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Report
On
Deposit-Alteration Modeling
2021 Fieldwork
Drone Magnetic Survey
Hand Stripping
Mapping
Channel Sampling
Grid Rehab
Exploration UTM Determinations
SG
Magnetic Susceptibility

(June 2022)

Reed Robinson Property

Eby Otto Township
Larder Lake Mining Division
North-eastern Ontario

NTS
42A1
UTM
Grid Zone 17
Nad 83
0563564mE, 5326832mN

For

Canada Silver Cobalt Works s

by
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Survey: OLS Survey of Reed Lese Otto Township

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Map: Surface Geology Map with Subcrop Stripping Scale: 1cm = 25m

Map: Surface Geology Map with Subcrop Stripping *Small* Scale: 1cm = 25m

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Eby-Otto Township 1994 AFM Cation Plot

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List: Historic UTM. 13 pages

1.0 SUMMARY

The "Eby Otto Property" is in Eby and Otto Townships 10 km southwest of Kirkland Lake, Ontario. The property is at the south part of the Cadillac Larder Lake Deformation Zone.

The Larder Lake Break, appears to subcrop450-650 meter north of the property, and dip onto the property at an unknown depth.

This report deals with the work required, to re-locate significant showings, and veins identified during the in 1994-1996 field mapping; and to hand-strip, and map, and channel sample these subcrop exposures.

This report also transitions, the transfer of knowledge from this author to younger Canada Silver Cobalt Works' staff *(CSCW)*. The knowledge base involves three Canada Silver Cobalt Works projects; the Castle Cobalt Silver Project in Gowganda, the CSCW Cobalt Silver project south of Cobalt and the Eby-Otto townships properties, dealt with in this report. The exploration concepts evolved from these three projects, and the concepts relate to the each other.

This author has significantly passed his allotted three score and ten years. There is no assurance this opportunity will persist into the future.

The author has an extensive knowledge base, derived from personally performing major work on most of the Canada Silver Cobalt Works; Otto, and Eby Township properties. This work commenced in 1994 and continue at this time.

The author has first hand knowledge of the Canada Silver Cobalt Works' cobalt silver projects. This work dates from Cobalt in circa 1983-1989 at the (Beaver-Temiskaming Mine), and the Gowganda Mining Camp dating from circa 1991 onwards, and the CSCW Castle Mine Project Geologist commencing in 2011. Prior to 1983, this author worked various other cobalt-silver properties near cobalt. These properties include: the Bailey Mine, Conisil Mine, South Giroux Mine, Giroux Mine, University Mine, and the Cleopatra Mine

Many concepts expressed in this report draw from these various CSCW projects and contribute to the validity of this report and its value to CSCW. Many of the concepts are strongly debatable in the geological community. To not express these concepts would be negligent. It is left to the reader to deal with the concepts and formulate appropriate conclusions and responses.

This report is a review of the CSCW 2021-2023 exploration program. It is intended bring perspective to this program. a review the drill logs, and drill core assay results, and drill core geochemical analysis was required to put this report into perspective.

This report is also intended to augment CSCW's staff's deep understanding of Macassa Mine geology, and local gold geology, and current geological geo-programming.

2.0 LOCATION AND ACCESS

Location

The property locations referenced in this report, and appendices are identified using Nad 83 UTM coordinates. The centre of the property is located at UTM coordinates 563,564mE, 5,326,832mN. This location is the grid origin; 4000E-000N. Topographic sheet 42A/1 (Kirkland Lake) applies to the property.

Nad 83 Zone 17 UTM coordinates are used exclusively in this report

All the claims are in Otto, and Eby Townships, of the Larder Lake Mining Division. The property is located:

- 10 kilometres southwest of the town of Kirkland Lake,
- 5½ kilometers southwest of the Macassa Mine workings,
- 2 kilometers west of the Gateford Mine (also known as Golden Gate Mine) at Swastika and
- 500 meters south of the Baldwin Mine and 400m south of the underground workings
- ~100-550 meters south of Highway 66.

Access

Access to **east part of the property** is from Highway 66 ~3.3km of east of the intersection of Highway 11 and Highway 66. At this location (563,554mE, 5,327,894mN), park on the shoulder of the highway, and walk the township line south for 550 meters to the #4 post of Mining Lease 475258.

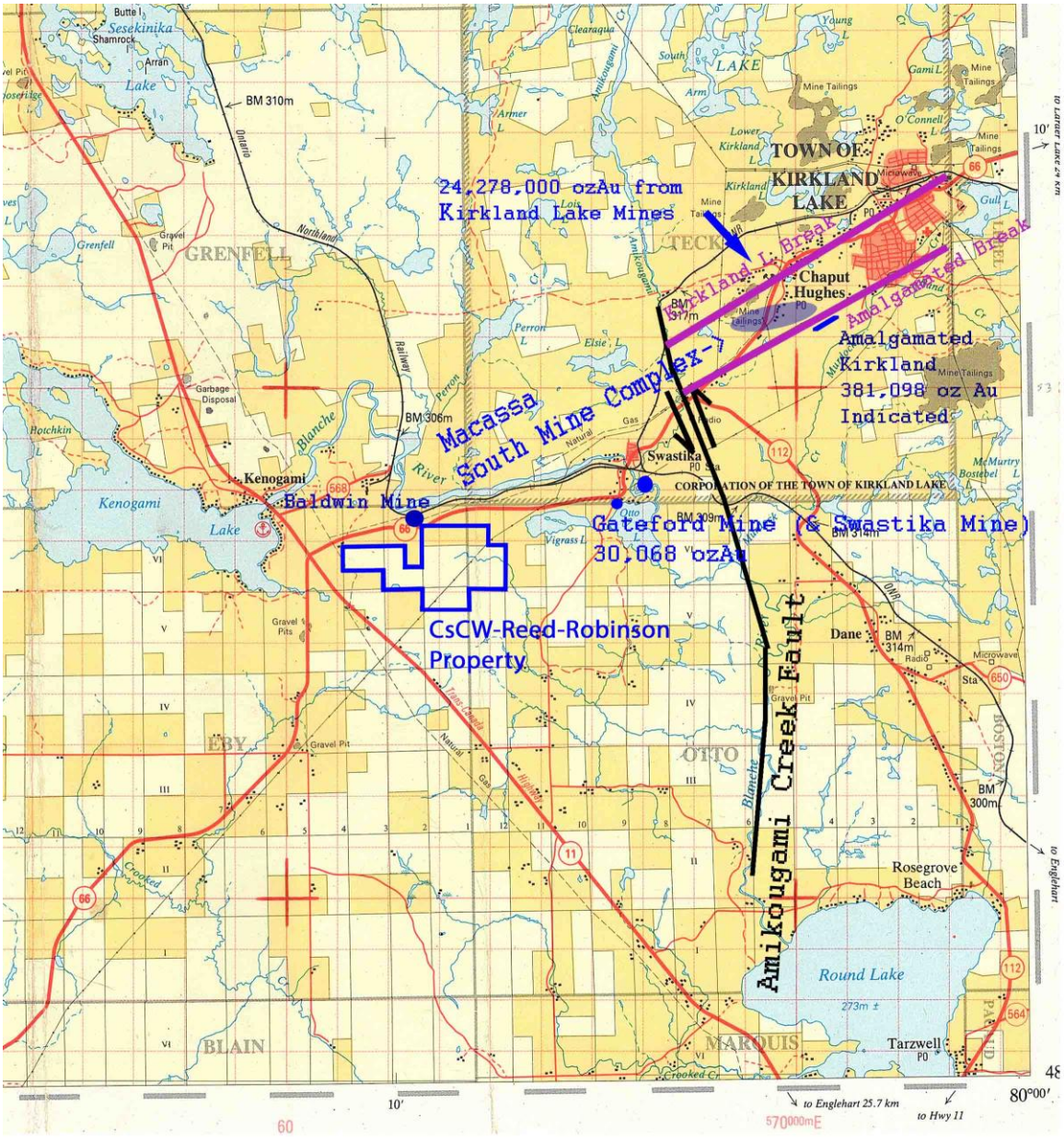
The **central part of the property** is best accessed from Highway 66 at a point 2 km east of the intersection of Highway 11 and Highway 66. At this location; an abandoned, but drivable section of Highway 66 leads south-east. Drive several hundred meters to the end of this road and park. At this location there is adequate road to turn a street vehicle using a multiple point turn. A trail leads approximately 400 meters south, to Line 2700mE on the former Robinson Legacy claim 1186975. Line 2700mE is clean, and easily walkable, to the base line. The base line is also clean from 16000mE, to 4735mE

The **extreme west end of the property** is best accessed from Highway 66 at a point 1.0 km east of the intersection of Highway 11 and Highway 66. At this location; turn south

and drive 0.6 km along the maintained gravel natural gas pine line road. Turn left (southeast) along the hard-bottom, dirt pipeline access road for approximately 0.5km to a clearing. Stop before entering the swampy area. There is plenty of parking here, and it is easy to turn a vehicle at this location.

Base line picket 1600mE picket is in the open area of SW pipeline right of way.

Where the NE pipeline crosses the base line (~1625E) the black muck is ~3 feet deep. Walk the NE edge of the pipeline clearing to the base line. The 000N base line extends to the east property boundary at grid 4735mE-000mN.



3.0 THE PROPERTY

The property is the Product of long-standing mining leases and legacy claims held by Douglas Robinson and Betty Robinson and James Reed. These consist of 15 legacy claim units (8 leased 7 staked) in Eby and Otto Townships.

Legacy Claim Map Number	Units	Location
532929 MLAS Map LEA 108932	1	NE1/4, S1/2 Lot 3, Conc. VI, Eby Tp. **Lease** 106013. MNDM#: G8000813
532930 MLAS Map LEA 108,932	1	NW1/4, S1/2 Lot 3, Conc. VI, Eby Tp. **Lease** 106013. MNDM#: G8000813
1242,292 Now 247,630 and 122,210	1	SE1/4 , S1/2 Lot 2, Conc. VI, Eby Tp. Douglas Robinson & Betty Robinson Joint Tenants
1186975 Now 327,167 and 192,312	2	W1/2, S1/2 Lot 2, Conc. VI, Eby Tp. Douglas Robinson
1187002 Now 310,340, 207,124, 266,415, 141,080, 122,210, and 290,927	4	S1/2 Lot 1, Conc. VI, Eby Tp. Bank of W9980.00451 **$10,847**. Bank W9680.00457 $ **1,013**. James Reed
532924 MLAS Map LEA 108931	1	NW1/4, N1/2 lot 1, Conc. VI, Eby Tp. Lease 106011. MNDM#: G8000814
532925 MLAS Map LEA 108931	1	NW1/4, N1/2 lot 1, Conc. VI, Eby Tp. Lease 106011. MNDM#: G8000814
475258 MLAS Map LEA-109272	1	NW1/4, S1/2 lot 12, Conc. VI, Otto Tp. Lease 106732. MNDM#: G8000296

475259 MLAS Map LEA-109272	1	NE1/4, S1/2 lot 12, Conc. VI, Otto Tp. **Lease** 106732. MNDM#: G8000296
475260 MLAS Map LEA-109272	1	SE1/4, S1/2 lot 12, Conc. VI, Otto Tp. **Lease** 106732. MNDM#: G8000296
475261 MLAS Map LEA 108932	1	SW1/4, S1/2 lot 12, Conc. VI, Otto Tp. Lease 106732. MNDM#: G8000296
MLAS Map LEA 108929		SE1/4, S1/2 Lot 3, Conc. V, Eby Tp.
MLAS Map LEA 108931		SE1/4, S1/2 Lot 1, Conc. V, Eby Tp.
	15 units	Total Units

The Above property was subdivided by MLAS Conversion into exactly the same property as shown below.

James and Emmalene Reed Main Group

Lease 108932 - (2 unit Eby West), Lease 108930 (2 unit Eby South), Lease 109272 (4 unit Otto), Cell Claims - 122210, 141080, 207124, 266415, 290927, 310340 (formerly 1187002)

and

James and Emmalene Southern Leases

Lease108929 (1 unit Eby South West), Lease 108931 (1 unit Eby South East)

and

Douglas Robinson *(Main Group)*

Cell Claims 327167 (formerly 1186975) and 192312 (formerly 1186975)

Douglas and Betty Robinson as Joint Tenant *(Main Group)*

Cell Claims – 209176 (formerly 1242292) and 247630 (formerly 1242292) and 191453.

At the time of Conversion Douglas Robinson, and Betty Robinson requested, all their mining lands be registered as joint tenant *(to simplify the MLAS recording of this complex environment)*.

The MLAS entry shown below; dealing with Legacy claim 191453, is correct. However, other MLAS entries dealing with the forced conversion of this claim are in error. This

author continues to request, that MLAS reconcile their ownership records to the correct MLAS entry below *(starting at conversion)*.

*"{The **correct** MLAS ONe-Key Account for Betty Robinson "View Joint Tenant" info is pasted below*

Mining Lands Administration System

Manage Joint Tenants > Joint Tenant Information

Joint Tenant Information

Joint Tenant	***Claim Numbers***
DOUGLAS,ROBINSON - (22286)	*209176, 191453, 247630*

Source: https://www.mlas.mndm.gov.on.ca/mlas/index.html#/manageJointTenantEx "

The default conversion of Legacy Claims to Cell Claims; required MLAS to convert the ownership exactly as registered to the Legacy claim.

Claim 191453 appears on the MLAS record. It appears MLAS cancelled this claim, by not enacting preferential treatment, that protected other claims from cancelation related to MLAS conversion process.

The property is now under Option to Canada Silver Cobalt Works.

This configuration is shown on MLAS Web Site
https://www.mndm.gov.on.ca/en/mines-and-minerals/applications/mlas-map-viewer

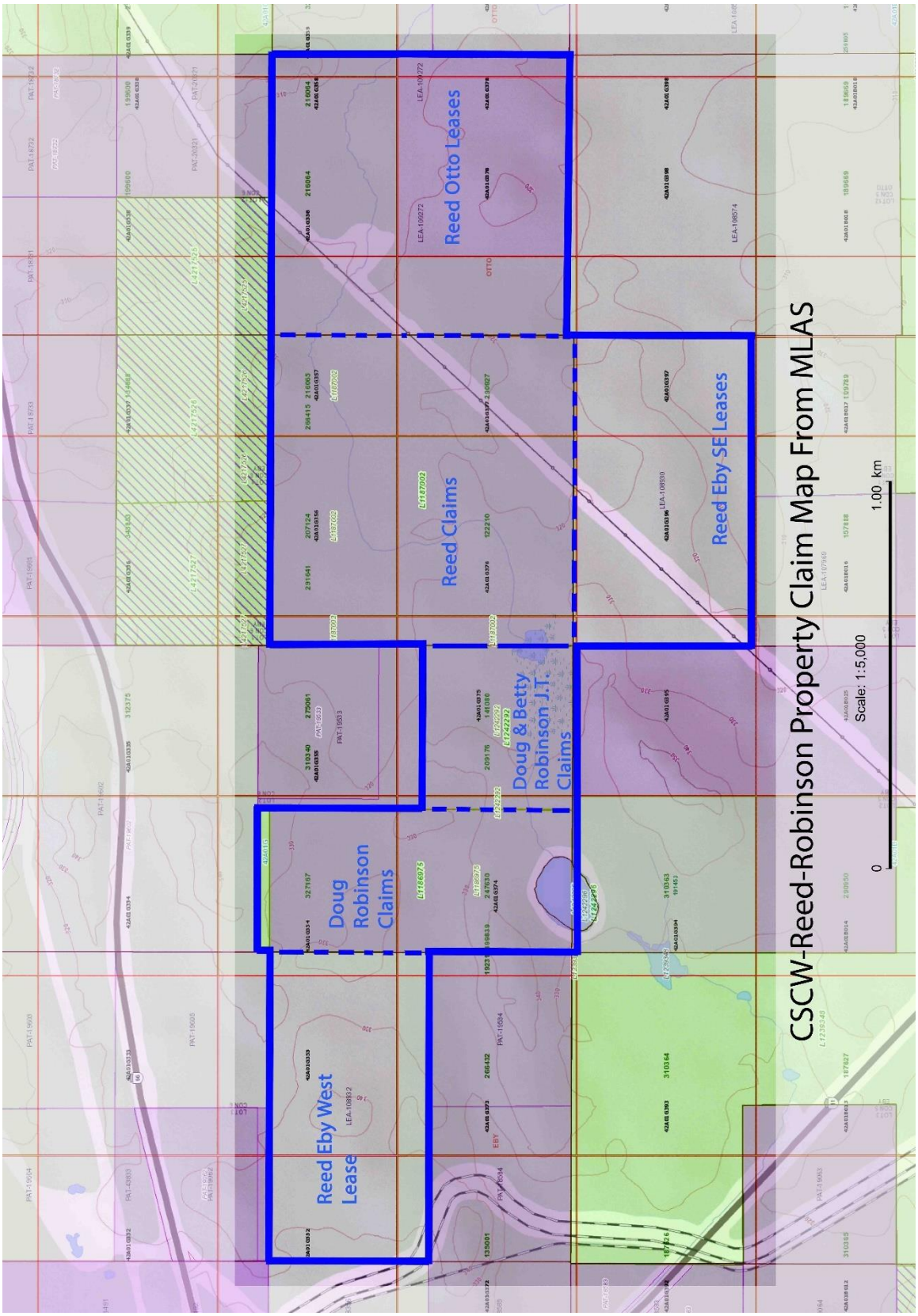


Image Above: Claim map Download from MLAS. The Legend follows in next image. All work was performed within the property outline shown in the above map.

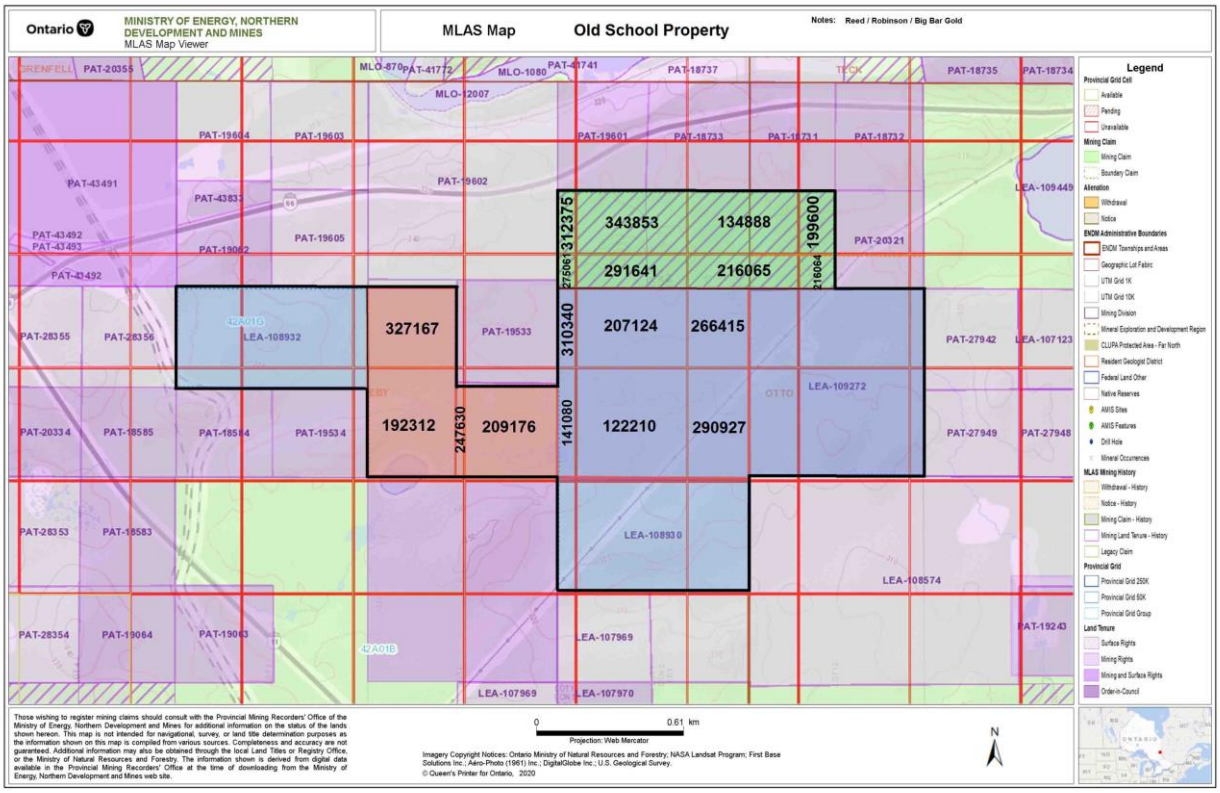


*Image Above: This image was extracted from the Eric Marion report referenced in this report as "**The Eby - Otto Project Eby & Otto Township Larder Lake Mining Division Reed / Robinson / Marion 2021 06 14**".* Filed as "Eby - Otto Project 2021 06 16 16 pages.pdf"

Marion, Reed, and Robinson explored, and marketed, this property and Marion's properties in close collaboration. CSCW assayed a Marion hole north of the Reed Showing, and all the channel sampled showings, and veins of the Reed-Robinson property. No assay costs are claimed in this assessment filing.

This report deals with the **Reed Property** shown in **blue**, and the **Robinson Property** shown in **orange**. This figure by Marion, is included in this report, because it is superior to the lower quality image, this author was able to access from the Ontario Mining Land Administration System *(MLAS)* ClaiMap.

The Marion property shown in green, is not described in this report.

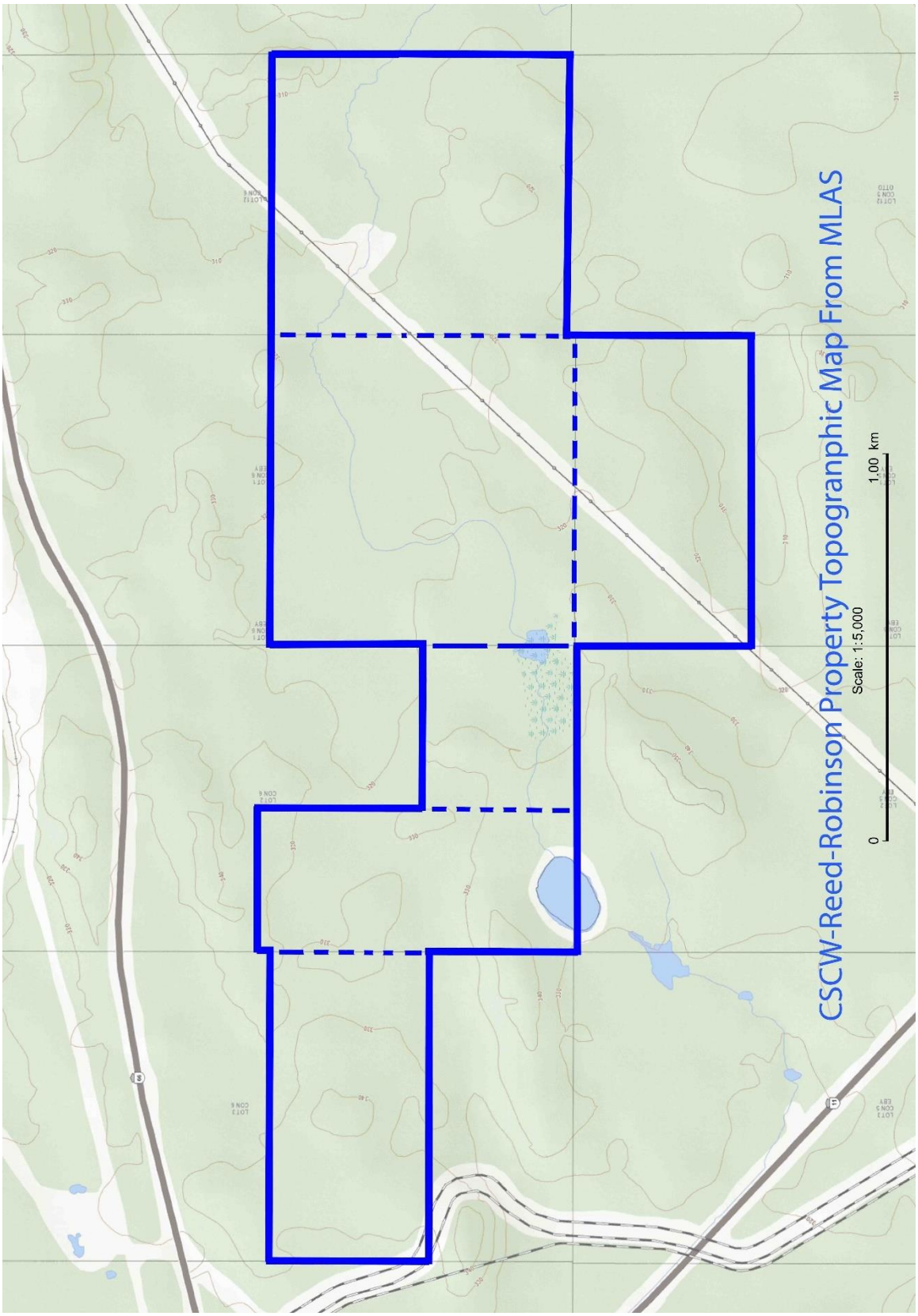


Image Above: Topographic Map with superimposed Legacy and Cell Claim Fabric Downloaded from MLAS.

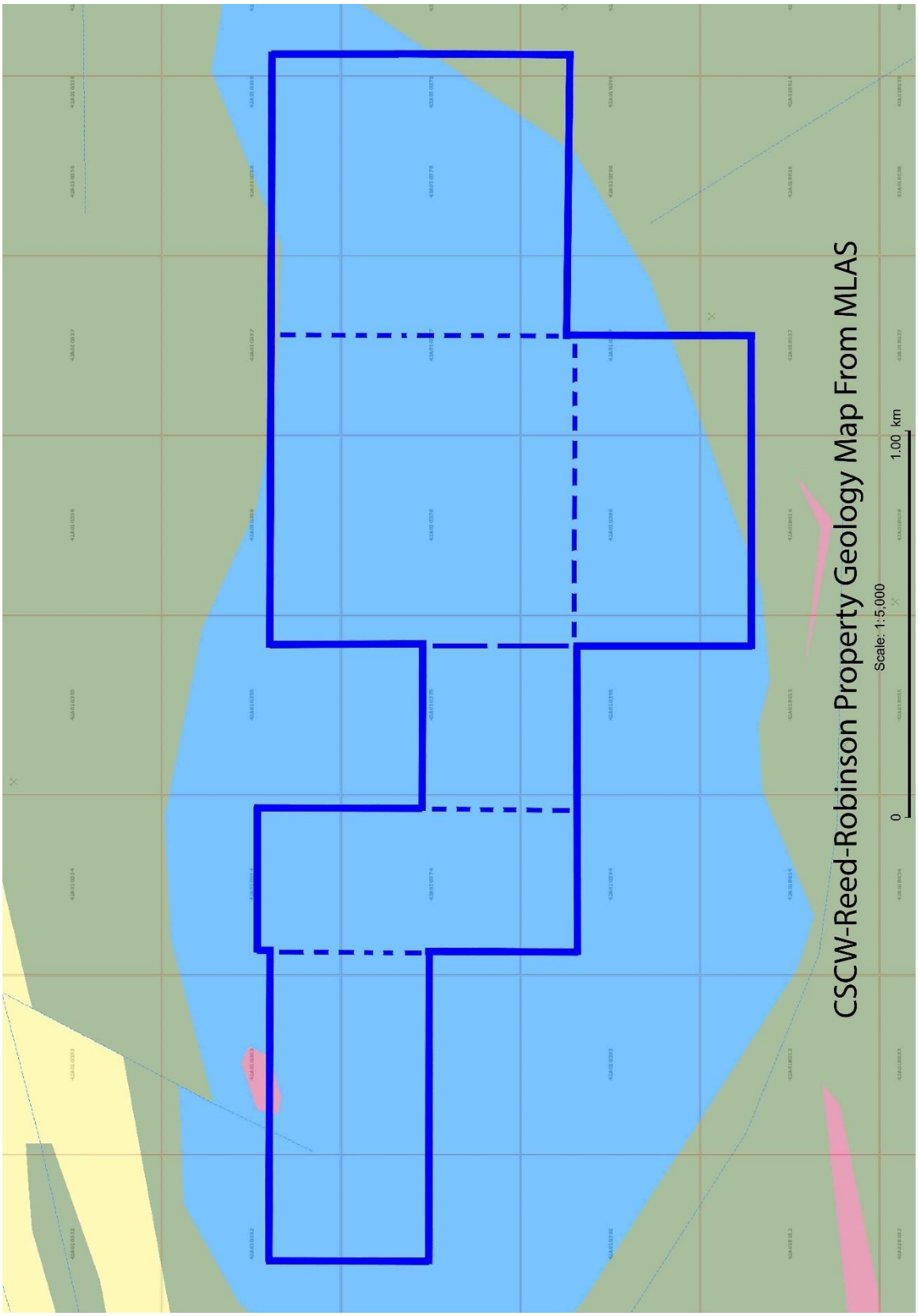


Image Above: OGS Geology with superimposed Legacy and Cell Claim Fabric. Downloaded from MLAS.

4.0 PHYSIOGRAPHY AND VEGETATION

The property has moderate topography, comprised of rocky knolls covered with glacial till, water worked glacial sediments, and clays. The area is covered by stands of boreal forest, consisting of poplar, balsam fir, black spruce, white cedar, and alders.

The extreme northeast portion of the Otto Township Lease 106732; *(MNDM#: G8000296)* is the S1/2 lot 12, Conc. VI, Otto Tp., is recently burned over ground, lacking tree cover.

The southern portion of Otto Township Lease 106732 *(MNDM#: G8000296)*; the S1/2 lot 12, Conc. VI, Otto Tp., is a circa 2020 clear cut that purged the area of standing trees. This ground is now covered by tight, new growth balsam fir.

5.0 REGIONAL AND PROPERTY GEOLOGY

The property is located 5½ km southwest of the Macassa Mine workings within the southern portion of the Cadillac Larder Lake Deformation Zone *(CLLDZ)*. The Gateford mine is 2 km to the east of the property, and the Baldwin Mine is located 500 to the north of the property.

The CLLDZ, consists of a series of east-west trending deformation/fault/alteration zones, and cross faults. The Kirkland Lake Break, within the northern part of this deformation package, produced 23,292,472 Troy Ounces of gold, from nine mines as tabulated below:

Tons	Grade	Troy Oz Au	Mines (on the Kirkland Lake Break)
6,496	0.07	483	Hudson Rand
3,140,283	0.37	1,172,955	Kirkland Lake
4,230	0.45	1,921	Kirkland Townsite
17,117,923	0.50	8,573,246	Lakeshore
6,305,835	**0.44**	**2,768,097**	**Macassa**
5,049,536	0.33	1,674,808	Sylvanite
9,565,302	0.38	3,709,007	Teck Hughes
1,186,316	0.48	570,659	Toburn
9,934,327	0.49	4,821,296	Wright Hargreaves
52,310,248	0.45	23,292,472	Troy Oz Au

**Production Figures to 2018*

The property is also located 2 kilometres east-southeast of the Gateford (Golden Gate) Mine at Swastika.

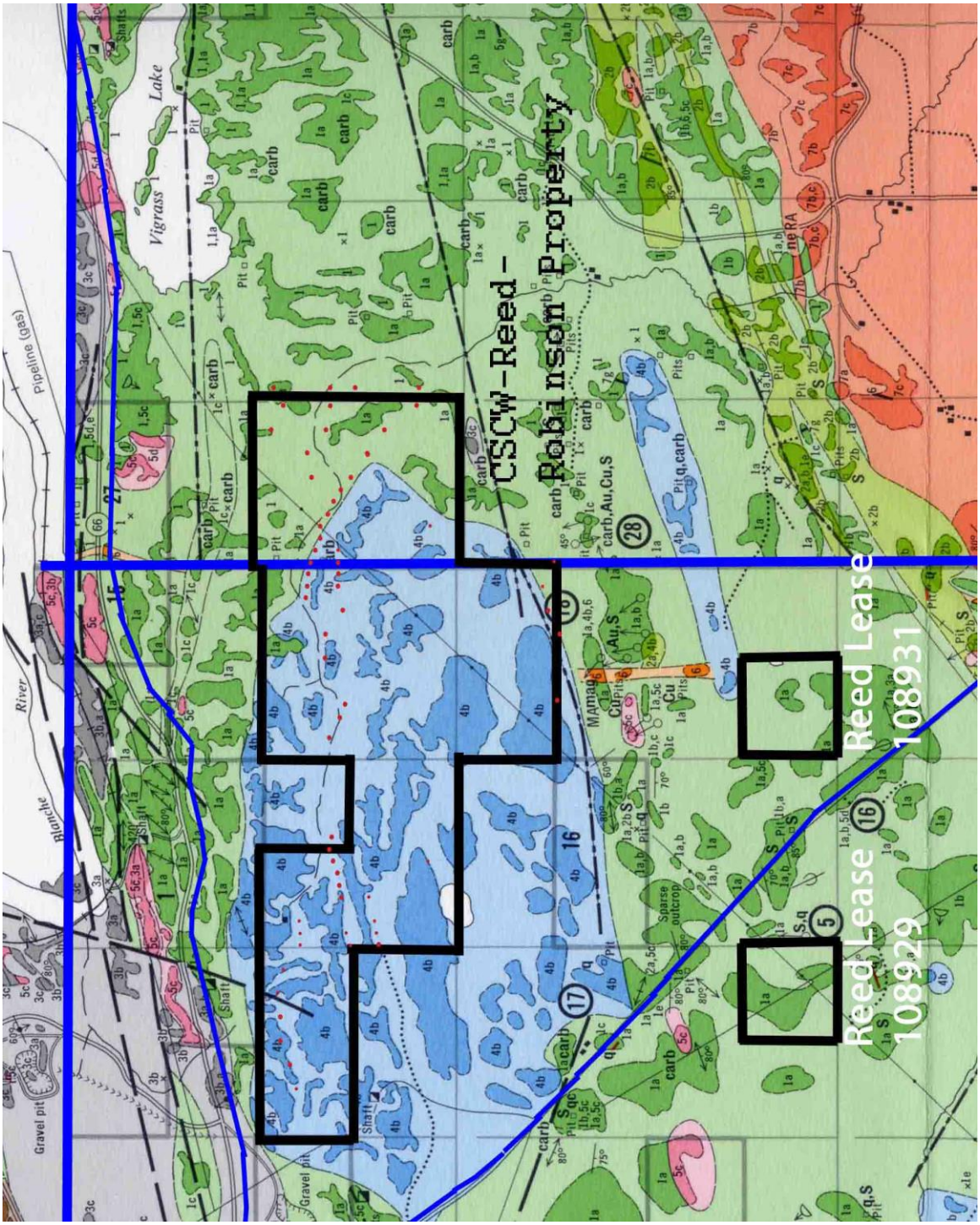
Tons	Grade	Troy Oz Au	Mines (on the Kirkland Lake Break)
103,684	0.29	30,068	Gateford (Swastika) Also known as Golden Gate Mine

Lovell's report, and map; *"**Ontario Department od Mines and Northern Affairs Geological Report 99 Geology of the Eby and Otto Area District of Timiskaming**"* and accompanying "***Map 2239 Eby-Otto Area***" are the best geological references dealing with the property. This map and legend for this map are shown below.

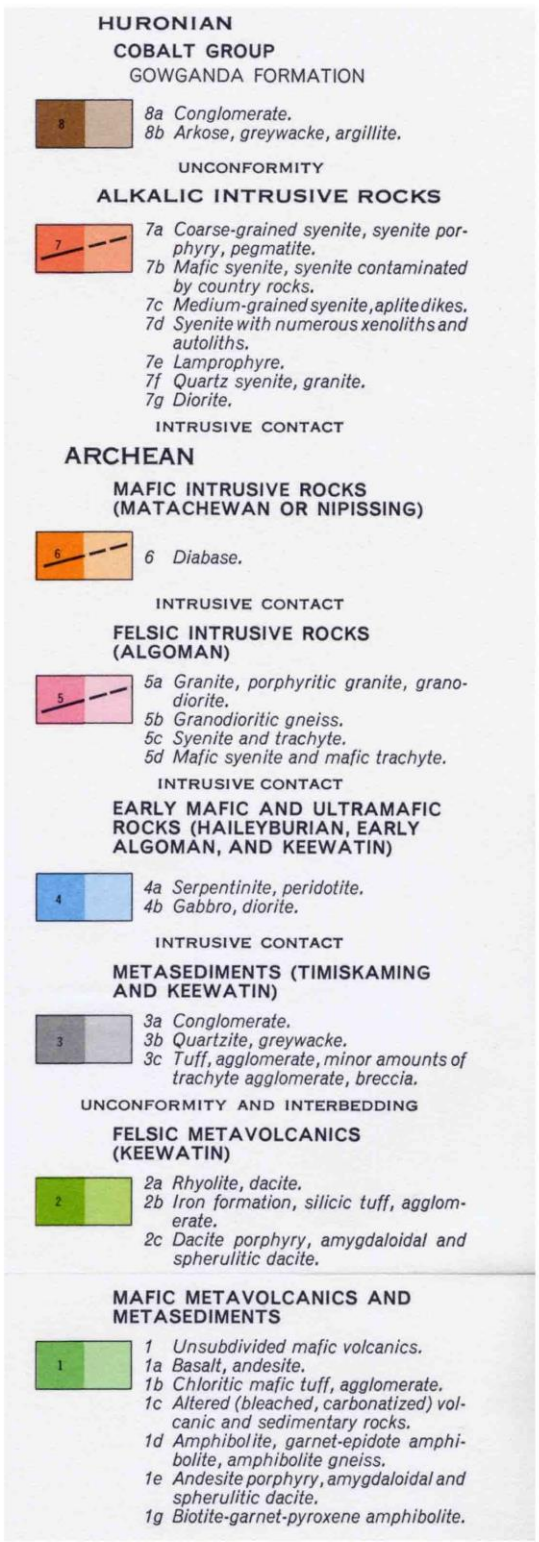
The following table of lithologies

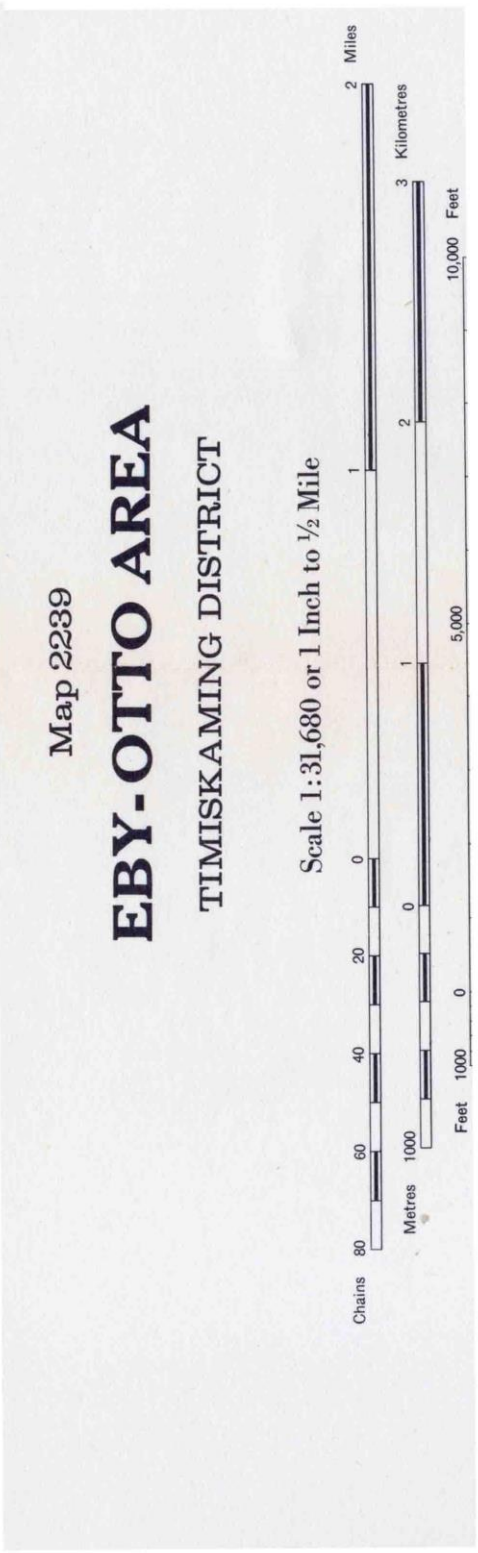
Table 1: Table of lithologic units (taken from Lovell's Geology of Eby and Otto Townships)

CENOZOIC
PLEISTOCENE AND RECENT
Silt, clay, sand, gravel
Unconformity
PRECAMBRIAN
PROTEROZOIC
LATE MAFIC INTRUSIVE ROCKS (NIPISSING OR KEWEENAWAN)
Diabase
Intrusive Contact
HURONIAN
COBALT GROUP
GOWGANDA FORMATION
Conglomerate, arkose, greywacke, argillite
Unconformity
ALKALIC INTRUSIVE ROCKS
Syenite, quartz syenite, porphyritic syenite, nepheline syenite, granite, aplite dikes, lamprophyre, diorite
Intrusive Contact
ARCHEAN
MAFIC INTRUSIVE ROCKS (MATACHEWAN OR NIPISSING)
Diabase
Intrusive Contact
FELSIC INTRUSIVE ROCKS (ALGOMAN)
Granite, porphyritic granite, granodiorite, granodioritic gneiss, syenite and trachyte *Intrusive Contact*
EARLY MAFIC AND ULTRAMAFIC INTRUSIVE ROCKS (HAILEYBURIAN, EARLY ALGOMAN, AND KEEWATIN)
Serpentinite, peridotite, gabbro, diorite
Intrusive Contact
METASEDIMENTS (TIMISKAMING AND KEEWATIN)
Conglomerate, quartzite, greywacke, tuff, agglomerate, breccia
Unconformity and Interbedding
FELSIC METAVOLCANICS (KEEWATIN)
Rhyolite, dacite, dacite porphyry, iron formation, silicic tuff, agglomerate



Map Above: From Lovel Map 2239 Eby-Otto Area. The tiny red dots are MaxMin Conductors. MaxMin conductors occur in the Blue Blob intrusive, in Archean volcanics and along the contact between the intrusive and the volcanics.


HURONIAN
COBALT GROUP
GOWGANDA FORMATION
8a Conglomerate.
8b Arkose, greywacke, argillite.
UNCONFORMITY
ALKALIC INTRUSIVE ROCKS
7a Coarse-grained syenite, syenite porphyry, pegmatite.
7b Mafic syenite, syenite contaminated by country rocks.
7c Medium-grained syenite, aplite dikes.
7d Syenite with numerous xenoliths and autoliths.
7e Lamprophyre.
7f Quartz syenite, granite.
7g Diorite.
INTRUSIVE CONTACT
ARCHEAN
MAFIC INTRUSIVE ROCKS (MATACHEWAN OR NIPISSING)
6 Diabase.
INTRUSIVE CONTACT
FELSIC INTRUSIVE ROCKS (ALGOMAN)
5a Granite, porphyritic granite, granodiorite.
5b Granodioritic gneiss.
5c Syenite and trachyte.
5d Mafic syenite and mafic trachyte.
INTRUSIVE CONTACT
EARLY MAFIC AND ULTRAMAFIC ROCKS (HAILEYBURIAN, EARLY ALGOMAN, AND KEEWATIN)
4a Serpentinite, peridotite.
4b Gabbro, diorite.
INTRUSIVE CONTACT
METASEDIMENTS (TIMISKAMING AND KEEWATIN)
3a Conglomerate.
3b Quartzite, greywacke.
3c Tuff, agglomerate, minor amounts of trachyte agglomerate, breccia.
UNCONFORMITY AND INTERBEDDING
FELSIC METAVOLCANICS (KEEWATIN)
2a Rhyolite, dacite.
2b Iron formation, silicic tuff, agglomerate.
2c Dacite porphyry, amygdaloidal and spherulitic dacite.
MAFIC METAVOLCANICS AND METASEDIMENTS
1 Unsubdivided mafic volcanics.
1a Basalt, andesite.
1b Chloritic mafic tuff, agglomerate.
1c Altered (bleached, carbonatized) volcanic and sedimentary rocks.
1d Amphibolite, garnet-epidote amphibolite, amphibolite gneiss.
1e Andesite porphyry, amygdaloidal and spherulitic dacite.
1g Biotite-garnet-pyroxene amphibolite.


Map 2239
EBY-OTTO AREA
TIMISKAMING DISTRICT
Scale 1:31,680 or 1 Inch to ½ Mile
Miles
Kilometres
Feet
Chains
Metres
Feet

DISCUSSION: GRAPHITE GENESIS MODELING & ALTERATION MODELING

. Hole EO-22-004: Two Generic Models of Graphite Deposits

This author is deeply indebted, to CSCW for introducing the concept that, the graphite in hole EO-22-004, appears to inorganic-graphite, not organic graphite, as I had previously modeled. This graphite, appears to be inorganic graphite *(in part or whole along faults);* potentially, as part a carbon-carbonate gold alteration-emplacement model associated with the CLLDZ . It appears, the jury is hung on this issue.

Years ago; I had unverified information, that Macassa geological staff, considered the presence of graphite, as a significant component, to their gold exploration model. CSCW's comments, reconciled this obscure graphite information, into my revised gold exploration model.

All the **graphite** intersections, in hole EO-22-004, were on the logging tables, November 21, 2022. Concerning Graphite, the log of EO-22-004 reads:

> *…. **Unit is coherent, yet 15-20% is fractured with a flooding of black hard material (silica +/- graphite and chl or maybe tourmaline?)**. (Quote: Log EO-22-004 **232.50-284.50**). (black matrix similar to Conisil Mine)*

and

> *Significant brecciation fault zone that appears to have been later remelted and ductilly deformed, yet still clast supported with **graphitic (+gouge) fracture surfaces**. Most intense zone (**texturally destructive**) …. (Quote: Log EO-22-004 **284.50-286.20**).*

and

> *Significant texturally destructive fault zone. Possible multiple deformation periods. Appears to have indistinctive angular breccias that have been later ductilly deformed. Appears to be composed of healed gouge and this **black material** that **may very well be graphite** (patchy hard areas). **Graphitic fracture surfaces**. Possible pre-deformation qzt/carb veining, as breccias appear whiter/silicifed. Pink vuggy qtz/carb dyke with sharp UC/LC at 60-70 dTCA from 371.16-371.62m. Contains about 5-8% fine-grained stringers of **Py throughout** affected by deformation. Beta angled cannot be measured. Averaged alpha angle measured. **SG cannot be measured**. (Quote: Log EO-22-004 **371.05-372.20**).*

and

> …. Significant texturally destructive fault zone with possibly multiple deformation periods. First 20cm is a clast-supported qtz breccia with carb infilling, followed by what appears to be indistinctive angular breccias that have been later **ductilly deformed**. Majority of this section is composed of healed gouge (that is vuggy) black material that may very well be graphite. About 5-10cm of rubble before and within ductile zone. **Graphitic fracture surfaces**. Possible pre- and post-deformation qzt/carb veining, as breccias appears whiter/silicified. *….(Quote: Log EO-22-004 **389.35-390.15**).*

and

> *Significant texturally destructive fault zone, predominantly composed of **black (graphitic) silicified** material with moderate foliation/trend of ductile shearing. First 30cm is alternating between layers of host rock and infilling of this graphitic material. Graphitic fracture surfaces. ….(Quote: Log EO-22-004 **470.94-471.75**).*

The log of the graphite, is well documented from a structural perspective.

The log was close to silent from a geophysics perspective, genesis perspective and large-flake graphite perspective:

- An ohm meter measurement, and/or magnetic conductivity measurement, embedded in the log would have been comforting to reconcile with the IP survey and MaxMin survey.
- **From a genesis perspective**, more detailed descriptions, of the lithology of the intersections, and adjacent host rock, would have been beneficial to **reconcile the genesis** of the graphite, as inorganic-graphite or organic-graphite.
- Also: from a **genesis perspective**, detailed logging of sulfide textures, explicitly emphasising the existence, or absence of primary sedimentary textures, or primary emplacement sulfide textures could reconcile genesis of the inferred graphite in the black faults.
    - The definitive statement no sulfides exist when no sulfides exist has genetic implications. It is assumed in any sedimentary, or replacement textures of sulfides, would have been destroyed deformation, but the sulfides would be preserved.
    - sedimentary sulfide textures in graphite would favour the organic-graphite model.
    - If the logger has an ideological issue, of recording genetic related sulfide or graphite specific observations, in the lithology log; these observations can be added to an inactive log sheet.
- The detailed structural logging, of the graphite host, indicates **large-flake graphite,** is unlikely to have survived deformation at this location.
- The log entry "*composed of black (graphitic) **silicified** material"* implies the rock is hard. Hard implies, the rock cannot be commercially viable large-flake graphite. An extra embedded statement "***consistently hard, no Coarse graphite observed,***" would have been conclusive, that this is not a potential large-flake graphite product.
- The embedded comment "***SG cannot be measured***" is a classical high standard SG, Quality-Assurance statement. This statement **leaves no room for doubt**.

During the November 21, 2022 core shed visit observations, significant evidence supporting the **organic-graphite** genesis was observed. Also; significant evidence**, supporting inorganic-graphite** genetic model, was

observed. The cumulative field/core evidence must eventually reconcile with the genesis of graphite. The genetic model of the graphite, has **significant ramifications**, to the gold-genesis model, and gold-exploration model.

A quick personal observation of hole EO-22-004, appears to support no commercial large-flake graphite was intersected in this hole. However: the evidence concerning existence of graphite and the genesis of the inferred graphite, genesis remains **elusive**. Also: the hole is silent, concerning the potential of Large-Flake-Graphite where significant EM anomalies exist.

. Hole EO-22-004: Two Genetic Models of Gold Deposition, Gold-Graphite Associated Alteration and Structural Ore Controls

Prior to hole EO-22-004, this Author (DRC) based his the Eby-Otto deposit models, on the conductor's sources in Eby-Otto being caused by organic graphite sources, and possible conductive metallic sources. This impacted his models, for gold depletion-gold deposition, alteration, structural ore controls, structural mapping, and potential for gold and alternative deposit types.

The introduction of the Inorganic-Graphite Model, changed all these geological models significantly. Changing all these models, has had very little impact on the drill hole recommendations. The proposed drilling, was based on sound prospecting principles, that commonly transcend deposit modelling.

Prior to EO-22-004, DRC's exploration model involved:

- A **four-phase alteration suite** associated with local gold deposition *(discussed in next subheading*).
- Existing **synvolcanic, organic graphite** mineralization *(potential large-flake graphite)*
    - Post deposition geological processes, potentially **increasing grain size** of graphite mineralization.
    - Post deposition deformation, **reducing grain size** of graphite.
- MaxMin conductors, having several potential source types including:
    - Sulfide hosted gold,
    - nickel, (*Intrusive analogue of Ni-Kamalda type {Redstone Mine Langmuir township})*
    - large-flake graphite,
    - waste graphite,
    - Archean age, cobalt-nickel-silver veins *(Archean Bert Tp. Cobalt and Archean McAra Cobalt-Deposit models)*
- A complex **fault history,** that **bifurcated** the geology, and any associated gold deposits, into coherent, **detached domains** *(blocks)*.

- MaxMin conductors, being a valuable tool, to resolve post-ore, fault displacements.

Prior to EO-22-004, the geology, and deposit models reconciled.

By changing one parameter; the origin of the graphite, the parameters fail to reconcile with each other, and the new scenarios complicate any surviving concepts.

Disclaimer: The Archean Bert Tp. Cobalt-Nickle and Archean McAra Cobalt-Nickle Deposit are conspicuous in their absence of silver. This does not mean silver cannot exist in Archean cobalt-nickel vein deposits.

. *Pre-EO-22-004 Four Phase, Alteration Model*

This author's; pre-EO-22-004. alteration model, in Eby-Otto area involved a four-phase, alteration suite, including:

1. A central, **auriferous pyritic-albite alteration** phase, with approximately 5.39% Na_2O. This pyritic-albite assemblage, may be locally associated with hard, fine-grained, black hornfels.
    a. This alteration appears to be a mineralization node along the Cadillac-Larder Lake Break (CLLDZ)
    b. This alteration may have overprinted CaMgFe-carbonate alteration as an alteration front.
2. An intermediate **CaMgFe-carbonate alteration**, that dominates the rocks, along the CLLDZ.
    a. This alteration may have overprinted calcite (+/- chlorite, +/magnetite) as a CaMgFe-carbonate alteration front.
3. An outer calcite (+/- chlorite +/- magnetite) alteration phase, that expanded as an alteration front.
4. **A potassium** (sericite +/- K-feldspar) alteration, within, or associated with structures, outside the pyritic albite alteration.
    a. The existence of this this potassium-phase, was based on limited, inconclusive evidence prior to hole EO-22-004. The holes EO-22-**001,** and EO-22-**004,** appear, to support the existence of this sericite alteration phase.

If the pyritic-albite alteration, CaMgFe-carbonate alteration, and/or calcite alteration, advanced as expanding alteration fronts; they are of the same age. This is a plausible scenario, but is not a proven fact.

It is also reasonable to assume; pyritic-albite alteration, and sericitic potassium alteration overprint a older established CaMgFe-carbonate alteration.

It is reasonable to assume; CSCW staff have a more advanced alteration model.
CSCW has introduced the concept, that inorganic-graphite in Eby-Otto Tps is introduced by a CLLDZ mineralizing event, associated with gold depletion, and/or gold deposition.
The introduction of inorganic-carbon overprint, into the gold mineralization-alteration model changes the apparent relationships, and association of the alteration phases, the gold mineralization, the structures and the MaxMin anomalies.
The implication is: elemental carbon (inorganic graphite), CaMgFe-carbonate alteration and calcite alteration are a single alteration suite centred on the graphite phase. This leaves questions, relating to the relationship of pyritic-albite alteration, and sericite alteration; relative to the CaMgFe-carbonate, and possible calcite (+/-Chlorite) alteration.
Also: inorganic graphite becomes a **pathfinder mineral** for gold mineralization. The spacial relationship of the Barber Larder gold pit near graphic rock, indicates this may be a real association.

. *Post-EO-22-004: 5-Phase Gold Alteration Model*

This Author's; post-EO-22-004. alteration model, in Eby-Otto area involves a five-phase, alteration suite. This suite includes: (1) introduced inorganic carbon, (2) CaMgFe-Carbonate alteration, (3) calcite alteration *(+/-chlorite +/-magnetite)*, (4) auriferous pyritic albite alteration and (5) potassic sericite alteration.
The introduction of the inorganic-graphite model, changes the genetic gold depletion-deposition model, the alteration model, and the MaxMin anomaly model. The implication is: inorganic graphite and CaMgFe-carbonate alteration may be genetically related as an event involving the CLLDZ.
The chemical mechanics I do not understand.
The new alteration model involves:

- Inorganic-graphite deposited:
    - Into existing fault structures which appear to have remanded active after graphite deposition.

    or

    - Into structures that developed into faults *(lubricated by graphite)*.
- Inorganic carbon was introduced into the country rock, resulting in the alteration of CaMgFe-silicates into an alteration package consisting of CaMgFe-Carbonate and **quartz**. It has been known since the 1960's, that the bulk composition of much CaMgFe-carbonate-quartz alteration, appeared to closely resemble its probable protolith, *(the original, unmetamorphosed rock from which a given*

metamorphic rock is formed). This would involve a significant volume change, due to the introduction of carbon. It appears the volume would have increased or material was removed.

The new alteration phase zonation model is:

1. Inorganic-graphite *(native carbon)* deposition in faults. These faults may be the extreme core alteration phase.
2. associated CaMgFe-silicate alteration to CaMgFe-Carbonate + **quartz**. due to addition of CO_2. Quartz appears to be derived from the **chemical destruction** of the CaMgFe-silicates and deposited within the original protolith.
3. An outer phase of calcite *(+/-chlorite +/-magnetite)* alteration due to addition of CO_2. Varying degrees of the primary silicate mineralogy appears to have survived structurally intact *(inconclusive possibility).*
4. An Auriferous pyritic-albite alteration.
5. A sericitic Potassium alteration (+/- K-feldspar).

Its is uncertain if Auriferous pyritic-albite alteration or inorganic graphite forms the core of the CLLDZ gold mineralization event. Potential zoning scenarios include:

- Scenario 1:
  - Auriferous Albite → Sericite → CaMgFe-Carbonate → Calcite (+/- chlorite +/-magnetite)
  - Independent emplacement of inorganic-graphite.
- Scenario 2:
  - Auriferous Albite → Sericite
  - Independent Inorganic-graphite → CaMgFe-Carbonate → Calcite (+/- chlorite+/-magnetite)
- Scenario 3:
  - Synchronous Auriferous Albite and inorganic Graphite occurring at the same time → Sericite → CaMgFe-Carbonate → Calcite (+/- chlorite+/-magnetite).

The above scenerios start with the core of the alteration with the arrows being the vectors to the outer alteration shells.

Disclaimer: The inferred Calcite (+/- chlorite+/-magnetite) zone may be in part or whole related to the CLLDZ mineralizing event, or may be an independent alteration overprinted by CLLDZ alteration.

The above alteration models will probably change over time, as it is reconciled to diamond drilling.

It is fair to assume CSCW staff have a more advanced, and reasoned alteration model.

. Determination of Graphite Origin by Field Observation or Carbon Isotope

Excluding oxide-Iron-Formation, it appears most of the **EM conductors** near Kirkland Lake **are on the** Reed-Robinson-Allsopp portion of the CSCW Eby-Otto project.

Drill holes on the **Allsopp** property, and hole **EO-22-004**, indicate many, if not most of CSCW's conductors are graphite.

It is **uncertain**, if the graphite in the Eby-Otto property, is **organic-graphite**, or **inorganic-graphite**.

CSCW staff; have presented the concept that, **inorganic-graphite**, and the Larder Lake Break's CaMgFe-**carbonate** alteration are genetically related. In this model, it appears, **inorganic-graphite** occupies faults, that may have transported **inorganic carbon** from depth, and deposited some of the **carbon** as **inorganic-graphite** in these same faults. It also appears, these, same faults may have transported **inorganic carbon** to the country rocks, altering CaMgFe-**Silicates**, to CaMgFe-C**arbonate** plus **quartz**.

There may be a **genetic link;** between **gold** deposition, and the **inorganic-graphite** deposition, and CaMgFe-c**arbonate** alteration. Until this enigma is resolved; **graphite should be considered a pathfinder mineral leading to gold mineralization**.

It appears, **Carbon Isotope** determination is the **definitive**, and the **geologically accepted** method, of determining if the graphite is inorganic-carbon. It appears that, without Carbon Isotope determination, the source of the graphite will remain an **enigma**. This **enigma is superficially true**.

Field evidence, and carbon **isotope** determinations, must reconcile. If **Carbon isotope data,** and **field data must reconcile,** then **field evidence is valid,** to support, or deny the inorganic-graphite genesis, or the organic-graphite genesis.

Core logging of the graphite and the associated host rock, has significant **potential to resolve** the graphite **enigma without resorting to carbon isotope analysis**.

In genesis modeling, it is important, to determine the genetic relationship (if any) of the graphite to gold mineralization. Careful logging the occurrences of graphite in core, paying careful attention to its association with the host rocks and faults, and its the relationship to pyrite textures is justified and necessary.

Does the graphite contain pyrite, with sedimentary textures? Sedimentary textures favor organic graphite.

Does the graphite occur in homogeneous massive intrusive? If it does, it favours inorganic-graphite.

Is the graphite associated with any rock that could be interflow related? If it does, it is probably inconclusive, but favours organic-graphite.

Are we certain, the MI, and AGAB are truly intrusive? If there is an extrusive component, it swings towards an organic graphite genesis.

Rare Earth Elements EEE

The graphite in EO-22-004, is within mafic intrusives. If these are juvenile mafic rocks, the intrusive should have a low Rare Earth Element (REE) content. If the intrusive is a hybrid mafic igneous rock formed from juvenile mafic magma, that has assimilated felsic rock, or sedimentary rock; it will probably have an elevated REE content.

Sedimentary hosted graphite, probably has elevated to high REE content. If graphite in hole EO-22-004 has a low REE content relative to the known graphitic sedimentary rock *(such as CSCW Castle property hole CS1108 graphite)*, this low REE content would support inorganic-graphite origin, within the Eby-Otto intrusive.

Other questions concerning the graphite enigma include:

- Can hydrothermal fluids transport **organic-carbon,** and deposit this a **graphite** and cause **carbonate alteration** having the same appearance expected from inorganic-graphite environment? If the answer is yes, this may cause reconciliation issues with gold-inorganic-graphite genetic modelling.
- Assuming Carbon Isotope determination is the definitive the geologically accepted method: A study determining if the Carbon in graphite and the carbon in CaMgFe-Carbonate alteration have the same genetic signature. It is important to know and understand the relationship of these two phases of carbon overprints, relative to CLLDZ mineralization event.
- Are the Eby-Otto graphite and the Eby-Otto CaMgFe-carbonate caused by a single event?
- Are the REE MMI anomalies in the property; related to inorganic carbon, nickel deposits, sedimentary rocks hosting graphite and or sulfides.

Other Comments.

Is there a relationship of the apparent igneous intrusive rocks, the apparent intrusive breccia, and the apparent inorganic-graphite, and the fault-shear structures?

The old Large-Flake-Graphite model was benefitting from igneous intrusive to enlarge graphite crystal size.

High REE content of the gabbro intrusive would benefit Kamalda Ni-sulfide deposit model, to explain conductors along the intrusive contact with volcanic rocks.

Cobalt model survives both inorganic-graphite and organic-graphite models.

PGM model is independent of inorganic-graphite organic-graphite model.

. Structural Implications of Organic-Graphite and Inorganic-Graphite

If Eby-Otto graphite is **organic,** it will reduce its significance to gold emplacement model and enhanced its significance to cobalt-silver exploration. Also, if the graphite is organic, it will probably play a significant role in determining the **structural architecture** of the property.

If the graphite is organic, it will be hosted in interflow horizons. The implications include:

- The subcrop trace of these graphite horizons, will be MaxMin conductors *(which are located to sub-5-meter precision*).
- Hopefully; the 3-D IP survey, will establish the strike, and dip, of the graphite horizons,
- Faulting will truncate, and displace these geophysical anomalies.
- Establishing truncations of the geophysical anomalies, will establish **edges of fault blocks**.
- If the geophysical anomalies truncations are coincident with lineaments, those lineaments will probably be the subcrop trace of the fault.
- For other geological features truncated along a fault, there is potential to establish a fault offset of these features and the MaxMin conductor. **NB. It is potentially dangerous to assume, two conductors on opposite sides of a fault, are the same conductor.** Supporting evidence would be beneficial to support fault-offset assumptions.
- **Sorting out the fault structures may be instrumental to identifying the fault-offset parts of truncated ore depot(s).**

If Eby-Otto graphite is **inorganic;** it appears to have enhanced, its significance to the gold emplacement model and reduced its significance to cobalt-silver exploration model. Also: if the graphite is inorganic: it will probably play a significant role in determining the existence, location and orientation of faults that define the structural architecture of the property.

If the graphite is inorganic, it will probably be hosted in faults. The implications include:

- The subcrop trace of these graphite horizons, will be MaxMin conductors *(which are located to sub-5-meter precision)*.
- Hopefully; the 3-D IP survey, will establish the strike, and dip, of the graphite horizons,
- Faulting will host the graphite.
- Establishing the trace of geophysical anomalies, will establish the subcrop **trace of faults** and the **associated edges of fault blocks.**

- The geophysical anomalies, the graphite, the faults and the edgers of fault blocks will probably be coincident.
- Lineaments coincident with the conductors will be coincident with structural geological features.
- If the inorganic-graphite is part of the gold related alteration package, knowing its orientation and location and may be significant to gold exploration.
- Sorting out the fault structures may be instrumental to identifying the parts of truncated ore depot(s).

Knowing the difference between organic, and inorganic graphite; is significant to gold, cobalt-nickel-silver, large flake graphite exploration. It will also greatly benefit the determination of the **structural architecture** of the property geology.

. *Pre-and Post EO-22-004 Structural Geology Model*

The pre-EO-22-004 structural model, visualized the property, being cross cut by inferred EW, ESE ENE and NS **faults**, tentatively defined by:

- **breaks** in apparent geological continuity
- **lineaments** identified by surface mapping
- apparent breaks in **MaxMin conductors**.

This model, assumed, the faults, post-date, the sources of MaxMin conductors. If this scenario survives, and reconciles with hole EO-22-004 and future drilling, the concept of using MaxMin conductors to establish and quantify **fault offsets,** continues to be a valuable structural tool.

CSCW's inorganic Carbon models depends on the graphite being emplaced in faults during the CLLDZ mineralizing-alteration event. On viewing the black faults in hole EO-22-004, this author radically changed his opinion to accommodate this model faster than he can change tie-up-boots.

This author now acknowledges and is grateful for the CSCW inorganic carbon model. This CSCW model does not negate much of the old exploration-geology model held.

However: CSCW has not tested any identified MaxMin conductors. The black faults intersected in EO-22-004 corelate well with questionable quadrature responses that were expected to be wet faults.

The CSCW model has not dealt with ore potential for Cobalt-Nickle vein deposits, Kamala style massive Nickle deposits, PGM deposits or Large-Flake-Graphite deposits. These deposit models are discussed in this report.

. *Pre-EO-22-004 Structural Geology - MaxMin Model*

No MaxMin (EM) conductor has be tested orc appropriately explained by field mapping or diamond drilling.

Prior to EO-22-004; it was assumed, the MaxMin conductors in Eby-Otto townships were explained as follows:

- Conductors, within Archean volcanics north-east of the Eby-Otto mafic intrusive ***(blue blob),*** were considered, to be caused, by organic-graphite, within interflow horizons *(NE part of Otto)*.
- An apparent, formational-conductor along the North contact of the mafic intrusive *(blue blob),* caused by uncertain causes, possibly including graphite, possibly including Ni deposits and/or Cobalt-Nickel veins.
- The conductors within the Eby-Otto intrusive were not considered synvolcanic graphitic-interflow horizons.
- The conductors within, and in-proximity to the Eby-Otto intrusive, were considered potential:
    - Archean-age, cobalt-nickel *(+/-silver)* veins like the McAra veins and the Bert Township vein.
      Note: The log of the igneous intrusive, that hosts the Bert Tp. cobalt-Vein's (*4.18%Co/4 meters)*, discovery hole, reads like the log of EO-22-004. That discovery hole, tested a conductivity anomaly that may be coincident with the vein or the fault that hosts that vein.
    - Nickel sulfide deposits

Note: The cobalt-nickel-silver veins at Cobalt, North Cobalt and Casey Tp. were associated with interflow horizons *(these included veins hosted in Archean volcanics, and Huronian Sediments, and Nipissing diabase)*. If this style of interflow horizon is present in close-proximity to the Eby-Otto igneous intrusive, the geology is a match with cobalt-nickel-silver.

Note: Silver, is conspicuously absent, in the Archean Bert Township and at the Archean McAra Cobalt-Nickel vein deposits.

. *Post EO-22-004 Structural Geology - MaxMin Model*

It the black faults in EO-22-004 is **inorganic**-graphite, the evidence does not reconcile with the old MaxMin Model of Conductors within the intrusive that hosts these faults. Assuming hole EO-22-004 intersected inorganic-graphite, the old model must reconcile with this inorganic-graphite model resulting the following revisions:

- Conductors, within the Archean volcanics, north-east of the Eby-Otto intrusive ***(blue blob),*** are **probably** caused by inorganic-graphite. This does not rule out the less probable occurrence, of organic-graphite within interflow horizons *(NE part of Otto)*. *(Graphite within interflow sediments are noted on the Agnico ground to the east).*
- An apparent formational-conductor, along the North contact of the mafic intrusive (blue blob) may be inorganic-graphite, but, this does not rule out, nickel sulfide source or cobalt-nickel vein sources along this conductor. Nor does it rule out Large-Flake-Graphite deposits.
- The conductors within the Eby-Otto intrusive, are probably dominated by, **or**, are, exclusively inorganic-graphite. This does not rule out nickel sulfide ore, **or**, Archean-age

cobalt-nickel +/-silver veins, like the McAra and Bert Township veins or Large-Flake-Graphite.

The log of the igneous intrusive, hosting the Bert Township's cobalt-Vein's (4.18%Co/4 meters) discovery hole, reads like the log of EO-22-004. That discovery hole, tested a conductivity anomaly, that may be coincident with the vein, or the fault zone that hosts that vein.

. *Logging Fragmental and Diatreme Like Structures*

CSCW has logged, an apparent igneous breccia in EO-22-004. This was briefly viewed, on November 21, 2022. The core was viewed for approximately an hour. In that hour, this author viewed a lot of core, and radically changed many Eby-Otto concepts, faster that you can change tie up-boots.

Based on that brief viewing, I cannot definitively conclude, if the "Blue Blob" core is all igneous intrusive.

A breccia with an aphanitic, black matrix was observed. I cannot conclude if the breccia, is an intrusive igneous breccia, or an extrusive flow texture, or a transported, *(Diatreme like)* breccia.

I have seen in-situ volcanic breccias, with similar *(hard)* black, aphanitic matrix, as discussed below. I have also seen igneous intrusive breccias, some with xenolith fragments, and others as apparent auto-breccia.

The apparent **graphitic** core, observed on November *(hole EO-22-004)* reads:

> .... ***Unit is coherent, yet 15-20% is fractured with a flooding of black hard material (silica +/- graphite and chl or maybe tourmaline?)****. (Quote: Log EO-22-004* ***232.50-284.50****). (the black matrix appears similar to Conisil Mine auto-breccia within volcanic rocks)*

This author's 246-279-meter quick log notes of this core reads:

> *"Breccia, primarily rounded in black matrix".*

My vague memory is: these breccia fragments, were from somewhat mixed sources, dominated by igneous intrusive fragments. The terms "**rounding**," and "**mixed source** fragments," read like, "diatreme-like-textures and-associations".

This author does not know, which description best represents this breccia. My notes, are extremely-quick log notes. Careful logging, generally takes, presidence over quick-log notes. At the Agnico Beaver Mine; this author frequently made quick-log notes on the back of the core logging sheets, and turned the sheets over, for the formal log. This author considers quick-log notes, to be subordinate, but relevant.

The descriptions, of both the matrix, and fragments, are significant to, the genesis of gold ore in Eby-Otto Tps. These descriptions, may seem trivial; however, the graphite-

gold model and drill hole log must reconcile to establish confidence in both the log and the model.

In silver deposits; graphite, and or, sulfides, appear to have a significant impact on the cobalt-nickel-silver deposit model. An accurate understanding, of graphite, may also impact the gold deposit model in Eby-Otto townships.

The existence, **or**, absence of graphite in the black, breccia filling is important. This importance emphasises the necessity to measure resistivity and electrical continuity with an ohm meter and/or conductance by a conductivity meter *(preferably both)*. My experience is; clean, dry core, without graphite, has infinite resistance.

At the Castle property, wet non-conductive core registered measurable resistance. In wet core, only infinite resistance measurements, should be considered valid Rock-Quality measurements. Once core is dry, Rock-Quality measurements are valid.

Any slight, resistance measurement of matrix, relative to fragments or unfractured host would indicate the possible presence of graphite.

Care is required, to assure no residual acid salts on the core create a response. If matrix, and fragments have equivalent responses, the core should be washed and remeasured as dry core.

My suspicion is: the absence of a electrical response, does not rule out graphite. I have a sample of high-grade Large-Flake-Graphite ore, from the Desert Lake graphite deposit that is not conductive. (*I have also seen crystalline graphite spheres in the Golden Keene nepheline pegmatite east of Bancroft, Ontario)*.

The detailed relationship, of real or apparent graphite, to the igneous host, including any unit or sub-unit contacts is important. The detailed relationship of graphite to the igneous breccias is also important. Simple things, including the variation and degree of fragment milling (rounding), and, single source, or variable providence of the fragments, are important. Questions include:

- Are there any apparent graphitic or sedimentary fragments, hosted in the igneous breccia?
- Does the graphite appear, to be grain-reduced by shearing?
- Is the graphite sooty *(dull fine and black)* in appearance?
- Is there an association of graphite, with unit, **or**, apparent sub-unit **contacts**?
- Is pyrite conspicuously **absent** in the graphite?
- If pyrite or other sulfides are present: do the pyrite and/or sulfide textures have evidence of primary igneous crystallization (i.e. intergranular Kamalda style mineralization), or alteration-mineralization replacement, or remobilization by faulting (implied in EO-22-004), brecciation or fracturing, recrystallization against

an intrusive contact emplacement (i.e. skarn), or remobilization towards structural controls (cobalt-silver veins), or other geological mechanisms?

For example: In the high-grade Minto diatreme ore west of Gowganda; the quartz matrix has abundant native gold and pyrite is restricted to the fragments *(grade 20.32 gAu/mT over 51.65m)*. Logs have to be explicit regarding description that impact genetic models, and even impacting milling decisions when a major is reviewing the viability of a property acquisition.

For example: the zoned copper-lead-zinc halo of cobalt-silver veins appears to be remobilized by the vein mineralization event, and not introduced vein mineralization fluids. The evidence is this scenario is in the detailed logging of silver-cobalt mapping and diamond drill holes logging, such as at McAra, Cobalt Beaver mine, Canadaka's silver mines south of Cobalt, Silversides mine near North Cobalt. This conclusion is a highly contentious genetic model that cannot be resolved by conventional, cursory logging of sulfide mineralization. The devil is in the details.

- Is there evidence, of sulfides, with a **sedimentary signature**, in the graphite, or, associated with the graphite?

It is beneficial to the project, if the logger explicitly, and, decisively anticipates, and, answers, probable and potential, questions, in the text of the logs. The importance of details, is not always obvious, at the time of logging.

Two examples below; from the Reed Trench Vein, and CSCW Castle property, illustrate the importance of detail.

<u>Details of Reed Trench Vein: Diatreme-Like Event</u>

The Eby-Otto example of the Reed Trench showing below, illustrates a set of inconspicuous details that can prove beneficial. These details include:

1. *The fragments have various **degrees of milling,** from angular to rounded,*
2. *The fragments, have **variable lithological** appearance, and **alteration,** and are **exotic** to the host rock.*
3. *Sulfide mineralization, within vein fracturing, appears to **post date** both the fault and vein.*
4. *Vein fracturing and fracture filling are, **focused** within the 1/3 of the vein against the fault.*
5. *This vein-fault is **32-meters** north of a short, strong, and well- defined conductor located within a prominent E-W lineament. Prospecting standards define "**short**", "**strong**" and "**well defined**" as prime conductor combination. Graphite, if present in the*

conductor, appears to be an indicator mineral of gold mineralization.

These five details, reconcile, to a complex sequence of genetic events. The breccia fragments, are exotic, and have been mixed by fault-movement-mixing, or fluid-flow-mixing. This is a diatreme like event.

The term "**diatreme-like event**" is used, because the line between a classic volcanic diatreme (i.e. kimberlite) and a hydrothermal breccia body is fuzzy. It appears that, similar pressure release mechanics cause both, and the term, diatreme, is loosely used.

The diatreme like event, appears to have opened along the edge of the vein. Fluid flow, during the diatreme-like-event, appears to have **mixed**, and **milled** the fragments. It appears the fault movement has **brecciated the vein** and pyrite mineralization was emplaced in the vein's fracture openings. The detailed evidence indicates this is a **complex structure,** with a history of events.

Based on small details, the association of this mineralized vein-fault-diatreme-like structure, with a short, and strong MaxMin conductor, make these a prime exploration target. CSCW has designated this for a base line hole *(1 of 4 base line holes)*. Details add greatly genetic models, and resultant exploration targets.

Details of Castle Diatreme-Like Events

The Castle example below; also illustrates a set of inconspicuous details that can prove beneficial. These details include:

- *CSCW drilling of the Castle property, intersected several small intrusive breccias having **diatreme-like** features. The fragments were **heterolithic** with rock fragments similar-to the local units the diatreme cut and **exotic** rock fragments of lithology unknown on the property.*

At the time of logging, these Archean age diatreme-like structures, had no known relationship to silver mineralization.

However: these structures, appear to be a potentially important, to understanding the association of feldspathic sub-volcanic units, and associated feldspathic volcanic units, that appear to host gold mineralization encountered while drilling for cobalt-silver veins. Gold was discovered by surface trenching.

This is documented in the 2015 assessment report pages 61 and 62 and in the appendices map in: MNDM Assessment File: part 1 of 4 parts:
http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/20000014046/2_56259_10_AssessmentReport_CastleSilver_August2015_**1of4**.pdf

The Castle's, diatreme-like dike intersections, may appear trivial, but it adds credence to the Gold Deposit model *(Orefinders diatreme-like structure [located between Gowganda and Shining Tree] grades 20.32 gAu/Tn/tonne over 51.65-meters).*
The juxtaposition of apparent feeder dikes, and similar appearing volcanic extrusive rocks, and diatremes, forming a feldspathic suite, hosting gold mineralization; **is significant**. This spacial association suggests, the gold mineralization, and a feldspathic subvolcanic-volcanic suite, are spatially, and genetically associated.

Details of Cobalt Deposit's Breccia Textures

At Cobalt, North Cobalt, Casey Township *(Langis*), CSCW's Castle*(Robinson Zone)* and McAra; the Archean volcanic stratigraphic relationships, were paramount in mineral exploration. At both McAra south vein, and CSCW Robinson zone discoveries, the target area was designed, to specifically test in the optimal location, proximal to conductive Archean rocks. This was consistent with relationships that were well established in the Cobalt mining camp before 1975 *(when this author commenced work as mine geologist for Canadaka Mines)*.

At the south projection of the Kerr Lake volcanic sequence *(Conisil Mine 535 x-cut west of Kerr #3 Vein)*, the volcanic breccias, have either a black breccia filling, or pale grey breccia filling. The white matrix, appears to be albitic. The black matrix, is an unknown composition *(probably albitic)*. The host is Archean mafic flows which are probably albitic spilites, and the brecciation appears to represent local, explosive surface events. The fragments are visually identical to the massive, volcanic host. Those breccias do not appear to impact the cobalt-silver model, but the spilite signature may impact the volcanogenic deposit model that explorations companies use/have used in the Cobalt mining camp.

It can be argued, breccia logging is immaterial to gold exploration.

Is the apparent Eby-Otto Igneous intrusive, one intrusive, or multiple intrusions, or are extrusive volcanic rocks also involved? It can be argued that; descriptive logging of the igneous intrusive-extrusive features, are not relevant to gold exploration. However; resolution of the organic-inorganic graphite enigma, is relevant to gold exploration, and the igneous petrology, is also important to resolving the graphite enigma.

Field evidence, and any hypothetical carbon isotope determinations, must reconcilable. If carbon isotope data, and field data must reconcile, field evidence is valid; to support, or, deny the existence of inorganic-graphite, or organic-graphite; in the graphite genesis model, and gold ore genesis model, and the models of alternate deposit types.

If, inorganic graphite, is potentially significant to gold exploration, then, documenting seemingly insignificant field evidence, or core evidence, is expedient, to resolve the graphite enigma. Logging of graphite in the context of its host rock, might be important to gold exploration. Solving the graphite enigma, might enhance, or disqualify the various deposit models discussed in this report.

In hole EO-22-004, there is probably significant additional information, in the relationship of the apparent igneous intrusive rocks, and the apparent intrusive breccia, and the apparent inorganic-graphite, and the black faults. This information is important; to both genetic modelling, and for the use of EO-22-004 as a Base-Line-Hole.

It is important that the logs of lithologies, graphite, faults, shears, and breccia types be backed-up with, descriptive details, that reconcile with the name. Hole EO-22-004. is a Base-Line-Hole: A log user should be able to identify geological features in other holes, or surface exposures, based on either the log descriptions of the base line holes, and rock property data, **independent of** the genetic names used to classify the geology. The key words are "***independent of***".

. *EO-22-004: CLLDZ Alteration*

The CLLDZ overprint appears to include:

- An inorganic-Carbon overprint as graphite.
- An inorganic-Carbon overprint as CaMgFe-carbonate alteration of CaMgFe-silicates.
- An inorganic-Carbon overprint as chlorite-Ca-carbonate alteration (questionable and can have alternate explanations overlapping with the CLLDZ overprint.
- An albite (Na) alteration.
- A sericite (K) alteration.
- A pyrite overprint.
- A gold overprint.

The exact alteration-mineralization zoning sequence is debatable and may be variable from location to location.
The CLLDZ overprint is discussed further in the text of this report.

The exact alteration-mineralization zoning sequence is debatable and may be variable from location to location.

The CLLDZ alteration is further discussed under the subheading "*EO-22-004 Geochemistry*".

. *Conductivity Deposit Model*

During this 2021 field work; this author considered:

- The Conductors within the Archean volcanics to be responses to sulfides and/or, graphite of organic origins, associated with interflow sediments which are

locally reported in these volcanics east of the Reed Leases in Otto Township See EO image below.

- The Conductors along the contact of the Eby-Otto, gabbroic intrusive *(Blue Blob)* contact with its associated volcanics to be potential, intrusive hosted Ni-Au-Cu-PGM-sulfides (an Intrusive analogue kamala Ni-sulfide deposits).
- The conductors hosted within the Eby-Otto, gabbroic intrusive *(Blue Blob)* to be problematic. This author is indebted to CSCW for resolving this apparent enigma.

