

# Ministry of Energy, Mines & Petroleum Resources Mining & Minerals Division BC Geological Survey



Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Airphoto Interpretation	TOTAL COST: \$5,200
AUTHOR(S): J. T. Shearer, M.Sc., P.Geo	SIGNATURE(S):
NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):	YEAR OF WORK: 2012
STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE	(S): <u>5419773</u>
PROPERTY NAME: Gold Ledge	
CLAIM NAME(S) (on which the work was done):	
COMMODITIES SOUGHT: Au/Ag	
MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:	
WINING DIVISION: Fort Steele	NTS/BCGS: 82F/09E
ATITUDE: 49 ° 40 '48 " LONGITUDE: 116	
DWNER(S):  J. T. Shearer	2)
IAILING ADDRESS: Unit 5 - 2330 Tyner Street	
Port Coquitlam, BC	
PERATOR(S) [who paid for the work]: ) Same as above	2)
IAILING ADDRESS: Same as above	
ROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structu The Goldledge showing occurs in a major regional fault cuttin	ure, alteration, mineralization, size and attitude): g middle Proterozoic argillaceous quartzite of the
oldridge Formation. The 1890's workings are a 41m drift with	
rsenopyrite, galena and pyrite. A selected sample assayed	over 34g/tonne Au

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		All Claims	\$5,200
GEOPHYSICAL (line-kilometres) Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			100
Airborne			
GEOCHEMICAL (number of samples analysed for)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size) Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trai			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	\$5,200

Confirmation



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# Mineral Claim Exploration and Development Work/Expiry Date

Recorder: SHEARER, JOHAN THOM (124452) Submitter: SHEARER, JOHAN THOM (124452)

Effective: 2012/DEC/02 Recorded: 2012/DEC/02

D/E Date: 2012/DEC/02

#### Confirmation

If you have not yet submitted your report for this work program, your technical work report is due in 90 days. The Exploration and Development Work/Expiry Date Change event number is required with your report submission. Please attach a copy of this confirmation page to your report. Contact Mineral Titles Branch for more information.

5419773 **Event Number:** 

Work Type:

Geological, PAC Withdrawal (up to 30% of technical work performed), **Technical Items:** 

Preparatory Surveys

**Work Start Date:** 2011/DEC/15 2012/DEC/02 **Work Stop Date: Total Value of Work:** 

\$ 5200.00

Mine Permit No:

#### Summary of the work value:

Tenure Number	Claim Name/Property	Issue Date	Good To Date	То	# of Days For- ward	Area in Ha	Applied Work Value	Sub- mission Fee
839507	GOLD LEDGE	2010/dec/02	2013/dec/02	2013/dec/02	0	501.78	\$ 0.00	\$ 0.00
839530	GOLD LEDGE 2	2010/dec/02	2013/dec/02	2013/dec/02	0	501.99	\$ 0.00	\$ 0.00
839870	PETE 1	2010/dec/05	2012/dec/05	2013/dec/05	365	188.11	\$ 940.56	\$ 0.00
839871	PETE 2	2010/dec/05	2012/dec/05	2013/dec/05	365	167.29	\$ 836.46	\$ 0.00
839872	PETE 3	2010/dec/05	2012/dec/05	2013/dec/05	365	271.70	\$ 1358.48	\$ 0.00
839873	PETE 4	2010/dec/05	2012/dec/05	2013/dec/05	365	83.60	\$ 418.02	\$ 0.00
839874	PETE 5	2010/dec/05	2012/dec/05	2013/dec/05	365	83.58	\$ 417.88	\$ 0.00
839875	PETE 6	2010/dec/05	2012/dec/05	2013/dec/05	365	167.37	\$ 836.85	\$ 0.00
839876	PETE 7	2010/dec/05	2012/dec/05	2013/dec/05	365	104.63	\$ 523.17	\$ 0.00
839877	PETE 8	2010/dec/05	2012/dec/05	2013/dec/05	365	125.50	\$ 627.52	\$ 0.00

#### **Financial Summary:**

Total applied work value: \$5958.94

PAC name: J Shearer **Debited PAC amount:** \$ 758.94 **Credited PAC amount:** \$ 0.0

**Total Submission Fees:** \$ 0.0

**Total Paid:** \$ 0.0

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# AIRPHOTO INTERPRETATION REPORT on the GOLDLEDGE PROPERTY

LATITUDE 49°40'48"N LONGITUDE 116°14'58"W NTS 082F/09 UTM 5503323N + 554146E (11 NAD83)

ST. MARY'S LAKE AREA, KIMBERLEY,
FORT STEELE MINING DIVISION, BRITISH COLUMBIA,
CANADA
Event #5419773

For

BC Geological Survey Assessment Report 33978

Electra Gold Ltd.
Unit 5 – 2330 Tyner Street,
Port Coquitlam, BC
V3C 2Z1

**Prepared By** 

J. T. SHEARER, M.Sc., P.Geo. (BC & Ontario)

January 4, 2013

Fieldwork completed between December 15, 2011 and December 2, 2012

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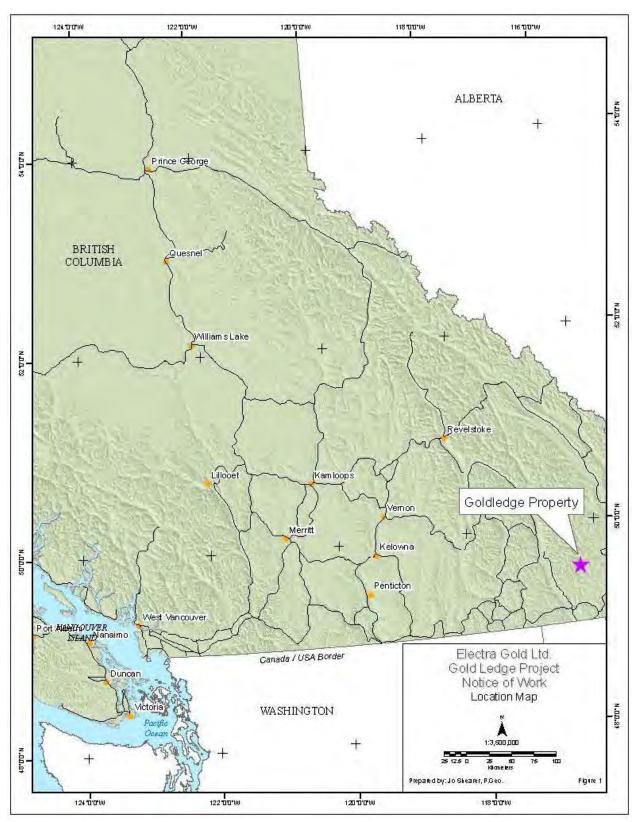
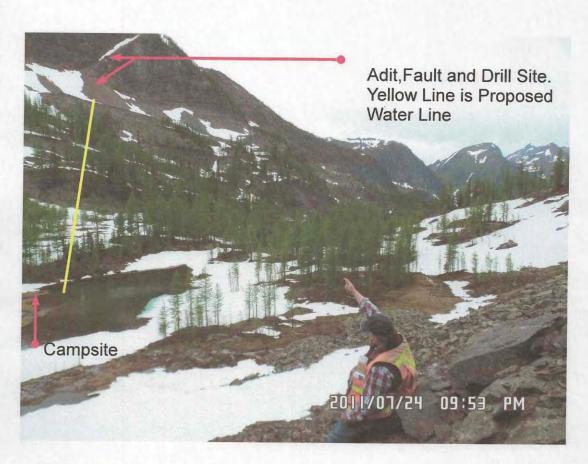


Figure 1 Location Map



Jo Shearer points to the Gold Ledge adit while standing on the lake zone adit on Electra Gold's wholly owned Gold Ledge property near Cranbrook B.C.

# Looking NW from 11 U 553687 5503871 At Fault on Gold Ledge Property



#### **SUMMARY**

The Goldledge property comprises 10 mineral claims with a total of 4,495.14 ha. The claims are within the Fort Steele Mining Division, and located west of the town of Kimberley, B.C. Road access to the property is via the St. Mary Lake Road and the Matthew Creek Forest Service Road. Elevations on the property range from 1000m to 2690m above sea level. Higher elevations and remote areas on the property were accessed by helicopter from a base in Cranbrook.

The Gold Ledge Property lies within the Purcell Anticlinorium. The Proterozoic aged Purcell Supergroup is exposed in the core of the Anticlinorium with the lower Aldridge Formation forming the basal part of the Purcell Supergroup. The lower Aldridge comprises thin bedded, rusty quartzitic wacke and siltstone. The formation is conformably overlain by the middle Aldridge comprised of thin to medium bedded, rusty to grey weathering quartz wacke, quartzitic wacke and siltstone units. Syn-depositional gabbro sills and dikes have intruded the lower and middle Aldridge Formation.

The most significant base metal deposit in the region is Cominco's Sullivan deposit at Kimberley. This sedimentary exhalative lead-zinc sulfide deposit contained an estimated 170 MT grading 5.5% zinc, 5.8% lead and 59 gram per tonne silver; and is stratigraphically situated immediately below the lower Aldridge-middle Aldridge contact (LMC).

The focus of exploration for 2011 on the Gold Ledge Property was the LMC. Fieldwork was carried out between June 11 and September 27, 2000. Geological mapping and lithogeochemical sampling was geared towards refining and expanding the previous seasons fieldwork and interpretations. The LMC was mapped on the eastern side of the property, with a gentle westward dip. The geometry of the contact is complicated by several north and east trending faults.

Two historic diamond drill holes (PP-00-1 and PP-00-2) were completed between July 27 and September 17, 2000. The target was a Sullivan-type mineral deposit at the LMC. The LMC was not intersected in PP-00-1. The hole was interpreted to have passed from middle Aldridge into the upper part of the lower Aldridge, with some of the section being removed by a west-side-down normal fault (the Alki Fault).

In hole PP-00-2, the LMC was intersected. Sullivan Horizon equivalent rocks, weakly to moderately anomalous in Zn and Pb, were cored for 13m before a fault zone was encountered. Lower Aldridge Formation strata below this fault was not geochemically anomalous, and it was interpreted that some of the section was removed by the fault. This fault was not previously recognised in outcrop.

