

Ministry of Energy and Mines
BC Geological Survey

ASSESSMENT REPORT
TITLE PAGE AND SUMMARY

TITLE OF REPORT [type of survey(s)] <u>REPORT ON DRILLHOLE LOGGING ON THE PAKK GROUP</u>	TOTAL COST <u>912150.00</u>
---	--------------------------------

AUTHOR(S) DAVID L. PUGHEN SIGNATURE(S) Dave F. Pughen
TOM KEENEY

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S) _____ YEAR OF WORK 2016

STATEMENT OF WORK - CASH PAYMENT EVENT NUMBER(S)/DATE(S) EVENT No 5623906 AND 5633300

PROPERTY NAME PAKK GROUP

CLAIM NAME(S) (on which work was done) PAKK X CLAIM # 1047421

COMMODITIES SOUGHT Pb/Zn

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN ~~FORT STEELE~~ 82FNE117, 115

MINING DIVISION FORT STEELE NTS 82F09W, 82F09E

LATITUDE 49° 33' 59" LONGITUDE 116° 15' 46" (at centre of work)

OWNER(S)
1) P. KLEWCHUK 2) _____

MAILING ADDRESS
409 ASPEN RD
KIMBERLEY, BC VIA 3B5

OPERATOR(S) [who paid for the work]
1) SELF 2) _____

MAILING ADDRESS

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
LOWER/MIDDLE ALDRIDGE FORMATION, FRAGMENTAL
ROCK UNITS, ALBITE, SILICIFICATION, TOURMALINE, SERICITE
SPHALERITE, GALENA, ARSENOPYRITE PRE-CAMBRIAN AGE

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS _____

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping _____			
Photo interpretation _____			
GEOFYSICAL (line-kilometres)			
Ground			
Magnetic _____			
Electromagnetic _____			
Induced Polarization _____			
Radiometric _____			
Seismic _____			
Other _____			
Airborne _____			
GEOCHEMICAL			
(number of samples analysed for ...)			
Soil _____			
Silt _____			
Rock _____			
Other _____			
DRILLING			
(total metres; number of holes, size)			
Core <u>NQ 2 HOLES, 1134.3m total</u>		<u>PARK X TENURE # 1047421</u>	<u>\$12150.00</u>
Non-core _____			
RELATED TECHNICAL			
Sampling/assaying _____			
Petrographic _____			
Mineralographic _____			
Metallurgical _____			
PROSPECTING (scale, area) _____			
PREPARATORY/PHYSICAL			
Line/grid (kilometres) _____			
Topographic/Photogrammetric (scale, area) _____			
Legal surveys (scale, area) _____			
Road, local access (kilometres)/trail _____			
Trench (metres) _____			
Underground dev. (metres) _____			
Other _____			
TOTAL COST			<u>\$12150.00</u>

**Report on Drillhole Logging
For**

**The Pakk Property
Fall of 2016**

**By
David L. Pighin
and
Tom Kennedy**

**Fort Steele
Mining Division**

**NTS
82F059
UTM Co-Ordinates:
552000E, 5489500N**

January 2017

36388

**Report on Drillhole Logging
For**

**The Pakk Property
Fall of 2016**

**By
David L. Pighin
and
Tom Kennedy**

*Fort Steele
Mining Division*

**NTS
82F059
UTM Co-Ordinates:
552000E, 5489500N**

January 2017

36, 388

**GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT**

TABLE OF CONTENTS

	Page
1.00 SUMMARY	2
2.00 INTRODUCTION	2
1.10 Location and Access	2
1.20 Property	2
1.30 Physiography	2
1.40 History of Previous Work	5
1.50 Purpose of Work	5
3.00 GEOLOGY	5
4.00 DRILL LOGGING RESULTS	7-9
5.00 CONCLUSIONS and RECOMMENDATIONS	9
6.00 STATEMENT OF EXPENDITURES	10
7.00 AUTHOR'S QUALIFICATIONS	11

APPENDIX 1	Drill Logs
APPENDIX 2	Graphic Logs
APPENDIX 3	Minfile Report Copies

LIST OF ILLUSTRATIONS

Figure 1	Property Location Map	3
Figure 2	Claim Map	4
Figure 3	Regional Geology Map	6
Figure 4	Drill Hole Location Map	8
Figures 5&6	Graphic logs of H92-06, H96-09	Appendix 2

1:00 SUMMARY

Two previously unrecorded drill holes on the PAKK X claim were re-logged at the Vine core facility by David L. Pighin in October through November of 2016. Both holes intersected Aldridge formation sediments and fragmental units with gabbro. Varying degrees of silicification with albitization and sericite/muscovite alteration was encountered in both holes as well as tourmaline alteration (euhedral black crystals and brown tourmalinite). Pyrrhotite is the main sulfide present in both holes along with sphalerite in disseminations, and in quartz calcite and chlorite veining. Galena and arsenopyrite with some chalcopyrite is also present.

2.00 INTRODUCTION

This report describes the re-logging of two drill holes previously drilled on the PAKK X claim block.

2.10 Location and Access

The Pakk claims cover the peak and south-eastern flank of Mt. Evans roughly seven km south west of St.Marys Lake and approximately 37 km west of Cranbrook BC (Fig.1). The claim group is centered roughly at UTM co-ordinates 55200E, 5489500N.

Access to the claim group is provided to the southern portion of the claim group via the Hellroaring Cr. logging road and then northern Jack Cr. Spur road. An ATV driveable trail branches off of the Jack creek haul road and continues into the heart of the claim group to the Upper Jack mineral showing. Further access to the property is provided the Meachen creek haul road and the by a series of old logging roads that branch off the main haul road and follow both sides of the Sinclair creek valley to the south.


2.20 Property

The Pakk claim group consists of 6 mineral tenures (514716, 515124, 515125, 515141, 515473 and 1047421) shown on Figure 2. They cover roughly 1445.4731Ha of area and are owned by Peter Klewchuck of Kimberley BC, Canada.



2.30 Physiography

The Pakk group of claims covers an area of rugged topography on the south eastern flanks and summit of Mt. Evans near St.Marys Lake. Elevations on the property range from lows of 1440m to a high of 2720m. In the highest reaches of the property talus slopes and cliffs with little vegetation are encountered. Forest cover ranges from a mainly mixed second growth spruce, balsam, pine and larch at lower elevations to a dominant alpine larch and albicaulus pine forest type at higher elevations. Cliff exposures of outcrop are quite abundant.


Fig.1: PAKK Location Map

 **PAKK Location**

Topographic Layers

-  **Lakes 1:6M**
-  **Rivers 1:6M**

BC Border Layers

-  **BC Border 1:6M**



SCALE 1 : 11,188,177

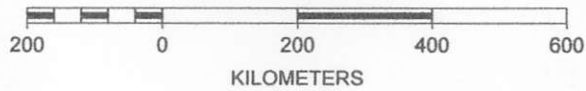
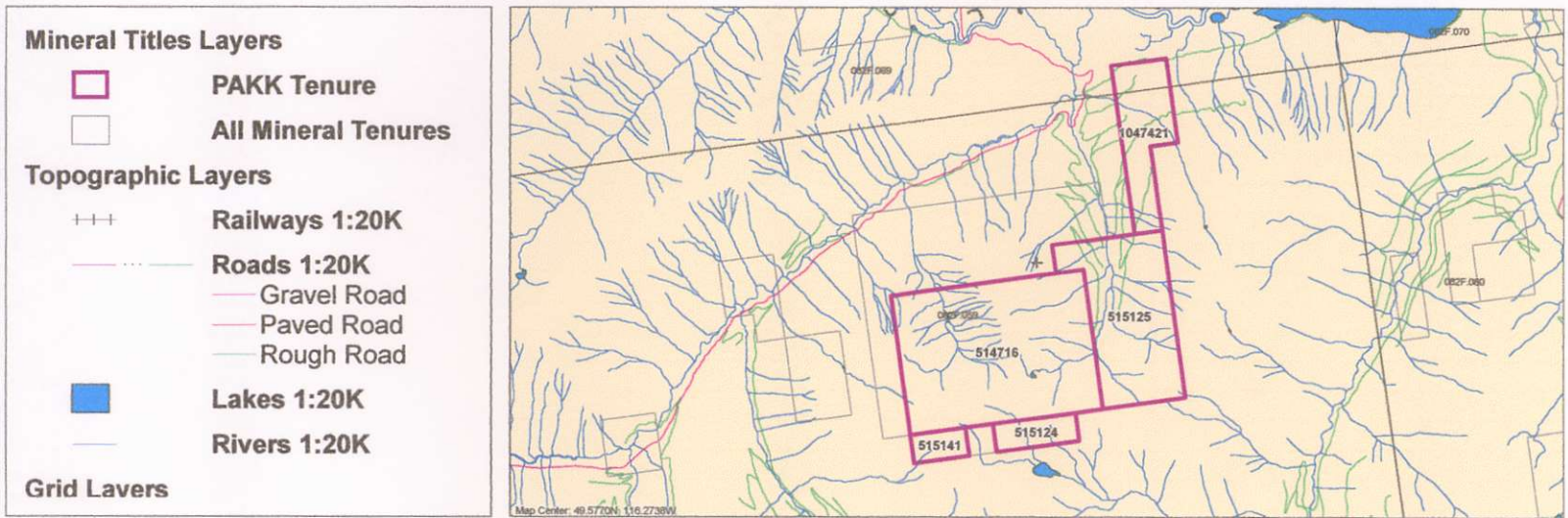
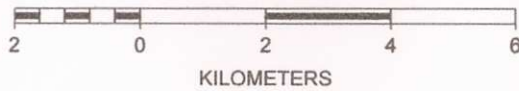


