LANDSAT INTERPRETATION ASSESSMENT REPORT ON THE CHILKOOT PROJECT, ATLIN MINING DIVISION NORTHWESTERN BRITISH COLUMBIA

N.T.S. 104M/15_16
Latitude 59" 45' N, Longitude 134" 30' w

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APEGBC #31027
APGO #0017
September 15, 2014

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1.0 SUMMARY

This report was prepared by John Buckle. P.Geo. at the request of Xplorer Minerals Inc. ("Xplorer Minerals") on the interpretation of false colour Landsat 7 imaging. The Chilkoot property, located in northwestern British Columbia, The claims are 70 kilometres northwest of the community of Atlin, or 90 kilometres south of the city of Whitehorse, Yukon. The property lies south from the Yukon border near Log Cabin on the South Klondike Highway and to the west of

Bennett Lake. The 7 claims that comprise the property are 100% owned by Xplorer Minerals and total about 3428.54 hectares.

The area contains many mineral occurrences, including new occurrences recorded since 1988. The area straddles the contact between the Coast Crystalline Belt to the west and the Intermontane Belt to the east. The Intermontane Belt (Whitehorse Trough) is represented by Lower Jurassic Laberge Group sediments and younger volcanics of the Inklin overlap assemblage and rocks of the Upper Triassic Stuhini Group and Devonian to Permian Boundary Ranges Metamorphics of the Stikine Terrane. These link Mississippian and older Nisling Assemblage units (Nisling Terrane?), to the west, with Cache Creek Complex and Peninsula Mountain oceanic rocks of the Cache Creek Terrane.

All these units are intruded by Cretaceous to Tertiary granitic rocks of the Coast Plutonic Complex. The northwest trending Llewellyn and Nahlin faults cut through the map area. The Llewellyn Fault was the locus for a large hydrothermal system and the majority of the mineralization in the area is associated with this fault.
The area, discovered as a result of the Klondike gold rush, has been explored since at least 1899 when the Engineer mine and the Laverdiere skarn were discovered. Little activity took place from the mid-1920s to the late 1960s. Increasing base metal prices generated new exploration in the 1970s and discovery of the Mount Skukum gold deposit in the 1980s triggered intensive precious metal exploration. Mineralization in the area, consists of sulphide-rich and sulphide-poor precious and base metal quartz and quartz-carbonate veins, goldcopper skarns, massive sulphide pods and gold associated with listwanite-altered ultramafic rocks.

Historic production came from the Engineer, Ben-My-Chree and Gridiron deposits. The Engineer (104M 014) deposit consists of sulphide-poor gold and gold-tellurium-silver bearing quartz veins hosted in Laberge Group greywacke. The Ben-My-Chree (104M 011) deposit produced minor amounts fi-om a sulphide-rich gold-silver bearing quartz vein in Cretaceous diorite. The Gridiron (104M 001) deposit produced small amounts from a gold-silver vein hosted in gneiss of the Boundary Ranges Metamorphics.

The Spokane (104M 006) prospect consists of the Lawsan go lead-silver vein hosted in schistose gneiss of the Boundary Ranges Metamorphics inferred ore reserves were calculated to be 77.216 tonnes grading 5.83 grams per tonne gold in the area above 1035 metres elevation between the Blacksmith and Incline adits.

The Happy Sullivan (104M 013) prospect is similar to the Engineer mine, however, Arsenopyrite is locally up to 20 per cent and dendritic crystals of native gold have been found. The Rupert (104M 008) prospect is a goldsilver quartz vein in gneiss of the Boundary Ranges Metamorphics. The Laverdiere (104M 022) and newly discovered Skarn (104M 085) prospects are gold-copper skarns and the TP-Main (104M 048) prospect is a gold-copper-cobalt skarn. The Laverdiere skarn is hosted in limestone of the Stuhini Group. The Skarn is hosted

in porphyritic volcaniclastics of the Stuhini Group and the TP-Main occurs in marble of the Boundary Ranges Metamorphics. The Crine (104M 081) prospect is a gold-silver-stibnite vein hosted in schist of the Boundary Ranges Metamorphics. The LQ (104M 044) prospect is a gold-silver vein hosted in gneiss of the Boundary Ranges Metamorphics. The UM (104M 084) prospect is a gold-silver vein hosted in listwanite-altered peridotite. The new Falcon (104M 087) prospect is a silver-gold vein with a high base metal content hosted in schist of the Nisling Assemblage.

Potential exploration targets include: veins hosted in Laberge Group sediments associated with splays of the Llewellyn Fault or intrusions; late cross-cutting veins in Boundary Ranges Metamorphics; sheared and altered or quartz veined rocks within and near the Llewellyn Fault: brecciated contact zones between Cretaceous to Tertiary volcanics and Boundary Ranges Metamorphics and mafic and ultramafic rocks next to fault structures or capped by volcanics.

Xplorer Minerals Inc. ("Xplorer") has acquired the Chilkoot Project in its entirety. The Chilkoot property is centred 70 km west-northwest of Atlin, British Columbia or 30 km south of Carcross, Yukon. Xplorer Minerals staked the claims and holds 100% interest in the Chilkoot claim block. The majority of modem exploration in the area was conducted in the later part of the 1980's and early to mid 1990's when major companies such as DuPont, Noranda and Westmin conducted regional and property scale exploration in the district. The Chilkoot mineral claims were staked in, 2006 by Xplorer Minerals Inc. The June. 2007 field program consisted of geochemical sampling of all the steam drainages and along ridges throughout the property area in order to help provide a geochemical Framework for property area rocks. Preliminary rock and stream sedimentsampling pregram was conducted by Xplorer during the 2006 and 2007 field seasons on the property.

This report covers data processing and interpretation of Landsat imagery generated colour images of the iron oxide and hydroxyl content of the rocks. The method was effective along the barren ridge tops of the project area. The drainages that originated or crossed the colour anomalies were sampled in the 2007 stream sediment survey.

The area presently held as the Chilkoot property received exploration from numerous exploration companies in the past who have identified and isolated areas containing a wide variety of mineralization and deposit types. Gold-bearing polymetallic vein occurrences account for almost half of the mineral showings on the property. Other significant mineralization comprise an epithermal gold-silver showing, a gold-bearing copper skarn, an iron skarn and a porphyry molybdenum showing. The property encompasses a wide variety of lithotectonic terranes, several intrusive events, and is cut by major, long-lived faults. Thus, it provides tectonic and lithologic environments favorable for a wide variety of minetal occurrences and deposit types. Quartz-base metal sulphide veins containing gold occur within Boundary Ranges metamorphic suite rocks. Some veins are associated

with Eocene volcanic or related hypabyssal intrusions (e.g. Crine). Regional geochemical surveys show that Boundary Ranges suite rocks exhibit a clear anomalous gold signature. Due to the abundance of gold occurrences the anomalous geochemical response and the relative lack of exploration within the Boundary Ranges suite rocks, future exploration efforts aimed at gold-bearing vein systems are well founded. The 198990 drill program on the Crine showings, located on the Chilkoot property by Cyprus Gold (Canada) Ltd. suggest that the vein structures are highly variable and pinch and swell along strike. Several other areas remain to be prospected that have to date suggested an enrichment in precious metal and base metal mineralization.