The Sullivan Horizon equivalent strata tested by hole PP-00-2 was weakly to moderately anomalous in Zn and Pb. The assay values (87ppm Pb, 226ppm Zn over 7.43m) suggest that the Sullivan Horizon equivalents in this hole are distal to ore bearing strata.

Work in 2011 focussed on general prospecting, rock and soil sample on known showings on the claims.

The previously known underground workings known as the Blue Peter and Mystery returned grab samples assaying over 1% (up to 2.48% Cu) Copper with variable gold (from trace to 1.423 g/tonne) and silver values. However a previously undocumented relatively wide east-west trending pyritic zone (now called St. Mary Zone) was noted as being investigated in the old days by 3 adits up along the mountain side. Samples of fine muck from the upper adit assayed 3.913 g/tonne gold with 8.3 g/tonne Ag, 0.05%

Cu with very low Arsenopyrite (49ppm). A grab sample from the lowest adit on the St. Mary Zone assayed 1.470 g/tonne gold.

Based on the preliminary surveys, the main thrust fault and subsidiary East-West zones important mineral-bearing structures as indicated by old workings that are found along 8 kilometer strike length. As well, some limited reconnaissance prospecting to the north along strike of the structure has found additional sulphide mineralization to suggest possible extension of quartz-mineral-bearing structures to the north.

An early northerly set of linears appears to be cut by a stronger, younger series of northwesterly linears. The northern structures control the distribution of many of the alteration zones whereas the northeasterly structures bound the known mineralized zones (which apparently contain gold).

The major thrust faults which displace large packages of stratigraphy are less apparent as Airphoto linears. A subtle set of northwesterly Airphoto linears also appear to be relatively older as suggested by off-sets along the northerly structures.

Having the Airphotos in the field during future work will be a valuable tool to focus attention on the structurally controlled Au-bearing siliceous zones.

Respectfully submitted,

J. T. Shearer, M.Sc., P.Geo. (BC & Ontario)

#### INTRODUCTION

The Gold Ledge Property comprises 10 mineral claims with a total of 4,495.14ha. The property is centred about the Goldledge, 13km west of Kimberley, B.C. The Gold Ledge Property is within the Fort Steele Mining Division, covered by NTS map sheet 82F/09, and is centred at 49°40′00″ north and longitude 116°15′00″ west (Figure 1). The St. Mary River runs along the southern and western sides of the property. Major streams such as Alki Creek, Matthew Creek and Pyramid Creek drain the high alpine regions around Goldledge in the central part of the property.

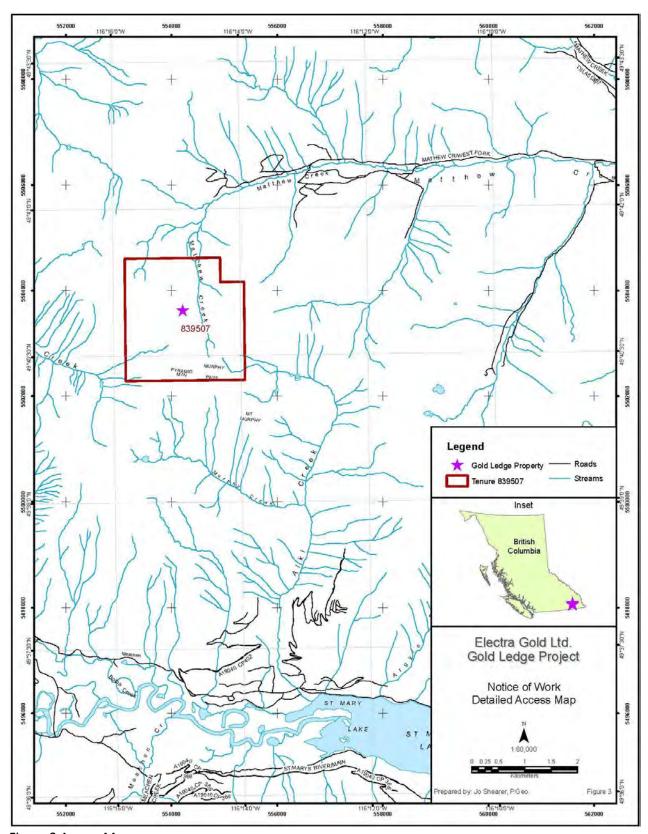
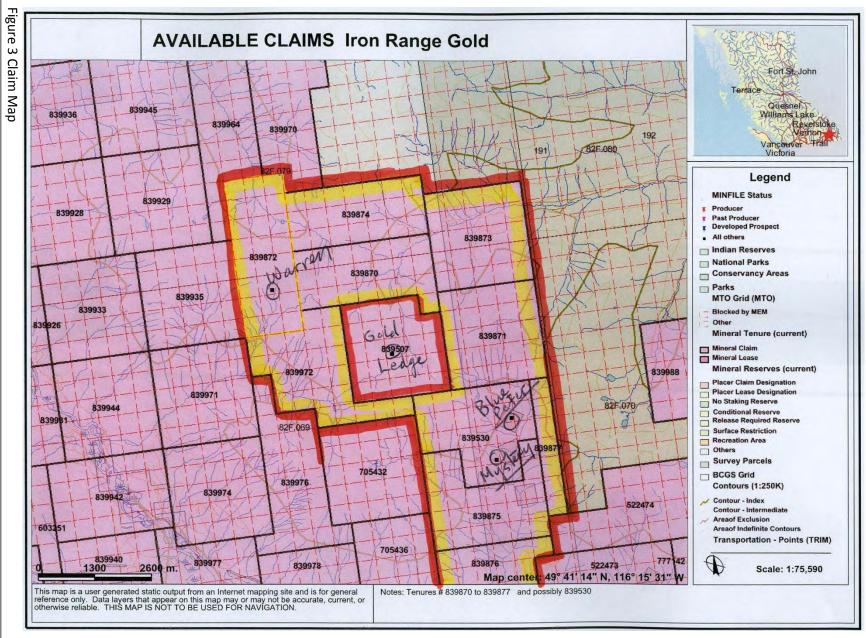


Figure 2 Access Map

#### LOCATION and ACCESS

Road access to the property is via the St. Mary Lake Road, the Matthew Creek Forest Service Road, and minor branches off these roads. A foot trail off a new logging road along the east side of Alki Creek provides access to the upper part of this drainage. Because of the relatively rugged ground and limited road access, a helicopter was used on several traverses to access the high alpine areas.

The property is located within the Purcell Mountains, at elevations ranging from 1000m above sea level (a.s.l.) in the St. Mary River valley, to 2690m on an unnamed ridge in the northwest comer of the property. Goldledge reaches a height of 2640m a.s.l. Vegetation at lower elevations consists of mature timber. There has been some logging in the area, and it is currently ongoing at Alki Creek. At higher elevations, scrub spruce and alpine shrubs and grasses predominate. The high ridges and cirques expose bare rock and talus. Outcrop exposure is quite good along ridges as well as some steep valley walls and streambeds. The climate is characterized by low to moderate precipitation with temperatures ranging from -30° Celsius in the winter to over 25° in the summer. The project area is generally accessible from late June to mid-October, depending on the preceding winter's snowfall.



#### **CLAIM STATUS**

The 16 mineral claims of the Goldledge property are owned by Electra Gold Ltd. The claims cover an area of approximately 4,495.14ha. A listing of claims and their status is shown in Table 1. The claim expiry dates listed reflect work credits filed with this report.

Table 1
Goldledge Claims

Claim Name	Tenure No.	Area (ha)	Located Date	Current Expiry Date*	Registered Owner
Goldledge	839507	501.78	December 2, 2010	December 2, 2013	J. T. Shearer
Goldledge 2	839530	501.99	December 2, 2010	December 2, 2013	J. T. Shearer
Pete 1	839870	459.79	December 5, 2010	December 5, 2013	J. T. Shearer
Pete 2	839871	522.71	December 5, 2010	December 5, 2013	J. T. Shearer
Pete 3	839872	501.51	December 5, 2010	December 5, 2013	J. T. Shearer
Pete 4	839873	522.45	December 5, 2010	December 5, 2013	J. T. Shearer
Pete 5	839874	438.76	December 5, 2010	December 5, 2013	J. T. Shearer
Pete 6	839875	502.11	December 5, 2010	December 5, 2013	J. T. Shearer
Pete 7	839876	397.61	December 5, 2010	December 5, 2013	J. T. Shearer
Pete 8	839877	146.43	December 5, 2010	December 5, 2013	J. T. Shearer

Total ha: 4,495.14ha

Under the present status of mineral claims in British Columbia, the consideration of industrial minerals requires careful designation of the product end use. An industrial mineral is a rock or naturally occurring substance that can be mined and processed for its unique qualities and used for industrial purposes (as defined in the *Mineral Tenure Act*). It does not include "Quarry Resources". Quarry Resources includes earth, soil, marl, peat, sand and gravel, and rock, rip-rap and stone products that are used for construction purposes (as defined in the *Land Act*). Construction means the use of rock or other natural substances for roads, buildings, berms, breakwaters, runways, rip-rap and fills and includes crushed rock. Dimension stone means any rock or stone product that is cut or split on two or more sides, but does not include crushed rock.

Cash may be paid in lieu if no work is performed. Following revisions to the Mineral Tenures Act on July 1, 2012, claims bear the burden of \$5 per hectare for the initial two years, \$10 per hectare for year three and four, \$15 per hectare for year five and six and \$20 per hectare each year thereafter.

<sup>\*</sup> with application of work documented in this Assessment Report.

#### **HISTORY**

Placer gold exploration and mining in the East Kootenay region began on the Wild Horse River near Ft. Steele in the mid-1860s. The discovery of the St. Eugene deposit at Moyie, and the Sullivan deposit, 13km to the east at Kimberley, switched the major focus of exploration to lead and zinc mineralization. Several small-scale workings, mainly in quartz veins and shears are located in the Alki Creek and upper Pyramid Creek areas and date to the 1890's or early part of the 1900s. (see section 4.0, Property Geology).

Current exploration activity in the East Kootenay is mostly focussed on lead-zinc mineralization within the Aldridge Group, particularly in the Sullivan-North Star corridor, the Moyie-Yahk area and the Findlay-Skookumchuck Creek area.