Fig.2: PAKK Claim Map



SCALE 1 : 120,821



2.40 History of Previous Exploration

The area underlain by the Pakk group of claims has been explored at various times by both major and junior mining companies for both Sullivan style lead/zinc mineralization as well as gabbro hosted copper occurrences just to the west of the current claim group. Two Minfile (82FNE115, and 82FNE117) occurrences are covered by the claim group and summary pages can be found in Appendix 3. In brief two drill holes on the claim group penetrated through the stratigraphic interval that at Kimberley hosts the Sullivan lead zinc deposit and similar geological features were encountered (i.e. thick conglomerate package and laminated mud sequence). In addition to this drilling two holes were drilled to test a stratabound occurrence of lead and zinc mineralization in Lower Aldridge rocks at the base of the footwall quartzite sequence. Drilling was also carried out on the Upper Jack Pipe a cross-cutting zone of fragmental and tourmaline altered rock with base metal mineralization.

On the PAKK X claim several rounds of drilling were carried out to test the southern extension of the Clair fragmental package initially by Cominaco and then Minnova and Quest international resources, from the late 70's to mid 90's.

The copper showings to the immediate west of the property have been worked from the turn of the last century and their Minfile reference numbers can be found on the regional Geology map (Fig.3).

2.50 Purpose of work

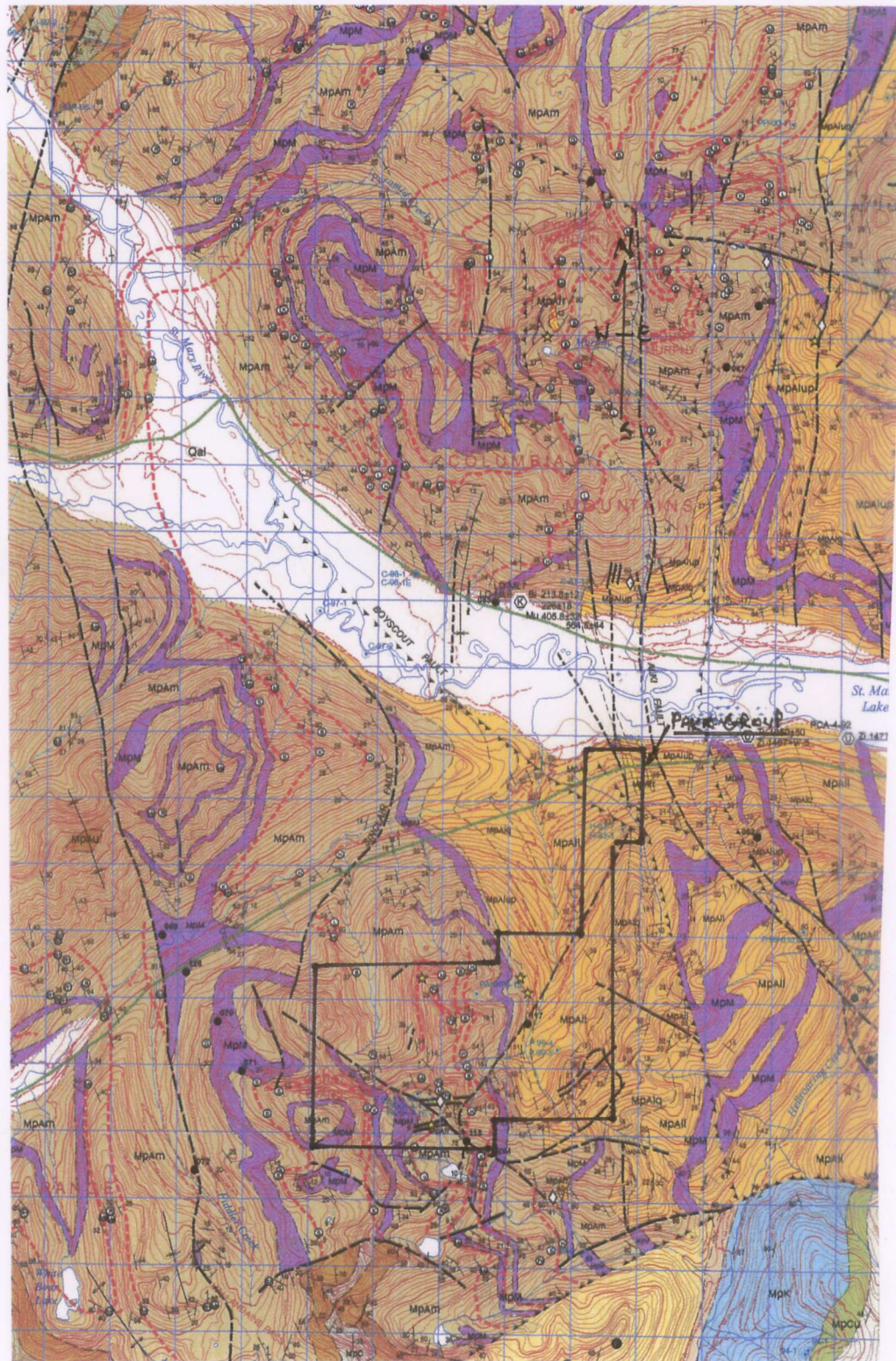
The purpose of the 2016 logging was to re-log two previously unreported and recorded drill holes in the area of fragmental rocks at the lower to middle Aldridge contact.

3.00 GEOLOGY

The Pakk property covers an area underlain by sedimentary stratigraphy assigned to the Middle Pre-Cambrian Aldridge formation rocks (Fig.3). Both the middle and lower members of the Aldridge formation outcrop on the property and this contact zone at Kimberley is host the world class Sullivan lead/zinc deposit. The sedimentary stratigraphy has been intruded by a number of gabbro sills assigned to the Moyie intrusive suite and are in places thought have been injected nearly contemporaneously with sedimentation.

The property is also in the hangingwall block of the St.Marys Fault, a major east/west trending transverse fault which offsets middle to lower Aldridge rocks against Creston and Eager formation rocks in the footwall. The north south trending Fiddler Creek fault bounds the property to the west and in the east the block is bounded by the north to northwest trending Boy Scout Fault. Several other faults occur on the property and in general trend in a mostly north/south direction, and locally have several hundred meters of offset.

FIGURE 3: REGIONAL GEOLOGY (FROM OPEN FILE 6308 GEOLOGY ST. MARYS LK., B.C.
COMPILED BY DA BROWN, R.F. MACLEOD, AND G.L. WAGNER)



LEGEND

LAYERED ROCKS

Coloured legend blocks indicate map units that appear on this map.