Boundary Range metamorphic suite rocks also appear to offer a high potential for discovery of volcanogenic massive sulphide deposits based on the Big Thing occurrence located near the southeast end of Tutshi Lake (not on. but adjacent the Chilkoot property). The showing may be an isolated lens of Kuroko-type volcanogenic massive sulphide mineralization. Age data and correlation suggest that the Boundary Ranges suite is a metamorphosed equivalent of the Stikine assemblage which hosts the Tulsequah Chief volcanogenic massive sulphide deposit located approximately 125 kilometres south-southeast of the property boundary. To the north, in the Finlayson Lake district of the Yukon, the Fyre Lake. Kudz Ze Kayah and Wolverine volcanogenic massive sulphide deposits are part of the Yukon-Tanana Terrane that may correlate with the Stikine assemblage. Upper Triassic strata on the property hosts gold-bearing copper skarn mineralization at the Mill showing just north of the shoreline of Tutshi Lake where it bends to the east. Host rocks are carbonate and conglomerate; similar mineralization occurs in correlative host rocks in the Whitehorse copper belt to the north. Epithermal gold-silver deposits can occur in almost any type of host rock. Although volcanic rocks are most common because of the association of epithermal deposits with felsic volcanic fields. Two main elements are large, sustained open fracture systems and extended periods of hydrothermal activity. The Ben-Southeast showing in Lower to Middle Jurassic volcaniclastic breccia and tuffaceous conglomerate consists of vuggy quartz veins containing galena and chalcopyrite mineralization with silver-gold values. The Chilkoot property area is part of the Tintina Gold Belt that stretches from central Alaska through the Dawson area, Yukon and down into northern British Columbia. This belt is host to a number of intrusion-hosted or intrusion-related gold and copper-gold deposits. The Cretaceous intrusions on the property are similar in age to many of the intrusions in the Tintina Gold Belt and have a similar geochemical signature. The large Donlin Creek gold deposit in southwest Alaska has spatial and temporal associations with Cretaceous granitic to granodiorite magmatism; bismuth-tungsten-tellurium signatures in granitoid stocks and arsenic-antimony+/-mercury signatures where hosted by sedimentary rocks and hypabyssal dikes. The similarity of the geological setting and geochemical fingerprint of the Tutshi Lake area to that of the Eskay Creek area is recognized. Eskay Creek is a gold-silver rich volcanogenic massive sulphide deposit where mineralization is interpreted to have formed in a subaqueous, near-shore hotspring environment in an active arc setting. The volcanic strata on the Chilkoot property are coincident with a regional geochemical province displaying an elevated gold-antimony-arsenic signature; a geochemical fingerprint also seen in the belt hosting the Eskay deposit.

The potential for precious metal vein formation is moderate to high where Laberge Group strata occur together with high level magmatic rocks; especially in proximity to large structures such as the Llewellyn fault.
The Chilkoot property contains numerous base and precious metal-bearing mineral zones that require carefully planned and executed exploration and development work in order to outline economic mineralization. In order to advance exploration on the property, a 2 phase fieldwork program focused on exploring and expanding known mineralization is recommended. A first phase program of geological mapping and geochemical sampling is recommended to further define and expand mineralization present on the property, and to assess the potential of new mineral deposit type settings. A geophysical survey of the central portion of the block between Tutshi Lake and Bennett Lake of approximately 500 line kilometres. In this phase of exploration the objective of an airborne geophysical survey is to outline and further define favourable stratigraphy and deposit settings followed up by an exploration drill program in order to test subsequent targets and extend known mineralization. Results from previous and current exploration have been positive and a two-phase program of property scale and detailed geological mapping, geochemical sampling, geophysical surveying followed up by a drill program with a proposed budget of C$725,000 is recommended.

2.0 INTRODUCTION

In June and July of 2007 the author supervised the sampling program on behalf of Xplorer Minerals Inc. The property is about 40 kilometres northwest of the past producing Engineer gold-silver mine and covers ten mineral showings documented in the British Columbia provincial mineral database, MINFILE. These showings are the Gridiron (MINFILE 104M 001), Silver Queen (MINFILE 104M 002), Bennett Lake (104M 032), Ben-Southeast (104M046), Selly (104M 052). Net 6 (MINFILE 104M 058), Net 3 (MINFILE 104M O59), Pike (MINFILE 104M 062). Crine (MINFILE 104M 08l), and Mill (MINFILE 104M O83) (Figure l). This report is based in part on documents and technical reports prepared by various authors and the portions of this report that provide that information are referenced. The documents and technical reports were used to compile the Chilkoot property history, geology and mineralization and are listed in Section l 1.0, References.

3.0 ACCESSIBILITY, CLIMATE, INFRASTRUCTURE AND PHYSIOGRAPHY

The Chilkoot property area straddles the South Klondike Highway (Highway 2) that runs from Carcross, Yukon south to the port community of Skagway, Alaska. The highway is paved and maintained year-round. Gravel bush roads extend from the South Klondike Highway to provide access to parts of the claim block along Paddy Pass and to a plateau area between Bennett Lake and Tutshi Lake. Helicopter support is provided from permanently based machines in Atlin, 70 kilometres to the southeast and Whitehorse, 90 kilometres to the north. The project area is in the Coast Mountains. The topography is mountainous and can be extremely rugged and precipitous at higher elevations. Elevations range from about 700 metres above sea level (ASL) at Tutshi Lake to

2040 metres ASL. At lower elevations balsam and lodgepole pine dominate with willow and alder occurring in drainages and avalanche chutes. The alpine areas have scrub balsam, heather and alpine flora. The area is affected by weather from the coast and receives abundant rain and snow. Snow generally begins accumulating in the alpine areas in mid-September and begins receding in late April to early May. The snow is generally melted back sufficiently by mid- to late May to allow for fieldwork at lower elevations.

Power is not available in the project area. The nearest source of power is in Carcross, 30 kilometres north by road. Carcross is connected to the Whitehorse hydroelectric grid. Water resources are abundant in the project area in numerous flowing streams and large lakes.

The nearest major city centre is Whitehorse, 110 kilometres by road north of the project area. Whitehorse is a supply centre for this northern region and has an ample labour force. Due to historic mining activity in the area, an experienced work force, including mining personnel are available here and in Atlin. The communities of Atlin and Whitehorse are government centres, and supply and service points for fuel, groceries, accommodation etc. Whitehorse is serviced by major airlines and there are chartered flights to Atlin.

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Power is not available in the project area. The nearest source of power is in Carcross. 30 km north by road. Carcross is connected to the Whitehorse hydroelectric grid. At this time the Whitehone grid has plenty of excess power and the ability to readily increase its output to supply a large mining complex. Water resources are abundant in the project area in flowing steams and numerous large lakes.

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4.0 HISTORY

The Bennett Lake district was first explored by prospectors travelling along the major lakes and rivers in the early 1890s. The Klondike gold rush in the Yukon brought a great influx of people to the Bennett lake area in 1898. Gold and silver-bearing quartz veins were discovered around Bennett and Tagish lakes, and in the

Wheaton River drainage. High grade mining operations at the Engineer mine beside Taku Arm (Tagish Lake), and at the Venus mine on Montana Mountain (Yukon) periodically produced gold and silver during the early to mid-1900s. The Venus mine is about 5 kilometres north of the northern Chilkoot property boundary and the Engineer mine is about 40 kilometres south-southeast of the Chilkoot property.