Cominco explored the Goldledge area in the past as part of their regional search for Sedex deposits in the Aldridge Formation. A few drill holes were completed in the 1980's. Cominco continues to hold claims in the area. More recently, Abitibi Mining Corp. undertook mapping and prospecting on the Goldledge property in 1997 and 1998. Two drill holes were completed by Abitibi in the south part of the Goldledge property near the St. Mary River. In 1999, Rio Algom Exploration Inc. undertook a program of geological mapping and lithogeochemical sampling on the Goldledge Property. A single diamond drill hole (PP-99-1) was completed in the northern part of the property (Gal and Weidner, 1999).

Two diamond drill holes were completed between July 27 and September 17, 2000; by Beaupre Diamond Drilling Ltd. of Princeton, BC. (see section 7.0). Patrick Donnelly and Leonard Gal, P.Geo supervised the drilling in the field and logged core. Geological mapping was conducted between June 11 and September 27 by Gal, assisted by Lloyd Addie. Siegfied O. Weidner, senior geologist for Rio Algom Exploration Inc., supervised the entire program. For stratigraphic control purposes, "markers laminites" were sampled from the middle Aldridge Formation. Marker samples were forwarded to Dave Pighin of Supergroup Holdings Ltd. for identification. Drill core and rock samples were collected and shipped to Eco-Tech Laboratories of Kamloops, BC for 28 element ICP and gold (AA +fire assay) analysis.

Mineralization and Analytical Results 2000

Twenty-one rock samples were collected from surface outcrops for 28 element ICP analysis plus gold by AA and fire assay. Samples were collected from fragmental units, rusty pyrrhotitic siltstones and mineralized veins.

The highest values for base and precious metal mineralization were obtained from select sampling of several quartz sulphide veins exposed at the Gold Key workings and an unnamed showing at the headwaters of Pyramid Creek. At the Blue Peter showing, chalcopyrite, galena and sphalerite were observed in veins. Some significant assays are compiled in the table below:

### Significant assays from quartz-sulphide veins

Sample No.	Au (ppb)	Ag (ppm)	As (%)	Cu	Pb	Zn	Comment
16732	190	77.5	0.0775	3.17%	4946ppm	1173ppm	Gold Key shaft-select quartz- chalcopyrite vein material from dump
16733	55	<0.2	>1.0	163ppm	1594ppm	28ppm	Gold Key shaft-select quartz- calcite-pyrite vein material from dump
16734	60	<0.2	>1.0	162ppm	104ppm	13ppm	Patra Fault zone – 5cm quartz-arsenopyrite vein
16738	70	5.6	>1.0	6ррт	2738ppm	7ppm	Adit at head of Pyramid Creek. Select quartz- arsenopyrite-galena vein material from dump

Samples from fragmental units at the LMC were not anomalous. The best value of 92ppm Zn (sample 16727) was from fragmental with pyrrhotized clasts. Sample 7796 yielded 198ppm Pb from a fragmental bed within the A2 on the north side of Murphy Creek.

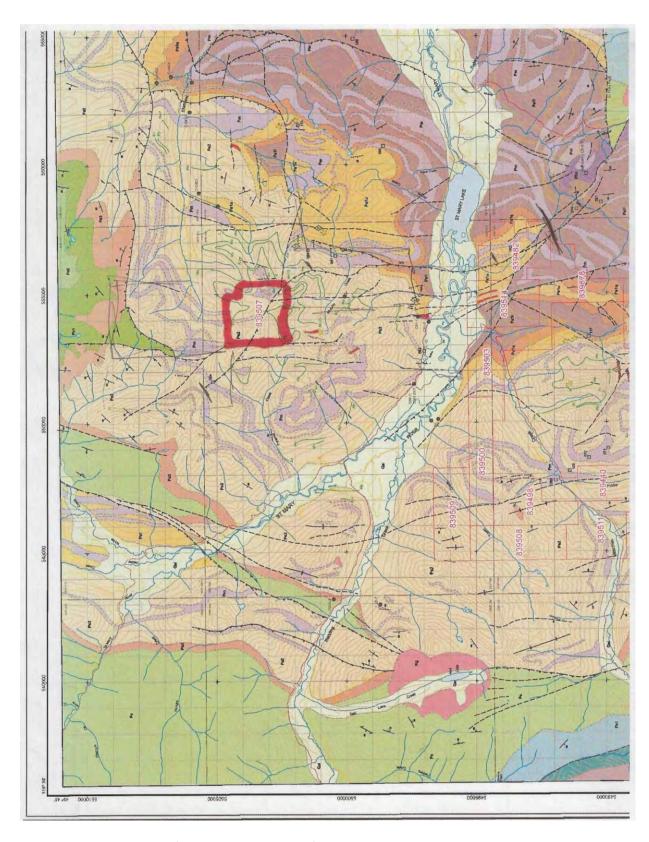


Figure 4 Regional Geology (see legend on Figure 5)

#### REGIONAL GEOLOGY

The Gold Ledge Property is located within the Purcell Anticlinorium, a broad, gently north plunging structure with dominantly east verging thrust and fold structures. The Purcell Anticlinorium is cored by the Proterozoic Purcell Supergroup, comprised of a siliciclastic and lesser carbonate sequence at least 12 kilometres thick, deposited in an intracratonic rift basin (the Belt-Purcell Basin) (Figure 1). The strata are preserved in an area 750km long and 550km wide extending from southeastern British Columbia to eastern Washington, Idaho and western Montana.

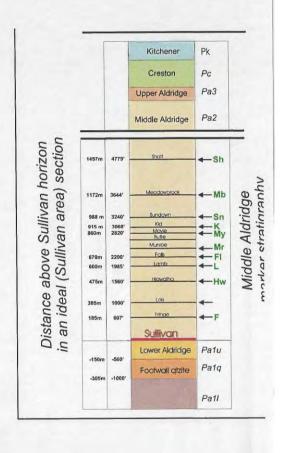
The claim area is underlain by the Aldridge Formation, the lowermost division of the Purcell Supergroup. The Aldridge Formation is divisible into a lower, middle and upper unit. The lower Aldridge Formation is comprised of thin bedded, rusty weathering, fine-grained quartzitic wackes, siltstones and some argillites. A white to grey weathering quartzite marker unit (the "Footwall Quartzite") lies approximately 150 metres below the stratigraphic top of the lower Aldridge. The uppermost part of the lower Aldridge Formation locally includes a package of laminated siltstones and mudstones, known in the camp as the "Sullivan Horizon". The massive sulphide ore body of the Sullivan deposit is hosted in this package, immediately below the top of the lower Aldridge.

In the absence of the Sullivan Horizon, the lower Aldridge sediments grade upward into medium to thin bedded grey weathering quartz wackes, quartzitic wackes, wackes and siltstones with local argillite. The middle Aldridge Formation is rather monotonous in character and about 2,500m to 3,500m thick. Within the middle Aldridge Formation are distinctive grey laminated siltstone (marker laminite) horizons comprised of thin alternating light and dark laminae. The millimetre-scale patterns of light and dark laminae are distinctive for each marker unit, and can be correlated over considerable distances. At the Sullivan Mine area, the various markers occur at known and measured distances above the LMC. The markers (once identified) can be used throughout the basin to estimate stratigraphic distance above the LMC.

The upper Aldridge Formation, consists of rusty weathering and dark grey, thin-bedded siltstone and argillite and is typically 250m to 500m thick.

Sedimentary fragmental units are known to occur at or near the LMC in the region. Significant among these is the Clair fragmental (or Clair conglomerate), southwest of St. Mary Lake. This conformable fragmental unit comprises variably altered and sized clasts supported in a massive wacke matrix with disseminated pyrrhotite. Fragments are mostly small and rounded siltstone and wacke, and some are albitized, tourmalinized or pyrite-pyrrhotite altered. Larger, angular mudstone rip-up clasts are also common. The Clair fragmental continues across St. Mary River to the south part of the Gold Ledge Property. The unit is quite thick (50m?) north of the St. Mary River, then thins northeastward along the exposure of the LMC. South of Murphy Creek, the fragmental bed is no more than 1 or 2m thick.

Both the lower and middle Aldridge Formations are intruded by Middle Proterozoic dioritic to gabbroic sills (Moyie intrusions). These sills (and rarely, dykes) can vary in thickness from a few to several hundred metres. The sills are interpreted to be syn-depositional, and to have intruded unlithitied sediments without any loss of sedimentary stratigraphy.



In the Goldledge region, the lower and middle Aldridge Formations are carried in the hanging wall of the St. Mary Fault, a southeasterly directed thrust fault that may be related to major basement structures. The Hall Lake Fault, another major thrust structure, lies to the northwest. Between the St. Mary and Hall Lake faults, the Aldridge strata are characterized by open north trending folds, and gently to moderately dipping fault bounded blocks.

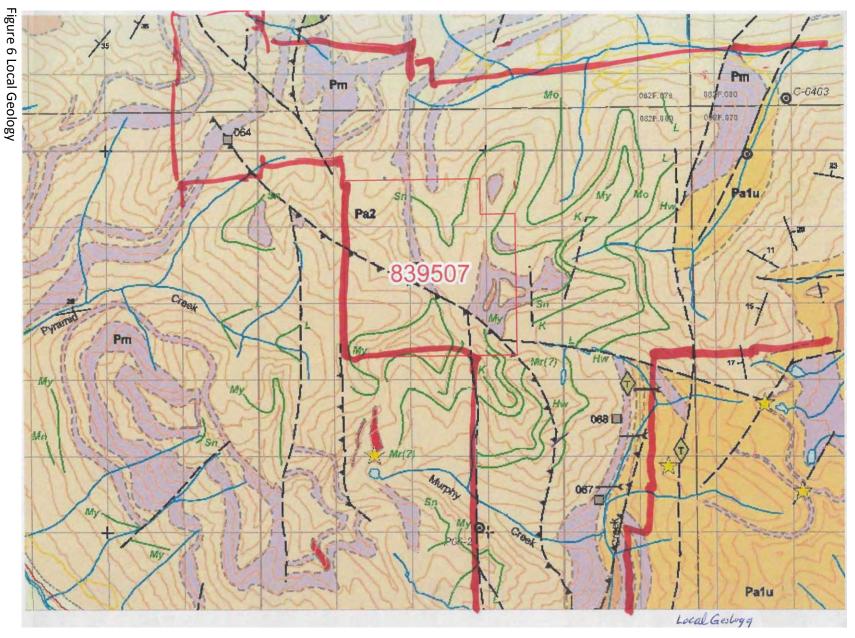
The Kimberley Fault extends along the north boundary of the Gold Ledge Property, eastward to the Sullivan Mine. The Kimberley Fault has a complex history of reactivation. The last motion on the fault was left lateral and normal (north side down). The northern part of the Sullivan ore body is offset along this fault, where approximately 3000m of net displacement has been documented. A number of north and northeast trending, steep faults occur in the mine area (e.g., the Sullivan Fault), many with a west side down displacement. The age of this faulting varies, but at least some are considered to be syndepositional, basin bounding growth faults that formed the boundary of smaller (second and third order) graben basins within the Belt-Purcell basin, and thus localised mineralization at Sullivan. Many north trending faults occur on the Gold Ledge Property, and some are thought to be analogous to the Sullivan Fault.