During this author's, Nov 21, 2022 core-shed visit, hole EO-22-004's **black faults** were being logged. CSCW logged these as graphite, but no rock property data confirms the presence of conductive rock or the presence of graphite in the hole.

During ensuing discussion, CSCW geologist introduced the concept that graphite in Eby-Otto Townships are inorganic carbon introduced along faults during the CLLDZ alteration and/or mineralization event(s). The logical extension of this concept is; both the graphite and CaMgFe-Alteration of Ca-Mg-Fe-silicates resulted from the CLLDZ event, and graphite may be a pathfinder-mineral acting as a vector to gold mineralization within a carbonate alteration envelope.

Graphite as a **pathfinder**-mineral, is supported by an open pit gold mine, located very close to graphitic rock Barber Lake and Hwy 66, which appears to have produced 51,000 tonnes which returned a total of 6,700 ounces of gold for an average reconciled grade of 4.1 gAu/mT *(see MNDM AFRI file 32D04SE0006)*.

<u>Eby-Otto Intrusive Contact Conductors: Nickle Sulfides?</u>

Disclaimer: This author does not consider himself an expert in PGM and Nickle Sulfide deposits. If exploration progresses beyond sampling intuitively favorable mineralization and alteration; it is recommended an independent literature review be undertaken, while seriously considering the following observations, working hypothesizes, and opinions expressed in this report.

In preparation of this sub-heading, a cursory review was read of some PGM and Ni deposits to test this author's working hypothesis concerning the mineral deposits with emphasis on immiscible sulfide melts. This review was hampered by frequent word searches in Bates and Jackson's 788 page "Glossary of Geology". This was particularly problematic, when the geology terms used to describe these deposits, are not in this comprehensive glossary, and are not searchable Google.

Significant terms that appear are "hosted in varitextured xxxx", "altered to hydrous amphiboles", Associated with "deformation," "breccia ore," heterolithic gabbro breccia" ore. Some significant quotes are included in this text.

This author is not recommending a dedicated PGM exploration program. However; it would be prudent to be aware of PGM potential in the Eby gabbro, and the Nipissing Gabbro intrusives. The same applied to Kamalda style Nickle deposits in the Eby gabbro.

This author's working hypothesis concerning Kamalda style Nickle deposits and PGM mineralization are based on drilling the Redstone deposit in Langmuir township south of Timmins and decades of work exploring, and drill planning-core logging of North-eastern Ontario's Nipissing Gabbros.

This author has based his long stranding concept of PGM mineralization in Nipissing Gabbro on three potential modes of PGM mineralization.

1. *A floating stratigraphic horizon encountered in Elk Lake-Gowganda area with low PGM-Au values. This horizon extends without change between holes. In these intrusives these intersections are not considered to have ore potential. These might have PGM-Au potential, if traced along strike, probably towards the more mafic injection point. Mafic phases, assumed to be neat injection point, commonly appear to be pervasively altered. This alteration appears to be due to the disequilibrium of the mafic mineralogy, after initial crystallization. Pervasive alteration of mafic minerals, including amphibole pseudomorphs of anhydrous mafic minerals, appear to be a prominent association with PGM deposits.*
2. *Varitextured gabbro consisting of a fine (~1- mm crystalline mafic phase and a coarse-grained feldspathic phase. In the Nipissing gabbro, the crystal grains are continuous across the phase boundaries. It appears hot mafic magma, was injected into relatively cool more feldspathic magma. It appears the mafic magma was quenched by rapid cooling as irregular masses and the more feldspathic magma absorbed the heat and crystalized as pegmatitic phase with pyroxene commonly reaching 1-5-cm long. The varitextured Nipissing gabbro this author has encountered do not appear to have adjusted for disequilibrium between the two phases.*
   In the literature review it appears PGM's are commonly in varitextured intrusive similar to the varitextured phase of Nipissing Gabbros. One apparent difference is extensive alteration and deformation are common in PGM ore.
   This author observed Lac Des Isles, high-grade PGM core at a prospectors tent at PDAC. That ore had the appearance of varitextured Nipissing diabase and had no visible mineralization.
   ***It is recommended CSCW sample the varitextured phase of the blue blob for Pt-Pd.** The ratios of these metal can be highly variable.*

The Bushveld's Merensky Reef includes high Pt/Pd ratio (c 106:4) and ***Pd/Pt minerals (~20:2)*** ***(the reversed metal order was check from quote*** *https://en.wikipedia.org/wiki/Bushveld_Igneous_Complex)*

The Stillwater Igneous Complex Montana has a Pd/Pt ratio of about 3.6

3. *It appears arsenide veins in the Nipissing Gabbro may contain PGM that has be fractionated from PGM mineralization in the Nipissing gabbro. This author assayed a single arsenide vein (between Elk Lake and Gowganda). One of the metals Pt or Pd was significant. This author's memory has failed to recall which of Pt or Pd was significant and the other barren. This author does not consider arsenide veins, potential strand alone PGM deposits. However; in cobalt-silver arsenide ore veins, PGM and gold could be valuable byproduct metals. The CSCW silver-cobalt veins have significant Au byproduct value.*

   There is evidence that cobalt-silver veins are a late stage product of differential crystallization (silicate petrogenesis) of the Nipissing that creating various phases ranging from mafic cumulates to feldspathic pegmatite, to aplite to cobalt-silver veins.

   It is reasonable to expect any Archean cobalt arsenide veins in Eby-Otto to also host significant PGM and Au byproduct values.

Disclaimer: This petrogenesis model does not ascribe the origin of cobalt and silver to any particular source. The source of the cobalt, and silver mineralization is a contentious issue. This issue remains to be resolved. Until the sources and genesis of these cobalt-silver veins, and other deposits are resolved; geologist must continue to objectively log mineralization, and the host environments objectively, with **appropriate descriptions that will reconcile with the truth**.

Disclaimer: This report uses the term petrogenesis "as a petrologic concept, meaning an equilibrium sequence of mineral phases including the dominant silicate phases of an intrusive*." This adoption appears to not be technically compliant with common usage in geology. However there appears to be no technical term to deal fully with the genetic evolution of a gabbroic magma into various phases. Some of these various phases are in disequilibrium with other phases. This disequilibrium in intrusives, explains much of the alteration developed within intrusives, as they evolve from a parent, juvenile magma into phases, and adjust to changes of temperature and pressure and hydrothermal fluids. This evolution of gabbros; explains why ore alteration is phase dependent. This ore related alteration explains, why; vein alteration in the Nipissing gabbro, is host-phase dependent. This dependency ranges from equilibrium to various styles of alteration mineralogy.*

If the Nipissing gabbro ore alterations are variable. Literature indicated PGM ore related alteration in gabbroic rocks are also variable. ***It is very dangerous to project alteration and mineralization styles from one deposit to other potential ore***

environments. *For this reason; it is recommended CSCW geologist log core objectively using* ***sound prospecting methodology****, in addition to perceived, or static ore deposit models.*

The Conductors along the contact of the Eby-Otto, gabbroic intrusive (Blue Blob) contact with its associated volcanics remain potential, intrusive hosted Ni-Sulfides *(an analogue Kamala-style Ni-sulfide deposits like the Redstone Mine in Langmuir Township south of Timmins).*

Juvenile Mafic and Ultramafic magmas have naturally high Nickle contents, and very low concentrations of non-compatible, Rare-Earth-Elements *(REE)*. These intrusives are significantly hotter than the melting point of many rocks that they intrude *(particularly sulfide bodies and sulfide rich interflow sediments)*. The heat causes thermal erosion, and assimilation of the melted country rock. The assimilated sulfur scavenges Ni-Cu-Au-PGM from the magma, and the heavy metal rich, immiscible melt settles to the bottom of the magma in long-narrow flow-channels *(Redstone Mine < /= 200metrs strike length and probably, thousands of meter plunge distance)*. The host rock is then; typically, depleted in Nickle and enriched in Non-Compatible Rare-Earth Elements that are foreign to the juvenile melt. *(See the reference assessment reports documenting MMI anomalies associated MaxMin conductors of this property).*

The litho-geochemistry of the hole EO-22-004 gabbro appears to be nickel depleted, and much of the ultramafic (flow) volcanic rocks, appear to be have high juvenile nickel content. This low Nickel content of the gabbro, indicates any juvenile nickel has been depleted. If a nickel deposit resulted from this nickel depletion, it is uncertain if it is on the property, associated with MaxMin anomalies, has been eroded, or occurs at depth or off the property.



Image Above: Sulfide outcrop (full width of the image) on Agnico Eagle Ground at the trail head to Reed Otto Township Leases.

Web Page Findings Mafic and Ultramafic Igneous Rocks

Mafic volcanic and intrusive igneous rocks can host massive sulfide Ni-Au-PGM-Cu deposits and interstitial to silicates sulfide deposits are their base or PGM deposits as horizons floating in Ultramafic intrusives.

This concept is discussed in the web Britanica web page:

> *https://www.britannica.com/science/mineral-deposit/Immiscible-melts*
> *Immiscible melts*
> *A different kind of magmatic segregation involves **liquid immiscibility**. A cooling magma will sometimes precipitate droplets of a **second magma** that has an entirely different composition. Like oil and water, the two magmas will not mix (i.e., they are immiscible). The chemical principle governing precipitation of an immiscible liquid is the same as that governing crystallization of a mineral from a magma: when the concentration of a particular mineral within a parent magma reaches saturation, precipitation occurs. If saturation is reached at a temperature above the melting point of the mineral, a drop of **liquid precipitates instead of a mineral grain**. The*

composition of this immiscible drop is not exactly that of the pure mineral, because the liquid tends to ***scavenge*** *and* ***concentrate many elements from the parent magma****, and this process can lead to rich ore deposits.*

Iron sulfide *is the principal constituent of* ***most immiscible magmas****, and the* ***metals scavenged*** *by iron sulfide liquid are* ***copper, nickel****, and the* ***platinum group****. Immiscible sulfide drops can become segregated and form* ***immiscible magma layers in a magma chamber*** *in the same way that cumulus layers form; then, when layers of sulfide magma cool and crystallize, the result is a deposit of ore minerals of* ***copper****,* ***nickel****, and* ***platinum-group metals*** *in a* ***gangue of an iron sulfide*** *mineral. Among the ore deposits of the world formed in this way are the* ***Merensky Reef*** *of the Bushveld Complex, producer of a major fraction of the world's platinum-group metals; the* ***Stillwater Complex****, Montana, host to platinum-group deposits similar to the Merensky Reef; and the Norilsk deposits of Russia, containing large reserves of platinum-group metals.*

Under suitable conditions, ***immiscible sulfide liquids*** *can also become segregated from flowing lavas. An example is offered by the* ***Kambalda nickel deposit*** *in Western Australia. At Kambalda a nickel ore mineral, pentlandite, together with valuable by-product minerals of* ***copper*** *and* ***platinum-group metals****, crystallized in an iron-sulfide-rich gangue from a sulfide liquid that had become segregated from a magnesium-rich lava called a komatiite (named for the Komati River in South Africa).*
Also Britannica lists

Lac des Iles PGM Deposit MNDM Ontario Mineral Inventory 2023

http://www.geologyontario.mndm.gov.on.ca/mndmfiles/mdi/data/records/MDI52H04NE00003.html

Lavigne and Michaud (2001) noted a strong association of PGE mineralization with brecciated rock and ***varitextured gabbro*** *within which magmatic minerals are variously* ***altered to hydrous silicates****. These authors concluded that the mineralization resulted from forcible* ***introduction of a PGE-and sulfide-rich magma into the partially crystallized magma*** *chamber of the Mine Block Intrusion (Stone et al, 2003).*

Reference to Roby Zone

Pervasive alteration *results in the complete metamorphism of the primary silicates* ***to amphibole pseudomorphs****. The psydomorhic amphiboles are*

of use in identifying the primary cumulate mineralogy and for classification of the igneous layers. Narrow zones of mylonitization occur locally, resulting in significant decrease in grain size of the cumulus and intercumulus minerals.

List of PGM Metals

The platinum group metals in order of increasing atomic weight are:
ruthenium (Ru),
rhodium (Rh),
palladium (Pd),
osmium (Os),
iridium (Ir), and
platinum (Pt).

Large-Flake-Graphite Conductors

This author considers the possibility; some of the MaxMin conductors, regardless of their origin; could be responses to Archean-age, Large-Flake-Graphite. This author is of the opinion, that many geological processes including metamorphism tend to increase grain size, and deformation processes tend to reduce grain size. This concept was developed to reconcile, with the Archean age, Large-Flake-Graphite deposit, this author logged in from the Cartheil Property, which is located "170 km north of Rouyn-Noranda in the Northern Abitibi Greenstone Belt".

Cobalt Vein Conductors

This author has performed extensive work in the Cobalt(+/-silver) deposits in NE Ontario including: Agnico Eagle *(Beaver Mine)*, Canadaka Mines *(Bailey, Conisil, Giroux, South Giroux, University, and Cleopatra Mines)*, Liberty Mines *(McAra High-grade Cobalt Deposit)*, Hastings Group *(Gowganda Silver-Camp Exploration)*, Creso Exploration *(gold exploration in the Gowganda-Shining tree gold-silver environment)* and CSCW (Castle Mine).

This experience has convinced the author the three main ore controls of ore deposits are **Geochemistry**, **Geophysics** and Geology. It appears Geochemistry and Geophysics are the most important of the three general ore controls.

> *An Analogy: If Ore Deposits are comparable to fruit. Geology is comparable to the basket that holds the fruit (ore) and Geochemistry and Geophysics are comparable to the roots and stems of the plant that produced the fruit.*

This author considers; the Archean-age Gabbro, and the Archean structures as the Archean analogue, of the classical Cobalt-Silver deposits of he has explored and mined

in Cobalt Mining Camp, North Cobalt Mines, Casey Township (Langis Mine) and CSCWs' Castle Property. Very little is missing. 15 km to the west of the Eby-Otto property, the same Archean geology, hosts the Bert Township Cobalt occurrence *(hole SG-08-04)* grading 4.18% Co/4.0 m. This vein is hosted in an Archean gabbro intrusive similar-to and smaller than the Eby-Otto gabbro.

On April 26, 2023, CSCW indicated intersections comparable to the Bert occurrence should be EM conductors. CSCW has put a lot of effort in understanding the geophysics of extremely conductive, extremely thin, Cobalt veins and Cobalt Silver veins. From the EM-IP perspective, thin, extremely conductive graphite, introduced into faults is reasonably expected to be an analogue of Cobalt-Silver veins. The jury is out on this issue effectiveness of EM and IP surveys on Cobalt veins and Silver-Cobalt veins. By extension; the jury is also out on the EM and IP responses of thin graphite fault fillings.

This author works on the principle that two types of Conductive-Capacitance *(Impedance)* metallic minerals. These are:

- **Annealing** metallics that tend to anneal in geological processes. Silver and chalcopyrite appear to qualify as annealing metallics. Geological processes tend to smear or recrystallize these minerals. This process tends to improve and/or preserve their electrical conductivity.

  It appears graphite probably anneals during shearing and bifurcates during crystal enlargement *(formation of Large-Flake-Graphite)*.

- **Bifurcating** metallics that tend to break apart, with resistive minerals separating the broken mineral grains. Pyrite, cobaltite and possibly other arsenides, would have this bifurcating tendency. This tendency, would reduce their conductivity, and possibly increase their capacitance (IP Effect).

  In theory; the presence of an annealing minerals like native silver would nullify and tend to overwhelm the bifurcating impact of minerals like pyrite or cobaltite.

  This authors believes the (apparent) Archean age Arsenide Veins such as the McAra mineral resource and the Bert Township occurrence, are bifurcation mineral occurrences. Also: arsenides lacking native silver, are expected to be isolated crystal grains separated by calcite.

- Cobalt-Nickel veins and Cobalt-Silver veins are commonly associated with faulting. Commonly these vein deposits are donut deposits, centred on conductive rocks.

- In the CSCW model of Eby-Otto graphite, involves inorganic graphite deposited in faults. These faults, and associated graphite are probably associated with the CLLDZ alteration-mineralizing event. A November 21, 2022 discussion

associated with the viewing the Black Faults in EO-22-004, dealt with the genetic origin of apparent graphite in that core being logged at that time. CSCW convincing caused, this author to change his graphite genetic model to include inorganic-graphite emplaced into faults as an important genetic model.

Ironically; this major graphite model reorientation, does not change the drill recommendations presented to CSCW. All the proposals remain prioritized gold as the primary drill targe, with critical metals; including Cobalt, Nickel, and Large-Flake-Graphite remaining secondary targets. The secondary targets remain focused at and near the MaxMin conductors. Also: introduced graphite has become a pathfinder mineral for gold. If we find ore, using the wrong model, we can assign the genesis enigma to the mine geologist to resolve.

The concepts in this subsection; are discussed in deal, within this report under the heading, "*Regional and Property Geology*".

6.0 EXPLORATION HISTORY (SUMMARY)

Prior to James Reed staking the property, (circa 1980) very little information of previous work, was evident in the literature, or on the ground. Field evidence; of significant previous field work, included: three bedrock pit-trenches identified, and reported in 1994 assessment reports by this author).

The property owners performed seven significant exploration phases as follows:

1. Circa 1980 field work by James Reed including: grid cutting, geological mapping, a VLF survey, trenching, and minor X-Ray drilling.
2. 1994-1997 field work by Douglas Robinson, and James Reed *(and Nastek 1996)*: including grid cutting, detailed geological mapping, detailed total magnetic field surveys and MaxMin EM surveys.
3. 1995 to date, Grid Maintenance.
4. 2012 MMI survey by this author.
5. 2018 MMI survey by this author.
6. 2021 hand stripping and channel sampling program, by this author, and Canada Silver Cobalt Works, and an orientation drone magnetic survey by FERA UAV.
7. 2022 SOS Surveyors on Site Inc:
    a. SOS **Boundary Survey** reported in this report.
    b. **S**OS survey of the reference-points used in subcrop mapping reported in this report.
    c. grid survey reference-points reported in this report.

8. 2022 Drone UAV-Borne **Magnetic Survey**,
9. 2022 Dias Geophysical DIAS32 **RESISTIVITY/IP** SYSTEM IP survey and diamond drilling (Laframboise) by Canada Silver Cobalt Works. Report from CSCW pending
10. 2022 CSCW drilling of hole EO-22-004 discussed in this report.

The old geological and surveys performed prior to 2021, are discussed directly below. The recent work is discussed under the headings: "**EXPLORATION RATIONAL**" and/or "**EXPLROATION PROGRAM**" as deemed appropriate to maintain continuity of these two overlapping contents.

. *1994-1996 Linecutting, Magnetic Surveys MaxMin Surveys*

The property owners; James Reed and this author cut in excess of 40-km of grid lines in the 1994-1996 field seasons. Total magnetic field strength surveys, and multi frequency MaxMin surveys, and detailed geological mapping, were performed by this author and his family during 1994-1996".

THE 1994 portion of this work, was supported by OPAP grants. The 1996 work, was funded by Nastek Exploration Ltd. and reported by James Tilsley and Douglas Robinson *(See MNDM assessment files referenced to this report)*.

The Nastek option, including a planned drill program, was terminated within ten days of MNR's (leaked) proposal; that recommended, the placement of a Lands for Life provincial park on the property. This park proposal, was abandoned approximately 18 months later.

Selected portions of the grid; including the Base Line, were maintained between, and during the subsequent phases of exploration.

. *2012 and 2018 MMI Surveys*

The two MMI surveys performed on this property, were funded personally by this author.

Personal resources, prohibited a full MMI survey. This MMI work was performed as an orientation survey, to determine the signature of exploration targets identified in the 1994-1996: geology mapping, and MaxMin Surveys.

These two MMI survey introduced a novel concept, of normalizing "oxidated sample" values, and "reduced sample" values, to compensate for a major difference in response of metal concentrations, that are caused by the impact of oxidation and reduction. These resulted in a major statistical shift in threshold values which were compensated for by this normalization. This concept involved plotting both raw data, and normalized data, on the individual line profiles.

This normalization process is a controversial process. Many geologist-geochemist believe; oxidation, and reduction state of the sample medium, do not impact MMI data. Both the raw data, and normalized data, were plotted the same profile. This duplicated data plotting is intuitive, and accommodated geologists of both opinions.

The 2012 data of the oxidized sample analyses data statistics, were normalized *(reconciled)* to be equivalent to reducing data. This decision was established because the exploration targets were in swampy lineaments.

Since 2012, this author has performed MMI surveys, including the 2018 MMI survey, by normalizing reduced sample analyses to equivalent oxidized data. **Normalizing data to oxidized equivalents appears to be the better process**.

All the MMI work was very low impact work, that exempt from permitting-applications and plan-applications. First nations groups were consulted by in-person meetings.

MMI: Light Rare Earth Implications

The MMI work included plotting the Light Rare Earth Metals; Cerium ***(Ce)*** and Neodymium *(Nd)*.

Background work dealing with this report, has considered the implications of REE to tracking Ni-PGM-Au depletion from Juvenile ultramafic-mafic magmas. Depletion of Ni-PGM-Au from the parent magma is accompanied by enrichment of REE within the resultant melts.

Ore from the bushveld complex can contain enrichment of REE. This enrichment was noted in the literature review. That documentation was a spacial observation and no opinion was expressed concerning the cause of this spacial association. It could be assimilated REE or that REE could be the natural enrichment of these non-compatible elements resulting from fractional crystallization.

If the Archean Gabbro (AGAB) phase of the Eby-Otto gabbro is enriched relative to the Mafic Intrusive (MI) phase this would be explained by fractional crystallization. This REE associated would then be ambiguous. If fractional crystallization of MI results in AGAB formation, a resulting REE enrichment would be expected. It would be expected MI and AGAB associated MMI would form two REE populations. MMI samples collected in shallow overburden, tend to have elevated metal values, relative to samples collected from deep overburden. These two scenerios, create two levels of noise in MMI sample data.

If the MMI sample collector, makes appropriate sample descriptions, including proximity to subcrop-outcrop and slopes, it is valuable in anomaly evaluation. Also referencing sample location to the underlying MI-AGAB may be important.

A cursory review of the MMI data was performed during preparation of this report. This review in indicates:

- Au and Ce may have a correlation based on the Reed Showing MMI.
- The REEs Ce, and Nd may have a correlation with some conductors and not other conductors. A Ce and Nd anomaly at 4000mE at 200mN is located at the contact of the gabbroic intrusive and the Archean volcanics. This anomaly may be significant for Nickel. It may also be a significant CLLDZ break, with Au significance.
- Rb may have a correlation with CLLDZ faults.
- Zn may have a correlation with the impact area of CLLDZ faults.
- Several Co and Ni anomalies may be significant to Co-Ni vein targets

Chart below: Light Rare Earth Element and the Lanthanide Series Metals

	Atomic Number		Lanthanide Series Metals
LRE	21	Sc	Scandium
LRE	39	Y	Yttrium
LRE	57	La	Lanthanum
LRE*	**58**	**Ce**	**Cerium**
LRE	59	Pr	Praseodymium
LRE*	**60**	**Nd**	**Neodymium**
LRE	61	Pm	Promethium
LRE	62	Sm	Samarium
LRE	63	Eu	Europium
LRE	64	Gd	Gadolinium
	65	Tb	Terbium
	66	Dy	Dysprosium
	67	Ho	Holmium
	68	Er	Erbium
	69	Tm	Thulium
	70	Yb	Ytterbium
	71	Lu	Lutetium

LRE* = Tracked in Eby-Otto MMI Surveys

LRE = Light Rare Earth Elements Metal (Light Rare Earth Metals)

MMI: Some explorationists swear by it and some swear at it.

This author considers MMI surveys useful but dangerous. MMI appears to be a valuable tool; provided the data from reduced environments is normalized to the oxidized

environment equivalent. MMI is valuable to prioritize exploitation targets. However: MMI should not be used as the primary exploration tool.

The MMI surveys of this property should be reevaluated. The first step would be to normalize all the data to the oxidized environment. The MMI surveys concentrated on the identified exploration targets, and this may have skewed the results, making interpretation less decisive than desired. Based on this re-evaluation, consideration could be given to expanding the MMI survey to cover a wider areas.

7.0 EXPLORATION PROGRAM

This report deals with, the 2021 exploration program in the context of the 2022 exploration program. The 2022 exploration program has been discussed in detail in other reports. The 2021 work involved **grid re-chaining**, locating **lost historic showings**, hand **stripping,** and pail washing, hand cleaning-scrubbing, **channel sampling**, subcrop **mapping**, **assaying**, drafting, and an orientation **drone magnetic survey**.

SOS Surveyors on Site also conducted a boundary determination, a UTM survey of grid pickets, and the reference-points determination of the subcrops documented in this report.

The scope of this report is expanded to include comments linking this work to the 2022 exploration which included drone magnetics, and IP, and diamond drilling. The scope has also been expanded; to deal with genetic modelling, involving the Eby-Otto gabbro ore deposit models, and Cobalt Vein models and Large-Flake-Graphite models. These deposit models were derived; from this authors extensive work in the Castle **Nipissing gabbro,** which hosts, the CSCW Cobalt-Silver resource.

In addition to the Cobalt-Silver resource, the Gowganda area, Castle Nipissing gabbro and Archean mafic, ultramafic feldspathic volcanics and intrusives hosts ore grade Au intercepts.

> *"Canada Cobalt Works (TSXV: CCW) announced the discovery of* ***unexpected high-grade gold*** *in addition to* ***more high-grade cobalt****, silver and nickel at its* ***Castle mine*** *in Ontario, Canada.*
> *Highlights of the discovery include, among other results,* ***22.7 g/t Au*** *and* ***1.03% Co*** *in drill hole C-U-19-016" ……*
> *"The presence of gold in gabbro (diabase) vein structures, open toward the surface and at depth, is extremely intriguing," Matt Halliday, Canada Cobalt's VP-exploration,*
> *Quote from 2020-01-03 press release:*
> *https://www.mining.com/canada-cobalt-works-discovers-high-grade-gold-at-castle-mine/*

Also see quote from 2023-05-08 Press release
https://www.canadasilvercobaltworks.com/news/stripping-begins-at-castle-east-to-follow-up-on-silver-and-gold-intercepts/

***"Channel sampling from** the 2014 **trenching** returned values of 3.77 g/t Au over 1,27m, 1.16 g/t Au over 0.83 and a further 1.25 g/t Au over 0.83m. Drill intercepts in this area can be seen in Table below. This phase will include channel sampling over prospective targets.*

- *Stripping to follow up on **4,710 g/t silver over 0.53m** from 64.99 to 65.52m in hole CS-22-115.*
- *Additional follow-up on the nearby **24.95 g/t gold** over 0.30m from 49.70 to 50.00 in hole CS-20-31.*

Hole ID	From (m)	To (m)	Length (m)	Au gpt
CS-18-16W	315.97	316.34	0.37	3.26
CS-19-19	298.00	299.00	1.00	**15.20**
CS-20-25*	315.00	316.00	1.00	5.00
CS-22-108	276.00	277.00	1.00	2.94

*In May 2020, based on a small initial drill program, the Company published the region's first 43-101 resource estimate that contained a total of **7.56 million ounces of silver** in **Inferred resources**, comprising very high-grade silver (8,582 grams per tonne un-cut or 250.2 oz/ton) in 27,400 tonnes of material from two sections (1A and 1B) of the Castle East Robinson Zone"*

In this authors extensive experience at the Castle project, and 15 years underground in the Agnico Beaver-Temiskaming Mine , and Canadaka mines' producing silver mine, has impacted this authors genetic ore models. The major conclusion is: mineral deposits are controlled by the **geochemistry**, and **geophysics** processes at time of deposition, and these processes are more important than the age of the host rocks. The **geochemistry** and **geophysical** gradients, not age of intrusive, may be to be **primary cause of cobalt** (+/- Silver) **vein deposits**.

It is important to note: the CSW's Cobalt-Silver veins and high gold values are hosted in both the **Nipissing Age Gabbro**; and in the **Archean age intrusive** and **extrusive ultra-mafic, gabbro and feldspathic rocks**. It appears the silver veins are Nipissing age, and the gold values may include both Archean and Nipissing age mineralization.

Significant, sub-economic Au-Cu values have also been encountered in **Huronian age** rocks *(Hole CS1107: 138.11-139.27 1.16m at 1.727 gAu/mT).*

This author recognizes the Eby-Otto gabbroic intrusive appears to have the geological, and geophysical requirements, for cobalt mineralization *(possibly with very low silver values)*.

This author's concept of Archean age Cobalt deposits; is impacted by the apparent Archean age of the McAra Deposit, which he drilled, and the apparent Archean age of the Bert Township occurrence, which he is familiar with.

The McAra deposit is discussed below in a Battery Minerals Resources public release:

> *"McAra is the highest-grade primary cobalt deposit delineated in North America in the last 50 years. The McAra deposit hosts measured & indicated* ***NI 43-101*** *resources of* ***1,124,000 lb of cobalt equivalent*** *and inferred resource of 216,000 lb of cobalt equivalent. Mineral resources are reported at a cut-off grade at 0.75% cobalt equivalent, using a price of US$16 per lb. cobalt and US$17 per oz silver."* *(Quote from https://bmrcorp.com/projects/cobalt-silver/mcara/*

The Bert Township occurrence is drill hole EO-22-004; which grades 4.18 %Co over 4.0 meters from personal communication with and from a report by Michael P. Rosatelli, M.Sc., P.Geo. quoted below:

Sample	From	To	Width (m	Co	Ni	Ag
311708	110.00	111.00	1.00	1.79%	0.13%	3.0 g/t
311709	111.00	111.90	0.90	4.36%	0.36%	7.0 g/t
311710	111.90	112.30	0.40	1.31%	0.11%	4.0 g/t
311711	112.30	114.00	1.70	6.33%	0.61%	22.0 g/t

Also: this author has outlived his allotted "three-score and ten years," and there is no assurance his experience will not be lost, if not documented. While the opportunity lasts; It is important to present 50+ years experience to CSCW and for the good of the property.

2022 Field Work

The 2022 field work; involved both low impact, and moderate impact work *(that was performed, under plan-permit applications*). This work is reported separately by Canada Silver Cobalt Works.

SOS Surveyors on Site Inc performed a high precision Boundary Survey of the key exploration areas. This survey was performed, to establish the location of the exploration areas, within the confines of the property.

SOS Surveyors on Site Inc. also performed their routine exploration reference-point survey documenting precise UTM locations of:

- all the *(0+00N)* locations of cross-lines, along the 0+00N *(1994)* base-line.
- 100-meter spaced pickets along key grid lines connecting the base line to key 2021 exploration sites.
- the reference-point-pairs used to map the 2021 hand-stripped subcrops.

A 2022 drone, UAV-Borne Magnetic Survey was performed, based on the 2021 preliminary drone magnetic survey. Total magnetic field strength, and current first vertical derivative survey lines were flown along 50-meter spaced N-S lines *(parallel to the ground grid located between lines 1600E to 4700E).* The report, and orthogonal pseudosections and pseudoplans are still pending from CSCW.

A Dias Geophysical "DIAS32 RESISTIVITY/IP SYSTEM" IP survey was performed in the fall of 2022, and early winter of 2023. The IP lines were spaced along N-S 300-meter spaced lines with a 75-meter receiver, and 105-meter injection spacing. The report on this field work is pending.

Laframboise drilling, performed drilling in in between November 16, 2022, and November 27, 2022 inclusive.

Canada Silver Cobalt Works has submitted assessment work reports for much of this work. This report involved an evaluation of the drilling and assaying. It does not deal with other 2022 and 2023 work performed by Canada Silver Cobalt Works.

Historic Drilling

"In 1984 James D Reed drilled 6 shallow holes in outcrop areas". A small diameter packsack drill was used. This drill was not capable of penetrating deep overburden.

Personal communication with James Reed indicates the core was not assayed. The core is stored at the MNDM Kirkland Lake Core Library. Considering the ambiguity concerning core assaying a review of the core is warranted to confirm if the core was assayed.

During an MNDM Core Shed visit; I recall; round core with alteration zones as expected within the impact zone of the CLLDZ.

CSCW 2022 Hole EO-22-004

During 2022, Canada Silver Cobalt Works drilled a single hole: EO-22-004 to a depth of 969-m meters The hole was collared at UTM NAD83 Zone 17: Easting 5,326,540.6-mE

and 552,168.0-mN which is ground grid coordinates 2608-mE 259mS. The hole was collared at 345.2^{o} Dip 56^{o}.

. *EO-22-004 Base Line Hole*

Hole EO-22-004 is the prime base-line-hole on the Reed-Robinson property.

A base-line-hole; is a hole that defines the type lithology, alteration, veining, structures, X-Y-Z-dip-strike, and rock property signatures of a property. It is critical to exercise extra care in logging a base line hole. It sets the standard for future logging.

The original logger of a base line hole, is ultimately responsible for enhanced Quality-Assurance; of geological and Rock-Quality data.

Holes drilled 100-meters or more from the nearest base line hole, should be logged with sufficient care to ensure consistency of lithology and Rock-Quality data laterally and vertically with the nearest base-line holes. These holes would then be considered as additional base line-holes. Establishing consistent base-line holes; supports, assured consistency over significant distances, over time, and among loggers and between drilling and surface mapping.

It is particularly critical to establish reliable, and predictable petrology, alteration and the rock properties SG, and magnetic susceptibility, and other geophysical and geochemical signatures of the geology with definitive descriptions to supplement the lithology and alteration unit names.

In base-line holes, the diagnostic petrological and minerals descriptions are established to be descriptively, mineralogically, and texturally diagnostic of the lithological and alteration units and their sub-units-phases.

The rock property signatures, must be established to determine the natural ranges of lithological units, and their sub-units. This need is discussed separately in this report. It is particularly critical, to distinguish sub-unit signatures. If the sub-units, within a logged lithology, have separate Rock-Property signatures, then indiscriminate Rock-Property data from that unit are compromised. For example: hole EO-22-004; appears to have several subunits, logged together within the name “Mafic Intrusive”.

If **surface lithologies**, along **surface traverse** along the surface trace of a hole that cuts vertical stratigraphy; cannot be **independently correlated**; with certainty, with the **lithologies logged** in that hole, that hole has failed as a base-line-hole. Ideally, the lithologies should be identifiable, using only the Rock-Quality data of the hole, or lithological descriptions. It is the reconciliation of Rock-Quality log, and the geology logs, that establishes Quality Control of the geology log, and Rock-Quality log.

This author traversed the area of this hole, and could not corelate the surface geology with the drill log geology or the rock quality data. EO-22-004 fails as a base line hole. The data, and descriptions are not diagnostic, or correlatable *(data to 400-meters)*.

A over concentration, on an exact geological classification, is a hindrance to the property and to the company. The saying "*Four geologist, and five opinions*" refers to this scenario. Good base-line-holes, depend on supporting evidence, and descriptions, to justify the geological classifications used. Also, Good base line-holes, depend on establishing, and documenting the easily recognised, and easily verifiable, diagnostic signature of the geological classification.

The alteration shown below, appears to be controlled by the original, protolith lithology. The pale brown spots, are diagnostic, and appear to be pseudomorphs of that petrology, or are interstitial to other minerals. A geologist may not know what this is, or can be sincerely wrong in classifying it. A good base-line description of this rock; that easily recognized in both core, and in outcrop, is as important as a correct classification. **A good description is superior** to an incorrect classification, or a description that cannot be easily recognized and is correlatable.



Image Above:[4845] *This is a chunk of channel sample 7740. This is dark green, brown spotted- chlorite alteration typical of the R-Vein Subcrop and was observed on other area on the grid.*

"*Who knows what this apparent alteration is*"*?* This unit was almost certainly intersected by EO-22-004. Only the core logger, is likely to be able to correlate this sample to the drill hole geology.

If this unit cannot be correlated to the drilling, there is a problem.

. *EO-22-004 Zones: Logged Embedded as "Significant"*

Hole EO-22-004 was extensively veined, and hosted widespread sericite alteration. The veining, and alteration were extensive. The logger, **embedded statements** identifying the significant zones. Without these embedded statements, evaluation of this hole, would have been much more difficult, and the conclusions less reliable.

The zones, were named, during preparation of this report. The zones were named; Zone 1 to Zone 5 inclusive. The numbering of these zones, are ordered from north to south. Below are quotes from the intersections logged as "**significant**" by embedded statements:

*157.16 198.15 "Mafic Intrusive; Archean Gabbro ……. **Significant** qtz/carb veining from 166.95-168m, are weakly Kspar altered + purplish alteration of qtz. ……"*

. *Zone 5*

*284.50 286.2 "Fault Zone **Significant** brecciation fault zone that appears to have been later remelted and ductilly deformed, yet still clast supported with graphitic (+gouge) fracture surfaces. Most intense zone (texturally destructive) from 284.50-286.30m. Possible pre-deformation 5-10cm qzt/carb vein from 285.20-285.35m. Beta angle could not be measured. Alpha averaged. (DRR Only slips are described like conductive material. Slips are thin and thin conductors have very low conductivity-Thickness making them problematic like silver veins. See CSCW work)."*

*284.50 286.2 **Significant** brecciation fault zone that appears to have been later remelted and ductilly deformed, yet still clast supported with graphitic (+gouge) fracture surfaces. Deformation 5-**10cm qzt**/carb vein midway through(?) Unable to get beta, alpha averaged.*

. *Zone 4*

*371.05 372.2 Fault Zone **Significant** texturall+G16y destructive fault zone. Possible multiple deformation periods. Appears to have indistinctive angular breccias that have been later ductilly deformed. Appears to be composed of healed gouge and this black material tha+G16t may very well be graphite (patchy hard areas). Graphitic fracture surfaces. Possible pre-deformation qzt/carb veining, as breccias appear whiter/silicified. Pink vuggy qzt/carb dyke with sharp UC/LC at 60-70 dTCA from 371.16-371.62m. Contains about **5-8% fine-grained stringers of Py** throughout affected by deformation. Beta angled cannot be measured. Averaged alpha angle measured. SG cannot be*

*measured. (DRR general observation "black (graphitic appearing) silicifed material tends to be **lack electrical continuity** {non-conductive}).*

389.35 390.15 *"Fault Zone Similar to fault zone from 371.05-372.20m. **Significant** texturally destructive fault zone with possibly multiple deformation periods.. First 20cm is a clast-supported qtz breccia with carb infilling, followed by what appears to be indistinctive angular breccias that have been later ductilly deformed. Majority of this section is composed of healed gouge (that is vuggy) black material that may very well be graphite. About 5-10cm of rubble before and within ductile zone. Graphitic fracture surfaces. Possible pre- and post-deformation qzt/carb veining, as breccias appears whiter/silicifed. Later stage veining appears slightly pinkish. 10cm of 1-2% discontinuous stringers and blebs of Py within breccia zone. About 1% sphalerite or Py thin stringers within ductile zone. Beta angled cannot be measured. Averaged alpha angle measured. SG cannot be measured. UC and LC are relatively sharp at 60 and 35 dTCA, respectively. "* (DSR 389.35-400.75-m Associated Au,-Ag--As-Sb-Cu-Zn-Te anomaly appears to overprint main lithology). (DRR general observation "black (graphitic appearing) silicified material tends to be lack electrical continuity {non-conductive})."

390.15 411.85 *Mafic Intrusive……..**Significant** breccia zone from 396-399.6m that is dominantly qtz/carb/chl infilled + graphite near the beginning, as well as a possibly ductilly deformed zone from 408.90-409.70m. …….*

396.00 399.6 "**Significant** breccia zone that is dominantly qtz/carb/chl infilled. Some graphitic black material infilling within the first 70cm. Significant qtz/carb flooding within the last 60cm."

. *Zone 3*

470.94 471.75 *"Fault Zone **Significant** texturally destructive fault zone, predominantly composed of black (graphitic) silicified material with moderate foliation/trend of ductile shearing. First 30cm is alternating between layers of host rock and infilling of this graphitic material. Graphitic fracture surfaces. Appears to be a 1.5cm qtz/carb vein near the middle, followed by a couple of thin stringers, all following foliation trend. UC is sharp at about 45 dTCA, but lower contact is irregular and slightly diffuse, difficult to get proper angle. 3-5% Py predominantly associated with graphitic carb, typically as fine-grained foliated blebs, and disseminated. A 1.5-2cm wide zone of clustered medium to coarse-grained euhedral Py surrounding barely identifiable discontinuous qtz/carb stringer, after previous stringers mentioned."* *(DRR general observation "black (graphitic appearing) silicifed material tends to be lack electrical continuity {non-conductive}).*

475.75 476.75 *"Fault Zone **Significant** texturally destructive fault zone with possibly multiple deformation periods. Appears slightly brecciated within first and last 20cm but predominantly ductily foliated/trend. Majority of this fault zone is composed of silica altered black graphitic material. Graphitic fracture surfaces. Healed gouge of same composition 476.30-476.40m. Possible pre- and syn-deformation qzt/carb veining, as breccias appears whiter/silicified. 2-3% as fine-grained, as small blebs, and as discontinuous hairline fracture infills, all typically following shear trend/foliation - majority found before gouge section. UC and LC are relatively sharp at 45 and nearly 90 dTCA, respectively."* *(DRR general observation "black (graphitic appearing) silicified material tends to be lack electrical continuity {non-conductive}).*

. Zone 2

635.40 654.8 *"Mafic Intrusive "Grey to greenish, medium to coarse-grained, homogeneous, MI unit. First 1.5-2m appears coarser - nearly AGAB looking but gradually decreases to medium-grained throughout. Moderate pervasive chl alt within the first 2m, gradually weakening until 643, and appears very weak to pretty much absent afterwards. First 5-6m of unit, as well as last 3-5m of unit, appears to have some weak degree of foliation that can be measured at 20-40 dTCA. 1-2% qtz/carb stringers throughout at angles of 50-70 dTCA. A few 1-3cm wide qtz/carb veins throughout at angles of 10-30 dTCA + <1% stringers at similar angles. Some minor chl / ser alt can also be seen associated with these stringers and veins. A **significant** zone of qtz/carb 643.65- 644.60m, which contains about 4-5% very fine-grained euhedral Py as disseminated and fracture infilling. Otherwise 1-2% fine- to medium-grained euhedral disseminated Py throughout, often seen rimming qtz/carb veins, and present in higher concentrations within the 1m before and after the significant qtz/carb vein. Upper contact is generally sharp at 35-40 dTCA and lower contact is sharp at about 50-60 dTCA."*

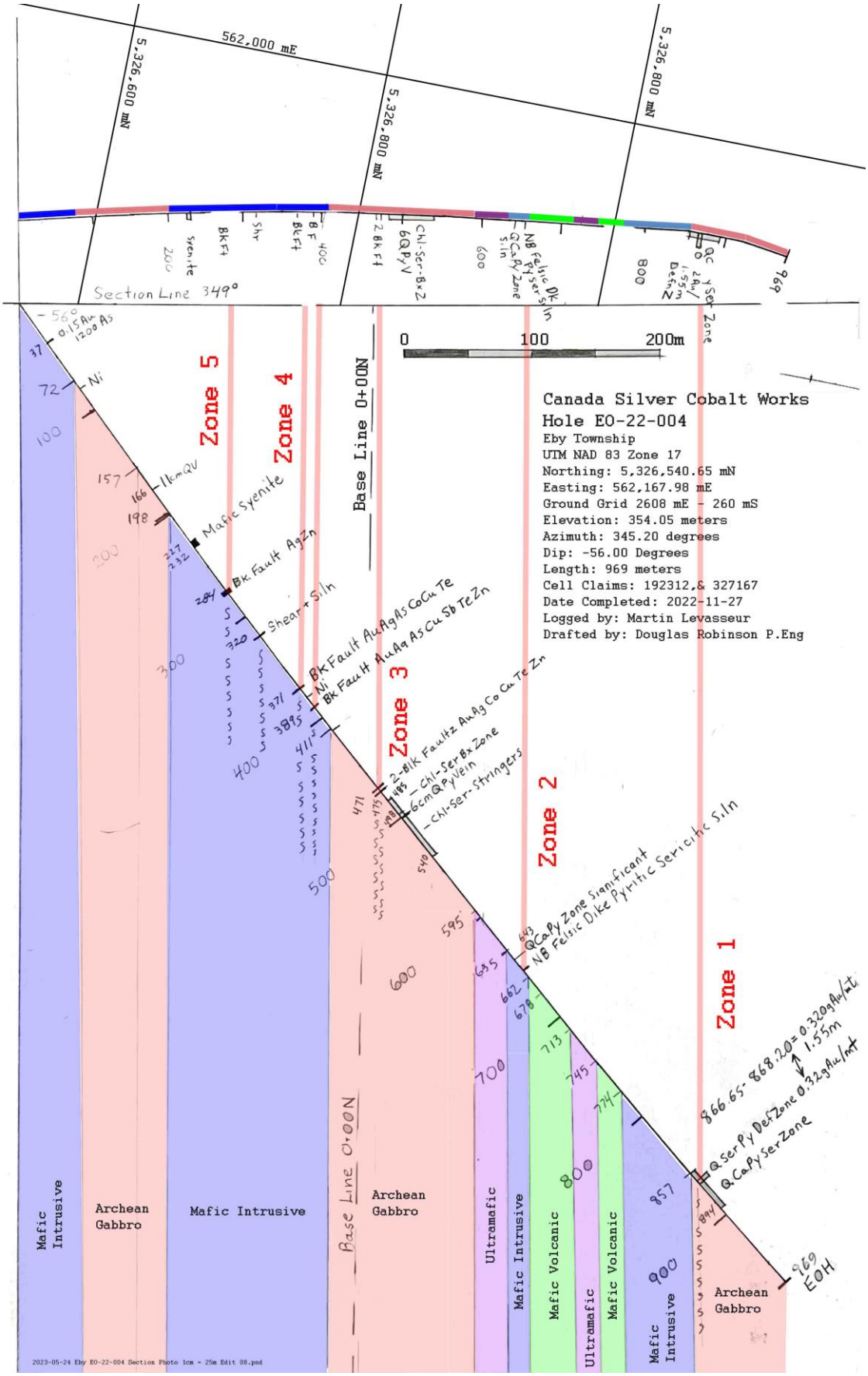
635.40 643.65 *"1-2% fine- to medium-grained euhedral disseminated Py throughout, seen rimming qtz/carb veins, and present in higher concentrations (2%) within the 1m before the **significant** qtz/carb vein."*

643.65 644.60 *"A **significant** zone of qtz/carb zone, which contains about **4-5% very fine**-grained euhedral **Py** as **disseminated** and **fracture infilling**. Some chl infilling can be seen within it as well. UC is easiest to measure but grinded core does not allow or beta angle. LC is undulating and therefore angles are not very reliable."*

644.60 654.80 *"1-2% fine- to medium-grained euhedral disseminated or blebby Py throughout, seen rimming qtz/carb veins, and present in higher concentrations (2%) within the 1m after the **significant** qtz/carb vein."*

. *Zone 1*

865.90	*868.20*	*Zone grading 0.232gAu/mT over 2.30-m including 866.65-868.20 grading **0.320 gAu/mT over 1.55-m**. (Calculation by DRR)*
868.20	*870.50*	*"Moderately to strongly chl/epi/sil (+/- ser/fuchsite), with webby hairline chl infilling, all crosscut by later qtz/carb stringers. First and last 30cm is heavily brecciated with multi-generational with chl/qtz veining."*
284.5	*286.2*	*"**Significant** brecciation fault zone that appears to have been later remelted and ductilly deformed, yet still clast supported with graphitic (+gouge) fracture surfaces. Deformation 5-**10cm qzt**/carb vein midway through(?) Unable to get beta, alpha averaged."*


562,000 mE
5,326,600 mN
5,326,800 mN
5,327,000 mN
Section Line 349°
-56°
0.15Au
1200As
Ni
Zone 5
Zone 4
Zone 3
Zone 2
Zone 1
Base Line 0+00N
0
100
200m
Canada Silver Cobalt Works
Hole EO-22-004
Eby Township
UTM NAD 83 Zone 17
Northing: 5,326,540.65 mN
Easting: 562,167.98 mE
Ground Grid 2608 mE - 260 mS
Elevation: 354.05 meters
Azimuth: 345.20 degrees
Dip: -56.00 Degrees
Length: 969 meters
Cell Claims: 192312,& 327167
Date Completed: 2022-11-27
Logged by: Martin Levasseur
Drafted by: Douglas Robinson P.Eng
Mafic Syenite
Bk Fault AgZn
Shear+Silh
Bk Fault AuAgAsCoCuTe
Bk Fault AuAgAsCuSbTeZn
2-8Bk Faultz AuAgCoCuTeZn
Chl-Ser Bx Zone
6cm Qz Py Vein
Chl-Ser-Stringers
QCaPy Zone Significant
NB Felsic Dike Pyritic Sericitic Silh
866.65-868.20=0.320gAu/t 1.55m
Qz Ser Py Def Zone 0.32gAu/t
QCaPy Ser Zone
969 EOH
Mafic Intrusive
Archean Gabbro
Mafic Intrusive
Base Line 0+00N
Archean Gabbro
Ultramafic
Mafic Intrusive
Mafic Volcanic
Ultramafic
Mafic Volcanic
Mafic Intrusive
Archean Gabbro
2023-05-24 Eby EO-22-004 Section Photo 1cm = 25m Edit 08.psd

. EO-22-004 Geochemistry

This report required, an appraisal of the drill core geochemical analysis, to complete an integration of the various components of the CSCW 2021-2023 exploration program.

CSCW forwarded; two "**Actlabs**" assay data files, "***A22-19030cert&res.pdf,***" and "***A22-19030Final.csv***". The Actlabs analyse are "Ultra-1 (Aqua Regia ICP-MS) for multi-element (base metal, critical metals, alkali metals" and "AA-Au (Fire Assay Atomic Absorption) for gold" *Quote internal CSCW document".*

These files dealt with 326 multi element geochemical analysis; of core from EO-22-004.

The sample intervals, and sample lengths were added to the Actlabs spreadsheet file "***A22-19030Final.csv***". A quasi-anomaly-study was then performed, by selecting, and deeming, the highest analysis anomalous (< 2% of the geochemical metal analysis). A summary of the anomalous samples in included below. This was a blind statistical process.

This study defined 23 anomalous sample intervals, consisting of 43 anomalous samples. The anomalous vales, were separate populations from the rest of the hole. These anomalies appear to be an overprint of the CLLDZ alteration, and mineralization event(s).

The anomalies have a one-to-one relationship, to the drill targets intersected, as Zones 1 to Zone 5. These five zones, are identified in the chart below.

The nickel values, were an exception. High Nickle values in the bottom half of the hole, appear to predate the CLLDZ event. This nickel, appears to relate to the original petrology of ultramafic (flows?), and Archean volcanics encountered in this hole. The elevated nickel in the hole is coincident with high nickel in the MMI samples program. Isolated MMI Nickel values among low Nickel values outside this area should be treated seriously.

The low nickel values in the Mafic Intrusive and Archean Gabbro are favourable to the Kamalda style nickel deposit, and PGM deposit model, as discussed in this report.

The CLLDZ overprint appears to include:

- An inorganic-Carbon overprint as graphite.
- An inorganic-Carbon overprint as CaMgFe-carbonate alteration of CaMgFe-silicates.
- An inorganic-Carbon overprint as chlorite-Ca-carbonate alteration (questionable and can have alternate explanations overlapping with the CLLDZ overprint.
- An albite (Na) alteration.
- A sericite (K) alteration.
- A pyrite overprint.
- A gold overprint.

The exact alteration-mineralization zoning sequence is debatable, and may be variable from location to location.
The CLLDZ overprint is discussed further in the text of this report.

EO22-001 Samples Probably impacted by CLLDZ Mineralizing Event

Sample	Start At	Metal	Units	Description		
2352	37.11	1200.00	As ppm	Coarse Net texture quartz-calcite vein with alteration.	1	1
2352	37.11	0.15	gAu / mT	Sericite alteration Interval		
2556	46.80	1.10	Te ppm	Sericite alteration interval	2	2
2356	46.80	0.60	Ag ppm			
2366	57.00	0.02	gAu / mT		3	2
2385	73.05	0.06	gAu / mT		4	3
2393	79.38	121.00	La ppm	79.38- 85.70-meters anomalous in **La Sr Te.**	5	4
2393	79.38	940.00	Sr ppm	Unknown relationship to ore???? Sericite alteration interval		
2396	82.40	1130.00	Sr ppm	82.40-85.70 anomalous in **Sr La Te** & elevated in Ni	6	5
2396	82.40	1.30	Te ppm	Unknown relationship to ore????		
2397	82.90	810.00	Sr ppm		7	
2398	83.75	104.00	La ppm		8	
2398	83.75	800.00	Sr ppm			
2399	84.75	119.00	La ppm		9	
2399	84.75	727.00	Sr ppm		10	
2407	90.76	0.03	gAu / mT			6
	168.00			10-12-cm true width , coarse grained quartz carbonate vein		
	227.65	232.50	syenite	Mafic syenite (altered amphiboles and intensely chloritized pyroxenes to 0.5 cm)		
2496	285.00	822.00	Zn ppm	**Zone 5** 285.00-286.20-meters anomalous in Ag Zn	11	7
2496	285.00	0.50	Ag ppm	284.50-286.20-meters **Black Fault Zone**. This was		
2499	286.80	0.60	Ag ppm	intersected below the West Riedel zone. This was not an identified MaxMin Conductor. Sericite alteration interval	12	
2506	302.80	611.00	Cu ppm		13	8
2506	302.80	1810.00	Zn ppm			
2513	319.95	0.02	gAu / mT		14	9

EO-22-004 Assay Geochem Anomalies A22-19030 Final. Highlighted 06.xlsx 1 Anomaly Sort

Image Above: Page 1 of 4: EO-22-004: Geochemical Analysis
File EO-22-004 Assay Geochem Anomalies A22-19030 Final. Highlighted 06.xlsx

2517	328.45	187	As ppm		10
2517	328.45	0.023	gAu / mT		
2527	370.05	3000	Zn ppm	**Zone 4** 370.05-373.00-meters anomalous in **Au, Ag As Co Cu Te** and C	15 11
2528	371.05	304	As ppm		16
2328	371.05	2590	Cu ppm	371.05-372.20-meters **Blank Fault Zone** **hard silicified.** This and the fault at 389.35m	
2528	371.05	142	Co ppm		
2528	371.05	2.0	Te ppm		
2528	371.05	1.5	Ag ppm		
2528	371.05	0.055	gAu / mT	were intersected below the East trending	
2529	372.00	1.1	Ag ppm	"South Fault" identified at grid 2643mE-	17
2529	372.20	250	As ppm	025mS. This was not an identified MaxMin	
2529	372.20	2790	Cu ppm	Conductor. There was no MaxMin	
2529	372.20	99	Co ppm	Conductor identified at this location. A	
2529	372.20	1.2	Te ppm	very weak, and questionable, quadrature	
2529	372.20	0.039	gAu / mT	response was identified near this location.	
				That response is the response expected	
				from a wet fault.	
				371.16-371.62-meter Carb-Quartz Vein	
				Sericite alteration interval	
2535	389.35	1220	Cu ppm	**Zone 4** 389.35-400.75-meters anomalous in **Au Ag As Sb Cu Zn Te** and C.	18 12
2535	389.35	3600	Zn ppm		
2535	389.35	23	Sb ppm	389.35-390.1-meters **Black Fault Zone** "may be	
2535	389.35	2.5	Te ppm	Graphite ... silicified ... about 1% sphalerite or	
2535	389.35	9.5	Ag ppm	pyrite". This and the fault at 371.05-m were	
2535	389.35	0.052	gAu / mT		
2536	390.15	0.6	Ag ppm	intersected below the East trending "**South Fault**"	19
				identified at grid **2643mE-025mS**. There was no	
2542	396.00	30	Sb ppm	MaxMin Conductor identified at this location. A	20
2542	396.00	0.5	Ag ppm	very weak, and questionable, quadrature response	
2543	397.00	208	As ppm	was identified near this location. That response is	21
2543	397.00	121	Sb ppm	the response expected from a wet fault.	22
2543	397.00	1.6	Ag ppm		23
2544	398.00	193	As ppm		24
2546	399.70	397	As ppm		25
2546	399.70	0.5	Ag ppm		
	418.15			6-cm quartz-pyrite Vein Kspar alteration interval	
2454	428.10	184	As ppm	Sericite alteration interval	26 14

Image Above: Page 2 of 4: EO-22-004: Geochemical Analysis
File EO-22-004 Assay Geochem Anomalies A22-19030 Final. Highlighted 06.xlsx

2558	470.94	1120	Cu ppm	**Zone 3** 470.94-476.75-meters anomalous in **Au Ag Cu Co Zn Te** and C. 470.94-471.75-meters **Black Fault Zone** "predominantly composed of black (graphitic) silicified material" 475.75-476.75-meters **Black Fault Zone** "Majority ... silica altered black graphitic material" 485.55-490.00-meters "many 5-50-cm zones of clustered (+/- **sericite**) stringers giving it a weak ductile shear/foliation". This fault was intersected below the East trending "North Fault" identified at grid **2538mE-048mN**. There was no MaxMin conductor identified at this location.	27	15
2558	470.94	90	Co ppm			
2558	470.94	2170	Zn ppm			
2558	470.94	3.1	Te ppm			
2558	470.94	2.8	Ag ppm			
2558	470.94	0.040	gAu / mT			
2564	475.75	0.7	Ag ppm		28	
2564	475.75	0.023	gAu / mT			
2585	584.60	0.030	gAu / mT		29	16
2588	587.50	715	Ni ppm	Sericite alteration interval	30	
2608	643.65	0.6	Ag ppm	643.65-644.60-meters "A **significant zone** of qtz/carb zone, which contains about **4-5% very fine-grained euhedral Py** as **disseminated** and **fracture infilling**."	31	17
2619	652.85	0.022	gAu / mT	**Zone 2** 652.85- 658.85-m anomalous in **Co Ni Te** High Ni characteristic of ultramafic host rock **654.80-655.95**-meters ... "**felsic**? ... moderate to **strong sericite** alteration ... moderate **silicification** (hard). ...Contains 5-6% qtz/carb stringer and fracture fills throughout, with <1cm stronger **sericite** alt **haloes** +/- chl infilling. From 655.60-655.80m, contains abundant **silicified black** material (chl?) and brecciated qtz. ... About **2-3% disseminated Py** increasing to **5-6%** after 655.60m, often see following and **rimming** qtz/carb infills." **(DRR This reads like the felsic [feeder?] dikes at the Castle Co-Ag-Au Property and Minto Gold Property).**	32	18
2622	654.80	677	Cu ppm		33	
2622	654.80	123	Co ppm			
2622	654.80	1.4	Te ppm			
2624	656.80	116	Co ppm		34	
2624	656.80	1020	Ni ppm			
2625	657.80	107	Co ppm		35	
2625	657.80	832	Ni ppm			

Image Above: Page 3 of 4: EO-22-004: Geochemical Analysis
File EO-22-004 Assay Geochem Anomalies A22-19030 Final. Highlighted 06.xlsx

2642	865.90	0.052	gAu / mT	**Zone 1** 858.30-870.60-meters, strong **vein-alteration-mineralization system**	36	19
2643	866.65	0.337	gAu / mT			
2644	867.20	16	Sb ppm	866.65-868.20-meters **0.320gAu/mT** over 1.55m	37	
2644	867.20	0.5	Ag ppm	865.90-868.75-meters anomalous in **Au Ag Sb Co**		
2644	867.20	0.310	gAu / mT	Sericite alteration interval		
2645	868.20	11	Sb ppm		38	
2648	870.00	0.025	gAu / mT	**Zone 1** Sericite alteration interval	39	20
2651	871.60	0.054	gAu / mT			
2661	879.00	0.031	gAu / mT	**Zone 1** Sericite alteration interval	40	21
2676	893.25	0.030	gAu / mT	**Zone 1** Sericite alteration interval	41	22
2677	894.00	0.023	gAu / mT		42	
2678	922.75	0.066	gAu / mT		43	23

43 Anomalous Samples
23 Anomalous Intervals
Zone 1 to Zone 5, labelled from North to South

The pyrite description generally appears to read as an overprint and cannot be distinguished from primary sulphides of magma crystallization.

Image Above: Page 4 of 4: EO-22-004: Geochemical Analysis

File EO-22-004 Assay Geochem Anomalies A22-19030 Final. Highlighted 06.xlsx

Historic Reed Showing: Gold Assays

An initial (1994) grab sample of the main Reed showing assayed 19.7 gm Au/tonne.

It was resampled by Doug Robinson, and assayed 14.0375 g Au/tonne over 0.40m. See the individual assay tabulation below:

Sample 46707	0.10m	13.28gAu/tonne
Sample 46708	0.20m	18.82 gAu/tonne
Sample 46709	0.10m	5.23 gAu/tonne
Average	0.40m	**14.0375 gAu/tonne**

MNDM sampled the subcrop returning an assay of 0.234 ozAu/ton across 0.61m (**8.02 gAu/mT**/tonne).

An independent geologist sampled the showing returning a grade of **8.89 gAu/mT** across 0.55m.



Image 01 Above: Reed gold showing in Eby-Otto Tps. Image facing south-west. Grade 0.40 m @ 14.04 gAu/Tonne.



Image 02: Above: Bedrock sample 46708 from Reed gold showing in Eby-Otto Tps.

*Bedrock sample grading **18.82 gAu**/Tonne, **36.97% SiO_2**, **10.35% Al_2O_3** and **5.39% Na_2O** over 0.20m. The SiO_2 value is low indicating little or no quartz content in this gold rich zone. It appears the rock is dominated by **albite** and pyrite (and some carbonate?). The 11.99% LOI appears to be consistent with a high pyrite content.*

8.0 EXPLORATION RATIONAL

This exploration program was designed to "locate," and "hand strip," and "hand wash," and "hand scrub," and "channel sample," showings and veins which were previously identified by this author, during the 1994 and 1996 mapping program.

The grid was sporadically maintained since 1996. This grid maintenance, included work during 2012, and 2018. In the spring of 2021, very few original pickets survived, and any surviving original pickets were severely deteriorated with no original inscriptions.

It was determined; the location of known veins, and showings, required identification of, and rechaining of, the existing grid. This grid identification was dependent on field evidence, which consisted of erratically spaced blazes, and stumps, and bungees that marked the lines. 2x2 pickets lumber pickets deemed the optimal picket material to assure the long-term maintenance of the grid.

The grid work fell within the "Impact Area of the Cadillac-Larder Lake-Deformation Zone" *(CLLDZ)*. It was recognized, that the CLLDZ is a series of braided structures, with associated alteration, and mineralization; some of which was developed as mines. These

mines and their production, is reported in the "**Regional and Property Geology**" section of this report.

The dominant lithology of the property; is an ultramafic-mafic intrusive suite consisting of gabbro, and leucogabbro *(mapped as anorthositic in 1994-1996 mapping)* and diorite. The log of hole EO-22-004 logged this intrusive as "**Mafic Intrusive**" and "**Archean Gabbro**" *("**MI**" and "**AGAB**" in CSCW internal documents)*. This intrusive is locally known as the *"**Blue Blob**"*.

Numerous conductors, were recognized as potential indicators of Cobalt veins, Kamalda Nickel style deposits, Large-Flake-Graphite deposits and/or Ni, Pt Pd deposits.

The numerous conductors in the Archean Volcanics, indicated this Mafic Intrusive had access to thermally erode, and assimilate mineralized rocks (including sediments).

Assimilated sulphides including pyrite provide sulphur; to scavenge Ni, PGMs, and Au from the Mafic Intrusive to form ore deposits of these metals.

This working hypothesis, rendered all conductors along the Mafic Intrusive-Archean volcanic contact priority Kamalda style Nickel deposit targets. The CSCW's hypothesis that many, probably all conductors in Eby and Otto Townships are CLLDZ emplaced inorganic carbon, might negate the above working hypothesis.

A low elevation, magnetic total field and a first vertical derivative survey was designed to cover the grid at 25-meter spaced, north-south lines. The high priority area in Otto township, was flown at a 12.5-meter spacings, to determine the optimal survey line-spacing for blanket coverage of the property.

The Drone program was designed; to commence at the East property boundary, and progress to the west. Pat Fara; the drone operator, recommended the program survey the Otto Portion of the property *(eastern part of the property)*. He recommended an evaluation of the results to design a continued program. This was done, and CSCW extended the drone magnetic survey in 2022.

9.0 EXPLORATION PROGRAM and OBSERVATIONS

This author made logistical and equipment preparations prior to field work. Except as noted; the bulk of the field work, was performed by the Doug Robinson Consulting staff: Douglas Robinson, David Robinson, Nathan Robinson, James Robinson, and Ryan Robinson.

Grid Re-Chaining UTM and OLS Surveys

Canada Silver Cobalt Works is in the process of reconciling 28 years of paper ground grid paper, and mylar documents, into a UTM based electronic format. This reconciliation process, was compromised grid deterioration. Only rare, original grid-pickets could be identified. For example; grid line 2400mE had only one surviving *(downed)* picket.

The 0+00N base line, and key grid lines were identified by tracking blazes, stumps, and bungees. The grid lines leading to **OLS survey monuments**, showings and veins, and key access lines were emphasised.

Four foot, 2-X-2-inch commercial pickets were cared, manually into the grid. The following lines were identified, rechained and re-picketed:

- Base line **000mN** from **1600E** to **4735E**.
- Line **2400mE** south from the baseline.
- Line **2500mE** north from the baseline.
- Line **2700mE** north and south from the baseline.
- Line **4000mE** north and south from the baseline.
- Line **4300mE** north from the baseline.
- Line **4550mE** south from the baseline.
- Line **4735mE** north and south from the baseline.
- Various other lines to significant site-specific locations.

A working field map, showing rechained lines, was prepared as an overlay of the master, 1-cm = 50-m 1994-1996 compilation map. This map was used by Canada Silver Cobalt Works staff and their contractors; including, “Surveyor on Site (SOS)”, who performed the property boundary survey.

Note: Line 4300-E was mis-plotted at 4350mE on this map.



Inage Above: Intersection Base Line 000mN and Line 2700mE. Image facing West along base line 000mN *(image 2018 MMI work)*.



Image Above: Picketing break at turn in Boudreau trail along the base line *(from the west)* where the trail turns south along line 2500mE at base line 000mN. These are the pickets

used the rechaining the grid, to identify the lost SIB locations, and the subcrop stripping's reference-points .

. *Grid Re-Chaining and UTM Measurement Details*

In 1994 the Reed Robinson Grid was initiated, from an arbitrary origin along the OLS surveyed Eby-Otto Township. This origin, is a few meters north of a high-voltage hydro-electric power-line, along the north edge of the cut-out, hydro right-of-way.

This power line crosses the property in an ENE direction.

In 1994; the origin, was assigned an arbitrary coordinate of 000mN-4000mE. The baseline was cut in an astronomic east west direction. The township line was established as grid line 4000mE.

During 2021 rechaining; a large cairn of rocks, was placed around the 4000mE-000mN reference picket.

The base line was rechained, and re-picketed east, and west from 4000E-000N. The cross-lines were rechained and re-picketed from the baseline.

The 2x2 inch. base line pickets, and cross-line pickets, were established at 25-meter intervals. The grid coordinate of each picket; was graphite pencil inscribed, onto, two sides of the picket, and an inscribed aluminum tag, was also attached to each picket.

These pickets are expected to have a field life of 20 years. At Canada Silver Cobalt Works', Castle property; we found original Agnico Eagle 2x2 pickets that were over 25 years old.

Many of the line pickets were nocked down during the IP survey. If these are not erected, these pickets will quickly determinate, and the grid will be lost again.

The author is confident; the rechained pickets are along the exact, original lines, and the new pickets are very close to the location of the original pickets. Many of the individual 2012, and 2018, MMI sample sites were easily identified. These sample sites, reconciled with the chainage measurements.

During rechaining of the base line; each cross-line (grid-line) was determined, and the base-line picket was placed at the exact intersection with the original cross-line. This picket placement was based on direct, field evidence including; blazes, and stumps and bungies. The pickets between cross-lines, were placed by chainage measurements. All; but several cross-lines were positively identified.

The above process; is identical to the rechaining of the circa 1997 baseline, of the Canada Silver Cobalt Works Highway 66 grid. This rechaining was performed to locate the lost showings dealt with in the 2021 assessment report titled; *"PROSPECTING REPORT On*

THE "1" AND JOHN DOH PROPERTIES, EBY TOWNSHIP LARDER LAKE MINING DIVISION, ONTARIO NTS: 42A01B, Submission Date: 2021-12-10".

1994-1996 Map plotting and field note reconciliation were designed to be a conspicuous and intuitive format as shown below in two CSCW grids. (Grid C and Grid D and IP line B) shown below

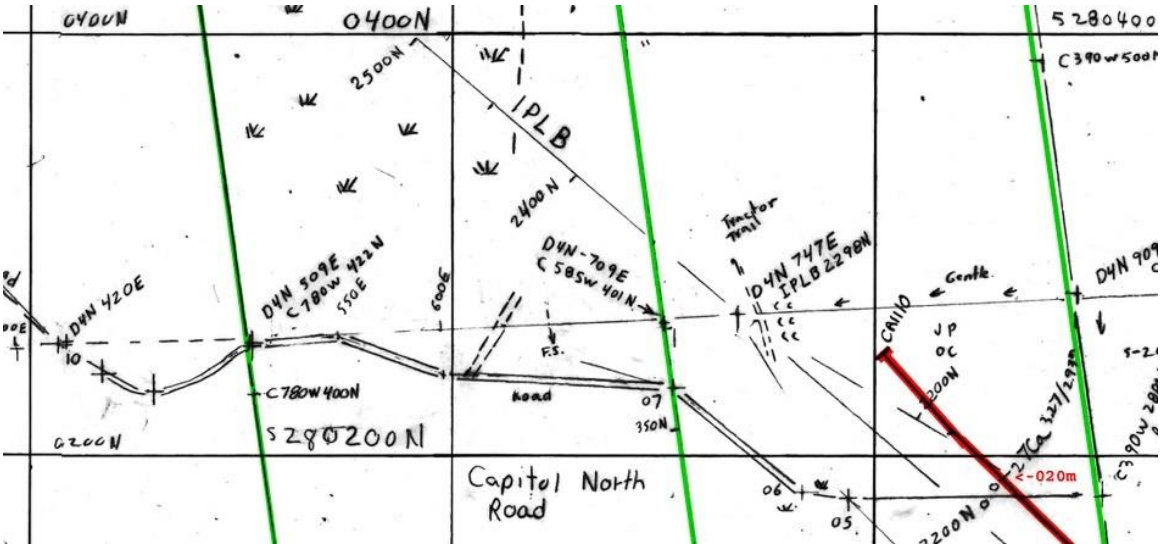


Image above: Excerpt from CSCW Castle Surface Map, showing reconciliation field notes of IP-Grid-B and Grid-C and Grid-D in the format D4N509E at C780W 422N (+/- one-meter precision). All pickets were 2x2 pickets.

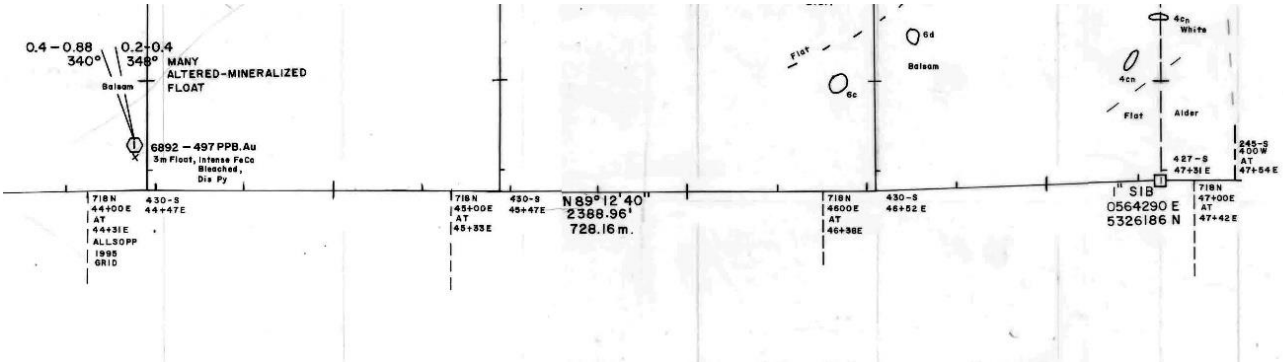


Image Above: Excerpt, ***CSCW-Reed-Robinson Grid*** *Image showing reconciliation of field notes of CSCW-Reed-Robinson Grid (northern), and CSCW* ***Allsopp Grid*** *(southern) along OLS Survey in the format "**718N 45+00E at 45+33E D4N509E,**" and the Rivard Grid reconciled with the field note "**245-S 400W at 47+54E**". Both the Reed-Robinson and Allsopp properties are within the Canada Silver Cobalt Works project. That work is reported in separate reports. (Note: the east-west line is perfectly straight along the clearly identifiable OLS survey line of the Reed and Allsopp leases (in 1994-1996). The east line, 4737mE is also perfectly straight along the clearly identifiable OLS survey line of the Reed Lease and the historic Rivard Property. The*

apparent slight bends, represent industry norms for ground grid chainage along ~430m lines.

The various grids abutting the property; including the contiguous Canada Silver Cobalt Works grids were accurately scaled into the original 1996 master geology map, and text recorded in the format "**F Rivard 1995 Picket L400/175E**" *(at 4735-005S along OLS Survey Line). Mapping, and field note reconciliation were designed to be, a conspicuous, and intuitive format.*

UTM Measurements

Since 1996; the grid was frequently visited, and UTM measurements of key grid locations measured.

All UTM locations measured prior to late, 2021 were measured as Nad 83 Zone 17 measurements. All grid coordinates greater than 4000mE are in Otto township, and all grids coordinates less than 4000mE, are in Eby Township.

Douglas Robinson, and his associates; have cut various grids in Eby and Otto townships, using the Eby Otto Township line as a 4000mE reference. These grids include; a large (non contiguous) grid; cut to within ~1-km of the Bert Township line at the west edge of Eby Township; to near the Blanche River in Otto Township. These grids include the contiguous, Canada Silver Cobalt Works grids on the Allsopp property to the south, and the Canada Silver Cobalt Works grids westward to Highway 66 east of Highway 11.

The geology maps, of these various Canada Silver Cobalt Works grids clearly, and numerically; record the reconciliation tie in measurements. CSCW has used the master Allsopp and CSCW-Reed-Robinson geology maps as base maps, within their geo-programming documentation.

Historic UTM Notes CSCW-Reed-Robinson Grid

From 1994, to late 2021, all UTM measurements were performed with a Garmin Rino 530HCx. All UTM measurements referenced in this report, were measured in, and are reported as, **Nad 83 Zone 17**. The WAAS was enabled, and the measurements were averaged over a minimum of 200 seconds, but generally a much longer time interval was used. The measured coordinates (Eastings and Northings), are considered accurate within 5-meters. The elevations are considered less accurate.

The Grid location 4000mE-000mN; was located and measured in 2008, as Nad 83 Zone 17, UTM coordinates **563,565mE**, **5,326,834mN**.

Grid locations measured in 2012 include:

2500E-300N	0562063mE	5327096mN	Elevation 342m
3800E-000N	0563364mE	5326830mN	Elevation 322m

4000E-000N	0563565mE	5326832mN	Elevation 321m
4200E-465N	0563755mE	5327299mN	Elevation 316m
4350E-425N	0563907mE	5327266mN	(at Line XL 088E)
XL-148E	0563952mE	5327304mN	(Line XL at 148E)
4450E-000S	0564004mE	5326641mN	Elevation 326m
4650E-200S	0564206mE	5326646mN	Elevation 320m

Two of the above readings reported illogical elevations. These elevations were omitted from the above chart.

The following sample of UTM field note locations were reported in 2016:

2016-11-01	Eby 25E 300N	**0562056**	E	**5327102**	N	Eby Line 2500E 300N picket found
2016-11-04	Eby 25E 000N	**0562058**	E	**5326801**	N	Eby Line 25E 000N Picket found
2016-11-04	Eby 25E 0N	**0562060**	E	**5326840**	N	Eby Line 25E 0N Picket Found
2016-11-01	Eby 27E 000N	**0562065**	E	**5327823**	N	Eby 27E 000N Base Line Centre of Work
2016-11-01	Eby 27E 0N EST	**0562065**	E	**5326732**	N	Estimated location based on line 4000E 0N
2016-11-01	Eby Trail TE	**0562154**	E	**5327310**	N	Eby Trail TE Turn East towards grid.
2016-11-01	Eby Old Hwy	**0562159**	E	**5327536**	N	Eby Old Hwy 11 Park Truck here. Walk E on old way 66
2016-11-01	2650E 000N	**0562209**	E	**5326808**	N	Eby Base Line 0N 650E
2016-11-01	Eby Trail 27E 500N	**0562242**	E	**5327302**	N	Eby Trail 27E 500N Turn South and follow flagging
2016-11-01	Eby 27E 375N SR	**0562256**	E	**5327175**	N	Eby 27E 375N Point on Line
2016-11-01	Eby 27E 359N QV	**0562256**	E	**5327156**	N	Eby 27E 359N QUARTZ VEIN on Line
2016-11-01	Eby 27E 375N LR	**0562258**	E	**5327175**	N	Eby 27E 375N Point on Line
2016-11-01	27E 000N	**0562261**	E	**5326805**	N	Eby Base Line 0N 2700E Picket not found
2016-11-03	Eby 27E 275s	**0562261**	E	**5326531**	N	Eby Line 27E Very short Reading
2016-11-01	Eby Trail Head	**0562302**	E	**5327501**	N	Eby Trail Head Turn South onto trail
2016-11-04	Eby 29E 000N	**0562456**	E	**5326805**	N	Eby Base Line 0N 2900E Picket found

Surveyors on Site UTM Survey

On May 09-12, 2022, Surveyor on Site (SOS) staff: Patrick Ramey; and helper, Audrey Cardinal, commenced a Boundary Survey of the Otto Lease. The Otto lease was the focus of the 2021 work, documented in this report. Three other key corner SIB marking property boundaries were also surveyed.

Surveyor on Site (SOS) also determined UTM's of:

- the ground grid that has been in operation since 1994 and

- The reference-points used to map the 2021 subcrop stripped-channel sampled areas.

May 09, 2022 Douglas Robinson accompanied the SOS team to:

- Most of the SIB and IB sites.
- The grid entry points and much of the grid.
- To all the subcrop map areas.

. *Boundary Survey*

On May 09-12, 2022, Surveyor on Site (SOS) staff: Patrick Ramey and helper Audrey Cardinal commenced a Boundary survey of the Otto Lease. SOS staff had previously, accessed the original OLS survey of the Otto lease. CSCW supplied a compilation map showing the boundary SIBs. This author had easily identified these OLS SIBs in 1994, when the OLS survey lines were relatively fresh and bearing trees were present. The compilation map also showed the 1994 grid lines that were to be determined. This author also walked the SOS staff, directly to most of the property SIB-IBs *(1 inch Square Iron Bars and 5/8 inch Iron Bars)*.

SOS survey costs are not claimed in this report.

PROPERTY MARKERS FOUND

POINTNUMBER	NORTHING	EASTING	DESCRIPTION
2	5 327 173.577	561 157.815	SIB
3	5 326 819.650	561 149.243	SIB
6	5 327 299.597	563 556.086	SIB
8	5 327 198.743	563 557.349	IB
9	5 327 289.485	563 556.231	IB
20	5 326 370.452	561 968.239	SIB
25	5 326 400.091	563 566.259	SIB
26	5 326 381.833	563 566.574	SIB
27	5 326 805.818	563 561.659	IB
28	5 326 418.617	564 293.837	SIB
29	5 326 418.626	564 293.831	SIB
30	5 327 306.270	564 284.274	SIB

Image Above: Surveyor on Site (SOS) determinations of Boundary SIB coordinates.

The Otto Township lease is bounded by POINTNUMBERs **#30** *(SIB, NE corner)*, **#28** *(SIB SE corner)*, **#25** *(SIB SW corner)* and **#9** *(IB NW corner)*.