In the early 1900s ridges in the area between Tutshi Lake and the south end of Windy Arm (Tagish Lake) were prospected for Venus vein-type occurrences. Seven pits in the old Venus mill site area (on the Chilkoot property) may date from this period. At the Venus mill site, an adit was driven into altered conglomerate and limestone during the 1970s. (Assessment Report 1610). The pits were, with one exception, blasted in conglomerate or a fine grained felsic intrusion containing copper-lead-zinc mineralization. One pit was in limestone and contained copper mineralization. Showings on the Mill claims, which covered the old Venus mill site, were discovered during geological mapping and prospecting in 1987 by United Keno Hill Mines Limited. In 1988, United Keno conducted ground magnetic and VLF-EM surveying. In 1989, mapping, prospecting and sampling were done on the Mill I claim and two drillholes totalling 639 metres were completed on the newly staked Mill 2 claim. This showing is listed as 104M 083 in the provincial mineral inventory database, MINFILE.

Near Pavey on the White Pass and Yukon Railroad two claims were staked by Fred H. Storey around 1913. The Silver Queen and Ruby Silver claims were staked to cover high grade silver mineralization. This showing is listed as 104M 002 (Silver Queen) in the provincial mineral inventory database and is located on the current Chilkoot property. Between 1916 and 1917, the early workers built a 1200-metre tramway from the railroad at 660 metres elevation up the mountainside to 1400 metres elevation. They then drove a 300 metre-long ad it to intersect the ruby silver (pyrargyrite) mineralization.

Some ore was reportedly shipped in 1916 but there is no record of the tonnage. No significant silver mineralization was observed in or near the adit. Pyrite, chalcopyrite and malachite occur in material below the old aerial tramway constructed below the adit portal. A quartz-arsenopyrite vein occurs in a quartz-eye porphyry dike above the adit; a grab sample assayed 14.8 grams per tonne gold (Lueck, 1989). The adit remains open and in geed shape (ca. 1989). Three shorter adits are located in a steep gully 2.5 kilometres to the north of the Ruby Silver adit but do not occur on the Chilkoot property; the history of these workings is unknown. In 1933, the Alaska Juneau Gold Mining Company carried out exploration work on the Silver Queen Group. The claims were held as the Dick 1-40 and Old 1-6 claims in 1970 by the Premier Mining Company who carried out an aeromagnetic survey. In 1971. Premier conducted geological mapping and trenching on the Old 5 and Dick 6 claims. Prospecting in 1987 located veins above the adit.

In the north pan of the Chilkoot property near the BC-Yukon border, the Rigel 1 claim was staked in 1987 to cover a very rusty ridge consisting of pyritiferous cherts. United Keno Hills Mines Limited conducted 5.2 kilometres of ground magnetic and VLF-EM surveying. The Fin 1 claim was staked in 1987 by Noranda Exploration in the north part of the Chilkoot property between Bennett and Tutshi lakes to cover a large gossan. In 1988, Noranda completed prospecting, mapping and stream sediment sampling. The Gridiron adit (MINFILE 104M 032) is located about 9 metres above the western shore of Bennett Lake on a west trending shear zone and is on the Chilkoot property. A clearly defined quartz vein about 0.2 metre wide near the adit portal was reported (Assessment Report 1901) to carry high gold and silver values. In 1901. 68 tonnes of ore were mined producing 2582 grams of silver and 156 grams of gold. In 198, DuPont of Canada Limited staked the Ange 1 and Be1 claims to cover the showing area and conducted soil and rock sampling. The Shui claim was staked in 1981 by Du Pont on the basis of an auriferous stream sediment anomaly. Follow-up work in July and August consisted of collecting 20 soil samples and 10 rock samples. In 1978-79 and 1981, E & B Explorations Ltd. conducted geological mapping, rock and stream sediment sampling and prospecting for uranium on the Net property on the east and west sides of Bennett Lake. These surveys were Follow up to geochemical anomalies in uranium derived from the analysis of sample pulps acquired from Kennco Explorations Ltd. Other wark done on the property involved prospecting using hand held scintillometers. In the 1981 work, two galena occurrences were discovered but neither appeared to have any economic signifiaance. One occurrence is within a narrow quartz vein in feldspar porphyry biotite quartz monzonite: the other is in a quartz-feldspar vein cutting equigranular quartz monzonite. One minor occurrence of molybdenite was also discovered close to the contact with feldspar porphyry biotite quartz monzonite (Net 6, MINFILE 104M 058; Net 3. 104M 059).

In the area where Tutshi Lake curves to the east, the Take claims were staked by Du Pont Exploration in 1981 and follow up of a cupriferous stream sediment sample was conducted later that year. Geological mapping and stream sampling were undertaken and the claims were allowed to lapse. In 1986, the Pike claim was staked and geological mapping, prospecting and sampling were carried out during the field season by H. Copland which resulted in the discovery of anomalous gold values in quartz stringers (Pike. Minfile 104M 062) Report 23736, 23737.

In 1994, the Pike 1-2 claims were staked to cover this showing and geological mapping, rock and stream sediment sampling and a VLF-EM survey were completed by R.H. McMillan. As a result of a large regional exploration programme known as the Kulta Project carried out in 1981 by Du Pont of Canada Exploration Limited, follow up heavy mineral, rock and soil sampling was conducted over a large area, between Bennett Lake, in the northwest and Teepee Peak in the southeast. An anomalous gold sample in a creek draining north into Skelly Lake led to the Selly claim being staked and rock, soil and stream sampling completed. This sampling resulted in the discovery of small mineralized skarns (Selly. MINFILE 104M 052).
The southern area of the Chilkoot property is adjacent to two significant skarn mineral occurrences the TP Main

(MINFILE 104M 048) and TP Camp (MINFILE 104M 049), which were discovered in 1983 on Teepee Peak by Trigg, Woollett, Olson Consulting Ltd. while exploring on behalf of Texaco Canada Resources Ltd. The TP claims were staked and a limited amount of prospecting, rock and stream sediment geochemical sampling and reconnaissance geological mapping were completed on and around the claims. The company kept the property in good standing but failed to continue work in this area until 1987 when Cyprus Gold (Canada) Ltd. optioned the property under joint venture agreement. It was the 1988 fieldwork conducted by Cyprus and the prospecting work done by BC Geological Survey geologists that first isolated new vein-type precious metal mineralization found on the TP 9 claim (located on the current Chilkoot property).

In 1988. Cyprus expanded the property and completed an exploration program consisting of 650 kilometres of airborne magnetic and electromagnetic surveys, followed by reconnaissance geological mapping, geochemical (soil and rock sampling) and ground magnetic surveys. Prospecting in 1988 in an area of previous soil, rock and stream sediment sampling by Du Pont resulted in the discovery of an arsenopyrite-rich quartz vein with gold-silver values containing galena, sphalerite, tetrahedrite, and minor chalcopyrite that could be traced for 500 metres on a north-northwesterly trend (Crine vein). Cyprus Gold (Canada) ltd. continued work in 1989 and the Crine #1 vein. Crine #3 vein. Scotia vein. BX zone and Quartz zone were discovered. The Scotia vein is located approximately 550 metres west of the Crine #3 vein and exhibits the same mineralogy as the Crine veins. The BX zone is the northerly extension of the Crine #1 vein. The Quartz zone, located at the southeast end of the projected Scotia vein, consists of high grade gold assays found in a quartz-graphite mix. The Crine veins, Scotia vein, BX and Quartz zones are located wholly within the current Chilkoot property boundaries. Further work in 1989 consisted of sampling, geochemical and geophysical surveys and 1371 metres of diamond drilling. This work focused on the Crine veins. Scotia vein and Quartz zone. A total of 12 NQ drillholes totalling 1282 metres were drilled on the Crine and Scotia veins; 2 holes on the Crine #3 vein, 7 holes on the Crine #1 vein. 1 hole on the Scotia vein and 2 holes on the Quartz zone. In 1990, Cyprus Gold conducted trenching, diamond drilling, prospecting and rock sampling on the Crine/Scotia veins, and BX and Quartz zones. Eleven NQ drillholes totalling 1336 metres were drilled on the Crine #1 vein, BX zone. Quartz Zone and Scotia vein. Westmin Resources Limited planned to evaluate the area in 1996.