Although several deformational episodes are documented in the region, open folds and steep block faults are the most obvious structures at a megascopic scale. These are related to Mesozoic compression and Tertiary extension, respectively. At the outcrop scale, foliation is variably developed. The best developed foliation generally occurs adjacent to and within fault and shear zones. Open tectonic folds and soft-sediment folds are also evident at the outcrop scale.

The metamorphic grade is regionally within the greenschist facies. A metamorphic culmination of sillimanite grade occurs southeast of the Gold Ledge Property, at the confluence of Matthew Creek and the St. Mary River valley. The amphibolite facies metamorphic and structural features suggest a core complex, or the core of a large-scale fold structure. Plutonism may also be a factor.

The Proterozoic Hellroaring Creek granodioritic pegmatites tock and related dykes, located south of the St. Mary River, intrude the Aldridge Formation and Moyie gabbro sills. The youngest intrusive rocks in the area are Cretaceous, including the White Creek batholith, the Hall Lake pluton and the Reade Lake stock. Thin lamprophyre dykes of probable Cretaceous age intrude all units.

The Sullivan deposit is the only major base metal deposit in the region, at an estimated 170 million tonnes grading 5.5% zinc, 5.8% lead and 59 g/t silver. The deposit is hosted by siltstone and argillite of the lower Aldridge Formation, immediately below the contact with the middle Aldridge Formation. The Sullivan deposit is interpreted to be a sedimentary exhalative (Sedex) sulphide deposit formed in a fault-controlled sub-basin of the Belt-Purcell basin.



#### **LOCAL GEOLOGY**

The Gold Ledge Property is underlain by Purcell Supergroup metasediments of the lower and middle Aldridge Formations. The Aldridge Formation sediments dip gently to moderately and mainly westward within a series of fault hounded blocks. North and northeast trending open folds occur locally. The lower Aldridge is restricted to the east side of the property. The middle Aldridge outcrops elsewhere. Several Moyie sills intrude the Aldridge Formation (Figure 2).

Several north and east trending faults serve to divide the property into gently dipping blocks. Among the north trending faults, the Pyramid and Murphy Pass Faults are down dropped to the east. The Alki and AC Faults are down dropped to the west. The Pyramid and Alki Faults form the west and east boundaries to the Clair graben. This is thought to be a Proterozoic aged structure. The Patra Fault is a northwest trending, northeasterly directed thrust fault associated with a wide zone of alteration and shearing. At least 300m of vertical throw can be demonstrated. The Kimberley Fault is an east trending, north dipping normal fault. Most other major east trending faults on the property also indicate north-side-down offset.

Several mineral showings occur within the property boundaries and are listed in the B.C. MINFILE (Figure 2). They are essentially all quartz (+/- carbonate) sulphide veins (chalcopyrite, galena, arsenopyrite) within Aldridge sediments, at or near contacts with gabbros. The showings are: Warren-Wolmer (082FNE064), Mystery (082FNE067), Blue Peter (082FNE068) and Gold Ledge (082FNE087). The Dominion Crown Grants (MINFILE No. 082FNE063) are on the south side of the Gold Ledge Property and host lead and zinc mineralization in fractures, as well as tungsten mineralization associated with a garnet skarn or alteration zone.

The Gold Ledge Project is an aggressive gold exploration located in the historical highly endowed mineral region of the Belt Purcell Basin, Purcell Mountains, south-eastern British Columbia. The Company is pleased to announce that its' Phase I exploration project has rediscovered several significant gold mineral showings and workings consisting of trenches, pits and short adits and has defined an important mineral-bearing major fault system.

The Gold Ledge claim group, which covers the project site, consists of 16 contiguous mineral claims encompassing 7,503.50 hectares. The lower and southern portion of the claim group is easily accessible from the town of Cranbrook, some half-hour drive along the St. Mary Lake Forest Service Road. Two of the old gold workings, the Mystery and Blue Peter, can be accessed by an old horse pack trail leading from the Alkai Creek logging roads. Some of the mineral prospects such as the Gold Ledge and Warren workings are located at higher elevations and are presently best accessible by helicopter, a 15 minute ferry time from Cranbrook. A nearby old logging road up the west branch of Matthew Creek comes within 3km of the Gold Ledge Zone.

Phase I exploration consisted of reconnaissance sampling of the old workings and preliminary geological and structural mapping. The workings and associated mineralization are spatially related to a major north-northwest trending, second order thrust fault and lower order cross-cutting (East-West), offset faults. The offset faults have developed drag folds along the thrust structure producing brittle deformation with mineralized quartz structures hosted in the Lower Aldridge fine grain quartzite and siltstone. Drag folds may be important in hosting some of the mineralization as in the case of the Warren workings where a 16 meter wide, highly mineralized quartz structure was mapped and sampled occurring proximal to a drag fold. Here the sulphide assemblage consists, in order of abundance:

arsenopyrite, galena, sphalerite and pyrite. The quartz structure is traceable for at least 150 meters before it is covered by talus material. At a lower elevation some 300 meters southwest of Warren workings, several old trenches were located cutting a shallow dipping, massive quartz structure hosting chalcopyrite, pyrite and arsenopyrite with some very fine bladed tourmaline crystals. This structure is hosted in a gabbroic sill (Moyie Intrusion) and distal to the thrust fault. Grab Samples assayed 6.00% Pb, 1.61% Zn and 37.2 g/tonne Ag.

The Gold Ledge workings are also structurally controlled and believed to be in a similar structural setting as the Warren workings and suggest drag folding. However, here, there is more evidence of brittle deformation and the quartz veins not as massive as the Warren instead display numerous subparalleling narrow (1 to 0.5 meters) veins across several meters with associated anastomosing quartz veinlets. The brecciated host rock composed of quartzite and siltstone is partly replaced by sulphide mineralization adjacent to the quartz veins. The sulphide assemblage is similar to Warren mineralization.

Underground workings at the Gold Ledge consist of a 41m drift with a 14m wide crosscut. The crosscut exposes 2.4m of quartz filled breccia and 7.6m of fractured quartz. Gold values up to 34g/tonne are reported at the main Gold Ledge workings by previous selected sampling. Grab Samples from talus returned 4.97% Pb and 52.8 g/tonne silver.

Approximately 1.5km southwest of the Gold Ledge Workings is a series of short underground adits and shafts, which we refer to as the Lake Zone. Several character grab samples from the dump assayed 99.5g/tonne silver with 3.61 to 5.42% Pb and 6.56 to 9.61% Zinc. One sample ran 1.18% Copper.

The previously known underground workings known as the Blue Peter and Mystery returned grab samples assaying over 1% (up to 2.48% Cu) Copper with variable gold (from trace to 1.423 g/tonne) and silver values. However a previously undocumented relatively wide east-west trending pyritic zone (now called St. Mary Zone) was noted as being investigated in the old days by 3 adits up along the mountain side. Samples of fine muck from the upper adit assayed 3.913 g/tonne gold with 8.3 g/tonne Ag, 0.05% Cu with very low Arsenopyrite (49ppm). A grab sample from the lowest adit on the St. Mary Zone assayed 1.470 g/tonne gold.

Based on the preliminary surveys, the main thrust fault and subsidiary East-West zones important mineral-bearing structures as indicated by old workings that are found along 8 kilometer strike length. As well, some limited reconnaissance prospecting to the north along strike of the structure has found additional sulphide mineralization to suggest possible extension of quartz-mineral-bearing structures to the north.

Mapping was conducted at a scale of 1:10,000 using TRIM base maps and air photos in 2000. The geological maps of Gal and Weidner (1999) have been amended to include the new information and interpretations. The geology map is shown as Figure ??.

The following lithological descriptions are taken from Gal and Weidner (1999).

Lower Aldridge (Al)

The lower Aldridge strata are thin bedded, fine grained and typically rusty weathering due to disseminated pyrrhotite. Lithologies are mainly wacke, quartzitic wacke and siltstone. Size grading, cross beds and laminations are locally observed. Abundant disseminated biotite and muscovite occur in most beds. Schistose textures are locally observed. The lower Aldridge

Formation (AI) outcrops on the east side of the Gold Ledge Property: east of Alki Creek and south of the Bootleg Fault, south of Murphy Creek on the west side of Alki Creek, and in the valley of "East Creek". Medium bedded grey weathering quartzite was mapped in East Creek and west of Alki Creek, and has been tentatively correlated with the Footwall Quartzite (FWQ).

#### Middle Aldridge (A2)

The A2 stratigraphy is comprised of typically medium to thin bedded, fine to medium grained and rusty or grey-brown weathering quartz wackes, quartzitic wackes, sub-wackes, siltstones and minor argillites. Much of the A2 metasediments comprise thin to medium beds of quartz wacke or quartzitic wacke sometimes coupled with an overlying, thin bed of laminated siltstone. They can be described as A-E turbidites. The A2 beds locally display normal grading, load structures, ripples, cross beds and slumped bedding features. Siltstone and argillite sequences are often rusty weathering, but there are few siltstone and argillite beds that are thicker than 20cm. The A2 quartz wackes and quartzitic wackes are generally less micaceous than the corresponding A1 lithologies.

From within the A2, four laminite markers were identified. A further three samples were tentatively correlated. Appendix II contains a list of laminate locations and identifications.

#### Fragmentals (Frag)

The Clair fragmental is interpreted to continue onto the Gold Ledge Property, northwest of St. Mary Lake. The best exposure is at 554150, 5497450N, where thick (up to 50m?) rusty fragmental outcrops at the LMC, on the west side of a steep gully. The fragmental here has a variety of altered clasts, including pyrrhotized ones, up to a few cm in size. The fragmental bed(s) decrease in thickness as the LMC is traced east and north. South of Murphy Creek, the fragmental is no more than 1 or 2m thick, with very few fragments in a massive micaceous wacke matrix.