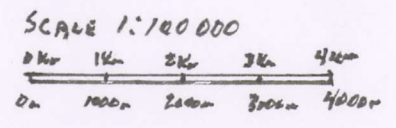
- CENOZOIC**
QUATERNARY
- Qal** Unconsolidated outwash, alluvium, colluvium and till.
- PALEOZOIC**
CAMBRIAN
- LOWER AND (?) MIDDLE CAMBRIAN**
EAGER FORMATION
- CE** Grey argillite, silty argillite, siltstone; buff weathering, silty limestone; rare bioclastic beds.
 - CC** Calcite marble, dolomite marble, calc-silicates.
- PROTEROZOIC**
MESOPROTEROZOIC (HELIGIAN)
PURCELL SUPERGROUP
- DUTCH CREEK FORMATION**
MpDC Green siltstone, argillite, stromatolitic dolomite, quartz wacke.
 - GATEWAY FORMATION**
MpG Dolomite, quartz wacke, siltstone, argillite.
 - NICOL CREEK FORMATION**
MpNC Massive to amygdaloidal, basalt to andesite lava flows, volcanic sandstone, siltite.
 - VAN CREEK FORMATION**
MpVC Pale green, laminated, siltite and argillaceous siltite, and quartz wacke; minor ripple marks, lenticular bedding, rare flattened mudcracks.
 - KITCHENER FORMATION**
 - MpK** Undivided.
 - MpKU** UPPER: thin- to thick-bedded, white to grey dolomite, with interbedded white quartzite.
 - MpKM** MIDDLE: dolomitic siltstone, dolomitic argillite, and dolomite, commonly buff weathering; argillite, siltstone, quartzite; molar green lined dolomitic siltstone near base.
 - MpKL** LOWER: green and beige siltstone, dark grey argillite, dolomitic siltstone. - CRESTON FORMATION**
 - MpC** Undivided.
 - MpCU** UPPER: green siltstone; black or purple argillite and siltstone.
 - MpCM** MIDDLE: light grey, mauve, purple, thin- to medium-bedded quartz arenite, quartz wacke, lesser grey siltite and argillite; white quartzite interbeds; lenticular bedding, ripples, cross-bedding and mudcracks.
 - MpCL** LOWER: waxy green to olive with tan weathering surfaces, laminated to thick-bedded argillite and siltite; lesser fine-grained quartz wacke. Waxy bedding and abundant mudcracks.
 - MpCimc** Mud-cracked member. - ALDRIDGE FORMATION**
 - MpA** Fragmental rocks interpreted as sedimentary debris flows, breccia formed in dewatering pathways, mud volcano debris, and hydrothermal breccias; stratiform and discordant; matrix- and framework-supported fragmental rocks consisting of angular to rounded quartzite clasts having a size range of <2 mm to >2 m.
 - MpAU** UPPER: rusty brown weathering, grey to dark grey, fissile to platy, laminated silty argillite, and siltite.
 - MpAm** MIDDLE: grey to rusty weathering, thick to thin-bedded, quartzofeldspathic wacke intercalated with argillite and siltite.
 - MpAl** LOWER: rusty brown weathering, thin- to medium-bedded, quartz wacke, quartz arenite.
 - MpAlup** Upper siltites: argillite, minor quartzite.
 - MpAlq** "Footwall quartzites": grey quartzite, quartz wacke.
 - MpAlp** Lower siltites: siltstone, argillite, minor quartzite.

INTRUSIVE ROCKS

- MESOZOIC**
CRETACEOUS (?)
- Kg** Massive, medium-grained, quartz monzonite, monzonite, and granodiorite. Includes Hall Lake Stock.
 - Km** Biotite monzogranite; medium- to fine-grained, massive; includes Angus Creek Stock.
- PROTEROZOIC**
MESOPROTEROZOIC (HELIGIAN)
MESOHELIGIAN
- FHC** HELLROARING CREEK STOCK: Granitoid pegmatite, coarse-grained tourmaline-rich pegmatite, ~1370 Ma. (Smith and Brown, 1998)
 - FMC** MATTHEW CREEK STOCK: Pegmatite.
 - Mpb** Mafic sills and rare dikes hosted in Kitchener Formation. Olive green, massive to plagioclase porphyritic.
 - MpM** MOYIE INTRUSIONS
"Moyie Sills": Dark green to black, medium- to fine-grained gabbro and hornblende quartz diorite sills and minor dikes. Zircon U-Pb dates circa 1487 Ma (Anderson and Davis, 1995).

SYMBOLS

- Geological contact: defined, approximate, assumed
- Outcrop
- Quaternary limit of cover
- Fault: defined, approximate, assumed
- Fault, thrust (teeth on upthrust side): defined, approximate, assumed
- Fault, normal (solid circle indicates downthrown side): defined, approximate, assumed
- Bedding: inclined, vertical, overturned
- Bedding: facing direction known
- Foliation, schistosity, fracture cleavage: inclined, vertical
- Mylonitic foliation
- Foliation (granitic rocks): primary (inclined)
- Fold axis, symmetric fold: general
- Fold axis, asymmetric fold: Z-fold, S-fold
- Lineation: undefined
- Sedimentary fragmentals (isolated exposures)
- Tourmalinite: outcrop
- Marker locality (see index for abbreviations)
- Geochronology sample: Age Method: Ar/Ar, K/Ar, Rb/Sr, Sr/Y, U/Pb, (Lab number, Age, Mineral marked as shown)
- MINFILE mineral occurrence (see table)
- past producer, developed prospect, prospect, showing
- Drill hole and reference number (see Joseph et al., 2010)
- Fossil locality
- Anticline, syncline (trace of axial surface)
- Antiform, synform (trace of axial surface)
- Overtured anticline, syncline (trace of axial surface)
- Overtured antiform, synform (trace of axial surface)
- Marker horizon projection: defined, approximate, assumed
- Approximate location of seismic line
- Matthew Creek Metamorphic Zone Boundary
- Sullivan Ore Body
- Sullivan Graben System limit



4.00 DRILL HOLE RE-LOGGING

Two drill holes: H 92-06 and H96-09. Drill hole locations are shown of Figure 4. Both holes were re-logged by David L. Pighin, at the Vine core facility where they have been stored since initially being drilled. Complete logs for both holes can be found in Appendix 1 with graphic logs in Appendix 2; a brief summary for both holes is given below.

Drill Hole H92-06

This hole was collared at UTM co-ordinates 554700E, 5493640N and drilled 388.6m at a bearing of 90 degrees azimuth. The collar dip angle was -45 degrees. Frontier Drilling was the primary contractor, and the hole was drilled in 1992. The diameter of core is NQ. Over burden was cased to a depth of 12.2m where bedrock was intersected.

The hole began in gabbro and at a depth of 57.4m a fragmental complex was intersected. The unit consists of massive to matrix supported fragmental with generally small clasts(3-10mm in size). Pyrrhotite replacements of clasts and in disseminations is the dominant sulfide with minor arsenopyrite as disseminated crystals and fracture and disseminated sphalerite. The unit extended to 136.4m where argillite and interbedded siltstone was cored to 155m down hole depth followed by slumped argillite and siltstone, and from 201.0-245.2m down hole depth more fragmental rock was cored. Below this interval sediments were intersected with some tourmaline needle zones and pink garnet intervals till 322.5m where gabbro was intersected till 388.6m down hole where drilling was ended.

Patchy zones of silicification, albitization, and sericite/muscovite alteration occur throughout the hole commonly controlled by fracturing and structure. Chloritization is also common with the above mentioned alteration. Overall base metal mineralization is most abundant in the upper fragmental unit. Several lamprophyre dykes were also intersected in the drill hole.