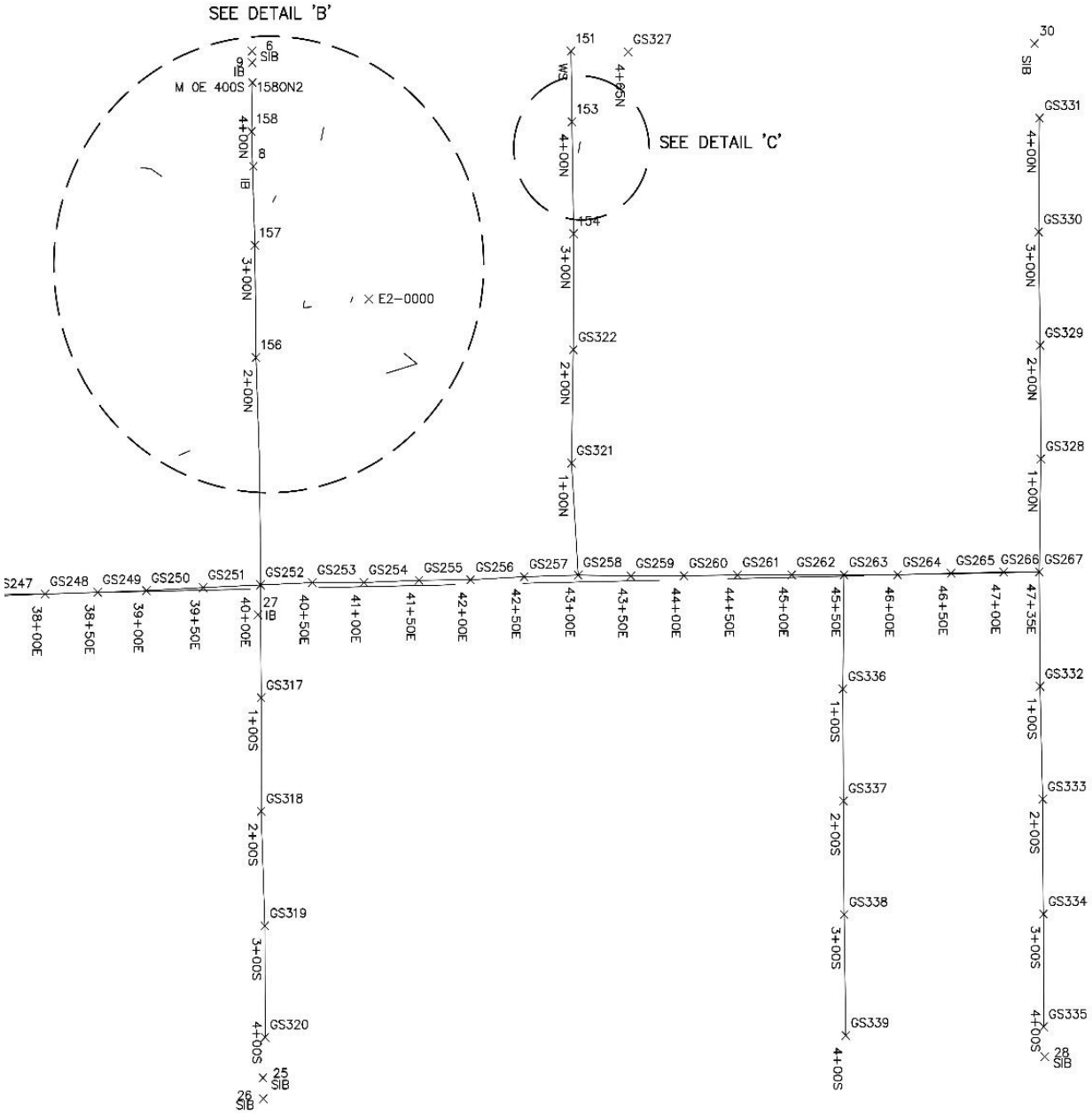


Image Above: Map of "Surveyor on Site" (SOS) determinations of Boundary SIB locations.

The four corners of the Otto Township lease were identified as SOS numbers:

- #30 at the NE corner of the Otto Township lease.
- #28 at the SE corner of the Otto Township lease
- #25 at the SW corner of the Otto Township lease
- #9 at the NW corner of the Otto Township lease

The UTM locations of the Otto Leases are shown below.

SOS POINT NUMBER	CsCW NUMBER	SOS EASTING	**SOS** NORTHING	**SOS** ELEVATION	**CsCW** Easting	Difference	**CsCW** Northing	Difference	**CsCW** DESCRIPTION	**SOS** DESCRIPTION
30	10	**564,284.27**	**5,327,306.27**	317.29	**564,273**	11	**5,327,307**	-1	NE Corner (#1) Otto Lease	1 inch SIB
28	11	**564,293.84**	**5,326,418.62**	304.11	**564,302**	-8	**5,326,399**	20	SE Corner (#2) Otto Lease	1 inch SIB
25	6	**563,566.26**	**5,326,400.09**	316.00	**563,562**	4	**5,326,399**	1	#3 Otto Lease	1 inch SIB
9	8	**563,556.23**	**5,327,289.49**	311.52	**563,557**	4	**5,327,292**	-3	Otto-Eby Line	5/8 IB
2	1	**561,157.82**	**5,327,173.58**	330.28	**561,157**	1	**5,327,172**	2	NW corner(#4) Reed West Lease	1 inch SIB
20	4	**561,968.24**	**5,326,370.45**	325.26	**561,971**	-3	**5,326,366**	4	SW Corner (#3) Robinson Cell Claims	1 inch SIB
26	5	**563,566.57**	**5,326,381.83**	315.14	**563,565**	2	**5,326,382**	0	NE Corner (#1) Eby South East Lease	1 inch SIB

Table Above: UTM locations from Surveyor on Site (SOS) Boundary survey

. *Grid Line, UTM Determinations*

UTM coordinates were measured on the following selected lines:

- Baseline 0+00N from 1600E to 4735E.
- Line 2400E south from the baseline.
- Line 2500E north from the baseline.
- Line 2700E north and south from the baseline.
- Line 4000E north and south from the baseline.
- Line 4300E north from the baseline.
- Line 4550 South from the baseline.
- Line 4735 North and south from the baseline.

The UTM determinations of these grid lines, were measured at 100-meter intervals *(i.e. Line 4000E, 400s, 300s, 200s, 100s, 000N,100N, 200N ….)*.

The UTM determinations of the Base line were measured at 50-meter intervals *(i.e. Line 1600E, 1650E, 1700E, …… 4600E, 4650E, 4700E, 4735E).*

It is assumed elevations were at ground level.

Below: Surveyor on Site (SOS) – "*CSCW UTM Data 2022-06-11.xlsx*" The ground grid pickets are labelled in the 4300E-400N format.

SOS POINT NUMBER	Easting	Northing	DESCRIPTION	EASTING	NORTHING	ELEVATION
153	4300	400	4+00N	**563,854**	**5,327,238**	309.4

154	4300	300	3+00N	**563,855**	**5,327,140**	309.5
156	4000	200	2+00N	**563,560**	**5,327,031**	308.8
157	4000	100	3+00N	**563,559**	**5,327,130**	313.2
158	4000	0	4+00N	**563,556**	**5,327,229**	313.1
GS210	1600	0	16+00E	**561,169**	**5,326,779**	324.0
GS211	1700	0	17+00E	**561,268**	**5,326,781**	336.7
GS212	1800	0	18+00E	**561,367**	**5,326,783**	333.2
GS213	1900	0	19+00E	**561,465**	**5,326,786**	326.3
GS214	2000	0	20+00E	**561,566**	**5,326,787**	328.5
GS215	2100	0	21+00E	**561,666**	**5,326,790**	331.7
GS216	2200	0	22+00E	**561,765**	**5,326,793**	330.6
GS217	2300	0	23+00E	**561,864**	**5,326,800**	330.1
GS218	2400	0	24+00E	**561,963**	**5,326,800**	329.2
GS219	2450	0	24+50E	**562,014**	**5,326,800**	330.2
GS220	2500	0	25+00E	**562,062**	**5,326,800**	330.3
GS221	2550	0	25+50E	**562,109**	**5,326,800**	330.5
GS222	2600	0	26+00E	**562,160**	**5,326,800**	328.2
GS223	2650	0	26+50E	**562,210**	**5,326,801**	327.3
GS224	2700	0	27+00E	**562,259**	**5,326,801**	328.3
GS225	2750	0	27+50E	**562,308**	**5,326,800**	328.3
GS226	2800	0	28+00E	**562,361**	**5,326,801**	324.5
GS227	2850	0	28+50E	**562,409**	**5,326,802**	320.3
GS228	2900	0	29+00E	**562,458**	**5,326,802**	318.7
GS229	2950	0	29+50E	**562,509**	**5,326,803**	318.2
GS230	3000	0	30+00E	**562,558**	**5,326,804**	316.0
GS231	3050	0	30+50E	**562,607**	**5,326,803**	315.1
GS232	3100	0	31+00E	**562,657**	**5,326,804**	315.6
GS233	3150	0	31+50E	**562,705**	**5,326,805**	314.9
GS234	3200	0	32+00E	**562,758**	**5,326,804**	315.0
GS235	3250	0	32+50E	**562,810**	**5,326,805**	314.3
GS236	3300	0	33+00E	**562,858**	**5,326,806**	314.2
GS237	3350	0	33+50E	**562,907**	**5,326,808**	313.8

GS238	3400	0	34+00E	**562,958**	**5,326,810**	313.4
GS239	3450	0	34+25E	**562,983**	**5,326,811**	313.2
GS240	3500	0	34+50E	**563,008**	**5,326,811**	312.5
GS241	3550	0	35+00E	**563,057**	**5,326,813**	313.3
GS242	**3525**	**0**	**35+25E**	**563,083**	**5,326,814**	**314.4**
GS243	3550	0	35+50E	**563,108**	**5,326,815**	314.0
GS244	3600	0	36+00E	**563,157**	**5,326,819**	320.4
GS245	3650	0	36+50E	**563,209**	**5,326,819**	316.2
GS246	3700	0	37+00E	**563,258**	**5,326,820**	317.9
GS247	3750	0	37+50E	**563,311**	**5,326,822**	311.5
GS248	3800	0	38+00E	**563,364**	**5,326,824**	310.8
GS249	3850	0	38+50E	**563,413**	**5,326,825**	311.0
GS250	3900	0	39+00E	**563,458**	**5,326,827**	310.7
GS251	3950	0	39+50E	**563,511**	**5,326,830**	311.7
GS252	4000	0	40+00E	**563,564**	**5,326,832**	313.9
GS253	4050	0	40+50E	**563,612**	**5,326,834**	313.0
GS254	4100	0	41+00E	**563,660**	**5,326,834**	314.1
GS255	4150	0	41+50E	**563,711**	**5,326,836**	311.3
GS256	4200	0	42+00E	**563,759**	**5,326,836**	311.5
GS257	4250	0	42+50E	**563,809**	**5,326,839**	307.2
GS258	4300	0	43+00E	**563,860**	**5,326,841**	307.9
GS259	4350	0	43+50E	**563,909**	**5,326,840**	307.5
GS260	4400	0	44+00E	**563,958**	**5,326,840**	307.5
GS261	4450	0	44+50E	**564,008**	**5,326,841**	307.7
GS262	4500	0	45+00E	**564,058**	**5,326,841**	307.7
GS263	4550	0	45+50E	**564,107**	**5,326,841**	308.0
GS264	4600	0	46+00E	**564,157**	**5,326,841**	312.4
GS265	4650	0	46+50E	**564,207**	**5,326,842**	308.8
GS266	4700	0	47+00E	**564,256**	**5,326,843**	302.8
GS267	4735	0	47+35E	**564,289**	**5,326,843**	304.3
GS300	2400	-100	1+00S	**561,964**	**5,326,702**	319.8
GS301	2400	-200	2+00S	**561,965**	**5,326,601**	333.9

GS302	2400	-300	3+00S	**561,967**	**5,326,503**	339.7
GS303	2400	-400	4+00S	**561,969**	**5,326,404**	325.0
GS305	2500	100	1+00N	**562,062**	**5,326,899**	334.5
GS306	2500	200	2+00N	**562,062**	**5,326,996**	328.9
GS307	2500	300	3+00N	**562,058**	**5,327,097**	331.2
GS308	2500	400	4+00N	**562,048**	**5,327,195**	331.8
GS309	2700	100	1+00N	**562,259**	**5,326,898**	319.7
GS310	2700	200	2+00N	**562,259**	**5,326,999**	322.1
GS311	2700	300	3+00N	**562,260**	**5,327,098**	337.3
GS312	2700	400	4+00N	**562,259**	**5,327,195**	336.0
GS313	2700	-100	1+00S	**562,261**	**5,326,701**	328.0
GS314	2700	-100	2+00S	**562,259**	**5,326,601**	327.4
GS315	2700	-100	3+00S	**562,265**	**5,326,506**	335.0
GS316	2700	-100	4+00S	**562,268**	**5,326,419**	326.2
GS317	4000	-100	1+00S	**563,565**	**5,326,733**	319.8
GS318	4000	-200	2+00S	**563,565**	**5,326,634**	318.8
GS319	4000	-300	3+00S	**563,568**	**5,326,533**	324.5
GS320	4000	-400	4+00S	**563,568**	**5,326,436**	315.6
GS321	4300	100	1+00N	**563,853**	**5,326,939**	306.6
GS322	4300	200	2+00N	**563,855**	**5,327,038**	307.8
GS327	4735	465	4+65N	**563,906**	**5,327,299**	309.2
GS328	4735	100	1+00N	**564,290**	**5,326,942**	306.2
GS329	4735	200	2+00N	**564,289**	**5,327,042**	312.8
GS330	4735	300	3+00N	**564,288**	**5,327,141**	324.8
GS331	4735	400	4+00N	**564,289**	**5,327,241**	315.6
GS332	4735	-100	1+00S	**564,289**	**5,326,743**	311.2
GS333	4735	-200	2+00S	**564,292**	**5,326,644**	308.6
GS334	4735	-300	3+00S	**564,293**	**5,326,544**	315.6
GS335	4735	-400	4+00S	**564,293**	**5,326,445**	304.9
GS336	4550	100	1+00S	**564,106**	**5,326,741**	309.6
GS337	4550	200	2+00S	**564,106**	**5,326,643**	310.3
GS338	4550	300	3+00S	**564,107**	**5,326,543**	314.8

GS339	4550	400	4+00S	**564,109**	**5,326,437**	312.9

. *Subcrop Reference-point Determinations*

Surveyor on Site (SOS), established the UTM coordinates of the reference-points this author used, to map the subcrop stripping, and channel samples referenced in this report.

Subcrop mapping was performed, using a chain stretched from a zero-reference-point, to an end-of-line-reference-point(s).

These reference-points were established as, long carpentry screws, driven into long tree blazes, near the ground. SOS could not measure these reference-point directly. The reference-points , in the blazed side of active trees, were problematic to SOS measurements.

At each reference-point; the two-meter sensor pole was positioned horizontally from the CSCW reference-point. The true XYZ UTM location of the reference-point, was triangulated from two horizontal-orientations.

OUTCROP POINTS

POINTNUMBER	NORTHING	EASTING	DESCRIPTION
B1-000	5 327 172.653	563 578.217	OUTCROP B
E1-000	5 327 075.011	563 603.899	OUTCROP E1
E1-001	5 327 080.828	563 604.839	OUTCROP E1
E1-DHH	5 327 075.496	563 611.396	E1 DIAMOND DRILL HOLE
E2-000	5 327 082.374	563 664.801	OUTCROP E2
B1-0000	5 327 167.514	563 575.398	OUTCROP B
E3-0000	5 327 084.357	563 649.857	OUTCROP E3
E3-0596	5 327 079.624	563 648.035	OUTCROP E3
F-0000	5 327 232.761	563 622.741	OUTCROP F
F-0001	5 327 221.833	563 620.43	OUTCROP F
G1-0000	5 327 025.745	563 709.703	OUTCROP G1
G4-2978	5 327 017.394	563 681.172	OUTCROP G1
GSRS-0000	5 327 220.308	563 861.45	OUTCROP RS
RS-0991	5 327 210.644	563 859.704	OUTCROP RS
S1-0000	5 327 196.628	563 461.938	OUTCROP S
S1-0912	5 327 197.488	563 452.972	OUTCROP S
S1-1195	5 327 190.024	563 471.88	OUTCROP S
RT1-0000	5 326 945.459	563 488.2	OUTCROP E1
RT1-1074	5 326 949.451	563 497.919	OUTCROP E1
G3-7727	5 327 034.616	563 697.925	OUTCROP G1
R-0000	5 327 156.001	562 255.929	OUTCROP R
R-0380	5 327 156.022	562 252.158	OUTCROP R
R-1417	5 327 160.336	562 269.4	OUTCROP R
RS-0605	5 327 214.481	563 860.543	OUTCROP RS
5	5 327 133.47	561 513.733	LEASE SPECIAL

Image Above: "Surveyor on Site" (SOS) determinations of subcrop reference-point coordinates. The 18th and 19th subcrop entries should read subcrop "RTV" not "E1".

The SOS "pointnumbers," are field note identifiers; represented by alpha-numeric characters, designating subcrop area, and distance from the zero-reference-point. "***RT1-0000***" represents the zero-reference-point at the Reed Trench stripping, and "***RT1-1074***" represents the reference-point 10.74 meters from the zero-reference-point.

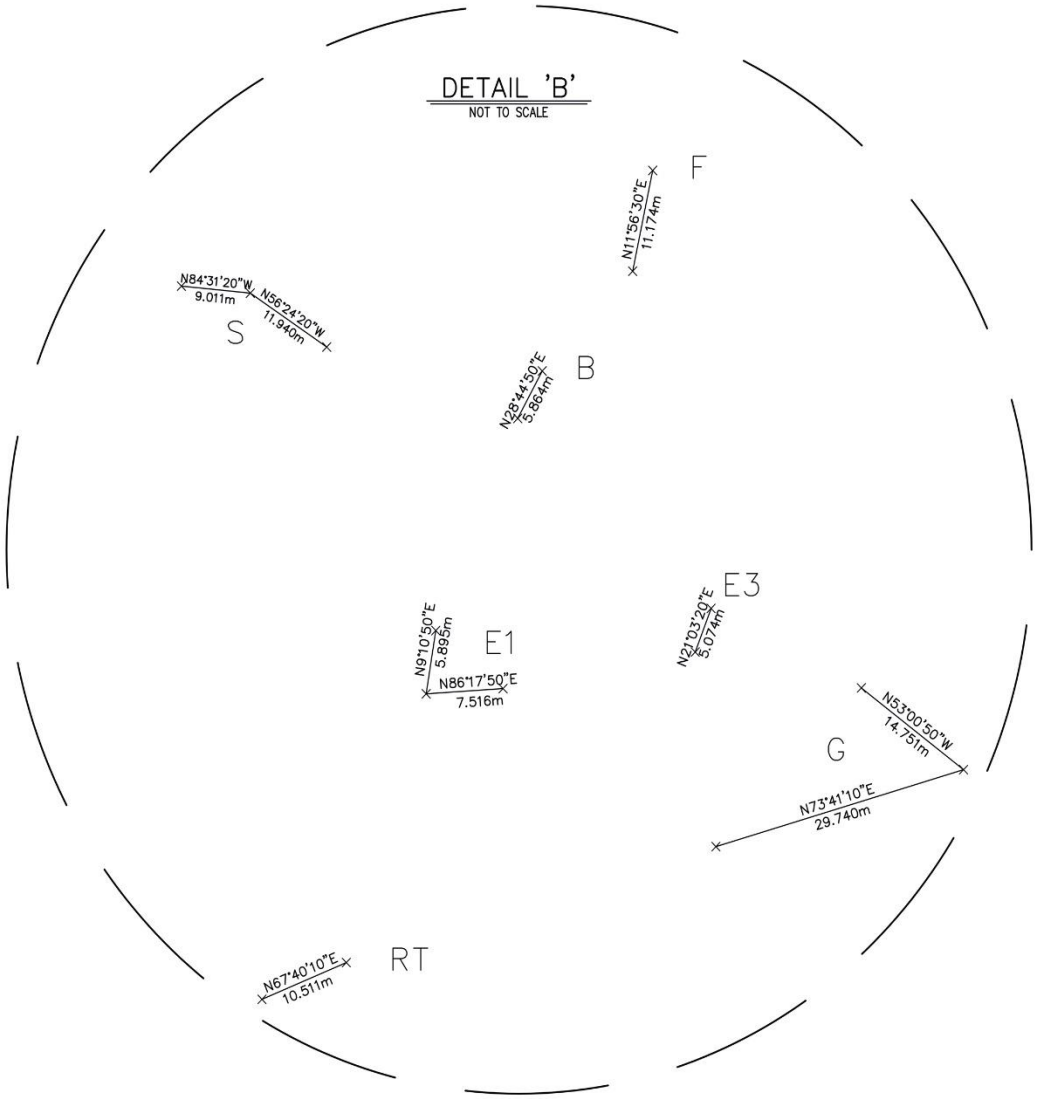


Image Above: Surveyor on Site (SOS) representation of the Survey Lines between subcrop Reference-points .

Subcrop RT is in Eby Township. Subcrops “B” and “F” and “E1” and “E3” and G are in Otto Township.

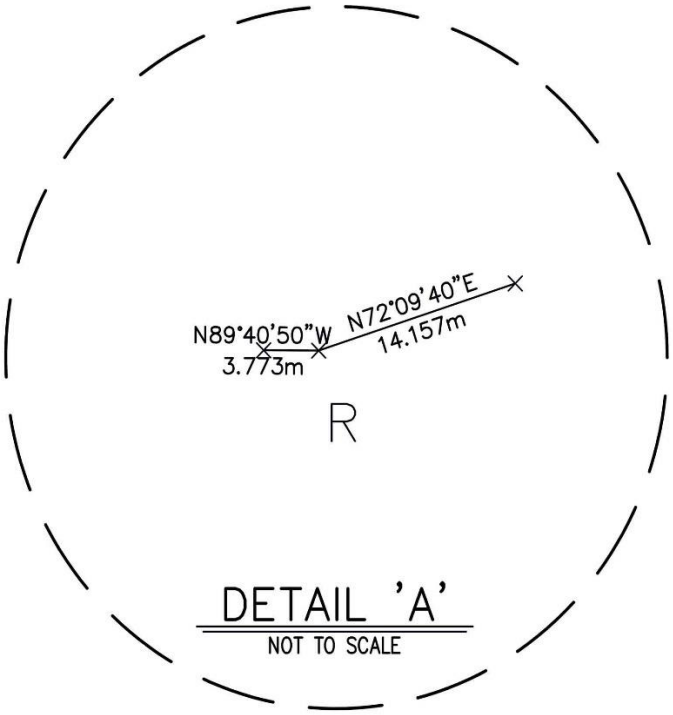


Image Above: Surveyor on Site (SOS), Survey Lines between subcrop Reference-Points in Eby Township.

The Surveyor on Site (SOS) and CSCW UTM-determinations of the Reference-points for the hand stripped areas are reported in the chart below:

SOS EASTING m	**SOS** NORTHING n	**SOS** ELEVATION		**CSCW** Easting m	Difference m	CSCW Northing m	Difference m	Location
563861.5	**5327220.3**	310.2		**563,860**	1	**5,327,215**	5	Read Showing Zero-reference-point
563709.7	**5327025.7**	310.9		**563,706**	4	**5,327,026**	0	G1 Subcrop Zero-reference-point
563664.8	**5327082.4**	313.5		**563,663**	2	**5,327,086**	-4	E2 Zero-reference-point
563649.9	**5327084.4**	314.9		**563,647**	3	**5,327,084**	0	E3 Zero-reference-point
563603.9	**5327075.0**	310.7		**563,600**	4	**5,327,079**	-4	E1 Zero-reference
563488.2	**5326945.5**	310.8		**563,485**	3	**5,326,949**	-4	Reed Trench Vein Zero-reference-point
563578.2	**5327172.7**	312.9		**563,581**	-3	**5,327,171**	2	B1 Vein Zero-reference-point

563620.4	**5327221.8**	314.7		**563,620**	0	**5,327,218**	4	F Vein Zero-reference-point
562255.9	**5327156.0**	339.8		**562,256**	0	**5,327,160**	-4	Robinson Vein Zero-reference-point
561513.7	**5327133.5**	332.9		Not Determined		Not Determined		Boudreau Vein Zero-reference-point

Above chart: Surveyor on Site (SOS) Zero-reference-points for the hand stripped areas. The discrepancies between CSCW GPS units and Surveyor on Site (SOS) coordinates varied from 0 to 5 meters.

Hand Stripping

This author focused on identifying the targets based on field evidence, and supervising David Robinson, Ryan Robinson, James Robinson, and Nathan Robinson in the process of hand-stripping, hand-washing, and hand scrubbing the subcrops. Stripping was performed by shovel, grub-hoe, and Fiskers machetes.

The most useful tool in hand stripping, was a Fiskers curved machete shown below. Fiskers machetes were extremely effective, to cut root mats, and to loosen the soil, and glacial rocks.



The Reed Trench Vein, was the only work-site, with available water. Water was carried to the work-sites using 5-gallon pails. The subcrops were stripped as clean as possible with hand tools. The subcrops were then swept. The subcrops were then cleaned by vegetable brush, and flushed with water until the exposure was clean.

Water was carried from a stream on the power line to wash the Reed Showing, G1, G2, G3, G4, E3, E2, and E3 subcrops. E1 Vein subcrops was washed from water accessed near Line 4000mE. The Reed Trench Vein, subcrop was washed with water from the trench. The B and F Vein subcrops were washed with water, from the swamp between these two subcrops.

Water was carried from Swastika to clean, and channel saw the R-Vein subcrop in Eby Township.



Image above[5283] facing south: Early stag of hand stripping E1 vein.

Subcrop Mapping

This author prepared each subcrop area for mapping, by stretching a cloth chain, from the Zero-Reference-Point, to a distant reference-point . A temporary grid was constructed, by using 2-meter, ABS pipes, marked at 0.5-meter intervals, as cross-lines. One-meter, ABS pipes, marked in 0.10-meter increments, were used too measure points between, and along the cross-lines. Wooden meter sticks, were used to for precise measurements.



Image Above[4229]: Reed Showing facing south, showing the mapping grid. The zero-reference-point is a standard 2x2 picket. Two distant reference-points , appear in the background of this image.

Channel Cutting and Sampling

This author selected the channel sample locations, and orientation, and the sample intervals; based his geological mapping. David Robinson operated the channel saw, and this author feed water to the blade during cutting. Cutting and channel sampling was performed as other staff performed other tasks, on various subcrops.

Cutting water used for channel saw, cutting was carried from a steam on the power line, to the channel sample sites.

Samples were broken out; using a hammer, and ax (ax as wedge). In rare incidents, a commercial hinge, was used to augment the ax as wedge as shown below.

Each sample was placed in a dedicated sample bag, with a sample tag, then tapped closed.



Image Above[7019]: G2 subcrop facing North. Channel sample 7724 being broken from the saw cut. The saw cut space was wider than normal. A steel plate *(hinge)* was used to fill the gap, enabling the rock to be broken out of the channel.

Sample Logging

Each sample bag was opened, in the Doug Robinson Consulting Office. The largest pieces were logged, and their SG and magnetic susceptibility were measured, then the samples were photographed. Some of these images are shown in this report.

CSCW Reconciliation-Quality-Assurance, for lithology-alteration logs and Rock-Quality data: including SG, magnetic susceptibility, and other Rock-Property data, was reconciled in the text of the logs during the logging process.

Each sample then re-bagged and prepared for shipment. Sample analysis were performed by CSCW.

The rock quality data logging, is discussed under separate discussions dealing with SG, and magnetic susceptibility.

The log of the channel samples, below included sample number, sample weight, subcrop, channel interval, SG, magnetic susceptibility *(3-4 readings and average)*, conductivity, Au grade, Ag grade and sample description.

The log sample log is shown below. The individual magnetic susceptibility readings, were deleted from this presentation to accommodate the page size limitations.

Channel ID	Outcrop	From	To	Length	Weight (g)	SG	AVG 10^{-3}SI	S/m	Au (g/t)	Ag (g/t)	Description
46708	Reed Showing	N/A	N/A	N/A	0	2.83	5.05	0.00	N/A	N/A	Not received - 10% indistinct pyrite grains in part concentrated in bands. 40% pale hard > steel, white silicate bands (albite), 40% hard, pale grey silicate interstitial to white bands and 20% hard > steel, dark green patches.0.5 cm rusty brown weathering rind.
7702	Reed Showing	0.00	0.35	0.35	1252	2.73	1.85	0.00	0.048	<1.000	South Dark green shear zone with moderate foliation 2% fine disseminated pyrite< 001 to 0.5mm
7703	Reed Showing	0.35	0.77	0.42	1376	2.88	29.60	0.00	**0.517**	<1.000	South. Friable rusty rock, mostly <1cm chips. Includes a 6 cm fresh rock piece as intense albite pyrite alteration Most of sample <1cm chips. The chunk is medium grey bands hard -> steel and dark green bands soft << steel.
7704	Reed Showing	0.77	2.02	1.25	5700	2.76	23.90	0.00	**1.886**	**4.500**	South. including 0.77-1.24 m Intense patchy pale grey yellow albite pyrite alteration with masses of pyrite to 5 cm wid. From 1.24-2.02 patchy grey-yellow albite pyrite alteration with relict patches of med grey-green less altered rock. 45 & 45.0 10-3SI has 5.5 & 1.0 cm fall back of pencil magnet
7705	Reed Showing	2.02	2.98	0.96	4573	N/A	0.64	0.00	0.031	<1.000	South. From 2.02-2.87 Massive dark green, hard with hairline calcite fracture fillings. From 2.87-2.98 patchy yellow albite pyrite alteration. Sample dominated by dark green, soft << steel with trace pyrite and 2% white calcite fracture filling. Also included bleached albitite pyrite alteration with 5% extremely fine to pyrite grains (13.1 SI10-3 SI with 1 cm fall back of pencil magnetite) associated with medium grey, extremely fine grained, hard > steel with 1% fine disseminated pyrite (26. 10-3 Si with 6 cm fall back of pencil magnet).
7706	Reed Showing	2.98	3.49	0.51	3432	2.84	4.23	0.00	0.141	<1.000	South. Intense pale yellow patchy albite pyrite alteration with 5% disseminated 0.1-1.0mm pyrite. Weak rusty brown weathering rind. Whole rock sample. Dominated by pale yellow pyritic albite alteration with 5% very fine disseminated pyrite, hard > steel, non-magnetic to weakly magnetic. Also light grey, hard > steel, moderately to strongly magnetic with 4.0-5.0 cm fall back of pencil magnet, Trace pyrite

Image Above: Page 01 of 6 pages file "*CCW 2021 Eby-Otto Channel Sample Assays.pdf"*

7707	Reed Showing	3.49	3.74	0.25	1903	2.74	0.87	0.00	<0.005	<1.000	South. Uniform and massive, extremely fine grained, medium green. Hare Line calcite fracture filling. 1% fine disseminated pyrite <0.5 mm. Moderately hard < steel. Thin white weathering rind.
7708	G4 Vein WRX	0.00	0.74	0.74	3072	2.70	0.32	0.00	0.043	<1.000	South East Cut. Wall rock north of vein. Shear banded light grey, hard with paler yellow grey alteration. Includes two masses of coarse pyrite (1.3x2.2 cm, 4.3x1.3 cm) and scattered 0.3x1.5 cm dark green lenses with 5% extremely fine disseminated pyrite and disseminated pyrite in groundmass.
7709	G4 Vein	0.74	0.99	0.25	1258	2.63	0.17	0.00	0.025	<1.000	South on East Cut. 20 cm quartz vein with 2% fine grained disseminated pyrite concentrated in grey-yellow fracture filling (and wall rock rip offs?)(5%). Includes 0.05 meters of wall rock. Quartz hard > steel Inclusions soft << steel
7710	G4 Vein	0.00	0.49	0.49	3473	2.66	0.16	0.00	0.033	**3.660**	South From 0.00-0.44 Quartz vein. 0.44-0.49 wall rock. Quartz is coarse waxy appearance. Quartz and wall rock hard > steel. 1% fine pyrite.
7711	G4 Vein WRX	0.49	1.03	0.54	2998	2.67	0.20	N/A	0.036	<1.000	South, Center Channel. Silicified, shear banded, light grey with pale yellow grey alteration bands. Hairline fracture fillings. Sample includes 3.0x1.1 cm patch of massive coarse grained pyrite and 6.2x1.0 cm patch of coarse grained pyrite. Minor dark green streaks with up to 10% very fine grained pyrite. Includes 0.5 cm quartz fracture filling. Hard > steel.
7712	G4 Vein WRX	1.03	1.31	0.28	1890	N/A	N/A	N/A	**0.139**	1.080	South Fault. Rusty Gouge as deep eroded channel.
7713	???	1.31	N/A	N/A	4925	2.79	0.72	0.00	**0.161**	<1.000	Uniform and massive, very fine grained, light grey very soft << steel. No response to pencil magnet. Locally minor disseminated pyrite. Rusty brown weathering rind.
7714	R Vein	0.00	0.10	0.10	940	2.86	0.57	0.00	0.007	<1.000	South in East channel. Wall rock North of Vein Uniform and massive, dark green, very soft << steel, chloritic alteration. Dominant feature is 5% pale brown leucoxene grains.
7715	R Vein	0.10	0.36	0.26	3275	N/A	0.19	0.00	**0.233**	<1.000	South in East Channel. 26 cm wide Quartz Vein. Porous due to weathered out carbonate from between quartz crystals. Highly fractures. Vein pas chlorite patches and bands. Vein includes 3.0 cm dark green, chloritic wall rock with 5% leucoxene flecks.

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7716	R vein	0.00	0.22	0.22	4094	N/A	85.20	0.00	0.031	<1.000	North in West Channel. Quartz Vein. Milky white quartz crystals, generally 0.4x1.0 cm and massive white quartz, and massive light green quartz. One 2.6x0.4 cm medium green wall rock fragment of chlorite alteration with 5% 1.0 mm leucoxene grains. 10 % of vein is hard > steel, dark green chloritic quartz infilling between quartz crystals.
7717	R vein	0.22	0.62	0.40	3972	N/A	N/A	N/A	0.015	<1.000	North in West channel. Sampled on last day Wall rock north of vein. Cut length 0.50 meters with horizontal width 0.40 meters
7718	G1	0.00	0.83	0.83	2919	2.88	0.78	0.00	0.022	1.140	South Very fine grained, uniform and massive, light grey, moderately hard < steel. 10% dark green microfracture filling to 2 mm. Includes 0.4 cm quartz pale grey quartz vein and 1.0 cm black quartz vein with disseminated pyrite. 0.5 cm rusty brown weathering rind.
7719	G1	0.96	1.52	0.56	2289	2.84	0.66	0.00	0.017	**2.820**	South. Very fine grained, uniform and massive with 5% dark green micro-fracture filling to 2mm and infilling interlocking breccia fragments. Moderately soft << steel. Prominent 0.5 cm rusty brown weathering rind. 0.01% extremely fine disseminated pyrite
7720	G1	1.52	2.30	0.78	3485	2.88	0.62	0.00	**0.742**	**2.700**	South. Uniform and massive, very fine grained, light grey ww 20% dark green chloritic microfracture filling. Includes 3.5x0.8 cm patch with 30% pyrite in contact with and perpendicular to thin pale grey to dark grey quartz vein (shallow dipping). Soft << steel to moderately hard < steel. 0.5 cm rusty brown weathering rind.
7721	G2	0.00	0.57	0.57	3699	2.84	1.97	0.00	0.008	2.580	South. Uniform and massive, extremely fine grained, light grey with 10% dark green-pale grey chlorite-carbonate microfracture filling
7722	G2	0.57	1.50	0.93	3907	2.82	0.57	0.00	0.007	2.160	South. Uniform and massive, moderately hard < steel, extremely fine grained, light grey, with 10% dark green chloritic micro fracture filling. 0.4 cm rusty brown weathering rind. Includes 1.2 cm and a 0.4 cm extremely fine grained, pale grey, cherty appearing quartz vein parallel to the outcrop surface. Trace pyrite.
7723	G2	1.50	2.05	0.55	3238	2.86	0.66	0.00	0.017	1.740	South. Uniform and massive, moderately soft to moderately hard < steel, extremely fine grained, light grey, with 10% dark green chloritic carbonate micro fracture filling. 1.2 & 0.8 cm irregular white quartz veins with 10% pyrite at 70-80 degrees to late banded cherty grey quartz vein which is parallel to the outcrop surface (shallow dipping). 2% pyrite concentrated in micro fracture filling and early quartz vein described above. 0.4 cm rusty brown weathering rind. 0.4 cm rusty brown weathering rind.

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7724	G2	0.00	0.75	0.75	5700	2.80	0.67	0.00	0.086	1.560		South face of outcrop. Moderately soft to moderately hard < steel, extremely fine grained, light grey, with 10% dark green chloritic micro fracture filling. Hairline to 2.2 cm quartz fracture filling to veins at various angles and cross cutting relationships 2% pyrite pyritohedral and cubic pyrite crystals to 3.0 mm concentrated wall rock. 1.5cm prominent rusty brown weathering rind. Field notes --> 0.75 m incline distance at 54 degree incline. Includes 2.0 & 1.2 cm quartz veins and small quartz fracture fillings. Appears to be 3 generations of veining [(A & B) 1.0 & 0.6 cm white quartz at 320 degrees dipping 32 degrees north which offsets (C)], [(C) 0.2-0.5 cm white quartz vein 020 degrees dipping 70 degrees east] and [(D) 0.8 cm transparent medium grey quartz veins at 320 degrees that appear to truncate vein (C)] Wall rock 1% 0.1-3.0 pyrite crystal). 0.5 cm rusty brown weathering rind.
7725	G2	N/A	N/A	N/A	N/A	N/A	0.16	0.00	0.026	1.200		Sample 0.035 m true width as 3.0 cm quartz vein with 0.5 cm porous rusty brown weathering rind on one wall. Strike 115 degrees with dip ~20 degrees south. No pyrite observed.
7726	G2	0.00	0.83	0.83	3948	2.81	0.68	N/A	0.010	**2.040**		North Very fine grained, uniform and massive, with <0.1 groundmass texture Light grey, moderately hard < steel. 15% dark green microfracture filling to 2 mm. Minor pyrite 0.5%. 0.6 cm rusty brown weathering rind
7727	G3	0.83	1.47	0.64	3024	2.75	0.46	N/A	0.048	**3.900**		North. Uniform and massive, 0.2-0.5 mm textured, light greenish-grey, moderately hard to hard , - > steel. Appears to be massive un-bedded tuff with pale grey and medium green fragments to 0.5 mm or a massive flow crystalline flow. Vein "A" 0.4 cm black chloritic quartz vein at ~016 degrees, dipping ~20 degrees NW. Vein "B" 0.6 cm very fine grained quartz vein with fibrous texture at 90 degrees to the walls. Strike ~0.16 degrees dip ~20 Degree NW. Vein "C" 0.6 cm white quartz vein, cross cutting vein "B", Strike 062 degrees dip 90 degrees. Vein "D" hairline opaque white quartz vein truncated by veins "B' & "C" and cross cutting vein "A", strike 102? Degrees Dip 35? degrees south. Trace pyrite

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7728	E2 Vein	0.00	0.41	0.41	1265	N/A	N/A	N/A	0.010	**2.820**	E Channel sample across 7.0 cm opaque white quartz vein . Wall rock massive, dark green 0.2 mm groundmass texture and 5% pale brown leucoxene angular grains (magnetism 0.460 10-3 SI) . Wall rock also includes hard pale grey patchy silicification that preserves relic groundmass texture with trace pyrite in wispy dark green chloritic streaks (magnetism 0.175 10-3 SI) 1% pyrite concentrated in fracture filling an within minor q ff of wall rock
7729	E2 Vein	0.00	0.08	0.08	1634	N/A	N/A	N/A	0.048	2.160	E Vein Sample South of Channel. 3.3 cm semi opaque white quartz vein in hard > steel, patchy pyritic pale yellow albitic alteration with 5% extremely fine to 0.5 mm disseminated pyrite and quartz flooding as fracture filling. Patches of soft <<steel chloritic alteration. (Magnetism 0.15 to 0.32 10-3 SI).
7730	E3 Vein WRX	0.00	0.45	0.45	2436	2.74	0.34	0.00	0.043	1.740	South. Patchy pyritic pale grey to pale grey albite alteration, hard > steel with 5% fine to 1.0 mm disseminated pyrite crystals. Minor pale grey carbonate fracture filling. 5% pale grey quartz carbonate veining.
7731	E3 Vein	0.45	0.93	0.48	1661	2.76	0.24	0.40	0.022	2.220	South. Includes 7 cm quartz vein in middle of sample and 7.0 cm qv in south end of sample and 5Rest of sample is pale yellow to grey pyritic albite alteration. 10% disseminated pyrite in both wall rock and vein% disseminated pyrite in yellow grey bleached alteration
7732	Reed Trench Vein	0.00	0.38	0.38	3551	2.63	0.14	0.50	0.010	<1.000	South. Broken out as small rusty chips. Minor Pyrite. The vein is fractured reducing the measured SG. Conductivity generally 0.0 with spot readings to 0.8 S/m. Sample measured from two chunks representing extreme of variance A 424 gram chunk emphasises brittle, hard, steel, pale yellow fracture filling with 1% pyrite within fracture filing. The quartz appears to consist of 1.0-2.0 quartz domains defined by changes in parting pattern of this quartz. Continuation of 7732 0.00-0.38 m South 321 gm piece of the purest quartz. Opaque white quartz. The quartz appears to consist of 1.0-2.0 quartz domains defined by changes in parting pattern of this quartz.
7733	Reed Trench	0.38	0.85	0.47	3136	2.72	0.50	N/A	<0.005	1.140	South. Dark green, uniform and massive,, <0.5 mm groundmass textured. Two generations of quartz fracture filling.

Image Above: Page 05 of 6 pages file "*CCW 2021 Eby-Otto Channel Sample Assays.pdf"*

7740	R Vein	0.00	0.77	0.77	3680	2.79	0.63	0.00	<0.005	<1.000	Soft << steel from East channel. Wall rock, dark green chloritic alteration, fresh break is grungy due to lack of crystal texture. 3.0 cm bleached alteration band. Includes 0.5 cm quartz vein. Minor Pyrite. Pale brown leucoxene has appearance of pyrite. Continued: Least altered. Dark green, very fine grained, soft <<steel, 5% 1.0 mm pale brown leucoxene. Continued: ~60% dark green chloritic alteration cut by soft << steel bleached pale grey alteration with 25% medium green chloritic patches.
7741	R Vein	0.00	0.18	0.18	1989	2.76	0.31	0.00	<0.005	<1.000	18.8 cm x 3.5 cm as oblique diamond shaped cut to test alteration band. Wall rock to 4.0 cm bleached pale grey, hard to moderately hard <- > steel, alteration band cutting typical soft << steel, dark green chlorite alteration band with 5%, 1 mm pale brown leucoxene. Bleached alteration band weathered as 1.0 cm ridge on the outcrop surface. No pyrite noted.
7742	R Vein	0.22	0.83	0.61	1388	2.73	0.45	0.00	0.008	<1.000	South in West Cut Wall rock. Uniform and massive, soft << steel, dark green chloritic alteration with 5% 1.0 cm angular pale brown leucoxene. Locally 1% pyrite. Pale grey weathering rind. No explanation for low SG value 2.0 cm wide Channel sample
7743	R Vein	0.00	0.21	0.21	717	N/A	0.00	N/A	0.025	<1.000	South in West Channel. Broken ground on strike with vein to the east. Dark green chloritic alteration, soft << steel, 5% pale brown leucoxene..
											Magnetic susceptibility generally average of three redings as AVG 10^{-3}SI

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Lithology Mapping

The hand stripping, and channel sampling, were designed to identify mineralization, and to sample that mineralization.

The lithologies, alteration, and mineralization were logged, and reported in the channel sample logs discussed above *(subheading "Sample Logging")*.

The subcrop mapping, concentrated on mapping, the veining, and alteration; and established the configuration, and location of the channel samples, in relationship to the veining.

The R-Vein subcrop, and Reed Trench vein subcrop are hosted in the coarse grained mafic intrusive, *(blue Blob)* that dominates the central southern, and western part of the property.

The other stripped subcrops, occur in altered mafic volcanics, of undetermined original affinity. It is plausible the volcanics, and the Mafic Intrusive are part of the same igneous suite. SG sampling and major element analysis, of the least altered volcanics, and Mafic Intrusive might be informative, concerning the relationship between this intrusive and the volcanic rocks.

Lithology MgO, FeO CaO and SiO_2 Saturation-Depletion

This author's experience at the Castle *(gabbro)* project, and other gabbro cantered projects, has impacted his deposit models for the similar Eby-Otto Gabbroic Intrusive. This author recognizes **geochemistry** and **geophysical** gradients, and boundaries appear to be the primary cause of mineral deposits, independent of their age.

The petrographic phases of the Nipissing gabbros and probably the Eby-Otto Mafic Intrusive, appear to be dependent on their **MgO**, **FeO**, CaO, Na_20 and SiO_2 concentration-saturation-depletion levels in gabbroic intrusion during fractional crystallization of their magmas, and magma mixing, and assimilation from enclosing rocks. Other impacting factors include pressure, temperature, water, and volatile concentrations, CO_2 concentrations, oxygen fugacity, and the oxidation states of the evolving magma during crystallization.

Understanding all the full, complexities of igneous petrology, and the genesis of igneous rocks is overwhelming. Understanding the full implications of petrology, and igneous genesis, is not a requirement to objectively log the resultant igneous rocks. The ability to recognize the significant major, and minor minerals, and their place in the petrographic sequence, is sufficient to generate a universally useful log. Experts can decipher the logs significance based on the log descriptions.

For example: a magnetite description includes; both the abundance of the magnetite, and its relationship to the other minerals. Is magnetite an interstitial mineral among the major silicates, or is the magnetite, dendritic *(Christmas-tree)* magnetite that predates the major silicate minerals. See paragenetic sequence below:

- A late petrographic gabbroic phase hosting dendritic-Christmas-tree magnetite that crystalized early within this late phase
- A middle petrographic gabbroic phase hosting interstitial magnetite that crystalized late among the major silicates.
- An early petrographic phase having little to no magnetite.

In Nipissing gabbro, the phases are subtle, and the mineralogical descriptions, must deal with the subtle nuances of the minerals such as magnetite, and hypersthene, and interstitial granophyre.

The fractional crystallization of the major silicate and oxide mineral of MgO, FeO, CaO, Na_2O and SiO2 and water of crystallization establish the characteristic, mineralogy of various, igneous intrusive phases.

In the Eby-Otto Mafic Intrusive quartz grains appear to be restricted to one specific phase and. Also; an approximately 1mm, pale beige, alteration mineral appears to be phase specific. In this situation: Log descriptions such: ***"~5% 0.5-2.0 mm interstitial quartz"*** or ***"2-5% 1 mm speckled, pale grey pale alteration mineral"*** are petrographicly significant and often phase specific. The description of the minerals is more useful that an unsupported interpretive classification that may or may not be correct.

In the Nipissing gabbro there can be PGM-Au enrichment horizon floating in the intrusive, and the apparent magma mixing phase recognized as Varied-textured diabase has PGM-Au potential. If primary PGM-Au mineralization exists in Nipissing gabbro , the Cobalt-Silver-Arsenide veins also have potential to also host PGM mineralization scavenged from the primary mineralization in the gabbro.

Much of the above is informed speculation. Investigation begins with speculation. You do not design a whole program on that level of speculation, however the low marginal cost of a few extra assays, and added notations within logs, dealing with the evidence, are a small cost.

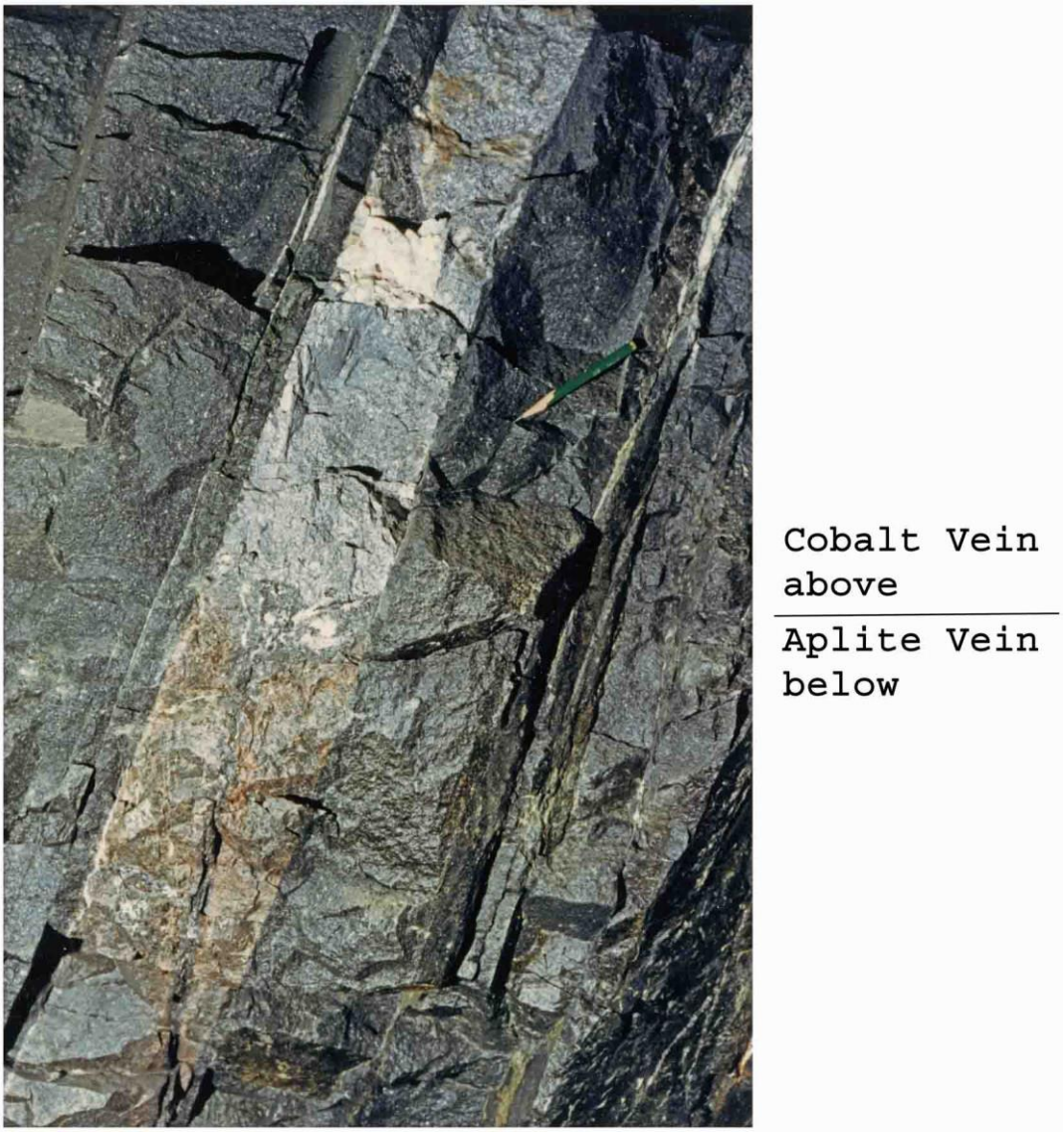


Image Above: Nipissing Gabbro hosting a composite aplite-cobalt vein with a sharp change from massive, pink aplite below, to massive, grey cobalt arsenides above.

This image raises as many questions, as it answers. At the time of mining high-grade silver, this aplite and cobalt were an inconvenience. However: the very small marginal cost of recording the details, has long term implications for exploring gabbroic intrusives.

This author also recognizes the Eby-Otto Mafic Intrusive may exhibit genetic traits equivalent to Nipissing gabbro model. See separate discussion on Magnetic susceptibility.

The preparation of this page involved a web search. The following web pages are useful to understand the concepts presented in this subheading;

Source: Wikipedia Fractional Crystallization:
https://en.wikipedia.org/wiki/Incompatible_element
and
Source: Wikipedia: Incompatible element:

https://en.wikipedia.org/wiki/Fractional_crystallization_(geology)

Photography

Prior to this report; this author imported, uncompressed JPG file images into his assessment reports, and other reports. This has created problematic file size issues.

In the preparation of this report, and other recent documents, this author has reduced the photographs to standard, 300 dpi, 6-inches wide landscape or 6-inch high portrait format images, at maximum JPG compression.

This format, has optimized the compromise, between small file size, and preservation of geological detail.

This author is of the opinion; "*if he is wrong; he wants to be proven wrong by his own evidence"*. It is hoped; if any personal geological interpretations or opinions expressed in this is report are **incorrect**, or inadequate, the photographs, and other data, will provide the reader with the evidence, to **reconcile** this report to a correct interpretation.

Oriented Core Discussion

This author is not a structural geologist, and is uncomfortable drawing conclusions from indirect observations.

This author, and many others like him, are reliant on the core logger, to measure the "***alpha***" and "***beta***" angles of important and significant structural features, and to establish estimates of the "X-Y-Z-Azimuth-Dip" coordinates. It is then important, to enter these ***"X-Y-Z-Azimuth-Dip"*** coordinates into the text of the geology log.

These critical features are expected to be intuitively obvious to the logger during logging. The logger has the unique opportunity, to make the important decisions, to directly determine the "***X-Y-Z-Azimuth-Dip***" orientation measurements during the logging process, and to embed notations into the geology log's text. This is important for the log term security of this critical information.

This one-time orientation-coordinate determination and embedded data entry assure all log users, have easy and convenient access in quotable format for internal use and press releases.

In hole EO-22-004, critical "X-Y-Z-Azimuth-Dip" determinations were required to estimate the azimuth-dip determinations of the five target zones intersected. These were recognized as significant zones within the log text. In some instances, the logger noted the core condition prevented oriented core measurements. It appears; the other critical intersections lacked defining fabric parallel to the orientation of the zone.

Had proxy-measurements been performed, and reported as proxy-measurements, the five intersected mineralization-alteration-structural zones might have been reconciled to the surface targets. The use of proxy measurements, is discussed under the subheading "***Problematic Orientation Measurements by Proxy.***"

The five surface targets, and the five interested zones, spatially-reconcile as five near-vertical zones with slight south dips. However; other scenerios may also reconcile with this data.

Reliable, structural orientation determinations, from oriented core determinations, could have affirmed, or contradicted the spacial reconciliation of the data. Also; reconciliation of surface locations, with intersection core locations, with orientation coordinates would have given much greater confidence in follow-up drill planning.

. *Embedding Azimuth -Dip into the Lithology, Structure and Vein Logs*

CSCW, and this author, have discussed the importance determining and recording "***X-Y-Z-Azimuth-Dip***" orientation data of critical geological features, into the text of the geology log, during the core logging process. Early in the logging process; someone must recognize the important features intersected, and be responsible for measuring, and reporting the Alpha, and Beta angle, and the "***X-Y-Z-Azimuth-Dip***" determinations of these features. That person must needs to enter "***X-Y-Z-Azimuth-Dip***" determinations into the text of the geology log. This is necessary for the security of that data in the log, and in the documents derived from that log. The quote below, from the contract represents our conversation.

> *"Both the Optionee and Optionor recognize the "Engineering importance of recorded* ***X-Y-Z-Azimuth-dip*** *data of critical* ***geological features****" and* ***report*** *(embed)* ***this information to the optionor****.*
>
> - *Ideally this data should be* ***recorded in the text of the drill log describing that feature****.*
> - ***Recording X-Y-Z-Azimuth-Dip data of a critical geological within the "drill-log-text" describing that feature*** *will be deemed to qualify under this reporting requirement.*
> - *Typically: "X" is the* ***East*** *(-West) coordinate, "****Y****" is the* ***North*** *(-south) coordinate and "****Z****" is the* ***elevation*** *coordinate and these are represented as* ***ground, survey*** *or* ***UTM coordinates****." Quote from contract.*

The entry of the critically important "***X-Y-Z-Azimuth-Dip***" data embedded in the text of the geology log is pending and could impact the conclusions of this report.

In a typical 800-meter hole at the Castle Property; it is reasonable to expect 8 critical structures, that would warrant dedicated "***X-Y-Z-Azimuth-Dip***" determinations within the geology log *(i.e. two faults, the Nipissing gabbro contact, 5 significant vein structures with significant ore potential and zero or near zero assay values)*

An 869-meter hole like EO-22-004, might include a dozen critical "***X-Y-Z-Azimuth-Dip***" determinations as log entries. It would be the responsibility of the logger, to determine which structures are significant, and warrant embedding of that data into the drill log.

. *The EO-22-004 X-Y-Z-Azimuth-Dip Log*

This author recently received a file named: *"IMDEXHUB-IQ Viewdataiqlogger export 2022-12-07_EO-22-004.xlsx".*

This file includes the *"**XYZ-Azimuth-Dip**"* data of EO-22-004. This file was reformatted. Much of the peripheral data, was deleted, and the file organized for this report, and for the convienience of future use, including CSCW.

The "*X-Y-Z-Azimuth-Dip*" file identified the location of the selected structural features. The orientation determinations, tended to deal with contacts, and secondary features of the mineralization-alteration-structural zones. It appears these secondary features are probably oblique to these zones. The critical structural features that define the strike, and dip of zones, tended to be unmeasurable by strict Quality-Assurance standards used by the logger.

Had the logger relaxed the Quality-Assurance standards, and measured the critical orientation by **proxy measurements**, significant, and reasonable orientation determinations might have been established. Azimuth-Dip determinations of the five intersected zones, would support, or deny, the reliability of the vertical spacial reconciliation of the drill intersections to the surface targets tested.

Discussion of proxy measurements follow the "X-Y-Z-Azimuth-Dip" chart below.

Ten fault determinations were established: Nine dip south and one dips north.

Fifteen foliation determinations were established: Ten dip south, four dip north, and one dips east.

Eighteen shear determinations were established: Eleventh dip south, one is vertical, four dip north, and two dip east.

(Excluding Lamprophyres) 6 lithology contacts determinations were established: Four dip south, one dips North, and one dips west.

It would be valuable to have a structural geologist, to comment on the probability of these south dips indicating sympathy to the orientation of the CLLDZ.

This file is summarized in the chart below. It was beyond the scope of this report, to reconcile this data to the drill logs.

Absence of Vein -width in the ""X-Y-Z-Azimuth-Dip" Log

The absence of vein-width in the "X-Y-Z-Azimuth-Dip" log, is a seriously impediment to the usefulness of this log. This problem can be partially reconciled by embedding this vein orientation data into the text of the vein log, or entering the vein description into the orientation log.

. *EO-22-004 X-Y-Z-Azimuth-Dip Data File* Below

The log of hole EO-22-004 was received as file ***"EO-22-004_GeoticExport.xlsx"***. This log records the oriented core ***"Alpha Angle"*** , and the ***"Beta Angle,"*** of many features in the core. The log is silent, regarding the "***XYZ-Az-Dip***" coordinates of these structures.

The contract requires the "***XYZ-Azimuth-Dip***" of important, and significant structures be embedded into the geology log. This data entry is pending.

The "***XYZ-Azimuth-Dip***" coordinates of these structures reported in a file called ***"IMDEXHUB-IQ Viewdataiqlogger export"***. This file was received, and processed to generate file the named ***"IMDEXHUB-IQ Viewdataiqlogger export 2022-12-07_EO-22-004 USEFULL ZYZAZDIP 2023-06-16.xlsx"***. The file was processed, into a practical, printable format which is shown below.

A separate data sheet, was created in this file, and sorted by structure type. This sorted file is not included in this report.

It appears the oriented data produced little directly-useful information. A statistical study might generate meaningful information. A statistical study is not recommended.

Hole: EO-22-004 X-Y-Z-Azimuth-Dip Data File									
Structure Description	Depth	Easting X (TN)	Northing Y (TN)	Elevation Z (TN)	Azimuth	Dip		Dip Direction (TN)	Comments
barren qz-carb vein	10.54	562,148	5,326,546	324	335	41	NE	65	Stringer
barren qz-carb vein	16.10	562,148	5,326,549	320	297	28	NE	27	Stringer with minor chl alt
barren qz-carb vein	33.37	562,145	5,326,558	306	283	87	N	13	Stringer with minor chl and ser alt
Contact Dike 35.22-35.85+C40	35.94	562,145	5,326,560	304	274	84	N	4	
barren qz-carb vein	37.37	562,144	5,326,561	302	44	83	SE	134	
Mineralized QzCrbV	42.68	562,144	5,326,564	298	235	89	NW	325	stringer trace py
Barren shear	46.53	562,143	5,326,566	295	242	82	NW	332	Second measurement
Mineralized QzCrbV	47.00	562,143	5,326,566	295	271	13	N	1	trace py
Mineralized QzCrbV	49.73	562,143	5,326,568	292	165	43	W	255	1-2% Py
Mineralized QzCrbV	50.16	562,143	5,326,568	292	168	52	W	258	trace py
barren qz-carb vein	57.97	562,141	5,326,572	286	204	22	NW	294	stringer very weakly k-spar altered
barren qz-carb vein	58.44	562,141	5,326,572	285	172	18	W	262	stringer very weakly k-spar altered
barren qz-carb vein	60.96	562,141	5,326,574	283	245	14	NW	335	stringer
barren qz-carb vein	62.21	562,141	5,326,575	282	182	27	W	272	Stringer
Mineralized QzCrbV	62.30	562,141	5,326,575	282	158	77	W	248	stringer 1-2% Py
Barren shear	65.34	562,140	5,326,576	280	254	89	N	344	
barren qz-carb vein	67.84	562,140	5,326,578	277	228	78	NW	318	stringer
Mineralized QzCrbV	73.45	562,139	5,326,581	273	252	13	N	342	1-2% Py
barren qz-carb vein	81.80	562,138	5,326,585	266	159	53	W	249	Stringer

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barren qz-carb vein	**83.83**	**562,138**	**5,326,587**	264	**112**	**69**	**SW**	202	Stringer
Barren shear	**83.95**	**562,138**	**5,326,587**	264	**64**	**77**	**SE**	154	Measurement 1
barren qz-carb vein	**84.73**	**562,138**	**5,326,587**	264	**164**	**14**	**W**	254	Stringer along edge of shear zone
barren qz-carb vein	**89.39**	**562,137**	**5,326,590**	260	**182**	**35**	**W**	272	
Barren shear	**91.38**	**562,137**	**5,326,591**	258	**305**	**35**	**NE**	35	
barren qz-carb vein	**91.41**	**562,137**	**5,326,591**	258	**331**	**31**	**NE**	61	
barren qz-carb vein	**91.92**	**562,137**	**5,326,591**	258	**320**	**22**	**NE**	50	Stringer
barren qz-carb vein	**122.20**	**562,132**	**5,326,608**	233	**347**	**67**	**E**	77	
barren qz-carb vein	**126.20**	**562,132**	**5,326,611**	230	**133**	**27**	**SW**	223	Stringer
barren qz-carb vein	**130.69**	**562,131**	**5,326,613**	226	**329**	**55**	**NE**	59	Stringer with ser+chl alt
barren qz-carb vein	**130.97**	**562,131**	**5,326,613**	226	**339**	**60**	**E**	69	Stringer with ser+chl alt
barren qz-carb vein	**138.71**	**562,130**	**5,326,618**	220	**165**	**48**	**W**	255	
Barren shear	**141.69**	**562,129**	**5,326,619**	217	**321**	**43**	**NE**	51	Chl shr measurement 2
barren qz-carb vein	**150.61**	**562,128**	**5,326,624**	210	**184**	**48**	**W**	274	
barren qz-carb vein	**152.05**	**562,128**	**5,326,625**	209	**220**	**16**	**NW**	310	Stringer with minor anomalous kspar +Ser alt
Contact MI -> AGAB	**157.16**	**562,127**	**5,326,628**	205	**47**	**58**	**SE**	137	
barren qz-carb vein	**157.43**	**562,127**	**5,326,628**	205	**231**	**47**	**NW**	321	Stringer
barren qz-carb vein	**160.29**	**562,127**	**5,326,630**	202	**80**	**68**	**S**	170	Strinnger plus weak chl+ser alt
barren qz-carb vein within 166.95-168.00m zone marked as **significant** in log including 11 cm q vein	**167.14**	**562,126**	**5,326,634**	197	**201**	**43**	**W**	291	Larger qtzcarb vein with kspar alt

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barren qz-carb vein	**169.89**	**562,125**	**5,326,635**	195	**187**	**87**	**W**	277	Stringer
barren qz-carb vein	**193.16**	**562,122**	**5,326,649**	176	**166**	**77**	**W**	256	Stringer
Mineralized QzCrbV	**197.50**	**562,122**	**5,326,651**	172	**49**	**48**	**SE**	139	Fracture fill with 1-2% Py along upper contact
Contact AGAB -> MI+AGAB	**197.88**	**562,122**	**5,326,652**	172	**62**	**68**	**SE**	152	Upper contact of the mafic dyke
barren qz-carb vein	**200.56**	**562,121**	**5,326,653**	170	**194**	**45**	**W**	284	Stringer
barren qz-carb vein	**203.42**	**562,121**	**5,326,655**	168	**231**	**66**	**N W**	321	Nearly shr-like with chl alteration
barren qz-carb vein	**204.51**	**562,121**	**5,326,655**	167	**226**	**75**	**N W**	316	Stringer
Barren **shear**	**215.04**	**562,119**	**5,326,661**	158	**31**	**82**	**SE**	121	Chl shear
Barren **shear**	**215.85**	**562,119**	**5,326,662**	158	**238**	**64**	**N W**	328	
Barren **shear**	**216.97**	**562,119**	**5,326,663**	157	**1**	**6**	**E**	91	
barren qz-carb vein	**219.86**	**562,119**	**5,326,664**	154	**348**	**53**	**E**	78	Stringer
Mineralized QzCrbV	**224.12**	**562,118**	**5,326,667**	151	**242**	**38**	**N W**	332	1-2% Py along UC
barren qz-carb vein	**230.92**	**562,117**	**5,326,671**	145	**22**	**84**	**E**	112	Stringer
barren qz-carb vein	**231.49**	**562,117**	**5,326,671**	145	**264**	**13**	**N**	354	Stringer
Contact M Syn -> MI	**232.50**	**562,117**	**5,326,672**	144	**161**	**61**	**W**	251	
barren qz-carb vein	**251.46**	**562,114**	**5,326,683**	129	**265**	**72**	**N**	355	Stringer
Mineralized QzCrbV	**251.95**	**562,114**	**5,326,683**	129	**49**	**87**	**SE**	139	Fracture fill with 1-2% Py
barren qz-carb vein	**253.75**	**562,114**	**5,326,684**	127	**222**	**87**	**N W**	312	Stringer
Barren **shear**	**261.77**	**562,113**	**5,326,689**	121	**75**	**87**	**S**	165	
barren qz-carb vein	**262.94**	**562,113**	**5,326,689**	120	**174**	**63**	**W**	264	Stringer
barren qz-carb vein	**266.89**	**562,112**	**5,326,692**	117	**282**	**16**	**N**	12	Stringer
barren qz-carb vein	**271.48**	**562,112**	**5,326,694**	113	**307**	**12**	**NE**	37	Vein with weak ser alt

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barren qz-carb vein	**271.83**	562,112	5,326,694	113	154	30	SW	244	Vein with weak ser alt
barren qz-carb vein	**272.73**	562,112	5,326,695	112	2	23	E	92	Stringer with weak ser alt
Mineralized QzCrbV	**278.26**	562,111	5,326,698	108	144	44	SW	234	Stringer with 1% Py
Mineralized QzCrbV	**278.53**	562,111	5,326,698	107	246	85	NW	336	Stringer with 1% py
Barren shear	**280.70**	562,110	5,326,700	106	94	86	S	184	
Barren quartz vein	**280.89**	562,110	5,326,700	105	85	80	S	175	Stringer
Barren quartz vein	**281.79**	562,110	5,326,700	105	78	83	S	168	Stringers
Foliation	**288.30**	562,110	5,326,704	99	93	88	S	183	Foliation weak shr
Zone 5 284.50-286.20m Blakck fault Zone anomalous in Ag Zn	**284.50**								No "X-Y-Z-Azimuth-Dip" determination
barren qz-carb vein	**294.58**	562,109	5,326,708	94	169	63	W	259	Stringer
barren qz-carb vein	**300.00**	562,108	5,326,711	90	252	80	N	342	Stringer
barren qz-carb vein	**302.66**	562,108	5,326,713	88	207	82	NW	297	Stringer
Mineralized QzCrbV	**303.01**	562,108	5,326,713	88	63	52	SE	153	Stringer 2-3% Py
barren qz-carb vein	**306.14**	562,107	5,326,715	85	232	87	NW	322	Stringer
barren qz-carb vein	**315.00**	562,106	5,326,720	78	241	84	NW	331	Stringer
barren qz-carb vein	**317.77**	562,106	5,326,722	76	35	89	SE	125	Stringer
Barren shear NB	**320.80**	562,105	5,326,723	74	22	77	E	112	NB
barren qz-carb vein	**321.57**	562,105	5,326,724	73	37	74	SE	127	Stringer
Mineralized QzCrbV	**328.68**	562,104	5,326,728	67	26	70	SE	116	Stringer 2-3% Py+Po
barren qz-carb vein	**334.50**	562,104	5,326,731	63	253	74	N	343	Stringer
barren qz-carb vein	**340.29**	562,103	5,326,735	58	220	86	NW	310	

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Zone 4. 371.05-390.15m Two Blk Faults anomalous in Au, Ag, As, Co, Cu, Sb, Te, Zn									Oriented Core measurements give no indication of "X-Y-Z-Azimuth-Dip" of this zone
barren qz-carb vein	**376.12**	562,099	5,326,756	30	212	74	N W	302	
barren qz-carb vein	**378.80**	562,098	5,326,758	28	57	84	SE	147	
barren qz-carb vein	**379.57**	562,098	5,326,758	27	264	75	N	354	
barren qz-carb vein	**385.82**	562,098	5,326,762	22	195	63	W	285	Stringer
Barren quartz vein	**386.90**	562,098	5,326,763	21	42	25	SE	132	Stringer
barren qz-carb vein	**393.82**	562,097	5,326,767	16	19	42	E	109	
Mineralized QzCrbV	**396.23**	562,096	5,326,768	14	22	69	E	112	
barren qz-carb vein	**396.90**	562,096	5,326,769	13	101	85	S	191	
Mineralized QzCrbV	**399.40**	562,096	5,326,770	11	345	40	E	75	Qtzcarb flooding in breccia zone
barren qz-carb vein	**402.55**	562,096	5,326,772	9	232	78	N W	322	
barren qz-carb vein	**406.49**	562,095	5,326,775	6	249	74	N	339	
barren qz-carb vein	**406.79**	562,095	5,326,775	6	233	83	N W	323	
Barren shear	**409.50**	562,095	5,326,777	3	156	44	SW	246	
barren qz-carb vein	**411.38**	562,095	5,326,778	2	55	88	SE	145	
Contact MI -> Lamp	**411.86**	562,095	5,326,778	2	90	80	S	180	
Mineralized qz vein	**418.07**	562,094	5,326,782	-3	18	59	E	108	
barren qz-carb vein	**431.59**	562,092	5,326,790	-14	149	81	SW	239	
Barren **shear**	**434.33**	562,092	5,326,792	-16	28	82	SE	118	
barren qz-carb vein	**434.68**	562,092	5,326,792	-16	106	82	S	196	Stringer ser alt
barren qz-carb vein	**436.81**	562,092	5,326,793	-18	73	70	S	163	Stringer ser alt
barren qz-carb vein	**457.09**	562,090	5,326,805	-34	37	58	SE	127	Stringer set alt

barren qz-carb vein	**460.00**	**562,089**	**5,326,807**	-36	**170**	**26**	**W**	260	Stringer
barren qz-carb vein	**460.20**	**562,089**	**5,326,807**	-36	**139**	**41**	**SW**	229	Stringer
Contact Lamp Below	**460.20**	**562,089**	**5,326,807**	-36	**224**	**82**	**NW**	314	
barren qz-carb vein	**460.73**	**562,089**	**5,326,808**	-37	**304**	**37**	**NE**	34	Stringer
Contact Lamp Above	**461.45**	**562,089**	**5,326,808**	-37	**257**	**85**	**N**	347	
barren qz-carb vein	**469.00**	**562,088**	**5,326,813**	-43	**226**	**71**	**NW**	316	Stringer
barren qz-carb vein	**469.81**	**562,088**	**5,326,813**	-44	**231**	**16**	**NW**	321	Stringer
Zone 3 470.94-540.00m including two Blk Faults, Chl-Ser & 6 cm Qpy Vein. Zone anamalous in Au, Ag, Co, Cu, Te, Zn									
Contact AGAB -> Fault Z	**470.94**	**562,088**	**5,326,814**	-45	**27**	**73**	**SE**	117	NB
Flt plane - no gouge	**471.20**	**562,088**	**5,326,814**	-45	**16**	**64**	**E**	106	NB Measurement1
barren qz-carb vein	**471.24**	**562,088**	**5,326,814**	-45	**28**	**56**	**SE**	118	
Flt plane - no gouge	**471.45**	**562,088**	**5,326,814**	-45	**32**	**51**	**SE**	122	NB Measurement 2
Foliation	**475.16**	**562,088**	**5,326,816**	-48	**12**	**52**	**E**	102	
Fault with gouge	**475.35**	**562,088**	**5,326,817**	-48	**45**	**47**	**SE**	135	
Contact AGAb -> **Fault Zone**	**475.76**	**562,087**	**5,326,817**	-49	**65**	**39**	**SE**	155	NB
Barren quartz vein	**475.89**	**562,087**	**5,326,817**	-49	**146**	**77**	**SW**	236	
Contact Fault Zone -> AGAB	**476.74**	**562,087**	**5,326,817**	-49	**25**	**67**	**SE**	115	
barren qz-carb vein	**481.00**	**562,087**	**5,326,820**	-53	**360**	**82**	**E**	90	Stringer with minor hem alt
barren qz-carb vein	**484.90**	**562,087**	**5,326,822**	-56	**346**	**57**	**E**	76	Stringer with minor chl alt
Contact AGAB -> MI	**485.55**	**562,086**	**5,326,823**	-56	**40**	**37**	**SE**	130	
Foliation	**488.72**	**562,086**	**5,326,825**	-59	**36**	**49**	**SE**	126	CHL stringer clusters foliation

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barren qz-carb vein	**494.74**	**562,085**	**5,326,828**	-64	**14**	**70**	**E**	104	
Foliation	**496.39**	**562,085**	**5,326,829**	-65	**35**	**43**	**SE**	125	CHL stringer clusters foliation
Foliation	**497.33**	**562,085**	**5,326,830**	-66	**54**	**56**	**SE**	144	CHL stringer clusters foliation
barren qz-carb vein	**502.54**	**562,085**	**5,326,833**	-70	**261**	**80**	**N**	351	Cluster of stringers
barren qz-carb vein	**505.43**	**562,084**	**5,326,835**	-72	**346**	**33**	**E**	76	
Foliation	**506.59**	**562,084**	**5,326,836**	-73	**42**	**61**	**SE**	132	CHL stringer clusters foliation
Foliation	**513.26**	**562,084**	**5,326,840**	-78	**57**	**56**	**SE**	147	CHL stringer clusters foliation
Mineralized QzCrbV	**526.62**	**562,082**	**5,326,848**	-88	**144**	**80**	**SW**	234	
barren qz-carb vein	**537.73**	**562,081**	**5,326,855**	-97	**217**	**17**	**NW**	307	Stringer
Foliation End of **Zone 3**	**540.56**	**562,081**	**5,326,857**	-99	**103**	**14**	**S**	193	CHL stringer clusters foliation
barren qz-carb vein	**545.41**	**562,080**	**5,326,860**	-103	**131**	**89**	**SW**	221	
Barren shear	**547.51**	**562,080**	**5,326,861**	-105	**57**	**64**	**SE**	147	
Mineralized QzCrbV	**581.37**	**562,077**	**5,326,882**	-131	**249**	**79**	**N**	339	6cm wide 1-2% Py qtzcarb vein
barren qz-carb vein	**582.95**	**562,077**	**5,326,883**	-132	**257**	**25**	**N**	347	
barren qz-carb vein	**583.27**	**562,077**	**5,326,883**	-132	**268**	**17**	**N**	358	
barren qz-carb vein	**585.25**	**562,077**	**5,326,885**	-134	**215**	**35**	**NW**	305	Stringer with trace Py
barren qz-carb vein	**586.25**	**562,077**	**5,326,885**	-135	**157**	**46**	**SW**	247	Stringer
Contact MI -> AGAB	**588.67**	**562,077**	**5,326,887**	-137	**100**	**89**	**S**	190	
Barren quartz vein	**619.96**	**562,074**	**5,326,906**	-161	**120**	**72**	**SW**	210	
Barren shear	**620.00**	**562,074**	**5,326,906**	-161	**120**	**67**	**SW**	210	
Barren quartz vein	**622.50**	**562,074**	**5,326,908**	-163	**245**	**80**	**NW**	335	

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Zone 2 643.65-655.95m 643.65-644.60m logged as significant qtz/Carb zone 4-5% py and 654.80-655.95m Mineralized/altered Felsic Dike	**643.65**								
Mineralized QzCrbV	**644.40**	**562,072**	**5,326,922**	-180	**343**	**61**	**E**	73	
Mineralized QzCrbV	**650.53**	**562,071**	**5,326,926**	-184	**235**	**86**	**N W**	325	Trace to 1% Py seen along rims of 2cm wide qtzcarb vein
Foliation	**652.65**	**562,071**	**5,326,927**	-186	**274**	**75**	**N**	4	
Contact Lamp Below	**693.85**	**562,068**	**5,326,953**	-218	**100**	**53**	**S**	190	
Contact Lamp Above	**694.05**	**562,068**	**5,326,953**	-218	**91**	**55**	**S**	181	
barren qz-carb vein	**695.78**	**562,068**	**5,326,954**	-219	**80**	**85**	**S**	170	Stringer
barren qz-carb vein	**697.21**	**562,068**	**5,326,955**	-221	**77**	**74**	**S**	167	Stringer
barren qz-carb vein	**699.43**	**562,068**	**5,326,956**	-222	**256**	**66**	**N**	346	Stringer
barren qz-carb vein	**704.38**	**562,067**	**5,326,960**	-226	**283**	**81**	**N**	13	Stringer
barren qz-carb vein	**705.78**	**562,067**	**5,326,961**	-227	**265**	**71**	**N**	355	Stringer
barren qz-carb vein	**710.69**	**562,067**	**5,326,964**	-231	**119**	**89**	**SW**	209	Stringer
barren qz-carb vein	**711.62**	**562,067**	**5,326,964**	-232	**150**	**73**	**SW**	240	Stringer
Contact MV -> Lamp	**713.84**	**562,067**	**5,326,966**	-233	**67**	**44**	**S**	157	
Fault with gouge	**742.41**	**562,065**	**5,326,984**	-255	**107**	**79**	**S**	197	
Foliation	**744.33**	**562,064**	**5,326,985**	-257	**235**	**87**	**N W**	325	
Fault with gouge	**744.77**	**562,064**	**5,326,985**	-257	**252**	**76**	**N**	342	
barren qz-carb vein	**745.39**	**562,064**	**5,326,986**	-258	**258**	**83**	**N**	348	Stringer
barren qz-carb vein	**753.93**	**562,064**	**5,326,991**	-264	**250**	**73**	**N**	340	Stringer
barren qz-carb vein	**757.36**	**562,064**	**5,326,993**	-267	**73**	**82**	**S**	163	Stringer
Contact Lamp Below	**770.80**	**562,062**	**5,327,002**	-277	**257**	**78**	**N**	347	
Contact Lamp Above	**771.70**	**562,062**	**5,327,003**	-278	**89**	**29**	**S**	179	

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barren qz-carb vein	**771.84**	**562,062**	**5,327,003**	-278	**256**	**89**	**N**	346	Stringer
Foliation	**773.39**	**562,062**	**5,327,004**	-279	**260**	**75**	**N**	350	Measurement 1
Foliation	**773.71**	**562,062**	**5,327,004**	-279	**262**	**82**	**N**	352	Measurement 2
barren qz-carb vein	**773.90**	**562,062**	**5,327,004**	-279	**88**	**74**	**S**	178	Stringer
Contact Lamp Below	**788.80**	**562,061**	**5,327,014**	-291	**225**	**77**	**NW**	315	
Contact Lamp Above	**788.95**	**562,061**	**5,327,014**	-291	**285**	**83**	**N**	15	
barren qz-carb vein	**790.32**	**562,061**	**5,327,015**	-292	**88**	**83**	**S**	178	Stringer
barren qz-carb vein	**791.17**	**562,061**	**5,327,015**	-292	**153**	**32**	**SW**	243	chl ser altered stringer
barren qz-carb vein	**791.45**	**562,061**	**5,327,015**	-293	**179**	**46**	**W**	269	chl ser altered stringer
barren qz-carb vein	**791.93**	**562,061**	**5,327,016**	-293	**272**	**80**	**N**	2	chl ser altered stringer
barren qz-carb vein	**793.52**	**562,060**	**5,327,017**	-294	**78**	**76**	**S**	168	Stringer
barren qz-carb vein	**795.28**	**562,060**	**5,327,018**	-296	**59**	**89**	**SE**	149	chl ser altered stringer
barren qz-carb vein	**795.79**	**562,060**	**5,327,018**	-296	**110**	**63**	**S**	200	chl ser altered stringer
barren qz-carb vein	**796.26**	**562,060**	**5,327,018**	-296	**112**	**69**	**S**	202	chl ser altered stringer
Foliation	**796.54**	**562,060**	**5,327,019**	-297	**57**	**83**	**SE**	147	
Barren quartz vein	**796.77**	**562,060**	**5,327,019**	-297	**175**	**68**	**W**	265	
barren qz-carb vein	**816.58**	**562,059**	**5,327,031**	-312	**33**	**75**	**SE**	123	Stringer
barren qz-carb vein	**817.06**	**562,058**	**5,327,032**	-312	**258**	**71**	**N**	348	Stringer
barren qz-carb vein	**820.45**	**562,058**	**5,327,034**	-315	**221**	**76**	**NW**	311	Minor hem alt
Contact Lamp Below	**822.50**	**562,058**	**5,327,035**	-316	**108**	**21**	**S**	198	
barren qz-carb vein	**822.96**	**562,058**	**5,327,036**	-317	**118**	**52**	**SW**	208	
Contact Lamp above	**824.35**	**562,058**	**5,327,036**	-318	**128**	**39**	**SW**	218	
Barren shear	**837.29**	**562,057**	**5,327,045**	-327	**32**	**81**	**SE**	122	
barren qz-carb vein	**839.60**	**562,057**	**5,327,046**	-329	**348**	**61**	**E**	78	Stringer
barren qz-carb vein	**841.29**	**562,056**	**5,327,047**	-330	**243**	**79**	**NW**	333	Stringer hem alt

EO-22-004 X-Y-Z-Azimuth-Dip Data File Continued page 9

Mineralized QzCrbV	**844.13**	562,056	5,327,049	-333	**2**	**17**	**E**	92	trace py
barren qz-carb vein	**844.60**	562,056	5,327,050	-333	**28**	**25**	**SE**	118	Stringer
Mineralized QzCrbV	**845.10**	562,056	5,327,050	-333	**15**	**23**	**E**	105	Stringer 1-2%
barren qz-carb vein	**847.07**	562,056	5,327,051	-335	**48**	**34**	**SE**	138	Stringer
Contact Lamp Below	**847.65**	562,056	5,327,052	-335	**53**	**38**	**SE**	143	
barren qz-carb vein	**848.02**	562,056	5,327,052	-336	**194**	**24**	**W**	284	Stringer
Contact Lamp Above	**848.20**	562,056	5,327,052	-336	**51**	**61**	**SE**	141	
Mineralized QzCrbV	**851.25**	562,056	5,327,054	-338	**117**	**11**	**SW**	207	1-2% py
barren qz-carb vein	**853.88**	562,055	5,327,056	-340	**149**	**37**	**SW**	239	hem alt
Zone 1 857.05-894.00m	**857.00**								NB
858.30-870.60 strong vein-alteration-mineralization Zone	**858.30**								NB
Barren shear	**858.68**	562,055	5,327,059	-344	**36**	**86**	**SE**	126	
barren qz-carb vein	**859.66**	562,055	5,327,059	-344	**70**	**89**	**S**	160	Ser altered stringer
barren qz-carb vein	**860.08**	562,055	5,327,060	-345	**211**	**41**	**N W**	301	Ser altered stringer
barren qz-carb vein	**861.78**	562,055	5,327,061	-346	**196**	**36**	**W**	286	Ser altered stringer
barren qz-carb vein	**864.58**	562,055	5,327,063	-348	**233**	**89**	**N W**	323	Ser altered stringer
barren qz-carb vein	**865.10**	562,055	5,327,063	-348	**198**	**42**	**W**	288	Ser altered stringer
Foliation	**866.16**	562,054	5,327,064	-349	**124**	**59**	**SW**	214	
866.65-668.20 **0.320 gAu/mt** over 1.55m	**866.65**								
Mineralized qz vein	**870.33**	562,054	5,327,066	-352	**106**	**75**	**S**	196	
Flt plane - no gouge	**870.50**	562,054	5,327,067	-352	**77**	**80**	**S**	167	
barren qz-carb vein	**872.80**	562,054	5,327,068	-354	**48**	**85**	**SE**	138	Ser altered stringer
barren qz-carb vein	**876.45**	562,054	5,327,070	-357	**243**	**20**	**N W**	333	Ser altered stringer

EO-22-004 X-Y-Z-Azimuth-Dip Data File Continued page 10

barren qz-carb vein	**880.01**	**562,053**	**5,327,073**	-360	**55**	**85**	**SE**	145	Ser altered stringer
Flt plane - no gouge	**880.95**	**562,053**	**5,327,073**	-360	**128**	**76**	**SW**	218	
Barren quartz vein	**881.65**	**562,053**	**5,327,074**	-361	**147**	**51**	**SW**	237	
barren qz-carb vein	**883.23**	**562,053**	**5,327,075**	-362	**21**	**8**	**E**	111	Ser altered stringer
barren qz-carb vein	**888.77**	**562,053**	**5,327,079**	-366	**60**	**88**	**SE**	150	Ser altered stringer
barren qz-carb vein	**889.03**	**562,053**	**5,327,079**	-366	**110**	**81**	**S**	200	Ser altered stringer
barren qz-carb vein	**889.78**	**562,053**	**5,327,079**	-367	**286**	**86**	**N**	16	Ser altered stringer
Mineralized qz vein	**894.25**	**562,052**	**5,327,082**	-370	**20**	**82**	**E**	110	Ser altered stringer
Barren **shear**	**910.77**	**562,051**	**5,327,093**	-382	**86**	**63**	**S**	176	
Mineralized QzCrbV	**923.93**	**562,050**	**5,327,102**	-392	**95**	**64**	**S**	185	1.5cm wide with 2-3% Py along contacts
barren qz-carb vein	**925.10**	**562,050**	**5,327,103**	-393	**302**	**66**	**NE**	32	
Contact Lamp Below	**925.39**	**562,050**	**5,327,103**	-393	**79**	**69**	**S**	169	
Contact Lamp Above	**926.85**	**562,050**	**5,327,104**	-394	**95**	**71**	**S**	185	
Foliation	**931.14**	**562,050**	**5,327,107**	-397	**44**	**78**	**SE**	134	
Contact Lamp Above	**932.27**	**562,050**	**5,327,108**	-398	**14**	**58**	**E**	104	
barren qz-carb vein	**950.00**	**562,049**	**5,327,120**	-411	**29**	**79**	**N**	119	Stringer
Mineralized QzCrbV	**951.49**	**562,049**	**5,327,121**	-412	**259**	**37**	**N**	349	Weak kspar alt and 1-2% Py
barren qz-carb vein	**953.99**	**562,049**	**5,327,123**	-414	**280**	**71**	**N**	10	Stringer
barren qz-carb vein	**954.45**	**562,049**	**5,327,123**	-414	**28**	**84**	**N**	118	Stringer
barren qz-carb vein	**957.00**	**562,049**	**5,327,125**	-416	**39**	**65**	**N**	129	Stringer
Mineralized QzCrbV	**958.58**	**562,049**	**5,327,126**	-417	**264**	**34**	**N**	354	Weak kspar alt 1-2% Py

EO-22-004 X-Y-Z-Azimuth-Dip Data File Continued page 11

The above "X-Y-Z-Azimuth-Dip" data file is a reformatting of EO-22-004 file ***"IMDEXHUB-IQ Viewdataiqlogger export".***

This chart is a useful accompaniment, to reading the various logs to reconcile the logs to "X-Y-Z-Azimuth-Dip" of features and to eventually add "X-Y-Z-Azimuth-Dip" data into the text of the relevant logs as required by the contract.