On the eastern valley slope above East Creek, fragmental units were not identified at the LMC. Northwest of Bootleg Mtn, there was some fragmental observed in outcrop and float. The fragmental here has few fragments and is interpreted to be thin. Nearby is a fragmental unit within the middle Aldridge (558950E, 5500700N). This unit is about 40-50m stratigraphically above the LMC. The rock is grey to slightly rusty weathering, medium grained quartzitic wacke matrix with many small rounded fragments.

The Murphy fragmental is a conformable body of stacked fragmental beds occurring within the A2, at or near the stratigraphic level of the Moyie marker, some 760m above the LMC. Individual fragmental beds range from 10cm to several metres thick. They are massive, rusty weathering quartzitic wacke beds, with a variety of matrix-supported clasts. Albite, sericite and pyrrhotite altered clasts are common Tourmaline was also observed. The unit was traced from the north side of Murphy Lake to the ridge at 553500E, 5501600N.

Southwest of the Murphy fragmental another stratiform fragmental sheet was mapped (552750E, 5499750N) that featured strong albite, sericite and biotite alteration.

#### Gabbro (gb)

The Moyie intrusions were observed in the lower and middle Aldridge Formation as sills and more rarely, dikes. Compositionally, these rocks have been defined as gabbro to diorite, although the field term gabbro is here used to indicate all Moyie intrusions. They are dark grey to dark greenish brown on fresh surfaces and weather brown, dark grey or rusty. The intrusions are generally medium to coarse grained, although thin sills (and locally developed chill margins) are fine grained. Textures are equigranular to hornblende (and more rarely plagioclase) porphyritic. Biotite, chlorite and quartz occur as alteration and/or metamorphic phases. Disseminated pyrrhotite and traces of chalcopyrite have been observed. The Moyie intrusions are non-magnetic except where considerable disseminated pyrrhotite is present.

Along Alki Creek a number of thick gabbro sills occur, offset by or possibly occupying the AC Fault. On the east side of the AC Fault, thick gabbros intrude the Al. On the west side south of Murphy Creek, a gabbro sill outcrops not far below the LMC. North of Murphy Creek, a different gabbro (probably the "Hiawatha" sill so named because of its proximity to the Hiawatha marker) has A2 in the immediate hanging wall.

On the west side of East Creek, the "Hiawatha" sill outcrops between the East Creek and Alki Faults. This 250m thick sill was encountered in a previous drill hole (PP-99-1), but not in PP-00-1. It is inferred that the sill ramps or arches upward through the stratigraphy to the south and west.

The "Sundown" sill(s) outcrops at several places on the property, in both the hanging and footwalls of the Patra Fault.

Gabbro dykes up to 20m wide, but normally thinner, were mapped in Murphy Pass and at the headwaters of Alki Creek (554800E, 5502450N; and 555000E, 5502800N). It is probable that theses dykes intrude along or near fault zones. On the ridge between Akli Creek and East Creek, a sheared gabbro lies in the Alki Fault zone.

Lamprophyre (1Ph)

North trending, 1-2 metre wide lamprophyre dykes occur at 552940E, 5501770N; and 555200E, 5497700N. They are also recognized in drill core, and were likely intruded along fault zones.

#### Structure

The bedding planes throughout the Gold Ledge Property indicate gently to moderately dipping blocks of sediments bounded by faults. Dips are mostly moderate to shallowly westward and northwestward. In the southwestern comer of the property along the St. Mary River valley, bedding dips moderately east-northeast. Other localised dip reversals and anomalous strike directions indicate folds. Local dip reversals are common directly adjacent to faults and some large gabbro sills. In the latter case, these are thought to be due to soft sediment deformation.

Foliation (cleavage) is almost always developed within finer grained siltstone units, and in some case the foliation is refracted through alternating wake-siltstone interbeds. Foliations are in most cases steeper than the corresponding bedding, while dipping in the same direction. This fabric is considered to be

indicative of regional east-southeast verging fold structures. In most cases, strongly developed foliations are due to nearby fault zones, and provided an outcrop-scale indication of the attitude of the zone.

Few large-scale folds were mapped; these are generally gentle open flexures. The axial traces of mapped folds trend north to northwest.

Major faults on the property trend both north and east. The east trending faults are mostly north-side-down, while the north trending faults display both east-side and west-side-down displacements. The major faults are discussed below.

#### **East Trending Faults**

The Kimberley Fault is exposed along the north side of the property. On the west side of the north branch of Matthew Creek (562300E3, 5507450N), strong shearing and chlorite alteration, and associated quartz veining are evident in the fault zone that appears to dip approximately 40° north. On the Gold Ledge Property, A2 strata occur in both hangingwall and footwall of the fault.

The Matthew Creek Fault is inferred from the apparent offset of the LMC on the east side of East Creek; to the north, where A2 outcrops on the north side of Matthew Creek. Thus, north-side-down offset is indicated. Further to the west, there does not appear to be any offset along this fault, as gabbro sills can be traced across the Matthew Creek valley.

The Bootleg Fault truncates the LMC on the east side of the property, and runs up the upper Alki Creek valley. At the head of Alki Creek, there may be as much as 100m of vertical offset, evidenced by the separation of the Sundown marker horizon across the fault. North-side-down displacement is indicated.

The Murphy Creek Fault was inferred from relations observed in drill hole PP-00-2, namely, the increased distance from the Fringe marker to the LMC. A lamprophyre dyke observed in drill core probably marks the fault zone.

#### North Trending Faults

The Pyramid Fault is indicated by an increasing degree of steep dipping foliations at the head of Pyramid Creek. East side down displacement, with up to 200m of vertical throw, is indicated by the offset of marker beds.

The Murphy Pass Fault is exposed in the headwaters of Matthew Creek (554600E, 5503300N). Strongly developed west-dipping foliation and chlorite, sericite and albite alteration were observed, but the fault is more difficult to trace to the south. It was intersected in drill hole PP-00-2, as a steeply dipping clay gouge zone. The offset is probably minor, on the order of 50m as indicated by the offset of marker units on the ridge south of Murphy Creek.

The AC Fault lies mostly in the valley of Alki Creek, where it is unexposed. It separates east and west dipping A1 strata on the lower part of Alki Creek. Where measured, foliations indicate a sub-vertical dip. West-side-down displacement is indicated by the juxtaposition of the LMC on the west side of Alki Creek, with A1 on the east side. The fault may be offset to the north by the Bootleg Fault, or it may merge with the Alki Fault.

The Alki Fault is considered to be the eastern bounding fault of the Clair graben. Evidence from drill holes suggests that the fault dips about 40° to the west. In outcrop, fault related foliations dip about 60-70° west. West-side-down displacement is indicated, with approximately 150m of vertical throw. The fault likely crosses Matthew Creek, and may intersect the Kimberley Fault on the north end of the property.

The East Creek Fault is a possible branch of the Alki Creek, and also has west-side-down motion. Middle and lower Aldridge Formations are juxtaposed along East Creek. In the order of 100m of vertical displacement is indicated. Strong foliation and fractures mark the fault zone at 558750E, 5505700N.

The Patra thrust fault trends northwestward across the Pyramid Property. On some earlier maps it is referred to as the Alki Fault. The fault zone is fairly well exposed from the headwaters of Alki Creek to Murphy Creek. It is marked by strong foliation and shearing, chloritic (+/- sericite, albite) alteration, and quartz veining. Shear zones and foliation dip 60-80' in outcrop. Strata are folded on both sides of the fault, and gabbros are associated with the trace of the fault zone. Alteration and disturbance seem to occur over a wider zone in the footwall than in the hangingwall. At the Wolmer-Warren showings, quartz sulphide veins occur in a linear zone that may be a splay fault in the footwall of the Patra Fault. At least 300m of vertical offset is indicated by the offset of marker units at the head of Alki Creek. The horizontal displacement is unknown, but it may be considerable. Likewise the timing of this fault relative to others is unclear.

#### Alteration

A regional greenschist facies metamorphism affected all rocks on the property. A high-grade zone characterized by sillimanite has been documented east of the property. Biotite and sericite were commonly observed in quartzitic wackes, sub-wackes and siltstones. Iron oxidation of pyrrhotite in the Aldridge Formation rocks (especially A1) is ubiquitous. More intense sericite, chlorite and albite alteration was noted within many fault and fracture zones. Albite-sericite-biotite alteration was also observed adjacent to some gabbro sills. Granophyre type alteration, caused by hydrothermal interaction of water saturated host sediments with intruding gabbros, was also observed in A1. The resulting even-grained, "salt and pepper" appearance of the altered sediments confused the contact relations with fine grained, altered, adjacent gabbros. A commonly observed feature in the quartz wackes of the Aldridge Formation were spherical to ellipsoidal "concretions". These are composed of quartz, feldspar, calcite, biotite, and often garnet, chlorite, sericite, and locally sulphides. The mineral assemblage and unique texture of the concretions suggests that the original composition differed from the host sediments.

#### PREVIOUS DIAMOND DRILLING 2000

Beaupre Diamond Drilling Ltd., of Princeton, B.C. was contracted to supply and operate a helicopter transportable Longyear Super 38 drill rig on the Pyramid Property from July 27 to September 17, 2000.

Drilling of hole PP-00-1 commenced on July 27, 2000 and was completed on August 7, 2000. The drill collar is at 557109E, 5504175N, at an elevation of 2146m a.s.l. The hole was drilled at an inclination of -77° on a bearing of 117°. NQ sized core was drilled to a depth of 758.5m, with 3.28m of casing. Several Pajari instrument tests were performed to monitor the inclination and azimuth of the drill hole during the drilling. The drill hole produced no water. However, owing to the sensitivity of the Matthew Creek watershed as a municipal water source, the hole was sealed with swelling clay (bentonite) pellets and a metal/rubber hole plug. The casing was left in place and a cap placed on the casing. All trees and timbers were bucked up to lie flat on the ground and facilitate natural re-vegetation, in accordance with the government permits.