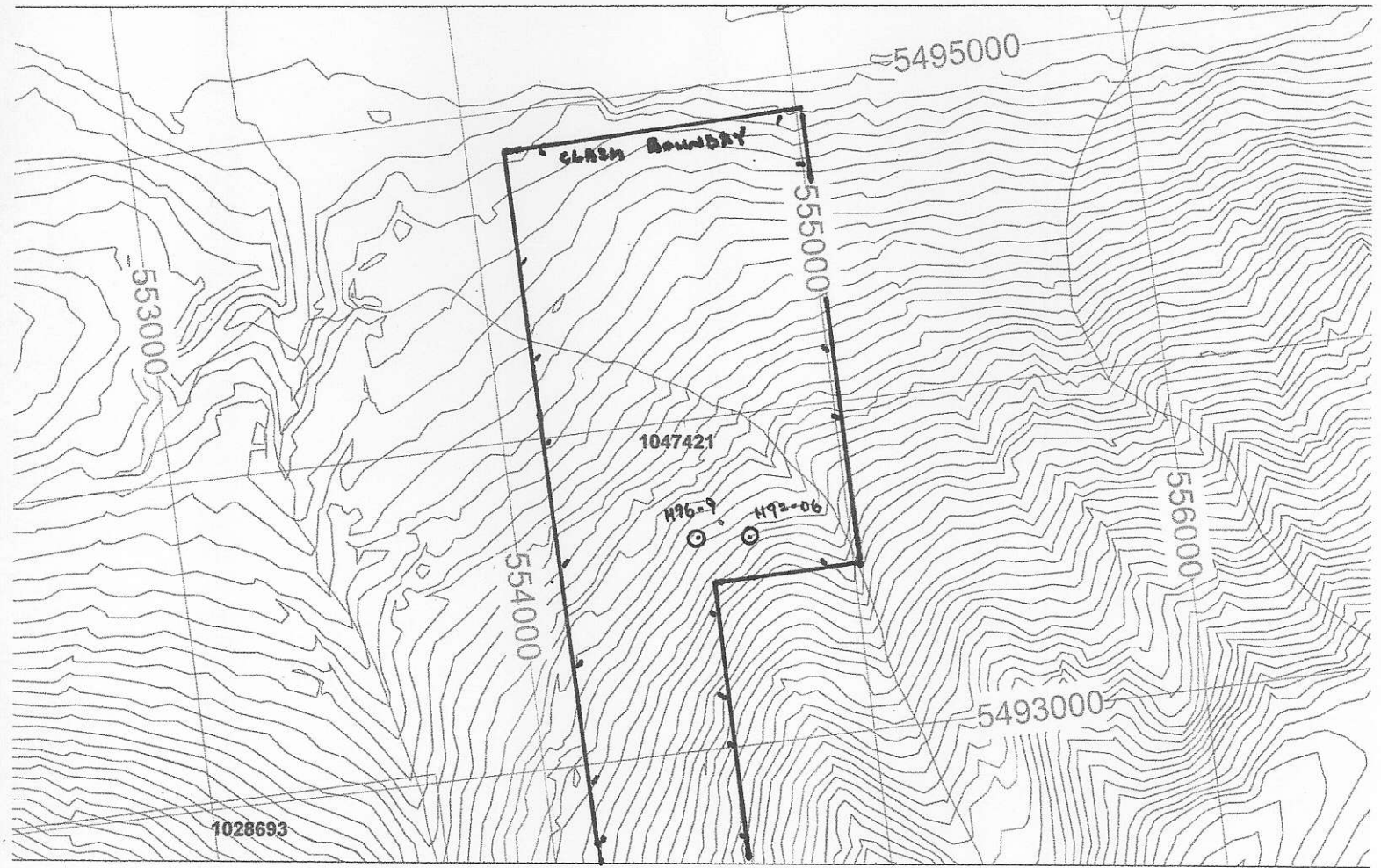
Drill Hole H96-9

Hole H96-9 was collared at UTM co-ordinates 554540E,5493640N and drilled to 745.7m at an angle of -70 degrees along a bearing of 90 degrees azimuth. NQ diameter core was drilled and the hole was commenced and completed in 1996. Over burden was cased to a depth of 6.7m at which point bedrock was cored.

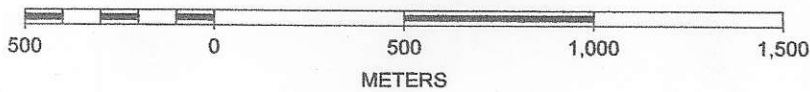
Schistose thin-bedded sediments were the first rock cored in the hole to a down hole depth of 210m. In this interval albitization and sericitization occurs, pyrrhotite is the most common sulfide. At 180.9m and 209.5m brown tourmalinite was noted. From 262.2m to 283.5m a graphitic fault zone was cored. This zone contained 1-3 percent sulfide with some irregular quartz siderite veinlets. Arsenopyrite, galena, sphalerite and chalcopyrite was seen in the above mentioned veining.

Below the fault zone massive siltstone and quartzitic sediments were cored to 383.0m where gabbro was intersected till 450.0m. In the footwall of the gabbro albitized sediments were intersected followed by an interval of fragmental rocks from 450.0m to 497.87m. The fragmental is weakly sericitically altered with patchy chloritization. In

Figure 4 Drill Hole location



SCALE 1 : 20,000



N



general clast sizes are small(2-5mm) and are composed of argillite and siltstone in a siltstone matrix. Pyrrhotite is the main sulfide species with minor sphalerite in quartz calcite fractures. Mainly thicker bedded siltstones with minor intervals of thin bedded and slumped argillite were cored below the fragmental from 498 to 559.0m. A quartz vein breccia(3cm wide) with pyrrhotite and sphalerite was intersected at 520.0m. Patchy zones of pink garnets with silicification was noted in this interval.

Another band of fragmental was intersected from 559.0-563.0m with more of a clast supported character. Siltstone and argillite was again cored to 681.2m. Between 661.0 and 677.0m disseminated sphalerite with lesser galena occurs in thin bedding parallel bands and fractures(estimated 0.5% combined Pb/Zn over interval) Quartz calcite and muscovite with chlorite occurs with mineralization in this interval.

From 681.2-684.6 clast supported fragmental was intersected followed by Lower Aldridge looking sediments to a depth of 745.7m where the hole was ended.

4.00 CONCLUSIONS AND RECOMMENDATIONS

Both drill holes examined intersected stacked fragmental packages. Alteration consisting of albitization, sericitization, chloritization and silicification occurs in both. Tourmaline alteration both brown and black occurs in the drill holes logged as well as zones of silicified sediments with euhedral pink garnet.

Sphalerite was noted in a number of fracture zones and as disseminations within both holes, along with galena and arsenopyrite. A major graphitic fault zone was intersected in hole H 96-9 with base metal mineralization and pyrite.

Significant Sullivan type indicators were intersected in each drill hole and define an area of potential for base metal mineralization. Geology in the holes is complicated due structural complications. More detailed surface mapping in this area should be undertaken to help aid in the development of a three dimensional model.

Mineralized intervals in the drill holes should be sampled for additional geochemical data that could help in directing future work.

5.00 STATEMENT OF COSTS

David Pighin:

Oct 25 - 30, Nov 1-4, 6-9,
2016:

14 Man days @	
\$500	\$7,000.00
5 Truck days @	
\$150	\$750.00

Brian Collinson:

Oct 25 - 30,
2016

6 Man days @	
\$300	\$1,800.00
4 Truck days @	
\$150	\$600.00

Tom Kennedy & D Pighin:

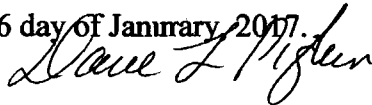
Report & Maps	<u>\$2,000.00</u>
Total	
Costs	<u>\$12,150.00</u>

6.00 AUTHOR'S QUALIFICATIONS

As author of this report I, David L. Pighin, certify that:

- (1) I am a self-employed consulting geologist whose office is at Hidden Valley Road, Cranbrook, B.C. Mailing address: 301 – 8th Street, Cranbrook, B.C. V1C 1P2.
- (2) I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
- (3) I have been actively involved in mining and exploration geology, primarily in the Province of British Columbia, for the past 50 years.
- (4) I was employed by Cominco Ltd. as a prospector, exploration technician, and geologist for 34 years, and later by numerous junior exploration companies.

Dated at Cranbrook, British Columbia, this 26 day of January, 2017.



As author of this report I, Tom Kennedy certifies that:

- 1) I am an independent consulting prospector residing at 1082 Cote Rd, South Slokan, B.C.
- 2) I have been actively involved in mining and mineral exploration for the past 23 years.
- 3) I have been employed by individuals as well as Junior and Major mining companies.
- 4) I have created and optioned numerous grass-roots mineral exploration properties.