. Structural Orientation - Hand Rule Discussion

The right-hand rule, was used to calculate the azimuth of the structures.

The "***X-Y-Z-Azimuth-Dip***" entries remain to be added to the drill logs, to protect the information as embedded statements contained in these logs as required by the contract. Embedded "***X-Y-Z-Azimuth-Dip***" entries remain render the logs more useful to the reader, and act as Quality-Assurance of the logging, and orientation measurements, and assure that orientation data is not bifurcated from the log data and lost.

The right-hand rule for the orientation of a planar structure can be represented as follows: The palm of the right hand is placed on the plane to be measured; All four fingers point down the slope; The open thumb indicates the orientation of the plane. *(from google search of "right-hand rule").*

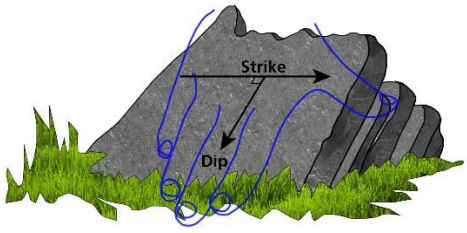


Image from Google (not referenced by Google)

The Sanuja Senanayake web site https://sanuja.com/blog/right-hand-rule-in-geology is similar to the Google search definition with expanded text explaining the use of the right hand rule.

. Problematic Orientation Measurements by Proxy

CSCW has encountered difficulty determining "X-Y-Z-Azimuth-Dip" determinations of critical faults.

This report recommends proxy determinations of "X-Y-Z-Azimuth-Dip" data.

> *If the core leading into, or out of a fault, is coherent, a line around the core, and parallel to the fault can be measured as a proxy "X-Y-Z-Azimuth-Dip" determination.*
>
> *If three points are established along a plane parallel to the fault, and the core is immersed into water with these three points at the water surface, the wet line around the core is parallel to the fault. An exact line can then be drawn on the core at the wet-dry line, and the proxy "X-Y-Z-Azimuth-Dip" can be determined relatively accurately.*

In the log comments typing **"*mbp*"** can be typed to be auto-replaced by **"*measured by proxy*"**. The typical log entry would then read ***"264 34 Calcite Vein*** X-Y-Z-097-75s ***measured by proxy"*** with X, Y and Z being the vein's UTM or Grid coordinates.

Aqua Regia ICP-MS Geochemical Discussion

Actlabs analysed **326 core samples** by their "**Ultra-1** ***(Aqua Regia ICP-MS)*** **for multi-element** ***(base metal, critical metals, alkali metals)***".

These are suitable geochemical analysis for sulfide, and carbonate ore minerals, and their contained metals. These, and their anomalous results are dealt with elsewhere in this report in the context of their apparent CLLDZ overprint.

This analytical process is a partial digestion. It is not suitable to be used to track albite *(Na)* alteration, or sericite *(K)* alteration or K-spar *(K)* alteration.

It appears **sperrylite** (PtS) is insoluble, therefor "As" analysis might not respond to PGM mineralization.

This author has communication with Actlabs' Robert Dampier *(705 264 0123),*

RobertDampier@actlabs.com) concerning major oxide-whole rock analysis and PGM assays.

For major oxide-whole rock analysis; he suggests BORON Digestion, is suitable for major oxide analysis to verify, and/or quantify, albite (Na) alteration, or sericite (K) alteration, or K-spar (K) alteration.

For PGM-Au assays; he suggests ICOES with fire assay finish.

The geochemical aspects of this report are dealt with in subsection titled "***EO-22-004 Geochemistry***".

FARA UAV: Total Magnetic Field and 1st First Vertical Derivative Survey

A magnetic survey, was conducted by Pat Fera owner of Fara UAV. Fara UAV was selected; based on a pervious, Fara UAV survey of the Canada Silver Cobalt Works', Castle Property in Gowganda Ontario.

This 2021, survey was designed to fly at low elevation, to enhance survey resolution of responses, from narrow bodies (*short wavelength responses)*. This low elevation, was designed to maximize the resolution from: structures, and alteration, and near surface bodies, without compromising responses from larger, and deeper sources.

The flight line pattern was designed 25-meter spaced north-south flight lines. This pattern, was designed to replicate, the existing 50-meter spaced, total magnetic ground survey. A high priority area; was designed, with 12.5-meter intermediate flight lines, over areas of highly favourable structures, and alteration, and mineralization.

The ground grid and the flight line grid; were both oriented NS *(to render a common orientation for direct correlation)*. The correlation of ground, and the drone magnetic data was not completed, in deference, to using the more comprehensive 2022, UAV-Borne Magnetic Survey. The report of the UAV-Borne Magnetic Survey is pending.

The Fara UAV program, was performed as an orientation survey to determine optimal survey configuration for a comprehensive survey. Canada Silver Cobalt Works commissioned a comprehensive survey in 2022, UAV-Borne Magnetic Survey. This survey included the entire CSCW-Reed-Robinson property, and its larger contiguous property to the south and to the west. Canada Silver Cobalt Works is reporting this work separately from this report.

Douglas Robinson site visited potential Fara UAV drone bases at:

1. A pipe line hill West of Highway 11.
2. Flat rock dump along Hwy 11 immediately SW of the hydro transformer station.
3. Side road (old Hwy 11) south from the Baldwin Mine in Eby Tp.
4. Highway 11 outcrop at Eby-Otto Township Line.

Fara UAV selected a drone base on a high hill, on the Baldwin Mine Road leading north from Hwy 11.

Normal drone flights are flown well above surface topography, and trees and power lines. To facilitate the low-level flights; presurvey-topographic, photo flights were flown of the property. The preliminary topographic data, was incorporated into the algorisms designed to program, low-level flight-plans.

Beginning May 05, 2021 Fara AUV commenced 12 flights of low elevation drone Total Magnetic Field, and First Vertical Derivative of Magnetic Field survey of the Reed Otto Tp. lease. These **12 flights consisted of 44 flight lines totalling 41.8 km of data**.

Flights were flown in both daytime and at night.



Image Above:[1367] Fara Drone setup on thew Baldwin Mine Road.

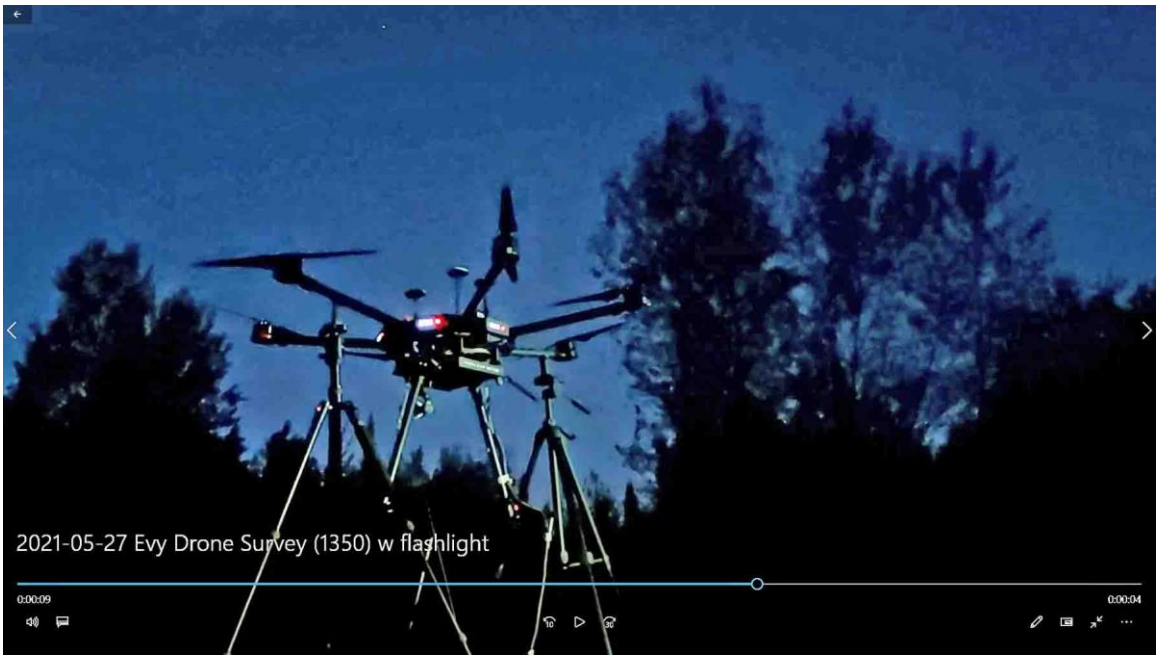


Image Above: Fara Drone at rest during start-up for night-time flight MP3 #1350



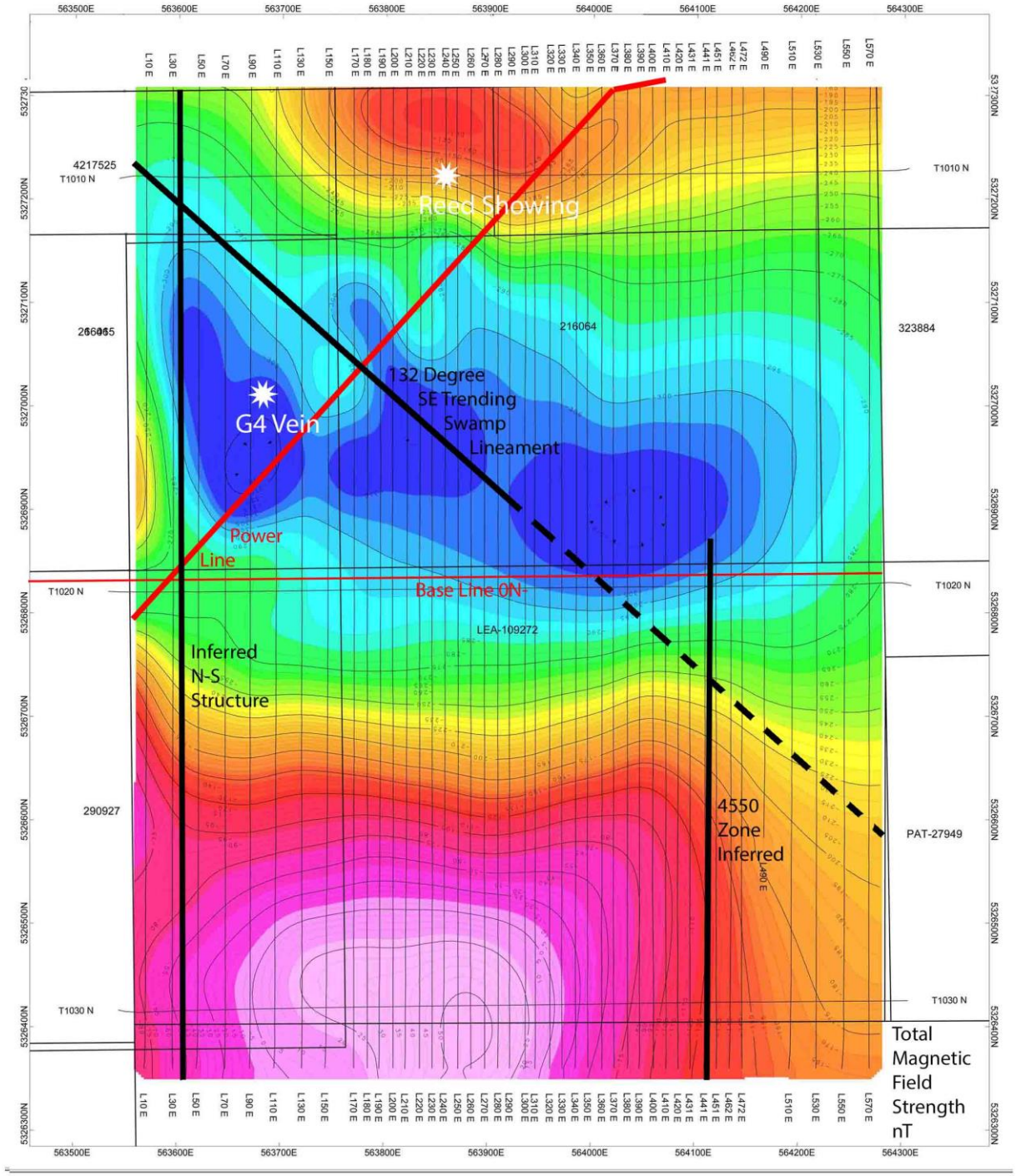
Image Above: Fara Drone at rest between day flights[1365]

. *Total Magnetic Field & First Vertical Derivative Pseudoplans*

Fara UAV provided a Total Field Strength plot *(nT)*, and a First Vertical Derivative plot *(nT/m)*. This survey was designed to emulate the survey Fera UAV performed over the CSCW Castle property. Fera UAV delivered both surveys as true horizontal pseudoplan-plots, registered to identical fiducial registration planes. This is the standard, deliverables format CSCW requested from their geophysics contractors at the Castle property.

This survey was an orientation survey performed to optimize survey procedures of the entire grid. Pseudosections were not requested. A report was not requested.

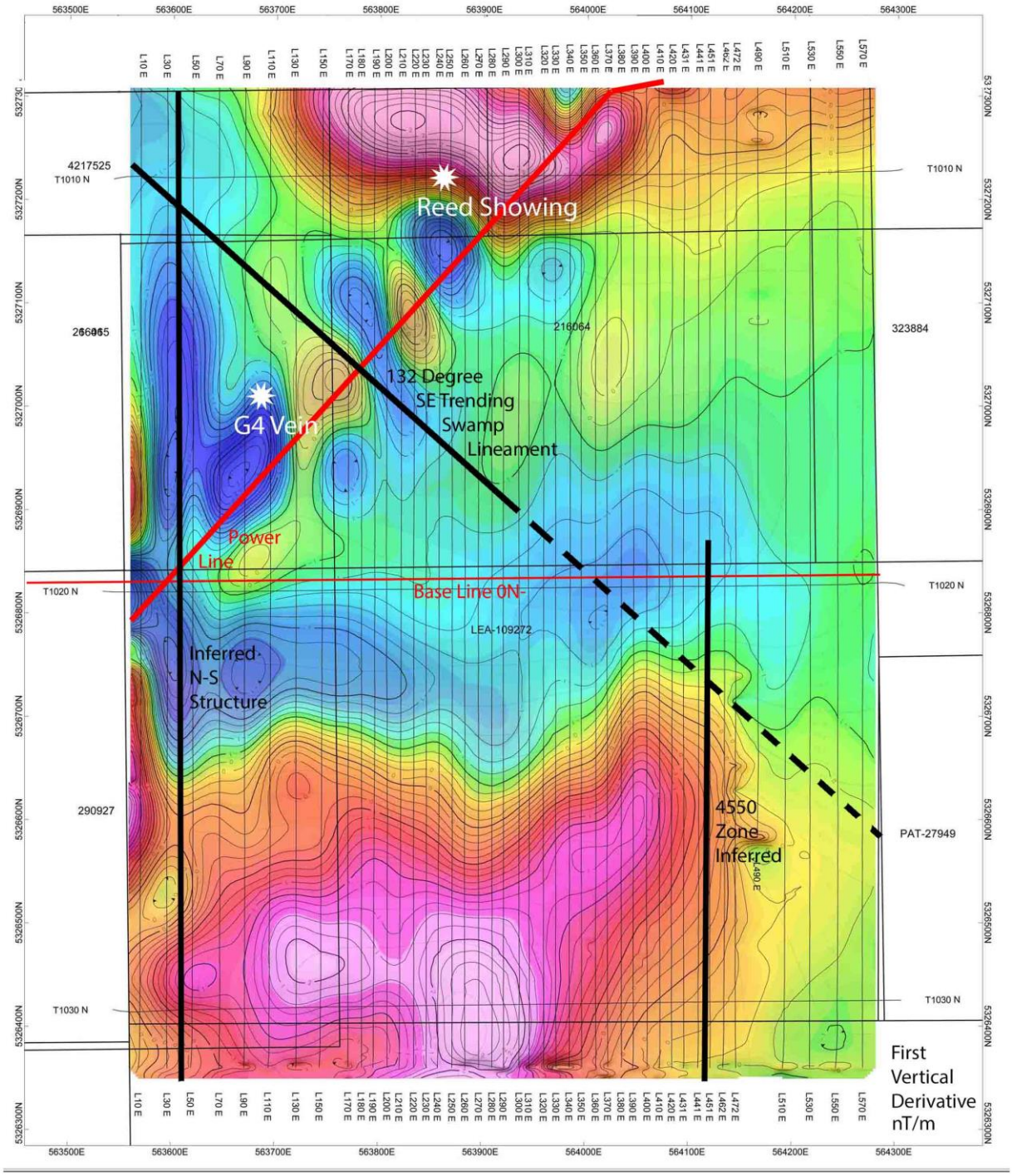
These Total Field Strength pseudoplan plot *(nT)* and a First Vertical Derivative pseudoplan plot *(nT/m*) are imaged below.



2021 Drone Magnetic Survey 1cm = 50m.jpg

Canada Silver Cobalt Works
Otto Township - Reed Lease
2021 Drone Magnetic Survey 1cm = 50m

Image Above: 1cm = 50m pseudoplan of the Total Magnetic Field Strength, low elevation drone survey. The boundaries of the image are very close (~+/-10m) to the boundaries of the Reed's Otto Township lease. The color contours are extracted from the complete full-scale map which is included in the appendices. Stored in Photo Archives



2021 Drone Magnetic Survey 1cm = 50m.jpg

Canada Silver Cobalt Works
Otto Township - Reed Lease
2021 Drone Magnetic Survey 1cm = 50m

Image Above: Scale 1cm=50m. Low elevation First Vertical Derivative of Total Magnetic Field Strength drone survey. The colored boundaries of the image are very close (~+/-10m) of the Reed Otto Tp. lease. The color contours are extracted from the complete full-scale map included in the appendices. Stored in Photo Archives

Power Line

The NE trending red line, is the trace of the power line that crosses the property. The algorism used to create the total magnetic field, appears to not be impacted by the power line. The data of the first vertical derivative appear somewhat bubbly along the trace of the power line. This author does not know if these bubbles are real bedrock data, or relicts of power line impacts.

Inferred NS Structure

The N-S trending black line along flight-line L30E *(west edge of plan)* is coincident with a linear feature mapped in 1994. This mapped structural trend; is accurately defined by the Total Magnetic Field and the First Vertical Derivative surveys. It appears this trend is the result from a real bedrock structural trend.

4550 Zone Inferred

The N-S trending black line, along flight-line L441, is coincident with a linear feature mapped in 1996. This linear surface trend, is also coincident with, an auriferous glacial float train documented during the 1996 field mapping. The evidence from Total Magnetic Field and the First Vertical Derivative is moderate and leaves room for error. This drone survey appears to be qualified evidence of this surface lineament having a structural cause.

Azimuth 132º: SE Trending Lineament

The 122º Azimuth, black line is coincident with a swamp feature mapped in 1994. This linear surface trend, is also parallel to a set of Riedel several structures with prominent CaMgFe-Carbonate Alteration.

The dashed line, is the projection of the mapped surface structure. The magnetic signature indicates this may be a real structural feature. However: an EW fault is inferred, that could truncate the apparent *(swamp)* lineament structure. It is very **dangerous** projecting probable structures across faults. If the dashed line is coincident with a real structure, that may be a coincidence, involving different structures shifted into that location. If this is the case; the alternate structure may also be valid by coincidence.

There is no direct evidence of alteration along this lineament. This is not negative evidence considering the width of the swamp lineament.

However: veins B and F appear to be sympathetic, dilation quartz veins, that appear to be perpendicular to the inferred structural trend of the swamp lineament.

This inferred structure, also strikes through the focus of the favourable alteration and vein targets identified in Otto Township.

This structure can be tested at zero marginal cost, by including this target within drilling directed to highly favourable targets.

Drilling a hole to intersect the *(apparent)* dilation veins B and F, one vein on each side of the structure, could produce three intersections, with the apparent Riedel structure, having the greatest potential of success.

G4 Vein

G-40-Vein, is in a prominent Total Field magnetic low. This is consistent with a wide alteration zone associated with this vein. This is a highly favourable vein discussed under subcrop stripping descriptions.

This target, is also associated with a MaxMin Conductor which might be due to the indicator mineral, graphite.

South Boundary Magnetic High

A large magnetic high located near the south boundary of the Reed lease, is roughly coincident with a broad, vaguely defined, CaMgFe-carbonate alteration zone. In 1994-1996 this area was tentatively defined as the extension of an apparent Riedel zone, striking ESE from the base line area in Eby Township *(3800mE-000mN)*. If this magnetic high is coincident with the alteration, the source is unlikely to be identified at surface. Surface recognisance, is required to explain the cause of this anomaly. A review of the 1996 surface magnetic survey, might explain this anomaly.

An alternate explanation could be calcite-chlorite magnetite alteration, associated with CaMgFe-carbonate alteration. This scenario is discussed under alteration associated with the impact zone of the CLLDZ.

If no surface explanation is produced, the source of the anomaly, is inferred to top, significantly below surface *(possibly topping about 300-meters below surface)*.

A deep steep hole intersecting the centre of strongest point of the anomaly 300 meter below surface is warranted, to look for mineralization like the Reed showing. This target could be coupled with a hole to test a shallow target. A dual-purpose hole would reduce the marginal cost of drilling this deep target.

Reed Showing

The Reed showing is unique on the property. This showing grades up to 18gm Au/mT in intense pyritic albite alteration. It is discussed under the subcrop stripping description.

This showing is on the SW edge of an apparent Riedel structure defined by a swamp lineament, parallel to the "132 degree, SE Trending Lineament" described above.

The apparent Riedel structure (also a swamp lineament) is coincident with a prominent positive Total Magnetic Field Anomaly, and prominent positive First Vertical Derivative Anomaly. These anomalies have no bedrock exposure. There is no direct field evidence

indicating the source of this anomaly, except for; parts of the gold mineralization having a high magnetic susceptibility.

The Reed Gold Showing, is the south edge of the swamp lineament and the south edge of the magnetic anomaly are coincident.

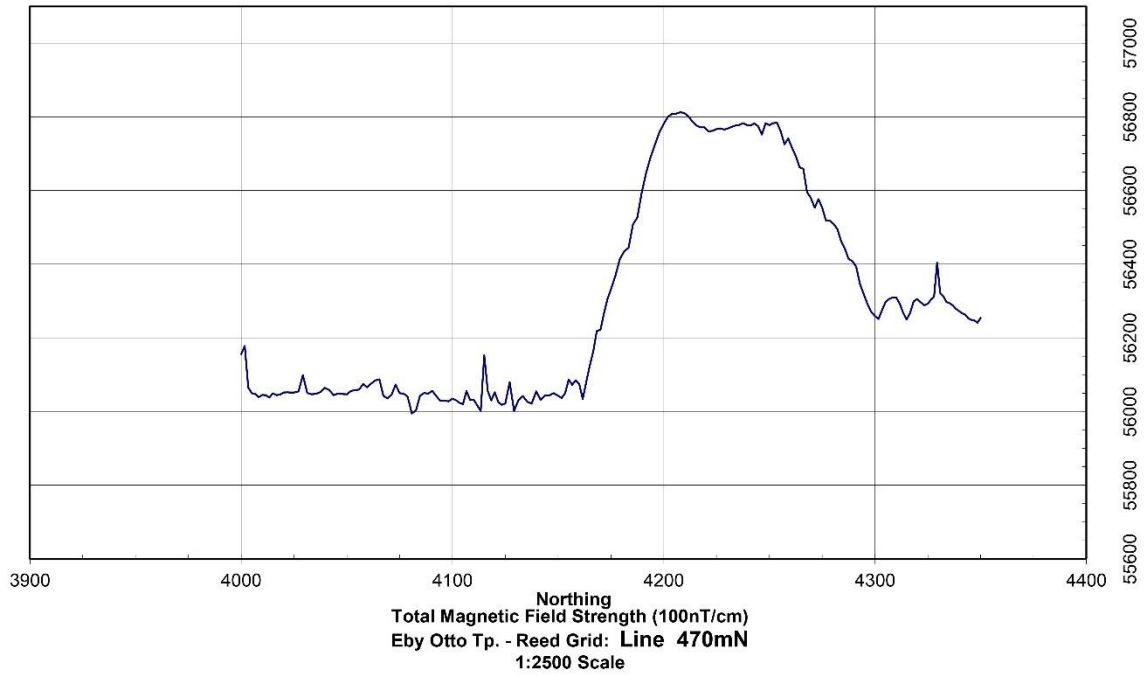


Image Above: Total Magnetic Field Strength Ground magnetic survey performed along the "OLS" Survey line of the north boundary of the Reed Otto Township Lease. Note three prominent magnetic domains.
1 A prominent central magnetic high under the SSE trending swamp lineament.
2. A relatively flat magnetic signature over an outcrop ridge (left) *and*
3. An elevated relatively flat magnetic signature (right) *under the SSE trending swamp lineament.*
Note apparent SIB detection at 4000E.

The ground magnetic survey on each side of the ground anomaly, has a flat magnetic signature with the north-east side having a significantly higher background value. This shift of background, indicates the source of this anomaly may exist within a, SSE trending fault.

The ground anomaly has sharp high contrast sides and a flat peak. This author recognized this configuration, potentially having a kimberlite pipe source. Circa 2019, several shallow test pits were dug, and the till soil panned for garnet indicator minerals. None were identified, and the kimberlite concept was abandoned.

The only direct evidence of this anomaly's source is; the alteration within the Reed showing. The mineralized auriferous albite alteration appeared to be host in a massive rock having the appearance of hard black hornfels. This identification has not been confirmed *(an alternative is a felsitic tuff which has no presidence on the property)*. The gold bearing albite alteration has local high magnetic susceptibility. The association of this magnetic

gold mineralization, with a sharply defined ground magnetic anomaly, and a drone magnetic anomaly, and along a potential fault, and in a potential hornfels makes this a high potential, gold target.

This may be a mineralization node within the Impact-Zone of the Cadillac-Larder Lake Deformation Zone. This potential node is expected to extend, outwards from the Cadillac-Larder Lake Break.

Field evidence indicates this is the most likely location of a mineralization node, associated with the CLLDZ west of the Amikougami Fault.

The impact of a broad mineralisation node, along the Larder Lake Break, can reasonably be expected to extend further vertically and horizontally than normal. This inference could explain the existence of widespread auriferous albite alteration halo, extending southward 300-meters from the Reed Showing.

CSCW did not extend their Drone Magnetic Survey, and their IP survey over the Reed Showing. This leaves no Quality-Assurance that the surveys performed can, or cannot, detect this style of mineralization.

Subcrop Stripping, and Channel Sampling, and Mapping

In this report; the subcrop stripping *(and associated mapping, and channel sampling)* are ordered in alpha-numeric order. The subcrops and associated information, is ordered in a clockwise route, leading from the Reed Showing, to the F-Vein subcrop. This is the natural sequence in which they occur during a property traverse.

Data collecting concentrated on the field map, which emphasised the veining, and channel sample intervals; and the sample log which dealt with the geological descriptions. The surface map was reconciled to the assay, and sample logs, by the channel sample intervals, and subcrop name.

The subcrop sample grades and sample identification is reported in Section "***8 Exploration Program*" subsection "*Sample Logging***". The sample log is extracted from the file titled: *"**CCW 2021 Eby-Otto Channel Sample Assays.xlsx**"*.

The area stripped is reported in the chart below:

Subcrop Stripped	Area
Reed Showing	14.27
G1 Subcrop	12.78
G2 Subcrop	6.07
G3 Subcrop	2.01
G4-Vein	5.52
E2 Subcrop	3.34
E3 Subcrop	4.19

E1 Subcrop	4.11
Reed Trench Vein	7.10
B-Vein	**7.10**
F-Vein	**4.58**
R-Vein Main	9.77
R-Vein East 1	1.23
R-Vein East 2	1.78
R-Vein West	0.43
Total square meter stripped	84.28

Chart above: This chart tabulates the total hand-stripped area. These areas are described directly below.

Each subcrop map, is included in the appendices of this report. These maps record the sampled channel locations, channel sample assays, reference points, and reference lines, and the **surveyed UTM coordinates** of the zero reference points, and pertinent comments.

. *Reed Showing Subcrop Stripping and Channels*

UTM Reed Showing: Zero-reference-point: 563861.5mE 5327220.3mN Elevation 310.

Area Stripped: 14.27 square meters.

The Reed Showing occurs in an apparent, unmineralized, dark green to black mafic volcanics. This volcanic is extremely compact, fine grained, and hard. This black rock has the appearance of **hornfels**. Chemical analysis, and/or, thin section work, would be required to identify this host rock.

The auriferous **mineralization** consists of a core zone, that appears to be dominated by albite-pyrite, and a peripheral zone of "**Patchy Albite-Pyrite Mineralization**". This showing, is the "***Type-Showing***", for albite alteration on the property. This showing lacks quartz veining, which is explained by the very low silica in the core zone.

The old surface mapping, east of Line 3900mE, documented Patchy-Albite-Pyrite Mineralization overprinting carbonate alteration. West of Line 3900mE, this mapping documented apparent sericite alteration overprinting carbonate alteration. The presence of sericite was tentative in this mapping. The 2022 drilling, confirmed sericite is widespread in the western portion of the property.

Albite alteration is hard, and pale yellow, and generally has thin-weak, brown weathering rinds. The weak weathering rinds, indicate, this alteration is depleted in CaMgFe-Carbonate relative to the pervasive CaMgFe-Carbonate that dominates the alteration within the CLLDZ impact zone. **This albite alteration can be easily mistaken for silicification**. Even the 36.97% SiO_2 sample has the appearance of intense silicification.

It is difficult to visually differentiate between silicification, and albite alteration, and silicification. This report, and other work of the author, frequently uses the term "**silicification**" to include **both albitization** and **silicification** *(if K-spar alteration were common, it would also fit into this collective term, silicification).*

The core zone has a high gold content measured in grams gAu/mT.

In the Reed Showing the multiple gAu/mt assays are from the core zone with heavy pyrite mineralization. .In the peripheral Patchy Albite-Pyrite Alteration, appears to grade approximately 0.100 gAu/mT for every 10% of patchy-pyrite-albite alteration *(to a maximum of 1gAu/mT with 100% alteration).*

. *Main Albite-Pyrite Zone*

The highest gold content of the Reed Showing is the main zone, which is pale grey, to pale yellowish grey, albitic alteration, with approximately 10%, fine to coarse grained pyrite. The small amount of rusty CaMgFe-Carbonate weathering rind is dominance to the hard silicate groundmass. The alteration's **stichometry**, involving high Al_2O_3 *(>10%)* and high Na_2O *(>5%)* content, indicates this zone is dominated by albite and pyrite.

A historic sample graded; 18.82 gAu/Tonne, 36.97% SiO_2, 10.35% Al_2O_3, and 5.39% Na_2O over 0.20m. The SiO_2, Al_2O_3, and Na_2O analyses, reconcile to an albite and pyrite dominated host rock **lacking any significant quartz** content. The weak weathering rind, is consistent with a low carbonate content. An 11.99% LOI appears to be consistent with a high pyrite content.

An initial (1994) grab sample of the Reed showing assayed **19.7 gm Au/tonne** *(1994).*

This showing was resampled by Doug Robinson, and assayed 14.0375 g Au/tonne over 0.40m. See individual assay tabulation below:

Sample 46707	0.10m	13.28gAu/tonne
Sample 46708	0.20m	18.82 gAu/tonne
Sample 46709	0.10m	5.23 gAu/tonne
Average	0.40m	**14.0375 gAu/tonne**

MNDM, sampled the subcrop, returning an assay of 0.234 ozAu/ton across **0.61**m (**8.02 gAu/mT/tonne**).

An independent geologist, sampled the showing, returning a grade of **8.89 gAu/mT** across **0.55**m.

The 2021 channel sample relating to this report grades **1.542**gAu/mT over 2.02 meter which includes **1.886gAu** & 4.50gAg/mT over 1.25-meters. See chart below.

Sample	From m	to m	Meters	gAu/mT
7703	0.35	0.77	0.42	0.517
7704	0.77	2.02	1.25	1.886
	0.35	2.02	1.67	1.542

Approximately 1/3 of the very heaviest pyrite mineralization broke off, high in the cut, and could not be recovered to be included in the sample. The absence of this pyrite; could have impacted the grade, by under reporting the grade by 0.000-0.300gAu/mT *(casual estimate)*. \

This zone has a weak, vertical 070-090º planner fabric, suggestive of healed shearing

Note: The subcrop map is included in the appendices. This documents reports the channel sample locations, and grades, relative to the geology.



Image Above[4229]: Reed Showing facing south showing mapping grid. The zero-reference-point is a standard 2x2 picket in the foreground.



Image Above[2583]: Reed Showing facing west. The rusty zone is the main mineralized zone with a high pyrite content within intense albite alteration. The left side of the image is patchy pyritic albite alteration. Inscribed aluminum tags in the background; mark previous channel samples. These samples include a channel sample collected by Kirkland Lake's resident geologist.

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Image Above[3537]: Reed Showing facing west. The rusty zone is the main mineralized zone with a high pyrite content in intense albite alteration. The two areas enclosed with the white rope is patchy albite pyrite alteration. This is the type location for the patchy albite pyrite alteration documented in this report.



Image Above[6982]: Reed Showing facing south. Inscribed aluminum tags mark the cross-cut saw marks, that designate the sample intervals.



Image Above[4055]: Reed Showing with top of the image west of the channel 7706. This is an classical example of strong patchy pyritic albite alteration.



Image Above[4055]: Reed Showing with the top of image west of the channel 7706. This image emphasises the sharp contrast between patchy pyritic albite alteration and the dark green-black country rock (hornfels?). This image; also shows the standard cross-cuts that mark the sample intervals. Inscribed, aluminum tags are attached by screws driven into the saw crosscut.



Image Above[7344]: Reed Showing with top of image west of the channel. This is an extreme close-up, emphasising the coarse pyrite that broke off, and stayed in the bottom of the channel. This pyrite could not be recovered, and included in the assayed sample.



Image Above[2359]: Reed Showing. Hand sample of the main zone consisting of ~10-15% pyrite in intense albite alteration.

This sample graded 18.82 gAu/Tonne, 36.97% SiO_2 10.35% Al_2O_3 and 5.39% Na_2O over 0.20m. The SiO_2 Al_2O_3 and Na_2O analysis reconciles to albite and pyrite dominated host rock lacking any significant quartz content. The weak weathering rind is consistent with a low carbonate content. An 11.99% LOI appears to be consistent with a high pyrite content.

. *G1 Subcrop Stripping*

UTM **G1** Subcrop: Zero-reference-point: 563,709.7mE 5,327,025.7mN El 310.9m

Area Stripped: 12.78 square meters.

12.78 square meters subcrop were hand stripped, hand washed, and hand scrubbed by vegetable brush, using water carried by bucket from the creek at a hydro-crossing of the creek, at grid 4150mE-125mN *(SE of this subcrop)*.

Subcrops G1, G2, G3 and G4 were all mapped; using zero-reference-point located in a blazed balsam tree at the east edge of Subcrop G1. A reference line was run at azimuth **252º** across subcrop G2, to the 29.75-meter reference-point in a 17-cm, blazed balsam three at the west edge of subcrop G4.

A temporary reference line, was run at azimuth **312º** to subcrop G3. No permanent reference point was established along this line. The subcrop map of the channel cut at this location, is an accurate representation of this line's location.

A 1.2-meter-deep pit, was hand-dug at a point 7.6 meters, at 173º azimuth, from the G1, zero reference point. This pit was dug to locate the inferred fault and/or find evidence of increased veining and alteration associated with the inferred fault. No subcrop was encountered. The pit was refilled.

At subcrop G1, A line of three channel samples, was cut. The highest grade was sample 7720 graded **0.7423gAu**, 2.70gAg over 0.78 meters.

This subcrop, G1 was strongly CaMgFe-carbonate altered, and cut by many quartz stringers to 3-cm. Based on a their wide varience of colour and texture, these stringers appear to represent **numerous quartz generations of quartz veining.** These stringers generally, dip at very low to 25º northerly t-westerly dips. Pyrite was locally present in the quartz veining.

The vein frequency, and vein thickness, increased to the south. This vein geometry, and shallow northly-westerly dips of the veining, indicate this veining, is genetically related to a fault south, of this subcrop. The most probable location of this inferred fault, is a MaxMin conductor 25-meters south of this subcrop. Based on the consistency of the shallow dips of the veins, it is inferred the fault displacement is probably near vertical.

The host rock's protolith, appears to have been, an extremely fine grained massive volcanic. The groundmass appears to be light grey-green, with intense CaMgFe-Carbonate alteration. This alteration may contain significant sericite. This existence of sericite is speculative, and remains to be proven.

The host rock has the appearance of a breccia, with fragments to several centimeters. The apparent fragments, have prominent, dark green, chloritic, micro-fracture filling. The matrix of the apparent fragments, is also dark green, chloritic, breccia filling (fracture filling?).

Based on the homogeneity of the apparent fragments, this chloritic fabric is assumed to be a deformation fabric. This chloritic breccia and/or micro-fracture filling appear to be genetically related to the inferred fault south of this map area.



Image above [6992]: G1 subcrop facing north. Note the shallow dipping quartz veining within intense carbonate (+/- sericite) alteration of unknown protolith, rock type.



Image above[2447]: G1 Channel sample 7719. Top of image is east. Note the apparent, dark green, chloritic breccia filling.



Image above[7720]: G1 channel sample 7720 showing pyrite mineralization and dark green micro-fracture filling and apparent dark green breccia filling(?). This sample graded **0.742 gAu**/mT, and **2.70 gAg**/mT over 0.78-meters. The magnetic susceptibility of these two samples is 0.62, and 0.58 10^{-3}SI.



Image above [6982]: G1 zero-reference-point facing east. This is the zero-reference-point for G1 subcrop, G2 Subcrop, G3 Subcrop and G4 Vein subcrop. This is typical, of most of the zero reference points, established during the 2021 subcrop stripping program.

. *G2 Vein Subcrop Stripping*

Zero-reference-point at G1 Subcrop: 563,709.7mE 5,327,025.7mN El 310.9m

Area Stripped: 6.07 square meters.

6.07 square meters subcrop were hand stripped, hand washed, and hand scrubbed by vegetable brush, using water carried by bucket from the creek at a hydro-crossing of the creek at grid 4150mE-125mN *(SE of this subcrop)*.

This subcrop lithology, and alteration, and veining and mineralization are identical to subcrop G1 subcrop and very different from G4 Vein Subcrop. This change of lithology, alteration, and veining is best reconciled with a NS, or NW trending **fault** west of G3 subcrop *(East of G4)*. A **MaxMin** conductor south of this location has an apparent 30-meter north-south displacement, with the west side displaced 30-meters south *(sinistral displacement).*

This MaxMin conductors ,appears to be a contact, between the Eby-Otto **Mafic Intrusive** mafic to the south, and **Archean volcanics** to the north.

CSCW hypothesize, this MaxMin conductor is inorganic-graphite, which was introduced into a fault. This hypothesis reconciles with the observed geology. The extension of this hypothesis is: If this conductor is a fault and the contact between the Mafic Intrusive, and the Archean volcanics; there is a high probability the fault has a major offset The low dip orientation of the associated quartz veining of G1, G2 and G3 indicate the fault displacement is largely vertical.

The CSCW hypothesis places the CLLDZ indicator mineral graphite, within this fault, and places the associated alteration-veining-mineralization within the impact zone of the CLLDZ alteration-mineralizing system.

The CSCW hypothesis does not rule out the previous hypothesis; that this conductor could be a Kamalda style Ni deposit along the Mafic Intrusive-Archean volcanic contact.

Both hypothesis reconcile with the geology, alteration, veining, and mineralization of G1, G2, G3 and G4 subcrops. Both hypotheses prioritize both the conductor, and the associated alteration-veining-mineralization as exploration targets.



Image Above[7384]: Facing west. **E2 subcrop** is in the foreground. The G4 subcrop is in the **whitish exposure** in the background. The tape is stretched from the G1 Zero Reference point to the G4 reference which is marked by red flagging, at the end of the tape. Subcrops; G1, G2 and G4 were mapped with the tape it this location/orientation.



Image above[5]: G2 Subcrop facing west during mapping. Note the 2-meter ABS piping used as a temporary grid.



Image Above[7019]: G2 subcrop facing North. This image. shows Channel sample 7724 being broken from the channel cut. The saw cut space was wider than normal, thus a steel plate *(hinge)* was used to fill the saw cut, enabling the rock to be broken out of the channel.



Image above[4286]: Subcrop G2 channel sample 7722 ready for bagging. This image emphasises, the dark green, chloritic breccia filling and micro-fracture filling of the breccia fragments.



Image above[7391]: G2 subcrop channel 7723. The top of this image is west. A shallow dipping, planar fabric is parallel to the veining.



Image above[4729]: G2 subcrop channel 7722. Note cherty quartz vein. This image emphasises, the dark green chloritic breccia filling, and similar micro-fracture filling of the breccia fragments. The magnetic susceptibility was 0.50, 0.58 and 0.58 10^{-3}SI.

. *G3 Subcrop Stripping and Channel*

Zero-reference-point at G1 Subcrop: 563,709.7mE 5,327,025.7mN El 310.9m

Area Stripped: 2.01 square meters.

2.01 square meters subcrop were hand stripped, hand washed, and hand scrubbed by vegetable brush, using water carried by bucket from the creek at a hydro-crossing of the creek, at grid 4150mE-125mN *(SE of this subcrop)*.

Subcrop G3 has veining similar-to subcrops G1 and G2. This veining is less frequent and smaller than in subcrops G1 and G2. This vein configuration indicates this subcrop is within the influence of inferred fault south of the subcrops G1, G2 and G4; but further from that fault.

The host rock is massive and light green with pervasive CaMgFe-alteration.



Image Above[7000]: G3 subcrop facing north. This image emphasises the channel cut prior to breaking out channel samples 7726, and 7727 cut.



Image above[7419]: G3 Subcrop the location of channel sample 7727 (left) and sample 7726 (Right). The Aluminum tags mark the start and the ends of the samples. The aluminum tags are held in place, by screws driven into saw cuts, which are cut perpendicular to the channel.



Image Above[7458]: G3 subcrop. Aluminum tag marking the east end of channel sample 7726. Top of image north-east.



Image Above[3059]: G3 sample 7727 showing multiple generations of quartz veining.

. *G4 vein Subcrop Stripping and Channels*

Zero-reference-point at G1 Subcrop: 563,709.7mE 5,327,025.7mN El 310.9m

Area Stripped: 5.52 square meters.

5.52 square meters subcrop, were hand stripped, hand washed, and hand scrubbed by vegetable brush, using water carried by bucket from the creek at a hydro-crossing of the creek at grid 4150mE-125mN *(SE of this subcrop)*.

This subcrop was discovered in 2021, by digging out a large loose talus piece, identified during the 1994 surface mapping.

The subcrop consists of the four mapped units listed from south to north:

1. 0.49m quartz **vein**.
2. 0.54 m of intense pale grey **alteration**, located between the vein and the fault to the north. This alteration appears to be sericite-albite alteration with patchy pyrite between the vein and the fault to the north.
3. 0.28-meters rusty brown gouge **fault** which is a depression in this subcrop.
4. 0.86-meters of an unidentified intense **alteration** located north of the fault.

<u>Discussion</u>

1. The vein is a multigenerational, pyritic-sericitic quartz vein with low Au values, and **3.66 gAg/mT** over 0.49m. It strikes **080º** with a **70º** south dip.

   Mapping indicates, this vein is probably faulted off between 0.00 to 3.0-meters east of this subcrop. The vein extension; is expected to be offset approximately 30-meters north, and continue to the east, intersecting line 4150mE at 208mN *(assuming the fault strikes North. The strike of fault can impact the displacement).*

2. The mineralogy of this alteration *(directly north of the vein)* has not been determined. It has the appearance of silicification. It is too soft for solidification. It does not appear to be carbonate alteration. The senior staff of CSCW and this author examined this exposure carefully, and could not determine the mineralogy of this alteration. The consensus was; this alteration probably includes sericite and possibly albite.

   It appears; this alteration has a distinctive shear foliation; with relict bands, of typical brownish CaMgFe-Carbonate alteration floating in the alteration. The CaMgFe-Carbonate bands are parallel to the foliation in the subcrop.

   It is unknown if the CaMgFe-Carbonate masses are anomalous in gold.

3. The rusty brown, fault gouge is anomalous in gold *(7712 grading 0.139 gAu/mT across 0.28-m).* The age of the fault, relative to the anomalous gold, and silver is unknown. It is uncertain if this gold was introduced into the fault, or if, the fault crushed rock anomalous in gold.

4. The mineralogy of the intense alteration to the north of the fault has not been identified. CaMgFe-Carbonate appears to be a major component of this alteration. It might also include sericite alteration as well. *(7713 grade 0.161 gAu/mT across 0.86-m).*

The vein is enriched in silver, with sample 7710 grading 3.66 gAg/mT 0.49m.

The fault and the CaMgFe-carbonate alteration north of the fault are anomalous in gold *(7712 fault 0.139 gAu/mT/0.08-m. 7713 alteration north of fault 0.161 gAu/mT/0.86-m).*

This author works on the hypothesis; that **silver** has a **greater dispersion** than gold within the silver to gold ratio increasing outwards within zoned mineralization.

The above, four-fold geological association of *(1)* vein, *(2)* foliated pyritic sericite alteration, *(3)* fault, *(4)* massive CaMgFe-Carbonate alteration, has not been identified along strike. A MaxMin 30-meters south of this vein; appears to be fault offset; with the east side shifted 30 meters to the north. This scenario, places the vein projection at line 4250mE at 208mN *(assuming the inferred fault strikes north).*

An alternate, less likely interpretation is: the fault in the G4 subcrop; is the straight-line projection of the MaxMin conductors encountered on lines 4150mE, 4200mE, 4250-mE, 4300-mE, and 4350mE. The 80º strike of the fault does not reconcile with this scenario.

The CSCW Inorganic Graphite emplacement into faults may be problematic at this location. The question is: **Why does the fault exposed in subcrop G4, have no graphite, and the inferred fault, at the MaxMin anomaly, located 30-meters to the south, host introduced Inorganic Graphite**.

It is uncertain if the G4 Vein and the Reed Trench Vein are the same vein, or are parallel veins. The G4 vein is 30 meters north of a MaxMin conductor and the Reed trench vein is 32-meters north of a MaxMin conductor. If it is inferred that these conductors are fault hosted, Inorganic Graphite. This inferred graphite, appears to be an indicator mineral that indicates, both veins are within the impact zone of CLLDZ mineralization-alteration event. Also; both veins, are parallel to, and within a meter of significant, identified faults.



Image above[7083]: G4 Subcrop freshly hand scrubbed/washed after second phase of hand stripping. Note two bands, of typical CaMgFe-Carbonate alteration that appear to be boudinaged as stretched and deformed bands parallel to the foliation.



Image above[7379]: G4 subcrop (facing west) with tape tied to G4 reference-point 29.75m. The channel in the foreground consists of samples 7708 and 9909. The channel along the meter stick, consists of samples 7710, 7711, 7712 and 7713 *(from left to right)*.

Channel sample **7710** is 0.49m quartz vein. This vein is anomalous in **silver**.

Channel sample **7711** is from 0.54 m of intense pale grey alteration that appears to be sericite-albite alteration with patchy pyrite

Channel sample **7712** is from the rusty brown gouge fault which is a depression in this subcrop. This fault is anomalous-elevated in **gold** and **silver**.

Channel sample **7713** is from an unidentified intense alteration to the north (right) of the fault. This alteration includes CaMgFe-Carbonate and possibly sericite. This alteration is anomalous-elevated in **gold**.



Image above[7405]: G4 Vein channel 7709. Top is north. Note: this vein appears to be a multigenerational vein with apparent dark green-grey, vein wall, rip-offs.



Image above [3786]: Intense sericite(-albite?) alteration zone between quartz vein and the rusty gouge fault to the north. Note the rusty pyrite masses within this alteration. The colouring gives the appearance of silicification.



Image Above[4643]: G4 quarts vein Channel Sample 7710 from west channel. Note: the magnetic susceptibility readings of 0.21, 0.18 and 0.01, 10^{-3}SI. Measuring and averaging three or four readings, was part of the Quality-Assurance of magnetic susceptibility measurements. The orange circles, are pyrite mineralization. Note: the apparent, dark green, wall-rock, rip-offs, indicate this is a complex multigenerational quartz vein. This sample is anomalous in **silver**.



Image Above[4646]: G4 Channel Sample 7711 from west channel. This is the alteration that appears to be sericitic +/- albite. The weathering rind, indicates CaMgFe-Carbonate alteration is present, but weak-moderate. Note Magnetic susceptibility readings of 0.23, 0.20, and 0.16, 10^{-3}SI.

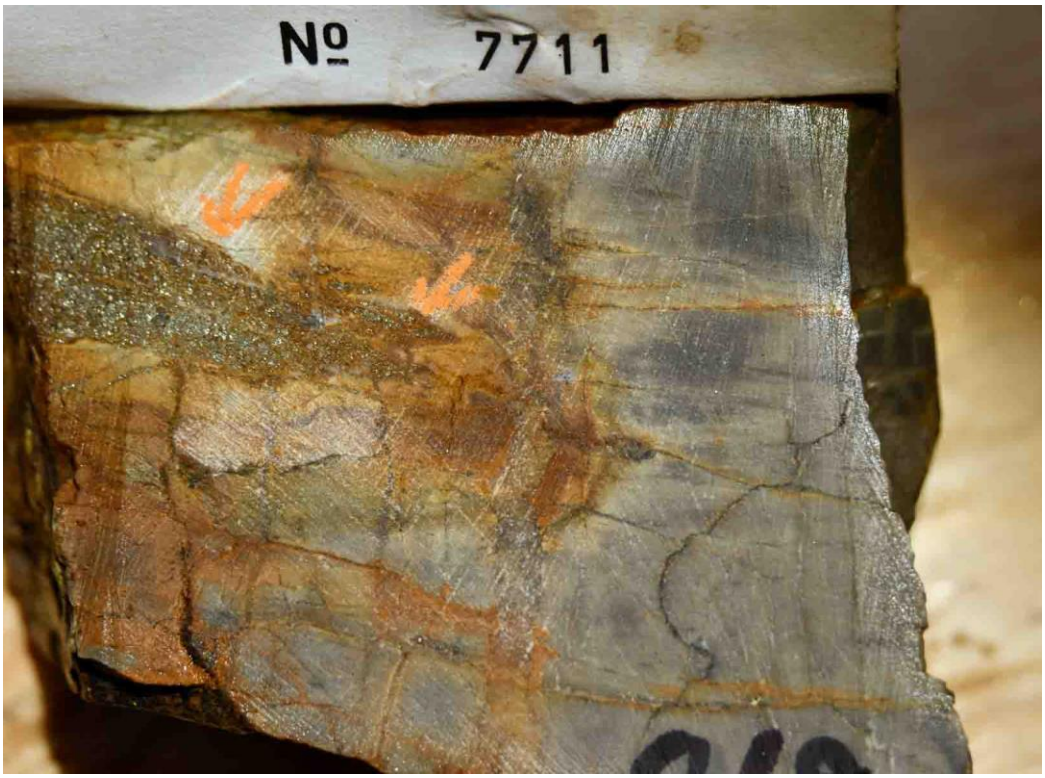


Image Above[4653]: G4 Channel Sample 7711 from the west channel, showing alteration and pyrite masses. The pyrite has the appearance of **boudinaged** masses, stretched into the shear fabric.



Image above[6859]: Fault located between intense sericite*(-albite?)* alteration and CaMgFe-Carbonate alteration *(+/- sericite alteration to the right)*. This alteration is somewhat similar-to the alteration similar to G1, D2, and G3, but without the quartz veining. This fault has anomalous-elevated **gold** and **silver**.

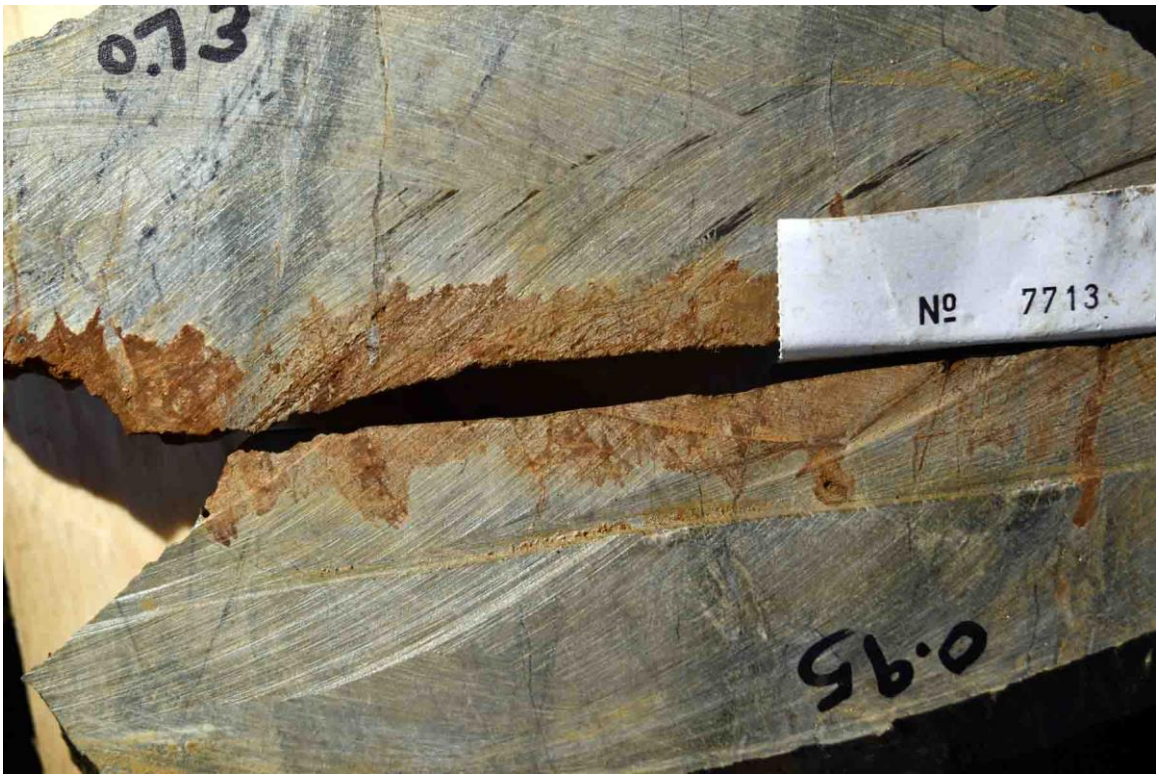


Image Above[7713]: G4 Channel Sample from west channel. Sample is CaMgFe-Carbonate (+/-sericite) taken from directly north of an the 0.28m wide, east striking *(~080°)*, gouge fault. This sample appears somewhat, like the alteration at G1 and G2 subcrops, with the chlorite overprint, but lacking the quartz veining. This sample is elevated in **gold**.

. *E2 Vein Subcrop Stripping*

UTM **E2** Subcrop: Zero-reference-point: 563,664.8mE 5,327,082.4mN El 313.5m

Area Stripped:: 3.34 square meters.

The E-2 Vein subcrop was hand stripped, and scrubbed by vegetable brush, using water from the hydro-line stream crossing, at grid 4150mE-125mN.

The E-2 vein is a 7-cm **simple dilation vein** that appears to be located between two south-east trending lineaments that may be structural mineralization-deformation zones ***(parent structures)***. The vein *(028°)* appears to be at a high angle to these inferred zones. The vein has weak patchy pyritic-albite alteration.

Three; 1-cm wide quartz veins, with patchy pyritic-albite alteration are located two-three meters west of the main vein. *(also azimuth 028°).*

It appears; the main vein, and the three auxiliary veins, and their associated alteration represent, a brief, moment in time, relative to their inferred parent structure to the north and south. If this is true; the alteration marking the alteration-mineralization vector that

sampled a short time interval within the inferred, longer lived, **parent structure**(s) to the north and south.

No direct testing of this vein is recommended; except in the context of the inferred, parent structures to the north, and south. Mechanical stripping along strike could lead to the parent structure.

Three additional, minor, 1-cm quartz veins *(also 028°)* have similar patchy albite-pyrite alteration.



Image above[7084]: Viewing south. *(7-cm)* E2 Vein samples: 7728 shown at back edge of subcrop, and the talus sample, 7729 positioned at white sample tag beyond the subcrop. Both samples are broken out ready for bagging.



Image above[7099]: E2 Vein sample 7729 taken from lose talus immediately south of the channel sample 7728. Note apparent patches pyritic-albite alteration.



Image aboe[5337] Facing South: Three Narrow, N-S quartz veinlets with patchy pyritic-albite alteration. These veinlets are located 2-3 meter west of the main vein. These were not sampled.

. *E3 Vein Subcrop Stripping and Channels*

UTM **E3** Subcrop: Zero-reference-point: 563,649.9mE 5,327,084.4mN El 314.9m

Area Stripped: 4.19 square meters.

Two subcrop areas, within five meters of the zero-reference-point, were hand stripped, and scrubbed by vegetable brush, using water from the hydro line, stream crossing at grid 4150mE-125mN.

The north subcrop is intense albite-pyrite alteration. The alteration is foliated at azimuth 080°. Three quartz veins, to 20-cm, appear to be contorted, gash veins, associated with the foliation. This veining and alteration, were discovered by digging out talus-float, encountered by prospecting in the 2021 program.

The south subcrop, is an unidentified, hard, pale grey alteration with quartz veining to 20-cm. This veining appears to be brittle, void filling, unrelated to the veining of the north subcrop. This exposure was discovered by staff, while this author mapped the north subcrop.

The north subcrop, appears to be the focus of deformation, and alteration, and mineralization, within the unidentified, hard, pale grey alteration; represented by the south subcrop.

The veins within the north subcrop deformation zone, are probably oblique to this deformation zone. This author is not sufficiently versed in structural geology; to infer the orientation of this zone.

This exposure is located between two SE trending lineaments, defined by swamps. The lineaments are approximately 100 meters apart, and inferred to be deformation zones. The south lineament hosts a prominent MaxMin conductor, that CSCW infers to be fault caused by inorganic graphite emplaced into a fault. The north lineament is marked by a magnetic feature which is consistent with a fault, or deformation zone. These are parallel to the Lincoln-Nipissing Break to the SE.

This pyritic-albite alteration, and vein-deformation zone should be mechanically stripped. This report recommends a drill hole drilled north from line 4000mE-225mN to test this zone, and the lineament to the north.



Image Above[5932] Facing north: E3 North subcrop with quartz veining in intense pyritic-albite alteration. Angular quartz and pyritic-albite alteration talus is staked to the left of the subcrop.



Image above[7120] facing west: E3 subcrop channel cuts of samples 7730 (right) and 7731 (left).



Image Above[7112]: E3 subcrop channel sample 7731. Quartz veining in strong pyritic-albite alteration.



Image Above[2976]: E3 Intense pyritic-albite alteration. Note relict pyrite survives in rusty weathering rind.

. *E1 Vein Subcrop Stripping*

UTM **E1** Subcrop: Zero-reference-point: 563,603.9mE 5,327,075.0mM El 310.7m

Area Stripped: 4.11 square meters.

No channel sampling was performed on this vein.

This subcrop areas was hand stripped, and scrubbed by vegetable brush, using water from the swamp immediately to the west.

The E-1 vein is a relatively **simple dilation vein**, that appears to be located between two south-east trending lineaments that may be structural mineralization-deformation zones. The vein appears to be at high angle to these inferred zones. The wall rock has relatively minor patchy albite pyrite alteration.

This vein alteration may represent a moment in time, with the alteration marking the alteration-mineralization vector, that sampled a short period within the long history of the inferred, longer lived, parent structure(s) to the south, and to the north.

No direct testing of this vein is recommended; except in the context of the parent structures to the north and south. Mechanical stripping along strike could lead to the parent structure.



Image above:[5283] facing south: Early stage of hand stripping E1 vein.



Image above:[5292] facing south: E1 quartz vein with minor pyritic albite alteration.

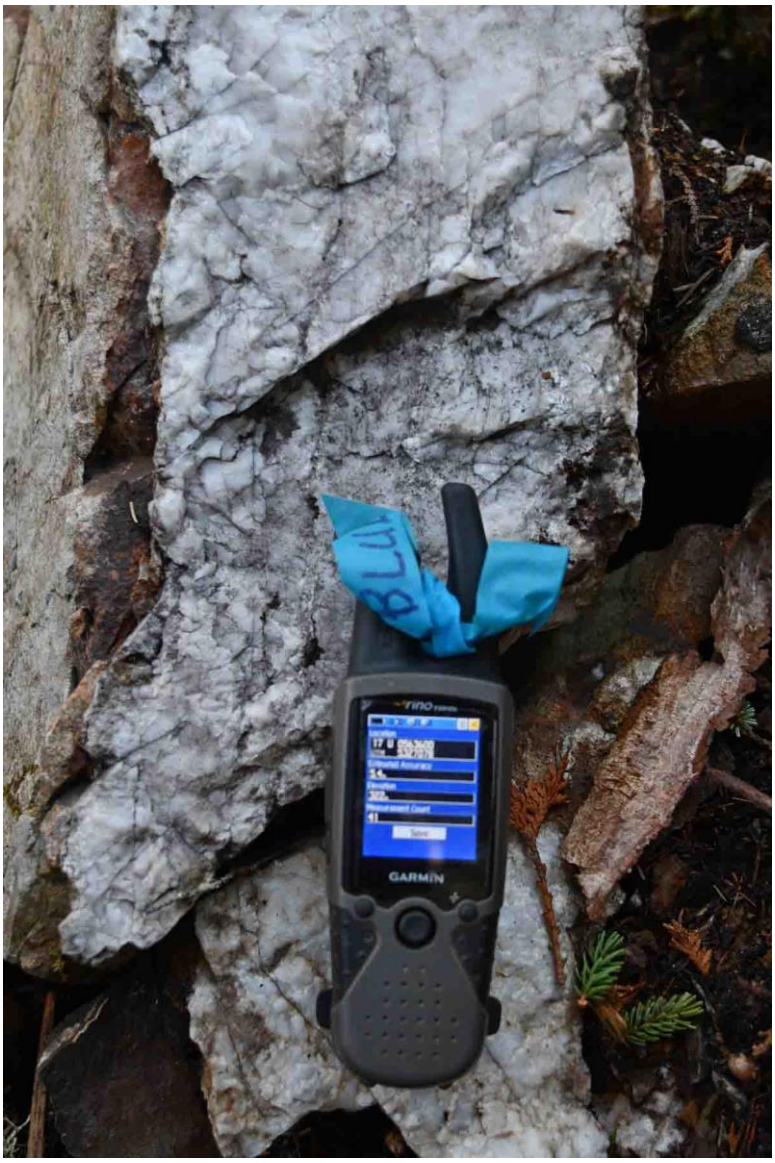


Image above[2832]: Closeup image of the E1 Vein.

. *Reed Trench Vein Subcrop Stripping and Channels*

UTM Reed Trench Vein Subcrop: Zero-reference-point: 563,488.2mE 5,326,945.5mN El 310.8m

Area Stripped: 7.10 square meters.

This old trench, was hand rehabilitated, and scrubbed by vegetable brush; using water from the trench. Staff dug out a vein extension, while this author was mapping and sampling the main subcrop.

The vein is hosted within a uniform, and massive phase of the Eby-Otto Mafic Intrusive.

The host rock has a fresh appearance. A 4-cm breccia-gouge fault is the south edge of the vein.

South of the vein-gouge fault, narrow CaMgFe-Carbonate alteration occurs along thin gouge seams.

Minor CaMgFe-Carbonate alteration occurs along fractures in the wall rock north of the vein.

The Reed Trench Vein; is a strong, multigenerational structure. The vein, and an associated-controlling fault structure, appear to have been an open structure, that formed a major fluid conduit within the impact zone of the CLLDZ. Mixed alteration styles in the fault breccia indicate CLLDZ style alteration that was in place when the breccia was formed. The vein appears to have been emplaced into this fault, and the present gouge appears to postdate the vein.

The fault breccia consists of mixed lithology, and alteration, consisting of angular to well-rounded fragments to approximately 1-cm. The breccia has diatreme like association, similar-to several diatreme-like structures at CSCW's Castle Silver-Gold property at Gowganda. This association and implications are discussed in the subsection titled *"Logging Fragmental and Diatreme Like Structures"*.

The is vein heavily fractured with prominent CaMgFe-Carbonate, and sericite*(?)* and pyrite as fracture filling *(up to 10% fracture infilling)*.

The fracture density, and intensity, decrease northward from the fault. Alteration minerals; including CaMgFe-Carbonate, and sericite(?), and pyrite infill the fracturing. The fracture filling ranges from, approximately 10 % near the fault, to near zero at the edge of the vein. The mineralogy of the fracture filling within the vein, indicates this vein-fault association was completed within the CLLDZ alteration-mineralization event

The vein is located; 32-meters north of a strong, short *(~150-meter length)* MaxMin conductor. The source of this conductor is unknown. If the source is graphite, that graphite appears to be an indicator mineral associated with the impact zone of the Cadillac-Larder Lake Deformation zone's alteration-mineralization. Alternatively; the MaxMin conductor could be a Cobalt-Nickle Vein (+/-Silver), or nickel sulfide *(Kamalda Ni-deposit type volcanic analogue in the intrusive)* or Large-Flake-Graphite or another unknown source.

The drilling recommended in this report, is intended to test the vein for gold, and to test the associated MaxMin conductor 32 meters to the south. Drill testing of this MaxMin conductor; is included to:

- Deal with the Inorganic graphite enigma relating to genetic relationship to the CLLDZ mineralization event.
- Test for gold within or near the conductor.

- Test for Cobalt-Nickle Vein (+/-Silver).
- Test for nickel sulfide (Kamalda Ni-deposit type volcanic analogue in the intrusive).
- To test for Large-Flake-Graphite.

It is uncertain if this vein, and the G4-Vein, 200-meters to the east are the same vein, or parallel veins.

Both veins, are closely associated with a similar gouge fault, *(with no MaxMin response)* and are an equivalent distance north of a prominent MaxMin conductor *(that may be in caused by inorganic graphite originating from the CLLDZ mineralizing event)*. The Reed Trench Vein is 32-meter north, and the G4 Vein is 30-meters north of their associated MaxMin Conductors.



Image above[5128] facing west: The Reed Trench Vein is a major structure the Cadillac-Larder Lake-Kirkland Lake Deformation Zone's, impact area. This impact area hosts the gold mines from Kirkland Lake to Val d'Or.



Image bove[5204] (Top is North):. The Reed Trench Vein 39 cm at its widest point.

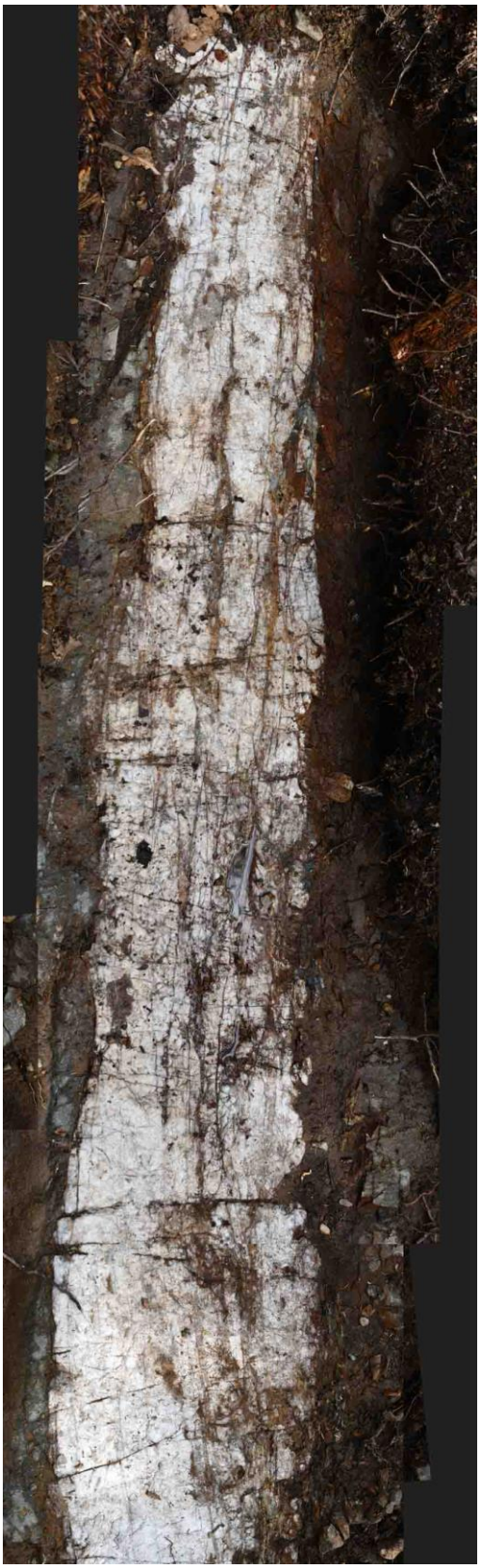


Image above:[2878-82] *Facing east: Composite image. The south (right) edge of the vein is a strong gouge fault.*



Image Above:[2874) 2871 77] *Top is south. Composite image showing the detail of the fault along the south edge of the Reed Trench Vein. The vein is fractured and healed with pyrite and alteration minerals including Fe-Ca-Mg-Carbonate and sericite(?).*

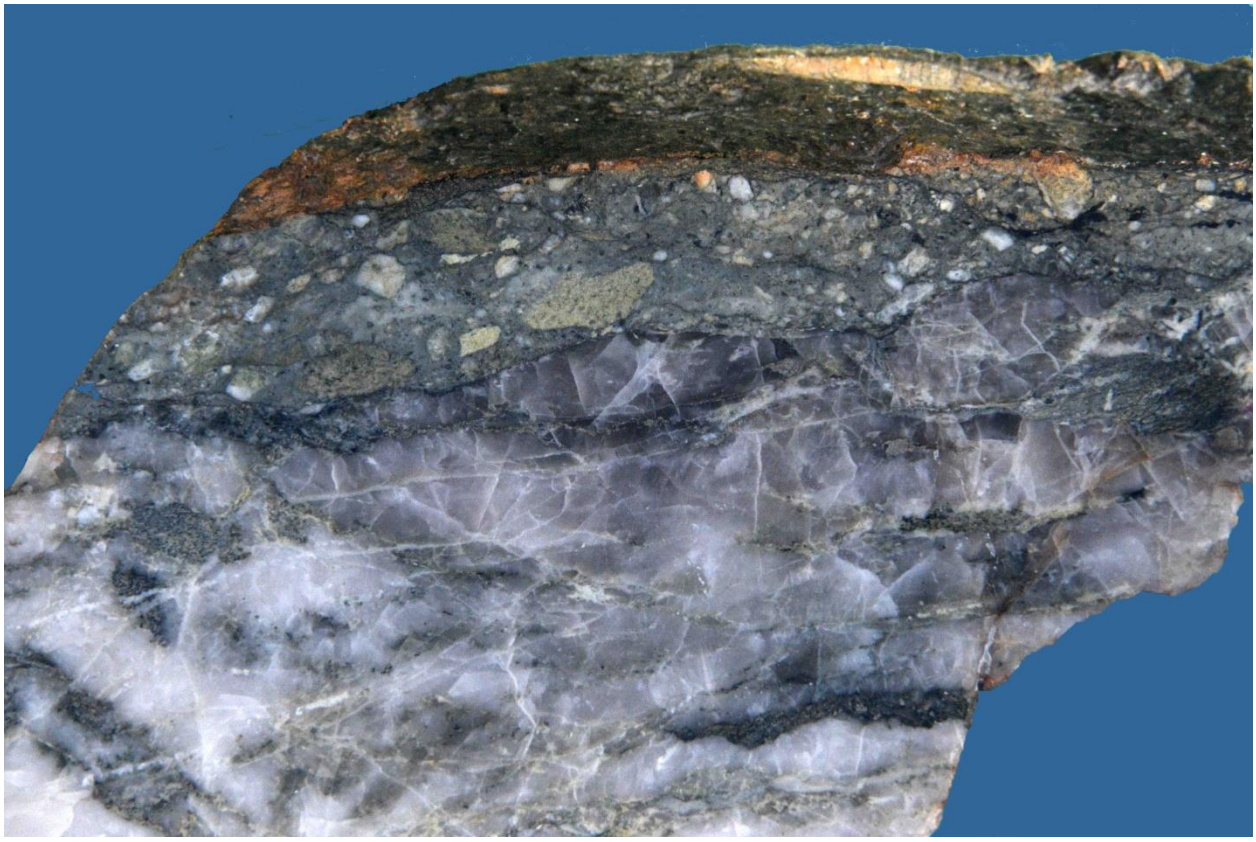


Image above:[2464] *Un-weathered fault breccia, consisting of angular to well-rounded fragments. The mixed angularity, and mixed composition, of the breccia, indicates, fault milling, or open-space fluid-flow milling occurred. This milling concept, is supported by the variability of the fragments. If this was an open space, it may have been a conduit for ore-forming fluids.*

Source is **2021-05-18 Eby Reed Trench Vein.docx**

The Reed Trench Vein would benefit from mechanical stripping to test the lateral extension of this strong structures.

. *B-Vein Subcrop Stripping*

UTM **B1 Vein** Subcrop: Zero-reference-point: 563,578.2mE 5,327,172.7mN El 312.9m.

Area Stripped: 7.10 square meters.

This vein was hand stripped, and scrubbed by vegetable brush. Water to clean the subcrop surface was carried from the swamp north-east of this subcrop.

This vein was not channel sampled.

The B-Vein appears to be a "**simple, one-event, dilation**" vein, associated with a SE *(azimuth 132^{o})* trending lineament, that is parallel to the **Lincoln-Nipissing Break** which is located to the South-east. See Transition Metals, Web page image after the subcrop images.

This *132^{o}* lineament; is an inferred structure, with gold mineralization potential. The lineament, is marked by a SE linear trending swamp, and a favourable magnetic signature.

The Reed *(18 gAu/mT)* Showing, is on a parallel Lineament approximately 250m to the north. Another similar lineament, occurs 100 south west of this lineament.

It is dangerous to project structures across faults such as the **Amikougami Creek Fault** *(which is located approximately 5-km east of the property)*. Similar appearing structures, on opposite sides of faults; such as the Amikougami Creek Fault, may not be the same structure. This issue; was encountered at the Agnico Beaver-Timiskaming Mine's faults and ore veins. At this mine; similar appearing veins were different structures with the appearance of continuity across an apparent fault offset. Any real, or apparent, offsets of the Lincoln-Nipissing Break at or near the Amikougami Creek Fault are tenuous.

From a mining perspective; structural theory does not matter. From a genetic, and exploration perspective; it is a real concern that this report does not resolve.

It appears the impact zone, of the CLLDZ alteration-mineralization **node** is centred on these three SE trending lineaments, that approximate, the projection of the Lincoln-Nipissing Break *(North limit near the Reed Showing and South limit, near the Reed Trench Vein)*.

The B-Vein, and the F-Vein, *(discussed next)* each appear to be, "simple, one-event, dilation" events associated with a SE *(azimuth 132^{o})* trending lineament. This lineament is inferred to have a potential *azimuth 132^{o}* structure, with ore potential. It is inferred to have to be a fault-deformation structure, with an **extended history of deformation**. It is

natural for deformation structures to have high angle simple, one event veins. These can be preferentially formed, at inflections of the mother shear structure.