The mineral occurrences that occur on the Chilkoot property are listed below. The Chilkoot property also surrounds a significant area of mineralization hosting numerous mineral showings that is currently known as the Golden Eagle Project. The Golden Eagle Project area is not part of the Chilkoot property but is herein briefly described as it shares similar geology. In 2003-04.

Marksmen Resources ltd. conducted a major exploration program on the Golden Eagle area covering 21 mineral showings that are documented in the provincial mineral inventory database, MINFILE. The Golden Eagle area has a long history of mineral exploration, dating back to the Klondike gold rush when the gold seekers came through the Bennett Lake valley on their way to the Klondike goldfields. Some old, undocumented adits

may date back to this time. The majority of modern exploration in the area was conducted in the latter part of the 1980s and early to mid-1990s when major companies such as Du Pont, Noranda and Westmin conducted regional and property scale exploration in the district. This work identified base and precious metal mineralization in a variety of geological settings and deposit model types over a large area measuring at least 14 by 18 kilometres. The mineralization occurs as skarn-type mineralization in Devonian to Triassic metavolcanic rocks bordering Cretaceous intrusions; as gold-bearing arsenopyrite-quartz veins in rhyolitic intrusions and adjacent hostrocks; as disseminated copper-gold mineralization in Cretaceous intrusions: and as feeder zone mineralization in a possible volcanogenic massive sulphide setting.

The following list of mineral showings occur within the Golden Eagle project area. Refer to the online provincial mineral inventory database. Minfile, at www.minfile.ca for geologic descriptions.

MINFILE NO. SHOWING NAME
104M 003 BEN 1 Silver Gold Lead Zinc Antimony
104M 027 JESSIE Silver Gold Copper Lead Zinc
104M O28 BALD PEAK Gold Silver Lead Antimony
104M 038 GAUG-WEST Gold Silver Lead Antimony
104M 039 GAUG 2 Gold Silver Zinc Copper Lead
104M 040 GAUG 1 Silver Copper
104M 041 BEN-POND Silver Lead Gold Zinc Antimony
104M 042 BEN-CAMP Silver Gold Lead Zinc
104M O43 BEN-GLACIER Gold Silver Cobalt
104M 044 BENNETT Gold Silver Zinc Copper Lead
104M 045 BEN-NORTHEAST Gold Silver
104M 047 BEN-FOUR Gold Silver
104M 057 MOON LAKE Silver Zinc Lead Copper Gold
104M 061 CATFISH Silver Gold Zinc Lead Antimony Copper
104M 071 BIG THING Gold Silver Lead Zinc Copper
104M 074 CATFISH-MIDDLE Gold Silver Copper Lead Zinc RIDGE
104M 075 CATFISH-SOUTH Silver Gold Copper Lead Zinc MOUNTAIN
104M 085 SKARN Gold Copper
104M 086 COWBOY Gold Silver Antimony Lead Copper
104M O90 CAMP Gold
104M 091 GOSSAN Gold Lead Copper

Reports.
02681. 05910, 06882. 06833, 07417. 09454, 10069, 10417. 10424. 10425. 10426. 10427. 10428,

10429. 10740. 11044. 1 1300, 12554, 14332. 14384. 15500. 15808. 15972. 16381. 16569, 17583, 17830, 17992, 18319, 18522, 18649, 18651, 18766A, 18766B, 19186, 19438A. 19438B, 19527A. 19627B. 20032. 20581. 20790, 23149. 23218. 23550, 23599. 23736. 23737. 24844. 24869, 25095, 25096, 25417. 25735, 26193, 26760, 27196A, 27196B, 27267, 27474, 27527. 27674A. 27674B, 27748, 27828.
02681, 05910.

Numerous old trenches and adits in the area show that exploration has occurred intermittently in the past, although none of this work was recorded in assessment records or Ministry of Mines describes the Bighorn Creek showing was investigated and the adit was resampled in 1978. 10069 reports work done on Bighorn Creek in 1981.

06882 and 06883 Culbert and Beaty 1978 describes the geology of the east and west shores of Bennett Lake as sedimentary, metasedimentary and metavolcanic rocks trending northeasterly. The exploration work concentrated on uranium values in the aplite and pegmatite dykes associated with late granitic intrusive on the Coast Range Plutonic Complex. In the report it is noted that the contact between the granitic and metasedimentary rocks is obvious from the rusty weathering of the pyrrhotitferous metasedimentary rocks. Also, noted are the marble and argillites on the west slope of the Bennett lake valley. The report refers to anomalously radioactivity from the radiometric geophysical survey and high geochemical values in the vicinity of the aplite and pegmatite dykes.

07417 Culbert and Leighton followed-up on the uranium anomalies in 1979 adding that silver values were also anomalous however, the uranium values were restricted to the narrow pegmatite veins. The reports notes hydrothermal alteration and arsenic values.

09454 Pegg of Kennecott worked the Net claims on Bennett Lake. Rock chip samples reported high values in gold and silver along with molybdenite, galena on the claim block. The mineralization is associated with small quartz veins related to a rhyolitic intrusive.

10417 Du Pont Canada performed geological and geochemical work on a number of claim blocks collectively known as the Kulta Project in the Tutshi and Bennett Lake area as well as a number of properties in the Yukon, in 1982. Their work concentrated on gold quartz carbonate vein shear zone systems hosted in fine grain greywacke. Narrs showing is slightly anomalous Cu, Zn and As in rock samples. The Peng has anomalous value in Au. Be. Take. Ange. Gaug, Shui, Tuts, Tshik, Undas and Annig had no significant values. Skel, Selly, Keap show

some anomalous Cu, Zn and Au. Race had no significant values, and Creed. Crine were the most interesting targets.

10424 Tuts also on the Kulta prospect explored by DuPont in 1982 showed anomalous Zn and Cu with one high value of Au.

10425 DuPont also explored in 1982 on the Ange claims sampling on old adit workings in quartz vein mineralization returned consistently high values in Cu. Pb and Zn.

10426 DuPont on the Crine claims geochemistry and geology Copland reported "No significant mineralization observed on the property." However, reprocessing of the data indicate an anomalous area in the northwest of the property.

10427 DuPont on the Gaug property low grade Cu. Ag. Au mineralization near an area of previous adit workings and well established trails on the east side of Tutshi L.

10428 Describes the sampling and geology done by Du Pont in 1982 on the Skelly claims on the south east corner of Skelly Lake. The report describes numerous gossans related to pyrite and pyrrhotite in the sedimentary rocks at the contact with dioritic and rhyolitic intrusive. Small skarns with Py. Po, Cu. and Zn are mentioned however no significant metal values were reported.