Tom Kennedy

Prospector

APPENDIX 1

DRILL HOLE LOGS

Drill Hole: H92-06
 Logged by D.L. Pighin

UTM Location:
 554700E,5493640N

Hole Length: 388.6m
 Bearing: 090 degrees Az

Meters	Lithology	Colour	Primary Structure and Texture	Tectonic Structure	General Alteration	Mineralization(Associated alteration, host structure)
0-12.2	Casing					
12.2-57.4	Gabbro	Green, speckled white	Medium to fine-grained equigranular	NIL	Local chloritization and patches of silicification	None
57.4-136.4	Massive Aldridge fragmental unit - mainly sericitic siltstone with altered clasts. At 69.3-70.8m lamprophyre dyke cuts core at 80 degrees	Grey with dark grey clasts	Massive, matrix supported fragmental unit; clasts generally range from 3mm to 10mm and locally up to 40mm. Clasts are generally elliptical and tabular, commonly orientate at 75 to 80 degrees to core axis. Locally some clasts are sharply angular.	NIL	For 1.0m below gabbro contact sediments are totally altered to calcite, mottled by black biotite(approximately 60% biotite), some remnant patches of albite, argillite matrix altered to fine sericite, clasts are altered mainly to sericite with some remnant silicification, most of the clasts are replaced in part by pyrrhotite and late calcite.	Pyrrhotite occurs throughout the fragmental unit, mainly replacing most of the clasts and is very weakly disseminated throughout the matrix. Pyrrhotite forms 50% to 80% of most of the clasts. Pyrrhotite content in general for the fragmental unit would be approximately from 1-3% by volume, rare crystals of arsenopyrite occur in matrix. An intensely silicified calcareous, sericite, biotite zone 80cm thick marks the base of the fragmental unit. This zone hosts disseminated pyrrhotite and sphalerite. 94.8-95.3m larger rebedded albitized clasts host weak disseminated pyrrhotite and sphalerite. At 97.6m a large silicified clast hosts disseminated pyrrhotite and sphalerite. 131.1-131.5m intense silicification with light green sericite hosts very weakly disseminated pyrrhotite and rare sphalerite. Rare barren late chlorite wisps and irregular veinlets occur widely scattered throughout the fragmental unit
136.4-155.0	Silty argillite interbedded siltstone at 136.4-137.9m lamprophyre dyke -cuts core at 50 degrees	Dark grey, banded and mottled by light grey and brownish grey.	Medium to thin and very thin bedded. Bedding is distinct and sharp mainly tabular and very fine-grained. Bedding to core angle; at 149.0m - 70 degrees, at 155.0m - 70 degrees, at 142.0m - 70 degrees	NIL	Regional sericitization and biotization and patchy silicification. 145.5-146.4m small patches of late albitization, 152.3 to 152.5 late disseminated muscovite. Patchy albitization from 138.0 to 140.0m	Pyrrhotite occurs as massive blebs in albitized patches rarely in very irregular chlorite veinlets. Pyrrhotite also occurs in thin 1-4mm disseminated layers sub parallel to bedding. Pyrrhotite in this interval is less than 1% by volume. Very irregular thin iron carbonate veinlets and tiny lenses are widely scattered throughout this interval. At 144.5m hairline fractures host rare arsenopyrite. 1356.0-136.4 intensely silicified and sericitized shear zone hosts minor disseminated pyrrhotite and rare sphalerite.
155.0-201.0	Mainly slump structured silty argillite. 168.0-170.0m undeformed silty argillite.	Dark grey with some light grey mottling	Bedding is totally distorted due to soft sediment deformation except for the interval between 168.0-170.0m. Bedding to core angle; at 168.0m - 58 degrees, at 170.0m - 68 degrees	NIL	155.0-201.0m regional sericitization and biotization with some patches of silicification. From 158.3-160.0m abundant bands and patches of albitization. From 160.0-201.0 slump sediments are strongly silicified and weakly sericitic with some rare beds totally altered to sericite, small wispy clusters of biotite are abundant locally.	Pyrrhotite is weakly disseminated throughout this unit, but is more abundant from 176.0-187.0m and from 177.5-177.7m; weakly disseminated sphalerite occurs with pyrrhotite disseminations. At 184.0 a 20 cm quartz vein cutting core at 40 degrees(barren). 197.0-197.5m quartz with massive chlorite breccia cutting core at 48 degrees. Late iron carbonate in small veinlets and lenses scattered throughout interval.

Drill Hole: H92-06
 Logged by D.L. Pighin

UTM Location:
 554700E,5493640N

Hole Length: 388.6m
 Bearing: 090 degrees Az

Meters	Lithology	Colour	Primary Structure and Texture	Tectonic Structure	General Alteration	Mineralization(Associated alteration, host structure)
201.0-245.2	Massive silty argillite with minor and widely scattered altered clasts	Generally light grey with dark	Massive with no evidence of bedding through out this unit. Clasts are generally small(3-10mm) elliptical in shape. Scattered throughout this unit are narrow bands of coarse fragmental with larger rounded and angular clasts, rarely more than 20mm in size. Clast edges are nebulous. The top of the unit is marked by a well developed clast supported fragmental band 1m thick. The silty argillite matrix is fine grained. The hanging wall of the unit cuts the core at 50 degrees. Clasts show a preferred orientation at 70 degrees to core axis.	NIL	Regional sericitization. Clasts are commonly replaced by late silicification and pyrrhotite.	Pyrrhotite is commonly abundant in most of the clasts within the fragmental unit. At 230.3-230.6m quartz vein hosts blebs of massive pyrrhotite, cuts core at 65 degrees. At 234.0-237.1m a silicified zone is cut by late paper thin irregular fractures hosting chlorite and minor sphalerite. At 242.1m a massive quartz vein occurs with disseminated arsenopyrite and sphalerite along selvages.
245.2-300.2	Sericitic silty argillite. Lamprophyre at 261.2-262.4m cut core axis at 47 degrees, and at 266.8m to 268.0m cuts core axis at 58 degrees	Light brownish grey with some reddish biotite	Generally destroyed by intense alteration with some remnant bedding at 278.0m - 60 degrees to core axis; 282.0m - 60 degrees to core axis and at 283.5m - 60 degrees to core axis	Shear zone at 268.0m consists of sheared lamprophyre and soft gouge cuts core axis at 78 degrees. 295.4-296.5m lamprophyre dyke cuts core axis at 59 degrees on hangingwall; footwall core axis is cut at 76 degrees	The sediments in this interval are totally altered mainly to sericite and overprinted by thin late iron carbonate lineations that cut core axis at 50-60 degrees. At 294.5m 10cm thick band of anhedral to subhedral tourmaline associated with thin layers of albite. At 295.0m 4cm thick band of anhedral to euhedral tourmaline associated with albitization. 285.0-288.0 some widely scattered subhedral light pink garnets. Rare tourmaline crystals scattered through 296.5-300.2m	Pyrrhotite in general is very weakly disseminated throughout this interval. At 286.0m very thin irregular veinlet hosts pyrrhotite and sphalerite.
300.2-322.5	Meta-sediments mainly altered to albite, sericite and lesser biotite	White speckled dark grey and some light brown grey beds and dark grey banding	Generally distorted by late hydrothermal alteration, some rare remnant bedding at 297.0m cutting core axis at 62 degrees; at 317.5m cutting core axis at 47 degrees	NIL	300.2-315.7m strongly albitized with weakly disseminated biotite and sericite. Tourmaline crystals weakly scattered throughout this interval. 313.7-322.5m intensely albitized with weakly disseminated biotite and some sericite with rare local subhedral to euhedral tourmaline crystals	Pyrrhotite occurs locally as very weak disseminations
322.5-388.6(end of hole)	Gabbro Sill?	Green white speckled	Fine grained to coarse grained	NIL	None observed	325.4m 10 cm thick quartz vein with clots of pyrrhotite and chalcopyrite.

Drill Hole: H96-09
 Logged by D.L. Pighin

UTM Co-Ordinates:
 554540E,5493640N

Length: 745.7m
 Bearing: 090 degrees

Meters	Lithology	Colour	Primary Structure and Texture	Tectonic Structure	General Alteration	Mineralization(Associated alteration, host structure)
0-6.7	Casing to 6.7m					
6.70-56.00	Schistose Siltstone	Gray, locally silver gray	Strongly slump structured, disrupted beds, some thin sections of thin bedded sediments. Bedding to core 82 degrees at 31.0m and at 85.5m 51 degrees	Widely scattered thin shears at 25 degrees to core	Intensely muscovitized, with scattered late silicified veinlets. Chlorite generally associated with silicification	Blebs of pyrrhotite and pyrite associated with slumped sediments. Fine dendritic pyrrhotite is scattered throughout sediments
56.0-96.0	Schistose Siltstone and intermixed argillite	Gray, mixed brownish gray and white with greenish streaks and blebs	Destroyed by alteration and tectonism	Finely foliated disrupted sediments, foliation appears to be sub parallel to bedding? Foliation planes are very tight and discreet, commonly accentuated by mineral alignment along planes. Foliation cuts core mainly at 51 degrees but locally at 38 degrees. Healed fault zone? Sediments are locally boudinaged and brecciated	Sediments locally altered to nearly massive crystalline muscovite. 56.0-66.1m -crackle brecciated albite healed by chlorite, pyrite and pyrrhotite. 79.9-83.3m -Albite foliated by reddish brown biotite and dark green chlorite, late quartz veinlets and lenses	56.0-66.1m -2 to 5 %pyrrhotite and pyrite as disseminations and blebs associated with albitization and chlorite
96.0-135.0	Altered Siltstone and Argillite	Gray and brownish gray	Thin to very thin bedded, bedding distinct and flat, rarely wavy. Bedding to core 87 degrees at 44.5m. Rare small scale soft sediment folding, some fine parallel laminations	Finely foliated throughout section, foliation as previously described with scattered quartz-calcite boudins	Intensely muscovitized throughout. 96.0-103.2 -intensely foliated, albitized and muscovitized with late veinlets of quartz and carbonate. Foliation cuts core at 64 degrees. Thin zones of similar albite alteration occur at 106.0 and 108.0m	Minor disseminated pyrite and pyrrhotite throughout section. 96.0-103.2m - abundant 2 to 3% pyrrhotite and pyrite as disseminations and blebs.
135.0-188.0	Siltstone, interbedded argillite, very fine-grained sediments -Lower Aldridge type sediments	Gray, light gray and brownish gray	Thin to very thin bedded. Bedding flat and distinct, but is deformed by later cleavage. Locally soft-sediment slumping is well developed. Bedding to core at 135m - 80 degrees, at 157m - 63 degrees	Finely developed cleavage throughout. The angle between bedding and cleavage is generally 70 degrees	Sediments are intensely biotized and muscovitized to the extent that some beds are essentially a biotite-muscovite gneiss. Some widely scattered thin calcite veinlets. Rare small irregular lenses of biotite, chlorite. 180.9-181.1m Brown Tourmalinite	In general pyrrhotite and pyrite in thin irregular quartz-calcite veinlets, widely scattered throughout section. 186.6-187.7m - irregular stockworks of quartz-calcite and pyrrhotite veins associated with intense muscovitization and biotization. Intense silicification along the base of this zone
188.0-207.3	Siltstone, interbedded schistose siltstone	Gray to light gray	Thick to very thick bedded, bedding indistinct. Bedding at 199.0m is 68 degrees to core, at 192.0m is 20 degrees to core. Soft sediment deformation? locally bedding is parallel to core	Well developed cleavage cuts core at 63 degrees, angle between bedding and cleavage is 58 degrees	Strongly biotized and muscovitized to locally a biotite-muscovite gneiss.	Minor pyrrhotite along thin chlorite-quartz veinlets
207.3-210.7	Siltstone, very fine grained	bluish gray to brownish gray	Destroyed by tectonism and alteration	Brecciated zone, shearing mainly at 8 degrees to core.	Intensely silicified, fractured and healed by very thin quartz-chlorite veinlets. 209.5-210.0m -light brown to brown tourmalinite	Pyrrhotite occurs in very thin irregular quartz-chlorite fractures