Drill hole PP-00-2 was started on August 11 and completed on September 17, 2000. The drill collar is at 554864E, 5500089N, at an elevation of 1940m a.s.l. The hole was drilled at an inclination of -74°, on a bearing of 086°. NQ sized core was drilled to a depth of 794.2m with 6.7m of casing. Pajari instrument tests were performed to monitor the inclination and azimuth of the drill hole during the drilling. The drill hole produced no water. Upon completion, the hole was plugged and capped. The drill site at the base of a talus slope resulted in very little surface disturbance.

All core was transported to a nearby camp on the Matthew Creek Forest Service Road. The core was logged, and sample intervals marked out and split with a diamond saw on site. Upon completion of the logging and sampling, the core was transported and is stored at the residence of Mr. Glen Rodgers of Abitibi Mining Corp.

The drill logs are presented in Appendix V. Drill core sample assays are listed in Appendix VI. Graphic drill hole sections are presented in Appendix VII, Map 3a and 3b.

**Drilling Results** 

PP-00-1

A summary log of drill hole PP-00-1 is presented in the table below:

Drill log summary for PP-00-1

Interval (m)	Lithology
0-3.28	Casing
3.28-43.7	A2
43.7-44.5	Gabbro
44.5-215.3	A2
215.3-217.7	Gabbro
217.7-241.3	A2
241.3-246.8	Gabbro
246.8-433.1	A2
433.8-440.45	Gabbro

440.45-446.9	A2: highly fractured, some veins and breccia
446.9-453.1	Fault zone, breccia (Alki Fault)
453.1-465.9	Gabbro
465.9-566.5	A1?: altered
566.5-570.5	Gabbro
570.5-582	A1
582-614.2	A1, Sullivan Horizon equivalent?
614.2-688.4	Gabbro
688.4-707	A1, Sullivan Horizon equivalent?
707-758.5	Gabbro
758.5	End of Hole

#### PP-00-1 Summary

Drill Hole PP-00-1 was collared in A2. Marker beds correlated with the Hiawatha marker were collected from the upper part of the hole, from 14 to 55m. The Fringe marker was intersected at 389m. Below this level, at 446.9-453.1m, a major fault zone was encountered. The zone was marked by strong foliation, shearing, chlorite-sericite alteration, and a 6m fault breccia zone, comprising matrix supported sub-angular to rounded fragments, in a soft sericite-clay-chlorite altered matrix. Narrow clay gouge zones were intersected near the centre of this zone. Quartz-sphalerite veins and brecciated vein fragments were collected from the breccia fault zone and from a gabbro in the hanging wall of the fault zone. A gabbro was also intersected in the footwall of the fault zone. Below the gabbro were sericite altered Aldridge sediments. These rocks were interpreted to be part of the lower Aldridge, probably not far below the LMC. The major fault zone below the Fringe marker was thus interpreted to have removed the LMC, and have brought up lower stratigraphy on its footwall (west-side-down displacement). Projection of the core bedding angles of the central gouge zone to surface resulted in good agreement with the mapped trace of the Alki Fault. Thus it is interpreted that the major fault zone cored by PP-00-1 is the Alki Fault. This results in a 40° westward dip for the fault, where it was originally considered to be steeply dipping or sub-vertical. Below the fault zone A1 lithologies were cored, with some thick massive laminated siltstones beds that could be correlated with Sullivan Horizon stratigraphy. Gabbro sequences encountered near the bottom of the hole (from 614.2m) were considered to be the top of a very thick (200-400m?) gabbro that had been intersected within the top part of the A1 in older drill holes. The hole was stopped in gabbro. Thus while the LMC itself was not intersected, it is felt that the top of the AI was intersected in the footwall of the Alki Fault, along with some possible Sullivan Horizon equivalents.

The determination that the Alki Fault dips moderately west rather than very steeply, led to a reinterpretation of last year's drill hole (PP-99-I), drilled some 2km north of PP-00-1. The Alki Fault here was projected to intersect this drill hole very near an observed fault-fixture breccia zone. The rocks below this fault zone were, upon re-examination, assigned to A1. Within this A1 unit were laminated wacke/siltstone sequences that could be correlated with Sullivan Horizon stratigraphy, including the zone previously identified as the top of the Sullivan Horizon at 912.8m. Furthermore, the drill hole was reinterpreted to end in albitized gabbro (987.3-1005.2m), rather than intermediate intrusive rock.

#### PP-00-1 Geochemistry Results

A total of 102 core samples were split, and half of the interval sent to Eco-Tech Labs for 28 element ICP analysis, plus gold by AA-fire assay methods. Sampling was geared mainly toward the upper A1 laminated siltstones, i.e., the Sullivan Horizon equivalents.

The area within and adjacent to the Alki Fault zone, from 43% to 452m, yielded several anomalous Pb, Zn, and Ag values, commonly due to quartz-sulphide vein and fracture mineralization. Sample 18215 yielded 4.56% Pb, 11.6% Zn and 73.9 g/t Ag over 23cm from a quartz-sulphide-chlorite vein within gabbro. Sample 18217 assayed 1.43% Zn over 1.13m from fault zone breccia and fractured rock. Sample 18220 yielded 2.21% Pb, 7.65% Zn and 4.8 ppm Ag over 42cm from semi massive sphalerite and brecciated sulphides within the Alki Fault zone.

Apart from the fault zone area, there were few anomalies. Sample 18182 yielded 138 ppm Pb over 1.55m, starting at 235m. This sample was from a zone of common tourmalinized mudchips and possible pyrrhotized fragments, probably a fragmental bed within A2. Sample 18202 assayed 104ppm Pb and 330ppm As over 1.13m starting at 357m. This sample was collected from an interval displaying disturbed bedding, and including a 13mm quartz veinlet with arsenopyrite. Sample 18236 yielded 40ppm Pb and 277ppm Zn over 1.2a starting at 539.7m. This sample was from laminated siltstone adjacent to a narrow fault zone.

The laminated siltstone-wacke beds within the A1 and below the fault zone, tentatively correlated with Sullivan Horizon lithologies, were generally not anomainlo Pubs or Zn.

PP-00-2

A summary log for PP-00-2 is presented below:

#### Drill log summary for PP-00-2

Drill log Summary for 11 00 2				
Lithology				
Casing				
A2				
Gabbro				
A2				
Gabbro				
A2				
Gabbro				
A2				
Altered Mafic Intrusive – lamprophyre?				
A2				
LMC: A1, Sullivan Horizon equivalent				
A1				
Fault Zone – A1				
A1				
A1, Sullivan Horizon equivalent (?)				
A1				
EOH				

#### PP-00-2 Summary

Drill Hole PP-00-2 was collared in A2, below the Lamb marker, which outcrops on the ridge to the south. The Murphy Pass Fault was intersected at 145m, expressed by a gouge zone parallel to the core axis. A 54.6m thick gabbro sill was intersected at 162.9m, which may correlate with the "Hiawatha" sill. The Fringe marker was intersected at 333.5m. Below this level, a few minor shear or gouge zones were intersected, as well as an altered lamprophyre dyke at 428.7m. The lamprophyre was inferred to represent the Murphy Creek Fault. The LMC was intersected at 656.85rn. The Fringe to LMC distance in core (283.35m) indicates that the Murphy Creek Fault must have north-side-down motion. Below the LMC approximately 13m of Sullivan Horizon equivalent strata (massive, laminated fine grained biotitic wacke/siltstone) was encountered. Below this was A1 with some laminated beds, then a fault zone at 685.4m. The footwall of the fault zone was A1 with some significant interbedded massive laminated units that were correlative with Sullivan Horizon. The hole was stopped in A1 at 794.2m.

The hole was successful in intersecting the LMC horizon, with 13m of favourable stratigraphy in the footwall of the LMC. However, a fault zone less than 30m below the LMC has removed some of the favourable Sullivan horizon equivalent stratigraphy.

#### PP-00-2 Geochemistry Results

A total of 147 core samples were split, and half of the interval sent to Eco-Tech Labs for 28 element ICP analysis, plus gold by AA-fire assay methods. Sampling was geared mainly toward the upper A1 laminated beds that were correlated with the Sullivan Horizon. In addition, other siltstone and fine-grained wackes were sampled. There were few anomalous Pb or Zn values sampled until the LMC. Here there was a fairly abrupt and consistent increase in Pb and Zn at the LMC, in the footwall laminated siltstones. Over 11.43m of laminated rocks (samples 92633-92645), a weighted average of 74ppm Pb and 189ppm Zn was obtained. A central 7.43m of this zone (samples 92636-92643) yielded a weighted average of 87ppm Pb and 226ppm Zn.

Further samples within the A1, and lower laminated units were not anomalous, including those below the fault zone at 685.4m. Some minor anomalies were obtained in A2 samples from 625m to 632m, partly within a siltstone-mudstone package above the LMC. Sample 92596 assayed 154ppm Zn and 48ppm Pb over 1.06m (starting at 625.74m). This sample was from a quartz wacke with a pyrrhotite fragment(?). The adjacent sample 92597 (139ppm Zn, 36ppm Pb over 1.03m, starting at 626.8m) was collected from the top of a siltstone-mudstone unit. Sample 92599 (128ppm Zn, 26ppm Pb, 0.97m, starting at 629.15m) was from this same fine-grained package. Sample 92602 yielded 114ppm Zn, 62ppm Pb over 0.28m, from 631.92m. The sample was fractured and altered by biotite, chlorite and calcite.

The weakly to moderately anomalous nature of the Sullivan Horizon equivalent rocks below the LMC indicate that the drill hole intersected the extreme distal margin of a massive sulphide horizon.