Deformation-fault zones tend to host ore zones in dilations that preferential form at inflections. Movement on the host structure causes both dilation within the structure and dilations at high -angle to the structures. The mother structure, tends to be long lived, with a complex, deformation-alteration-mineralization history. The auxiliary structures, tend to be short lived, single events that do not reflect the complex, deformation-alteration-mineralization history of the mother structure.

The high angle; B-Vein, and F-Vein, do not appear to be direct ore targets, but they may be structural vectors leading to ore, within their mother structure.

For these reasons; this author has selected the juxtaposition of the inferred 132^{o} structure, and the B-Vein, and F-Vein, as a priority exploration target location on the inferred 132^{o} structure.



Image above[5344] facing south: B-Vein immediately after hand scrubbing and washing.



Image Above[4047] Facing south: Mapping configuration of the B-Vein subcrop. The vein is widest to the north as this vein approaches an apparent magnetic, and structural feature in a linear swamp (swamp lineament 132°).

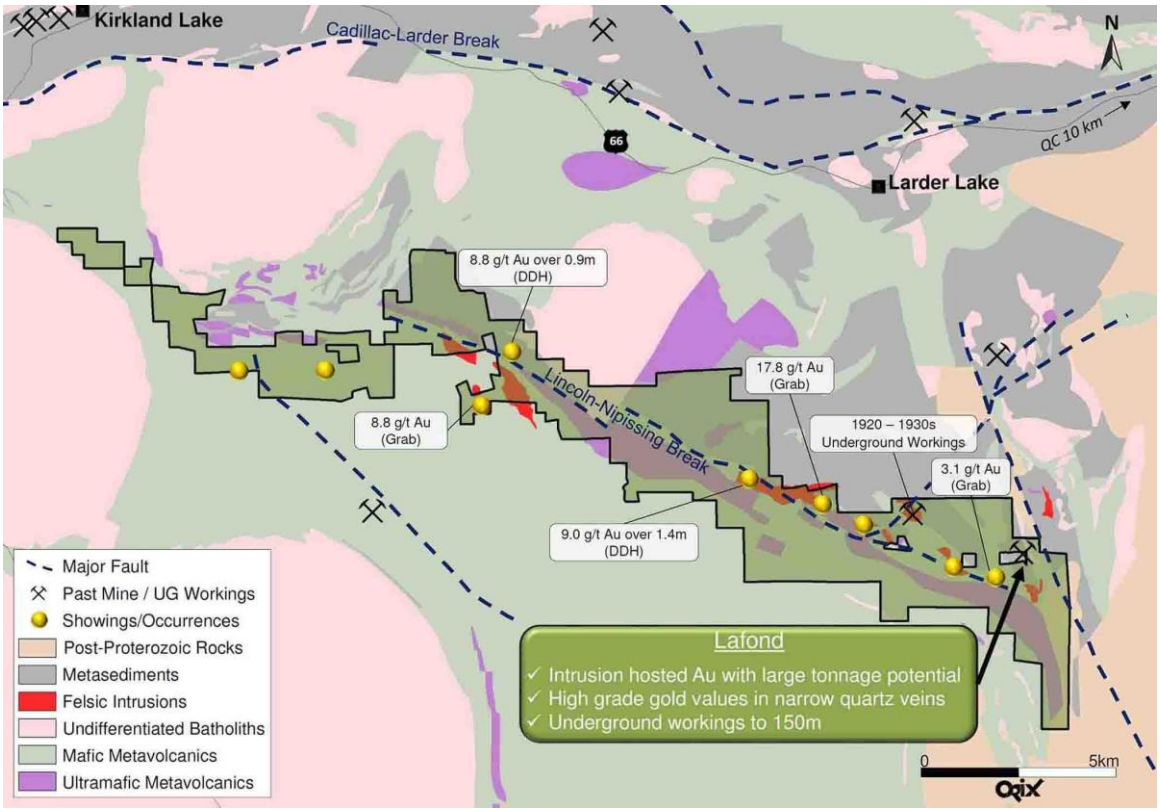


Image Above: extracted from a Transition Metals web page shows the Lincoln-Nipissing Break in relation to the CLLDZ.

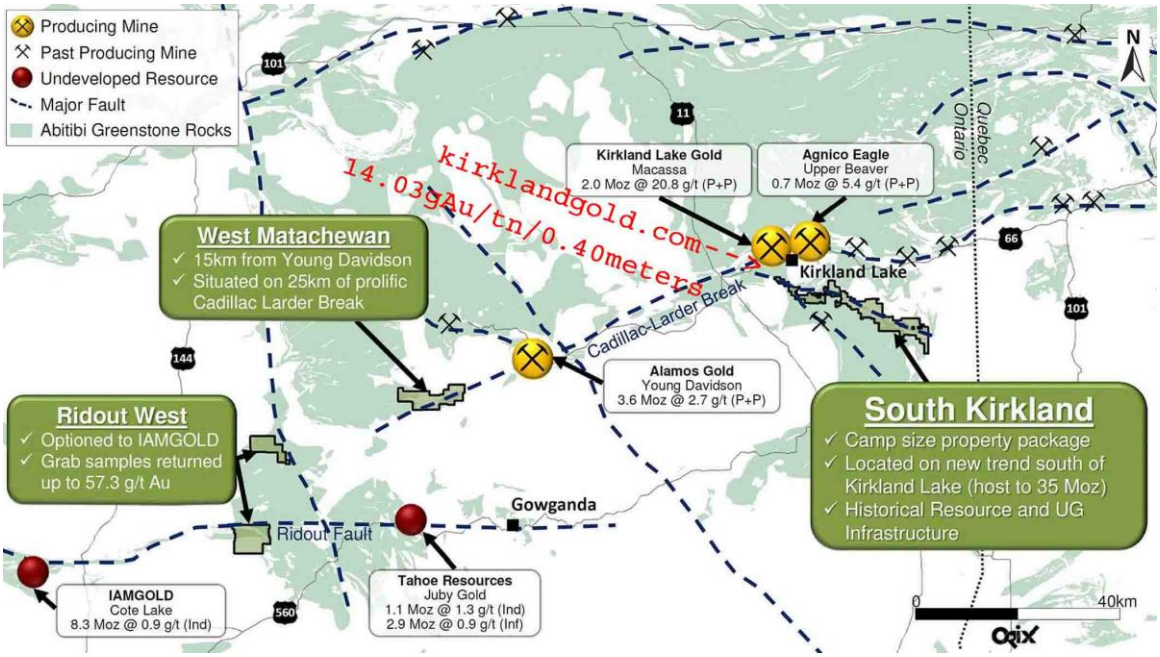


Image Above: Regional map extracted from a Transition Metals web page showing Lincoln-Nipissing break trending towards the Reed Otto Township lease

claim. The Reed Otto township lease claims hosts three strong lineaments defining an approximately 425-meters^{+} wide, mineralization corridor parallel to the Lincoln-Nipissing break.

. F-Vein Subcrop Stripping

UTM **F1 Vein** Subcrop: Zero-reference-point: 563,620.4mE 5,327,221.8mN El 314.7m

Area Stripped: 4.58 square meters.

This vein was hand stripped, and scrubbed by vegetable brush. Water was carried from the swamp south-west of this subcrop to clean the rock surface.

This vein was not channel sampled.

The host rock does not appear to be significantly altered.

The F-Vein appears to be a simple, one-event, dilation event associated with an *azimuth 132^{o}* trending lineament, that is parallel to the Lincoln-Continental deformation zone *(and the similar trending Reed Showing lineament of the same orientation).* This relationship is discussed in detail in the **B-Vein** text.

The F-Vein, in combination with the B-Vein, appear to be vectors pointing to the inferred azimuth 132^{o} lineament in the swamp lineament to the south-west.



Image above:[1043] Top of image is east: Dextral offsets of the vein shift the north side of the vein to the east (right hand offset).



Image Above:[8272] Facing south: This image emphasises the mapping configuration of the F-Vein subcrop.



Image above:[3182] *Image facing south: F-Vein immediately after hand scrubbing and washing the subcrop. Note the dextral slip offset of the vein.*



Image above:[8282] The image faces west: Note the dextral offsets that shift the north side of the fault to the east (right hand offset).

. *R-Vein Subcrop Stripping*

UTM R**1 Vein** Subcrop: Zero-reference-point: 562,255.9mE 5,327,156.0mN 339.8m

R-Vein Main Area Stripped: 9.77 square meters.
R-Vein East 1 Area Stripped: 1.23 square meters.
R-Vein East 2 Area Stripped: 1.78 square meters.
R-Vein West Area Stripped: 0.43 square meters.
The R-Vein is located on the Robinson Claims in Eby township. This vein was identified in 1994 field mapping. Noranda Inc sampled this vein returning an assay of 1.358 gAu/Tn/mT.

The vein was hand stripped, hand washed by vegetable brush, with water carried from Swastika.

The water used during channel sampling, was also carried from Swastika. Three channels, were cut across the vein and associated wall rock. The vein and wall rock

were assayed by CSCW. The best channel sample graded **0.233** gAu/mT across 0.26m. Two grab-samples graded **1.470** and **0.070 gAu**/Tn/mT.

Three additional subcrops, designated as R-Vein West, East 1 and East 2 were also had stripped and brushed clean.

During 2021, CSCW extended the subcrop by mechanical stripping and washing. This subcrop extension remains to be mapped.

This vein appears to be within a vein corridor, intersected as "**Zone 1**" in hole EO-22-004 *(866.65-868.20-m **0.320 gAu**/mT over 1.55meters)*.

The bedrock host, appears to be strong chlorite alteration, with associated speckled pale beige alteration spotting. The pale beige alteration appears to be a relict of the original rocks texture, possible black iron-titanium oxides. See the subcrop image below.

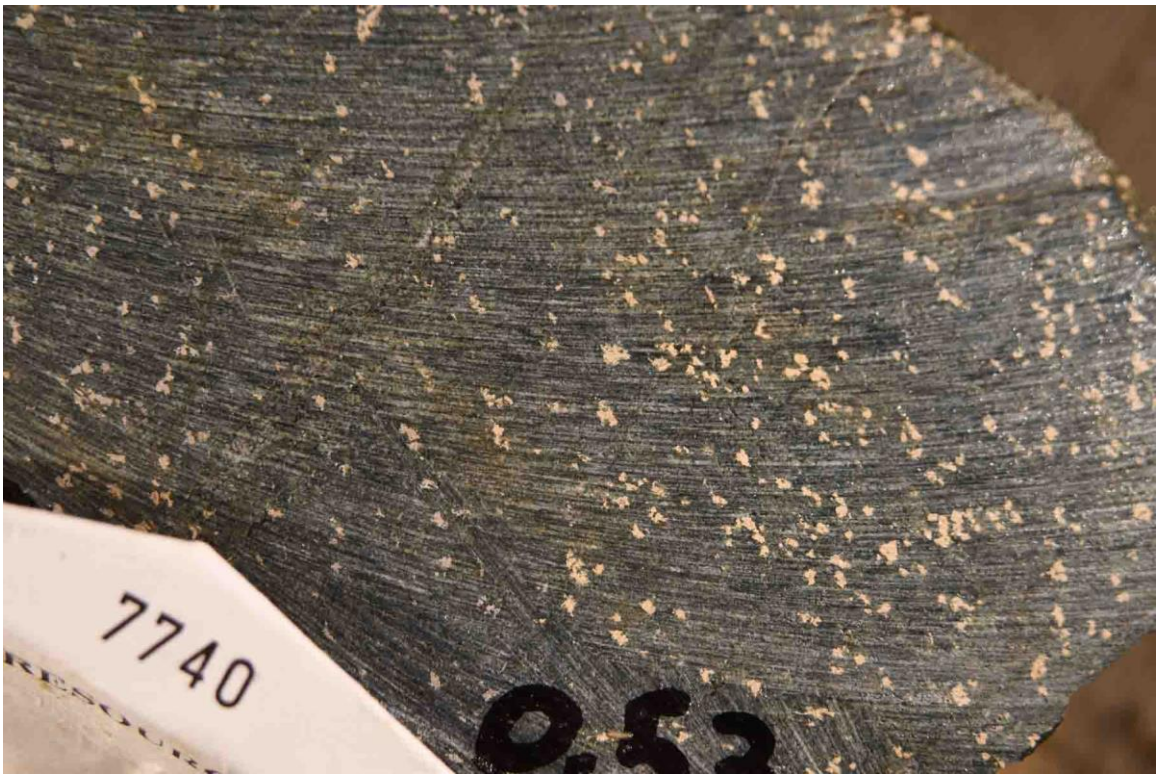


Image Above:[4845] This is a chunk of channel sample 7740. This is dark green, brown spotted- chlorite alteration typical of the R-Vein Subcrop.



Image Above: [6759] Facing north-west emphasising the vein. This subcrop image was taken after subcrop cleaned, and before channel cutting



Image Above: [7292] Image facing west during mapping. Note: The Zero-reference-point in the balsam fir at the west end of the subcrop. Channel cut of sample 7740 is conspicuous in the foreground. The channel cut, for samples 7716 and 7717 is visible, but difficult to see, at the one-meter ABS mearing rod held in place by orange handled, Fiskers machete.



*Image Above:[4845] Subcrop after channel sampling. This image, emphasises the channel sampling configuration. Sample 7715 graded **0.233 gAu/mT**.*

. *2550E-Trench Preparation*

Grid location measured at the South Fault is 2539mE 046mN



Image above: Image facing North. ***2550E-Trench*** *after removal of much down timber. This trench is prepared for hand stripping. The west, (left) and east (right) face were left undisturbed, because the ground is sheared, and needed to remain undisturbed, for mapping by an experienced structural geologist.*

Two strong faults, approximately 2 meter apart, are exposed in both walls of this pit. The fault-shear fabric is parallel to the strike-dip of this near vertical fault.

The North Fault is 0.30-meters of gouge. The south fault is 0.25-meters of black gouge.

This trench is located **117-meters** west, of the **nearest MaxMin Conductor**. That conductor, is located on line 2650E at 087-m North.

It appears hole **EO-22-004**, intersected this fault *(~400m below surface)* as "**Zone 3**" as described below:

470.94-476.75-meters anomalous in **Au Ag Cu Co Zn Te** and possibly **C** as graphite including *(DRR).*
470.94-471.75-meters Black **Fault Zone** *("471.20m Flt plane no gouge" Az 016º Dip 64ºE) (ML)*
and
475.75-476.75-meters Black **Fault Zone** *("476.74m FZ to AGAB Az 025º Dip 67ºSE) (ML)*

The faults in this trench, and Zone 3 in hole EO-22-004, appear to spatially reconcile as, a near vertical fault. The "**X-Y-Z-Azimuth-Dip**" determinations of Zone 3, in EO-22-004, are problematic, and do not reconcile to this scenario.

It is probably coincidental, that the surface trench, and the drill hole, both have two distinct fault zones.

Without conformation (reconciliation) of a second hole or reliable "X-Y-Z-Azimuth-Dip" determination, it is dangerous to correlate these two-point fault locations as the same fault.

It would be beneficial to monitor the vertical-horizontal strength, and phase of the alteration associated with this fault zone and other fault zones. If there is a predictable zonation, this zonation could be a vector to ore.

. *2650E-Trench Preparation*

Grid location measured at the Fault 2643mE 025mS.



Image above: Facing North. The 2650mE Trench after removal of much down timber. This trench is prepared for hand stripping. The west (left) and east (right) face were left undisturbed because the ground is sheared, and needed to remain undisturbed, for mapping by an experienced structural geologist.

A single strong fault, is exposed in both walls of this pit. 1994 notes; indicate this fault strikes 070^{o} azimuth with an 80^{o}S dip. The fault consists of a 0.70-meter grey, and red gouge, and intense shearing. The fault-shear fabric, is parallel to the strike-dip of this steep fault.

It appears hole **EO-22-004** intersected this fault as "**Zone 4,**" at approximately **300m** vertically below, the 075°azimuth projection of this fault.

Zone 4 includes:

> *"370.05-373.00-meters anomalous in **Au, Ag As Co Cu Te** and possibly **C** as graphite including. (DRR)*
> ***371.05-372.20**-meters Black **Fault** Zone hard silicified.*
> *and*
> *"**389.35-390.10**-meters Black Fault Zone … silicified"*

The surface fault, and Zone 4 in hole EO-22-004, appear to spatially reconcile, as a near vertical fault. The "X-Y-Z-Azimuth-Dip" determinations of Zone 3, were not established in hole EO-22-004.

Without conformation *(reconciliation)* of a second hole; or a reliable "**X-Y-Z-Azimuth-Dip**" determination; it is dangerous to correlate, this surface fault, with the Zone 4 fault intersection in EO-22-004.

It would be beneficial, to monitor the vertical-horizontal strength and phase of the alteration associated with this fault zone and other fault zones. If there is a predictable zonation, this zonation could be a vector to ore.

. *4300E Talus Stripping*

Grid Location: 4282mE-197mS



Image above: 4282mE-197mS Talus Stripping. Note talus chunks stacked near this large rock.

Line 4300 was rechained and re-picketed to 200mS.

An area of about 3x3-meters ,was dug out exposing many pieces of angular CaMgFe-Carbonate talus. No subcrop was identified, and digging was suspended.

It is assumed this is rock and the angular talus was derived from float.

If drill trails are planned near this area, the trail could be placed to pass by this area. The backhoe scoop, could be pushed into the overburden, without removal of material to determine if similar subcrop exists. If subcrop similar-to the apparent float were encountered it could be mechanically stripped.

. *Boudreau Showing 1952mE*

UTM **Boudreau Vein** Subcrop: Zero-reference-point: 561,513.7mE 5,327,133.5mN 332.9m



Image above: Rock sample collected from the Boudreau zone at grid location 1952mE-362mN and UTM 561,513.7mE - 5,327,133.5mN. *(This showing is located 489-meters west of the deep intersection of Zone 1 in EO-22-004).*

Mr. Boudreau, showed this author the location, where he sampled a structure that assayed 1 oz Au/Ton. This author took CSCW staff to the Boudreau zone. CSCW, subsequently performed hand stripping at this location. CSCW staff and this author agreed, this showing is an indicator of close-proximity to the CLLDZ. It appears this showing, may have impacted CSCW's location for drilling hole EO-22-004.

SIB Site Surveyed by Surveyors On Site

The following images are the corner SIB surveyed by Surveyors On Site *(SOS)*.

Over the period from 2018, to 2022; this author spent a few days trying to locate the SIBs located at the south edge of the Reed's Otto Lease, and the SIB at the NE Corner of the y Lease, bordering the Eby-Otto Township line. The area has been forested by Grant Forest products. This clearcut, destroyed the clearly visible OLS survey lines

between the corner SIB's, and the bearing trees identifying the location of these three, 1-inch, SIBs, and the wooden survey monuments, that accompanied, and identified these SIB's. Prior to clearcutting, the OLS survey lines were easily identifiable.

On the Otto Township lease, the OLS survey lines, remained clearly visible and easily identified, continuously except for the eastern, approximately 200 meters of dense underbrush on the north OLS line, and approximately 150 meters of forest fire burned area south of the NE corner, and the Grant Forest clearcut, of the southern portion of the lease.

This forestry issue, was identified, and dealt with, in the **2015** Castle Silver, assessment report, referenced in this reports appendices.

Without rechaining of the 1994-1996 grid lines, it is unlikely these three SIBs would have been identified.

. *SIB and Bearing Tree Reed at NE (#1) Reed Otto Lease*

Grid Location: Grid 4735mE-469mN
SOS surveyed UTM Location: 564,284.27mE-5,327,306.27mN elevation 317.29m



Image above: SIB evidence at the NE (#1) corner of the Reed, Otto township Lease, located at Grid 4735mE-469mN at SOS UTM 564,284.27mE-5,327,306.27mN.



Image above: Bearing tree for SIB at NE (#1) Reed Otto Lease located at Grid 4735mE-469mN, at SOS UTM 564,284.27mE-5,327,306.27mN elevation 317.29m

. *SIB at SE (#2) Reed Otto Lease*

Grid Location: 4735mE-427mS
SOS surveyed UTM Location: 564,293.84mE-5,326,418.62mN elevation 304.11m.



Image above: SIB at SE (#2) Reed Otto Lease located at Grid 4735mE-427mS at SOS UTM 564,293.84mE-5,326,418.62mN elevation 304.11m.

Prior to 2021, much effort had been exerted, to identify the location of this SIB *(which marks the SE corner of the Reed Otto Township, lease)*. Without rechaining line 4735mE, it is unlikely this monument would have been found.

. *SIB at SW (#3) Reed Otto Lease*

Grid Location: 4000mE-437mS

SOS surveyed UTM Location: 563,566.26mE-5,326,400.09mN elevation 316.00m



Image above: SIB at SW (#3) Reed Otto Lease located at Grid 4000mE-437mS at SOS UTM 563,566.26mE-5,326,400.09mN elevation 316.00m

Prior to 2021, much effort had been exerted, to identify the location of this SIB *(which marks the SW corner of the Reed, Otto Township, lease)*. Without rechaining line 4000mE, it is unlikely this monument would have been found.

. *SIB NW Corner (#4) Reed Eby Lease*

Grid Location: 4000mE-470mN

SOS surveyed UTM Location: 563,566.09mE-5,327,299.60mN



Image above: 1-inch SIB located at Grid 4000mE-470mN at SOS UTM 563,566.09mE-5,327,299.60mN.

This SIB is located on the Eby-Otto Township line; 10.11-meters north of the #4, (5/8-inch iron bar) of the Reed Otto Lease located at Grid 4000mE-461mN at SOS UTM 563,556.23mE-5,327,289.49mN

The **location**, and **identity** of this 1-inch SIB, and the 5/8-inch iron bar, 10.11-meter to the south; have been continuously maintained, by the Reeds, and Robinsons, and Eric Marion, during our mutual grid maintenance.

. SIB at NE corner of Reed NE Eby Tp. Lease

Grid Location: 4000mE-457mS

SOS surveyed UTM Location: 563,566.57mE-5,326,381.83mN elevation 315.14m



Image above: SIB at SW (#1) Reed Eby Lease located at Grid 4000mE-457mS; at SOS UTM 563,566.57mE-5,326,381.83mN elevation 315.14m. Note: The downed, wooden post, is the Surveyors post in a late stage of decay, due to forestry operations.

Prior to 2021, much effort had been exerted, to identify the location of this SIB *(which marks the NE corner of the South East, Reed Eby Township lease, which is located at the Eby-Otto Township line)*. Without rechaining line 4000mE, it is unlikely, this monument would have been found.

. *SIB at SW corner of Robinson Cell Claims*

Grid Location: 2400mE-437mS

SOS surveyed UTM Location: 561,968.24mE-5,326,370.45mN elevation 325.26m



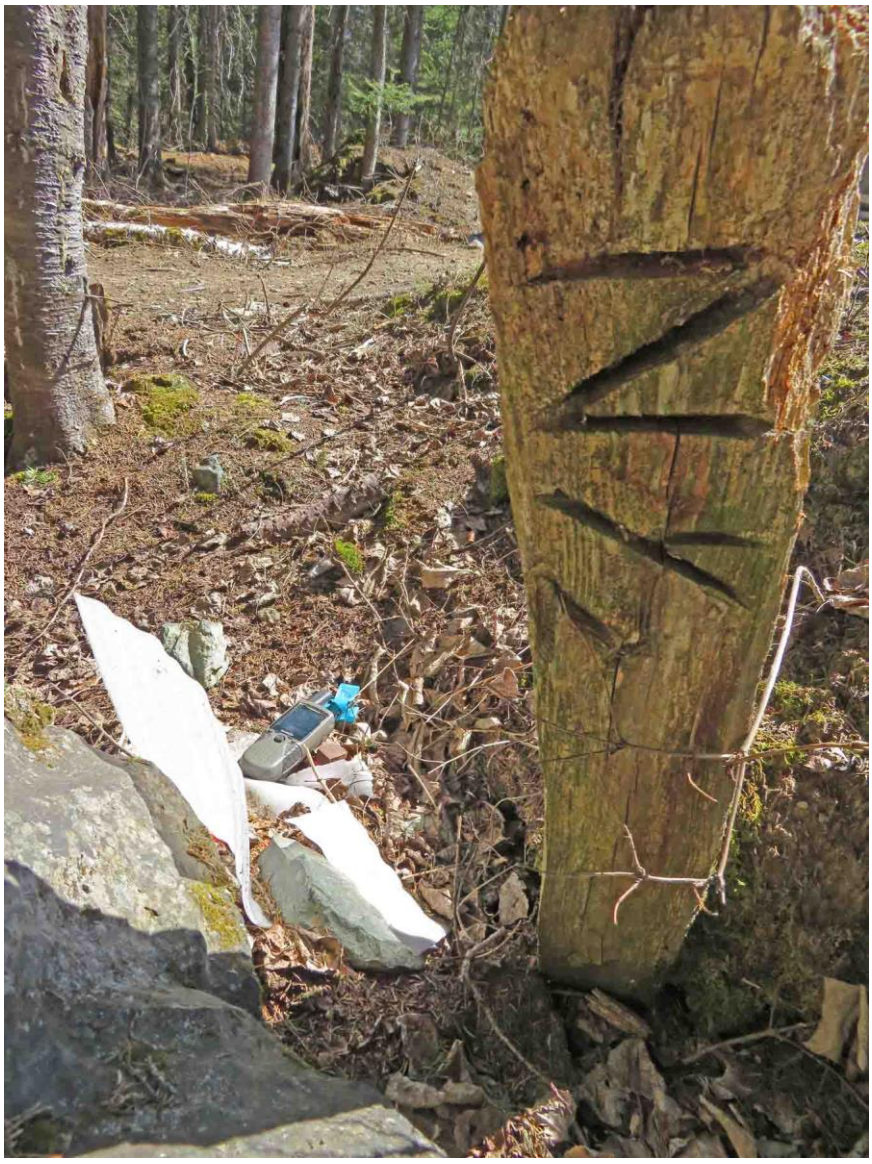
Image above: SIB at SW corner of Robinson Cell Claims located at Grid 2400mE-437mS at SOS UTM 561,968.24mE-5,326,370.45mN elevation 325.26m

Prior to 2021, much effort had been exerted, to identify the location of this SIB *(which marks the SE corner of the Reed Otto Township, lease)*. Without rechaining line 2400mE, it is unlikely this monument would have been found.

. *SIB at NW corner of Reed Eby West Lease*

Grid Location: 1600mE-400mN

SOS surveyed UTM Location: 561,157.82mE-5,327,173.58mN



SIB NW (#4) Reed Eby Lease located at Grid 1600mE-400mN at SOS UTM 561,157.82mE-5,327,173.58mN

The ground location of this SIB has never been lost.

2022 Hole EO-22-004

Surveyed UTM collar location: 562,167.9841mE, 5,326,540.6530mN Elevation 354.05m. Dip -56.00º, Azimuth 345.20º. It is uncertain; if this collar UTM and orientation are assigned or surveyed collar location and orientation.

During 2022, Canada Silver Cobalt Works drilled a single hole: EO-22-004 to a depth of 969-m meters The hole was collared at UTM NAD83 Zone 17: Easting 5,326,540.6-mE and 552,168.0-mN which is ground grid coordinates 2608-mE 259mS

No drilling expenses are included in this assessment report. However, this drilling is a critical aspect of this exploration program and has required significant work to reconcile all aspects of the 2021-2022 field work to each other.

. Technical Files Received from CSCW

This author received a spread sheet of multi element geochemical analysis of 326 core samples.

In addition: This author has received an excellent Excel-format geo-programming *(Geotic)* log which includes the separate logs sheets for:

- title page log
- Gyro log
- Main Lithology log
- Alteration log
- Vein log
- Structure log
- assay log (Au, Ag, Co, Cu, Ni)
- Magnetic susceptibility log
- SG log
- Box log
- Sample number log with “from”, “to” and “sample length”
- Assay standards and blank sample log
- Oriented core quality log
- Core recovery log
- In-hole Gyro survey log

In addition; the author received a high quality 73-page, pdf **image** log, including:

- Pages 01: title page log
- Pages 02-12: Gyro log
- Pages 13-26: Main Lithology log
- Pages 27-30: Alteration log
- Pages 31-39: Vein log

- Pages 40-45: Structure log
- Pages 46-55: Assay log with final Au, Ag, Co, Cu and Ni assays
- Pages 56-67: Magnetic susceptibility log
- Pages 68-73: SG log

Except for SG, and magnetic susceptibility, the quality of logging was excellent. The SG and magnetic susceptibility values are considered accurate to industry standards. Rock-Quality data; Quality-Assurance requires both "high quality readings" and "high quality sample selection with descriptions". The main lithologies were hybrid lithologies involving interfingering of lithologies and the lithologies were not identified in the Rock-Quality data.

In addition; the author received an "X-Y-Z-Azimuth-Dip" Excel file named "*IMDEXHUB-IQ Viewdataiqlogger export 2022-12-07_EO-22-004"*.

In addition; the author received a technical report titled: "REPORT ON DRILL CORE ASSAY AND GEOCHEMICAL RESULTS AT THE REED-ROBINSON CLAIM GROUP".

. *Discussion Various aspects of Hole EO-22-004*

Hole EO-22-004; was an entry level hole, in a planned 4-hole drill program on the Reed-Robinson property.

The first three holes *(EO-22-001 to EO-22003)* were drilled on the contiguous Marion property. These holes were drilled approximately 5 km west of the Reed showing. CSCW requested this author recommend this drilling program for the Marion property. These holes EO-22-001 to EO-22-003 were drilled with minor adjustments to accommodate CSCW expectations. Hole EO22-001 was reviewed during early stage of preparation for the Reed-Robinson drilling. The Quality-Assurance of the SG log and reconciliation to the geology log was the focus of this review.

The trails and drill pads for the 4-hole Reed -Robinson program, were established before drilling commenced. The proposed 2nd, 3rd and 4th holes were from the drill proposal sent to CSCW. These recommendations ,and the other recommendations; targeted gold as the prime target of many of the hole. The collar locations, and hole orientations, were designed to maximize exploration return, by commonly incorporating secondary targets along the trace of the holes. These drill proposals were designed to **quietly test** these secondary targets, at **zero marginal cost** to the primary gold exploration program.

This author, and CSCW have spent much time, and effort, dealing with **critical metals-minerals**. Critical metals-minerals are identified in the corporate profile objectives. CSCW, and this author dealt with the recognition that properties such as the CSCW

flagship, Castle Property; have potential both critical metals-minerals *(cobalt-nickel-silver)* and gold deposits. This is supported by CSCW diamond drill intersections, and surface trenching. Discussion dealt with the similarities between the Geology at the CSCW's Castle project, and CSCW's Eby-Otto property.

The **quiet approach** was discussed; because exploration for the critical minerals **Cobalt**, **Nickle**, PGM-Au, and **Large-Flake-Graphite** within gold camps, is problematic to the investment community, which often focuses on a single, narrow objective. Unlike the Eby-Otto Mafic Intrusive, most other ground in gold camps, is not favourable for these additional commodities.

PGM exploration is problematic; because PGM mineralization is unlikely to be recognized in conventional core logging. The sub-economic PGM-Au horizon within the Gowganda-Elk Lake Nipissing Gabbro has no visible metallic mineralization or identifiable alteration.

It is the favourable geochemical, and geophysical signatures, of the Archean, Eby-Otto Mafic Intrusive and its similarity to the Castle property, and other local and Ontario deposits, that make quiet exploration for these critical metals-minerals beneficial, to dampen see-saw investor expectations, in this unique, and novel environment.

The discussion included drilling a **deep hole**, below the Reed Showing. This recommendation was based on prospecting practice, of following alteration-mineralization-analytical vectors. That recommendation, included testing a series of identified targets, between the collar and deep mineralization at, or near, the CLLDZ. This Reed Showing site, was proposed; because prospecting evidence indicates this is a node of mineralization, that can be expected to extend significantly furthest from the CLLDZ, and has the best potential of an ore deposit along the CLLDZ.

This author supported the CSCW decision, to drill the deep hole EO-22-004, at its drilled location; 1.8 km west of the alternate location. It was an excellent decision.

<u>The decision appears to have been heavily weighted by:</u>

- This being the closest drillable location; to the surface trace of the CLLDZ.
- The **1.358 gAu/mT** R-Vein assay at grid location: 2700mE-360mN, and at UTM 562,255.9mE 5,327,156.0mN *(200-m east of the deep intersection of EO-22-004)*
- The **1 ozAu/Ton** assay at the Boudreau structure at grid location: 1952mE-362mN and UTM 561,513.7mE - 5,327,133.5mN *(489-m west of the deep intersection of EO-22-004)*

Disclaimer: Hole EO-22-004 tested no identified MaxMin conductors. No conductors were explained by the Rock-Property data reported within the drill logs. No identified Nickle, or Cobalt, or Large-Flake-Graphite targets were tested. This hole tested two known fault zones referred to as the "**North Fault**" *(see 2550E Trench, EO-22-004 zone 3)* and the "**South Fault**" *(see 2650E Trench, EO-22-004 zone 4)* in this report. A prominent lineament called the "**West**

Riedel Lineament" in this report was also tested *(see EO-22-004 zone 4)*. The South Fault is proximal, to a very weak quadrature response that was interpreted as a possible wet fault.

This hole: EO-22-004 was designed to identify and test:

- the **Cadillac-Larder Lake-Deformation-Zone** *(CLLDZ)* at depth. This was the primary purpose of the hole.
- The gold bearing, 25-inch quartz vein located on line 2700mE-360mN *(Noranda sample **1.358gAu/mT**) (200-m east of the deep intersection, Zone 1 in EO-22-004)*
- The East trending "**North Fault**" *(E-W striking)* identified at grid location **2538mE-048mN** (*Zone 3 in EO-22-004).*
- The East trending "**South Fault**" *(E-W striking)* identified at grid location **2643mE-025mS** (*Zone 4 in EO-22-004)*
- The SE trending "**West Riedel Zone**" inferred at grid location ~**2525E-087mS** (*Zone 5 in EO-22-004)*. This is a prominent lineament associated with intense alteration along the edge of a narrow swamp.

This hole, EO-22-004:

1. Did not identify the Cadillac-Larker Lake-Deformation-Zone *(CLLDZ)* at depth.
2. Appears to have intersected the gold bearing, **25-inch quartz vein** *(corridor)* located on line 2700mE-360mN as described below: ***(Zone 1)***
    a. 858.30-870.60-meters as a **strong vein-alteration-mineralization system.**
    b. 865.90-868.75-meters anomalous in **Au Ag Sb Co** within a sericite alteration interval
    c. 866.65-868.20-meters grading **0.320gAu/mT over 1.55m**.
    d. This intersection is much stronger, and has a more promising appearance, than the surface veins on strike with this intersection.
    e. A vertical, **azimuth 082º gold vein corridor** appears to be established as a plane defined by:
        i. This intersection at 858.30-870.60-meters.
        ii. The surface, 25-inch gold bearing quartz vein located on line 2700mE-360mN *(200-m east of the intersection)*
        iii. 10-inch quartz vein and area of quartz vein talus located at 2441mE-323mN *(62m west of the intersection).*
3. Appears to have intersected the East trending "**North Fault,**" (E-W striking) identified at grid **2538mE-048mN** is identified as: ***(Zone 3)***
    a. 470.94-476.75-meters anomalous in **Au Ag Cu Co Zn Te** and **Introduced Carbon**.
    b. 470.94-471.75-meters Black Fault Zone *"predominantly composed of black (graphitic) silicified material"*
    c. 475.75-476.75-meters Black Fault Zone "*Majority ... silica altered black graphitic material*"

d. 485.55-490.00-meters "*many 5-50-cm zones of clustered (+/- sericite) stringers giving it a weak ductile shear/foliation". This fault was intersected below the East trending "**North Fault**"* identified at grid **2538mE-048mN**. There was no MaxMin conductor identified at this location.
e. There is no MaxMin Conductor identified at this location

4. Appears to have intersected the East trending "**South Fault,**" identified at grid **2643mE-025mS is identified stand-alone**: ***(Zone 4)***
    a. 370.05-373.00-meters: anomalous in **Au, Ag As Co Cu Te** and **Introduced Carbon**
    b. 371.05-372.20-meters **Black Fault Zone**, hard silicified. This and the fault at 389.35m were intersected below the East trending "**South Fault**" identified at grid 2643mE-025mS. There is no MaxMin Conductor identified at this location. A very weak, and questionable, quadrature response was identified near this location. That response is the response expected from a wet fault. At 371.16-371.62-meter is a "Carb-Quartz Vein. This is within a sericite alteration interval.
    c. 389.35-400.75-meters anomalous in Au g As Sb Cu Zn Te and Carbon.
    d. 389.35-390.15-meters **Black Fault Zone** "*may be Graphite … silicified … about 1% sphalerite or pyrite*". This fault, and the fault at 371.05-m were intersected below the East trending "**South Fault**" identified at grid 2643mE-025mS. There is no MaxMin Conductor identified at this location. A very weak, and questionable, quadrature response was identified near this location. That response is the response expected from a wet fault.
    e. There is no MaxMin Conductor identified at this location.
5. Appears to have intersected the SE trending "**West Riedel Zone**" inferred to exist at grid 2525E-087mS. The intersection consisted of: ***(Zone 5)***
    a. 285.00-286.20-meters anomalous in **Ag Zn**
    b. 284.50-286.20-meters **Black Fault Zone**. There is no identified MaxMin Conductor at this location.
    c. A sericite alteration interval.

Hole EO-22-004:

- Established **sericite** (K) alteration is widespread in much of the hole.
- No **albite** alteration was observed, and recorded in the log.
- **Did not test** any known MaxMin Anomalies.
- **Did not confirm** any conductive graphite. This confirmation concept is expanded in the text of this report.
- The R-Vein projection, the North Fault and the South Fault and the West Riedel Lineament are the targets drilled that were discussed with this author. These were **gold targets only**, and had no expected geophysical signature.
- The "**R-Vein**" projection was intersected at 858.30-870.60-meters *(a strong vein-alteration-mineralization system which assayed 1.358gAu/mT over 1.55-meter)* and the

West Riedel lineament are the only EO-22-004 drill target discussed by CSCW and this author. The drill trail was cut to other targets, and these remain to be tested. The CLLDZ, was the prime target of the hole. That objective could not be compromised to target other drill targets we discussed.

- The main asset of the property; the Reed showing 14.0375 gAu/tonne across 0.40-meters, remains untested.
- This hole, and all the other proposed drill holes targeted gold first, and foremost:
    - **No Ni targets** were tested along MaxMin Conductors, along the contact of the Eby-Otto Mafic Intrusive contact, with the volcanics rocks
    - No Large-Flake-Graphite targets, were tested *(true MaxMin conductors)*.
        - This author uses the concept geological that igneous and metamorphic process tend to enlarge grain size. Conversely, shearing and deformation tends to reduce grain size.
        - Careful logging of the graphite is required to fit "introduced carbon, (G*raphite and Carbonate alteration)* into its appropriate zoning vector, within the CLLDZ the zoned alteration and mineralization event*(s)*.
    - No Cobalt targets established in close association with conductors were tested.
        - HSM School of Mine's geophysics Professor K.V. Kunduri, working in collaboration with Agnico Eagle Mines, established the geometric-genetic model, of drilling proximal to conductors, to identify Cobalt-Silver Ore associated with; but not within conductive rock.
        - This author used this concept to drill the south vein, discovery hole at the McAra deposit. This was done by setting up approximately 25 m west of the conductive, IP response, and drilling precisely parallel to the ~60^{o} dip of that conductive unit.
        - This author used this concept, in the CSCW discovery hole *(CS11-08)* to discover the Cobalt-Silver, Robinson Zone. The main target was silver veins proximal to the secondary target, an IP conductor *(apparent graphite)* (The conductor was logged as "***256.55-261.10**-m Graphic Archean sediments" … "The black graphic beds commonly **120-140 ohms across the core width (4.7 cm**). The shiny black graphitic slips commonly **2-5 ohms across 4.7 cm core width**"* The primary target was ***logged as "564.64-564.77-m** 28^{o} NB Ag-Co-Calcite vein: Visual estimate 6% Ag and 4% grey Co-arsenides by volume.*
        - This genetic observation, is consistent with 7 years silver mining for Canadaka Mines, and 7 years silver mining with Agnico Eagle. Cobalt-silver ore was consistently donut deposits, with the ore being

proximal to, but not within conductive sulfide (+/- black rock, that appears to have been graphitic).

- The "**XYZ-Azimuth-Dip**" orientation of the important intercepts remain to be embedded into the drill logs, as discussed, and as required in the contract quoted below:

> *"Both the Optionee and Optionor recognize the "Engineering importance of recorded* ***X-Y-Z-Azimuth-dip*** *data of critical* ***geological features"*** *and* ***report*** *(embed)* ***this information to the optionor****.*
>
> - *Ideally this data should be* ***recorded in the text of the drill log describing that feature****.*
> - ***Recording X-Y-Z-Azimuth-Dip data of a critical geological within the "drill-log-text" describing that feature*** *will be deemed to qualify under this reporting requirement."*

The author received; an "*X-Y-Z-Azimuth-Dip*" Excel file named "*IMDEXHUB-IQ Viewdataiqlogger export 2022-12-07_EO-22-004*". Unlike SG and Magnetic susceptibility, this very important orientation log, is separate from the drill hole log . Logging that is separate from the geology log tends to be overlooked ad lost. This trend, to bifurcate critical data from geology logs, was a reason for the contract wording.

The format of this orientation file is of little value, without dedicated reprogramming. The CSCW's exclusive use of this dedicated programming; is the reason for the contract requirement, to embed important "*X-Y-Z-Azimuth-Dip*" into the text of the geology log.

Contract: Embedded Statements, Rock Quality Data

The contract deals with a broad spectrum of concerns, impacting the quality of physical field practices, and core logging processes, and Quality-Assurance of Rock-Quality data, and data presentation, and data preservation; for the **good of the property** and the **good of the exploration company**.

The concepts presented were developed during this author's approximately 11-year service as geologist for CSCW.
The contract endeavoured to present CSCW's practice into a simple, and concise, best practice code *(610 words)*. It was designed to be **useful**, yet **flexible**, and to permit **much latitude** to the geologist or geotic.

The contract is quoted below:

'1.4' The Optionee and Optionor recognize the ***vertical sections and horizontal plans*** *as the* ***default orientation of Engineering records*** *and* ***geotechnical records.***

'1.5' The Optionee and Optionor recognize the ***strengths of computer-generated records*** *while*

*recognizing the high value of **true vertical and true horizontal Engineering records** and **other presentations**.*

*'1.6' If the Optionee causes inverted geotechnical data to be constructed, the optionee will present to the optionor high resolution digital PDF copies at an **optimal** and **natural scalable scale** with the text being clearly legible. The presentation of inverted geotechnical data will default to:*

- *True Vertical Section lines along the surveyed lines or UTM North-South lines and or UTM East West line and Id*
- *Id 25-meter spaced, true horizontal plan interval.*
- *Sections and plans will be **tied to consistent reference-point** to permit the documents to be stacked for optimal viewing*

*'1.7' Both the Optionee and Optionor recognize the "Engineering importance of recorded **X-Y-Z-Azimuth-dip** data of critical **geological features**" and **report** (embed) **this information to the optionor**.*

- *Ideally this data should be **recorded in the text of the drill log describing that feature**.*
- ***Recording X-Y-Z-Azimuth-Dip data of a critical geological within the "drill-log-text" describing that feature** will be deemed to qualify under this reporting requirement.*
- *Typically: "X" is the **East** (-West) coordinate, "**Y**" is the **North** (-south) coordinate and "**Z**" is the **elevation** coordinate and these are represented as **ground, survey** or **UTM coordinates**.*

and

*'1.9' Both the Optionor and Optionee recognize **the value of measuring physical rock properties on diamond drill core:***

- *Rock properties commonly measured in core include: **specific gravity**, **magnetic susceptibility**, conductance/resistivity, **chargeability**, permeability, **chemical composition**, **hardness**, **color**.*

- *Valid Variations in measurement and reporting exist including systematic measurements at a regular or predetermined interval that are optimal to measuring rock. The combined impact of many conflicting parameters cumulatively results in parameters that can be measured by geophysical instruments or that may impact geophysical measurements from within a hole, at surface or from the air. This can be critically important to designing, conducting, and interpreting geophysical and geological data. This style of measurement and reporting (embedding) is appropriate, independent of the written log of the hole.*

- ***Scientific measurements** designed **to facilitate** mineral exploration include measurements designed to resolve the **genesis**, **origin**, **history**, **alteration**, **signature** and/or **other features of the rocks in a drill hole**. These involve **selecting** and **measuring specific core intervals** that **best represent the feature(s)** of interest (**without contamination** (hybrid Products) of or from the many other parameters that can impact the measurement).*

- *This process **maximizes the contrast between different units** or **subunits** while **establishing the natural variance within** the **individual units** or **subunits**.*
  - *Example A: In Gowganda Nipissing diabase and Archean mafic-ultramafic units have natural subunits (phases), some with gradational boundaries and others with discrete boundaries.*
  - *Example B: a sediment might vary from 20%:80% A:B to 90%:10% A:B. In this case specifically measuring the end members and specific mid members has great value if appropriately measured and reported (embedded) in the text of the log.*

- Example C: Measurements designed to determine the signature of alteration would measure the relevant parameter of the least altered rock and the end product of alteration separately and then if beneficial deal with the intermediate products.

*'1.10' The Optionee and Optionor agree It is appropriate to **report** (embed) **rock property evidence** from core **in the text of the drill log of that core***

*'1.15' The Optionee (project operator on the Claims) agree to preserve **all drill cores**, **assay pulps**, samples and data until fulfillment of the Option Commitments. If the Option is terminated the Optionee will surrender **all** drill cores, assay pulps, samples and **data** to the optionor*

The text of the contract is used, as a "**base line text**" dealing within the applicable discussions in this report.

Embedded Statements in Drill Logs: Discussion of Importance

In Integrated-logs, the reconciliation process is often, self correcting, and self evident. Historically; drill logs were **stand-alone** documents, that recorded geological features consecutively in the order they were encountered in the hole. This format forced the core logger, to reconcile lithology, alteration veins and other Rock-Property data in an integrated format. These **stand-alone drill logs**, made data-reconciliation, intuitive, and obvious to both the logger and log user.

Modern computer applications, have necessitated abandoning the Integrated-Log format in favour of the more efficient Bifurcated-Logging system. In this Bifurcated logging style; separate log sheets are required for each parameter reported. By bifurcating the data into separate logs sheets: the logging geologist, bears **greater responsibility** to actively reconcile Rock-Quality data, to the Lithology Log, and Alteration Log.

. Embedded Statements Sample CSCW Log CS1107

Below is a sample integrated log quoted from CSCW hole CS1107:

"477.59	*477.94*	*SG = 2.99*
478.56	*478.74*	*SG = 2.92*
482.68	*482.77*	*SG = 2.88. Approximately 30% very fine grained white granophyre.*
482.77	*482.87*	*SG = 2.93. Approximately 30% very fine grained white granophyre.*
482.68	*482.87*	*SG = 2.91. Approximately 30% very fine grained white granophyre. Three separate SG measurements of this interval.*
483.37	*483.60*	*SG = 2.91*
487.69	*488.20*	*Zoned carbonate-chlorite alteration: Classical strong zoned carbonate-chlorite alteration. Light grey bleached calcite alteration. Within 3.0 cm of the vein is strong dark green chlorite alteration of the pyroxene. The altered pyroxene in the outer calcite zone is not readily apparent. In the inner chlorite alteration part; the chlorite after pyroxene is sharp and prominent (the dominant feature). This alteration is associated with the vein described below.*
487.67	*488.05*	*SG = 2.76. Vein and alteration.*
487.90	*488.02*	*45° **NB**. 10.0 cm calcite-quartz vein with 10% breccia fragments, 40% quartz along walls and breccia fragments and 40% grey calcite. Several angular fragments are fine grained, banded rock with the appearance of **Huronian or Archean sediments**. Directly above this*

		vein a 0.2-1.0 cm vein a gash fracture of white and grey calcite with cleavages to 1.0 cm splays of the main vein.
488.74	***525.26***	*One pyroxene diabase: Uniform and massive, medium greenish grey with 1.0-2.0 mm groundmass. Above 496.00 m is generally weakly magnetic with 1.0 cm fall back of pencil magnet. Below 496.00 m is very weakly magnetic with 0.0 cm fall back of pencil magnet.*
488.66	*488.79*	*SG = 2.97*
489.56	*489.86*	*SG = 3.00*
490.61	*490.85*	*SG = 2.97*
494.46	*494.62*	*SG = 3.00*
496.55	*497.60*	*Zoned carbonate-chlorite alteration as moderate pervasive calcite alteration with weak chlorite alteration along the vein walls. Extremely fine calcite fracture fillings throughout.*
497.05	*497.39*	*SG = 2.82. Vein and alteration.*
497.16	*497.22*	*30º* ***NB.*** *3.0 cm calcite vein as coarse grained grey calcite cleavages to 1.5 cm. Several minor dark green chlorite rip off bands.*
498.33	*498.50*	*Coarse grained diabase with 5.0-10.0 mm plagioclase and pyroxene without significant granophyre. Crystals of wall rock project into zone.*
498.52	*498.83*	*Coarse grained diabase with 5.0-10.0 mm plagioclase and pyroxene without significant granophyre. Crystals of wall rock project into zone.*
498.52	*498.83*	*SG = 2.97. Coarse grained diabase.*
499.85	*500.11*	*SG = 2.95*
503.55	*503.76*	*SG = 2.98"*

In this Integrated-Log; It is "**self-evident**," this log has dealt with many economic and genetic implications of this core interval. The data reconciliation, and the emphatic embedded statements, assures, the key economic, and genetic information is **preserved** and **emphasised**.

In a consolidated log, the interrelationship of the lithology, alteration, veins, faults, rock properties are **intuitively evident** and **emphasised**. It is clear to the reader, if the logger recognized, and understood; the relationship, and importance of these features relative to each other.

In this log; all SG samples without a qualifying statement, were selected, to best represent the original igneous petrology. If a sample was selected to represent a deviation from the norm, that deviation was explicitly explained in the description.

For example: the three anomalously low SG's at:

"482.77-482.8 SG = 2.93. Approximately 30% very fine grained white granophyre."
"487.67-488.05 SG =2.76. Vein and alteration."
"498.52-498.83 SG =2.97. Coarse grained diabase."

are reconciled by the explicit, embedded statements, that explain the anomalously low SG signature. The petrographic implications are self-evident, and any **inferences** and implications derived from the log, **must reconcile** with these SG values.

The SG at SG at ***"478.56- 478.74 SG = 2.92"*** was not reconciled to the Lithology-Alteration log. It is "self-evident," **this SG value failed Quality-Assurance**. The SG is probably correct, and an unknown geological feature appears to have been missed in the logging.

The log entry "***497.05 497.39 SG = 2.82. Vein and alteration***" decisively reconciles the **anomalous SG** with the vein and alteration. It is self evident to the logger reconcileds the SG with the geology of the hole as the core was logged.

The description of exotic-foreign breccia fragments in the vein at 487.90-meters, is an example of a genetically significant embedded comment:

> *487.90 488.02 45º **NB**. 10.0 cm calcite-quartz vein with 10% breccia fragments, 40% quartz along walls and breccia fragments and 40% grey calcite. **Several angular fragments** are fine grained, banded rock with the appearance of **Huronian or Archean sediments**.*

The vein is hosted in Nipissing gabbro. The upper contact of this intrusive, was intersected at 357.88-meters, which is located, approximately 100-meters, vertically above the vein intersection.

This observation indicates, the vein opening, extended beyond the host intrusive's, upper contact, which is located approximately 100 meters above this intersection. It is reasonable to speculate, that the vein extends an equivalent distance laterally, and below this intersection, and probably extends above the intrusive contact. The alternative explanation is, fluid flow flushed the fragments up from below.

The embedded statement, alerts the log user to the importance of this intersection. These are observations a geo-program is unlikely to facilitated This observations would commonly fall outside of common logging protocol.

Embedded comments; like **"*NB*"** are important, to reinforces the importance of the two veins described at **487.09-488.02**-meters, and **497.16-487.22**-meters, and the importance of the exotic breccia in the second vein.

The imbedded statement "***NB***" is necessary; because assays are not a good indicator of ore potential, of many intersections within high potential veins. The assays from this potentially ore vein, are not anomalous. This is consistent with this author's 15- years as the underground geologist for Agnico's and Canada Mines' silver-cobalt mines.

The assays generate no priority interest in this priority vein. These assays are consistent with vein extensions beyond ore zones in cobalt-silver veins.

Assay Quote from CSCW Hole CS1107 interval discussed above.

From	To	Legth	PPM Ag
472.20	473.42	1.22	3.26
477.59	478.74	1.15	3.02
482.68	482.87	0.19	2.69
486.73	487.67	0.94	3.02
487.67	**488.15**	**0.48**	**3.17**
488.15	489.34	1.19	2.76
495.70	496.96	1.26	2.93
496.96	497.40	0.44	3.43
497.40	498.16	0.76	2.67
498.52	498.83	0.31	2.32
504.47	505.88	1.41	2.61
514.34	515.69	1.35	2.06

*Chart Above: Assay of hole CS1107. Note Vein Intersection values at **487.67-488.15**-meters and **497.16-497.22**-meters.*

The assays of the veins at **487.09-488.02**-meters, and **497.16-487.22**-meters are not indicative of the ore potential of these two veins.

The Rock-Property, "fallback of pencil magnet" is a quantified; "quasi-magnetic-susceptibility value, which is reconciled to this part of the "*One Pyroxene phase*" of the Nipissing gabbro.

488.74 ***525.26*** *One pyroxene diabase: Uniform and massive, medium greenish grey with 1.0-2.0 mm groundmass. Above 496.00 m is generally **weakly magnetic with 1.0 cm fall back** of pencil magnet. Below 496.00 m is **very weakly magnetic with 0.0 cm fall back** of pencil magnet.*

The core logger had no access to a magnetic susceptibility meter at the time of logging. He had experience using both a pencil magnet and a magnetic susceptibility meter to quantify the magnetic signature of core. The pencil magnet is more useful tool to quantify and define the contacts of the of vein's narrow alteration zones. The magnetic susceptibility meter's strength, is quantifying the overall signature of units and their sub-units, if appropriate Rock-Quality Data, **Quality-Assurance** is established.

In the log of EO-22-004, the logger made 14 embedded statements, "**significant**," deep within the lithology log. In compiling this log data for this report, these one-word statements were missed. It would have been beneficial for these references "**significant**" had been emphasised more. Enhanced emphasis, on the entry, "significant" would have made this compilation more efficient, and reduced some of the repetition in this report.

By being consistent in the use of this embedded statement, confidence was added to the eventual compilation. This concept is also discussed under the subheading *"EO-22-004 Zones: Logged Embedded as "Significant""*

. *Agnico Beaver Mine Demonstration of Assay Ore Potential*

Assay stope sections of the Beaver-Temiskaming Mine: 41stope, and 44 Stope, and 37 stope, are shown, and discussed below. This discussion deals with the background evidence, supporting CSCW's exploration of their Castle cobalt-silver-gold project at Gowganda, and their cobalt-silver properties south of Cobalt Ontario, *(including the Beaver Mine)* and the CSCW Eby-Otto gold (potential Cobalt-Nickle-PGM) property dealt with in this report.

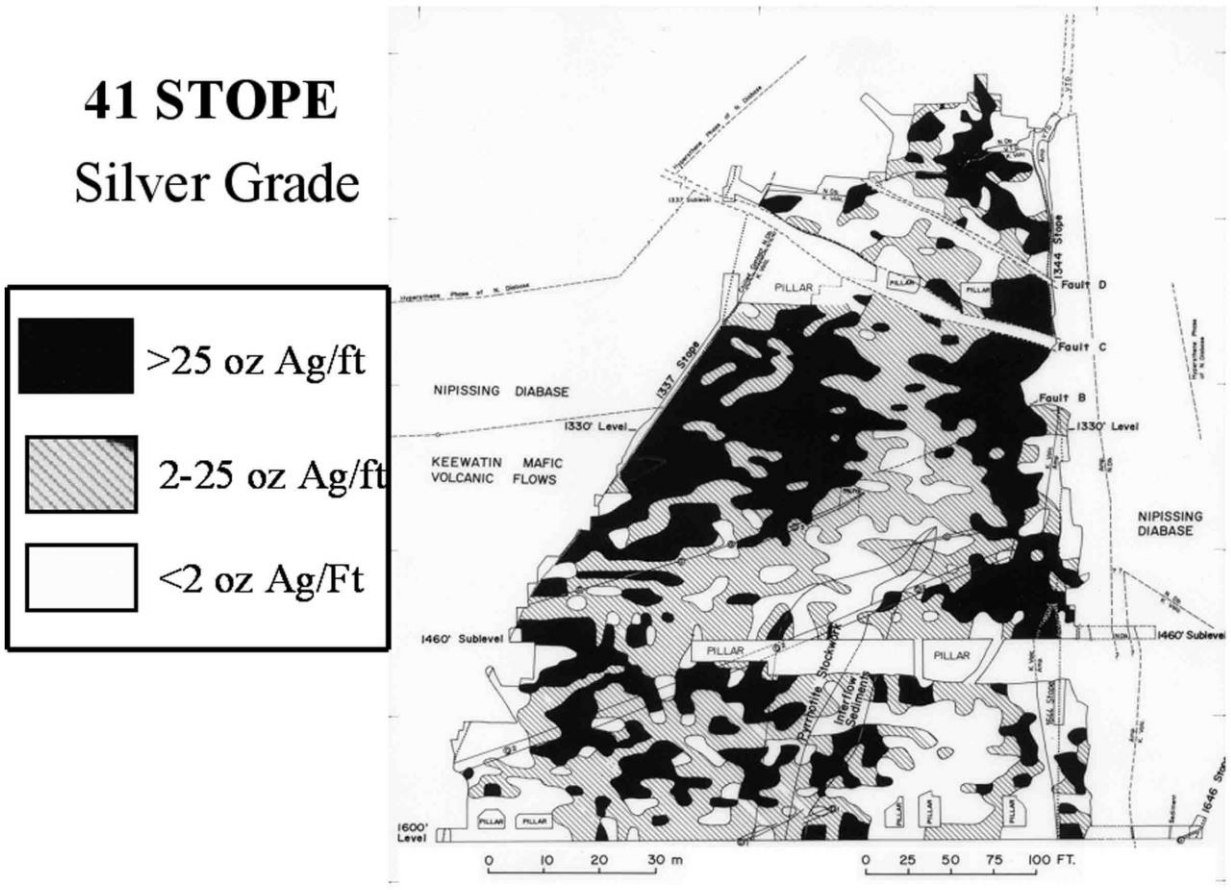


Image above (facing North): Agnico's 41 stope of a Cobalt-Silver vein at the Beaver-Timiskaming Mine. Note: 25 oz Ag over 1 foot, is not ore grade. Significantly more than ***50%*** *of the* ***stoped vein, was not***

ore grade. *This vein is anomalously represented by ore; because there are no vein extensions beyond the ends of the stope.*

See Image below; where the 37-vein truncates the 41-vein. The vein is also truncated at the east (right end). Had the 41-vein extended beyond the ore zone; zero-grade, waste would have overwhelmed the ore waste ratio.



Image Above (Viewing upwards with directional orientation reversed): Agnico Beaver-Temiskaming Mine 1441-Vein truncated by 1437-Vein. At this location; the 41-vein was high-grade ore, without contribution from the high-grade 37-Vein. With the contribution from the 37-Vein the ore consistently pulled 500 oz Ag/Ton (real grade). Special Note: The 37 vein is a fault vein and no vein equivalent to the 41 vein occurs on the other side of this fault.

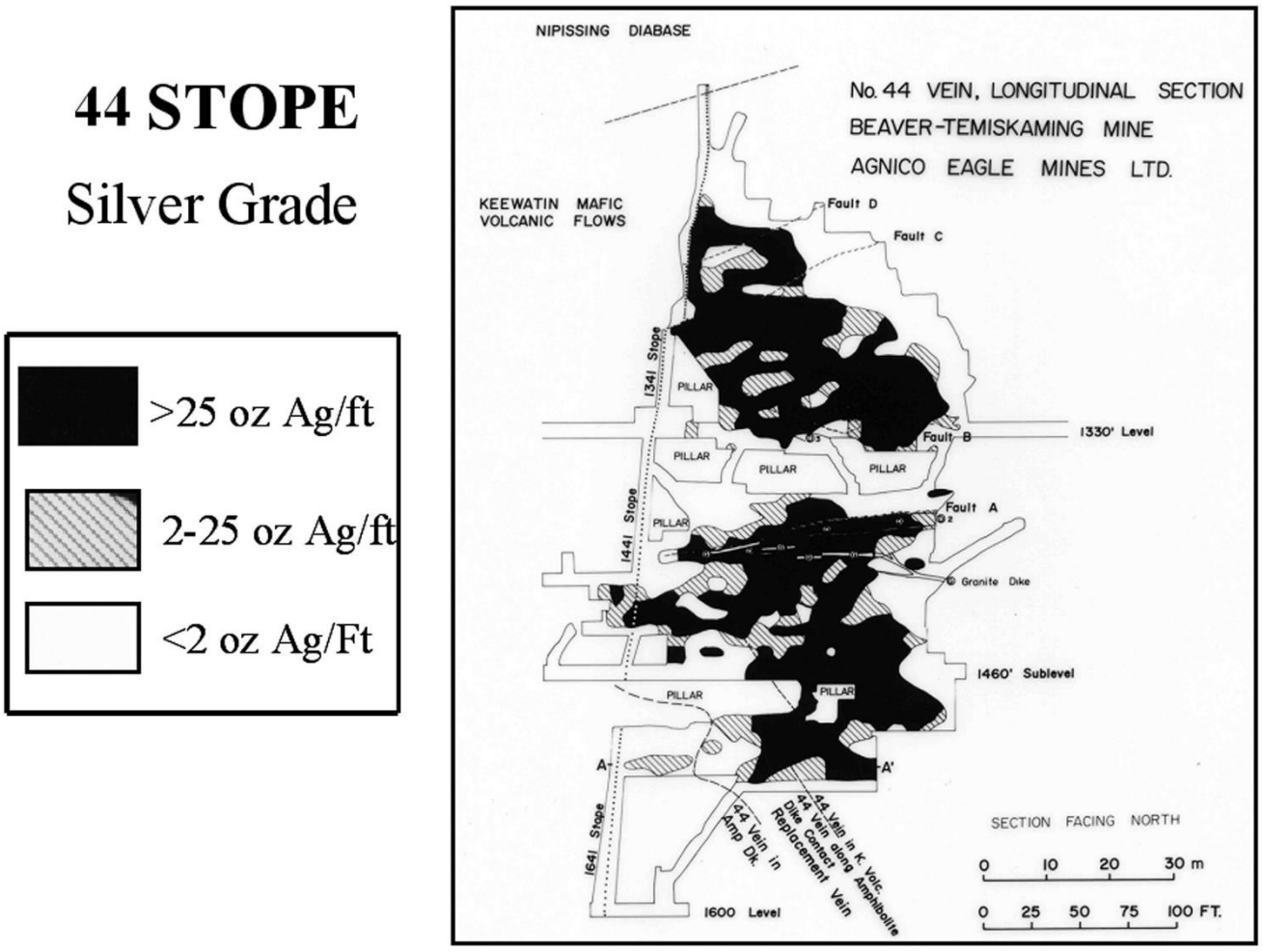


*Image Above: (image facing west) This image is inserted to demonstrate the relationship of **high-grade ore, within an otherwise zero grade vein**. Note: The lower stope mined high-grade silver-cobalt ore, that tended to end abruptly as zero grade. The distance between high-grade ore, and zero-grade rock was often millimeters.*
Three raises were driven, and all three were totally barren grade. The south (left) raise, and central raise, were extended into the high-grade horizon, with no indication of ore. The 1344-Drift was driven to intersect the three raises. The drift was extremely high-grade ore, except for the three raises, which were barren.

Any assays from the 1460-Stope backs, the ends of the stopes, and its three raises would be extremely unreliable to prioritize potential of that vein. The ore controls demonstrated at the Beaver-Timiskaming Mine were not established, until the 37-Stope, and 41-Stope and 44-Stope were well advanced.

The Agnico Beaver-Temiskaming Mine provided Agnico valuable insights into Cobalt and Cobalt-Silver vein genesis and their ore-controls. Many of these ore controls, appear

to also apply to the CSCW Castle property in the Gowganda mining camp, and possibly to the CSCW Eby-Otto property.

Three of Agnico's staff, have brought this Agnico knowledge to CSCW, and we continue to use this this knowledge base in CSCW exploration in Gowganda, and our work in CSCW's Eby-Otto property dealt with in this report.

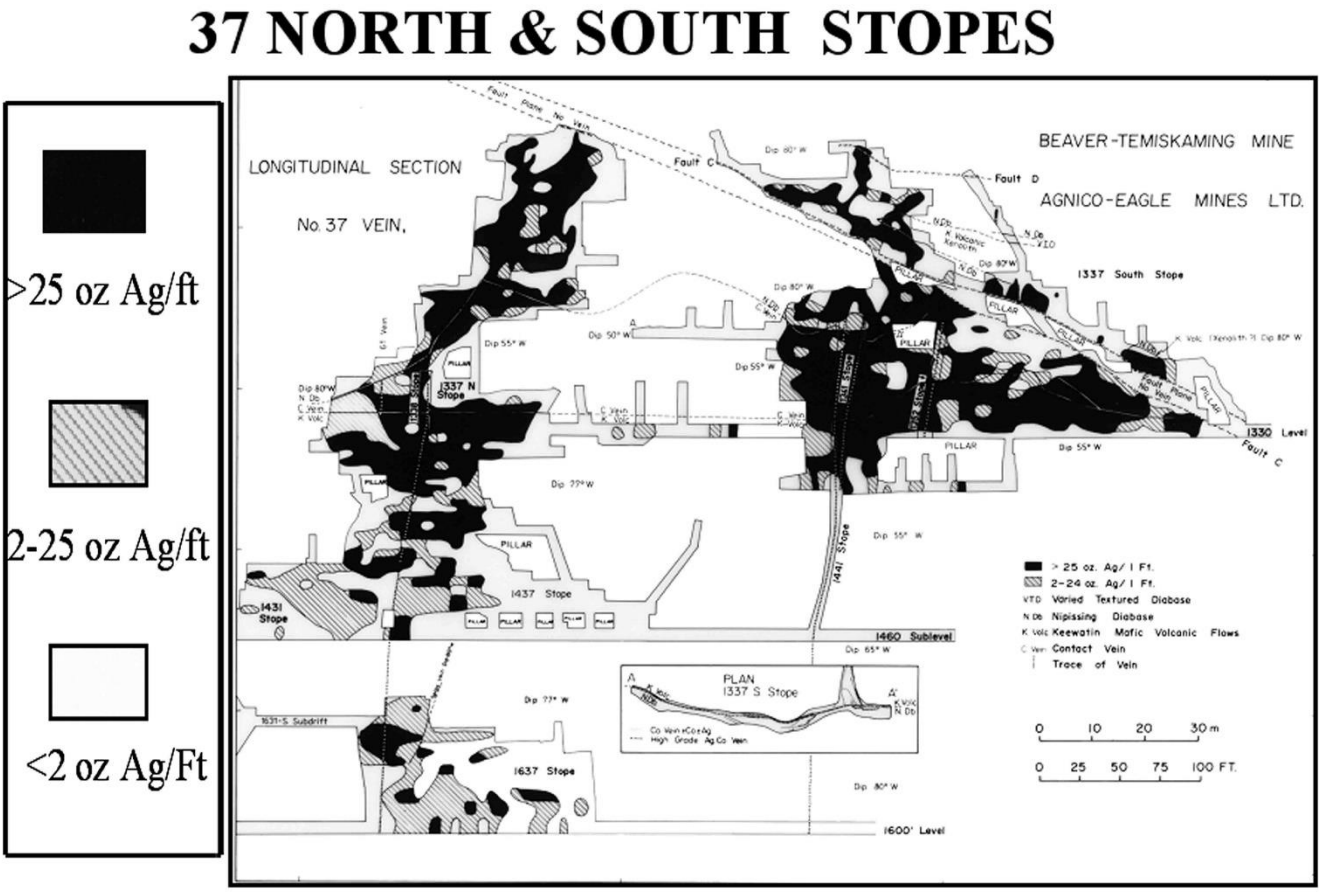


Image Above: (image facing east): This image is inserted, to demonstrate the relationship of high-grade ore within a laterally extensive, and otherwise barren fault-vein. The stopes ended in zero grade vein, and the fault-vein extensions are probably zero grade as well. Any drill hole intersections outside the ore zones, are unlikely to enhance the apparent ore potential of this (or similar ore veins).

*Logs and descriptions of **high-potential, barren veins** benefit from descriptions and embedded statements demonstrating ore potential of the vein. Appropriate embedded comments include statements like: "NB," or "explicit knowledge of the logger that is not common knowledge" that are of great **benefit** to the **log**, and to the **property**, and to the **company**.*

In the absence of significant assays values; mapping, and logging requires the geologist to make decisive decisions, that document, the ore potential of veins, and structures, and alterations. This geologist logging the core has the unique, and valuable opportunity that is lost when the core is split, and otherwise degraded over time.

The unreliability of assays to predict the probability of Cobalt-Silver ore, (and Ni-Kamalda deposits also) emphasis the importance of Quality-Assurance of Rock-Quality data and EMBEDDED comments in drill logs. The core logger, has the best opportunity, to deal with the geological nuances encountered in prioritizing logging, to emphasis the significance of the intersections within the text of the log.

. *Embedded Statements Sample CSCW Log CS1112*

The excerpt below: from CSCW hole CS1112, demonstrates important use of "Embedded-Comments" like "NB" as a heads up, and "**facts not commonly known**,**"** or facts that may be missed by the log user.

513.27	*513.38*	*80o NB. 11.0 cm shear vein with 1.0 cm clean very coarse grained calcite cleavages to 1.0cm followed by 6.0cm of calcite-chlorite healed breccia, followed by 2.0cm of clean, very coarse grained calcite cleavages to 2.5cm followed by 1.5cm of fractured rock weakly to moderately healed by calcite. Wall rock above and below this vein does not effervesce in 10% HCl. Upper contact 80o, Lower contact 90o.*
513.38	*513.42*	*90o NB . 3.5 cm fault. Perfect insitu recovery of vein and fault recovered as extremely fine gouge and very thin friable chloritic wafers.*
513.42	*513.88*	*Nipissing diabase, aphanitic chill. Perfect recovery of classical pale green aphanitic Nipissing diabase chill. Not magnetic, extremely soft (<< chisel. Chisel very leaves deep scratch). This chill appears to be similar to the vertical diabase contact in the 13xx level x-cut and the steeply dipping 1337 Stope vein along the steeply dipping (60-70o SW) Nipissing diabase contact of the Beaver Temiskaming Mine. On the 13xx level x-cut the Nipissing diabase appears to have intruded along a vertical fault preserving the fault gouge. Alternatively the fault could have cut perfectly along the contact preserving the aphanitic chill and crushing the Archean rocks to fine gouge similar to this fault. In the 1337 Stope, the 1337 Vein occurred exactly between the preserved aphanitic diabase chill and the Archean volcanic rocks. Similar association without gouge occurs in the #2 vein and the 78 vein of the Conisil Mine where the veins occurred along the steeply dipping (Approximately 60-70o E and 60-70o west respectively) Nipissing diabase-Archean volcanic contact .*

*The above **Embedded** (red text) is excerpted from Castle hole CS1112 log. The only surviving geologists, that have observed the details, included in the highlighted text are, Agnico geologists Elaine Basa and Douglas Robinson. The core logger above, is the only surviving geotechnical person, that has observed the relationships of the Conisil Mine's #2 and #78 veins.*

Note: the text 13xx represents "1330". The embedded text was from ~20 year of memory.

The "**Embedded** comments" *(red text)* are clearly, **embedded comments** and any experienced readers would not confuse this embedded text as a log of the core.

Whether, the reader agrees with, or, disagrees with the embedded comments; that information, is critical to silver-cobalt exploration *(near this hole)*. The reader is free to agree with, or, disagree with the logger's comments, at the reader's peril.

See the Agnico Stope sections below; showing the contact relationship embedded in the log of CS1112.

Image From: "MERC Louise Rush Ag Pic Files"

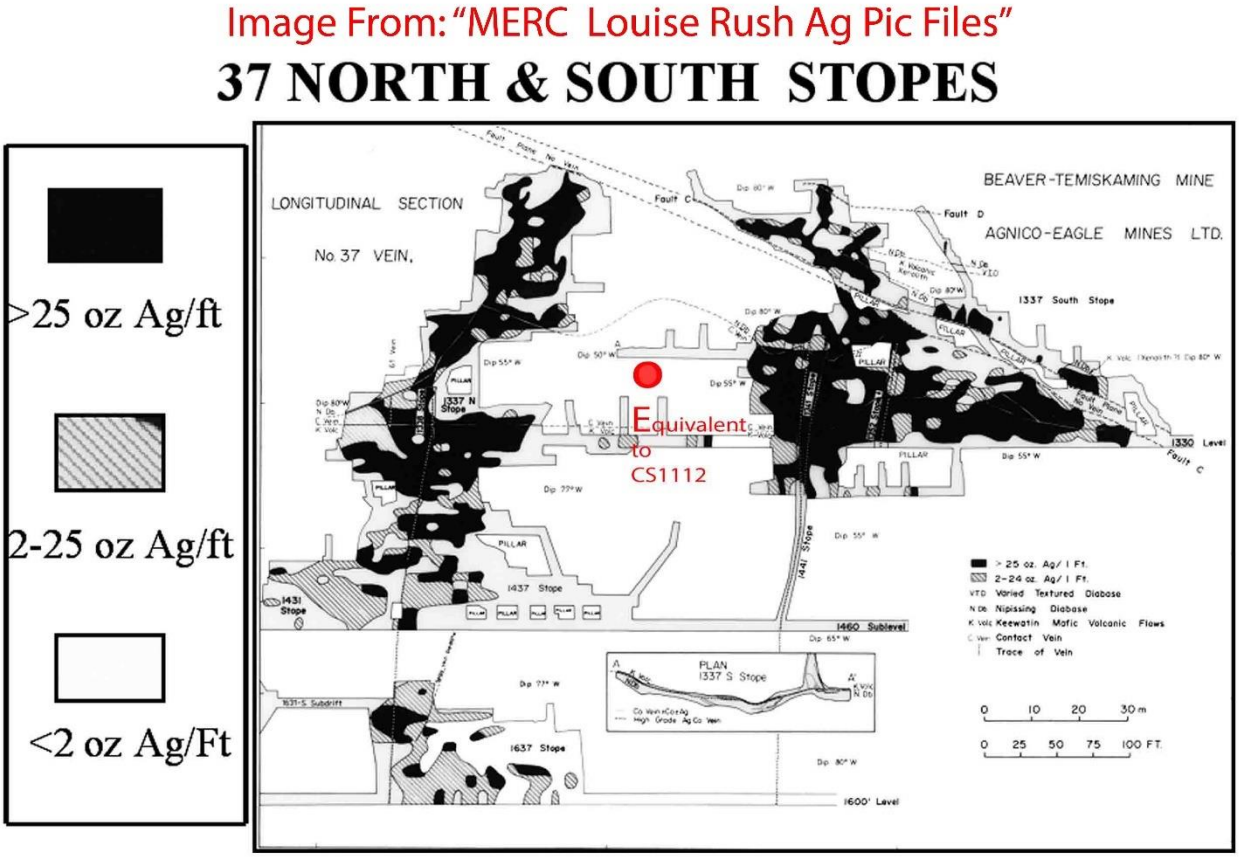


Image above: Hole CS1112 vein, has an equivalent spacial association, as the 37 vein, along the chilled, steeply dipping, Nipissing diabase contact, as shown by the red dot.

The 37-vein ,appears to be hosted in an apparent, pre-Nipissing, Timiskaming Rift Valley fault. This apparent fault, terminated west ends of 38 vein (to the left), and, the west end of 41 Vein (to the right). This apparent, 37-fault structure, has little or no movement after the chilling of the Nipissing gabbro.

Also see equivalent location of hole CS1112 in the 41-Vein-stope section below.

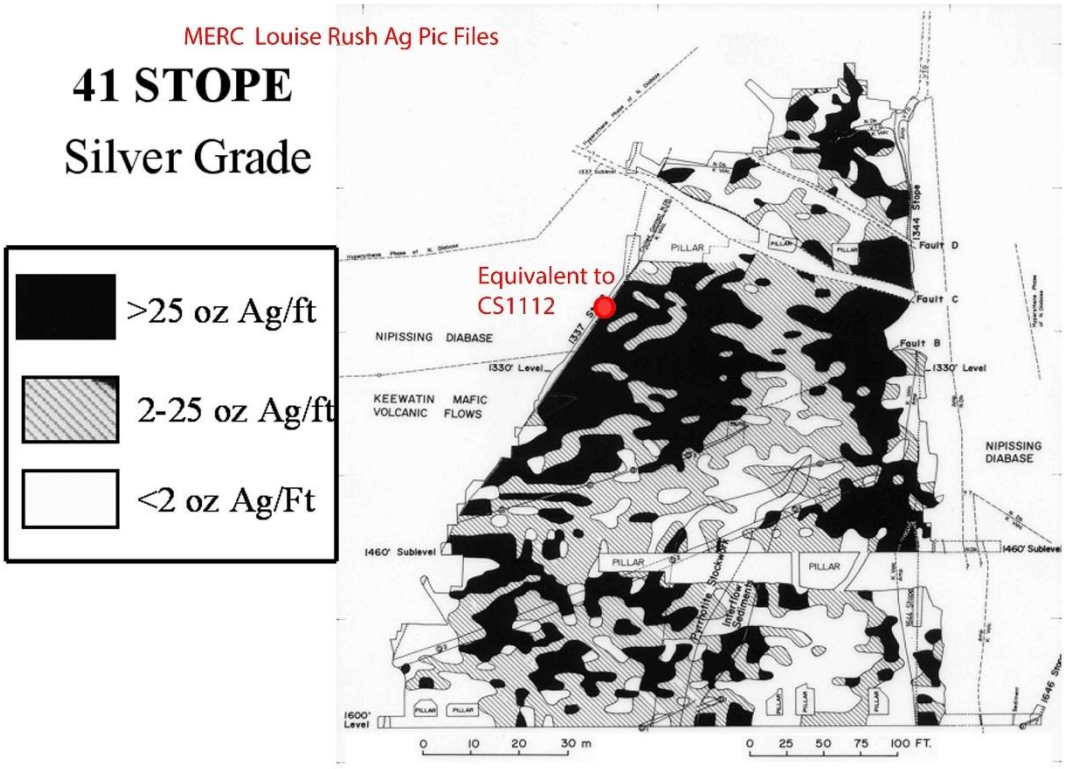


Image above: The red dot on this section, represents the equivalent position in 37-Vein referenced in the hole CS1112 veins.

CS1112 Vein occurs at the chilled contact of the Nipissing gabbro, and Archean volcanics above. This geometry, appears to be the mirror image, of red dot at the steeply dipping, fault-controlled 37-Vein, along a chilled Nipissing diabase contact

The 37-vein is located at in an apparent, pre-Nipissing, Timiskaming Rift Valley fault. This apparent fault, terminated the west end of 41 Vein (to the left). This apparent fault structure, has little or no movement, after the chilling of the Nipissing gabbro.

The Agnico 37-Stope, and 41 and excerpt from CS1112 log, are included in this report to demonstrate, the high value of embedded statements in drill logs, for the "**Good of the Property**," and the "**Benefit of the exploration Company**."

In Eby-Otto hole EO-22-004, there is a multitude of veins and alterations. These veins, and alterations range from trivial to very significant targets. It is difficult to rank-prioritize these by potential-significance.

Fortunately: The property, and the log of EO-22-004, and the company have benefited from 14 embedded statements that read "***significant***". These 14 comments, were key in confirming the five significant zones intersected in this hole.

The **issue of embedding comments** in a drill log, is a highly controversial, **ethical issue**. The embedded information is **best included** in the text of the log describing the feature as outlined in the contract. If a logger has a problem with this ethical issue; it can be adverted by embedding those comments in an **inactive page** in the log.

It is this author's opinion, that; the "**Good of the Property,**" takes "**Ethical priority",** over the "**Good of the Company**". During his first 7 years with CSCW, this author adopted this opinion, due to CSCW's great corporate losses, derived from this dealing with missing data.

This author has endeavoured to maintain these CSCW stands in channel samples logs, in the same manner as he has done in core logging, and in MMI sampling during his service with CSCW.

Rock-Quality Data Discussion

Geologist take great care in Quality-Assurance measures: when dealing with **geochronology** sampling, **Paleomagnetism** sampling, **whole-rock** and **geochemical** sampling, soil-geochemical sampling, and **core sampling** for **resource calculations**. CSCW recognizes Rock-Property measurements, including **SG**, and **magnetic susceptibility** deserve equivalent Quality-Assurance. This Quality-Assurance, involves sample reconciliation as described in this document.