Drill Hole: H96-09
 Logged by D.L. Pighin

UTM Co-Ordinates:
 554540E,5493640N

Length: 745.7m
 Bearing: 090 degrees

Meters	Lithology	Colour	Primary Structure and Texture	Tectonic Structure	General Alteration	Mineralization(Associated alteration, host structure)
210.7-262.2	Siltstone, interbedded argillite -locally schistose Lower Aldridge??	Gray to reddish gray	Medium to thin bedded, rarely thin bedded, bedding distinct, generally distorted. Bedding to coarse at 226.0m - 8 degrees, at 231.0m - 40 degrees, at 239.0m - 30 degrees, at 245.0m - 45 degrees	At 244.2-244.7m FAULT ZONE cuts core at 62 degrees. Graphitic gouge, argillite beds are typically finely foliated	Strongly muscovitized and biotized, locally muscovite schist is developed. Some scattered wispy lenses of quartz and chlorite	Minor disseminated pyrrhotite associated with small quartz and chlorite lenses and veinlets
262.2-283.5	Graphitic mylonite, breccia and gouge	Gray to jet black	NIL	210.7-283.5m -FAULT ZONE cuts core at 62 degrees, minor shears at 26 degrees and 42 degrees	Fault zone is partly healed by graphite, with scattered veinlets of quartz and siderite	Graphite forms the matrix of the fault and is locally coarsely crystalline. The fault zone hosts from 1 to 3% sulphides and locally up to 5% sulphide. Sulphides are disseminated in clasts, matrix and in thin irregular quartz-siderite veinlets and lenses. Principle sulphide is arsenopyrite, fine to locally coarsely crystalline galena, sphalerite, chalcopyrite. Pyrrhotite is very weakly disseminated pyrite.
283.5-293.8	Quartzite, minor siltstone	light gray to very light gray	NIL	Strongly foliated, crackle brecciated. Foliation generally at 25 degrees to core.	Strongly silicified with minor sericitization and weak chlorite along foliation planes.	Sulphides are very rare, occasional disseminated pyrite
293.8-316.5	Siltstone, inter-banded argillite	Green, greenish gray banded brownish gray	NIL	Strongly foliated with associated small scale drag folds. Generally foliation cuts core at 45 degrees	Strongly biotized and sericitized with late bands of intense silicification and chlorite typically controlled by foliation planes and drag folds.	Rare disseminated pyrite or pyrrhotite.
316.5-318.3	Biotitic quartz-talc schist	Banded green, white and brownish green	NIL	Strongly foliated with quartz layers commonly boudinaged along the planes of foliation. Foliation cuts core at 35 degrees.	Intense talcose and biotite alteration	Rare pyrrhotite and or pyrite
318.3-383.0	Siltstone, some interbedded quartzite	Dark gray and light bluish gray	Thick to very thick bedded. Bedding is indistinct. Bedding at 334.0m - 24 degrees to core, at 351.0m - 60 degrees.	Weakly crackle brecciated throughout section. At 336.0m, shearing at 30 degrees to core, slickensided fracture sub-parallel to core. Foliation which was dominant up-hole occurs only very rarely in this section	intensely silicified and sericitized with minor biotite	Rare sphalerite, arsenopyrite and pyrrhotite occur in widely scattered quartz-chlorite-calcite filled hairline fractures from 359.0-362.0m
383.0-450.0	Gabbro Sill?	Green speckled white with irregular veinlets	Medium to coarsely crystalline.	Upper contact strongly foliated for 2.0m at 45 degrees to core.	Gabbro is riddled by thin irregular calcite-minor quartz veins and veinlets. Scattered veins of albite from 2cm to 5cm cut core at 25 degrees. 386.2-387.2m massively finely crystalline albite and minor chlorite	

Drill Hole: H96-09
 Logged by D.L. Pighin

UTM Co-Ordinates:
 554540E,5493640N

Length: 745.7m
 Bearing: 090 degrees

Meters	Lithology	Colour	Primary Structure and Texture	Tectonic Structure	General Alteration	Mineralization(Associated alteration, host structure)
450.0-457.0	Massive albite to albitized quartz	White with green mottling	NIL	Crackle brecciated, vuggy in part.	Massive albite, crackle brecciated and healed by chlorite	Pyrite-pyrrhotite filled vugs
457.0-497.8	Fragmental, siltstone matrix, siltstone, and argillite clasts.	gray to light gray	Massive, matrix supported clasts, clasts range in size from 2mm to 5mm, rarely 10mm. Clasts generally flatten parallel to planes of schistosity	Finely foliated throughout, foliation cuts core at 46 degrees	intense fine grained muscovitization throughout, patchy weak chloritization.	Pyrrhotite occurs as flattened clasts?, blebs and disseminated throughout section, locally 2 to 3% pyrrhotite. At 459.0m, thin irregular calcite veinlets contain sphalerite. 461.5-461.9m thin veinlets of pyrrhotite and chalcopyrite. 468.5-471.6m siderite-quartz veins deposited along planes of foliation at 46 degrees to core
497.8-503.0	Argillite	Light greenish gray to light gray	Wispy banded, disrupted bedding?, soft sediment deformation?	Abundantly fractured at 48 degrees to core	Intensely muscovitized, and weakly chloritic	2 to 3% pyrrhotite, locally 5%, mainly as irregular blebs and lenses. Some scattered wispy lenses and veinlets of calcite
503.0-559.0	Siltstone	Gray to brownish gray	Thick to very thick bedded, rarely medium bedded. Bedding planes are rare, but are commonly distinct and flat. Bedding to core 73 degrees at 520.0m.	NIL	Strongly biotitic and muscovitic, locally intensely muscovitic. Scattered subhedral, light pink garnets from 526.6 to 527m, some locally intense silicification, very intensely muscovitized, from 531.4 to 535.2m and 542.6 to 546.0m. Scattered patches of light pink subhedral garnets throughout section	At 510.0m, thin 4mm thick pyrrhotite(rare galena) filled fractures cut core at 18 degrees. At 520.0m, 3cm thick quartz breccia with pyrrhotite-minor sphalerite - matrix is parallel to bedding. Throughout this section pyrrhotite occurs in widely scattered thin 2 to 4mm calcite filled fractures. Pyrrhotite also occurs in blebs, wispy lenses and as disseminations. At 554.0m, 2mm thick calcite-chlorite filled fractures host minor sphalerite
559.0-563.0	Fragmental, siltstone matrix, siltstone, and argillite clasts.	Light gray, gray and dark gray	Clast supported fragmental, clasts are generally rounded to sub-rounded, rarely sharply angular, strong preferred clast orientation at 34 degrees to core.	NIL	Strongly muscovitic, with some strongly biotitic clasts.	Pyrrhotite, 1 to 2% by volume occurs as sulphide clasts and as heavy disseminations in clasts
563.0-622.7	Siltstone; generally medium grained.	Light gray	Thick to very thick bedded rarely medium or thin bedded, bedding planes are rare but distinct. Bedding to core at 572.4m - 46 degrees, at 585.5m - 66 degrees, at 610.0m - 70 degrees, at 618.0m - 70 degrees. 573.0-576.0m strongly slump structured.	NIL	Strongly muscovitic throughout. Intensely muscovitic from 610.0 to 623.0m. Scattered patches of intense silicification with some local concentrations of subhedral pink garnets and biotite.	Pyrrhotite is widely scattered throughout the section as disseminations, blebs and in very thin irregular calcite filled fractures. Sphalerite occurs at 577.2m, at 584.0m, and 588.6m in thin irregular calcite-quartz filled fracture. Sphalerite occurs at 591.8m in a 1cm thick calcite-chlorite filled fracture cuts core at 45 degrees.