Figure 7 Google Image Key Map

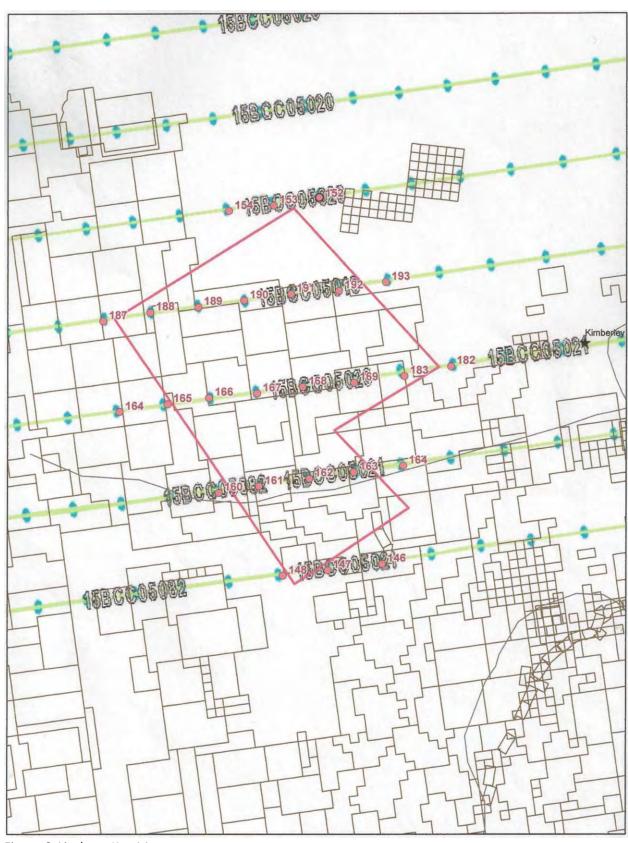


Figure 8 Airphoto Key Map

#### PREVIOUS EXPLORATION RESULTS 2011

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The Gold Ledge claim group, which covers the project site, consists of 16 contiguous mineral claims encompassing 7,503.50 hectares. The lower and southern portion of the claim group is easily accessible from the town of Cranbrook, some half-hour drive along the St. Mary Lake Forest Service Road. Two of the old gold workings, the Mystery and Blue Peter, can be accessed by an old horse pack trail leading from the Alkai Creek logging roads. Some of the mineral prospects such as the Gold Ledge and Warren workings are located at higher elevations and are presently best accessible by helicopter, a 15 minute ferry time from Cranbrook. A nearby old logging road up the west branch of Matthew Creek comes within 3km of the Gold Ledge Zone.

Phase I exploration consisted of reconnaissance sampling of the old workings and preliminary geological and structural mapping. The workings and associated mineralization are spatially related to a major north-northwest trending, second order thrust fault and lower order cross-cutting (East-West), offset faults. The offset faults have developed drag folds along the thrust structure producing brittle deformation with mineralized quartz structures hosted in the Lower Aldridge fine grain quartzite and siltstone. Drag folds may be important in hosting some of the mineralization as in the case of the Warren workings where a 16 meter wide, highly mineralized quartz structure was mapped and sampled occurring proximal to a drag fold. Here the sulphide assemblage consists, in order of abundance: arsenopyrite, galena, sphalerite and pyrite. The quartz structure is traceable for at least 150 meters before it is covered by talus material. At a lower elevation some 300 meters southwest of Warren workings, several old trenches were located cutting a shallow dipping, massive quartz structure hosting chalcopyrite, pyrite and arsenopyrite with some very fine bladed tourmaline crystals. This structure is hosted in a gabbroic sill (Moyie Intrusion) and distal to the thrust fault. Grab Samples assayed 6.00% Pb, 1.61% Zn and 37.2 g/tonne Ag.

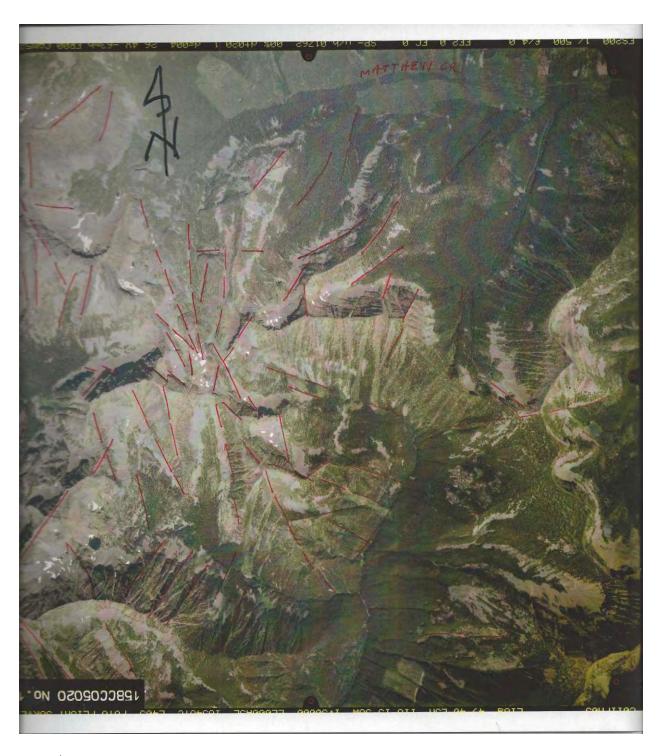
The Gold Ledge workings are also structurally controlled and believed to be in a similar structural setting as the Warren workings and suggest drag folding. However, here, there is more evidence of brittle deformation and the quartz veins not as massive as the Warren instead display numerous subparalleling narrow (1 to 0.5 meters) veins across several meters with associated anastomosing quartz veinlets. The brecciated host rock composed of quartzite and siltstone is partly replaced by sulphide mineralization adjacent to the quartz veins. The sulphide assemblage is similar to Warren mineralization.

Underground workings at the Gold Ledge consist of a 41m drift with a 14m wide crosscut. The crosscut exposes 2.4m of quartz filled breccia and 7.6m of fractured quartz. Gold values up to 34g/tonne are reported at the main Gold Ledge workings by previous selected sampling. Grab Samples from talus returned 4.97% Pb and 52.8 g/tonne silver.

Approximately 1.5km southwest of the Gold Ledge Workings is a series of short underground adits and shafts, which we refer to as the Lake Zone. Several character grab samples from the dump assayed 99.5g/tonne silver with 3.61 to 5.42% Pb and 6.56 to 9.61% Zinc. One sample ran 1.18% Copper.

The previously known underground workings known as the Blue Peter and Mystery returned grab samples assaying over 1% (up to 2.48% Cu) Copper with variable gold (from trace to 1.423 g/tonne) and silver values. However a previously undocumented relatively wide east-west trending pyritic zone (now called St. Mary Zone) was noted as being investigated in the old days by 3 adits up along the mountain side. Samples of fine muck from the upper adit assayed 3.913 g/tonne gold with 8.3 g/tonne Ag, 0.05% Cu with very low Arsenopyrite (49ppm). A grab sample from the lowest adit on the St. Mary Zone assayed 1.470 g/tonne gold.

Based on the preliminary surveys, the main thrust fault and subsidiary East-West zones important mineral-bearing structures as indicated by old workings that are found along 8 kilometer strike length. As well, some limited reconnaissance prospecting to the north along strike of the structure has found additional sulphide mineralization to suggest possible extension of quartz-mineral-bearing structures to the north.



Legend

Red lines Airphoto linears

Figure 9 Airphoto #15BCC05020 No. 167

### **AIR PHOTO INTERPRETATION 2012-2013**

A total of 26 colour airphotos were received on digital DC format. Each photo was greater than 1 GB of data. A selection of low digital scans of the printed product are contained in Appendix III. Each photo was plotted on standard airphoto size as to 9 inch by 9 inch and grouped to the flight lines.

The most important series are (2005) – see Key Map Figure 8:

- (1) Flight line 15BCC05020: 154, 153, 152
- (2) Flight line 15BCC05018: 187,188, 1889, 190, 191, 192, 193
- (3) Flight line 15BCC05020: 164, 165, 166, 167, 168, 169
- (4) Flight line 15BCC05021: 183, 182
- (5) Flight line 15BCC05021: 160, 161, 162, 163, 164
- (6) Flight line 15BCC05021: 148, 147, 146

A transparent overlay was attached and the prominent geological features as mapped were noted. Each stereo pair was examined in detail using a Gordon stereoscope type F-71 serial #9466. Detailed attention was given to the mapped location of the known alteration and mineralized zones.

Figure 9 illustrates some of the Airphoto linears that are apparent. An early northerly set of linears appears to be cut by a stronger, younger series of northwesterly linears. The northern structures control the distribution of many of the alteration zones whereas the northeasterly structures bound the known mineralized zones (which apparently contain gold).

The major thrust faults which displace large packages of stratigraphy are less apparent as Airphoto linears. A subtle set of northwesterly Airphoto linears also appear to be relatively older as suggested by off-sets along the northerly structures.

Having the Airphotos in the field during future work will be a valuable tool to focus attention on the structurally controlled Au-bearing siliceous zones.

#### CONCLUSIONS and RECOMMENDATIONS

The Gold Ledge Property comprises 10 mineral claims with a total of 4,629.16 ha. The property is situated west of Kimberley, and north and west of the St. Mary River. The property covers exposures of the Proterozoic lower and middle Aldridge Formations of the Purcell Supergroup. The target of exploration was a Sedex deposit such as Sullivan, stratigraphically located at the lower Aldridge – middle Aldridge contact (LMC).

The 2000 exploration program on the Gold Ledge Property consisted of two diamond drill holes (PP-00-1 and PP-00-2). Geological mapping that expanded and refined previous work and geological interpretations initiated in 1999 preceded the drilling.

Hole PP-00-1 intersected the Hiawatha and Fringe markers in the middle Aldridge (A2), then entered a fault zone that was interpreted to be the west-dipping normal Alki Fault. Lower Aldridge (A1) stratigraphy was encountered below the fault. While the LMC was not intersected, some favourable horizons were encountered. These horizons were only very weakly anomalous. Zinc, lead and silver mineralization within and near the Alki Fault zone is vein and fracture related, and is probably a late feature rather than representing remobilized Sedex mineralization at the LMC.

Hole PP-00-2 also intersected the Fringe marker and the LMC. The greater than expected distance from Fringe marker to the LMC in the hole was ascribed to motion on the previously undetected Murphy Creek Fault. Below the LMC, approximately 13m of favourable laminated siltstones and fine-grained wackes, correlative to the Sullivan Horizon, were encountered. A fault zone 30m below the LMC may have removed some thickness of Sullivan Horizon equivalent strata. The Sullivan Horizon equivalent sediments were weakly to moderately elevated in Pb and Zn (87ppm Pb, 226ppm Zn over 7.43m). This anomalous geochemistry may be indicative of strata very distal to that hosting Sedex style mineralization.

The Gold Ledge Project is an aggressive gold exploration located in the historical highly endowed mineral region of the Belt Purcell Basin, Purcell Mountains, south-eastern British Columbia. The Company is pleased to announce that its' Phase I exploration project has rediscovered several significant gold mineral showings and workings consisting of trenches, pits and short adits and has defined an important mineral-bearing major fault system.