Quality Assurance of rock or core sampling, and **Rock-Quality** measurements, depend on the following **three fundamentals**:

- Assurance of the **accuracy** and **reproducibility** of the measurement, and more importantly
- Proper sample site selection (avoiding hybrid sample sites).
- Proper sample descriptions, that reconcile the Rock-Quality data with the applicable lithology and alteration logs.

If one of these Quality-Assurance fundamentals is not met, the Rock-Quality data lacks Quality-Assurance. Remember; 0.00 x 10.00 = 0.00.

The value of Rock-Quality data, requires the geologist: to select the sample sites free of interference from hybrid affects, and to reconcile the Rock-Quality data to the lithology-alteration logs. If the Lithology-Alteration logs, and the Rock-Quality log, do not reconcile; one or both logs, must be relogged until the logs reconcile *(or the logs explicitly deal with the lack of reconciliation)*.

If the person reading a log, sees no apparent Quality-Assurance text, that person should assume, Quality-Assurance does not exist. Quality-Assurance text may be, self-evident in some normal logging situations. For example: if a conductance measurement is

included in the lithology log, the reader is **assured** the logger has taken the appropriate care.

In systematic Rock-Quality measurements *(such as each 3-meter core block)*, the Rock-Property log's comment cell is generally the place best suited for the Rock-Quality reconciliation text.

Assurance comments can be stylized into simple text replacement entries. For example: the typed text "**uami**" can be automatically to be replaced by "**unaltered mafic intrusive,**" and "**uaagab**" can be automatically to be replaced by "**unaltered Archean gabbro**".

Typing "ua" to auto-convert to "unknown alteration," is a high-quality Quality-Assurance Notation. The log user is alerted to the ambiguity in the comment, and can deal with this issue. Documenting uncertainty is an important logging process.
Auto-text replacement; also has the benefit of creating consistent descriptions. Consistency makes log reading, and log usage, fast, efficient, and **reliable**. This gives the log user **confidence** in both the log, and the users understanding of the log. Effective use of **Eye Control** by the logger, controls the effectiveness of, and confidence in, the log-reader's work.

When a person, reads the first few rock-property measurements, a rapport is established with the logger. The rapport with the logger, establishes a negative, or positive confidence **level** in the log data. Confidence in Rock-Quality data, and logging is dependent on apparent Quality-Assurance which is commonly established in the log's text.

The CSCW contract deals with Rock-Quality data designed to establish genesis, origin, history, alteration, signature, and/or other features of the rocks. The contract emphasises the requirement of careful **sample site selection**, that clearly identifies the purpose of the sample, and the reliability of the sample.
The contract states:

- ***"Scientific measurements*** *designed* ***to facilitate*** *mineral exploration include measurements designed to resolve the* ***genesis***, ***origin***, ***history***, ***alteration***, ***signature*** *and/or* ***other features of the rocks in a drill hole***. *These involve* ***selecting*** *and* ***measuring specific core intervals*** *that* ***best represent the feature(s)*** *of interest (****without contamination*** *(hybrid Products) of or from the many other parameters that can impact the measurement).*

- *This process* ***maximizes the contrast between different units*** *or* ***subunits*** *while* ***establishing the natural variance within*** *the* ***individual units*** *or* ***subunits***.

- Example A: In Gowganda Nipissing diabase and Archean mafic-ultramafic units have natural subunits (phases), some with gradational boundaries and others with discrete boundaries.

The quote above; emphasises the **purpose** of rock property measurements and the optimization of Rock-Property data measurements. The quote; also connects the purpose of rock property measurements, to the Quality Assurance of sample site selection required to achieve that purpose.

This quote; emphasis the importance of avoiding **hybrid** sample sites. Hybrid sample sites are, core that does not represent the *(true)* diagnostic properties, required to establish the signature of a lithologies and/or alteration.

The true rock-quality assurance; is intended to establish **maximum resolution,** and **detail** within the actual, **natural range** of a lithology or alteration. This resolution, and detail; requires avoidance of **Hybrid** samples. Hybrid samples **extend the apparent range** of the data ascribed to a lithology, or alteration. This expanded hybrid data, extends the apparent data range, causing fuzzy data, that creates **overlaps** with other data sets.

Appropriate Rock-Quality measurement of Hybrid Rocks can be valid:

- If the definitive signature of the lithology, and alteration products of that lithology, are established in text,
  and
- If the hybrid log text, explicitly describes the hybrid character of the sample site. or labels the sample as a hybrid sample. *(hybrid sample descriptions could read, "partly altered"', or , "15% calcite veining", or "5% vesicles", etc.)*

<u>Varied-Textured Nipissing Gabbro Hybrid Example</u>

Varied-textured Nipissing gabbro, is a **classic hybrid rock**. It is composed of a fine-grained mafic phase, and a coarser grained, more feldspathic phase. The log of EO-22-004, is not explicit: but the Mafic Intrusive and Archean Gabbro reads like a hybrid rock, like Varied-Textured Nipissing gabbro.

An SG (or other rock property) evaluation of Varied-textured Nipissing gabbro requires: SG sample site, selection involving separate, representative *(pure)* samples of each phase.

In varied-textured Nipissing gabbro, the two phases have mutually exclusive data ranges without overlap. The mafic phase has a higher SG and probably a lower Magnetic Susceptibility. The SG and magnetic susceptibility of the mafic phase will be relatively consistent within its phase. .

The SG of the coarser grained, more feldspathic phase should also be consistent within a separate, narrow range. The Magnetic Susceptibility of this coarse phase is likely to be extremely variable. Multiple magnetic susceptibility readings or averaged, multiple

readings are required (possibly discarding the highest and lowest readings).

Typically: 25 meters section of Varied-textured Nipissing gabbro, requires three, or more determinations of both phases, to establish Quality-Assurance confidence in the lithology log and Rock-Quality data log.

The Eby-Otto **mafic intrusive in EO-22-004**, appears to be a varied-textured **hybrid lithology**, that requires extra care in Rock-Property Quality-Assurance. This Quality-Assurance should be equivalent to the recommendation for the Nipissing Gabbro, of CSCW's Castle property.

Ideally: Quality-Assurance of Rock-Property data, requires the core logger, to personally select, or directly supervise the selection of optimal sample sites, including any required hybrid sites. If the sample site selection is **delegated**; the delegate must then take extra care in text, describing samples site.

Prior to 2019; the CSCW geologist, selected the SG sample sites, and the geotic and/or the geologist, performed the SG measurements, and inscribed the SG on the core, and into the geology log, as the geology was being logged. In this process, the core logger, reconciled the SG in the core log. This is the procedure used in the core logs quoted in this report.

The second-best scenario, is to have a qualified geotic perform the SG sample site selection and SG determinations. The geologist logging the core, then reviews the SG *(rock property log)* and reconciles the geology log and SG log within the text of the log(s).

Adding lithology and alteration notes to Rock-Quality data after the log is completed is compilation. This process **is not Rock-Property Quality-Assurance.**

Post logging, data compilation creates a false confidence in the quality of the lithology log, and the alteration log, and the Rock-Quality data. This problem can be difficult to spot and may require statistical analysis to identify this problem.

. *SG Discussion EO22-001 & EO-22-004*

Discussion EO22-001

Hole EO22-001, was a valuable **base-line** hole, in the extreme western part of the CSCW property.

The core of Hole EO22-001, and the logs of that hole were reviewed, with the intent optimizing the ongoing logging processes. The hole was well logged. It was established great care was required in Quality-Assurance of Rock-Quality data.

The SG determinations of hole EO-22-001, *(not discussed in this report)* were a **valuable asset,** that **reconciled with** the lithology log. The hole had two main lithologies. These

lithologies, had narrow, mutually exclusive SG ranges, that reconciled with the geology log. Any logs after that base line hole, must reconcile with that SG.

Discussion EO22-004

The **Lithology Log** of hole EO-22-004, reconciled well with the ***Alteration Log***; because, alteration comments were EMBEDDED into the Lithology Log. This author **is deeply indebted** for this reconciliation. The Lithology Log, was used, as the primary document ,to deal with the alteration and the structural-alteration zones 1-5, discussed in this report.

In EO-22-004 the SG determinations **lacked** the **Quality-Assurance** required to be valuable. Hole EO-22-004, is dominated by the Eby-Otto Intrusive, which consists of two dominant sub-units classified as, "Mafic Intrusive" ***(MI)*** and "Archean Gabbro" ***(AGAB)***.

The log **reads like**, the Mafic Intrusive and Archean Gabbro are hybrid rocks, with each having sub-phases of the other. This is an analogue, of the varied-textured Nipissing gabbro, at the Castle property.

When the core log to 400-meters was received; this author performed separate SG statistical analysis of the MI subunit and a separate statistical analysis the AGAB.

The SG signature s, of the Mafic Intrusive and the Archean Gabbro, had virtually identical SG signatures, with equivalent data ranges and mean values.

This author has confidence the SG determinations of EO-22-004 are accurate. The lithology log, and SG log, indicates the MI and AGAB sub-units as logged are hybrid rocks consisting of both sub-units. These were not appropriately differentiated, in the lithology log and/or SG log.

The Rock-Property logging (SG and magnetic susceptibility) of this hole, EO-22-004 lacks Quality-Assurance. The Quality-Assurance of both the Lithology Logs, and the SG log required these two logs, to have been reconciled by the core logger, during the core logging process.

After the analysis was performed, a hypothetical example of SG-magnetic susceptibility logs, were forwarded to the company. It appears the lithology data, was then compiled into the SG and magnetic susceptibility logs. Late in hole EO-22-004, lithology reconciliation, with SG, and magnetic susceptibility logs, may have been performed during logging.

. *Magnetic Susceptibility*

This discussion deals primarily with magnetic susceptibility measurement, of core, but applies equally to magnetic susceptibility measurements of rock samples, and the

magnetic susceptibility of the channel samples discussed under the heading "*Sample Logging*".

This discussion has implications to the drone magnetic survey discussed under the heading

"FARA UAV: Total Magnetic Field and 1st First Vertical Derivative Survey" 115

Theory

Historically geophysicist, and geologist measured magnetic susceptibility, as nano-Teslas (nT). Measurements of magnetic susceptibility are now reported as SI units.

Web page of "BYJUS" https://byjus.com/physics/magnetic-susceptibility/ describes magnetic susceptibility as:

> *"Magnetic susceptibility is a **dimensionless proportionality constant** that indicates the **degree of magnetization** of a material **in response to an applied magnetic field**. It is caused by the interactions of electrons and nuclei with the externally applied magnetic field.*
>
> *In electromagnetism, magnetic susceptibility is defined as: The measure of how much a material will be magnetized in an applied magnetic field."*

Discussion

Magnetic susceptibility is a Rock-Quality commonly measured by geologist. Magnetic susceptibility, Quality-Assurance requirements, are equivalent, to the Quality-Assurance requirements of SG. The Quality-Assurance, of Rock-Quality data is rigorously discussed under SG discussions.

It is common practice for geophysicist, and geologist to measure magnetic susceptibility, at the 3-meter core marker intervals, that mark the depth of the hole.

This practice, fails the Rock-Quality Quality-Assurance test, if the geologist does not certify the validity and significance of the individual measurements. In hole EO-22-004, the magnetic susceptibility measurements failed the Quality-Assurance test.

To pass the Quality-Assurance test, the geologist was required to **review** the magnetic susceptibility data **during logging** and **explicitly comment** to the significance and validity of the reading.

Hole EO-22-004, could have passed, the Quality-Assurance by selecting sample sites, free of hybrid impacts, (as discussed in SG in this report). This in combination with the regular 3-meter measurements, would have provided Quality-Assurance of both sets of magnetic susceptibility measurements.

The value of magnetic susceptibility readings at a predetermined 3-meter interval:

- **Is valid** to correlate an individual magnetic susceptibility reading, with the equivalent X-Y-Z point on the pseudoplan ,or pseudosection; from a surface, or air magnetic survey.
- **Is valid** to correlate individual magnetic susceptibility readings along the drill hole, with the equivalent X-Y-Z points on the pseudoplans, or pseudosections; from a surface, or air magnetic surveys.
- **Is not valid** to correlate an individual reading with an equivalent lithology, or alteration, or magnetic anomaly, outside the influence of the hole; or to explain an anomaly interpretation, from the pseudoplan or pseudosection responses of surface, or air magnetic surveys, outside the influence of the hole.
- **Is not valid** to correlate individual magnetic susceptibility readings along the drill hole, with an equivalent lithology or alteration, or magnetic anomaly; outside the influence of the hole, or, to explain an anomaly interpretation from the pseudoplan or pseudosection response of surface, or air magnetic surveys, outside the influence of the hole.

Appropriate Quality-Assurance of magnetic susceptibility readings, involving both directed readings, with appropriate certifying comments, and pre-determined 3-meter reading intervals, increase the reliability and validity of projecting magnetic interpretation beyond the influence of the hole.

If the geologist reviews the printout of the predetermined readings, while logging the core and adds qualifying comments to the magnetic susceptibility log, and/or geology log, the reliability and validity of projection interpretations beyond the area of influence of the hole is strengthened.

Conductivity-Resistivity MaxMin and IP Anomalies

Summary of electrical properties of Channel Samples and Hole EO-22-004

The conductivity of all channel samples, was measured concurrently with the sample logging, SG, and magnetic susceptibility measurements of the channel samples.

All samples; except 7731 (0.4S/M), and 7732 (0.5S/M) from the Reed Trench Subcrop, had zero conductivity. See the included channel sample log for details.

None of the subcrop areas mapped were able to explain the many MaxMin conductors encountered on the property.

Drill hole EO-22-004 did not test any known MaxMin anomalies of the property.

Drill hole EO-22-004 did not explain any MaxMin Anomaly of the property

Drill hole EO-22-004 did not test the electrical properties of the core that might be conductive or have electrical continuity.

. *Conductivity, Resistivity, & Electrical Continuity Discussion*

CSCW has spent much effort dealing with the problematic; Conductivity, and Electrical Continuity and Electrical Resistivity of: extremely narrow extremely conductive cobalt-silver veins.

This work is an extension of a study performed by KV Kunduri in conjunction with Agnico staff. The CSCW work appears to have confirmed Mr. Kunduri's observations, hypothesis and recommendations.

The text below draws heavily on the work by Mr. Kunduri and CSCW.

Measurement of Electrical Conductivity and Continuity and Resistance

When logging, apparent graphitic rocks or other rocks that appear to be potential conductors; it is imperative the logger **fully describe** that rock including; measuring, and describing the electrical properties of that rock. These descriptions, and measurements, must focus on the implications to the rock's detectability by EM and/or IP geophysics.

Of the graphitic appearing core, this author has encountered: approximately ½ of that core lacked electrical continuity *(that is required to be considered conductive)*. Also: much of conductive core, was weakly to moderately conductive. In conductive core: thin black polished slips were often, an order of magnitude more conductive than the adjacent, black, coherent rock hosting the slip.

It is **counter-intuitive**: but IP, and EM surveys appear to respond very differently to apparent conductors. If a geologist, or geophysicist is designing a geophysics survey; it is imperative to have properly described-quantified data, to be sure the target has the required electrical properties, and dimensions, and XYZ-Az-Dip orientations, to be detected by various geophysics surveys.

All core samples, or rock samples that appear to be graphitic or assumed to be conductive; require:

- Conductivity measurements which (are commonly measured by a Conductivity-Magnetic Susceptibility meter)
- And/or (preferably both)
- Electrical continuity-electrical resistance measurements by an Ohm meter (ohms over core width core-width is reliable and easy to quantify),

The recommended descriptions, and quantified measurement, are a requirement to make informed exploration decisions and/or definitive conclusions regarding conductive geology and existing geophysical anomalies.

It takes very extra little effort, to include conductivity measurements of apparent conductors when taking the magnetic susceptibility reading of that unit. It is commonly the same meter.

Some geophysicist, and geologists, argue that these meters are too inaccurate, to give precise geophysical measurements, because standard geophysical Quality-Assurance standards have not been practiced.

- If the data is being published in geotechnical journals, that argument is valid.
- If we are arguing the conductance measurement, may have a 10% error, that argument is invalid.
- CSCW measurements, of real core samples, and sawn ore samples, indicate moving the conductance meter, 1.0 cm along the core or sawn sample; typically produces **+/-50% varience** from the **average**.
- Likewise, if preparation of a standard **Quality-Assured** sample, had been prepared by a qualified geophysicist, an equivalent data shift (variance) would occur, from an equivalent 1.0 cm shift in selecting the sample location.

In measuring electrical continuity of samples by an Ohm-meter; one contact is placed on a **point** that appears to be **most conductive** *(commonly a shiny black slip or metallic-sulfide grain).* The other contact is moved across the apparent conductive area. The signature of the continuity across the conductive area is then noted. If this procedure establishes no continuity; the reference contact, should be moved to several other locations, and the measurements repeated. this assures appropriate contact has been established.

It can be argued that high Quality-Assurance performed by a qualified geophysicist is a requirement for geophysical measurements.

++

The quote below; was extracted from the 29 page file named; *"Atlas of Vein Conductivity-Magnetic Susceptibility 2020-03-30.docx"*. This quote had been extracted from the 12 page CSCW Rock property Conductivity Study named "CS1108W2 Wedge Intersection 2020-03-07a.docx". this quote demonstrates the extreme variability experienced within an ore sample, in support of the discussion above.

> *"Multiple readings were taken at approximately 1cm spacing locations identified as A, B, C and D.*
>
> ……

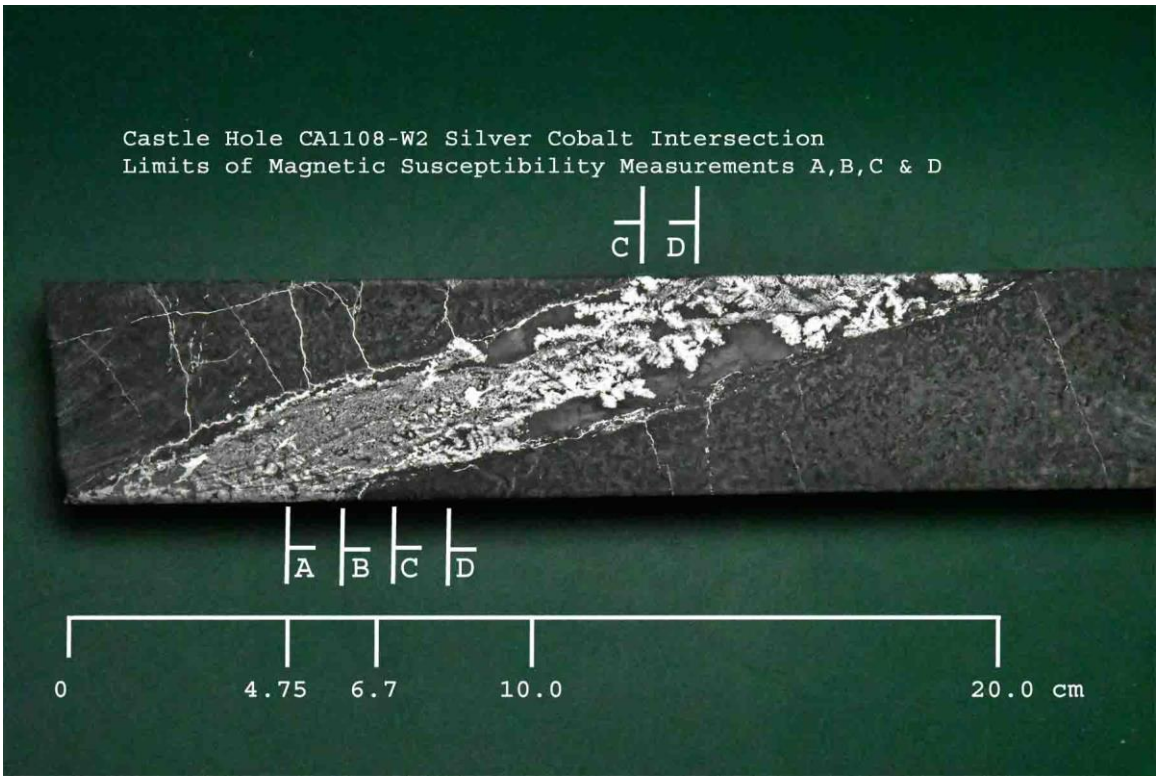


Image Above: Location of conductivity reported below.

The following conductivity measurements were taken on the core prior to grinding and polishing.

	1	2	3	4	Average
A	15,291	14,251	14,560	15,215	14,829
B	14,603	12,618	14,944	15,021	14,297
C	15,071	15,410	15,414	15,869	15,441
D	10,488	11,525	12,576	12,366	11,739
Average	13,863	13,451	14,374	14,618	14,076

The following conductivity measurements were taken on the core after grinding and polishing.

	1	2	3	4	5	Average
A	14,248	14,276	15,108	14,539	14,990	14,632
B	13,405	13,793	14,978	14,955	14,576	14,341
C	14,749	15,064	15,406	15,479	15,851	15,310

D	8,982	10,909	13,298	12,368	12,492	11,610
Average	12,846	13,511	14,698	14,335	14,477	13,973

It appears, the grinding, and polishing the silver smear from the core have little or no significant impact on the measured conductivity.

The vein is 2.5 cm true width and the sensor measured a 6.6 cm diameter area. This results in an apparent conductivity significantly less than the true conductivity of the vein. However; it appears EM responds to conductivity thickness. Assuming the magnitude of an EM response is the product of conductivity and vein thickness the dilution of response due to non-conductive wall rock may have little impact on exploration decisions.

*The wall rock farthest from the vein has a magnetic susceptibility of 3.13 x10-3 *10-3 SI units. The KT-10 v2-10 is unable to determine magnetic susceptibility in strongly conductive rocks including this core within the zone of influence of the conductive vein. Non of the wall wall-rock and vein influences a pencil magnet."*

This quote is intended to demonstrates the extreme variability experienced within an ore samples, and to contribute to the discussion of EM responses to very thin, extremely conductive, conductors. .

Mr. Kunduri predicted, extremely thin, extremely conductive mineralization would be difficult to detect by EM, which includes, the MaxMin survey conducted on the CSCW Eby-Otto property dealt with in this report.

Down hole EM near this CSCW Castle zone was silent to the thin vein (*hole CS1108 specifically*) near the ore zone as predicted by KV Kunduri. Why would very, fault hosted organic-graphite in Eby-Otto claims respond any different than very thin silver veins in Gowganda.

All work in the CSCW, Eby-Otto, concerning conductive rocks, and MaxMin conductors, and deposit models; should be performed in the knowledge of CSCW's work dealing with thin, conductive ores and rocks including inorganic graphite in narrow faults, and potential cobalt veins, and thicker Kamalda type deposits potential. (Note: nickel sulphides ore are noted for extreme, potentially problematic conductance).

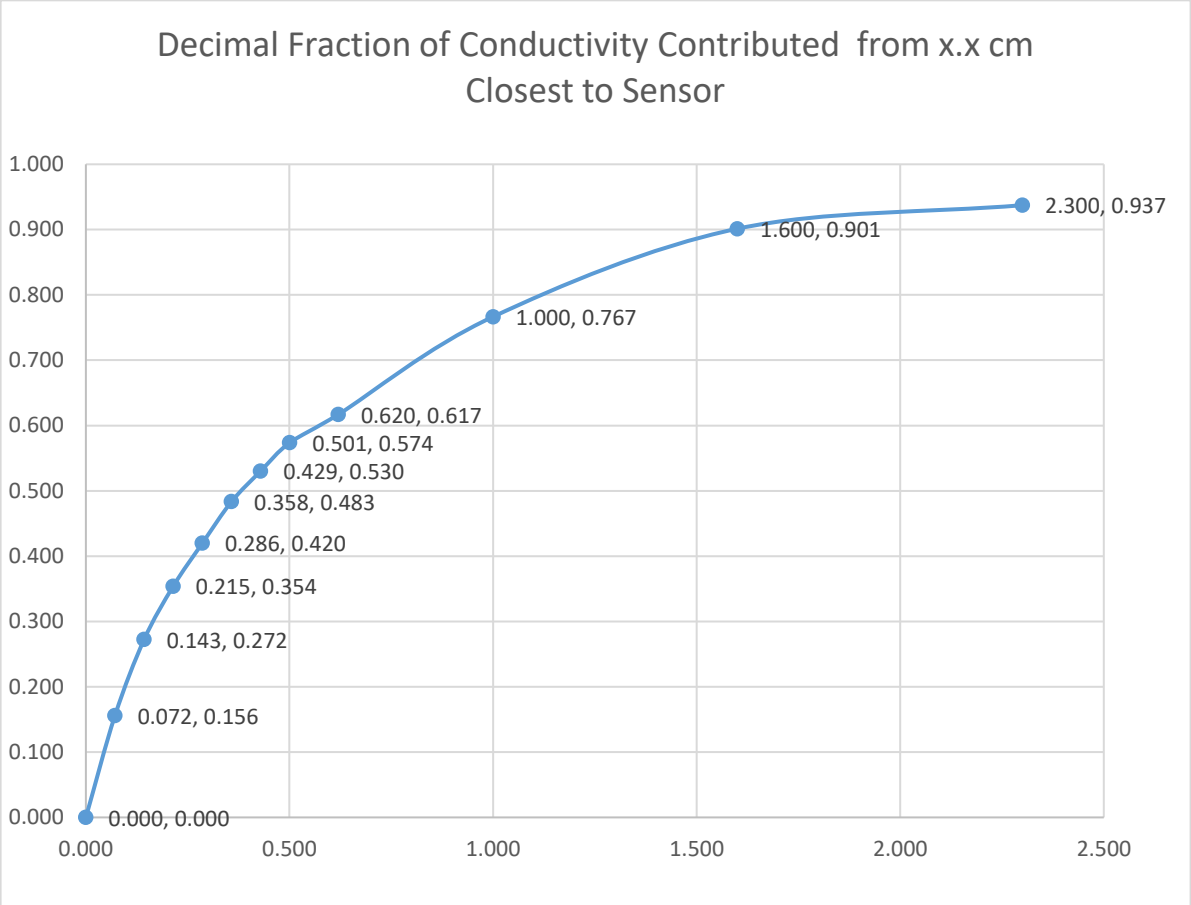
In summary: CSCW, including myself do not have a clear understanding of the conductors in the CSCW Eby-Otto property. We must remain diligent, and careful in any work involving these conductors.

++

CSCW dealt with this issue reliability of conductivity sample thickness in the following quote from an internal document named: "*Atlas of Vein Conductivity-Magnetic Susceptibility*

2020-03-30.docx". This study was performed to deal with the fact; that few, if any surviving ore samples, quality as sources of geophysical, Quality-Assurance samples to determine conductivity of cobalt-silver ore. *(and conductive rock from other narrow sources).*

"



Graph Above: Skin Effect of Conductivity Measurements
Vertical Scale Decimal Fraction of full natural conductivity
The top 0.5 cm thickness of mineralization contributes 57% of the total conductivity measurement of the thick sample
The top 1.0 cm thickness of mineralization contributes 77% of the total conductivity measurement of the thick sample."

The above quote was designed to assist CSCW to deal with conductivity measurements.

CSCW was aware, that the thickness of the ore samples tested in the "Atlas of Vein Conductivity-Magnetic Susceptibility" was impacted by sample thickness. The variability of conductivity, between samples, and often, within a sample was as serious, or more serious than the impact of sample thickness.

This chart is included in this report, to assist the reader to understand Quality-Assurance of difficult situations, that impact CSCW projects including Eby-Otto property and the Castle property and the Beaver property.

++

The quote below, is from a CSCW log of rock logged as graphitic, and possibly conductive. It is intended to demonstrate a novel solution to reporting Rock-Quality data, dealing with electrical continuity in diamond drill intersections.

Quote from CSCW Hole CS1108:

Condensed Quotes from CSCW Hole CS1108 Quotes

256.55 261.10 **Graphic** Archean sediments: Bedding dominantly 45-65o, locally folded to 00o. 50% **black graphic** cherty tuff (silicified argillite?), Very hard (>chisel, carbide scriber leaves modest scratch) and not magnetic. ……..The **black graphic** beds commonly **120-140 ohms across the core width** (4.7 cm). The shiny **black graphitic slips** commonly **2-5 ohms across 4.7 cm core width.**

315.97 328.16 Archean sediments: Dominantly thin bedded medium grey silts to **black graphitic** argillite with some medium grey tuff beds. The sediments are **consistently non conductive** as **indicated by ohm meter**. **Some black graphitic slips are conductive**. ….."

326.28 326.30 55o 1.0 cm **graphite** fault as extremely fine **black gouge**. Fault parallel to bedding/foliation. Resistance across the core is **30-50 ohms**.

326.32 326.33 55o **Graphite** seam with strong smooth **graphite slip** face. **5-7 ohms resistance across the core**.

This quote demonstrates a simple, easily replicated procedure to measure electrical continuity and electric resistance.. It involves the measurement of the continuity as ohms of resistance **across the core width**. CSCW's core is typically **typically 4.7 cm** *thick.* The log user, then knows the electrical-continuity, and resistance with reasonable certainty. Note: it is important, to have quantified data, differentiating the difference, between the continuity-ohms of extremely thin slips and the continuity-ohms across the

coherent core that host the slip. Slips in this core was an order of magnitude greater on slips than in the solid (coherent) core.

Shiny, black graphitic slip(s), are very thin conductors, that are commonly, much more conductive than the black, coherent rock cut by the slip(s). Also, slips tend to be much thinner than the cobalt-silver veins discussed above. EM detectability is proportional to 'Conductivity-Thickness *(CT)* of the conductive body. The Conductivity-Thickness calculation is problematic, Reporting the electrical continuity, as **ohms over core width**, of both the highly conductive slips, and the commonly less conductive, coherent black rocks the slip(s) cuts is important.

A geophysicist, not the geologist, should then decide the importance of these measurements. The concepts concerning extreme, almost zero thickness conductors is a concept, that is also problematic, to many if not most geophysicist.

It is poorly understood among both geological and geophysical experts.

Conductivity thickness is discussed separately in this report

Conductivity measurements; combined with electrical continuity-ohm measurements, accompanied by appropriate descriptive comment, are an asset to the geophysical rock property determinations, and dealings with EM and/or IP geophysics work.

CSCW should establish an atlas of geophysical measurements of all potentially conductive intersection encountered in the Eby-Otto drilling. Without such an atlas, al geologists and geophysicist dealing with conductive rocks and EM conductors and IP responses lack a valuable resource for their work and an effective base line for geological-geophysical discussion.

THIS REPORT WAS HEAVILY IMPACTED BY CSCW'S LACK OF UNDERSTANDING, AND REPORTING OF THE CONDUCTIVE ROCKS, GEOPHYSICAL SIGNATURES OF THE CONDUCTIVE ROCKS, AND GEOPHYSICAL RESPONSES TO THESE CONDUCTIVE ROCK IN EBY-OTTO TOWNSHIP.

<u>KI Kunduri-Agnico IP-EM Study</u>

Circa 1990, a modelling-study by K.V. Kunduri *(for Agnico Eagle Mines)* predicted that Conductive bodies behave very differently to IP and EM surveys. This work predicted Cobalt-Silver veins would be problematic for EM surveys and detectable by IP. This conclusion assumed; that EM detectability is dependent on Conductivity-Thickness. The formula for Conductivity-Thickness is CT =C x T where

CT is Conductivity Thickness
C is Conductivity
T is Thickness

Mr. Kunduri dealt with cobalt-silver veins, which are extremely conductive, and extremely thin. He recognised, Physics-Formulas work well, over a large range of values, but are potentially problematic in extreme situations. Cobalt-Silver veins approach **Zero thickness**, and **infinite conductivity**. The Conductivity-Thickness of silver veins was recognised to be approaching "***CT* = *Zero x Infinity***" which is a doubly, mathematically problematic value. An analogue would be Quantum Physics Math, where traditional physics formulas fail.

Mr. Kunduri recognized that IP, was less likely to be impacted by this impact.

The logical extension of this math is: extremely thin graphite (such as a graphitic slip in non-conductive black rock *(commonly logged as graphite)* are as problematic as Cobalt-Silver veins.

The logical extension of Mr. Kunduri's work is:

- knowing the thickness of a conductive rock unit; and
- knowing its conductivity and
- Knowing its continuity

are is required to draw model any conclusion regarding detectability of that unit, and to determine if EM and/or IP is the appropriate tool to remote detection.

A 29 page Unedited document titled "***Atlas of Vein Conductivity-Magnetic Susceptibility 2020-03-30.docx***" is quoted below

The quote extracted from that report, represents typical extremely narrow, extremely Conductive cobalt silver ore from the CSCW Castle property. This quote of is included, as this information, is not generally known, and assessable, but impacts mineral exploration including; CSCW's Castle Mine property, and Beaver Mine property, and Eby-Otto property dealt with in this report.

"



Image Above: Castle Mine: Hollow Core Dendritic Cobalt and Generation Two Silver (515g)

*(Sample 515g, 18.0x6.0x**1.2 cm**) The dendritic grey cobalt arsenide mineralization is dominated by calcite filled dendrites. Silver filled silver-cobalt dendrites occur above the band of bright, generation two silver.*

*<u>Conductivity</u> Five **regularly spaced readings** from left to right along the length of the sample: **830**, 1,674, 4,028, **8,848** & 6,173, averaging **4,311Siemens/m.** Mineralization **1.1 cm** thick over full 6.5 cm diameter of censor.*

<u>Magnetic Susceptibility</u>: KT-10 v2 is unable to render readings in highly conductive rocks."

This quote is intended to demonstrate the extreme local varience in conductivity. It is also intended to demonstrate that conductivity measurements should be measured even it the source rock is thinner than required for geophysical Quality-Assurance. What difference does a 10% error due to sample thickness make, when the ore varies from 830 to 8848 Siemens/m over a distance of a few centimeters.

Geologist do not hesitate to report **silver** and **gold** grades in **resources calculations** when these grades suffer equivalent varience.

Likewise: Geologist **should not hesitate** to report **conductivity** measurements that have **varience equivalent to** the varience suffer equivalent gold and silver.

Any ideological concerns regarding Rock-Property data lacking strict Quality-Assurance reporting, should be dealt with in perspective of the issues of dealing with resource determinations.

Geoscientist split hairs over small analytical errors in core samples, that have cm scale grade variances, equivalent ore with immense variance demonstrated in the conductivity measurements documented above.

The above comments, are directed to the geoscientist community in general. With the wide varience in individual loggers' ideologies, with the mobile geotechnical community, it is imperative, corporate prudence take presidence over individual preferences in this reporting issue.

This opinion expressed, is impacted by the cumulative observation of over 50 years of core logging duties.

IP. The Screen Door Effect and the Conicil 78-2 Vein

Parts of an internal, 50 page report named "*Draft GEOPHYSICS CONCEPTS Developed for CCW Updated 2020-03-18.docx*" were extracted, and commented on, in the Conicil 78-2 vein discussion below.

Do silver veins consisting of multiple zones within the vein, or as en echelon veins act as a single screen door response, or superimposed multiple independent bodies (responses).





High Grade Ag in CaCo Vein
Note Almost No Wall Rock Ag

Conicil Mine: 78-2 Vein

Vertical Nipissing diabase part of Ottawa Rift Valley fault vein above approximately 60 degree West dipping dipping contact of Chilled Nipissing diabase in contact with Archean basalt.
The apparent prenipissing Ottawa Rift Valley fault also dipped approximately 60 degrees West in the basement Archean basalt.
In diabase this vein appears to follow the joints that closely approximate the trace of the apparent underlying fault.
This stope produced silver ore only in the Nipissing diabase. Cobalt mineralization occured in the Archean host vein.
THis vein is a low angle to base metal mineralized graphitic sediments hosted in and apparently controlled by the Kerr Lake Archean axis.
Note classical zoned chlorite-calcite alteration along calcite vein.

Photos and mapping by Douglas Robinson P.Eng.

Image Above: The image above, is a typical portion of the Conicil 78-2 vein, in Nipissing gabbro. Note: the highly variable vein orientations, that consistently dip vertically, and strike at various azimuths. This image was part of the background data used by Mr. KV Kunduri the evaluate IP responses to narrow silver veins.

It appears this vein was:

a. Detected by a Dipole-Dipole IP A spacing 200 feet, using N=5, on lines sub-parallel to the vein,
   and
b. Possibly detected by a Dipole-Dipole IP A spacing 400 feet, using N=5 on lines sub-perpendicular to the vein.

The top of the stope was at n=3, which was approximately 300 feet below surface, and the stope extended downwards, approximately 150 feet.

Observation from Mining this vein, were instrumental in developing the screen door theory for IP and EM responses. The Ag-Co sections of the veins were vertical shoot separated by barren calcite vein sections. Memory is: This vein was 50% high-grade Ag-Co Ore zones, separated a 50% barren calcite zones. This creating a number of separate, vertical ore zones which were conductive bodies. The ore appears to have been restricted to specific, vertical slips, that persisted from lift to lift *(blast)* during mining. The ore was consistently at the same location in each 6-foot blast.

A blasting wire was extended from the extreme north end of the ore, to the extreme south end of the ore. The electrical continuity, was perfect (zero ohms). It would only require the equivalent of a single hydro wire, to complete the circuit making all the ore zones within the stope a single conductor. This is much like a screen door, where >50% of the screen is an insulator, and all the wire in the screen acts as a single conductor.

The questions KV Kunduri, Agnico, and CSCW dealt with are:

- **Will all these small individual ore zones respond as a single Conductor, or as a set separate parallel conductors**?
- **Did the subparallel orientation *(flat earth) of the* vein and the vertical trace of the IP line enhance the Conductivity/resistivity response; by creating a short circuit signaled by a stronger than expected conductivity response?**
- **If the individual ore zones were insulated from each other, would the expected EM or IP conductivity/resistivity response have been impacted?**

KV and Agnico concluded:

the vein acted as a single conductor

It was improbable EM would be effective to discover similar veins.

IP did respond to the conductor.

The IP response was enhanced by the line being parallel to the vein *(**flat earth IP model** with the trace of the IP line parallel to the conductor. Note parallel, to can be any horizontal plane, or incline plane, or vertical plane that is parallel to the IP line).*

The IP response on lines perpendicular to the vein might be (**vertical earth IP model** with the trace of the IP line perpendicular to the trace of the IP conductor).

Note: **Surface IP** surveys respond to a hemisphere that is symmetrical to the IP line.

Note: **Drill hole Surface IP** surveys respond to a sphere that is symmetrical to the IP line.

Note: **IP** surveys respond to all the rock within the hemisphere or sphere. Two lines with overlapping hemisphere or sphere are required to triangulate the location the conductive body. This concept was paramount in Mr. Kunduri's appraisal. It is assumed, present day 3-D IP algorithms are dependent on the same model, Mr. Kunduri visualized.

Work by CSCW appears to confirm Mr. Kunduri's conclusions.

10.0 Observations

Observation of this report are dealt with under the heading and sub-heading deal with the subject matter.

11.0 REOMMENDATIONS

. *Diamond Drilling Recommendations*

In February 2022 CSCW requested Doug Robinson Consulting to recommend a drill program for the Reed Robinson Property and the Marion Property to the west. These were submitted as three property area recommendations: Marion Hwy 66 area, Marion Hwy 11 Area, and the Reed Robinson Eby-Otto property.

These proposed drill holes were designed to test many scenarios. It is not uncommon for drilling of a low priority target model and alternate targets to provide the best intersections. Also: when a primary target fails to meet expectations, it is imperative to have a viable next selection of alternate holes, to accommodate sudden changes of direction.

The Eby-Otto proposal was designed to be performed over several years.

The drill targets were primarily designed to locate and identify gold mineralization and the geology required to identify gold targets. The selection process involved integrating

data from vein and geology mapping, lineament identification, MaxMin conductor signatures, magnetic features and MMI results.

The selection process also considered the potential of Kambalda style Ni Deposits, McAra Lake and Bert Tp. style Archean age Co-Ni vein deposits and a faint chance of large flake graphite deposits.

The planning emphasised testing multiple targets within each hole. A primary gold target was selected and collar locations and hole orientation were selected to quietly intersect secondary targets, including alternate deposit models.

The program was designed to consider the various exploration ands genetic models that reconciled with the property.

Geologist vary widely on deposit and genetic models. For example, during the drilling of EO-22-004, the CSCW program director worked on the premise the any graphite encountered on the CSCW property is inorganic carbon introduced into fault structures during the CLLDZ mineralizing event*(s)*. This was exactly opposite of my genetic models used to plan this proposal. This author changed his genetic model faster than you can tie up tie up boots to reconcile the MaxMin conductors within the intrusive as discussed in this report.

The drill proposal remains unchanged. It was designed on first principle of prospecting. The alternate, CSCW model reconciled with the drill hole data. The introduction of graphite as an indicator mineral for CLLDZ mineralizing event preserved the emphasis on MaxMin conductors within the drill proposal.

Below: Summary of diamond drill hole recommendations
Eby-Otto Township CSCW Ground Grid

Priority	Depth (m)	HDist	dip	Azimuth	Easting	Northing
2	400	281	-45	180	2500	365
1	400	281	-45	360	2500	180
1	450	320	-45	360	2700	50
1	450	320	-45	360	2700	-150
2	100	71	-45	180	2701	-150
1	350	247	-45	180	2800	-175
2	300	212	-45	180	3400	370

1	300	212	-45	360	3400	000
1	200	140	-45	360	3700	075
1	300	212	-45	360	3800	-50
1+	400	282	-45	360	3928	10
1+	250	175	-45	065	3972	328
2	200	140	-45	180	4100	220
1	250	178	-45	360	4130	225
1	300	214	-45	090	4146	460
1	208	146	-45	045	4290	362
1	425	274	-45	360	4300	-25
1	510	363	-45	360	4350	100
1	400	282	-45	360	4350	-25
1	225	157	-45	090	4450	-200
2	150	103	-45	348	4450	428

Below is the detailed list of recommended drill holes with reasons that this report recommends

Preliminary List of Diamond Drill Targets
Kirkland Lake West Property
Eby & Otto Tps.

This document is unvetted for quick release.
Feb 15, 22, 23, 24, 25, 2022
Last updated February 25, 2022 Used in 2023 Assessment Report

Priority	ID	Depth (m)	HDist	dip	Azimuth	Easting	Northing	Comments
								All casings should be capped and left to allow hole deepening and to accommodate inhole geophysics.
2		**400**	281	-45	**180**	**2500**	**365**	To Test Alteration zones in Northern part of Robinson Claim along MMI Line 2500E.
1		**400**	281	-45	**360**	**2500**	**180**	To test intersection of South Deformation Zone (EW) with Robinson Riedel (SE) Structure which are coincident with a week MaxMin Quadrature response. Test North Deformation Zone. To test along MMI Line 2500E.
1		**450**	320	-45	**360**	**2700**	**50**	To test 200m Cable MaxMin anomaly coincident with North Deformation Zone and on strike with alteration. To test alteration zones in Northern part of Robinson Claim along MMI Line 2700E. This hole is recommended before the hole recommended at 27000E-150S
1		**450**	320	-45	**360**	**2700**	**-150**	To test alteration zones in the central part of the Robinson Claims with emphasis on the South Deformation Zone and the North Deformation Zone. This hole should be drilled after the completion of the hole at 2700E-050N to establish the optimal end of hole depth.
2		**100**	71	-45	**180**	**2701**	**-150**	To Test Robinson Riedel Alteration zone with emphasis to establish a dip. If this is successful it is recommended an additional hole be drilled from 2700E-100S. This hole can be extended to test the 070° structure to the south. This hole is rated as priority 2 assuming the hole at 2800E-175S is drilled; otherwise it is a priority 1 hole. Only the edges of this apparent Riedel structure has been examined. Riedels can have shallow dips. The dips of the Riedel structures are important to estimate the rake of the intersection of the Riedels with other priority targets. Intersections of veins have an enhanced probability of ore.
1		**350**	247	-45	**180**	**2800**	**-175**	To test the Robinson Riedel Zone and to determine the cause of a very strong 070 lineament passing through the large pond on the south claim line. Also to determine if this 070 structure is a potential target on the Marion claims to the west. If this hole intersects favourable targets then an equivalent hole at 21850E-175s is strongly recommend because it would interest The 070 and Riedel structure near their intersection which as an enhanced probability of ore.

CsCW Reed Robinson Preliminary Drill Proposal 2023-06-08 a Bacup.xlsx 1 Data Entry

Image Above: Page 01 of February 2022, CSCW drill proposal which remains unchanged to this date as recommendations in this report.

Priority	ID	Depth (m)	HDist	dip	Azimuth	Easting	Northing	Comments
2		**300**	212	-45	**180**	**3400**	**370**	To test below 130x300 long swamp on strike with favourable structures and associated alteration. Hole can be extended if hole at 3400E-000N intersects favourable geology. This hole is recommended as a scissor hole with a hole at 000N to assure a complete section north of the base line. Favourable Riedel structures can have shallow dips and can pass between parallel overlapping holes. i.e. At the Conicil silver mine (Cobalt Ontario) overlapping holes were drilled and a 65-70 degree dipping #2 Cobalt vein dipped though the gap between the holes..
1		**300**	212	-45	**360**	**3400**	**000**	To test 200m cable length MaxMin anomaly within a linear swamp that may possibly be associated within a 120-135o Riedel Structure. To test western extension of known favourable veins to the east. If the recommended hole at 370N is not drilled this hole should be drilled to ~524m at the north claim boundary.
1		**200**	140	-45	**360**	**3700**	**075**	To test 200m cable MaxMin anomaly associated with the potential intersection of two structures potential 120-135o Riedel Structure. To test west projection of the Reed Trench Vein.
1		**300**	212	-45	**360**	**3800**	**-50**	To test 200m cable MaxMin anomaly associated with potential 070° structure near a 120-135° Riedel structure and/or EW structures. **To test west projection of the Reed Trench Vein.**
1*		**400**	282	-45	**360**	**3928**	**10**	To test below the Reed Trench Vein and two MaxMin anomalies within lineaments.
1*		**250**	175	-45	**065**	**3972**	**328**	To test prominent Air Drone Magnetic Survey feature (135°) that appears to extend to 300 below surface. This magnetic feature is coincident with a prominent surface lineament of the same strike. This hole is designed to intersect the B vein before the lineament and the F vein after the lineament.
2		**200**	140	-45	**180**	**4100**	**220**	To test prominent Air Drone Magnetic Survey feature that appears to extend to 300 below surface. This magnetic feature is coincident with a strong surface lineament of the same strike. **This hole is also intended to test mineralized G3 Vein system.**

CsCW Reed Robinson Preliminary Drill Proposal 2023-06-08 a Bacup.xlsx 2 Data Entry

Image Above: Page 02 of February 2022, CSCW drill proposal which remains unchanged to this date as recommendations in this report.

Priority	ID	Depth (m)	HDist	dip	Azimuth	Easting	Northing	Comments
1		**250**	178	-45	**360**	**4130**	**225**	To test G4 Vein and MaxMin Conductor 20m south of G4 Vein. The MaxMin conductor appears to have a 30m fault offset with the east side shifted North. The strike of this apparent fault is unknown but appears to be close to this hole. The drill intersection is intended to determine the relationship of this conductor relative to the mafic Intrusive (Blue Blob) and the mafic volcanics to the north and determine if this conductor has any significance to potential contact Ni deposits. If Ni rich ultramafic intrusive or extrusive igneous magmas incorporate sedimentary rocks (particularly sulphide rich substrates) by thermo erosion they can form Kambalda style Ni deposits. This was the case at a deep drilling program at Redstone mine where similar appearing sulphide deposit horizons included barren substrate sulphide (flank) and high-grade (a keel to 16% Ni) along the lower contact of the ultramafics.
1		**300**	214	-45	**090**	**4146**	**460**	To be drilled parallel to North boundary of Reed Leases to intersect and explain a strong high magnetic anomaly to determine if it is caused by magnetic, auriferous pyritic mineralization at the Reed Showing. It is also testing a shift in background magnetic field strength across this magnetitic anomaly. This magnetic shift may be caused by a structural (fault/deformation) that could potentially host gold mineralization. The magnetic survey indicates the magnetic source rock is shallow and of limited vertical extent; however, this **apparent vertical attenuation** of the magnetic anomaly can be explained by **signal dilution with depth**. It is important to determine if pyritic, magnetic auriferous mineralization exists within this anomaly.
1		**208**	146	-45	**045**	**4290**	**362**	To test Reed Showing and lineament NE of the Reed Showing.
1		**425**	274	-45	**360**	**4300**	**-25**	Drilled to test the projection of two MaxMin Conductors that appear to be missing from the stratigraphic sequence. This is a high priority hole within high priority gold potential ground. If the apparent absence of the conductor is due to thermo erosion it has significance to Ni mineralization. It is unlikely but plausible the extreme latent heat of the ultramafic intrusive recrystalized graphite causing large flake graphite. I have logged Archean age large flake graphite deposit. It may seam stage, but my sample from a the high-grade sample of large flake graphite from Desert Lake graphite mine is only weakly conductive due to the recrystallization of graphite. I do not know what has happened to create this anomalous situation, but it is in a high gold potential area and warrants special attention.
1		**510**	363	-45	**360**	**4350**	**100**	Drilled to test two MaxMin Conductors within high priority gold potential ground

CsCW Reed Robinson Preliminary Drill Proposal 2023-06-08 a Bacup.xlsx 3 Data Entry

Image Above: Page 03 of February 2022, CSCW drill proposal which remains unchanged to this date as recommendations in this report.

1		**400**	282	-45	**360**	**4350**	**-25**	Drilled to testone MaxMin Conductors within high priority gold potential ground in a 400x400m deep overburden area with no outcrop. Drilled to deep test 40 m east of the Reed Showing and other . This zone may extend south onto the Allsopp ground.
1		**225**	157	-45	**090**	**4450**	**-200**	To test a N-S lineament with abundant coincident auriferous float train to 1.34 gAu/Tn. This is along MMI Line 200-S 56m north of the 1.34 gAu/Tn float.
2		**150**	103	-45	**348**	**4450**	**428**	To test a potential 070o trend lineament 348 degrees from a float train to 0.50 gAu/Tn float. This may also be om the projection of a Riedel zone evident to the west.
Priority	ID	Depth (m)	H.Dist	dip	Azimuth	Easting	Northing	Comments

The drill targets were primarily designed to locate and identify gold mineralization and the geology required to identify gold targets. The selection process involved integrating data from vein and geology mapping, lineament identification, MaxMin conductor signatures, magnetic features and MMI results.

Prior to 1983 (early Reed work) only the Reed Trench vein and the trenches on the Robinson North Deformation Zone and South Deformation Zone had apparent previous work. Considering the large number of veins found in ~1994-~1996) mapping and 2021 hand stripping, probable many more promising, unknown veins and mineralization exit.
The selection process also considered the potential of Kambalda style Ni Deposits, McAra Lake and Bert Tp. style Archean age Co-Ni vein deposits and a faint chance of large flake graphite deposits

Previous MMI work tested the highest priority target areas. In selecting similar potential drill targets the MMI tested targets were preferentially selected.

In many cases one long hole appeared to be superior two a couple of shorter holes of equivalent total length.

We can reasonably expect near vertical vein deposits and much shallower deposits including Riedel structures. Veins appear to dip both to the North and South. With the potential of shallow dipping deposits and uncertain north and south dips some scissor hole configurations are recommended for assurance of complete coverage on some drill sections.

CsCW Reed Robinson Preliminary Drill Proposal 2023-06-08 a Bacup.xlsx 4 Data Entry

Image Above: Page 04 of February 2022, CSCW drill proposal which remains unchanged to this date as recommendations in this report.

Disclaimer: This author has not received the finalized 2022 IP and Drone magnetic geophysics data, to impact the content of this report. Receipt of these reports could alter the drill proposal. It would be imprudent to refine these proposals before this data is received.

When acting on these drill proposals, it is recommended the geophysics data be reviewed to optimize the elevation of the proposed intercepts with the drill targets. This evaluation may change the collar locations and hole orientations. It is also recommended revised drill proposal be reviewed by this author to assure all targets are optimized.

The combined list of drill targets; was designed as phased drilling program, designed to test a wide variety of targets styles. It is a multi-year inventory of desirable proposed holes.

. *Grid Recommendations*

It is recommended grid be extended to include lines cut at natural 50 meter spacing between the natural 100-meter spaced lines where these lines were not cut on the existing grid.

It is recommended the grid be rechained using four-foot 2X2 inch commercial lumber pickets.

It is recommended grid be extended to include lines cut at natural 50 meter spacing between the natural 100-meter spaced lines where these lines were not cut on the existing grid.

. *Mechanical Stripping Recommendations*

The mechanical stripping recommendations include:

- Continue the hand stripping program to identify more mechanical stripping locations. *(High priority).*
- Mechanical stripping following the **Reed Showing** to the north and east limits of the alteration-mineralization. This trench may provide a suitable sump for drilling. *(High priority).*
- Mechanical stripping following the **Reed Trench Vein** to the north and east limits of modest subcrop depth. Extend a perpendicular trench to the south at the locations that extends closest to the MaxMin conductor south of that vein. *(High priority).*
- Mechanical stripping following the **G4 Vein** to the west and the east of the hand stripping. This stripping may encounter faults. Emphasis must be placed on the structural aspects associated any faults and fault offsets encountered. A NE or E or -NW trending fault with a 25-meters sinistral (left-hand) vein offset is expected. This speculative offset; is evidenced by the equivalent offset of the associated conductor south of this vein. *(High priority)*.
- Mechanically strip a narrow trench south from the **G4 Vein** to test between this vein and the MaxMin Conductor west of the fault mentioned above. This trench would probably have to be filled after mapping and sampling (due to high sides). (High priority).
- Mechanically strip a narrow trench south from the **G1** Subcrop to test towards MaxMin Conductor estimated to be 25 meters to the south of the subcrop and east of the speculative NE or E or -NW trending fault mentioned above. This trench would probably have to be filled after mapping and sampling (due to high sides). (High priority).
- Mechanically strip **E3** Vein to establish the lateral extent of the vein system and its associated mineralized, alteration zone. *(High priority).*
- Mechanically strip following the E2 Vein south towards the G4 vein to monitor the alteration and mineralization. *(Medium Priority)*
- Mechanical stripping north and south from the historic 2550E *(North)* Deformation Zone trench looking for EW trending veins and mineralization. *(Medium Priority)*

- Mechanical strip north and south from the historic 2650E *(South)* Deformation Zone trench looking for EW trending veins and mineralization. *(Medium Priority).*
- Mechanical stripping following the B-Vein north to the edge of the swamp in hope of establishing information relating to the apparent SE-NW trending lineament and coincident magnetic feature that appear to be the target associated with this vein. *(Low Priority).*
- Mechanical stripping following the F-Vein south to the edge of the swamp in hope of establishing information relating to the apparent SE-NW trending lineament and coincident magnetic feature that appear to be the target associated with this vein. *(Low Priority).*
- Map the **R-Vein** subcrop which was mechanically stripped by CSCW during 2022. *(Medium Priority).*

. *Recovery of 1994-1996 Magnetic Surveys Recommendations*

Recovery of the data from the 1994 and 1996 surface magnetic survey,s and performance of the appropriate inversion of this data to define magnetic structures that might represent structures and/or alteration textures is recommended.

. *Reconciliation of Drill Logging-Surface Mapping Recommendation*

Remap the property with emphasis on lithology, alteration, litho-chemistry, and **SG**. The SG is the great quality assurance measure that is accurate and directly related to the lithology and alteration of that lithology.

. *SG RECOMMENDATIONS*

It is recommended SG determinations be prioritised as an instrument of Quality-Assurance control of drill logging and surface mapping under the guidance of the terms defined in the CSCW-Reed-Robinson contract.

This recommendation focuses on the need of full Quality-Assurance for rock property data and lithology and alteration logging.

This recommendation particular attention be paid to both parameters required for Quality-Assurance of rock property data collection.

- The first is the assurance of the measurement accuracy.

- Secondly the assurance of thoughtful sample site selection and reporting:
    a. based on logging emphasis the sample medium.
    b. the embedded statements describing reconciling the SG to the lithology and/or alteration.
    c. Relogging when the lithology and or alteration and or SG if these do not reconcile *(as the logging progresses)*.

See Contract below for procedure in context of the project.

1.9 Both the Optionor and Optionee recognize the value of measuring physical rock properties on diamond drill core:

- Rock properties commonly measured in core include: specific gravity, magnetic susceptibility, conductance/resistivity, chargeability, permeability, chemical composition, hardness, color.

- Valid Variations in measurement and reporting exist including systematic measurements at a regular or predetermined interval that are optimal to measuring rock. The combined impact of many conflicting parameters cumulatively results in parameters that can be measured by geophysical instruments or that may impact geophysical measurements from within a hole,

  at surface or from the air. This can be critically important to designing, conducting, and interpreting geophysical and geological data. This style of measurement and reporting is appropriate, independent of the written log of the hole.

- Scientific measurements designed to facilitate mineral exploration include measurements designed to resolve the genesis, origin, history, alteration, signature and/or other features of the rocks in a drill hole. These involve selecting and measuring specific core intervals that best represent the feature(s) of interest (without contamination of or from the many other parameters that can impact the measurement).

- This process maximizes the contrast between different units or subunits while establishing the natural variance within the individual units or subunits.
  - Example A: In Gowganda Nipissing diabase and Archean mafic-ultramafic units have natural subunits (phases), some with gradational boundaries and others with discrete boundaries.
  - Example B: a sediment might vary from 20%:80% A:B to 90%:10% A:B. In this case specifically measuring measuring the end members and specific mid members has great value if appropriately measured and reported in the text of the log.
  - Example C: Measurements designed to determine the signature of alteration would measure the relevant parameter of the least altered rock and the end product of alteration separately and then if beneficial deal with the intermediate products.

1.10 The Optionee and Optionor agree It is appropriate to report rock property evidence from core in the text of the drill log of that core

Image Above: Contract text.

12.0 Plans, Permits and First Nation Issues

All the work in the 2022 work was low impact work, that does not require additional first nations consultation, and MLAS plans, and permits.

Doug Robinson Consulting has dealt with Dianne Tookenay, and other Matachewan First Nations staff during First Nations consulting, as reported the MMI reports referenced in this report.

CSCW has obtained the MLAS plans and/or permits, and conducted First Nations consultation required to perform trail access, diamond drilling, IP surveys and linecutting referenced in this report. No plans or permits were required for the drone magnetic surveys referenced in this report.

. *MLAS RECOMMENDATIONS*

1. It is recommended MLAS recognize intellectual disabilities of people trying to access necessary MLAS functions. The ministry halted many ministry functions for a long time to make ministry functions accessible to physically disabled persons. Intellectually disabled persons deserve the same level of consideration. A low cost, and easy solution, and **recommendation** Is: **Enable the Resident Geologist staff, and disabled persons, to have access to a public domain computer, to access Ministry-MLAS functions, in the local ministry office, to enable intellectually disabled persons to access Ministry-MLAS functions effectively, with the assistance of local ministry staff.** This is a long-standing recommendation, this report is again, reiterating to the Ministry. People like myself are intellectually disabled in accessing MLAS and MNDM ClaiMap and Web page information required to download information required for assessment report preparation and other MLAS related functions. MLAS staff have been very **gracious** in trying to help me deal with ClaiMap and accessing MLAS files, with little success.
2. **It is recommended MLAS revert to recognizing that prospectors have the ability to self-identify their property** *(based on MNDM Mining Lands, long standing recognition of their ability)*. This recommendation is the natural extension of the observations and recommendations of the referenced, 2015 assessment report: MNDM Assessment File: part 1 of 4 parts on web page: http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/20000014046/2_56259_10_AssessmentReport_CastleSilver_August2015_1of4.pdf . The observations and recommendations of that 2015 report, remain valid and have not been acknowledged or dealt with. Subsequent to the 2015 report, these recommendations were significantly upgraded to be more easily implemented.

3. **This report recommends the assessor, and the ministry deal quickly, and effectively to the recommendations sent to Caroline Eisen, Policy Advisor, Office of the Hon. George Pirie, Ministry of Mines.** Early in 2023; an email was received from **Caroline Eisen,** Policy Advisor, Office of the Hon. George Pirie, *Ministry of Mines,* +1 (647) 271-7569, Caroline.Eisen@ontario.ca . This email, was a request to make recommendations to the ministry to improve their service. In response to this request, **three recommendations** were forwarded to her on April 7, 2023. The 2015 assessment report: MNDM Assessment File: part 1 of 4 parts on web page: http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/imaging/20000014046/2_56259_10_AssessmentReport_CastleSilver_August2015_1of4.pdf was sent as to **Caroline Eisen** as supporting evidence of the need to address these three issues. The three questions related directly to the 2015 assessment report recommendations. The response to these three requests, have **direct** and **heavy** implications to this, 2023 assessment report, and to the assessor's response to this report.
4. This report recommends the ministry; MLAS send inspectors to Eby-Otto to conduct a property inspection: to deal with the issues addressed:
    a. In the 2015 assessment report,
    b. in the tree recommendations sent April 23, 2023 to Caroline Eisen, Policy Advisor, Office of the Hon. George Pirie, Ministry of Mines, and
    c. the issues this report involves.
5. It is recommended MLAS include the activity (i.e. diamond drilling, trails, IP, linecutting etc.) identified by plan and permit application within all ministry communication regarding the plan or permit application. The applicant clearly identifies the activity in the application ,and that identity should be included in the text of communications involving the plan-permit. The combined proliferation of MLAS document due to bifurcation of project into separate applications, and multiple activity application is a nightmare of miscommunication
6. It is recommended MLS accept one plan or permit application for an activity. CSCW was required multiple applications for the Reed-Robinson property for single activity that blanketed the property. The application process was so horrendous, that CSCW almost walked from the IP-linecutting program and the diamond drilling program due to ministry red tape. The combined proliferation of MLAS document due to bifurcation of project into separate applications, and multiple activity application is a nightmare of miscommunication.
7. It is recommended Ministry-MLAS design its web pages to incorporate, and emphasis, user friendly Search-Functions directly to client Ministry-MLAS

assessment reports, ClaiMap, claim abstracts and other ministry documents and functions. In preparation of this report, it was not possible to access key files from MLAS assessment file, as noted in the references to this report. Last week Ministry staff enable me to access the portal sites GeologyOntario (gov.on.ca) and GeologyOntario Spatial Search (arcgis.com). On these sites, the searches appeared to be somewhat irrational and/or missing the required files. The recommendation below might have resolved this issue.

8. MLAS create YouTube tutorials to deal with client functions.
    a. The text guides; that MLAS staff graciously provided are dysfunctional for intellectually disabled person, and others to use.
    b. To serve the public, multiple mediums of communication are required to be effectual. The MLAS help sheets, are to fussy to read the images, and a single error in comprehending the required, convoluted action string is fatal.
    c. It can take a day or more for help, and that help is often insufficient. The stated; Ministry policy, is to assure a response to required help is provided within two business days. This was a serious problem in the early stages of preparation of this report. At that time, MLAS staff has graciously, and ineffectually spent hours trying to help. The last ministry response was, 2 hours, which is acceptable.
    d. The base issue is: The system designed for professional land management persons, and **the prospector that must use the system once a year is abandoned**.
    e. When a person accesses the ministry site, there is **no apparent search mechanism for client services** such as: client reports, or claim abstracts, assessment reports, etc. The Ministry site, is endless blind ends: expounding client obligations, accomplishments of the ministry and current government and **government the services, with no apparent direct, or indirect links to those services**.

In 2015 MLASs sent four inspectors to inspect the concerns of the 2015 assessment report, and found that report accurate and factual.

Note: The Ministry of Labour, also inspected the property in response to the 2015 report pictures of the workplace. The Minister of Labour responded by letter, personally stating, that the work performed by all companies in the work area meet, “Ontario Occupational Health and Safety” standards.

The ministry of MNR, and the surveyor general were also involved in response to the 2015 assessment report.

That 2015 assessment report was dealt with at an Ontario Minister of Mines, Mining Act Advisory Committee Meeting in Toronto.

13.0 REFERENCES

MNDM Web Page hot linked below was used to access much of the reference material below. Search GeologyOntario (gov.on.ca)

http://www.geologyontario.mndm.gov.on.ca/index.html

The advanced search option was used year by year to search the assessment files.

Many of the assessment reports appear in multiple years, one file for each year of the reported work. Also, it appears the body of some technical reports is repeated with Geological appendices on one assessment files, and other work in a separate assessment file.

This was tedious work and discretionary decisions were required to simplify the reporting into a somewhat logical order. A totally systematic approach would have been to complex to be useful.

Some assessment files have been omitted; were they contain identical or nearly identical configuration of report bodies and/or technical appendices.

It was very difficult to access assessment files from the MLAS Web site.

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MNDM Assessment File: part 1 of 4 parts which this Author's intellectual disability prohibits him from finding on the Mistry web site.

2015: ASSESSMENT REPORT ON Mapping MMI Geochemical Sampling, Stripping and Channel Sampling Grid Rehabilitation Castle #3 Rehabilitation & Castle #1 Voluntary Rehabilitation.
MNDM Assessment File: part 3 of 4 parts which this Author's intellectual disability prohibits him from finding on the Mistry web site.

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14.0 Post Report Observations

Cadillac Larder Lake Deformation Zone Sine Wave Model 2011

In December 2011, Dan Kurtz and Douglas Robinson were ice fishing on approximately 3-4 inches of water clear ice. While drilling a hole, a pressure crack passed through the hole. The very small incremental stress of drilling the hole, appears to have triggered this pressure crack and possibly many others. This pressure crack was traced to a 120-120-120 degree-triple junction. From this triple junction; two similar cracks appear to have extended outwards at approximately 120 degrees to the initial crack.

It is possible the whole lake; developed many polygons with triple junctions, joining many sine wave pressure cracks, in an instant.

These triple-point junctions have a geometry similar-to the geometry at plate tectonic Triple Junctions like at the Red Sea - Gulf of Adan – African Rift, See web pages:

https://en.wikipedia.org/wiki/Afar_Triple_Junction

and https://geology.com/articles/east-africa-rift.shtml

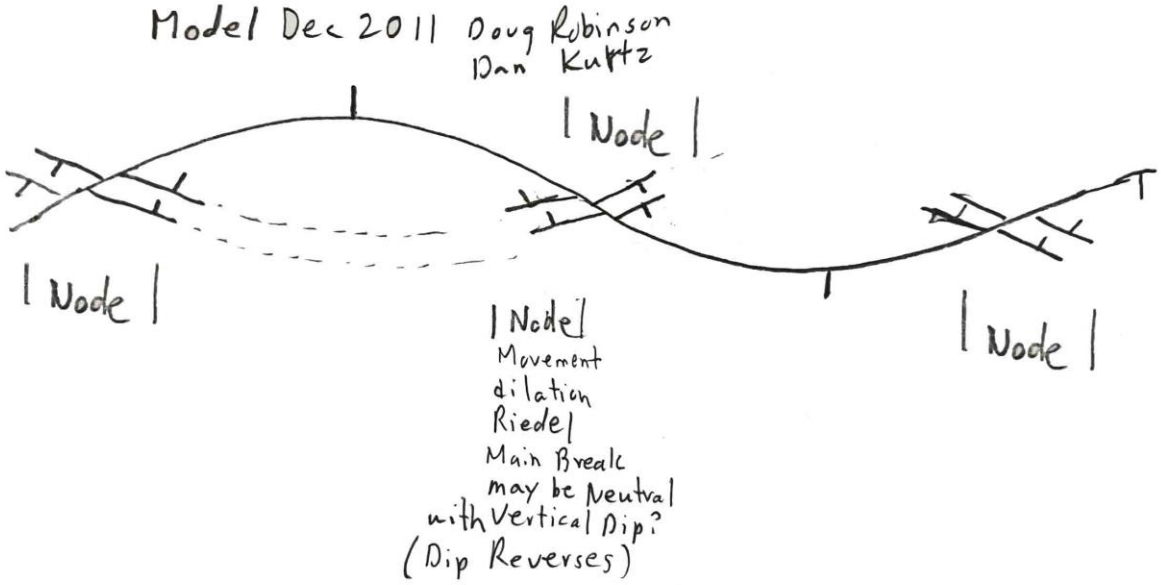
Each of these triplets, of pressure cracks, followed a fishtail, sign like wave like pattern from end to tend and ended at triple junctions with similar cracks. It appears the dips pointed inwards, toward the neutral line of the sign wave. Near the neutral points of the sign waves, the pressure cracks had vertical dips. Also: near the neutral points, where the dip ware vertical; auxiliary sets, of smaller pressure cracks developed, with their dips pointing inwards primary crack. On opposite sides of the primary pressure cracks, the inward dips reversed.

It is possible, this ice model is a dimensionless-model of tectonic plate development.

In Kirkland Lake, the Macassa South mine complex is located between two major faults. It appears to be commonly viewed that two faults are the ideal model to create an ore deposit.

If this ice model is a representation of deformation zones; the vertical parts of the CLLDZ may preferentially host ore deposits in auxiliary structures, where the CLLDZ break is near vertical.

This concept is untested and is probably controversial.



A hand copy of the sketch above appears to have reversed two of
the three dip marks reversed by error. Apparent correction is shown below.

In December 2011 Dan Kurtz and Douglas Robinson were ice fishing from approximately
3-4 inches of water clear ice. White we were drilling a hole,
a pressure crack passed through the hole. The very small incremental stress of drilling
the hole appears to have triggered this pressure crack.
We traced this pressure crack to a 120-120-120 degree-triple junction.
From this triple junction, two similar cracks appear to have and
extend outwards at approximately 120 degrees to the initial crack.
It is possible the whole lake; developed many polygons with triple junctions,
of many sine wave pressure cracks, in an instant.
This three point triple junction has a geometry similar-to the geometry at
plate tectonic spreading ridges at the gulf of Suez.
Each of three pressure cracks followed a sign wave like pattern from end to tend.
It appears the dips pointed inwards toward the neutral line of the sign wave.
Near the neutral points of the sign wave, the pressure cracks had vertical dips.
Also: near the neutral point where the dip was vertical and auxiliary set of
smaller pressure cracks developed, with their dips pointing inwards.
On opposite side of the primary pressure cracks, the inward dip reversed.
It is possible this ice model is a dimensionless model of tectonic plate development.

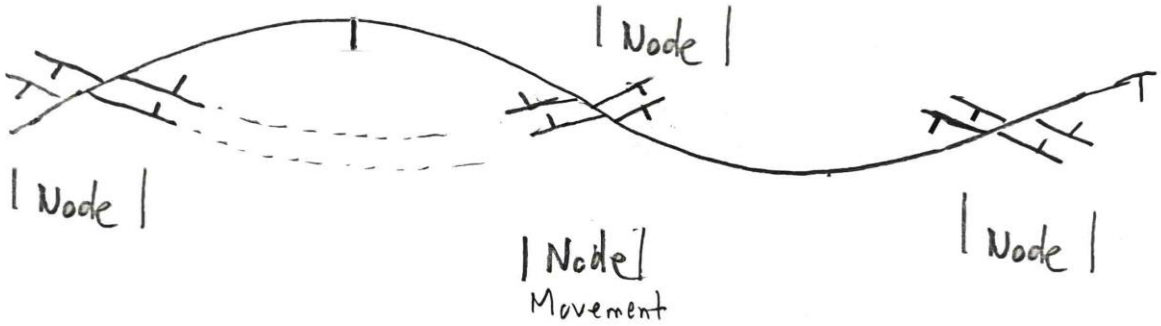


Image Above: A hand copy of the sketch appears to have reversed two of the three dip marks reversed by error. Apparent correction is shown at the bottom of the image.

Differing Paragenetic Sequence of dry and wet Mafic Intrusives.

The following observations and comments are extremely preliminary and potentially controversial.

The discussion below; assumes chemically similar (by Whole Rock elemental ratios) mafic magma petrogenesis might follow two significantly different petrographic sequences base on if they are dry or wet.

The Eby-Otto Intrusive appears to be a mafic intrusive.

The Castle Nipissing gabbro appears to have been a dry intrusive, that developed a pyroxene dominated mineralogy rich in plagioclase.

The Eby-Otto Intrusive; appears to be dominated by amphiboles; suggesting a wet paragenetic sequence of crystallization dominated by amphiboles which probably reduce the Al_2O_3 component of the residual magma. If the Al_2O_3 component of the magma is reduced it may reduce the capacity to crystalize plagioclase. If plagioclase is reduced, the apparent Mafic Index may increase creating an appearance of being more mafic than an equivalent dry sequence product.

If this is true: it explains the Eby-Otto intrusive's low SG and high mafic Index compared to the Nipissing gabbros and whole rock geochemistry of the 1994 exploration reports.

Comments by Turner and Verhoogen

During the 1960's and 1970's; Turner and Verhoogen were recognized experts in igneous petrology. They were open minded, skilled writers, that recognized the ambiguity and nuances of geology and the application of geological theory and principles, such as those presented in this report.

Some theory and working hypotheses used in this report are correct and others may not be.

A quote from; page 340, of their book "*Igneous and Metamorphic Petrology*" published by the": *International Series in the earth Sciences*" deals with the nuances of geology, you as reader may have experience reading this report. See quote below:

> *" Field relationships between ……. Tend to be complex and ambiguous.*
> *…….*
> *Different observers, variously prejudiced, are likely to interpret the same set of phenomena as products of totally different processes ……..*
> *It is thus exceedingly difficult, ……. to judge the relative merits of ……. views on the merit"*

If you or I disagree with someone, both may be wrong. A working hypothesis may be wrong. This author is comfortable using multiple working hypothesis at the same time. This involves being aware of the conflict between these hypothesis; and objectively observing and recording the evidence that deals with all reasonable hypothesis.

15.0 CERTIFICATE OF QUALIFICATIONS

1. I am a registered professional Engineer of the province of Ontario, No. 39322011.

2. I am a graduate of Queen's University in Kingston Ontario with an Honours Bachelor of Science, Geological Engineering 1975, and Northern College, School of Mines in Haileybury, Ontario, 1970.

3. I have been practicing my profession since graduation.

4. The information contained in this report is the result of work done by myself and the references cited.

5. December 30, 2017 I completed two MAAP tests numbered: #1314-1074-7097-6678 and #66DA-EC9D-20CC-79D8. One to renew my Lifetime Prospector's Licence and to act as certified as qualified to perform other functions as deemed necessary and appropriate by MNDM.

6. I am intellectually disabled in accessing MLAS and **MNDM** ClaiMap and Web page information required to download assessment reports, Ministry reports, and information required for assessment report preparation and submittal.

Respectfully submitted

Douglas Robinson, P. Eng.
June 27, 2023

Kirklandgold.com
Old School
Property

Map 2239

EBY-OTTO AREA

TIMISKAMING DISTRICT

Scale 1:31,680 or 1 Inch to ½ Mile

Chains 80 60 40 20 0 1 2 Miles
Metres 1000 0 1 2 3 Kilometres
Feet 1000 0 5,000 10,000 Feet

HURONIAN

COBALT GROUP

GOWGANDA FORMATION

8a Conglomerate.
8b Arkose, greywacke, argillite.

UNCONFORMITY

ALKALIC INTRUSIVE ROCKS

7a Coarse-grained syenite, syenite porphyry, pegmatite.
7b Mafic syenite, syenite contaminated by country rocks.
7c Medium-grained syenite, aplite dikes.
7d Syenite with numerous xenoliths and autoliths.
7e Lamprophyre.
7f Quartz syenite, granite.
7g Diorite.

INTRUSIVE CONTACT

ARCHEAN

MAFIC INTRUSIVE ROCKS (MATACHEWAN OR NIPISSING)

6 Diabase.

INTRUSIVE CONTACT

FELSIC INTRUSIVE ROCKS (ALGOMAN)

5a Granite, porphyritic granodiorite.
5b Granodioritic gneiss.
5c Syenite and trachyte.
5d Mafic syenite and mafic tr

INTRUSIVE CONTACT

EARLY MAFIC AND ULTRAMAFIC ROCKS (HAILEYBURIAN, EARLY ALGOMAN, AND KEEWATIN)

4a Serpentinite, peridotite.
4b Gabbro, diorite.

INTRUSIVE CONTACT

METASEDIMENTS (TIMISKAMING AND KEEWATIN)

3a Conglomerate.
3b Quartzite, greywacke.
3c Tuff, agglomerate, minor amounts of trachyte agglomerate, breccia.

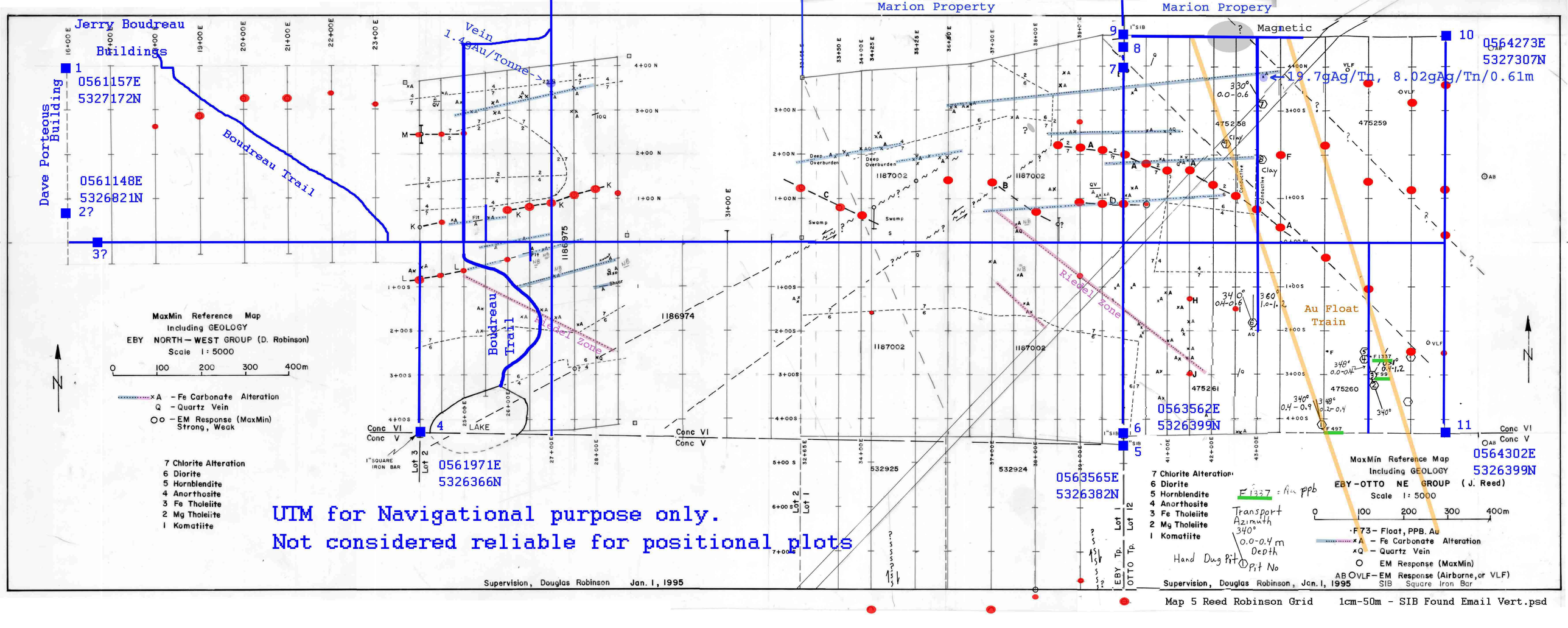
UNCONFORMITY AND INTERBEDDING

FELSIC METAVOLCANICS (KEEWATIN)

2a Rhyolite, dacite.
2b Iron formation, silicic tuff, agglomerate.
2c Dacite porphyry, amygdaloidal and spherulitic dacite.

MAFIC METAVOLCANICS AND METASEDIMENTS

1 Unsubdivided mafic volcanics.
1a Basalt, andesite.
1b Chloritic mafic tuff, agglomerate.
1c Altered (bleached, carbonatized) volcanic and sedimentary rocks.
1d Amphibolite, garnet-epidote amphibolite, amphibolite gneiss.
1e Andesite porphyry, amygdaloidal and spherulitic dacite.
1g Biotite-garnet-pyroxene amphibolite.


Jerry Boudreau
Buildings
Dave Porteous Building
1
0561157E
5327172N
0561148E
5326821N
2?
3?
Boudreau Trail
Vein
1.4gAu/Tonne->
Marion Property
Marion Propery
Magnetic
19.7gAg/Tn, 8.02gAg/Tn/0.61m
0564273E
5327307N
Riedel zone
Au Float Train
Clay
Conductive
Deep Overburden
Swamp
LAKE
1186975
1186974
1187002
532925
532924
0561971E
5326366N
0563562E
5326399N
0563565E
5326382N
0564302E
5326399N
I"SQUARE IRON BAR
Lot 3
Lot 2
Lot 1
Lot 12
EBY Tp.
OTTO Tp.
Conc VI
Conc V
MaxMin Reference Map
Including GEOLOGY
EBY NORTH — WEST GROUP (D. Robinson)
Scale 1:5000
0 100 200 300 400m
×A – Fe Carbonate Alteration
Q – Quartz Vein
o o – EM Response (MaxMin) Strong, Weak
7 Chlorite Alteration
6 Diorite
5 Hornblendite
4 Anorthosite
3 Fe Tholeiite
2 Mg Tholeiite
1 Komatiite
MaxMin Reference Map
Including GEOLOGY
EBY-OTTO NE GROUP (J. Reed)
Scale 1:5000
F1337 = Au ppb
Transport Azimuth 340°
0.0-0.4 m Depth
Hand Dug Pit
Pit No
F73 – Float, PPB. Au
AB VLF – EM Response (Airborne, or VLF)
SIB Square Iron Bar
Supervision, Douglas Robinson Jan. 1, 1995
UTM for Navigational purpose only.
Not considered reliable for positional plots
Map 5 Reed Robinson Grid 1cm-50m - SIB Found Email Vert.psd

SKETCH SHOWING BASELINE DETAILS OF

MINING CLAIMS OF CANADA SILVER COBLAT WORKS LOT 12 OTTO TOWNSHIP AND LOTS 1, 2, 3, 4 EBY TOWNSHIP CONCESSION 6

SCALE 1 : 5000 METRES

0 20 60 100 200 400 600

SURVEYORS ON SITE INC. ©

CAUTION
THIS IS NOT A PLAN OF SURVEY AND SHALL NOT BE USED EXCEPT FOR THE PURPOSE INDICATED IN THE TITLE BLOCK.