Drill Hole: H96-09
 Logged by D.L. Pighin

UTM Co-Ordinates:
 554540E,5493640N

Length: 745.7m
 Bearing: 090 degrees

Meters	Lithology	Colour	Primary Structure and Texture	Tectonic Structure	General Alteration	Mineralization(Associated alteration, host structure)
622.7-634.7	Siltstone, medium grained to fine grained	Light gray	Thick to very thick bedded, bedding generally not visible. Some very rare clasts.	At 630.2m thin graphitic shear cuts core at 78 degrees parallel to bedding?	Strongly muscovitic, with scattered small patches and bands of intense silicification associated with some biotite. Scattered light pink subhedral garnets usually with patchy chloritization	Rare disseminated pyrrhotite
634.7-635.7	Siltstone; fine to medium grained.	Light green and light brownish gray	Thin to very thin bedded, bedding is sharp-flat to wavy. Bedding to core 70 degrees at 635.0m	NIL	Strongly muscovitic with minor biotite	Weakly disseminated pyrrhotite
635.7-656.5	Siltstone; medium grained, 652.0 to 654.0m two sills parted by 50 cm siltstone	Light gray	Thick to very thick bedded, bedding indistinct	At 642.0m, thin gouge filled shear cuts core at 38 degrees.	Generally silicified with sericite and minor biotite.	Rare disseminated pyrrhotite.
656.5-678.0	Siltstone, minor argillite. Generally fine grained	Light gray to brownish	Thin to very thin bedded. Beds are strongly to moderately slump structured and generally disrupted, good bedding planes are rare. Bedding to core at 667.5 - 75 degrees and at 675.0m - 60 degrees	Thin gouge filled shearzone at 665.5m cut core at 37 degrees.	Generally silicified and muscovitic throughout. Intensely silicified from 661.0-677.0m, scattered patches of subhedral pink garnets and biotite	661.0-677.0m sphalerite and lesser galena occurs as weak disseminations and in thin irregular fractures, rarely 1cm thick and in rare thin bedding parallel bands. Quartz, calcite, coarsely crystalline muscovite and minor chlorite is typically associated with sphalerite and galena mineralization. Estimated grade for mineralized interval is 0.5% Pb and Zn combined. At 674.6m - disseminated sphalerite zone 2cm thick. At 675.5m -5mm thick band of disseminated arsenopyrite.
678.0-681.2	Siltstone, fine grained sediments.	Light gray to bluish gray	Thick to very thick bedded, bedding is rare but distinct, slump structured in part.	NIL	Strongly muscovitic with late irregular patches of intense silicification, locally with scattered subhedral light pink garnets	678.6-679.0m -weakly disseminated galena and sphalerite associated with intense silicification.
681.2-684.6	Fragmental Unit.	Light gray, gray and gray brown	Clast supported fragmental, clasts angular to sub-angular, typically angular clasts are mainly argillite and silty argillite in a siltstone matrix. Strong preferred orientation at 51 degrees to core.	NIL	Matrix is weakly biotitic and locally silicified, clasts appear unaltered.	Minor disseminated pyrrhotite.

Drill Hole: H96-09
 Logged by D.L. Pighin

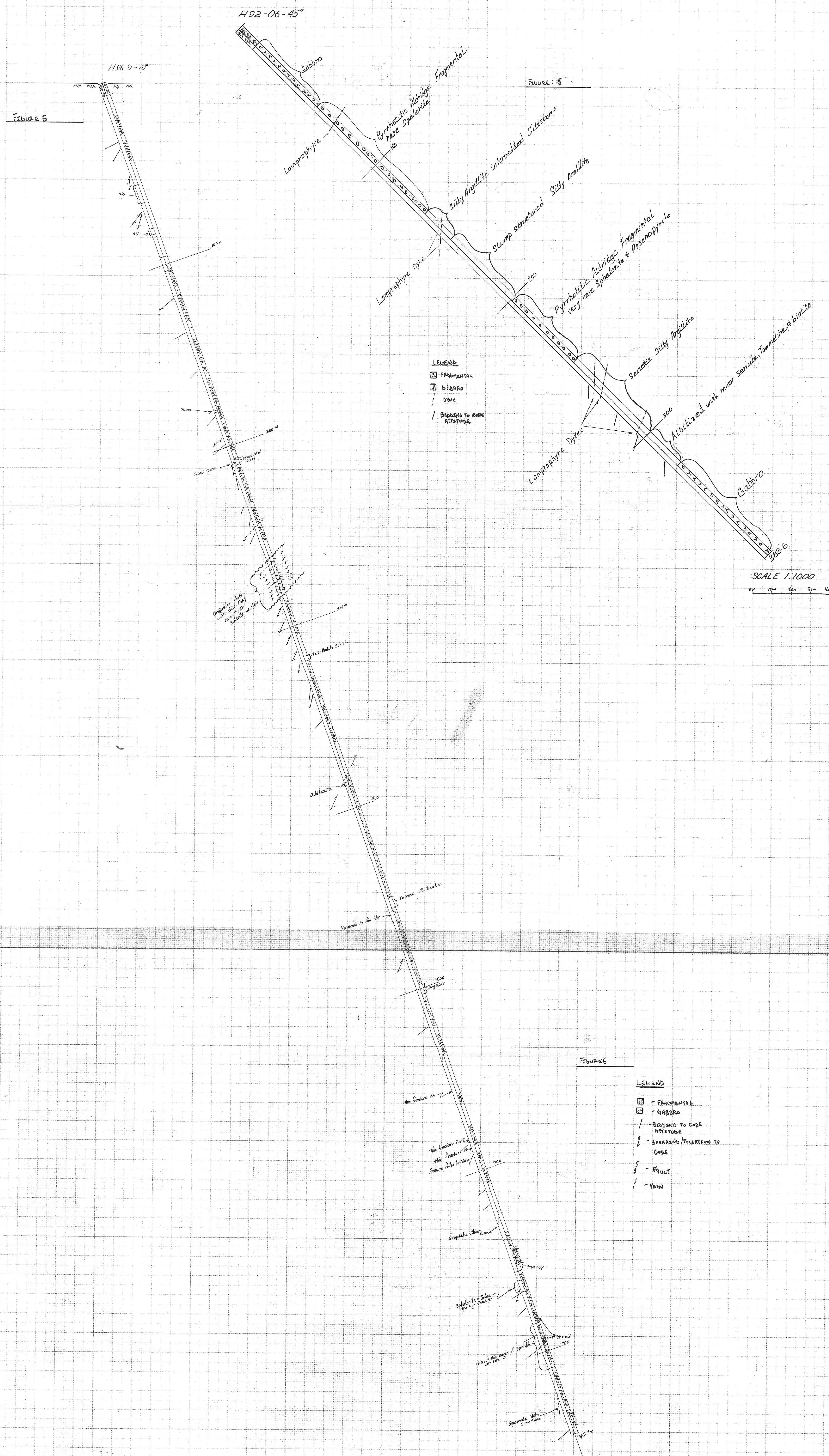
UTM Co-Ordinates:
 554540E,5493640N

Length: 745.7m
 Bearing: 090 degrees

Meters	Lithology	Colour	Primary Structure and Texture	Tectonic Structure	General Alteration	Mineralization(Associated alteration, host structure)
684.6-709.0	Siltstone, interbedded argillite and silty argillite -Typical Lower Aldridge	Banded gray, light gray and brownish gray	Thin to very thin bedded, bedding sharp and flat locally some beds are strongly slump structured. Bedding to core at 690.0m -80 degrees, at 697.0m - 72 degrees.	NIL	Siltstone beds are typically biotitic, locally some beds are intensely muscovitic.	Pyrrhotite with very rare sphalerite occurs throughout the section as scattered thin(1-2cm thick) bedding parallel bands and as weak disseminations.
709.0-712.0	Siltstone, interbedded silty argillite and argillite, very fine grained sediments. Typical Lower Aldridge Formation	Banded light gray, gray and brownish gray	Thin to medium bedded, bedding sharp-flat. Some beds finely parallel laminated.	NIL	As previously described (684.6-709.0m).	As previously described (684.6-709.0m)
712.0-733.0	Siltstone, minor thin argillite interbeds, fine grained sediments. Lower Aldridge Formation.	Light gray to brownish gray	Medium to thick bedded.	NIL	As previously described.	At 719.0m, very irregular 1cm thick calcite quartz vein contains galena and pyrrhotite. At 723.0m -5mm thick quartz sphalerite vein cuts core at 12 degrees. Some weakly disseminated sphalerite in sediments adjacent to veinlets
733.0-745.7 End of Hole at 745.7m	Siltstone, interbedded argillite, and silty argillite.	light gray, banded brownish gray	Thin to very thin bedded, rare medium beds. Bedding is sharp-flat, beds are commonly finely parallel laminated. Bedding to core at 744.0m - 70 degrees.	NIL	Generally biotitic and muscovitic with scattered 10 to 30cm thick bands of intense silicification	Widely scattered, thin(2-3mm thick) bedding parallel bands of pyrrhotite. Pyrrhotite also occurs as very weak disseminations throughout section.