10429 Also by Du Pont Canada describes the sampling and mapping of the Shui claims. These claims are adjacent to, but not on the current Xplorer property. Some elevated values of Au were reported and follow-up was recommended.

10740 Work on the Key claims by Newex Syndicate did yield encouraging results and no further work was recommended.

11044 Gaug claims report "significant values of Au. Ag. Cu, Pb and Zn are present on the Gaug property". The mineralization is in veins in a shear zone in a granodiorite host. Some grab samples ranged from 3.3% to 9.5% Cu. Gold and silver values were also high, in the order of 0.6 oz/T Au and 9.5 oz/T Ag.

11300 In 1983. Texaco Canada Resources Ltd. on TP claims, a gold/cobalt showing. The mineralization is in amphibole skarn and in shear zone related structures in a quartz-feldspar porphyry.

12554 In 1983, Texaco Canada Resources Ltd. staked the BEN 1 to BEN 4 mineral claims in the southeast part of the NEW — LQ claim block. This staking was undertaken to protect gold and silver occurrences discovered by prospecting in 1982. Texaco's exploration program included prospecting, geologic mapping, geochemical sampling, geophysical surveying and trenching.

14332 Cheemo Claims explored by R. McClure describes an epithermal gold deposit but assay values are very low.

14384 Work on the Dodge Claims at the south end of Windy Arm did not locate any mineralization.
15500 Moon Lake project by Noranda Tut claims from the south east end of Tutshi Lake to Moon Lake. Some very high assays were reported in structurally controlled values up to 6.400 ppb Au and 4% Cu were obtained from grab samples in a sulphide-rich weathered shear zone.
15808, 23236, 23237 Pike claims quartz carbonate veinlets with some gold values in the 500 ppb range on the east shore of Tutshi Lake.

15972 Catfish claims in Paddy Pass sulphide bearing quartz veins up to 1.5 m wide. In 1986, Copeland of Whitehorse staked the Catfish claims on the north side of Paddy Pass and conducted a program of geological mapping, sampling and prospecting. This work identified two major quartz vein trends, one striking westnorthwest: the other northeast. The west-northwest trend is generally barren in appearance and geochemistry and less than 50 cm wide. The northeast trending veins are coarse-grained, milky white, comb-structured, vuggy with moderate to intense limonite and jarosite coatings. A sample from a 15 ln long adit driven on one of these veins returned 21.27 gm/mt gold (0.68 oz/ton) and 134.2 gm/mt silver (4.29 oz/ton) the nature of the sample was not mentioned.

Copeland also found numerous pieces of mineralized float on the property including malachite stained quartz containing up to 2% galena that assayed up to 148.3 gm/mt silver (4.74 oz/ton), but he was not able to determine the source. He was able to locate the source of stibnite-galena mineralized quartz veins that occur crosscutting rhyolite dykes. One float sample of this material returned 3,800 ppb gold and 100.4 ppm silver. He also discovered a silicified volcanic boulder in a creek bed that contained lenses and blebs of pyrite, pyrrhotite, sphalerite and galena comprising 20% of the rock. Zinc values from this sample ran 47.766 ppm. Coarse molybdenite was observed on fracture surfaces on a granite outcrop in one location.
The Catfish Property was subsequently sold or optioned to Frame Mining Ltd. In 1988. Frame contracted Beacon Hill Consultants Ltd. to conduct an exploration program consisting of geological mapping, soil sampling, stream sediment sampling and rock sampling (Morris. 1988).

16381 Describes Du Pont's work on the Crine. Selly, Shui, Gaug and Ange claims. Statistical analysis led to recommendations of future work.

16569 In 1988. Lodestar added the WILLARD claim and optioned the adjoining BEN claims from Texaco. However, no exploration was conducted that year.
In 1990. Lodestar embarked on an extensive exploration program that tested a number of the prospective showings and discovered two new gold occurrences at the Skarn Zone and the
Cowboy Zone. The program included prospecting lithogeochemical sampling, road building, trenching and diamond drilling. Their results included 3.43 gm/mt gold over 8.0 m in hole 90-08 and 14.64 gm/mt gold over 1.0 m in hole 90-03.

2058 Lodestar reported results from trenching on the Pavey project. Good gold values between 1 and 3 gm/T were reported. Hemlo Gold Mines Inc. acquired an option on Lodestar's claim group (collectively known as the Pavey property) in 1993, and conducted limited prospecting in 1993 and 1994, with Noranda Exploration Company Limited acting as the operator on behalf of Hemlo. In 1993, Lodestar Explorations Inc. changed its name to Precision International Resources. In 1995, the PAVEY claims were allowed to lapse and in 1996 the BEN claims were allowed to lapse.

17583 A geophysical survey conducted by United Keno Hill identified a magnetic trend with coincident VLF conductor along Charlie Ridge on Mount Dean on the BC/Yukon border.

17830, 19186, 23218, 23550 Lodestar's Pavey Property was worked in 1987 the LQ and Pavey claims to cover the area previously known as the GAUG claims. Shortly after Lodestar Explorations Inc. optioned this claim group and began prospecting, reconnaissance mapping, trenching and sampling. This work identified the Ben Fault and I.Q vein zones and recommended future trenching and diamond drilling on these targets. 17992. 18319. 18651 In 1985. Noranda Exploration Company Ltd. initiated a regional exploration program in the area aimed at evaluating the Triassic volcanic rocks for their potential to host volcanogenic massive sulphide mineralization. The program involved mapping with lithogeochemical sampling and prospecting. During the program pods and lenses of massive pyrrhotite were found in a sequence of chert-shale and tuff in Moon Creek. The sulphides returned values up to 130 ppb gold. Noranda later staked the TUT 1 to 3 claims.
The following year Noranda conducted exploration program on the "Po" showing and the "Carbonate Zone" as well as regional silt sampling and prospecting in the surrounding area. This work returned gold values up to 450 ppb from carbonate-altered volcanic float and up to 6.000 ppm copper and 7,800 ppm zinc fi-om rock samples in the "Po" showing area.

In March of 1987, Noranda contracted Aerodat Ltd. to conduct an airborne geophysical survey over the property. The survey measured four electromagnetic frequencies, magnetics and two VLF EM frequencies. In 1988, Noranda collected 153 soil, 2 silt and 77 rock samples, conducted an Induced Polarization (IP) survey and drilled two diamond drill holes. The soil geochemical survey identified a northwest-southeast trending anomaly up to 400 m wide and 1000 m long. Values in the soil were up to 18,000 ppb gold, with several samples returning over 1,000 ppb gold. The rock sampling indicated the anomalous soil to be associated with a sheared mafic volcanic unit. The IP survey identified a resistivity anomaly in the Carbonate Zone that is coincident with the anomalous gold-in-soil zone.

18522 Beacon Hill recorded four styles of mineralization on the property: molybdenum in quartz veins; a bleached, pyritic shear zone; an antimony-rich volcanic tuff horizon: and arsenopyrite rich quartz veins. The molybdenite in quartz veins was observed on the North Mountain, west of an old adit. The bleached, pyritic shear zone occurs in a drainage on the east side of North Mountain. The area is described as a large pyritic gossan, but no other mineralization was observed. The antimony-rich tuff horizon occurs in the Lower to Middle Jurassic volcanics along the western part of the property. The arsenopyrite-rich quartz veins occur on North Mountain, Middle Ridge and South Mountain. The veins on the North Mountain are those described by Copeland in 1986. On South Mountain, the mineralized veins are up to 0.6 m wide and are confined to a fine-grained rhyolite host.