NOTES

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

DISTANCES ON THIS PLAN ARE HORIZONTAL GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE AVERAGE COMBINED SCALE FACTOR OF 0.999603654.

COORDINATES ARE DERIVED FROM SCPs, COSINE MONUMENTS HCM00819960005 & HCM00819960006 AND ARE REFERRED TO THE CENTRAL MERIDIAN OF UTM ZONE 17 (81° WEST LONGITUDE) NAD83 ORIGINAL.

LEGEND

SIB . . . . . 1" SQUARE STANDARD IRON BAR
IB . . . . . 5/8" SQUARE IRON BAR

BASELINE POINTS

POINTNUMBER	NORTHING	EASTING	DESCRIPTION
151	5 327 299.616	563 853.009	WS
153	5 327 237.738	563 853.852	4+00N
154	5 327 139.740	563 855.402	3+00N
156	5 327 031.205	563 559.832	2+00N
157	5 327 129.638	563 558.790	3+00N
158	5 327 229.221	563 555.644	4+00N
GS210	5 326 779.124	561 169.291	16+00E
GS211	5 326 781.160	561 267.526	17+00E
GS212	5 326 783.389	561 367.223	18+00E
GS213	5 326 785.575	561 465.254	19+00E
GS214	5 326 787.280	561 565.911	20+00E
GS215	5 326 789.733	561 665.756	21+00E
GS216	5 326 792.533	561 765.328	22+00E
GS217	5 326 799.608	561 864.163	23+00E
GS218	5 326 799.626	561 963.057	24+00E
GS219	5 326 799.850	562 014.318	24+50E
GS220	5 326 800.051	562 062.375	25+00E
GS221	5 326 800.269	562 109.037	25+50E
GS222	5 326 799.604	562 159.956	26+00E
GS223	5 326 800.954	562 209.569	26+50E
GS224	5 326 800.521	562 259.220	27+00E
GS225	5 326 800.428	562 308.343	27+50E
GS226	5 326 800.695	562 361.358	28+00E
GS227	5 326 802.164	562 408.979	28+50E
GS228	5 326 802.132	562 458.106	29+00E
GS229	5 326 803.347	562 509.145	29+50E
GS230	5 326 803.502	562 558.269	30+00E
GS231	5 326 802.874	562 607.321	30+50E
GS232	5 326 803.812	562 656.663	31+00E
GS233	5 326 804.799	562 705.273	31+50E
GS234	5 326 804.168	562 757.677	32+00E
GS235	5 326 804.853	562 810.057	32+50E
GS236	5 326 805.940	562 858.065	33+00E
GS237	5 326 807.535	562 907.021	33+50E
GS238	5 326 809.518	562 957.525	34+00E
GS239	5 326 811.494	562 983.010	34+25E
GS240	5 326 810.714	563 007.912	34+50E
GS241	5 326 813.069	563 057.161	35+00E
GS242	5 326 814.494	563 083.491	35+25E
GS243	5 326 815.017	563 108.180	35+50E
GS244	5 326 819.009	563 157.419	36+00E
GS245	5 326 819.138	563 208.623	36+50E
GS246	5 326 819.533	563 257.601	37+00E
GS247	5 326 822.039	563 311.444	37+50E
GS248	5 326 823.976	563 363.521	38+00E
GS249	5 326 825.442	563 412.546	38+50E
GS250	5 326 826.967	563 457.831	39+00E
GS251	5 326 829.600	563 510.632	39+50E
GS252	5 326 831.962	563 564.025	40+00E
GS253	5 326 833.993	563 612.254	40+50E

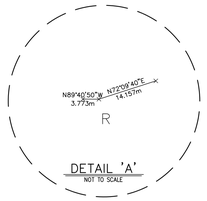
POINTNUMBER	NORTHING	EASTING	DESCRIPTION
GS254	5 326 834.073	563 660.250	41+00E
GS255	5 326 836.012	563 711.457	41+50E
GS256	5 326 836.449	563 759.492	42+00E
GS257	5 326 839.125	563 809.403	42+50E
GS258	5 326 840.511	563 859.683	43+00E
GS259	5 326 839.747	563 908.643	43+50E
GS260	5 326 839.986	563 958.112	44+00E
GS261	5 326 840.583	564 007.910	44+50E
GS262	5 326 840.774	564 058.318	45+00E
GS263	5 326 840.788	564 107.055	45+50E
GS264	5 326 840.856	564 156.909	46+00E
GS265	5 326 842.192	564 206.679	46+50E
GS266	5 326 843.221	564 255.612	47+00E
GS267	5 326 843.338	564 288.770	47+35E
GS300	5 326 701.554	561 963.608	1+00S
GS301	5 326 600.749	561 965.309	2+00S
GS302	5 326 503.036	561 967.212	3+00S
GS303	5 326 404.103	561 968.564	4+00S
GS305	5 326 898.804	562 061.615	1+00N
GS306	5 326 995.867	562 062.224	2+00N
GS307	5 327 096.513	562 058.247	3+00N
GS308	5 327 195.100	562 048.472	4+00N
GS309	5 326 898.302	562 259.495	1+00N
GS310	5 326 999.020	562 258.646	2+00N
GS311	5 327 097.841	562 259.534	3+00N
GS312	5 327 194.884	562 258.653	4+00N
GS313	5 326 701.094	562 260.724	1+00S
GS314	5 326 601.474	562 259.239	2+00S
GS315	5 326 506.355	562 264.979	3+00S
GS316	5 326 418.925	562 267.682	4+00S
GS317	5 326 733.037	563 564.649	1+00S
GS318	5 326 633.687	563 564.613	2+00S
GS319	5 326 533.257	563 568.037	3+00S
GS320	5 326 435.641	563 568.251	4+00S
GS321	5 326 938.649	563 853.485	1+00N
GS322	5 327 038.048	563 855.067	2+00N
GS327	5 327 298.925	563 906.154	4+65N
GS328	5 326 942.405	564 290.116	1+00N
GS329	5 327 041.802	564 289.485	2+00N
GS330	5 327 141.232	564 288.072	3+00N
GS331	5 327 240.950	564 288.921	4+00N
GS332	5 326 743.038	564 289.457	1+00S
GS333	5 326 644.169	564 291.890	2+00S
GS334	5 326 543.617	564 292.538	3+00S
GS335	5 326 444.879	564 292.775	4+00S
GS336	5 326 740.719	564 106.005	1+00S
GS337	5 326 642.648	564 106.440	2+00S
GS338	5 326 543.133	564 107.086	3+00S
GS339	5 326 437.194	564 108.694	4+00S
1580N2	5 327 272.050	563 556.508	M 0E 400S

PROPERTY MARKERS FOUND

POINTNUMBER	NORTHING	EASTING	DESCRIPTION
2	5 327 173.577	561 157.815	SIB
3	5 326 819.650	561 149.243	SIB
6	5 327 299.597	563 556.086	SIB
8	5 327 198.743	563 557.349	IB
9	5 327 289.485	563 556.231	IB
20	5 326 370.452	561 968.239	SIB
25	5 326 400.091	563 566.259	SIB
26	5 326 381.833	563 566.574	SIB
27	5 326 805.818	563 561.659	IB
28	5 326 418.617	564 293.837	SIB
29	5 326 418.626	564 293.831	SIB
30	5 327 306.270	564 284.274	SIB

OUTCROP POINTS

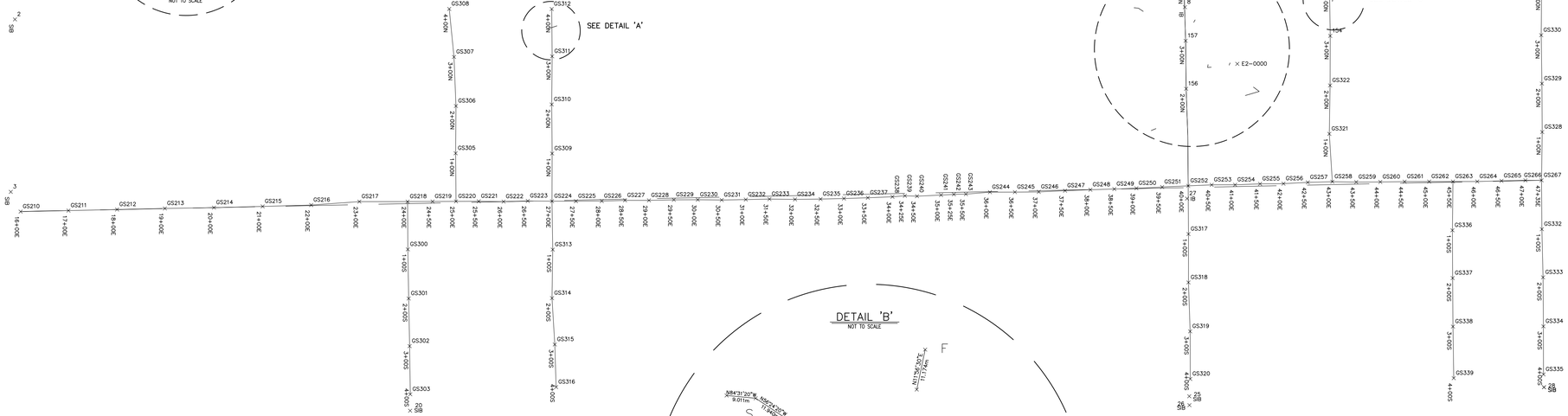
POINTNUMBER	NORTHING	EASTING	DESCRIPTION
B1–000	5 327 172.653	563 578.217	OUTCROP B
E1–000	5 327 075.011	563 603.899	OUTCROP E1
E1–001	5 327 080.828	563 604.839	OUTCROP E1
E1–DHH	5 327 075.496	563 611.396	E1 DIAMOND DRILL HOLE
E2–000	5 327 082.374	563 664.801	OUTCROP E2
B1–0000	5 327 167.514	563 575.398	OUTCROP B
E3–0000	5 327 084.357	563 649.857	OUTCROP E3
E3–0596	5 327 079.624	563 648.035	OUTCROP E3
F–0000	5 327 232.761	563 622.741	OUTCROP F
F–0001	5 327 221.833	563 620.43	OUTCROP F
G1–0000	5 327 025.745	563 709.703	OUTCROP G1
G4–2978	5 327 017.394	563 681.172	OUTCROP G1
GSRS–0000	5 327 220.308	563 861.45	OUTCROP RS
RS–0991	5 327 210.644	563 859.704	OUTCROP RS
S1–0000	5 327 196.628	563 461.938	OUTCROP S
S1–0912	5 327 197.488	563 452.972	OUTCROP S
S1–1195	5 327 190.024	563 471.88	OUTCROP S
RT1–0000	5 326 945.459	563 488.2	OUTCROP E1
RT1–1074	5 326 949.451	563 497.919	OUTCROP E1
G3–7727	5 327 034.616	563 697.925	OUTCROP G1
R–0000	5 327 156.001	562 255.929	OUTCROP R
R–0380	5 327 156.022	562 252.158	OUTCROP R
R–1417	5 327 160.336	562 269.4	OUTCROP R
RS–0605	5 327 214.481	563 860.543	OUTCROP RS
5	5 327 133.47	561 513.733	LEASE SPECIAL

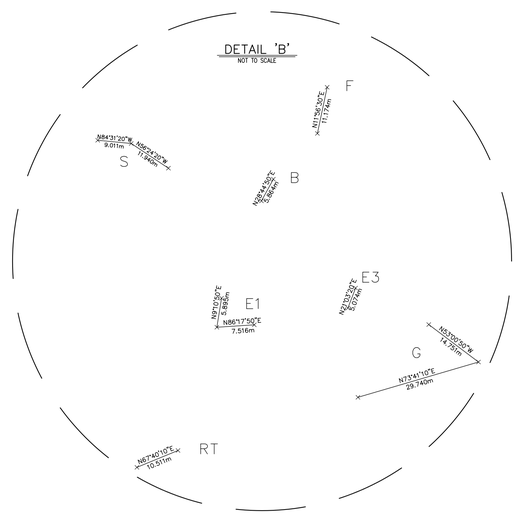


DETAIL 'A'
NOT TO SCALE



DETAIL 'C'
NOT TO SCALE





50 WHITEWOOD AVE
NEW LISKEARD
P0J 1P0
705–622–0872
www.surveyorsonsite.com

DRAWN BY: PRR	CHECKED BY: RWS	DATE: MAY 27, 2022	FILE: NL2022–057_BASELINE

PLAN 54R - 3814

RECEIVED AND DEPOSITED
92 MAR. 23
D.A. Perry
Dep. LAND REGISTRAR FOR THE LAND TITLES DIVISION OF TIMISKAMING

I REQUIRE THIS PLAN TO BE DEPOSITED UNDER THE LAND TITLES ACT
March 10, 1992
P. L. FINOS
SURVEYOR GENERAL
MINISTRY OF NATURAL RESOURCES

CAUTION:
THIS PLAN IS NOT A PLAN OF SUBDIVISION WITHIN THE MEANING OF THE PLANNING ACT.

PLAN AND FIELD NOTES OF
MINING CLAIMS
L 475258, L 475259, L 475260
AND L 475261
BEING
THE SOUTH PART OF LOT 12, CONCESSION VI
IN THE
TOWNSHIP OF OTTO
DISTRICT OF TIMISKAMING
SCALE: 1 INCH =300 FEET
J. E. WALKER, O.L.S.
1990

TOWNSHIP OF GRENFELL | TOWNSHIP OF TECK
CON I | CON I
CON VI | CON VI
TOWNSHIP OF EBY | TOWNSHIP OF OTTO

LOT 1 | LOT 12

FD. IB (S.C.) & WOOD POST POST SCRIBED: GRN □ TECK EBY □ OTTO

477.00' NORTH(P-3152) N0°01'30"W(M)

324.44'

SIB (MTO)

5'

PLAN 111849 T. (P-3152)

145'

152.56'

1300.55'(P1)(P2) 1301.03'(M)

CM (MTO)

N79°29'30"E(OTTO TWP)

THE KING'S HIGHWAY 66

150'

N79°29'30"E(OTTO TWP) (P1) 1300.93'(M) 1300.55'(P1)(P2)

= N79°24'30"E(EBY TWP)(P2) (REFERENCE BEARING)

CM (MTO) (TOP BROKEN)

CM (MTO)

237.39' (P1 & P2)

E.F. 65±50.0m (P-3152)

CM (MTO)

PLAN 111804 T. (P-3154-1)

MINING CLAIM L 16425

MINING CLAIM L 16424

MINING CLAIM L 16423

1337.49'(ACY) 1332.19'(MEAS)

NORTH(P-3152) N0°09'30"E(M) 855.19'

NO EVIDENCE

FD. IB (ACY)(1913) SCRIBING ILLEGIBLE

MINING CLAIM L 8868 (PATENTED) PARCEL 3117 S.S.T.

MINING CLAIM L 17723 (PATENTED) PARCEL 4767 S.S.T.

MINING CLAIM L 8866 (PATENTED) PARCEL 2890 S.S.T.

(SURVEYED BY A. C. YOUNG, O.L.S.) (NOVEMBER 7, 1913)

BOUNDARY AS ESTABLISHED BY A. MATHESON, O.L.S. (1929).

N89°12'40"E(P)(AM) N89°50'30"W (MEAS)

1188.66'(ACY)

NORTH(ACY) 1337.49'(ACY) 1329.84'(M)

NORTH(P-3152) N0°02'20"W(M)

33.29'

1499.94'(MEAS) 1236'(P)

N89°21'40"E(MEAS)

LIMIT AS REQUESTED BY MNR.

297.66'

NO EVIDENCE IB

FD. 4" CED. POST & CED. BT(AM) (1929) POST SCRIBED: □ XII SET POINT ON THE STRAIGHT LINE JOINING THE IB'S AT THE N.E. AND S.E. CORNERS OF PARCEL 2890 S.S.T. HOLDING (AM)(1929) BT. DISTANCE. REPLACED WITH SIB & 6" CED. POST FD. BT. 6"CED. N32°20'E(M) N30°E(AM) 6.73' BT. 9"CED. S47°25'E 11.99'

N 1/2 LOT 1, CON VI
S 1/2 LOT 1, CON VI

FD. IB (ACY)(1913) SCRIBED: 16361 PLT'D 6" CED. POST

2621.46'(MEAS) 1289.73'

L 532865 (UNSURVEYED)

PART 1 (AREA = 24.86 ACRES)

SSIB

2085.10' 733.07' 2196.45'(M) 1.81'E(P) 2297.80'

PART 2 (AREA = 5.04 ACRES)

713.38' 50' 47984 T/PARCEL 237 N.N.D. 750.00' REF.& L & RIGHT-OF-WAY TRANSFER

N43°05'10"E N43°E(P) N43°05'10"E(M) N43°05'10"E

L 475258 | L 475259

PART 3 (AREA = 130.02 ACRES)

N.E. CORNER S PART LOT 12, CON VI
FD. REMAINS OF 4" CED. POST & CED. BT (AM)(1929) POST LYING ON GROUND. SCRIBING PARTIALLY LEGIBLE...1X □ S1. RE-ESTABLISHED CORNER FROM 8" CEDAR BT.(AM)(1929) HOLDING (AM) BEARING AND DISTANCE.
NOTE: (AM)(1929) DISTANCES APPEAR TO BE SWITCHED BETWEEN BEARING TREES. 0.10 CHAINS, FIT LINE OF TREES BLAZED, IN 1929, ON 3 SIDES. 0.18 CHAINS WOULD LOCATE A LINE TWO FEET NORTH OF THE BLAZED LINE. REPLACED WITH SSIB & 6" CEDAR POST
FD. BT 10" CED. N8°E 6.60' BT 8" BIR. N57°50'W 6.18'

N43°05'10"E 35.23' 16.93'

SSIB

2389.87'

890.05' (MEAS) 1140'(SC)(1926)

2389.99'

SIB(WIT)

69.19'

69.19'

L 843837 (UNSURVEYED)

2912.67'(MEAS) 2923.14'(P)(AM)

MINING CLAIM L 8497 (PATENTED) PARCEL 2882 S.S.T.

L 532922 (UNSURVEYED)

ENLARGEMENT NOT TO SCALE

SIB & 6"CED. POST
N89°12'40"E(P)(AM)
N89°50'30"W (MEAS)

33.29' 4"CED. 2.68' 14"CED. 1.34' 10"CED. 3.29'

NORTH(P-3152) N0°02'20"W(M)

1499.94'(MEAS) 1236'(P)

N89°21'40"E (MEAS)

297.66' (ACY;1913 SET)

NO EVIDENCE IB

PART 1

FD. IB (ACY)(1913) SCRIBED: 16361 PLT'D 6" CED. POST

24"IB(DRILLED IN BEDROCK)(WIT)

73.25' 73.25'

S PART LOT 12, CON VI
(SURVEYED BY A. MATHESON, O.L.S.) (APRIL 7, 1929)

2952.41'(MEAS) 2923.14'(P)(1912) 2912.58'(ACY)(1913)

2674.98'(ACY)(1913) 2681.48'(MEAS)

1331.73'(MEAS) 1315'(P)

NORTH(P-3152) N0°02'10"E (MEAS)

LOT 1 | LOT 12 | LOT 11

TOWNSHIP OF EBY | TOWNSHIP OF OTTO

LOT 1 | LOT 12 | LOT 11

L 532922 (UNSURVEYED)

L 475261 | L 475260

MINING CLAIM L 8498 (PATENTED) PARCEL 2807 S.S.T.

NO°03'E (MEAS) N0°04'30"E(P-3152)

CONCESSION VI

CONCESSION VI

S.W. CORNER LOT 12, CON VI
SSIB IN ROCK CAIRN (MTO)(P-3152) PLT'D 6" SPRUCE POST

S. E. CORNER LOT 12, CON VI
SIB(MTO)(P-3152)

N89°12'40"E (MEAS) N89°07'55"E(P-3152)

2388.96' (MEAS) 2390.52'(P-3152)

S.E. CORNER LOT 1, CON VI
SSIB IN ROCK CAIRN (MTO)(P-3154-1) PLT'D 6" SPRUCE POST

60.06'(ACY)(P-3152)(MEAS) N0°12'30W(MEAS)

CON VI | CON V

CON VI | CON V

CONCESSION

L 532924 (UNSURVEYED)

511330 (MINING LEASE PATENT) PARCEL 5616 L-T. (SECONDLY)

511331 (MINING LEASE PATENT) PARCEL 5616 L-T. (SECONDLY)

511578 (MINING LEASE PATENT) PARCEL 5616 L-T. (THIRDLY)

N 1/2 LOT 12

LOT 1 | LOT 12 | LOT 11

KEY PLAN SCALE: 1 INCH = 2640 FEET

GRENFELL TWP. | TECK TWP.
EBY TWP. | OTTO TWP.
HIGHWAY 66 | KING'S HWY | HYDRO LINE | RIVER
L 17990 | L 16425 | L 16424 | L 842767 | L 843837 | L 17723 | L 8868 | L 8866 | L 8867 | L 532866 | L 532865 | L 475258 | L 475259 | L 8497 | L 532923 | L 532922 | L 475261 | L 457260 | L 8498 | L 532925 | L 532924 | L 511330 | L 511331 | L 511578
CON VI | CON V

SCHEDULE							
PART	MINING CLAIM	LOT	CON.	ACRES	HECTARES	INST./PARCEL	REMARKS
1	L 475258, L 475259 L 475261	12	VI	24.86	10.061	CROWN	
2	L 475258, L 475259 L 475261	12	VI	5.04	2.041	CROWN	SUBJECT TO RIGHT-OF-WAY (UNDER TANSFER 47984 T. PARCEL 237 N.N.D.)
3	L 475258, L 475259 L 475260, L 475261	12	VI	130.02	52.615	CROWN	
TOTAL AREA				159.92	64.717	MINING AND SURFACE RIGHTS	
						MNR LAND FILE No. 13410	

BEARING NOTE:
BEARING ARE ASTRONOMIC AND ARE REFERRED TO THE SOUTH LIMIT OF THE KING'S HIGHWAY 66 AS SHOWN ON PLAN P-3152 HAVING A BEARING OF N79°29'30"E.

LEGEND:

■	DENOTES	SURVEY MONUMENTS FOUND
□	DENOTES	SURVEY MONUMENTS PLANTED
S.S.T.	DENOTES	SOUTH SECTION TIMISKAMING
N.N.D.	DENOTES	NIPISSING NORTH DIVISION
T.	DENOTES	TIMISKAMING
P	DENOTES	PARCEL 237 N.N.D.
ACY	DENOTES	A. C. YOUNG, O.L.S.(1913 SURVEY)
AM	DENOTES	A. MATHESON O.L.S.(1929 SURVEY)
S.C.	DENOTES	SUTCLIFFE COMPANY
MEAS	DENOTES	MEASURED
BT	DENOTES	BEARING TREE
WP	DENOTES	WOOD POST
CED.	DENOTES	CEDAR TREE
BIR.	DENOTES	BIRCH TREE
P_1	DENOTES	PLAN P-3152
D	DENOTES	TREE FOUND WITH ORIGINAL BLAZES ON THREE SIDES
P_2	DENOTES	PLAN P-3154-1
H.E.P.C.	DENOTES	HYDRO ELECTRIC POWER COMMISSION OF ONTARIO
WIT	DENOTES	WITNESS
MNR.	DENOTES	MINISTRY OF NATURAL RESOURCES

CONFLICTION CERTIFICATE

I HEREBY CERTIFY THAT I HAVE CAREFULLY EXAMINED THE GROUND INCLUDED IN MINING CLAIMS L 475258, L 475259, L 475260 AND L 475261 SURVEYED BY ME AND HAVE OTHERWISE MADE ALL REASONABLE INVESTIGATIONS IN MY POWER TO ASCERTAIN IF THERE WAS ANY OTHER SUBSISTING CLAIM CONFLICTING THEREWITH AND I CERTIFY THAT I HAVE FOUND NO TRACE OR INDICATION AND HAVE NO KNOWLEDGE OR INFORMATION OF ANY SUCH CLAIM.

J. E. WALKER
ONTARIO LAND SURVEYOR

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT:
(1) THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE MINING ACT, THE LAND TITLES ACT, AND THE REGULATIONS MADE THEREUNDER;
(2) I WAS PRESENT AT AND DID PERSONALLY SUPERVISE THE SURVEY REPRESENTED BY THIS PLAN;
(3) THIS PLAN CONTAINS A TRUE COPY OF THE FIELD NOTES OF SURVEY;
(4) THE SURVEY WAS COMPLETED ON THE 31st DAY OF AUGUST, 1990.

ENGLEHART, ONTARIO
SEPTEMBER 7, 1990

JAMES E. WALKER
ONTARIO LAND SURVEYOR

J. E. WALKER SURVEYING LTD.
ONTARIO LAND SURVEYOR

ORDER № CL 6256
EXAMINED BY _____

FIELD	OFFICE	FILE
J.E.W., M.H., E.G.	J.E.W., M.L.	90-15

N89°12'40"E(P)(AM)
N89°50'30"W (MEAS)

NORTH(P)
N0°02'20"

1499.94'(MEAS)
1236'(P)

N89°21'40"E(MEAS)

2389.87'

890.05' (MEAS)
1140'(SC)(1926)
2389.99'

69.19'

SIB(WIT)

69.19'

N43°0[illegible]

35.2[illegible]

16.93'

14"CED. 1.34'
10"CED. 3.28'
12"BIR. 1.53'
12" CED. 0.69'
12" CED. 0.06'
16"
0
9"
2
13
18
10" CED.
1.05'
12" BIR. 0.99'

66'
297

NO EVIDENCE IB

F Vein

LIMIT AS REQUESTED BY MNR.

Reed Showing

FD. 4" CED. POST & CED. BT(AM)
(1929) POST SCRIBED: □ XII
B Vein SET POINT ON THE STRAIGHT
LINE JOINING THE IB'S AT THE
N.E. AND S.E. CORNERS OF
PARCEL 2890 S.S.T. HOLDING
(AM)(1929) BT. DISTANCE.
REPLACED WITH SIB & 6" CED. POST
FD. BT. 6" CED. N32°20'E(M)
N30°E(AM) 6.73'
BT 9" CED. S47°25'E 11.99'

Magnetic Structure

E3
E2
E1

2095.10'
733.07'
2196.45'(M) 1811'± (P)
2297.80'

SSIB

713.38'
50'
50' 47984 T.(PARCEL 237 N.N.D.)
TRANSFER
& RIGHT-OF-WAY

2912.67'(MEAS)
2923.14'(P)(AM)

2621.46'(MEAS)
1289.73'

N. E. CORNER
S PART LOT 12, CON VI
FD. REMAINS OF 4" CED. POST & CED. BT
(AM)(1929) POST LYING ON GROUND.
SCRIBING PARTIALLY LEGIBLE: 1X S1
RE-ESTABLISHED CORNER FROM
8" CEDAR BT.(AM)(1929) HOLDING (AM)
BEARING AND DISTANCE.
NOTE: (AM)(1929) DISTANCES APPEAR
TO BE SWITCHED BETWEEN BEARING TREES.
0.10 CHAINS, FIT LINE OF TREES BLAZED, IN
1929, ON 3 SIDES. 0.18 CHAINS WOULD LOCATE
A LINE TWO FEET NORTH OF THE BLAZED LINE.
REPLACED WITH SSIB & 6" CEDAR POST
FD. BT 10" CED. N8°E 6.60'
BT 8" BIR. N57°50'W 6.18'

PART 1
(AREA = 24.86 ACRES)

G3
G2
G4
G1

SIB

PART 2
(AREA = 5.04 ACRES)

Reed Trench Vein

LOT 1
LOT 12
OF

N43°05'10"E
750.00' H.E.P.C.
N43°05'10"E(M) N43°E(P) ℄ & RIGHT-OF-WAY
N43°05'10"E

L 475258

PART 3
(AREA = 130.02 ACRES)

L 475259

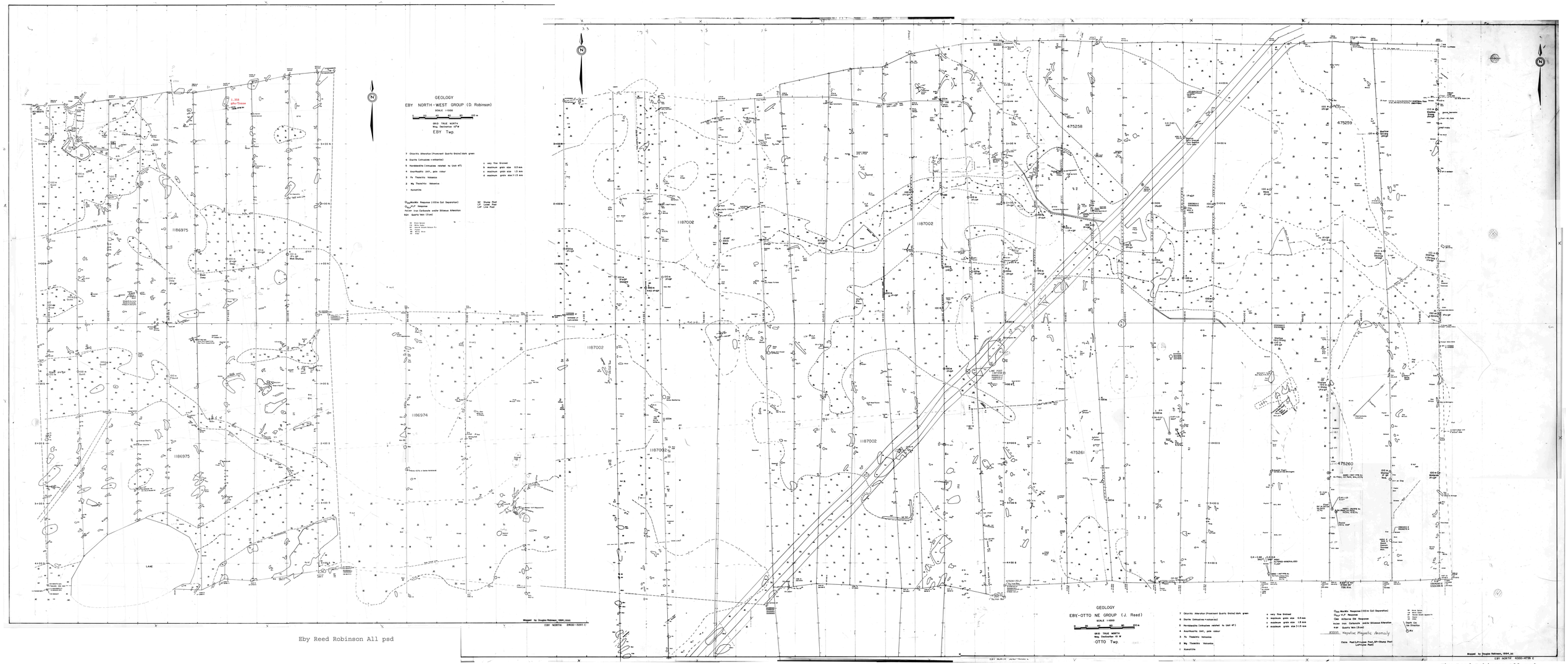
Legend
Conductor
ubcrop Stripped

0 100 200m

LOT 12
LOT 11

D
)(WIT)

S PART LOT 12, CON VI



Eby Reed Robinson All psd

Eby Reed Robinson All psd

F Vein

B Vein

Reed Showing

Magnetic Structure

E1

E2

E3

G2

G3

G4

Reed Trench Vein

475258

475259

Bedrock More Sheared Than Bedrock To N-East

Shallow Strong IP>QP

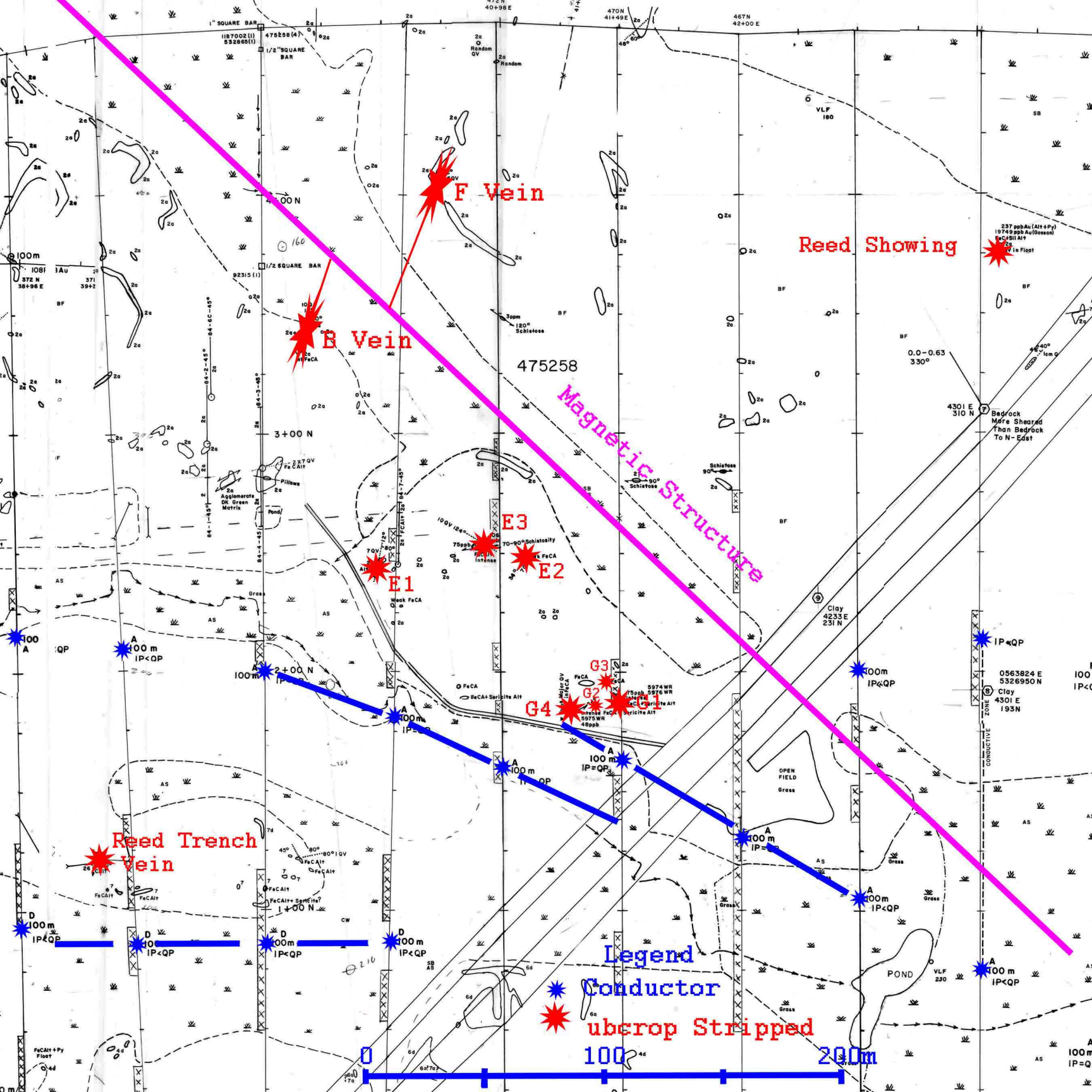
Shallow Very Strong

Legend

Conductor

Outcrop Stripped

0 100 200m


F Vein
B Vein
Reed Showing
Magnetic Structure
E1
E2
E3
G1
G2
G3
G4
Reed Trench Vein
Legend
Conductor
ubcrop Stripped
0
100
200m

2021 MAPPING Reed Showing psd.psd

0563858 E

0563860 E

0563862 E

2022 SOS Survey
0.00m Reference Point
5,327,220.308 mN
563,861.450 mE
5327215 N

Zero Ref Point
0563860E 5327215 N
Nad 83
2x2 inch Picket

UTM NAD 83 +/- 3 meters
Declination 11oW
~14.27 Square Meters of Subcrop were
Exposed by Hand-stripping and Hand Washing
and Scrubbing
Map by Doug Robinson Consulting
Original Scale 1cm = 0.25m

5327214 N

5327212 N

5327210 N

5327208 N

Dark Green Basalt

090o Shear

A
0.048

Gossan Intensely
Broken Ground
G 8.89

0.517 B

Edge May 2021

Edge Nov. 2021

H 8.02

I
14.037

082o

072o
Shear

010o
70o

78o

090o

1.886
+4.50Ag
C

210o
85o

Dark Green
Hornfels?

0.031
D

055o

0.140 E

<0.005
F

048o

0 1 2m

Reference Line 186o 9.75m

6m 2x2 Picket

7m

8m

9m

9.75m 2x2 Picket

Pyritic Albite Alteration

Shear, Foliation

Strong Joint
Azimuth 210o Dip 85o

N

Canada Silver Cobalt Works
Otto Tp,
Reed Showing
Vein Geology
December 2021

Assays
A = 0.048 gAu/Tn, <1.0gAg/Tn/0.35m
B = 0.517 gAu/Tn, <1.0 gAg/Tn/0.42m
C = 1.886 gAu/Tn, 4.50 gAg/Tn/1.25m
D = 0.031, gAu/Tn,<1.0 gAg/Tn/0.96m
E = 0.141 gAu/Tn, <1.0 gAg/Tn/0.51m
F = <0.005 gAu/Tn, <1.0 gAg/Tn,/0.25m

G = 8.89 gAu/mT/0.55m
H = 8.02 gAu/mT/0.61m
I = 14.037 gAu/mT/0.40
including 18.82gAu/0.2m

G3 Subcrop
CaMgFe-Carbonate
Alteration with
Quartz Veining

P 0.048, 3.90

O 0.010, 2.04

Assays With Sample Numbers G3
O 7726 0.010gAu, 2.04gAg/mI/0.03m
P 7727 0.048gAu, 3.90gAg/mI/0.03m

UTM NAD 83 +/- 3 meters
G3 "2.01 Square Meters of
Subcrop were Exposed by
Hand-stripping and
Hand Scubbed/Washed.
Original Sale 1cm = 0.25m
Declination 11oW
Map by Doug Robinson Consulting

Canada Silver
Cobalt Works
Otto Tp.
G3 Stripping
Vein Geology
November 2021

LEGEND
= 4cm Quartz Vein
194o Dip 25o North
= Channel Sample

G1 Subcrop
CaMgFe-Carbonate
Alteration
with Shallow
NW & N Dipping
Quartz Veining

G 0.022, 1.14

H 0.017, 2.82

I 0.742, 2.70

Canada Silver
Cobalt Works
Otto Tp.
G1 Stripping
Vein Geology
November 2021

UTM NAD 83 +/- 3 meters
G1 "12.78 Square Meters of
Subcrop were Exposed by
Hand-stripping and
Hand Scubbed/Washed.
Original Sale 1cm = 0.25m
Declination 11oW
Map by Doug Robinson Consulting

Assays With Sample Numbers G1
G 7718 0.022gAu, 1.14gAg/mI/0.83m
H 7719 0.017gAu, 2.82.gAg/mI/0.56m
I 7720 0.742Au, 2.70gAg/mI/0.78m

LEGEND
= 4cm Quartz Vein
194o Dip 35o North
= Channel Sample

SOS Survey Zero Ref
5,327,025.7mN
563,709.7mE

Zero Reference Point for
Reference Line 315o to G3 Stripping
Reference Line 252o, 29.75m to
17 cm Blazed Balsam at G4 Stripping
Reference Line 173o, 7.6m to
1.2m Deep Hand Dug pit.
NO subcrop encountered.
Pit refilled.

G2 Subcrops
CaMgFe-Carbonate
Alteration with
Shallow Dipping
Quartz Veining

J 0.008, 2.58

K 0.007, 2.16

L 0.017, 1.74

M 0.086, 1.56

N 0.026, 1.20

Assays With Sample Numbers G2
J 7721 0.008gAu, 2.58gAg/mI/0.57m
K 7722 0.007gAu, 2.16gAg/mI/0.93m
L 7723 0.017gAu, 1.74gAg/mI/0.55m
M 7724 0.086gAu, 1.56gAg/mI/0.75m
N 7725 0.026gAu, 1.20gAg/mI/0.20m

LEGEND
= 4cm Quartz Vein
194o Dip 25o North
= Channel Sample

Canada Silver
Cobalt Works
Otto Tp.
G2 Stripping
Vein Geology
November 2021

UTM NAD 83 +/- 3 meters
G3 Subcrop "6.07 Square Meters of
Subcrop were Exposed by
Hand-stripping and
Hand Scubbed/Washed.
Original Sale 1cm = 0.25m
Declination 11oW
Map by Doug Robinson Consulting

G4
Subcrop

<- CaMgFe-Carbonate Alteration

F 0.161gAu, <1.00

E 0.139, 1.08

D 0.036, <1.00

A 0.043, <1.00

C 0.033, 3.66

B 0.025, <1.00g

<- 30cm Fault Gouge Rusty

<-Pyritic Albite-Sericite Alteration

<-- Multi-Generation Pyritic Sericitic Quartz Vein
Averaging 080o Dip 70oS.

All of Outcrop G4 is CaMgFe Altered

29.75 Meters
Reference Point
17 cm Blazed Balsam
252o, 29.75 meters
from Zero Reference Point
at G1 Stripping.

Assays With Sample Numbers G4
A 7708 0.043gAu, <1.00gAg/mI/0.74m
B 7709 0.025gAu, <1.00gAg/mI/0.25m
C 7710 0.033gAu, 3.66.gAg/mI/0.49m
D 7711 0.036gAu, <1.00gAg/mI/0.54m
E 7712 0.139gAu, 1.08gAg/mI/0.0.28m
F 7713 0.161gAu, <1.00gAg/mI/0.86m

G4 Stripping
UTM NAD 83 +/- 3 meters
G4 "5.52 Square Meters of
Subcrop were Exposed by
Hand-stripping and
Hand Scubbed/Washed.

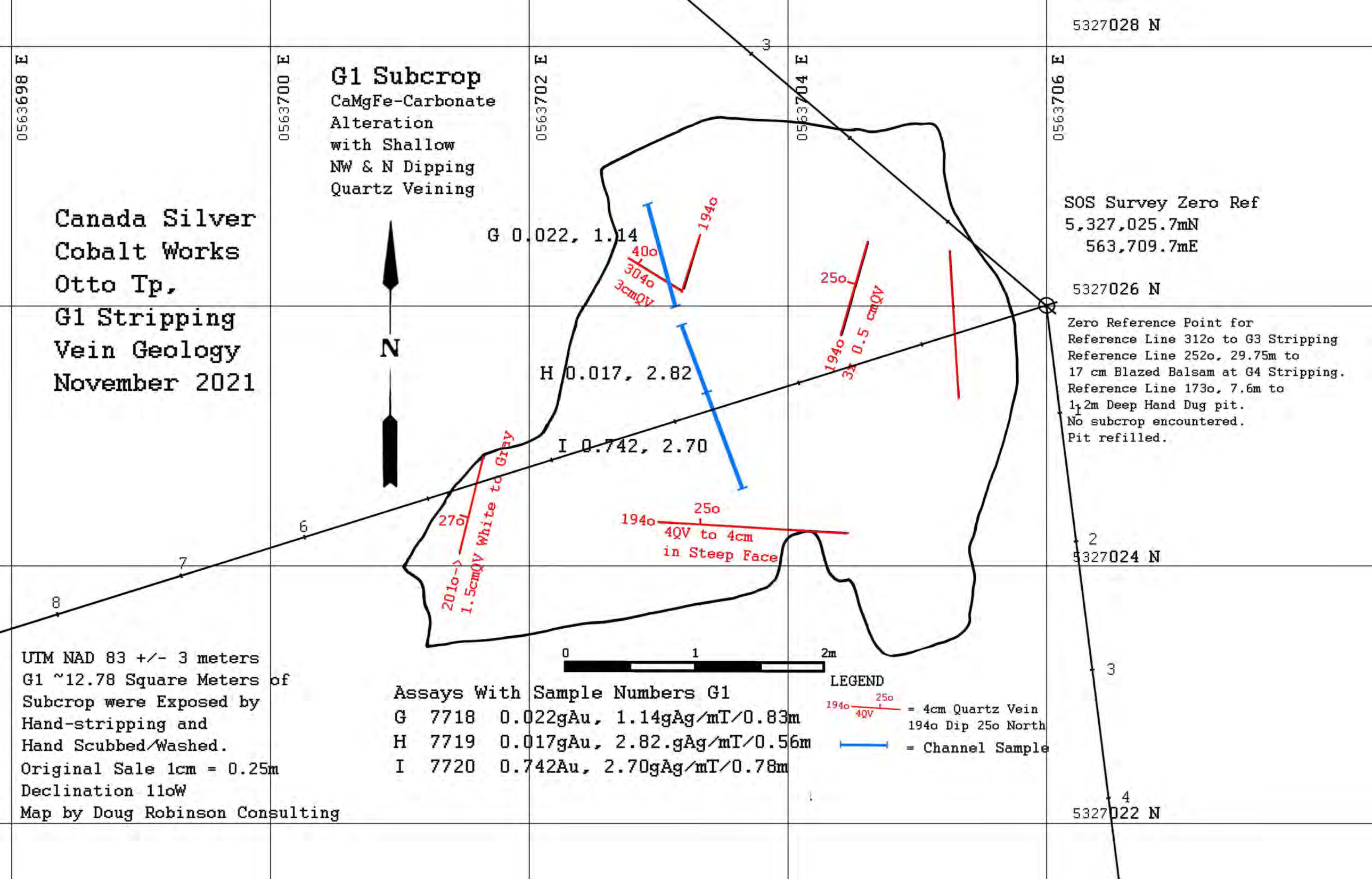
Original Sale 1cm = 0.25m
Declination 11oW
Map by Doug Robinson Consulting

Canada Silver
Cobalt Works
Otto Tp.
G4 Vein Stripping
Vein Geology
November 2021

Canada Silver Cobalt Works Otto Tp, G1 Stripping Vein Geology November 2021

G1 Subcrop

CaMgFe-Carbonate Alteration with Shallow NW & N Dipping Quartz Veining



UTM NAD 83 +/- 3 meters
G1 ~12.78 Square Meters of Subcrop were Exposed by Hand-stripping and Hand Scubbed/Washed.
Original Sale 1cm = 0.25m
Declination 11oW
Map by Doug Robinson Consulting

Assays With Sample Numbers G1

G	7718	0.022gAu,	1.14gAg/mT/0.83m
H	7719	0.017gAu,	2.82.gAg/mT/0.56m
I	7720	0.742Au,	2.70gAg/mT/0.78m

LEGEND

194o 25o / 4QV = 4cm Quartz Vein 194o Dip 25o North

= Channel Sample

2021-MAPPING G2 2021-12-01 Float.psd

G2 Subcrops

CaMgFe-Carbonate Alteration with Shallow Dipping Quartz Veining

5327022 N

5327020 N

5327018 N

5327016 N

0563682 E

0563684 E

0563688 E

0563690 E

N

J 0.008, 2.58

K 0.007, 2.16

L 0.017, 1.74

M 0.086, 1.56

N 0.026, 1.20

0.5cm Qv 154o->

05o

1cmQV 176o

15o

3cmQV 102o

70o

240o

12o

<- 126o Severe 0.5cmQV

15o

15o

<-200o Quartz Vein Set to 2cm

<-200o Quartz Vein Set to 2cm

16 17 18 19 20 21 22 23 24 25 26

1 2m

0 1 2m

rbonate Alteration ->

onate Alteration

<- 30cm Fault Gouge Rusty

North Dipping QV ->
in Steep Face
QV 060o Dip 80o S->

3, <1.00

<-Pyritic Albite-Sericite Alteration

025, <1.00g

<-- Multi-Generation Pyritic Sericitic Quartz Vein
Averaging 080o Dip 70oS.
Altered

Assays With Sample Numbers G4

A	7708	0.043gAu,	<1.00gAg/mT/0.74m
B	7709	0.025gAu,	<1.00gAg/mT/0.25m
C	7710	0.033gAu,	3.66.gAg/mT/0.49m
D	7711	0.036gAu,	<1.00gAg/mT/0.54m
E	7712	0.139gAu,	1.08gAg/mT/0.0.28m

Assays With Sample Numbers G2

J	7721	0.008gAu,	2.58gAg/mT/0.57m
K	7722	0.007gAu,	2.16gAg/mT/0.93m
L	7723	0.017gAu,	1.74gAg/mT/0.55m
M	7724	0.086gAu,	1.56gAg/mT/0.75m
N	7725	0.026gAu,	1.20gAg/mT/0.20m

LEGEND

194o 25o 40V = 4cm Quartz Vein 194o Dip 25o North

= Channel Sample

UTM NAD 83 +/- 3 meters

G3 Subcrop ~6.07 Square Meters of Subcrop were Exposed by Hand-stripping and Hand Scubbed/Washed.

Canada Silver Cobalt Works
Otto Tp,
G2 Stripping
Vein Geology
November 2021

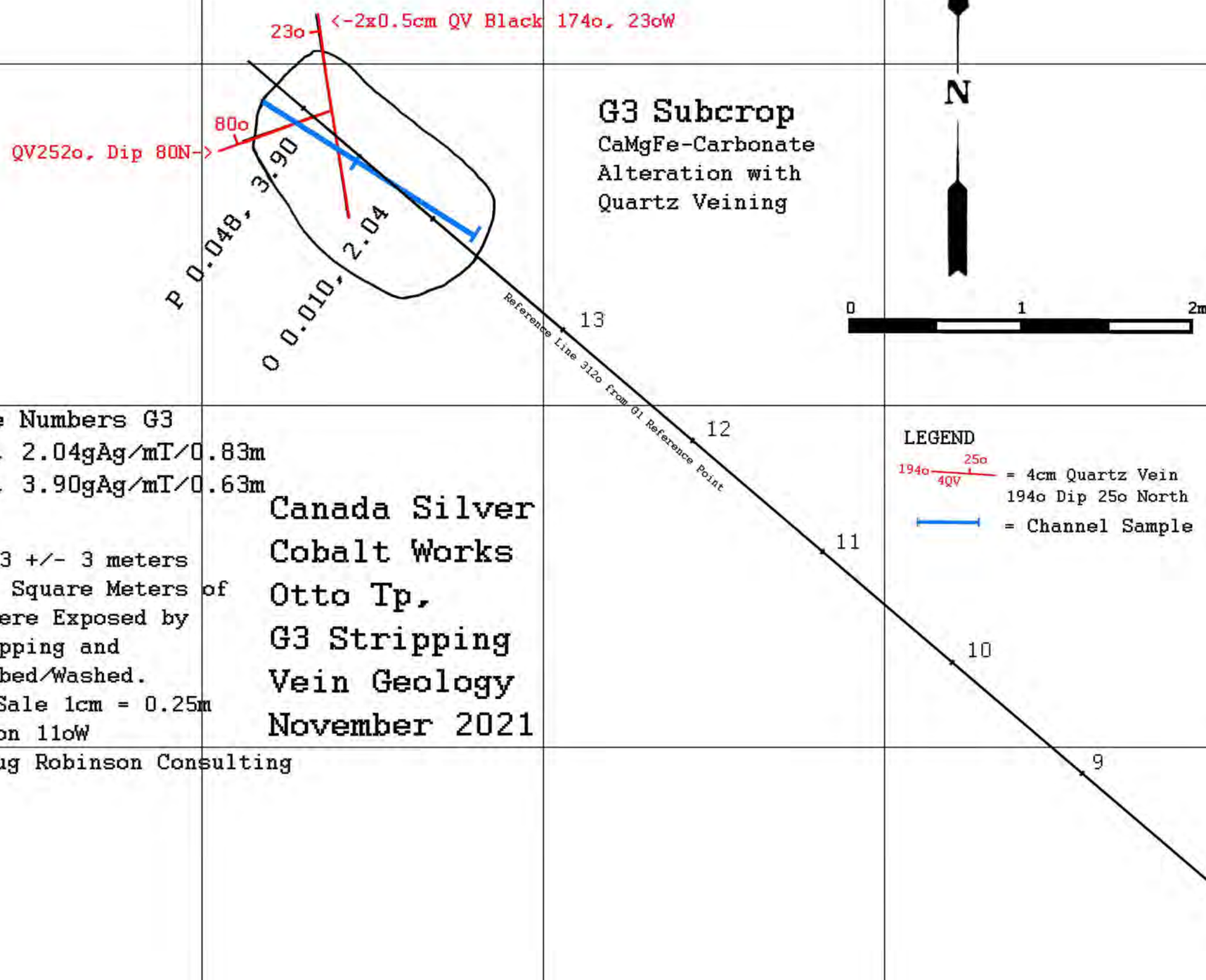
2021 MAPPING G3 2021-12-01 Float.psd

0563690 E | 0563692 E | 0563694 E | 0563696 E | 0563698 E | 0563700 E

5327036 N

5327034 N

5327032 N



G3 Subcrop

CaMgFe-Carbonate Alteration with Quartz Veining

LEGEND

194o 25o 4QV = 4cm Quartz Vein 194o Dip 25o North

= Channel Sample

Assays With Sample Numbers G3

O	7726	0.010gAu, 2.04gAg/mT/0.83m
P	7727	0.048gAu, 3.90gAg/mT/0.63m

UTM NAD 83 +/- 3 meters

G3 ~2.01 Square Meters of Subcrop were Exposed by Hand-stripping and Hand Scubbed/Washed.

Original Sale 1cm = 0.25m

Declination 11oW

Map by Doug Robinson Consulting

Canada Silver Cobalt Works Otto Tp, G3 Stripping Vein Geology November 2021

2021 MAPPING G4V 2021-12-01 Float.psd

0563678 E

0563680 E

0563682 E

G4 Subcrop

N

0 1 2m

CaMgFe-Carbonate Alteration ->

<- CaMgFe-Carbonate Alteration

F 0.161gAu, <1.00

5,327,018mN

E 0.139. 1.08

D 0.036, <1.00

A 0.043, <1.00

<-Pyritic Albite-Sericite Alteration

C 0.033, 3.66

B 0.025, <1.00g

<-- Multi-Generation Pyritic Sericitic Quartz Vein
Averaging 080o Dip 70oS.

J 0.008, 2.58

K 0.007, 2.16

L 0.017, 1.74

05o

240o

15o

1cmQV 176o

North Dipping QV ->
in Steep Face
QV 060o Dip 80o S->

M 0.086, 1.56

N 0.026, 1.20

21 22 23 24 25 26 27 28 29

<- 30cm Fault Gouge Rusty

Ass
J
K
L
M
N

LEGEND

194o 25o 4QV

29.75 Meters
Reference Point
17 cm Blazed Balsam
252o, 29.75 meters
from Zero Reference Point
at G1 Stripping.

All of Outcrop G4 is CaMgFe Altered

Assays With Sample Numbers G4

A	7708	0.043gAu,	<1.00gAg/mT/0.74m
B	7709	0.025gAu,	<1.00gAg/mT/0.25m
C	7710	0.033gAu,	3.66.gAg/mT/0.49m
D	7711	0.036gAu,	<1.00gAg/mT/0.54m
E	7712	0.139gAu,	1.08gAg/mT/0.0.28m
F	7713	0.161gAu,	<1.00gAg/mT/0.86cm

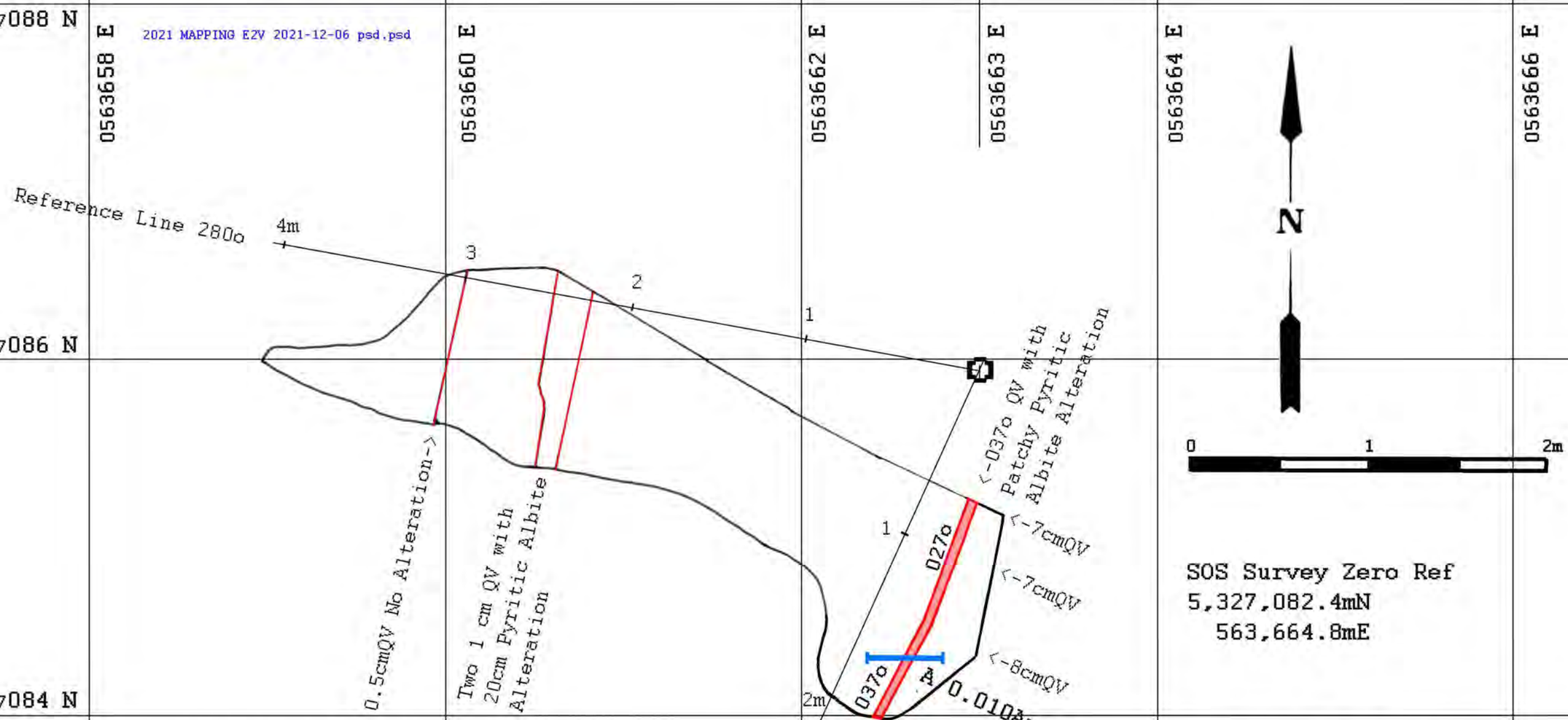
G4 Stripping
UTM NAD 83 +/- 3 meters
G4 ~5.52 Square Meters of
Subcrop were Exposed by
Hand-stripping and
Hand Scubbed/Washed.

UTM NAD 83 +/- 3 me
G3 Subcrop ~6.07 S
Subcrop were Expose
Hand-stripping and
Hand Scubbed/Washed

SOS Survey 29.75m Ref
5,327,017.4 mN
563,681.2mE

5,327,016mN

Canada Silver Cobalt Works Otto Tp, G4 Vein Stripping Vein Geology November 2021



Assays With Sample Numbers
A 7728 0.010gAu, 2.82gAg/mT/0.41m
B 7729 0.048gAu, 2.16gAg/mT/0.08m
Original Sale 1cm = 0.25m
Declination 11oW
Map by Doug Robinson Consulting
UTM NAD 83 +/- 3 meters
~3.34 Square Meters of Subcrop
were Exposed by Hand-stripping and
Manually Brushed Clean
This appears to be a secondary structure
Related to a Nearby Primary Structure.
Power Stripping Along Strike or Drilling a Hole
Intersecting this Vein at a Low Angle and at
a High Angle to Potential Related Primary Structure
is Advised

LEGEND
7cmQV = 7cm
Quartz Vein

Canada Silver Cobalt Works
Otto Tp,
E2 Vein
Vein Geology
November 2021

2021 MAPPING E3 2021-12-06 psd.psd

5327086 N

5327084 N

5327082 N

5327080 N

5327078 N

0563644 E

0563646 E

0563647 E

0563648 E

N

SOS Survey Zero Ref
5,327,084.4 mN
563,649.9mE

<-- Zero Reference Point
Blazed Balsam.
Reference Line 5.97m
at 194o.

CaMgFe Carbonate and
Pyritic Albite Alteration
Veining Dips 65oN -->

20cm QV->

Foliation 080o

A 0.043Au, 1.74Ag

65o

<-8cm QV

B 0.022Au, 2.22Ag

<-6cm QV

<-18cm QV

Foliation 080o

1

2

3m

4

5

The North Outcrop Alteration and
Veining may be Part of a
Primary Structure.
Mechanical Stripping a NS Line from
this Alteration and Veining is
Recommended.

The Veining in E3 South Outcrop Appears
to be Secondary Veining possibly at
a High Angle to Primary structures,
Possibly Including the North Outcrop Zone.

Very Hard, Pale Gray
0.5mm groundmass Texture-->

3cm QV->

<-3cm QV

<-Intense Bleaching

QV

Foliation 059o

LEGEND

3cmQV = 3 cm Quartz Vein

0 1 2m

Original Sale 1cm = 0.25m
Declination 11oW
Map by Doug Robinson Consulting

Fererence Point
Aluminum Tag 3 cm Balsam

UTM Nad 83 +/-2 meters
Origin 0563647E, 5327084N

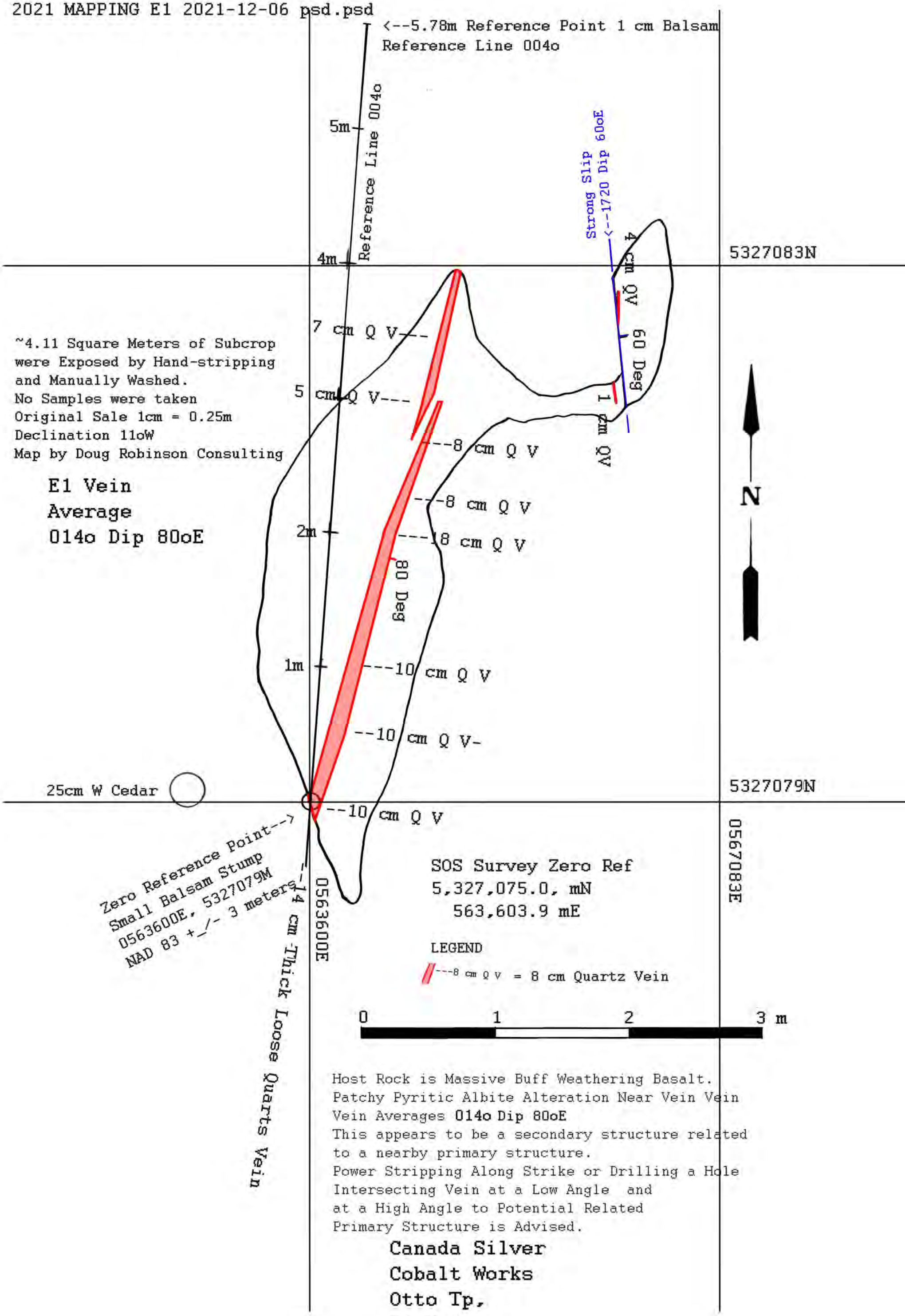
Assays With Sample Numbers
A 7730 0.043gAu, 1.74gAg/mT/0.45m
B 7731 0.022gAu, 2.22gAg/mT/0.48m

~4.19 Square Meters of Subcrop
were Exposed by Hand-stripping and
Manually Washed.
UTM NAD 83 +/- 3 Meter=

Canada Silver
Cobalt Works
Otto Tp,
E3 Vein
Dip 65oN
Vein Geology

by Doug Robinson Consulting
Nov 2021

2021 MAPPING E1 2021-12-06 psd.psd



~4.11 Square Meters of Subcrop were Exposed by Hand-stripping and Manually Washed.
No Samples were taken
Original Sale 1cm = 0.25m
Declination 11oW
Map by Doug Robinson Consulting

E1 Vein
Average
014o Dip 80oE

Host Rock is Massive Buff Weathering Basalt.
Patchy Pyritic Albite Alteration Near Vein Vein
Vein Averages **014o Dip 80oE**
This appears to be a secondary structure related to a nearby primary structure.
Power Stripping Along Strike or Drilling a Hole Intersecting Vein at a Low Angle and at a High Angle to Potential Related Primary Structure is Advised.

Canada Silver
Cobalt Works
Otto Tp,
E1 Vein
Vein Geology
Novenber 2021

2021-MAPPING RTV 2021-12-01 psd.psd

0563484 E

0563486 E

0563488 E

0563490 E

0563492 E

N

Assays With Sample Numbers Reed Trench Vein
A 7732 0.010gAu, <1.00gAg/mT/0.38m
B 7733 0.005gAu, 1.14gAg/mT/0.47m

<-38cm QV

<-38cm QV

<-34cm QV

<-35 cm QV

<-23cm QV

<-24cm QV

<-34cm QV

<-27cm QV

-3

-1

2

3

4

10.75m-> to Stump

A 7732 0.010, <1.00

B 7733 <0.005, 1.14

Zero
Reference
Point
Nail in Stump

<--3cm Shear with
Minor Quartz

SOS Survey Zero Ref
5,326,945.5 mN
563,488.2 mE

<--1.5-4.0cm CaMgFe-Carbonate
Alteration along 0.5 cm Shear

5326948 N

5326946 N

0 1 2m

Legend
Quartz Vein
Fault

Origin Variable Readings
0563491E 5326947N
0563485E 5326952N
0563476E 5326947N
0563488E 5326950N

UTM NAD 83 +/- 3 meters
7.1 Square Meters of
Subcrop were Exposed by
Hand-stripping and
Hand Scrubbed/Washed
Original Sale 1cm = 0.25m
Declination 11oW
Map by Doug Robinson
Consulting

Canada Silver
Cobalt Works
Eby Tp,
Reed Trench Vein
Vein Geology
Strike 080o Dip 85oS
November 2021

Vein and Fault Strike 080o Dip 85oS
Vein Fractured with CaMgFe-Carbonate and Pyrite Fracture Filling.
Fracturing Filling Concentrated in Southern Part of Vein.
Vein Fractured at 175o.
Fault Breccia of Various Compositions and Angular to Well-Rounded.

2021 MAPPING 2021-12-06 PSD

A Strong SE Trending Lineament with an Associated Magnetic Feature
is Located Between B Vein and F Vein (84 m at 045o from Vein B).
B Vein and F Vein Appear to be Secondary Structures (Ore Vectors) to this
Lineament Structure.
This Apparent Primary SE Trending Feature Warrants Drilling,
Possibly Collared at 4000E, 350N 073o 0 (100m horizontal distance) and
Collared near Base line 000N, 4300E-4350E, 360o (Target 030-160N).

5327174N

5327172N

5327170N

5327168N

5327166N

N

SOS Survey Zero Ref
5,327,172.7 mN
563,578.2 mE
=

Swamp Starts at 8 meters

<- Zero Reference Point
Short Stump Flagged
Reference Line 027o

0.5cm QV

1.0cm QV

<-0.7m 6.0 cm Q V

<-1.0m 12.0cm Q V

<-1.5m 8.0cm Q V

<-1.7m 18.0cm Q V

<-2.0m 17.0cm Q V

<-2.5m 9.0cm Q V

3.0m 9.0cm Q V->

3.5m 5.0cm Q V->

4.0m 3.5cm Q V->

4.5m 3cm Q V->

5.0m 1cm Q V->

Slips
340o 75oN

1

3

4

5

6

LEGEND
Quartz Vein
Measured in cm

7.1 Square Meters of Subcrop were
Exposed by Hand-stripping and
Manually Washed.
UTM NAD 83 +/- 3 meters
Decclinatoion 11o West
No samples Taken

0563578E

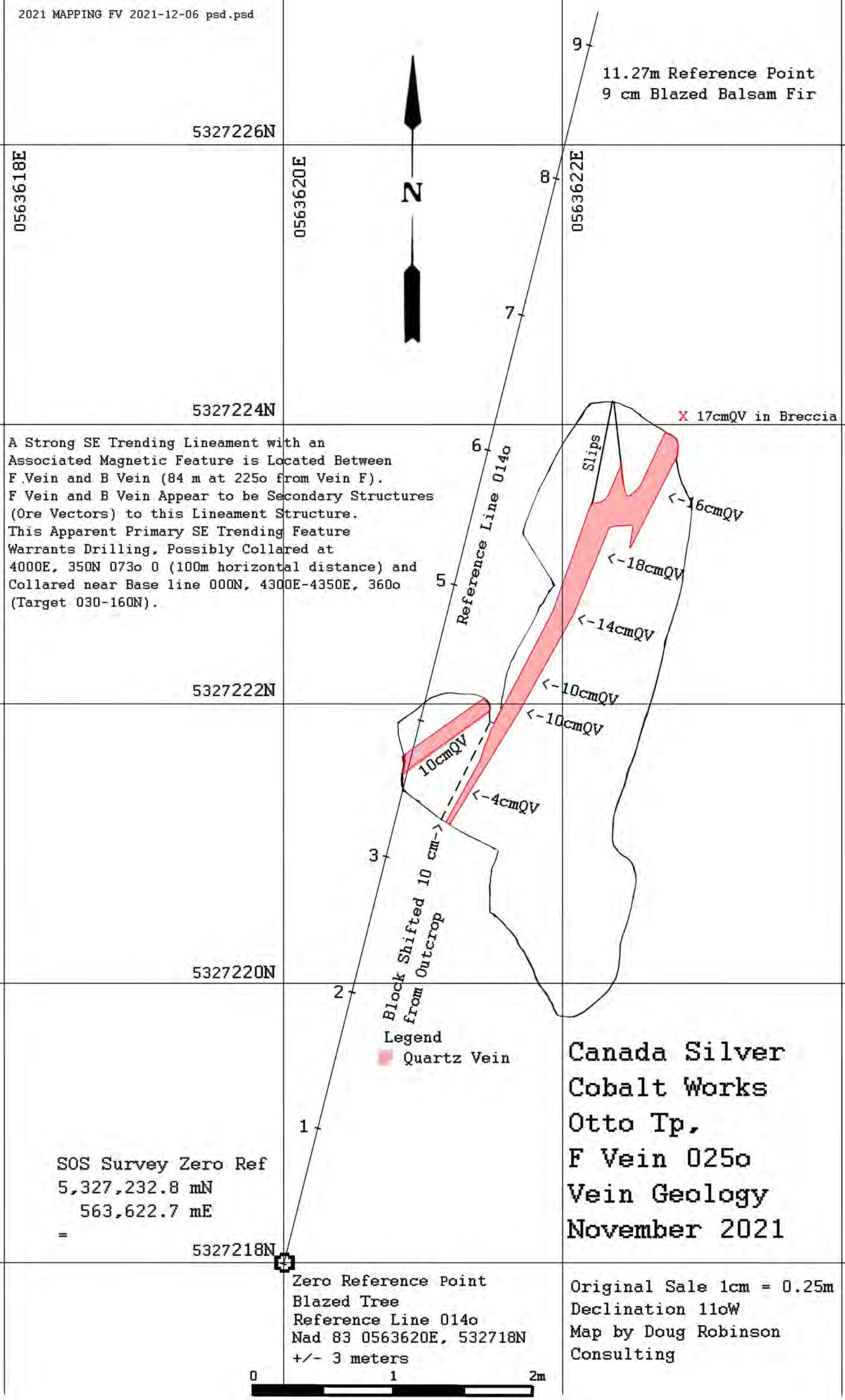
0563580E

0563582E

Original Sale 1cm = 0.25m
Declination 11oW
Map by Doug Robinson
Consulting

Canada Silver Cobalt Works
Otto Tp,
B Vein 029o
Vein Geology
November 2021

2021 MAPPING FV 2021-12-06 psd.psd



A Strong SE Trending Lineament with an
Associated Magnetic Feature is Located Between
F Vein and B Vein (84 m at 225o from Vein F).
F Vein and B Vein Appear to be Secondary Structures
(Ore Vectors) to this Lineament Structure.
This Apparent Primary SE Trending Feature
Warrants Drilling, Possibly Collared at
4000E, 350N 073o 0 (100m horizontal distance) and
Collared near Base line 000N, 4300E-4350E, 360o
(Target 030-160N).

Legend
Quartz Vein

SOS Survey Zero Ref
5,327,232.8 mN
563,622.7 mE
=

Zero Reference Point
Blazed Tree
Reference Line 014o
Nad 83 0563620E, 532718N
+/- 3 meters

0 1 2m

Canada Silver Cobalt Works
Otto Tp,
F Vein 025o
Vein Geology
November 2021

Original Sale 1cm = 0.25m
Declination 11oW
Map by Doug Robinson
Consulting

4.58 Square Meters of Hand Stripping

MAPPING RV 2021-12-04 All psd.psd

2021-MAPPING RV 2021-12-04 West Part

2021-MAPPING RV 2021-12-04 East Part psd.psd

0562254E 0562256E 0562258E 0562260E 0562262E 0562264E 0562266E 0562268E

5327164N 5327162N 5327160N

UTM NAD 83 +/- 3 meters
Declination 11o West
Four Subcrops total
~9.77 Square Meters of
Subcrop Exposed by
Hand-Stripping and
Hand Scrubbed/Washed.
Original Sale 1cm = 0.25m
Declination 11oW

Legend
= Quartz Vein
F <0.00 = Channel Sample Aug/mT

0 1 2m

N

Hand Stripping
= 0.43 sq m

3.8m
10cm
Balsam

SOS Survey Zero Ref
5,327,156.0 mN
562,256.0 mE

Canada Silver
Cobalt Works
Eby Tp.
Hand Stripping
R Vein
Vein Geology
Average 070o Dip 75N
November 2021
By Doug Robinson
Consulting

0.0m
14cm
Balsam

Hand Stripping
= 6.33 sq m

E <0.00
F <0.00
A 0.007
B 0.233
C 0.031
D 0.015
H0.025
G 0.008
Grab Sample
1.358gAu/mT

Reference Line 071 Azimuth

The wall rock is medium grained dark green chloritic with distictive pale grey 2% specks of Leucoxene(?)

A = 7714 0.007gAu/mT, <1.00gAg/mT/0.10m
B = 7715 0.233gAu/mT, <1.00gAg/mT/0.26m
C = 7716 0.031gAu/mT, <1.00gAg/mT/0.43m
D = 7717 0.015gAu/mT, <1.00gAg/mT/0.40m
E = 7740 <0.005gAu/mT, <1.00gAg/mT/0.77m
F = 7741 <0.005gAu/mT, <1.00gAg/mT/0.18m
G = 7742 0.008gAu/mT, <1.00gAg/mT/0.61m
H = 7743 0.025gAu/mT, <1.00gAg/mT/0.21m
I = Grab Sample 1.358gAu/mT
J = 1255409 Grab Sample 1.470gAu/mT
J = 1258410 Grab Sample 0.070gAu/mT

Legend
= Quartz Vein
F <0.00 = Channel Sample Aug/mT

0 1 2m

N

6cm Q Vein
060o

Hand Stripping
= 1.23 sq m

UTM NAD 83 +/- 3 meters
Declination 11o West
Four Subcrops total
~9.77 Square Meters of
Subcrop Exposed by
Hand-Stripping and
Hand Scrubbed/Washed.
Original Sale 1cm = 0.25m
Declination 11oW

14.17
12cm
Balsam

Hand Stripping
= 1.78 sq m

Canada Silver
Cobalt Works
Eby Tp.
Hand Stripping
R Vein
Vein Geology
Average 070o Dip 75N
November 2021
By Doug Robinson
Consulting

2021-MAPPING RV 2021-12-04 West Part

UTM NAD 83 +/- 3 meters
Declination 11o West
Four Subcrops total
~9.77 Square Meters of
Subcrop Exposed by
Hand-Stripping and
Hand Scrubbed/Washed.
Original Sale 1cm = 0.25m
Declination 11oW

0562254E
0562256E
0562258E
0562260E
0562262E
5327164N
5327162N
5327160N

N

0 1 2m

Hand Stripping
= 6.33 sq m

Legend
= Quartz Vein
= Channel Sample
Aug/mT

F <0.00
F <0.00
E <0.00
A 0.007
B 0.233
C 0.031
D 0.015
H0.025
G 0.008

Reference Line 071 Azim
5
6

Grab Sample
1.358gAu/mT

Hand Stripping
= 0.43 sq m

3
2
1
3.8m
10cm
Balsam

SOS Survey Zero Ref
5,327,156.0 mN
562,256.0 mE

0.0m
14cm
Balsam

Canada Silver Cobalt Works
Eby Tp.
Hand Stripping
R Vein
Vein Geology
Average 070o Dip 75N
November 2021
By Doug Robinson
Consulting

The wall rock is medium grained dark green chloritic with distictive pale grey 2% specks of Leucoxene(?)