APPENDIX 2

GRAPHIC LOGS



LEGEND
 □ FRAGMENTAL
 □ GABBRO
 / DYKE
 / BEDDING TO CORE ATTITUDE
 / SHEARING / FOLIATION TO CORE

FIGURE 5

FIGURE 6

FIGURE 6

LEGEND
 □ FRAGMENTAL
 □ GABBRO
 / BEDDING TO CORE ATTITUDE
 / SHEARING / FOLIATION TO CORE
 - FAULT
 - VEIN

SCALE 1:1000

APPENDIX 3

MINFILE SUMMARY REPORTS

Location/Identification

MINFILE Number:	082FNE115		
Name(s):	PAKK UPPER JACK, LOWER JACK, UPPER JACK VENT, LOWER JACK VENT		
Status:	Showing	Mining Division:	Fort Steele
		Electoral District:	East Kootenay
Regions:	British Columbia	Forest District:	Rocky Mountain Forest District
BCGS Map:	082F059		
NTS Map:	082F09W, 082F09E	UTM Zone:	11 (NAD 83)
Latitude:	49 33 02 N	Northing:	5488913
Longitude:	116 16 32 W	Easting:	552401
Elevation:	2200 metres		
Location Accuracy:	Within 500M		
Comments:	Showing on Mount Evans between Meachen and Hellroaring creeks, about 26 kilometres southwest of the Sullivan mine and 37 kilometres west of the community of Cranbrook.		

Mineral Occurrence

Commodities:	Zinc, Lead, Copper, Tungsten		
Minerals	Significant:	Galena, Sphalerite, Chalcopyrite, Scheelite	
	Associated:	Pyrrhotite, Arsenopyrite	
	Alteration:	Tourmaline, Garnet, Albite, Actinolite, Muscovite, Biotite	
	Alteration Type:	Tourmalin ^z n, Albitic	
	Mineralization Age:	Unknown	
Deposit	Character:	Massive, Vein, Disseminated	
	Classification:	Sedimentary	
	Type:	E14: Sedimentary exhalative Zn-Pb-Ag	
	Dimension:	800x30x0 metres	
	Comments:	Fragmental structure traced in outcrop.	

Host Rock

Dominant Host Rock:	Sedimentary		
Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Helikian	Purcell	Aldridge	-----
Isotopic Age	Dating Method	Material Dated	
-----	-----	-----	
Lithology:	Fragmental Sediment/Sedimentary, Altered Sediment/Sedimentary		

Geological Setting

Tectonic Belt:	Omineca	Physiographic Area:	Purcell Mountains
Terrane:	Ancestral North America		

Inventory

No inventory data

Capsule Geology

The Lower Jack zone was discovered in 1999 during prospecting along a newly constructed logging road in a steep, overburden-covered area. A number of large, lead-zinc bearing, hydrothermally altered, angular tourmalinite and Aldridge Formation fragmental float boulders occur in a 300 by 300 metre area. The float boulders are well mineralized with galena, sphalerite, arsenopyrite and pyrrhotite. This discovery was staked in the summer of 1999 and is now part of what is called the Pakk property. The Upper Jack zone was also discovered by prospecting in the area and is located 2500 metres northwest of the Lower Jack zone. A third discovery, the Sinclair zone (082FNE117), is 2000 metres north-northeast of the Upper Jack zone. The Pakk property includes the Horn, Burn, Pit and Pakk claim groups.

At surface, the Upper Jack vent zone consists of a fragmental structure with abundant galena, sphalerite, pyrrhotite and arsenopyrite in massive lenses, veins and disseminations. The structure is 30 metres wide and is traced in outcrop for 800 metres. Helikian Aldridge Formation (Purcell Supergroup) marker beds outcrop nearby.

In 1999, Chapleau Resources Ltd. conducted a diamond drilling program on the Upper Jack Vent zone where three short holes were completed to acquire preliminary geologic data. The holes outlined a near-vertical dipping structure consisting of discordant fragmental rocks about 10 metres thick. The crosscutting fragmental rock is bracketed by a 20-metre thick zone of intensely altered sediments. Sulphides form all or part of the fragmental matrix. Sphalerite and galena are dominant, with lesser pyrrhotite, arsenopyrite and chalcopyrite. The fragmental hostrock is intensely tourmalinized along with garnet, albite and actinolite with abundant muscovite and biotite. Scheelite is widely scattered throughout the fragmental rocks and in the adjacent sediments. The scheelite occurs as large disseminated crystals and as thin veinlets.

Super Group Holdings Ltd. is directing the exploration and Chapleau Resources Ltd. is performing the work on the property.

Bibliography

EMPR ASS RPT 23622

EMPR OF 2000-22

GSC MAP 15-1957

GCNL *#192(Oct.6),*#204(Oct.25), 1999

WWW <http://www.infomine.com/>

Date Coded: 1999/12/14

Coded By: George Owsiacki (GO)

Field Check: N

Date Revised: 1999/12/15

Revised By: George Owsiacki (GO)

Field Check: N

Location/Identification

MINFILE Number:	082FNE117	Mining Division:	Fort Steele
Name(s):	<u>SINCLAIR</u>	Electoral District:	East Kootenay
	PAKK	Forest District:	Rocky Mountain Forest District
Status:	Showing	UTM Zone:	11 (NAD 83)
Regions:	British Columbia	Northing:	5490683
BCGS Map:	082F059	Easting:	553308
NTS Map:	082F09W, 082F09E		
Latitude:	49 33 59 N		
Longitude:	116 15 46 W		
Elevation:	1800 metres		
Location Accuracy:	Within 500M		
Comments:	Showing on Mount Evans between Meachen and Hellroaring creeks, about 24 kilometres southwest of the Sullivan mine and 37 kilometres west of the community of Cranbrook.		

Mineral Occurrence

Commodities:	Zinc, Lead	
Minerals	Significant:	Sphalerite, Galena
	Associated:	Pyrrhotite
	Mineralization Age:	Unknown
Deposit	Character:	Massive, Disseminated
	Classification:	Sedimentary, Syngenetic
	Type:	E14: Sedimentary exhalative Zn-Pb-Ag

Host Rock

Dominant Host Rock:	Sedimentary		
Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Helikian	Purcell	Aldridge	-----
Isotopic Age	Dating Method	Material Dated	
-----	-----	-----	
Lithology:	Argillite, Silty Argillite, Mudstone		

Geological Setting

Tectonic Belt:	Omineca	Physiographic Area:	Purcell Mountains
Terrane:	Ancestral North America		

Inventory

No inventory data

Capsule Geology

The Lower Jack zone was discovered in 1999 during prospecting along a newly constructed logging road in a steep, overburden-covered area. A number of large, lead-zinc bearing, hydrothermally altered, angular tourmalinite and Aldridge Formation fragmental float boulders occur in a 300 by 300

metre area. The float boulders are well mineralized with galena, sphalerite, arsenopyrite and pyrrhotite. The Upper Jack zone (082FNE115) was also discovered by prospecting in the area and is located 2500 metres northwest of the Lower Jack zone. A third discovery, the Sinclair zone, is 2000 metres north-northeast of the Upper Jack zone. The Pakk property includes the Horn, Burn, Pit and Pakk claim groups.

At the Sinclair showing, thin bedded lead-zinc mineralization occurs in a mudstone unit 60 metres thick which has been traced on surface for 600 metres. Chapleau Resources Ltd. completed two short diamond drill-holes on the showing in 1999. The first hole intersected a fault zone and did not find the mineralized zone. The second hole intersected the stratiform sphalerite mineralization 90 metres downdip from the surface showing. The hole cut forty, thin, bedding-parallel bands of disseminated sphalerite and pyrrhotite ranging in thickness from 1 to 10 centimetres. The sulphide-rich bands are scattered throughout the 150-metre section of thin-bedded argillite and silty argillite of the Helikian Aldridge Formation (Purcell Supergroup).

Super Group Holdings Ltd. is directing the exploration and Chapleau Resources Ltd. is performing the work on the property.

Bibliography

EMPR ASS RPT 23622
EMPR OF 2000-22
GSC MAP 15-1957
GCNL *#192(Oct.6),*#204(Oct.25), 1999
WWW <http://www.infomine.com/>

Date Coded: 1999/12/14

Coded By: George Owsiacki (GO)

Field Check: N

Date Revised: 1999/12/15

Revised By: George Owsiacki (GO)

Field Check: N