18649 United Keno Hill conducted a geophysical program on their Mill claims located on the Venus mill site. Follow-up of mag and VLF anomalies was recommended. 20032 reports on the drilling of several targets finding blebs on of sulphides in felsic metavolcanics between metasedimentary sequences of carbonate, chert and argillite.

18766A.B 19438A, B 20790.23 149 Cyprus Gold work their Teepee property in the Skelly Lake area in 1988 with geophysics, geology and chemistry surveys. Their property included the previously mentioned Crine, Creed. Keap, Selly, TP and Key showings. The target was skarn gold and hydrothermal vein mineralization. Values were generally low with a few high gold/silver values to 27 g/T. Crine veins #1 returned 0.42 oz/T Au with 19 oz/T Ag from grab samples taken over 125 m and #3 assayed 0.47 oz/T Au and 2.75 oz/T Ag along 700m, the Scotia vein gave 0.52 oz/T Au with 3.41 oz/T Ag from selected samples over 700m and silver values in the Bx zone in the order of 15 g/T. Diamond drilling gave much lower but still significant values in Au and Ag. 195275A, B describes work done on the Catfish claims on the west side of Tutshi L at Paddy Pass significant gold/silver mineralization was only found in narrow veins in shears in the granodiorite. 19794 reports a moderate to strong IP anomaly associated with the veins.

19974 P. Walcott conducted a time-domain dipole-dipole IP survey for Frame Mining Co. in

1990 on their Catfish claims on the west shore of Tutshi L. at Paddy Pass. The target was sulphide bearing quartz veins. The results indicated some strong anomalies. In 1989, Frame Mining conducted a more extensive program consisting of geological mapping, rock and soil sampling, petrographic work. 3.1 km of roadwork, blasting and hand trenching (8 trenches). 10 km of line cutting and 10 km of Induced Polarization (IP) geophysical surveying. Frame collected 447 rock samples. 143 soil samples and 20 petrographic samples.
The trenching program focused on the north side of Middle Ridge. Highlights of the program include 1.0 gm/mt Au and 15 gm/mt Ag over 9.0 in in trench 4; 1.34 gm/mt Au and 25.0 gm/mt Ag over 9.7 m in Trench 6; 1.17 gm/mt Au over 6.0m in Trench 7; and 2.05 gm/mt Au and 141.1 gm/mt Ag over 6.0 m in Trench 8.
The IP survey identified three classes of chargeability anomaly on the property: Class A, Class B, and Class C. The Class A anomalies are narrow zones of high chargeability with little or no resistivity as would be expected from narrow vein-like causative sources. The Class B anomalies are high chargeability anomalies with lower resistivity that occur on the western extremities of the grid and southern end of the baseline and appear to represent the response of a carbonaceous argillite. The Class C anomalies are a large complex zone of high chargeability on the eastern side of the grid. These anomalies are attributed to a formational cause but are in an area mapped to be underlain by intrusive rocks and Boundary Range Metamorphic rocks.
Following the 1989 exploration program, Frame did not conduct any further exploration on the property and it was later allowed to lapse.

20032 Is a diamond drilling report for United Keno Hill on their Mill 1&2 claims that straddle the South Klondike highway 30 km south of Carcross. The some very high gold, silver and copper values were reported.
20581 report for Lodestar on their Pavey and Ben claims on the ridge to the north of Paddy Pass, describes work geology, geochemistry and diamond drilling done in 1990. Drilling 694 m of NQ core 8 holes in the Skarn zone and 3 in the Cowboy zone. Values up to 6.42 gm/T over 0.5 m were reported from the Cowboy zone. In November and December 1995 and in July. 1996 Westmin Resources Limited re-staked the area as the LEW and LQ claims. In 1996, Westmin conducted a program of geological mapping, lithogeochemical sampling, geophysical surveying and percussion drilling. Their work focused on the Skarn Zone and on the Bennett Grid IP anomaly. In 1997, Westmin conducted a program of diamond drilling on the Skarn Zone and Bennett Grid. The drilling at the Bennett grid (1 hole. 141.7 m) found the IP chargeability to be caused by graphitic sediments with anomalous, but low gold values (i.e. < 0.36 gm/mt Au). The drilling on the Skarn Zone intersected numerous quartz-calcite-arsenopyrite veins with the best results being 10.08 gm/mt gold over 2.0 m wide (drill width). No further work was done on the property.

In 1957, R.L. Christie of the Geological Survey of Canada mapped the area. In 1987, the BC Geological survey conducted a program of reconnaissance stream sediment and lithogeochemical sampling in the region. This program found the creek draining Paddy Pass and its most easterly, south tributary to the anomalous in gold, arsenic and antimony. In 1988, Mihalynuk, Rouse. Moore and Friz from the BC Geological Survey re-mapped the area in greater detail.

In the 1970's the north side of Paddy Pass was staked as the "Linda" claims then later the "Friendship Silver" claims and explored for molybdenum and copper (Morris. 1988). The B.C. mineral inventory lists "Linda" as a molybdenite occurrence.

The arsenopyrite-rich quartz veins on Middle Ridge are up to 3.1m wide and occur in a rhyolitic dyke that cuts Boundary Range Metamorphic rocks. An anomalous gold trend was traced for over 2.5 km by soil and stream sediment anomalies with values as high as 47.325 ppb. Soil samples yielded up to 24.220 ppb gold (0.71 oz/t) and up to 20.425 ppm arsenic. Beacon Hill recommended an extensive program of mapping, soil sampling, trenching and diamond drilling.

In 1981, DuPont and Kennco staked the area between Tutshi Lake and Moon Lake based on encouraging results from a regional geochemical survey in the area. During the field season a program of geological mapping soil, silt and rock sampling was conducted however the work was not recorded for assessment purposes. The claims were allowed to lapse in 1982.

At the Carbonate Zone, Noranda established a grid with a 4.9 km baseline and i 1.4 km of cross lines. The grid was geologically mapped at 1:2,500 scale and soil-sampled with 524 samples being collected. The mapping program outlined a carbonate alteration zone 75 m wide by several hundreds of m long. The soil-sampling program returned anomalous copper, gold, silver and zinc values throughout the Carbonate Zone with gold values as high as 2,000 ppb. Noranda also collected 224 rock samples. One float sample from the Carbonate Zone returned a value of 44,000 ppb gold, another returned 6.4 gm/mt gold and 4% copper (sample #97537). There is some confusion in the Noranda report as to whether the sample 197537 is from a 3.0 m chip or grab sample.

In 2004, Marksmen Resources Ltd. contracted McPhar Geosurveys Ltd. of Newmarket, Ontario to conduct helicopter-borne magnetic, electromagnetic and radiometric survey over the entire property. The airborne survey was flown from August 17 to September 1. Marksmen also contracted Aurora Geosciences Ltd. to conduct a mapping, prospecting and rock sampling program on the Bennett Lake Block and to follow—up some of the airborne results on the southeast shore of Tutshi Lake and southeast of the Carbonate Zone on the Connor 3 claim.