A = 7714 0.007gAu/mT, <1.00gAg/mT/0.10m
B = 7715 0.233gAu/mT, <1.00gAg/mT/0.26m
C = 7716 0.031gAu/mT, <1.00gAg/mT/0.43m
D = 7717 0.015gAu/mT, <1.00gAg/mT/0.40m
E = 7740 <0.005gAu/mT, <1.00gAg/mT/0.77m
F = 7741 <0.005gAu/mT, <1.00gAg/mT/0.18m
G = 7742 0.008gAu/mT, <1.00gAg/mT/0.61m
H = 7743 0.025gAu/mT, <1.00gAg/mT/0.21m
I = Grab Sample 1.358gAu/mT
J = 1255409 Grab Sample 1.470gAu/mT
J = 1258410 Grab Sample 0.070gAu/mT

2021 MAPPING RV 2021-12-04 East Part psd.psd

ripping
sq m

E <0.00

007
233

rab Sample
.358gAu/mT

007gAu/mT, <1.00gAg/mT/0.10m
.233gAu/mT, <1.00gAg/mT/0.26m

Legend

= Quartz Vein

F <0.00 = Channel Sample
Aug/mT

0 1 2m

N

5327164N

5327162N

5327160N

0562260E

0562262E

0562264E

0562266E

0562268E

Reference Line 071 Azimuth

5 6 7 8 9 10 11 12 13 14

14.17
12cm
Balsam

6cm Q Vein
060o

Hand Stripping
= 1.78 sq m

Hand Stripping
= 1.23 sq m

UTM NAD 83 +/- 3 meters
Declination 11o West
Four Subcrops total
~9.77 Square Meters of
Subcrop Exposed by
Hand-Stripping and
Hand Scrubbed/Washed.
Original Sale 1cm = 0.25m
Declination 11oW

SOS Survey Zero Ref
5,327,156.0 mN
562,256.0 mE

Canada Silver
Cobalt Works
Eby Tp.
Hand Stripping
R Vein
Vein Geology
Average 070o Dip 75N
November 2021
By Doug Robinson
Consulting

Channel Stripping 2021 Eby Tp

Magnetic Susceptibility 10^{-3}SI

Sample	From (m)	to (m)	Width (m)	Sample Weight grams	Outcrop	Description		Hardness	Dry weight g	grams In Water	Displacement gm	SG	Decimal Fraction Py	Average	10^{-3}SI	10^{-3}SI	10^{-3}SI	10^{-3}SI	Conductivity
46708				0	Reed Showing	sample 46708. 10% indistict pyrite grains in part concentrated in bands. 40% pale hard > steel, white silicate bands (albite), 40% hard, pale grey silicate interstitial to white bands and 20% hard > steel, dark green patches.0.5 cm rusty brown weathering rind.	46708	> Steel	1027	664	363	2.83	0.10	5.05	5.19	4.35	5.51	5.14	0
7702	0.00	0.35	0.35	1,252	Reed Showing	0.00-0.35 South Dark green shear zone with moderate foliation 2% fine disseminated pyrite< 001 to 0.5mm	7702	<< Steel	281	178	103	2.73	0.01	1.85	1.01	0.79	0.84	1.06	0
7703	0.35	0.77	0.42	1,376	Reed Showing	0.35-0.77m South. Friable rusty rock, mostly <1cm chips. Includes a 6 cm fresh rock piece as intense albite pyrite alteration Most of sample <1cm chips. The chunk is mrdium grey bands hard -> steel and dark green bands soft << steel.	7703	<-> Steel	259	169	90	2.88	0.05	29.60	14.9	28.1	45.8		0
7704	0.77	2.02	1.25	5,700	Reed Showing	0.77-2.02 m South including 0.77-1.24 m Intense patchy pale grey yellow albite pyrite alteration with masses of pyrite to 5 cm wid. From 1.24-2.02 patchy grey-yellow albite pyrite alteration with relict patches of med grey-green less altered rock. 45 & 45.0 10^{-3}SI has 5.5 & 1.0 cm fall back of pencil magnet	7704	> Steel	348	222	126	2.76	0.05	23.90	45.5	28.8	13.1	8.19	0
7704 Continued						7704 Continued	7704 Continued	> Steel	399	251	148	2.70		7704 Continued	24.2	10.9	14.8	5.55		

7704 Continued						7704 Continued	7704 Continued	> Steel			0			7704 Continued	4.17				
Qtz Standard									470	291	179	**2.63**		Qtz Standard					
7705	2.02	2.98	0.96	4,573	Reed Showing	2.02-2.98 m South. From 2.02-2.87 Massive dark green, hard with hairline calcite fracture fillings. From 2.87-2.98 patchy yellow albite pyrite alteration. Sample dominated by dark green, soft << steel with trace pyrite and 2% white calcite fracture filling. Also included bleached albititic pyrite alteration with 5% extremley fine to pyrite grains (13.1 SI10-3 SI with 1 cm fall back of pencil magnetete) associated with medium grey, extremley fine grained, hard > steel with 1% fine disemminated pyrite (26. 10-3 Si with 6 cm fall back of pencil magnet).	7705						**0.638**	0.49	0.59	0.53	0.94	0
7706	2.98	3.49	0.51	3,432	Reed Showing	2.98-3.49 m South. Intense pale yellow patchy albite pyrite alteration with 5% disseminated 0.1-1.0mm pyrite. Weak rusty brown weathering rind. Whole rock sample. Diminated by pale yellow pyritic albate alteration with 5% very fine dissewminated pyrite, hard > steel, non-magnetic to weakly magnetic. Also light grey, hard > steel, moderately to strongly magnetic with 4.0-5.0 cm fall back of pencil magnet, Trsace pyrite	7706	> Steel	543	352	191	**2.84**	0.05	**4.225**	0.9	7.8	1.7	6.5	0
7706 Continued	7706 Continued					7706 Continued	7706 Continued	> Steel	309	201	108	**2.86**	0.05	**7706 Continued**					0

7707 W Rx	3.49	3.74	0.25	1,903	Reed Showing	3.49-3.47 m South Uniform and massive, extremely fine grained, medium green. Hare Line calcite fracture filling. 1% fine disseminated pyrite <0.5 mm. Moderately hard < steel. Thin white weathering rind.	7707 W Rx	< steel	664	422	242	2.74	0.02	0.873	0.59	0.56	1.92	0.42	0
7708	0.00	0.74	0.74	3,072	G4 Vein WRx	0.00-0.74 m South East Cut. Wall rock north of vein. Shear banded light grey, hard with paler yellow grey alteration. Includes two masses of coarse pyrite (1.3x2.2 cm, 4.3x1.3 cm) and scattered 0.3x1.5 cm dark green lenses with 5% extremely fine disseminated pyrite and disseminated pyrite in groundmass.	7708	hard > steel	565	356	209	2.70	0.01	0.316	0.45	0.24	0.33	0.24	0
7708 Continued						7708 Continued	7708 Continued		391	251	140	2.79	0.02						
7709				1,258	G4 Vein	0.74-0.99 m South on East Cut. 20 cm quartz vein with 2% fine grained disseminated pyrite concentrated in grey-yellow fracture filling (and wall rock rip offs?)(5%). Includes 0.05 meters of wall rock. Quartz hard > steel Inclusions soft << steel	7709	hard > steel & Soft << steel	922	572	350	2.63	0.02	0.171	0.154	0.120	0.240		0
7710 Whole Rock				3,473	G4 Vein	0.00-0.49 m South From 0.00-0.44 Quartz vein. 0.44-0.49 wall rock. Quartz is coarse waxy appearance. Quartz and wall rock hard > steel. 1% fine pyrite.	7710 Whole Rock	hard > steel	1840	1149	691	2.66	0.01	0.159	0.097	0.211	0.178	0.148	0
7711 Whole Rock				2,998	G4 Vein WRx	0.49-1.03 m South, Center Channel. Silicified, shear banded, light grey with pale yellow grey alteration bands. Hairline fracture fillings. Sample includes 3.0x1.1 cm patch of massive coarse grained pyrite and 6.2x1.0 cm patch of coarse grained pyrite. Minor dark green streaks with up to 10% very fine grained pyrite. Includes 0.5 cm quasrtz fracture filling. Hard > steel.	7711 Whole Rock	hard > Steel	1506	942	564	2.67	0.01	0.196	0.195	0.157	0.227	0.204	

7712	1.03	1.31	0.28	1,890	G4 Vein Wall rock	1.03-1.31 m South Fault. Rusty Gouge as deep eroded channel.	7712		NA	NA	Na	NA	0.005							
7713 Whole Rock	1.03			4,925		1.31 - XXX Uniform and massive, very fine grained, light grey very soft << steel. No response to pencil magnet. Locally minor disseminated pyrite. Rusty brown weathering rind.	7713 Whole Rock	Soft << steel	1746	1121	625	2.79	0.005	0.722	0.950	0.739	0.700	0.499	0
7714	0.00	0.10	0.10	940	R Vein	0.00-0.10 South in East channel. Wall rock North of Vein Uniform and massive, dark green, very soft << steel, chloritic alteration. Dominent feature is 5% pale brown leucoxene grains.	7714	Soft << steel	780	507	273	2.86	0.00	0.565	0.623	0.571	0.530	0.537	0
7715	0.10	0.36	0.26	3,275	R Vein	0.10-0.36 South in East Channel. 26 cm wide Quartz Vein. Porous due to weathered out carbonate from between quasrz crystals. Highly fractures. Vein pas chlorite patches and bands. Vein includes 3.0 cm dark green, chlorititic wall rock with 5% leucoxene flecks.	7715		Porous Not measured	NA	NA	NA	0.00	0.195	0.12	0.35	0.16	0.15	0
7716	0.00	0.22	0.22	4,094	RV	0.00-0.22 m North in West Channel. Quartz Vein. Milky white quartz crystals, generally 0.4x1.0 cm and massive white quartz, and massive light green quartz. One 2.6x0.4 cm medium green wall rock fragment of chlotite alteration with 5% 1.0 mm leucoxene grains. 10 % of vein is hard > steel, dark green chloritic quartz infilling between quatz crystals.	7716			NA			0.00	85.17	0.12	340	0.21	0.34	0
7717	0.22	0.62	0.40	3,972	R Vein	0.22-0.62 m North in West west channel. Sampled on last day Wall rock north of vein. Cut legth 0.50 meters with horizontal width 0.40 meters	7717													
7718	0.00	0.83	0.83	2919 correct	G1 outcrop	0.00-0.83 m South Very fine grained, uniform and massive, light grey, moderately hard < steel. 10% dark green microfracture filling to 2 mm. Includes 0.4 cm quartz pale grey quartz vein and 1.0 cm black quartz vein with disseminated pyrite. 0.5 cm rusty brown weathering rind.	7718	Moderately hard < steel	1324	864	460	2.88	tr	0.778	0.618	1.120	0.643	0.731	0

7719	0.96	1.52	0.56	2289 Correct	G1 outcrop	m South. Very fine grained, uniform and massive with 5% dark green micro-fracture filling to 2mm and infilling interlocking breccia fragments. Moderately soft << steel. Prominent 0.5 cm rusty brown weathering rind. 0.01% extremely fine disseminated pyrite	7719	Moderately soft << steel	1370	887	483	**2.84**	tr	**0.6615**	0.694	0.544	0.674	0.734	0
7720	1.52	2.30	0.78	3,485	G1 outcrop	1.52-2.30 m South. Uniform and massive, very fine grained, light grey ww 20% dark green chloritic microfracture filling. Includes 3.5x0.8 cm patch with 30% pyrite in contact with and perpendiculat to thin pale grey to dark grey quatz vein (shallow dipping). Soft << steel to moderaltely hard < steel. 0.5 cm rusty brown weathering rind.	7720	soft << steel to moderately hard < steel	1800	1176	624	**2.88**	0.01	**0.61875**	0.628	0.661	0.577	0.609	0
7721	0.00	0.57	0.57	3,699	G2 outcrop	0.00-0.57 m South. Uniform and massive, extremely fine grained, light grey with 10% dark green-pale grey chloritr-carbonate microfracture filling	7721	moderately hard < steel	1806	1171	635	**2.84**	0.00	**1.968**	0.619	0.613	6.070	0.570	0
7722	0.57	1.50	0.93	3,907	G2 outcrop	0.57-1.50 m South. Uniform and msassive, moderately hard < steel, extremely fine grained, light grey, with 10% dark green chloritic micro fracture filling. 0.4 cm rusty brown weathering rind. Includes 1.2 cm and a 0.4 cm extremely fine grained, pale grey, cheerty appearing quartz vein parallel to the ourcrop surface. Trace pyrite.	7722	moderately hard < steel	1951	1259	692	**2.82**	0.01	**0.574**	0.579	0.582	0.504	0.631	0

7723	1.50	2.05	0.55	3,238	G2 outcrop	1.50-2.05 m South. Uniform and massive, moderatel soft to moderately hard < steel, extremely fine grained, light grey, with 10% dark green chloritic carbonate micro fracture filling. 1.2 & 0.8 cm irregular white quartz veins with 10% pyrite at 70-80 degrees to late banded cherty grey quartz vein which is parallel to the outcrop surface (shallow dippig). 2% pyrite concentrated in micro fracture filling and early quartz vein described above. 0.4 cm rusty brown weathering rind. 0.4 cm rustry brown weathering rind.	7723	moderately soft - moderately hard < steel	2060	1340	720	**2.86**	0.02	**0.66375**	0.670	0.754	0.653	0.578	0
7724	0.00	0.75	0.75	5,700	G2 Outcrop	South face of outcrop. Moderatel soft to moderately hard < steel, extremely fine grained, light grey, with 10% dark green chloritic micro fracture filling. Hairline to 2.2 cm quartx fracture filling to vewins at various angles and cross cutting relationships 2% pyrite pyritohrdral and cubic pyrite crystals to 3.0 mm concentrated wall rock. 1.5cm prominent rusty brown weathering rind. FIelds notes --> 0.75 m incline distance at 54 degree incline. Includes 2.0 & 1.2 cm quartz veins and small quartz freacture fillings. Appears to be 3 generations of veining [(A & B) 1.0 & 0.6 cm white quartz at 320 degrees dipping 32 degress north which ofsets (C)], [(C) 0.2-0.5 cm white quartz vein 020 degrees dipping 70 degrees east] and [(D) 0.8 cm transparentmediyum grey quartz veins at 320 degrees that appear to truncate vein (C)] Wall rock 1% 0.1-3.0 pyrite crystal}. 0.5 cm rusty brown weathering rind.	7724	moderately soft - moderately hard < steel	2046	1316	730	**2.80**	2.00	**0.66775**	0.656	0.744	0.549	0.722	0
7725					G2 Outcrop	Sample 0.035 m true width as 3.0 cm quartz vein with 0.5 cm pourous rusty brown weathering rind on one wall. Strike 115 degrees with dip ~20 degrees south. No pyrite observed.	7725	Hard > Steel	Not measured		####	**####**	0.00	**0.15925**	0.225	0.115	0.178	0.119	0

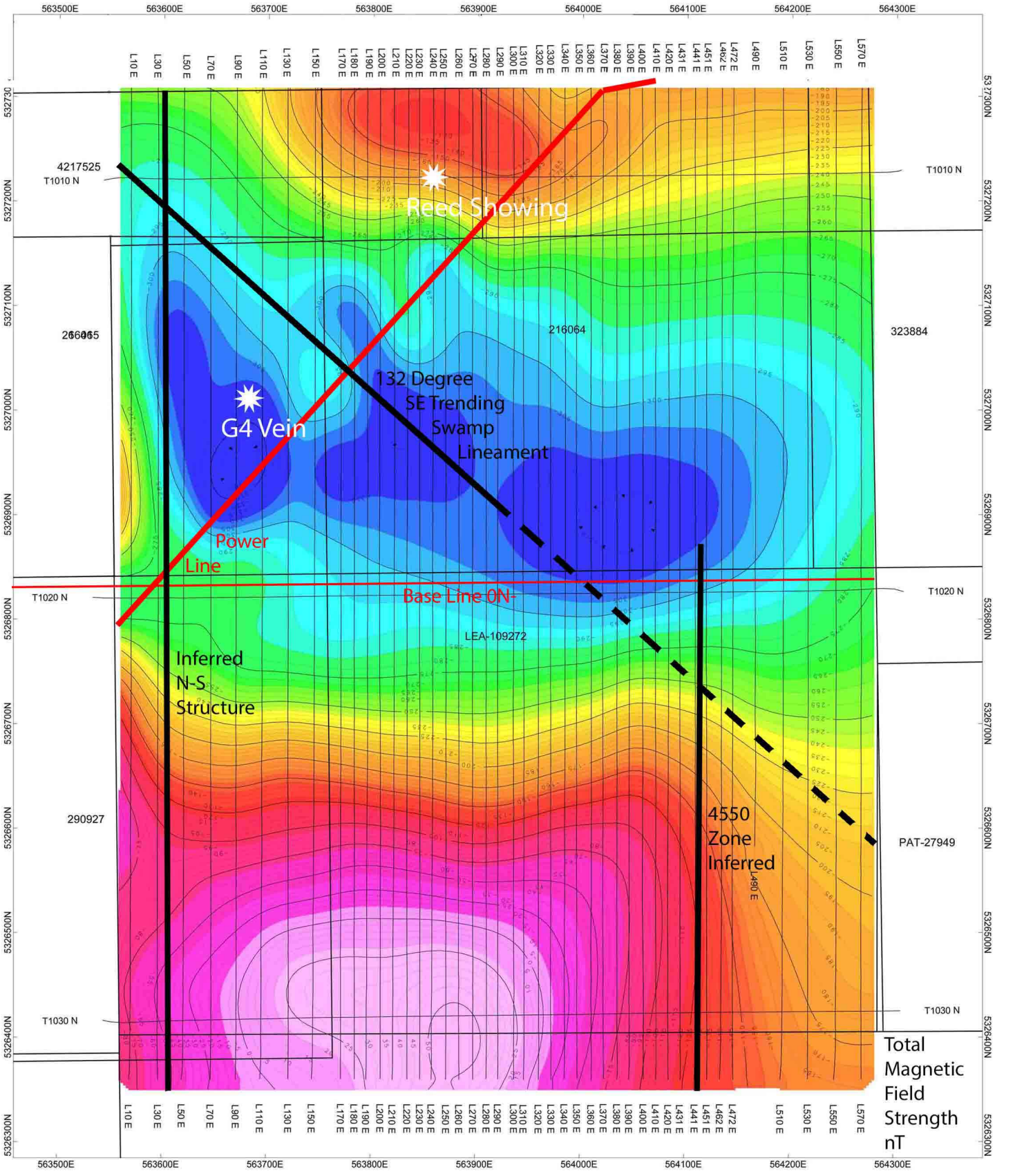
7726	0.00	0.83	0.78	3,948	G2 Outcrop	0.00-0.83 m North Very fine grained, uniform and massive, with <0.1 groundmass texture.light grey, moderately hard < steel. 15% dark green microfracture filling to 2 mm. Minor pyrite 0.5%. 0.6 cm rusty brwn weathering rind	7726	Moderately hard < steel	1461	941	520	**2.81**	0.01	0.677075	0.559	0.880	0.613	0.656	
7727	0.83	1.47	0.64	3,024	G3 Outcrop	0.8-1.47 m North. Uniform and massive, 0.2-0.5 mm textured, light greenish-grey, moderately hard to hard , - > steel. Appears to be massive unbedded tuff with pale grey and medium green fragments to 0.5 mm or a msassinve flow crystalline flow. Vein "A" 0.4 cm black chloritic quartz vein at ~016 degrees, dipping ~20 degrees NW. Vein "B" 0.6 cm very fine grained quartz vein with fibrous texture at 90 degrees to the walls. Strike ~0.16 degrees dip ~20 Degree NW. Vein "C" 0.6 cm white quartz vein, cross cutting vein 'B", Strike 062 degrees dip 90 degrees. Vein "D" hairline opaque white quartz vein truncated by veinss "B' & "C" and cross cutting vein "A", strike 102? Degrees Dip 35? degrees south. Trace pyrite	7727	Moderately hard to hard <> steel	1483	944	539	**2.75**	tr	0.45625	0.496	0.457	0.494	0.378	
7728	0.00	0.41	0.41	1265 ~~1280~~	E2 Vein	0.00--0.41 E Channel sample across 7.0 cm opaque white quartz vein . Wall rock massive, dark green 0.2 mm groundmass texture and 5% pale brown lecoxene angular grains (magnetism 0.460 10-3 SI) . Wall rock also includes hard pale grey patchy silicification that preserves relic groundmass texturete twith trace pyrite in wispy dark green chloritc streaks (magnetism 0.175 10-3 SI) 1% pyrite concentrated in fracture filling an within minor q ff of wall rock	7728				0	**####**	0.01						

7729	0.00	0.08	0.08	1,634	E2 Vein	0.00-0.08 m E Vein Sample South of Channel. 3.3 cm semi opaque white quartz vein in hard > steel, patchy pyriic pale yellow albitic alteration with 5% extremely fine to 0.5 mm disseminated pyrite and quartz flooding as fracture filling. Patches of soft <<steel chloritic alteratio. (Magnetisn 0.15 to 0.32 10-3 SI).	7729	Not measured			0	####	0.05		Not statitically valid 0.125 -0.32					
7730	0.00	0.45	0.45	2,436	E3 Vein WRx	0.00-0.45 m South. Patchy pyritic pale grey to pale grey albite alteration, hard > steel with 5% fine to 1.0 mm disseminated pyrite crystals. Minor pale grey carbonate fracture filling. 5% pale grey quartz carbonate veining.	7730	Hard > steel	1907	1212	695	**2.74**	0.05	**0.335**	0.367	0.340	0.359	0.274	0
7731	0.45	0.93	0.48	1,661	E3 Vein	0.45-0.93 m South. Includes 7 cm quartz vein in middle of sample and 7.0 cm qv in south end of sample and 5Rest of sample is pale yellow to grey ptyritic albite alteration. 10% diseminated pyrite in both wall rock and vein% disseminated pyrite in yellow grey bleached alteration	7731	Hard > steel	689	439	250	**2.76**	0.10	**0.2395**	0.190	0.225	0.326	0.217	0.4 max
7732	0.00	0.38	0.38	3,551	Reed Trench Vein	0.00-0.38 m South. Broken out as small rusty chips. Minor Pyrite. Ther vein is fracrured reducing the measured SG. Conductivity generally 0.0 with spot readings to 0.8 S/m. Sample measured measured from two chuncks representing extreme of variance A 424 gram chunk emphasises brittle, hard . steel, pale yellow fracture filling with 1% pyrite within fracture filing. The quartz appears to consist of 1.0-2.0 quartz domains defined by changes in parting partern of this quartz.	7732	Hard > steel.	424	263	161	**2.63**		**0.1405**	0.131	0.16	0.132	0.139	0.5
7732 Continued					Reed Trench Vein	Continuation of 7732 0.00-0.38 m South 321 gm piece of the purrest quartz. Opaque white quartz. The quartz appears to consist of 1.0-2.0 quartz domains defined by changes in parting partern of this quartz.	7732 Continued	Hard > steel.	321	198	123	**2.61**		**0.071**	0.05	0.075	0.075	0.084	0.5

Quartz Standard							Quartz Standard	Mod hard < steel	470	291	179	2.63		0.2495	0.33	0.038	0.32	0.31	0
7733	0.38	0.85	0.47	3,136	Reed Trench	0.38-0.85 m South. Dark green, uniform and massive,, <0.5 mm groundmsaas textured. Two generations of quartz fracture filling.	7733	Mod hard < steel	1427	902	525	2.72		0.5015	0.494	0.507	0.466	0.539	
7734 Whole Rock	0.00	0.45	0.45	2,101	S Vein WRx	0.00-0.45 m South in East Channel. (Microscope) Medium grey, moderately hard < steel, uniform and massive, with ~0.5 mm groundass texture with 5% pale glassy 0.5-1.0 glassy quartz grains. Wet hand specimen appears dark green, with 5% 0.1x0.5 mm flake leucoxene . Minor hairline quartz fracture fillingt perpendiculat to the vein. 5% py in 0.3 cm quartz fracture filling. Overall <0.01 % pyrite	7734 Whole Rock	Mod hard < steel	801	499	302	2.65	0.01	0.41975	0.341	0.455	0.524	0.359	0
7735	0.45	0.76	0.31	1,936	S Vein	0.45-0.76 m South in East Channel. Massive rusty trnsluscent white quartz vein with minor pyrite in fractures. Vein highly fractures. Sample includes 2.0 cm wall rock along the north edge. And includes 2.0 cm pale yellow silisious wall rock alteration along thje south edge. 3% pyrite in wall rock along south edge of sample. 2.2x0.2 cm seam of pyrite in fracture. Sample fractured reducing SG	7735	hard > steel	1156	711	445	2.60	0.01	0.08025	0.061	0.098	0.092	0.07	0
7736	0.76	1.05	0.29		S Vein WRx	0.76-1.05 m South in East Channel. Hard > steel. Extremely fine grained, pale grey, pyritic albitic alteration with 3% <0.1- 0.5 mm disseminated pyrite to 0.5 mm. From 0.99-1.05 dark green with 50% vague pinkish bleaching. 5% quartz fracture filling to 0.5 cm. Microfractured. Pale weathering	7736	hard > steel	1669	1043	626	2.67	0.03	0.38625	0.269	0.356	0.392	0.528	0

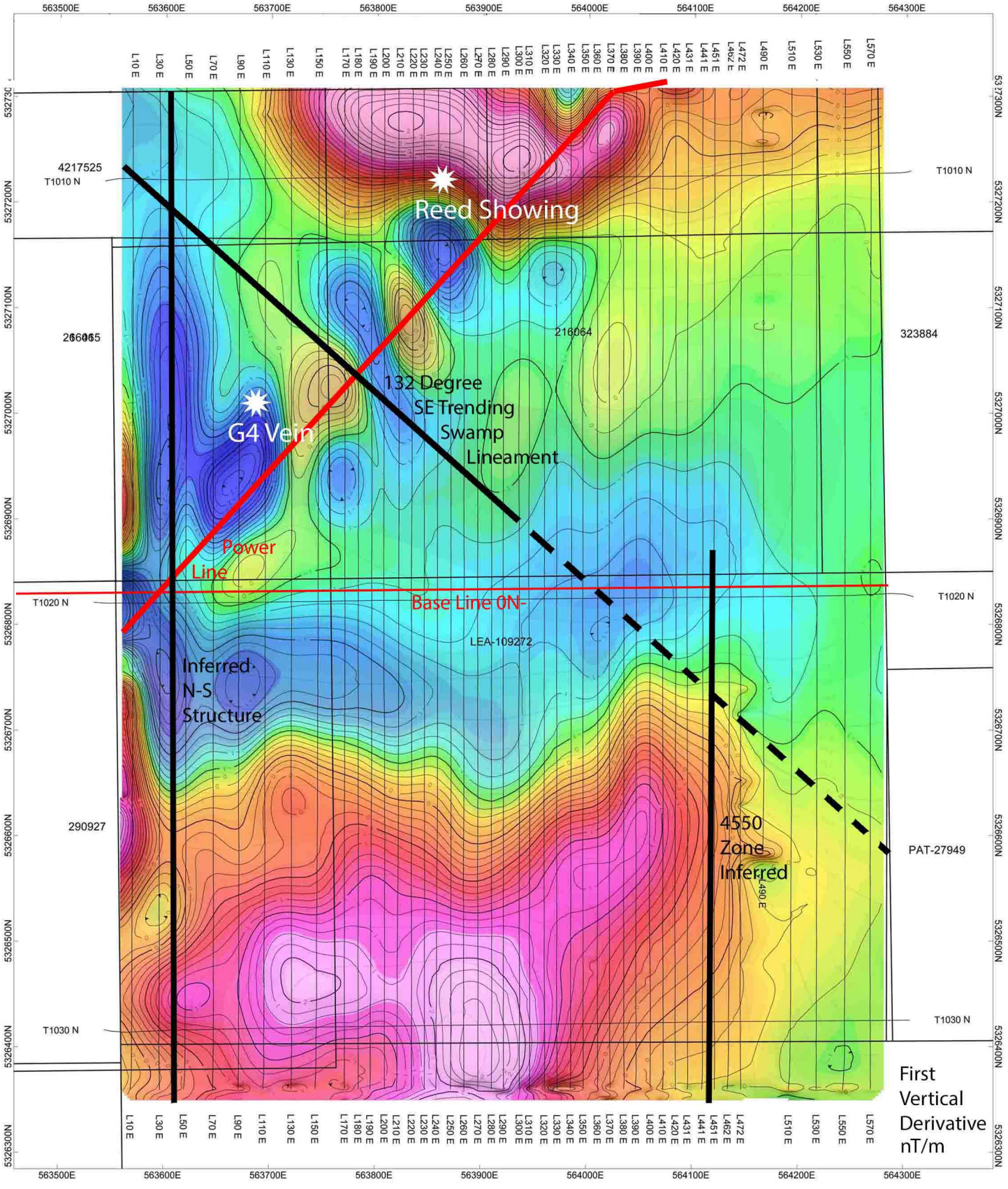
7737	0.00	0.31	0.31	1,921	S Vein	0.00-0.31 m South Weshannel 31 cm Massive glassy white quartz with patchy parvassiver yellow to brown rust. Minor coarse pyrite in rusty sections.	7737	hard > steel	1263	778	485	**2.60**	0.01	**0.06925**	0.045	0.099	0.093	0.04	
7738	0.00	0.36	0.36	1,964	S Vein	0.00-0.36 m South in Centre Channel. Massive white quartz quartz. Highly fractured reducing SG. Minor altered wall rock fragment.	7738	hard > steel	1359	836	523	**2.60**	0.00	**0.0695**	0.061	0.104	0.061	0.052	
7739	0.36	0.70	0.34	1,738	S Vein WRx	0.36-0.70 m South. Hard > steel. pale grey with 3% very fine disseminated pyrite interbanded with sost << steel dark green bands also with a 4 % fine did pyrite and a few large pyrite crystals. Rusty brown weathering rind on pale grey alteration. Sample includes 1.6 cm quartz vein at the north end of the sample. 5% quartz fracture filling to 0.5 cm.	7739	Hard & Soft << & > steel	1257	780	477	**2.64**	0.02	**0.375**	0.469	0.416	0.203	0.412	
Quartz Standard					Quartz Standard	Quartz Standard	Quartz Standard		470	291	179	**2.63**							
7740	0.00	0.77	0.77	3,680	R Vein	0.00-0.75 m Sost << steel from East channel. Wall rock, dark green chloritic alteration, fresh break is grungy due to lack of crystal texture. 3.0 cm blerached alteration band. Includes 0.5 cm quartz vein. Minor vpy. Pale brown leucoxene has appearanne of pyrite	7740	soft << steel	1920	1233	687	**2.79**	0.01	**0.629**	0.61	0.582	0.795	0.529	0
7740 Continued					2292	Least altered. Dark green, very fine grained, soft <<steel, 5% 1.0 mm pale brown leucoxene		soft << steel	1016	655	361	**2.81**							
7741 Continued						~60% dark green chloritic alteration cut by soft << steel bleached pale grey alteration with 25% medium green chloritic patches.		soft << steel	902	577	325	**2.78**							

7741	0.00	0.18	0.18	1,989	R Vein	18.8 cm x 3.5 cm as oblique diamond shaped cut to test alteration band. Wall rock to 4.0 cm bleached pale grey, hard to moderatley hard < - > steel, alteration band cutting typical soft << steel, dark green chlorite lalteration band with 5% 1 mm pale brown leucoxene. Bleached alteration band weathered as 1.0 cm ridge on the outcrop surface. No pyrite noted.	7741		1881	1199	682	**2.76**		**0.30925**	0.324	0.512	0.401	0.3906.48	0
7742	0.22	0.83	0.61	1,388	R Vein	0.21-0.83 m South in West Cut Wall rock. Uniform and massive, soft << steel, dark green chloritic alteration with 5% 1.0 cm angular pale brown leucoxene. Locally 1% pyrite. Pale grey weathering rind. No explaination for low SG value 2.0 cm wide Channel sample	7742		1085	687	398	**2.73**		**0.44775**	0.537	0.428	0.436	0.39	0
7743	0.00	0.21	0.21	717	R Vein	0.00-0.22 m South in West Channel. Broken ground on strike with vein to the east. Dark green chloritic alteration, soft << steel, 5% pale brown leucoxene..	7743				0			**0**					



2021 Drone Magnetic Survey 1cm = 50m.jpg

Canada Silver Cobalt Works
Otto Township - Reed Lease
2021 Drone Magnetic Survey 1cm = 50m



2021 Drone Magnetic Survey 1cm = 50m.jpg

Canada Silver Cobalt Works
Otto Township - Reed Lease
2021 Drone Magnetic Survey 1cm = 50m

5,326,400mE

562,400mN

562,600mN

Section Line 349°

200 M.Syenite 300 BKFt 400 Shr 500 BKFt 600 BF 700 2 BKFt 800 Chl-Ser-BxZ 6QPyV 900 NB Felsic Dk PySer Sil'n 969 QCaPy Zone Sil'n QCaPySer Zone 0.32Au/1.55m Defn'd

0 100 200m

Canada Silver Cobalt Works
Hole EO-22-004
Eby Township
UTM NAD 83 Zone 17
Easting: 5,326,540.65 mE
Northing: 562,167.98 mN
Elevation: 354.05 meters
Azimuth: 345.20 degrees
Dip: -56.00 Degrees
Length: 969 meters
Cell Claims: 192312,& 327167
Date Completed: 2022-11-27
Logged by: Martin Levasseur
Drafted by: Douglas Robinson P.Eng

-56° 0.15Au 1200As

Base Line 0+00N

Zone 5

Zone 4

Zone 3

Zone 2

Zone 1

37 72 Ni 100 157 166 11cmQV 198 Mafic Syenite 200 227 232 Bk. Fault AgZn 284 Shear+Silh 320 300 371 Ni Bk Fault AuAgAsCoCuTe 389.5 411 Bk Fault AuAgAsCuSbTeZn 400 471 475 498 2-Blk Faultz AuAgCoCuTeZn 6cmQPyVein Chl-Ser Bx Zone Chl-Ser-Stringers 500 540 595 600 635 643 QCaPy Zone Significant NB Felsic Dike Pyritic Sericitic Silh 662 678 700 713 745 774 800 857 894 900 866.65-868.20=0.320gAu/mt 1.55m 0.32gAu/mt QSerPy DefZone QCaPySerZone 969 EOH

Mafic Intrusive

Archean Gabbro

Mafic Intrusive

Archean Gabbro

Ultramafic

Mafic Intrusive

Mafic Volcanic

Ultramafic

Mafic Volcanic

Mafic Intrusive

Archean Gabbro

2023-05-24 Eby EO-22-004 Section Photo 1cm = 25m Edit 08.psd

EO22-001 Samples Probably impacted by CLLDZ Mineralizing Event

Sample	Start At	Metal	Units	Description		
2352	37.11	1200.00	As ppm	Coarse Net texture quartz-calcite vein with alteration.	1	1
2352	37.11	0.15	gAu / mT	Sericite alteration Interval		
2556	46.80	1.10	Te ppm	Sericite alteration interval	2	2
2356	46.80	0.60	Ag ppm			
2366	57.00	0.02	gAu / mT		3	2
2385	73.05	0.06	gAu / mT		4	3
2393	79.38	121.00	La ppm	79.38- 85.70-meters anomalous in **La Sr Te.**	5	4
2393	79.38	940.00	Sr ppm	Unknown relationship to ore???? Sericite alteration interval		
2396	82.40	1130.00	Sr ppm	82.40-85.70 anomalous in **Sr La Te** & elevated in Ni	6	5
2396	82.40	1.30	Te ppm	Unknown relationship to ore????		
2397	82.90	810.00	Sr ppm		7	
2398	83.75	104.00	La ppm		8	
2398	83.75	800.00	Sr ppm			
2399	84.75	119.00	La ppm		9	
2399	84.75	727.00	Sr ppm		10	
2407	90.76	0.03	gAu / mT			6
	168.00			10-12-cm true width , coarse grained quartz carbonate vein		
	227.65	232.50	syenite	Mafic syenite (altered amphiboles and intensely chloritized pyroxenes to 0.5 cm)		
2496	285.00	822.00	Zn ppm	**Zone 5** 285.00-286.20-meters anomalous in Ag Zn	11	7
2496	285.00	0.50	Ag ppm	284.50-286.20-meters **Black Fault Zone**. This was		
2499	286.80	0.60	Ag ppm	intersected below the West Riedel zone. This was not an identified MaxMin Conductor. Sericite alteration interval	12	
2506	302.80	611.00	Cu ppm		13	8
2506	302.80	1810.00	Zn ppm			
2513	319.95	0.02	gAu / mT		14	9

2517	328.45	187	As ppm		10
2517	328.45	0.023	gAu / mT		

2527	370.05	3000	Zn ppm	**Zone 4** 370.05-373.00-meters anomalous in **Au, Ag As Co Cu Te** and C	15	11
2528	371.05	304	As ppm		16	
2328	371.05	2590	Cu ppm			
2528	371.05	142	Co ppm			
2528	371.05	2.0	Te ppm			
2528	371.05	1.5	Ag ppm			
2528	371.05	0.055	gAu / mT			
2529	372.00	1.1	Ag ppm		17	
2529	372.20	250	As ppm			
2529	372.20	2790	Cu ppm			
2529	372.20	99	Co ppm			
2529	372.20	1.2	Te ppm			
2529	372.20	0.039	gAu / mT			
				371.05-372.20-meters **Blank Fault Zone** **hard silicified.** This and the fault at 389.35m were intersected below the East trending "South Fault" identified at grid 2643mE-025mS. This was not an identified MaxMin Conductor. There was no MaxMin Conductor identified at this location. A very weak, and questionable, quadrature response was identified near this location. That response is the response expected from a wet fault.		
				371.16-371.62-meter Carb-Quartz Vein Sericite alteration interval		

2535	389.35	1220	Cu ppm	**Zone 4** 389.35-400.75-meters anomalous in **Au Ag As Sb Cu Zn Te and C**.	18	12
2535	389.35	3600	Zn ppm			
2535	389.35	23	Sb ppm			
2535	389.35	2.5	Te ppm			
2535	389.35	9.5	Ag ppm			
2535	389.35	0.052	gAu / mT			
2536	390.15	0.6	Ag ppm		19	
2542	396.00	30	Sb ppm		20	
2542	396.00	0.5	Ag ppm			
2543	397.00	208	As ppm		21	
2543	397.00	121	Sb ppm		22	
2543	397.00	1.6	Ag ppm		23	
2544	398.00	193	As ppm		24	
2546	399.70	397	As ppm		25	
2546	399.70	0.5	Ag ppm			
				389.35-390.1-meters **Black Fault Zone** "may be Graphite … silicified … about 1% sphalerite or pyrite". This and the fault at 371.05-m were intersected below the East trending "**South Fault**" identified at grid **2643mE-025mS**. There was no MaxMin Conductor identified at this location. A very weak, and questionable, quadrature response was identified near this location. That response is the response expected from a wet fault.		

	418.15			6-cm quartz-pyrite Vein Kspar alteration interval		

2454	428.10	184	As ppm	Sericite alteration interval	26	14

2558	470.94	1120	Cu ppm	**Zone 3** 470.94-476.75-meters anomalous in **Au Ag Cu Co Zn Te** and C. 470.94-471.75-meters **Black Fault Zone** "predominantly composed of black (graphitic) silicified material" 475.75-476.75-meters **Black Fault Zone** "Majority ... silica altered black graphitic material" 485.55-490.00-meters "many 5-50-cm zones of clustered (+/- **sericite**) stringers giving it a weak ductile shear/foliation". This fault was intersected below the East trending "North Fault" identified at grid **2538mE-048mN**. There was no MaxMin conductor identified at this location.	27	15
2558	470.94	90	Co ppm			
2558	470.94	2170	Zn ppm			
2558	470.94	3.1	Te ppm			
2558	470.94	2.8	Ag ppm			
2558	470.94	0.040	gAu / mT			
2564	475.75	0.7	Ag ppm		28	
2564	475.75	0.023	gAu / mT			
2585	584.60	0.030	gAu / mT		29	16
2588	587.50	715	Ni ppm	Sericite alteration interval	30	
2608	643.65	0.6	Ag ppm	643.65-644.60-meters "A **significant zone** of qtz/carb zone, which contains about **4-5% very fine-grained euhedral Py** as **disseminated** and **fracture infilling**."	31	17
2619	652.85	0.022	gAu / mT	**Zone 2** 652.85- 658.85-m anomalous in **Co Ni Te** High Ni characteristic of ultramafic host rock **654.80-655.95**-meters ... "**felsic**? ... moderate to **strong sericite** alteration ... moderate **silicification** (hard). ...Contains 5-6% qtz/carb stringer and fracture fills throughout, with <1cm stronger **sericite** alt **haloes** +/- chl infilling. From 655.60-655.80m, contains abundant **silicified black** material (chl?) and brecciated qtz. ... About **2-3% disseminated Py** increasing to **5-6%** after 655.60m, often see following and **rimming** qtz/carb infills." **(DRR This reads like the felsic [feeder?] dikes at the Castle Co-Ag-Au Property and Minto Gold Property).**	32	18
2622	654.80	677	Cu ppm		33	
2622	654.80	123	Co ppm			
2622	654.80	1.4	Te ppm			
2624	656.80	116	Co ppm		34	
2624	656.80	1020	Ni ppm			
2625	657.80	107	Co ppm		35	
2625	657.80	832	Ni ppm			

2642	865.90	0.052	gAu / mT	**Zone 1** 858.30-870.60-meters, strong **vein-alteration-mineralization system**	36	19
2643	866.65	0.337	gAu / mT			
2644	867.20	16	Sb ppm	866.65-868.20-meters **0.320gAu/mT** over 1.55m	37	
2644	867.20	0.5	Ag ppm	865.90-868.75-meters anomalous in **Au Ag Sb Co**		
2644	867.20	0.310	gAu / mT	Sericite alteration interval		
2645	868.20	11	Sb ppm		38	

2648	870.00	0.025	gAu / mT	**Zone 1** Sericite alteration interval	39	20
2651	871.60	0.054	gAu / mT			

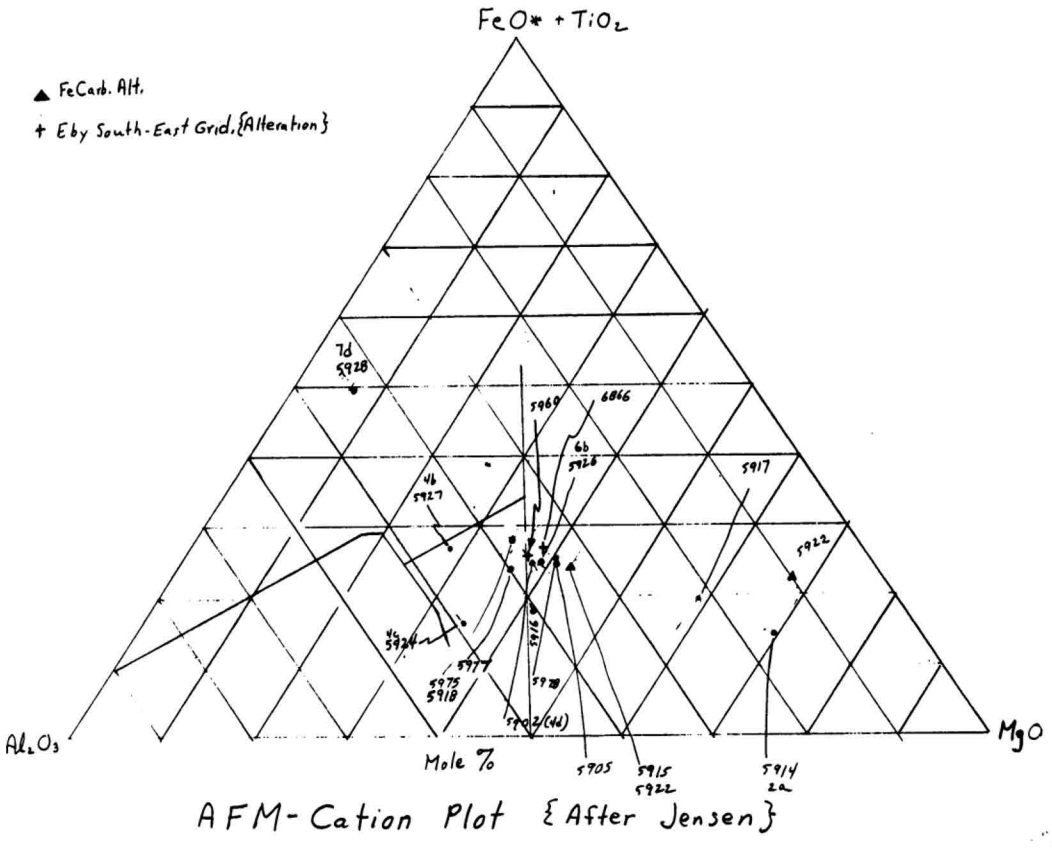
2661	879.00	0.031	gAu / mT	**Zone 1** Sericite alteration interval	40	21

2676	893.25	0.030	gAu / mT	**Zone 1** Sericite alteration interval	41	22
2677	894.00	0.023	gAu / mT		42	

2678	922.75	0.066	gAu / mT		43	23

43 Anomalous Samples
23 Anomalous Intervals
Zone 1 to Zone 5, labelled from North to South

The pyrite description generally appears to read as an overprint and cannot be distinguished from primary sulphides of magma crystallization.



Eby-Otto Intrusive: Reed-Robinson Property
Cation Plot of 1994 Litho-geochemical AFM Plot
(Al2O3 - FeO+TiO2 - Mg)

Priority ID **Depth (m)** dip **Azimuth** **Easting** **Northing**

Feb 15, 22, 23, 24, 2022

Preeliminary List of Diamond Drill Targets

Last updated February 24, 2022

Kirkland Lake West Property

CsCW Reed Robinson Preliminary Drill Proposal 2021-02-15

Eby & Otto Tps.

Priority ID)epth (m) Hdist dip Azimuth Easting Northing

Priority	ID	**Depth (m)**	Hdist	dip	**Azimuth**	**Easting**	**Northing**	
		400	281	-45	**180**	**2500**	**365**	To Test Alteration zones in Northern part of Robinson Claim along MMI Line 2500E.
		400	281	-45	**360**	**2500**	**180**	To test intersection of South Deformation Zone (EW) with Robinson Riedel (SE) Structure which are coincident with a week MaxMin Quadrature response. Test North Deformation Zone. To test along MMI Line 2500E.
		450	320	-45	**360**	**2700**	**50**	To test 200m Cable MaxMin anaomaly coincident with North Deformation Zone and on strike with alteration. To test alteration zones in Northern part of Robinson Claim along MMI Line 2700E.
		450	320	-45	**360**	**2700**	**-150**	To test alteration zones in the central part of the Robinson Claims with emphasis on the South Deformation Zone and the North eformation Zone. This hole should be drilled after the completion of the hole at 2700E-050N to establish the viability of testing down dip from that hole.
		100	71	-45	**180**	**2701**	**-150**	To Test Robinson Riedel Alteration zone with emphasis to establish a dip. If this is sucessful it is recommended an aditional hole be drilled from 2700E-100S. This hole can be extended to test the 070 structure to the south.
		350	247	-45	**180**	**2800**	**-175**	To test the Robinson Riedel Zone and to determine the cause of a very strong 070 lineament passing through the large pond on the south claim line. Also to determine if this is a potential 070 structure is a potential target on the Marion claims to the west.
		300	212	-45	**180**	**3400**	**370**	To test below 130x300 long swanp on strike with favourable structures and associated alteration. Hole can be extended if holer at 3400E-000N intersects favourable geology.
		300	212	-45	**360**	**3400**	**000**	To test 200m cable length MaxMin anomaly within lear swamp posably associated with110-120 Riedel Structure. To test westrern extension of Favourable Veins to the east.
		200	140	-45	**360**	**3700**	**075**	To test 200m cable MaxMin anomaly associated with potential Riedel Structure. To test west projection of the Reed Trench Vein.
		300	212	-45	**360**	**3800**	**-50**	To test 200m cable MaxMin anomaly associated with potential Riedel Structure. To test west projection of the Reed Trench Vein.
		400	282	-45	**360**	**3928**	**10**	To test below the Reed Trench Vein and two MaxMin anomalies within lineaments.

		250	175	-45	**065**	**3972**	**328**	To test priminent Air Drone Magnetic Survery feature (135^{o}) that appears to extend to 300 below surface. This magnetic feature is coincident with a strong lineament of the same strike. This hole is designed to intersect B-Vein and F-Vein proximal to their intersections with this inferred structural zone .To be drilled to test a major lineament (045o Azimuth swamp) with coincident break in the magnetic signature. This collar configuration was chosen to intersect the B vein befor the lineament and the F vein after the lineament.
		200	140	-45	**180**	**4100**	**220**	To test priminent Air Drone Magnetic Survery feature that appears to extend to 300 below surface. This magnetic feature is coincident with a strong lineament of the same strike. This hole is also intended to test G3 Vein system.
		250	178	-45	**360**	**4130**	**225**	To test G4 Vein and MaxMin Conductor 20m south of G4 Vein. The MaxMin conductor appears to have a 30m fault offset with the east side shifted North. The strike of this apparent faul;t is unknown but appears to be close to this hole.
		300	214	-45	**090**	**4146**	**460**	To be drilled parallel to North boundary of Reed Leases to intersect and explain a strong high magnetic anomaly to determine if it is similar to magnetic auriferous pyritic mineralization at the Reed . It is also testing a shift in background magnetic field strength across this magnetitic anomaly. This magnetic shift may be caused by a structural (fault/deformation) zone that could potentially host gold mineralization.
		208	146	-45	**045**	**4290**	**362**	To test Reed Showing and lineament NE of the Reed Showing.
		425	274	-45	**360**	**4300**	**-25**	Drilled to test two MaxMin Conductors within high priority gold potential ground
		510	363	-45	**360**	**4350**	**100**	Drilled to test two MaxMin Conductors within high priority gold potential ground
		400	282	-45	**360**	**4350**	**-25**	Drilled to testone MaxMin Conductors within high priority gold potential ground in a 400x400m deep overburden area with no outcrop. Drilled to deep test 40 m east of the Reed Showing and other
		225	157	-45	**090**	**4450**	**-200**	To test a N-S structural with coincident auriferous float train to 1.34 gAu/Tn. This is along MMI Line 200-S 56m north of the 1.34 gAu/Tn float.
		150	103	-45	**348**	**4450**	**428**	To test a potential 070 trend lineament 348 degrees from a float train to 0.50 gAu/Tn float.
Priority	ID	Depth (m)	Hdist	dip	Azimuth	Easting	Northing	

Sum	**6568**

The holes above targeted structural and alteration targets including veins. Emphasis was placed on veins and favorable alteration assemblages. MaxMin conductors were included in the proposals where the conductors are coincident with or proximal to otherwise favorable targets.

2500E 365N
400m - 45
180°

450m
HD 320

1.358
gAu/Tonne

1186975

400m
HD
281

400m
281 HD

450m
320HD

2700E
050N
450-45
360°

2700E
150S
450m -45
360

2701E
150S
100-45
180

2500E
150S
400m-45
A: 360

EO-22-004

1186975

100m
HD 7m

LAKE

N

3400E 370N
300m -45°
Az 180

Pond Lineament

No EM

No EM

200m
140
HD

300m
212 HD

1187002

1187002

1187002

40cm
28.2
HD.

300m
212 HH

Pond ? Lineament

Inferred South Lineament

3700E 075N
200m -45°
360°

3400E 000N
300m -45
360°

3928E 010N
400m -45
360°

3800 050
300m -45
360°

3+00N

2+00N

1+00N

4+00N

0+00N

32+00E

33+00E

34+00E

35+00E

36+00E

37+00E

38+00E

39+00E

40+00E

475258

475259

4+00 N

3+00 N

2+00 N

1+00 N

0+00 N

40+00 E

41+00 E

42+00 E

43+00 E

43+50 E

44+00 E

45+00 E

46+00 E

47+00 E

47+35 E

4146E 460N 090°

065°

3972E 328N 250m -45° 360°

4290E 362N 208m -45° 075°

510m 363 HD

308 HD

280

300m 214 HD

4130 E -225N 250 m -45° 180°

250m HD-172

4350E 100N 510m -45° 360°

4300E 025° 425m -45° 360°

4350E 025° 400m -45° 360°

3928E 010N 400m -45° 360°

400m 282m HD

425m 274HD.

100 m IP<QP

100 m IP=QP

100 m IP>QP

100 m Weak IP=QP

100 m Shallow Strong IP>QP

100 m Strong Shallow IP>QP

100 m Shallow V.Strong IP>QP

Shallow Very Stong 100 m IP>QP

4330 E 310 N Bedrock More Sheared than Bedrock To N-East

0.0-0.63 330°

4301 E 193 N

0563824 E 5326950 N

0563995 E 5326664 N

4235 E 231 N

OPEN FIELD

POND

Pond.

Beaver Dam

3m Old Base Line

Picket 400/200N

Picket 400/17

GEOLOGY

EBY-OTTO NE GROUP (J. Reed)

7 Chloritic Alteration (Prominent Quartz Grains) dark green

a very fine Grained

O_{100} MaxMin Response (100 m Coil Separation)

O_{VLF} VLF Response

SB Black Spruce
CW White Cedar
BF Second Growth Balsam Fir

	June 27, 2017					563,565	5,326,832		-1306	369		GRID REFERENCE Reed 4000E 000N
	Date	Count	Grid East	Grid North		UTM Easting	UTM Northing	Elevation	mE of Reference	mN of Ref	North Error	
160	2021-04-10	200	1,487	219		561,052	5,327,051		-2,513	219	0	SIB North Pipe Line. Blue
159	2021-04-10	100	1,490	220		561,055	5,327,052		-2,510	220	0	SIB North Pipe Line. Red
157	2021-04-10	200	1,552	-35		561,117	5,326,797		-2,448	-35	0	Drone Base 5 Go to Self 2m @ 233 degrees (Blue GPS) South Pipe Line 100m clearing. Clear view to NE, East & SE. 385m from Buildings on S end of road.
158	2021-04-10	150	1,554	-35		561,119	5,326,797		-2,446	-35	0	Drone Base 5 Go to Self 0m @ 000 degrees (Blue GPS) South Pipe Line 100m clearing. Clear view to NE, East & SE. 385m from Builbings on S end of road.
149			1600	0		560,755	5,326,570		-2,810	-262	262	
153	1996		1600	400		561,055	5,327,452		-2,510	620	-220	Estimated UTM. Not mesasured Also reported as 1577E on 400NTL
180	2021		1,658	-976		561,223	5,325,856		-2,342	-976	0	EBY DRONE B03
168	2021		1,666	-975		561,231	5,325,857		-2,334	-975	0	Eby Drone Base 02 Blue
161	2021-04-10	130	1,674	-975		561,239	5,325,857		-2,326	-975	0	Drone Base 3 Go to Self 216m @ 227 degrees (Red GPS)
162	2021-04-10	200	1,677	-978		561,242	5,325,854		-2,323	-978	0	Drone Base 3 (or 3?) Go to Self 215m @ 231 degrees (Red GPS) Go to self 175m @ 271 degrees
150	1996		1900	0		561,459	5,326,570		-2,106	-262	262	Very Old Reading (Spot reading?) on Base Line
151	1996		2100	0		561,660	5,326,563		-1,905	-269	269	Very Old Reading (Spot reading?) on Base Line

152	1996		2300	0		561,856	5,326,555		-1,709	-277	277	Very Old Reading (Spot reading?) on Base Line
69	2017-04-20	710	2400	-461		561,964	5,326,371	El	-1,601	-461	0	SIB SW Corner Robinson Claim 1186975 at 2400E-461s
3	2008-10-28		2400	0		561,965	5,326,799	332	-1,600	-33	33	007
4	2008-10-29		2400	0		561,962	5,326,802	327	-1,603	-30	30	
27	2008	C	2500	-125		562,061	5,326,669	340	-1,504	-163	38	Proposed Collar C (2500E, 125s) Drill North
5	2016-11-04		2500	0		562,060	5,326,840	El	-1,505	8	-8	
6	2016-11-04		2500	0		562,060	5,326,804	El	-1,505	-28	28	
7	2016-11-04		2500	0		562,058	5,326,801	El	-1,507	-31	31	Eby Line 25E 000N Picket found
9	2008		2500	0		562,058	5,326,797	345	-1,507	-35	35	
53	2016-11-04	1920	2500	0		562,060	5,326,804	El	-1,505	-28	28	Eby Line 25E 000N Picket found. Old MMI Line. Photo 4968, 4969
54	2016-11-04	1073	2500	0		562,058	5,326,801	?	-1,507	-31	31	Eby Line 25E 000N Picket found. Old MMI Line. Photo 4638
56	2016-11-04		2500	0		562,060	5,326,840	El	-1,505	8	-8	Eby Line 25E 0N Picket Found
42	2008	Q	2500	285		562,060	5,327,013	334	-1,505	181	104	Proposed Collar R (2500E, 285N) Drill North
43	2008	R	2500	285		562,060	5,327,058	330	-1,505	226	59	Proposed Collar R (2500E, 285N) Drill South (B?)
44	2012		2500	300		562,063	5,327,096	El	-1,502	264	36	MMI 2012
55	2016-11-01	154	2500	300		562,056	5,327,102	341	-1,509	270	30	Eby Line 2500EE 300N picket found Photo 4597
10	2008		2500	350		562,059	5,327,150	339	-1,506	318	32	350N picket?
26	2008	B	2500	370		562,055	5,327,160	331	-1,510	328	42	Proposed Collar B (2500E,370N) Drill South
8	2008		2500	400		562,046	5,327,192	225	-1,519	360	40	
94	2017-05-19		2,547	-547		0562112	5,326,284	El	-1,453	-548	1	Mega Porphyry Float 40% 1.5cm feldspar phenocrysts. Eby Tp

139			2,551	491		562,116	5,327,323	345	-1449	491	0	AAA gabbro COT (Orefinders Tour) (Apr 9, 114mm @ 271 degrees fron Reed #4 Post. GPS not working?)
2	2008		2,589	706		562,154	5,327,538	330	-1,411	706		Hwy 66 Exit to Robinson Claims
181	2021-03-30		2,619	-1,664		562,184	5,325,168		-1,381	-1,664	0	DRONE BASE ! south of Power Line & west of Hwy 11 Good Reading
192	2021-03-30		2,619	-1,664		562,184	5,325,168					DRONE BASE ! south of Power Line & west of Hwy 11 Good Reading
176	2021		2,628	-1,815		562,193	5,325,017		-1,372	-1,815	0	Eby DRONE 01
171	2021		2,632	-1,810		562,197	5,325,022		-1,368	-1,810	0	Eby Drone B01 B lue
11	2016-11-01		2650	0		562,209	5,326,808	El	-1,356	-24	24	Eby Base Line 0N 2650E
57	2016-11-01		2650	0		562,209	5,326,808	El	-1,356	-24	24	Eby Base Line 0N 650E Photo 4674
177	2021		2,672	658		562,237	5,327,490		-1,328	658	0	Eby Drone B 03
174	2021		2,674	-975		562,239	5,325,857		-1,326	-975	0	BDB 2
1	2008		2,694	369		562,259	5,327,201	341	-1,306	369		Line 2700E in Clear cut near North edge of property
59	2016-11-03	S R	2700	-275		562,261	5,326,531		-1,304	-301	26	27E 275s. Very short reading
64	2016-11-03	S R	2700	-275		562,261	5,326,531	El	-1,304	-301	26	Eby Line 27E Very short Reading
30	2008	F	2700	-200		562,258	5,326,602	327	-1,307	-230	30	Proposed Collar F (2700E, 200-S) Drill North
29	2008	E	2700	-115		562,258	5,326,679	335	-1,307	-153	38	Proposed Collar E (2700E, 115S) Drill North
12	2008		2700	0		562,253	5,326,799	335	-1,312	-33	33	
13	2008		2700	0		562,260	5,326,791	338	-1,305	-41	41	
15	2016-11-01		2700	0		562,261	5,326,805	El	-1,304	-27	27	Eby Base Line 0N 2700E. Picket found
16	2016-11-01		2700	0		562,065	5,326,823	El	-1,500	-9	9	Eby 27E 000N Base Line Centre of work.
58	**2016-11-01**	**4534**	**2700**	**0**		**562,261**	**5,326,805**	**337**	-1,304	-27	27	**Eby Base Line 0N 2700E Picket not found. Photo 4694**
28	2008	D	2700	175		562,254	5,326,964	312	-1,311	132	43	Proposed Collar D (2700E, 175N) Drill South

25	2008	A	**2700**	**300**		**562,259**	**5,327,102**	344	-1,306	270	30	Proposed Collar A (2700E 300N) Drill North
60	2016-11-01	724	**2700**	**359**		**562,256**	**5,327,156**	343	-1,309	324	35	Eby 27E 359N QUARTZ VEIN on Line 27E Photos 4789 4792
117		?	**2700**	**359**		**562,259**	**5,327,158**		-1,306	326	33	Location R Quartz vein. 8.8 cm cm quartz vein with 2.5 cm attached wall rock taken at narrowest part of vein exposxure. ~0.5% sulphide including chalcopyrite and pyrite and possibly purplish sulphie or mica (purplish sulphide may be micaor chlotite mineral in a dark green chlorite seam parallel to the vein walls). **Sample 46511 244g**
61	**2016-11-01**	**1230**	**2700**	**375**		**562,258**	**5,327,175**	**347**	-1,307	343	32	**Eby 27E 375N Point on Line. Photo 4773, 4779**
62	2016-11-01	Short	**2700**	**375**		**562,256**	**5,327,175**	347	-1,309	343	32	Eby 27E 375N Point on Line. Photo 4766
63	2016-11-01		**2700**	**500**		**562,242**	**5,327,302**	EI	-1,323	470	30	Eby Trail 27E 500N Turn South and follow flagging
155	2021-04-10	259	**2,713**	**661**		**562,278**	**5,327,493**		-1,287	661	0	Drone Base 3 Go to Self 34m @ 177 degrees (Blue GPS)
156	2021-04-10	211	**2,713**	**661**		**562,278**	**5,327,493**		-1,287	661	0	Drone Base 3 Go to Self 31m @ 177 degrees (Red GPS)
175	2021		**2,714**	**664**		**562,279**	**5,327,496**		-1,286	664	0	DBASE 3
17			**2800**			**562,365**		EI	-1,200			
138			**2,819**	**707**		**562,384**	**5,327,539**	330	-1181	707	0	Hwy 66 Mine Road
18	2016-11-04		**2900**	**0**		**562,456**	**5,326,805**	EI	-1,109	-27	27	Eby Base Line 0N 2900E Picket Found
65	2016-11-04		**2900**	**0**		**562,456**	**5,326,805**	333	-1,109	-27	27	Eby Base Line 0N 2900E Picket found. Photo 1770, 1772
14	2008		**3100**	**0**		**562,661**	**5,326,800**	330	-904	-32	32	
19			**3200**			**562,765**		EI	-800			
40	2008	P	**3400**	**0**		**562,952**	**5,326,811**	318	-613	-21	21	Proposed Collar P 3400E, 000N) Drill North
41	2008	L	**3450**	**190**		**563,006**	**5,327,013**	324	-559	181	9	Proposed Collar Q (3450, 190N) Drill North

39	2008	O	**3725**	**~20**		**563,840**	**5,326,852**	EI	275	20		O Drill North **UTM Calculated**
110	2020-11-09	315	**3762**	**251**		**563,325**	**5,327,076**	EI	E		N	Location **A2** Appears to be very fine grained Eby Mafic Intrusive(with 1mm crystalline bands?), Dark green. Moderately soft. No apparent sulphides. Not Assayed
109	2020-11-09	215	**3762**	**254**		**563,325**	**5,327,079**	EI	E		N	Location **A2** Appears to be Chill Zone of Eby Tp Mafic (gabbro) Intrusive. Aphanitic to near aphanitic, dark green with fragmental appearance. Moderately soft, chloritic. Brown weathering rind. Minor white calcite. 0.5% very fine disseminated pyrite. **Sample 46504 1478g**
137			~~**3,768**~~	~~**273**~~		~~**563,333**~~	~~**5,327,105**~~		-232	273	0	~~Otto OUT CROP 02~~
45	2012		**3800**	**0**		**563,364**	**5,326,830**	EI	-201	-2	2	MMI 2012
38	2008	N	**3800**	**~-25**		**563,765**	**5,326,807**	EI	200	-25		N Drill North **UTM Calculated**
147			~~**3,886**~~	~~**417**~~		~~**563,451**~~	~~**5,327,249**~~		-114	417	0	~~Otto 01~~
128			**3,897**	**364**		**563,462**	**5,327,196**	333	-103	364	0	SIB Otto Tp
112	2020-11-09		**3900**	**373**		**563,451**	**5,327,196**		E		N	Location **A1** Vein 35-40 cm white quartz vein, curved with azimuth 108-120 degrees with 78 degree dip to the south. Albite pyrite alteration with hair line to minor quartz fracture filling. Sample 46506 wall rock with 30% quartz veining. **Sample 46506 908g**

113	2020-11-09		**3900**	**373**		**563,451**	**5,327,196**		E		N	Location **A1** Vein 35-40 cm white quartz vein, curved with azimuth 108-120 degrees with 78 degree dip to the south. Albite pyrite alteration with hair line to minor quartz fracture filling. Sample 46507 wall rock with 30% quartz veining. **Sample 46507**
115	2020-10-01	1750	**3932**	**121**		**563,494**	**5,326,946**		E		N	Vein E Reed Shaft Vein Strike 080 degrees with 85 degrees south dip. 31 cm quartz pyrite Fe-carbonate vein. This vein is brittle fractured with Fe-carbonate-pyrite fracture filling with masses of pyrite to 0.5x1.0 cm. The south contact of vein is along a fully healed fault breccia with various rock milled fragments of various rock types to 0.5x1.5 cm. The wall rock north of the vein and south of the fault is relatively fresh coarse grained gabbro. Sample 46509 10.4 cm true width south paqrt of quartz vein along the healed fault. Approximately 4% pale yellow (sericitic-) carbonate and 2% coarse pyrite, both infilling and healing fracturing of the quartz vein. This wasthe thickest cut that could be made from a much larger piece. **Sample 46509 1347g**
37	2008	M	**3950**	**~25**		**563,615**	**5,326,857**	EI	50	25		M Drill North **UTM Calculated**
99	Calculated June 29, 2017 UTM & Reed Grid		**3973**	**640**		**563,592**	**5,327,472**		27	640	0	**0.04 gAu/mT 27W 200s Marion grid. Green carbonate with 15% white quatz lenses and 1% fine disseminated pyrite from talus dug from old hand dug trech as extesion ob Marion Vein showing. Duplicate 537 g.**
178	2021		**3,983**	**1,062**		**563,548**	**5,327,894**		-17	1,062	0	Eby Drone B 04
169	2021		**3,984**	**1,062**		**563,549**	**5,327,894**		-16	1,062	0	Bby Drone Base B 04 Blue
127	2001-03-24	370	**3,988**	**363**		**563,553**	**5,327,195**	319	-12	363	0	SIB Otto A1 2001-03-24

167	2018		3,990	-434		563,555	5,326,398		-10	-434	0	PGM Sample 16013 fron near Reed #4 SIB (Apr 9, 930m @ 181 degrees fron Reed #4 Post. GPS working)
135			3,990	469		563,555	5,327,301	322	-10	469	0	475258 4 June12, 2018
170	2021		3,991	643		563,556	5,327,475		-9	643	0	Eby Drone Base B 3 Blue
179	2021		3,992	636		563,557	5,327,468		-8	636	0	Eby DRONE B 3
136			3,993	462		563,558	5,327,294	325	-7	462	0	SIB 4 475258
166	2018		3,997	-442		563,562	5,326,390		-3	-442	0	2018 Estimate of Ree #4 SIB location
119	1905-07-13	UTM Calc	4000	-457		563,548	-457		-17	######	#####	SIB South Eby SIB on Eby Otto Line
20	2008		4000	0		563,565	5,326,834	320	0	2	-2	Long Reading
22	2011		4000	0		563,565	5,326,832	EI	0	0	0	GRID REFERENCE visual average of readings
46	2012		4000	0		563,565	5,326,832	EI	0	0	0	MMI 2012
116		0	4000	0		563,562	5,326,825		-3	-7	7	Estimated 4000E-000N
148		11225	4000	0		563,566	5,326,834		1	2	-2	4000E 000N (Apr 9, 477m @ 179 degrees fron Reed #4 Post. GPS not working?)
154			4,000	0		563,565	5,326,832		0	0	0	
106		2644	4000	250		563,551	5,327,078		-14	246	4	**Picket 4000E-250N Reference point for Vein D**
104	2020-11-07	3700	4000	370		563,553	5,327,195		-12	363	7	**5/8" SIB marked by 10 cm wooden survey post on Eby-Otto Tp Line.**
70	2017	325	4000	470		563,552	5,327,301	EI	-13	469	1	SIB 4L 475258 #1P 1187002 Eby-Otto Line
103	2020-11-07	201	4000	470		563,548	5,327,295		-17	463	7	**1" SIB #4** Corner of claim
95	2017-06-27	1314	4000	634		563,560	5,327,465	EI	-5	633	1	Marion Vein on Eby Otto Line Reed Grid E = ME+4000, Reed Grid N= 470+370-MN)

98	2017-06-30	1500 Y	**4000**	**639**		**563,555**	**5,327,470**	El	-10	638	1	Marion Grid 000E 200s. Yellow GPS
97	**2017-06-29**	**1600 R**	**4000**	**640**		**563,554**	**5,327,471**	El	-11	639	1	**Marion Grid 000E 200s. Red GPS**
100	Calculated June 29, 2017 UTM & Reed		**4000**	**640**		**563,565**	**5,327,472**		0	640	0	**0.12 gAu/mT** Green carbonate wall rock with 2-3% 1-2 mm pyrite crystals and 1.5cm grey quartz stringer
96	2017-06-28	1600 B	**4000**	**643**		**563,556**	**5,327,474**	El	-9	642	1	Marion Grid 000E 200s Blue GPS. (Apr 9, 1709m @ 001 degrees fron Reed #4 Post. GPS working)
124	UTM Calc	1500 Y	**4000**	**839**		**563,555**	**639**	El	-10	######	#####	Marion Grid 000E 000s. Calculated UTM and Reed Grid Coordinates
118	2021-04-01	SR	**4000**	**1062**		**563,548**	**5,327,894**		-17	1,062	0	Eby-Otto Line N shoulder of Hwy 66
21	2008		**4000**	**N**		**563,554**	**5,327,894**	321	-11	1,062		Hwy 66 at Eby-Otto Tp Line (4,000E)
93	2017-06-27	?	**4000**			**563,555**	**5,327,470**	El	-10	638		Marion Grid 000E 200s
146			~~**4,003**~~	~~**389**~~		~~**563,568**~~	~~**5,327,221**~~	~~277~~	3	389	0	~~Otto 01 7 SIB ?~~
101	Calculated June 29, 2017 UTM & Reed Grid		**4004**	**638.5**		**563,562**	**5,327,470**		-4	638	0	**0.16 gAu/mT 3.5E - 201.5**s Marion Grid. Wall rock along from south side of vein at base of outcrop (east edge). Duplicate 39 g.
107	2020-11-07	325	**4006**	**290**		**563,560**	**5,327,118**		-5	286	4	Site **C** Alteration appears to be carbonate with disseminated pyrite. Sample lacks weathering rind. Moderately soft << knife. Minor (0.8 cm) quartz vein in sample. **Sample 46502 1380g**
105	2020-11-07	500	**4017**	**342**		**563,578**	**5,327,173**		13	341	1	Site **B** Vein. 4-19 cm quartz vein. Wall rock pale grey, massive, moderately (hard <knife). **White weathering rind**. Appears to be feldspathic intrusive (or albite alteration?). in Long white plagioclase xls to ~0.2x1.0mm long. No pyrite. Sample 46501 of wall rock. UTM's from notes. **Sample 46501 537g**

108	2020-11-07	1621	**4048**	**247**		**563,603**	**5,327,077**		38	245	2	Site **E1** Vein. 9 cm quartz vein (strike 45 degree?) Alteration appears to be mixed moderately soft, pale greenish carbonate cut by hard orange albite alteration with 2% fined pyrite grains. The carbonate alteration has a 0.5-1.0 cm rusty weathering rind. Sample 46503 40% vein, 60 % wall rock. **Sample 46503 715g**
114	2020-11-09	528	**4109**	**247**		**563,661**	**5,327,085**		96	253	-6	Location E2 Vein. 8cm quartz vein Azimuth 40 degrees. Pale pinkish pyritic albite alteration along hairline to 0.3 mm quartz fracture fillings appears to overprint strong light green carbonate alteration that appears to lack pyrite. Brown weathering rind to 0.5 cm. Assay sample of wall rock with albite-pyrite alteration along 4mm quartz stringer. Vein not sampled. Sample 46507 is wall rock alteration consisting of pyritic albite alteration overprinting carbonate alteration. **Sample 46508 739g**
102	Calculated June 29, 2017 UTM & Reed Grid		**4162**	**475**		**563,403**	**5,327,307**		-162	475	0	**0.03 gAu/mT 162E 365s** Marion grid. 60% 3cm quartz vein with 1% pyrite and 40 % dark green wall rock. East edge of outcrop. Sample about 0.80m above ground level (above base of outcrop).
125	Oct 17 2017	300 Red	**4,193**	**526**		**563,758**	**5,327,358**	324	193	526	0	Merion Shaft
47	2012		**4200**	**465**		**563,755**	**5,327,299**	El	190	467	-2	MMI 2012
134		400	**4,230**	**357**		**563,795**	**5,327,189**	325	230	357	0	Dug Hole 2 400 Count?
132			**4,236**	**469**		**563,801**	**5,327,301**	318	236	469	0	Otto 4250 NTL
133		450	**4,238**	**418**		**563,803**	**5,327,250**	321	238	418	0	Dug Hole 1 450 Count? (Apr 9, 255m @ 105 degrees fron Reed #4 Post. GPS working?)

73	2017	350	**4238**	**~361**		**563,792**	**5,327,192**	El	227	360		Otto Till Hole SW 12 M west of Line 4250E. 109m S of 4238E of North Tie Line
74	2017-06-27	400 B	**4238**	**~361**		**563,795**	**5,327,189**	El	230	357		Otto Till Hole SW 12 M west of Line 4250E. 109m S of 4238E of North Tie Line June 27, 2017 2:40pm. (Apr 9, 269m @ 118 degrees fron Reed #4 Post. GPS working?)
88	2017-06-27	blue	**4250**	**NTL**		**563,801**	**5,327,301**	El	236	469		4250 at North Tie Line 'June27, 2:41 pm
164	2018		**4,285**	**624**		**563,850**	**5,327,456**		285	624	0	Pit 2? (Apr 9, 327m @ 065 degrees fron Reed #4 Post. GPS not working?)
173	2021		**4,288**	**625**		**563,853**	**5,327,457**		288	625	0	D 022
33	2008	I	**4290**	**364**		**563,843**	**5,327,206**	321	278	374	-10	Proposed Collar I 4290E, 364N) Drill North-east
163	2018		**4,293**	**389**		**563,858**	**5,327,221**		293	389	0	Pit 1? (Apr 9, 315m @ 108 degrees fron Reed #4 Post. GPS working?)
141			**4,293**	**391**		**563,858**	**5,327,223**	324	293	391	0	OT Reed Pit (Apr 9, 312 @ 107 degrees fron Reed #4 Post. GPS working?)
165	2018		**4,293**	**627**		**563,858**	**5,327,459**		293	627	0	Pit 2? (Apr 9, 334m @ 065 degrees fron Reed #4 Post. GPS not working?)
172	2021		**4,298**	**611**		**563,863**	**5,327,443**		298	611	0	D 02
23	2008		**4300**	**0**		**563,903**	**5,326,844**	314	338	12	-12	
89	2017-07-01	100 B	**4300**	**0**		**563,857**	**5,326,840**	El	292	8	-8	4300E 000N Base Line 2x2 Picket
90	2017-07-01	1650 B	**4300**	**0**		**564,008**	**5,326,838**	El	443	6	-6	4450E 000N Base Line 2x2 Picket
82	2017-06-29	3606 B	**4300**	**375**		**563,855**	**5,327,215**	El	290	383	-8	4300E 375N June 29, 2017 11:55 am
83	2017-06-29	3670 R	**4300**	**375**		**563,855**	**5,327,215**	El	290	383	-8	4300E 375N June 29, 2017 11:56 am
84	2017-06-29	3700 Y	**4300**	**375**		**563,855**	**5,327,215**	El	290	383	-8	4300E 375N June 29, 2017 12:00 noon
131			**4300**	**375**		**563,855**	**5,327,216**	321	290	384	-9	
48	2012		**4300**	**425**		**563,907**	**5,327,266**	El	342	434	-9	MMI 2012
85	**2017-06-29**	**4264 B**	**4300**	**468**		**563,851**	**5,327,300**	El	286	468	0	**4300E 468N North Tie Line June29, 1:10 pm**

86	2017-06-29	4325 R	**4300**	**468**		**563,850**	**5,327,300**	EI	285	468	0	4300E 468N North Tie Line June29, 1:12 pm
87	2017-06-29	4350 Y	**4300**	**468**		**563,854**	**5,327,299**	EI	289	467	1	4300E 468N North Tie Line June29, 1:13 pm
126	2017-06-29	red	**4300**	**468**		**563,850**	**5,327,300**		285	468	0	
140			**4300**	**468**		**563,851**	**5,327,300**	317	286	468	0	4300E 468N (Apr 9, 295m @094 degrees fron Reed #4 Post. GPS working?)
36	2008	L	**4350**	**0**		**563,215**	**5,326,832**	EI	-350	0	0	L Drill North-east **UTM Calculated**
49	2012		**4350**	**425**		**563,907**	**5,327,266**	EI	342	434	-9	MMI 2012
34	2008	J	**4350**	**~160**		**563,215**	**5,326,992**	EI	-350	160		J Drill North **UTM Calculated**
35	2008	K	**4350**	**~75**		**563,215**	**5,326,907**	EI	-350	75		K Drill North **UTM Calculated**
31	2008	G	**4450**	**-430**		**564,016**	**5,326,403**	315	451	-429	-1	Proposed Collar G (4450E, 430s) Drill North-north-west
50	2012		**4450**	**-200**		**564,004**	**5,326,641**	EI	439	-191	-9	MMI 2012
24	2008		**4450**	**0**		**564,007**	**5,326,839**	313	442	7	-7	
143			~~**4450**~~	~~**0**~~		~~**564,008**~~	~~**5,327,838**~~	~~318~~	~~443~~	~~1,006~~	~~-1006~~	
32	2008	H	**4475**	**-200**		**563,215**	**5,326,992**		-350	160	-360	H Drill East
91	2017-07-01	1390 B	**4550**	**0**		**564,106**	**5,326,843**	EI	541	11	-11	4550E 000N Base Line 2x2 Picket
142		13900	**4550**	**0**		**564,106**	**5,326,843**	316	541	11	-11	OT Count 1390Q
92	2017-07-01	4174 B	**4550**	**~ ~**		**564,113**	**5,326,587**	EI	548	-245		Float
144			~~**4551**~~	~~**257**~~		~~**564,113**~~	~~**5,326,587**~~	~~322~~	~~548~~	~~-245~~	~~502~~	
145			~~**4562**~~	~~**312**~~		~~**564,120**~~	~~**5,326,531**~~		~~555~~	~~-301~~	~~613~~	~~OT Float~~
129	2018-06-12		**4,713**	**479**		**564,278**	**5,327,311**	334	713	479	0	475259 #1 (April 10, 2021 notes 817m at 122 degrees from Hwy 66 at E-Oline G{PS not working ?) Red (Apr 9, 728 m @ 090 degrees fron Reed #4 Post. GPS working)
130	2018-06-16		**4,717**	**479**		**564,282**	**5,327,311**		717	479	0	Reed 1 475259 (April 10, 2021 notes 817m at 122 degrees from Hwy 66 at E-Oline G{PS not working ?) Blue.

122	~~Base Map Entry~~	~~Map Entry~~	~~**4735**~~	~~**-428**~~		~~**564,290**~~	~~**5,326,186**~~		~~725~~	~~-646~~	~~218~~	~~SIB SE Corner of 475254 on Line 47375 at427s and STL 437s at 4732E (Error in Map Entry?)~~
123	Base Map Entry	UTM Calc	**4735**	**-428**		**735**	**-428**		######	######	#####	SIB SE Corner of 475254 on Line 4737E at427s and STL 437s at 4732E
121	From Geo Map	UTM Calc	**4735**	**0**		**735**	**0**		######	######	#####	East End of Base Line at NS OLS survey Line
120	~~Old Reading~~	~~TTM Calc~~	~~**4735**~~	~~**465**~~		~~**735**~~	~~**465**~~		~~######~~	~~######~~	~~#####~~	~~SIB Post 1, 1L475254 at Line 47+35E 465N and NTL 469N 4736E~~
76	2017-06-27	400 B	~~**4735**~~	~~**~430**~~		**563,558**	**5,327,294**	EI	-7	462		SIB 4L 475258 #1P 1187002. Error in post numbering? June 27, 2017 8:30pm
51	2012		**4750**	**-200**		**564,206**	**5,326,646**	EI	641	-186	-14	MMI 2012
52	2012		**LX-150E**	**LX-150E**		**563,952**	**5,327,304**	EI	387	472		MMI 2012 LX-150E
66	2016-11-01		**R**	**R**		**562,154**	**5,327,310**	EI	-1,411	478		Eby Trail TE Turn East towards grid.
67	2016-11-01		**R**	**R**		**562,159**	**5,327,536**	EI	-1,406	704		Eby Old Hwy 11 Park Truck here. Walk E on old why 66
68	2016-11-01		**R**	**R**		**562,302**	**5,327,501**	EI	-1,263	669		Eby Trail Head Turn South on Trail
71	2017	1047	**Reed L.**	**~420**		**563,797**	**5,327,250**	EI	232	418		Otto Till Hole NW Pit #1 50m S of North Tie Line
72	2017-06-27	450 B	**Reed L.**	**~420**		**563,804**	**5,327,250**	EI	239	418		Otto Till Hole NW Pit #1 50m S of North Tie Line. 2:18PM June 27, 2017 52m@015deg from OT HOLE 02
75	2017	108	**Reed L.**			**563,856**	**5,327,209**	EI	291	377	-377	Otto Till Hole E +/- 5.6m 2m East of Line 4300E
77	2017-06-27		**Reed L.**			**563,862**	**5,327,223**	EI	297	391		Otto Tp Reed Au pit 3:41 pm
78	2017-06-27	8650 B	**Reed L.**			**563,858**	**5,327,223**	EI	293	391		Otto Tp Reed Au pit. 4:22pm
79	2017-06-29	4850 B	**Reed L.**			**563,858**	**5,327,221**	EI	293	389		Otto Tp Reed Au pit Ref 0N 2x2 Picket

80	**2017-06-29**	**4900 R**	**Reed L.**			**563,858**	**5,327,223**	EI	293	391		**Otto Tp Reed Au pit Ref 0N 2x2 Picket**
81	2017-06-29	4950 Y	**Reed L.**			**563,859**	**5,327,223**	EI	294	391		Otto Tp Reed Au pit Ref 0N 2x2 Picket
111												