The Gold Ledge claim group, which covers the project site, consists of 16 contiguous mineral claims encompassing 7,503.50 hectares. The lower and southern portion of the claim group is easily accessible from the town of Cranbrook, some half-hour drive along the St. Mary Lake Forest Service Road. Two of the old gold workings, the Mystery and Blue Peter, can be accessed by an old horse pack trail leading from the Alkai Creek logging roads. Some of the mineral prospects such as the Gold Ledge and Warren workings are located at higher elevations and are presently best accessible by helicopter, a 15 minute ferry time from Cranbrook. A nearby old logging road up the west branch of Matthew Creek comes within 3km of the Gold Ledge Zone.

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Respectfully submitted,

J. T. Shearer, M.Sc., P.Geo. (BC & Ontario)

#### REFERENCES

Gal, LP and Weidner SO (1999):

1999 Geological Evaluation of the Pyramid Peak Property. BCMEMPR Assessment Report

Hoy, T (1993):

Geology of the Purcell Supergroup in the Fernie West-Half Map Area, Southeastern British Columbia. B.C. Ministry of Energy, Mines and Petroleum Resources, Bulletin 84

Hoy, T, Price, RA, Legun, A, Grant, B and Brown, DA (1995):

Purcell Supergroup, southeastern British Columbia, compilation map, scale 1:250 000; B.C. Ministry of Energy, Mines and Petroleum Resources, Geoscience Map 1995-1

Kung, R, Brown, DA, Lowe, C. and Rencz, A. (1996):

Geology and Landsat Imagery of the St. Mary River Area- East, Southeastern British Columbia. Geological Survey of Canada Open File 3432.

Leech, GB (1952):

Preliminary Map. St. Mary Lake, British Columbia. Geological Survey of Canada Paper 52-15

Leech, GB (1957):

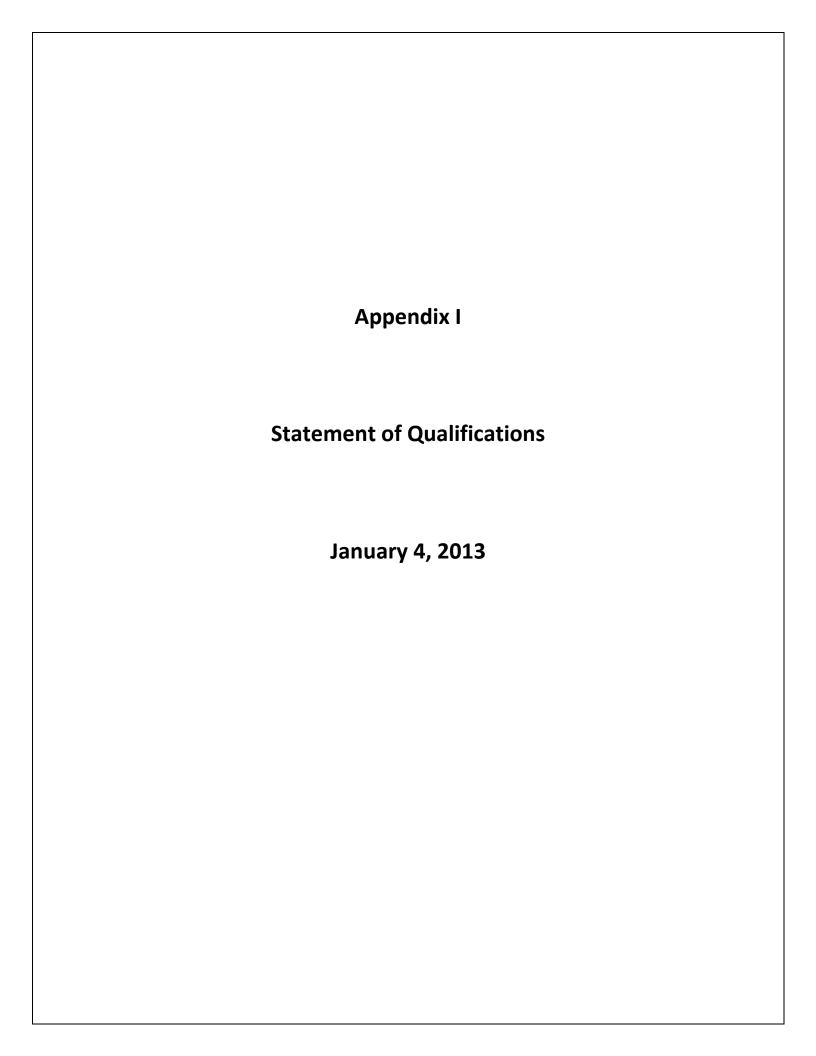
St. Mary Lake. Kootenay District, British Columbia. Geological Survey of CanadaMap 15-1957

Reesor, JE (1996):

Geology of Kootenay Lake, B.C. Geological Survey of Canada, Map 1864-A.

Shearer, J. T. (2012):

Geological and Geochemical Report on the Gold Ledge Property, for Electra Gold Ltd. February 1, 2012



## APPENDIX I STATEMENT OF QUALIFICATIONS

I, J. T. (Jo) Shearer, M.Sc.., P.Geo., of Unit 5 – 2330 Tyner St., Port Coquitlam, B.C. V3C 2Z1 do hereby certify that:

I am an independent consulting geologist and principal of Homegold Resources Ltd.

This Certificate applies to the Technical Report titled: GEOLOGICAL and GEOCHEMICAL ASSESSMENT REPORT on the GOLDLEDGE PROJECT, FORT STEEL MINING DIVISION, Prepared for Electra Gold Ltd.., North Vancouver, B.C., Prepared by myself, J. T. SHEARER, M.Sc., P.Geo., Consulting Geologist, #5-2330 Tyner St., Port Coquitlam, B.C., V3C 2Z1 dated February 1, 2012.

My academic qualifications are as follows: Bachelor of Science, (B.Sc.) in Honours Geology from the University of British Columbia, 1973, Associate of the Royal School of Mines (ARSM) from the Imperial College of Science and Technology in London, England in 1977 in Mineral Exploration, and Master of Science (M.Sc.) in Geology from the University of London, UK, 1977

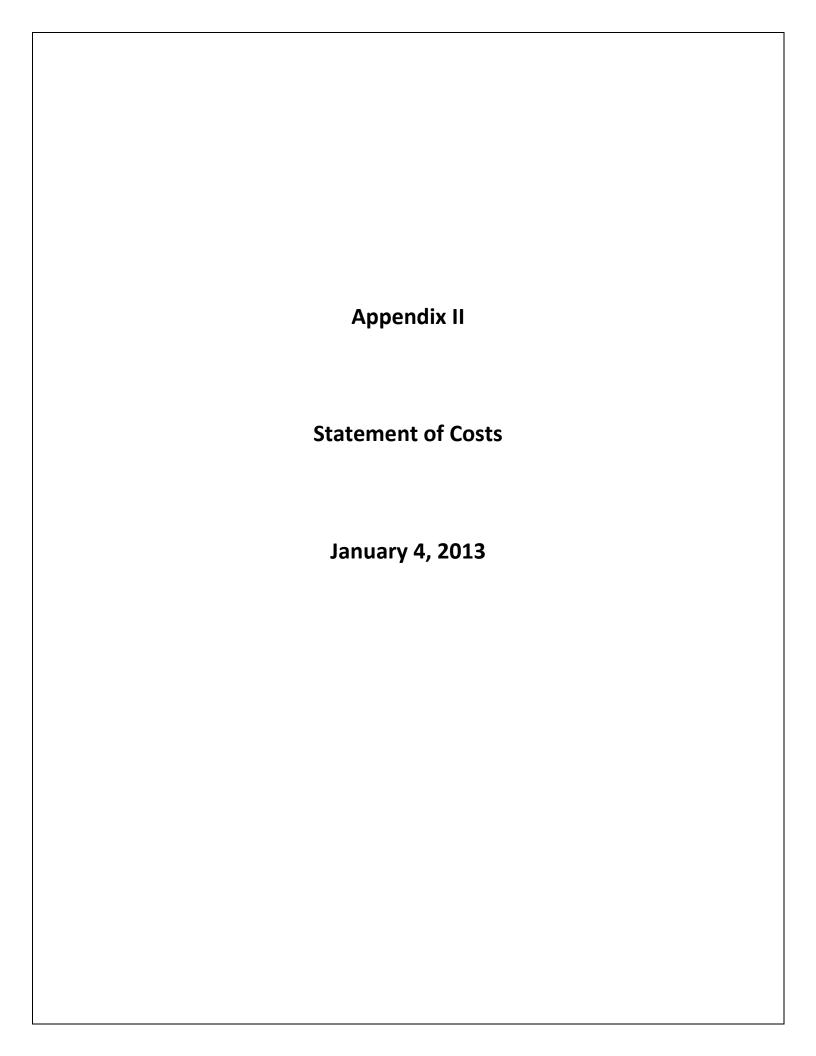
I am a Member in good standing of the Association of Professional Engineers and Geoscientists in the Province of British Columbia (APEGBC) Canada, Member No.19279 and a Fellow of the Geological Association of Canada, (Fellow No. F439)

I have been professionally active in the mining industry continuously for over 40 years since initial graduation from university and have worked on several epithermal precious metal properties.,

I visited the Goldledge Property most recently on June 10 and 12, 2012.

I am responsible for the preparation of all sections of the assessment report entitled "Airphoto Inerpretation Report on the Goldledge Project" dated January 4, 2013.

Signed and dated in Port Coquitlam, B.C.	
January 4, 2013	Shearen
Date	J.T. (Jo) Shearer, M.Sc., P.Geo. (BC & Ontario)



# Appendix II Statement of Costs

Wages	Total without HST
J. T. Shearer, M.Sc., P.Geo, Geologist, June 10+12, 2012	
3 days @ \$700/day	\$2,100.00
Transportation	
Truck, fully equipped 4x4, 1 day @ \$120/day	120.00
Hotel & Meal	145.00
Airphotos, 26 x 15	390.00
Airphoto Interpretation	1,400.00
Computer Drafting	300.00
Report Preparation	1,400.00
Word Processing	300.00

Total \$ 6,155.00

Event #5419773

Filed December 2, 2012

Amount \$5,200 PAC 758.94 Total paid \$5,958.94

Appendix III	
Airphotos	
January 4, 2013	