The 2003 program on the Bennett Lake Block involved a cursory look at the property and consisted of selected rock sampling and stream sediment sampling by the Marksmen crew. The crew looked at the old drill holes locations and old drill core and collected selected rock samples from the prospective sites and stream sediment samples from two creeks on the property. In 2004, the West Gully area was mapped in detail and anomalous

rock sample results from previous operators were followed-up to determine the geological setting of the mineralization. A more regional mapping and rock sampling program was conducted around the Skarn Zone and Stibnite Zone areas.

5.0 PROPERTY TENURE

Table 1 Mineral Tenures

Tenure Number	Claim Name	Owner	Tenure Type	Tenure Sub Type	Map Number	Issue Date	Good To Date	Status	Area (ha)
528397	ANNE 44	202067 (100%)	Mineral	Claim	104M	2006/feb/15	2014/sep/11	GOOD	390.094
528656	ANNE 92	202067 (100%)	Mineral	Claim	104M	2006/feb/20	2014/sep/11	GOOD	406.321
899125	BRE 1	202067 (100%)	Mineral	Claim	104M	2011/sep/21	2014/sep/01	GOOD	390.2424
904969	BRE 3	202067 (100%)	Mineral	Claim	104M	2011/oct/05	2014/sep/01	GOOD	406.381
960369	BREANNE 3	202067 (100%)	Mineral	Claim	104M	2012/mar/13	2014/sep/01	GOOD	470.8
960429	BREANNE 4	202067 (100%)	Mineral	Claim	104M	2012/mar/13	2014/sep/01	GOOD	552.272
960529	BREANNE 5	202067 (100%)	Mineral	Claim	104M	2012/mar/13	2014/sep/01	GOOD	812.428
									3428.54

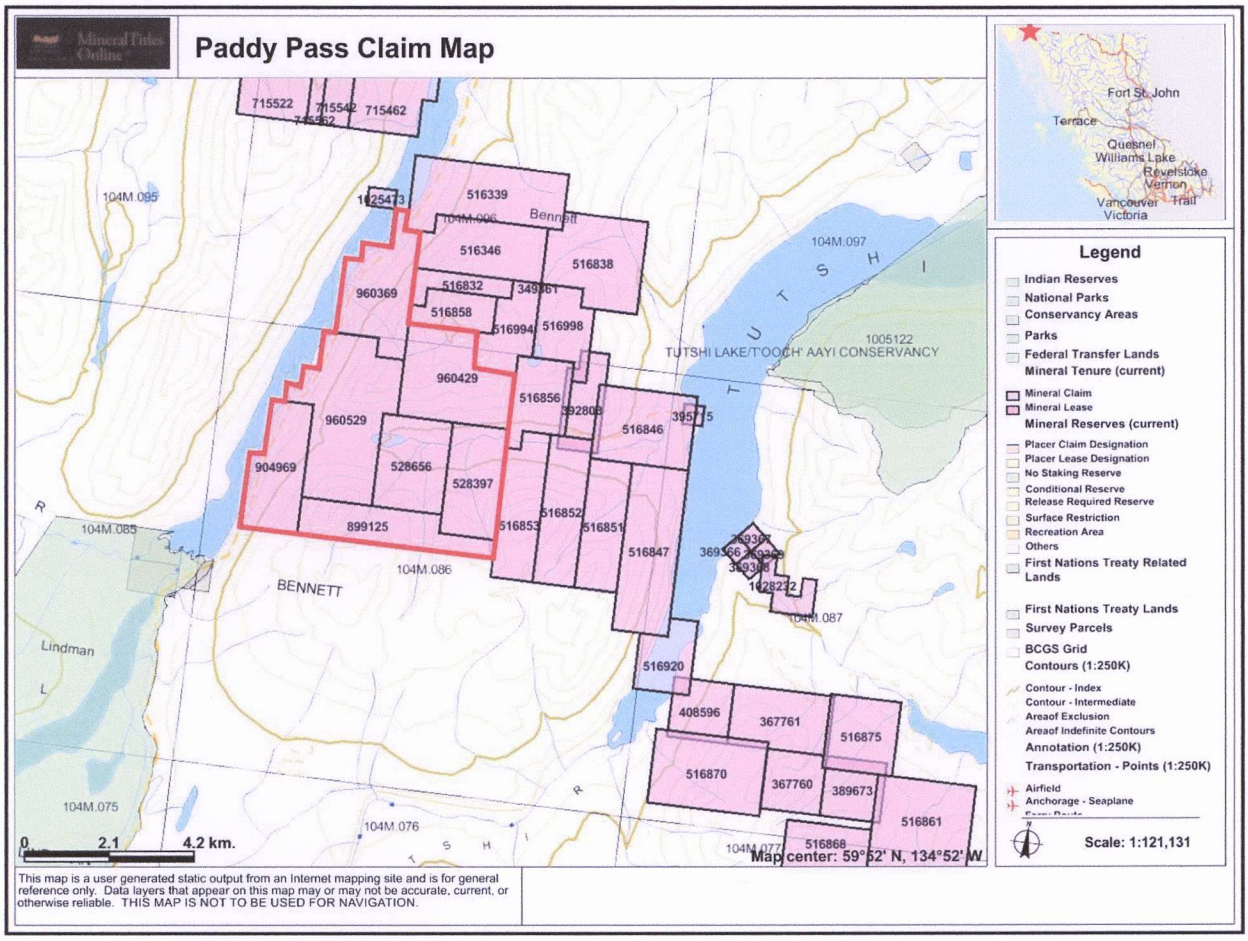

Figure 1 Claim Location Map

6.0 GEOLOGY

6.1 REGIONAL GEOLOGY

The regional geological description of the Chilkoot property is derived in whole or in part from Mihalynuk (1999, 2003), Casselman (2005) and Cuttle (1989, 1990). The property area occurs at the contact between the Coast Belt and the western margin of the Intermontane Belt. The Coast Belt is comprised predominantly of Late Cretaceous and Tertiary magmatic rocks, while the Intermontane Belt at this latitude is composed of Mesozoic arc volcanic and arc-derived sedimentary rocks. According to Wheeler e! al. (I 99l) the architecture of the area is a product of Late Triassic to Early Jurassic amalgamation of the following terranes (fi-om east to west): mainly Paleozoic and lesser early Mesozoic oceanic crustal and supracrustal rocks of the Cache Creek Terrane; early Mesozoic arc volcanic and related sedimentary rocks of the Stuhini Group, at this latitude representing Stikine Terrane; and possibly (?) Late Proterozoic to Paleozoic metamorphosed epicontinental rocks of the Nisling Terrane. These terranes are overlapped by Lower to Middle Jurassic basinal turbidites of the Laberge Group that form part of the Inklin overlap assemblage. Laberge strata are succeeded by late Mesozoic and Tertiary mainly felsic volcanic strata of the Windy-Table and Montana Mountain complexes and

the Sloko Group. Intrusive roots to the several volcanic episodes postdating Laberge deposition include the granitoids of the Whitehorse Trough and Coast Belt.

Current data indicate that both the Laberge Group and the Stuhini Group strata (which at this latitude represent Stikine Terrane) together constitute an overlap assemblage which is termed the Whitehorse Trough overlap assemblage. The nature of the Nisling rocks is in question; it is not certain that they really constitute a separate terrane. However. To maintain consistency with widespread current usage they are referred to collectively as the Yukon-Tanana Terrane.

The structural geology of the area is dominated by two major subparallel, north northwest trending faults that divide and define the boundaries between the Cache Creek Terrane and the Whitehorse Trough, and between the Whitehorse Trough and the Yukon-Tanana Terrane. The Nahlin fault, east of and not in the project area, more or less marks the western extent of the Cache Creek Terrane and eastern extent of the Whitehorse Trough. It is a steeply dipping to vertical fault or series of faults and has been intermittently active, probably since the Late Triassic into the Tertiary. The Llewellyn fault (which transects the Chilkoot property area) marks the boundary between the regionally metamorphosed Yukon-Tanana Terrane in the west and the Whitehorse Trough in the east. It is also steeply dipping and appears to have been active from Late Triassic to Tertiary time.

The Intermontane Belt in the property area is divided into two packages: Yukon-Tanana Terrane to the west, and rocks of the Whitehorse Trough to the east. Overlapping these packages are Lower to Middle Jurassic volcanic rocks. The Yukon-Tanana Terrane consists primarily of the Boundary Ranges metamorphic suite. a Belt of polydeformed rocks bounded on the east by the Llewellyn fault and on the west by mainly intrusive rocks of the Late Cretaceous to Tertiary Coast Plutonic Complex. The Boundary Ranges metamorphic suite is comprised of a wide range of protoliths from quartzose to pelitic or carbonaceous and calcareous sediments through volcanic tuffs or flows to small lenses to large bodies up to several kilometres across of gabbroic, dioritic, granodioritic and granitic intrusions and ultramafite. These rocks are believed to be Devonian to Middle Triassic in age.

The Whitehorse Trough is bounded by the Llewellyn fault to the west, and by the Nahlin fault to the east near Taku Arm (Tagish Lake). In the property area, the Whitehorse Trough rocks consist of the Upper Triassic Stuhini Group and Lower Jurassic Laberge Group. The Stuhini Group is comprised of basic to intermediate subalkaline volcanic flows, pyroclastics and related arc sediments. These rocks are intruded by Late Cretaceous and Paleogene granodioritic intrusions. The upper part of the Stuhini Group is comprised of conglomerate, limestone, shale and wacke. The Stuhini Groop is correlative with the Lewes River Group in the Yukon and this sequence extends from central Yukon down to the Tulsequah River area in British Columbia.

The Laberge Group is divided into the Takwahoni and Inklin formations. They are dominated by immature marine clastics that are regionally metamorphosed to prehnitepumpellyite and epidote-albite facies. Adjacent to plutons they are hornfelsed to a higher grade. The Takwahoni Formation is of Early to Middle Jurassic age and consists of Stikinia-derived, conglomerate-rich elastic rocks. The Inklin Formation consists of an Early Jurassic, mainly fine grained elastic succession of rhythmically bedded argillites and greywackes with locally abundant thin conglomerate units. The argillite can be non-calcareous to weakly calcareous to siliceous. Conglomerate units in both the Takwahoni and Inklin formations are polymictic with clasts of well-rounded volcanic, sedimentary and intrusive lithologies.

The overlapping Lower to Middle Jurassic volcanic rocks crop out northwest and southeast of Tutshi Lake. They are composed of andesitic to dacitic bladed feldspar porphyry flows and tuffs, dacitic lapilli tuff, rhyolite flows and ash flows, variegated feldspar-phyric flows or coarse pyroclastics, and polymictic felsic lapilli tuffs. In many instances volcanism appears to have been focused along major structural breaks, such as the Nahlin and Llewellyn faults.

6.2 PROPERTY GEOLOGY

The Chilkoot property geology description is sourced in whole or in pan from Mihalynuk (1999, 2003), Casselman (2005) and Cuttle (1989. 1990). The crustal-scale Llewellyn fault transects the Chilkoot property on a north-northwesterly trend. The steeply dipping fault marks the boundary between regionally metamorphosed rocks of the Yukon-Tanana Terrane in the west and Whitehorse Trough rocks to the east (Figure 4). The YukonTanana Terrane rocks consists primarily of the Devonian to Middle Triassic Boundary Ranges metamorphic suite where locally preserved relic textures display a wide range of protoliths from quartzose to pelitic or carbonaceous and calcareous sediments through volcanic tuffs or flows to small lenses to large bodies up to several kilometres across of gabbroic, dioritic, granodioritic and granitic intrusions and ultramafite. The Boundary Ranges suite are bounded on the east by the Llewellyn fault and on the west by mainly granitic intrusive rocks of the Late Cretaceous to Tertiary Coast Plutonic Complex. The Whitehorse Trough rocks consist of the Upper Triassic Stuhini Group and Lower Jurassic Laberge Group and are bounded by the Llewellyn fault to the west, and the Laberge Group sediments and Late Cretaceous and Paleogene granodioritic intrusions to the east. The Stuhini Group is comprised of mafic to intermediate subalkaline volcanic flows, pyroclastics and related are sediments. The upper part of the Stuhini Group is comprised of conglomerate, limestone, shale and wacke. The Stuhini Group is correlative with the Lewes River Group in the Yukon and this sequence extends from central Yukon down to the Tulsequah River area in British Columbia.

Intrusive rocks that dominate the western and eastern margins of the Chilkoot property are part of the Coast Plutonic Complex. Magmatic rocks that are genetically integral to the Coast Plutonic Complex range in age

from Jurassic to Early Tertiary. Caught within this plutonic collage are scraps of older, metamorphosed intrusive and layered rocks. Metamorphosed intrusive bodies of Jurassic and older age may be highly deformed, exhibiting a strong, pervasive, northwest-trending fabric. Most plutons are dominantly granodiorite and quartz monzonite, and mid-Tertiary. Late Cretaceous and older non-migmatitic tonalite orthogneiss and weakly to nonfoliated granite.

The lithologic diversity of the Boundary Ranges rocks are similar to that in the Whitehorse map area, suggesting a correlation with the metamorphic rocks there. Original thicknesses are difficult to estimate due to the high degree of deformation, and particularly, non-coaxial folding and interstratal slip. These same factors make it very difficult to trace specific layers more than a few hundred metres in outcrop. Biotite schists form a Belt along the western edge of the metamorphic Belt. Biotite schists generally display a strong foliation which is disrupted by minor folds. They form compact, low outcrops that weather rusty, dark grey and may also contain impure metaquartzite layers. Resistant, yellow, orange and tan-weathering, medium-grained marble layers up to 200 metres thick are the best marker units within the metamorphic package. Locally the marble is well banded with grey graphite-bearing, green chlorite bearing or orange iron oxide stained septa. Unfortunately, like all other rocks within this polydeformed metamorphic domain, these units are discontinuous on a scale of kilometres or even hundreds of metres. Finely crystalline graphite and muscovite (?) schist generally form rubbly to blocky outcrops depending on the degree of induration.

They may grade into actinolite chlorite schists and commonly contain calcareous interlayers. The graphite muscovite schist host base metal-gold-arsenopyrite veins and tectonic breccia zones at the Crine showing. Muscovite schists are generally closely associated with the graphite muscovite schist unit, but lack carbonaceous partings and rarely enclose carbonate bands. Chlorite actinolite schists are the most abundant rocks of the metamorphic suite. Plagioclase and quartz may comprise up to 50 per cent or more of the rock, which results in mineral segregation so that the outcrop displays gneissic green and white banding. Biotite and rare garnet may be present as accessory phases.

Pyroxene plagioclase schists with lesser chlorite and actinolite form conspicuous units several hundreds of metres thick north of Fantail Lake. They also occur as volumetrically minor layers within chlorite actinolite schist. In the Tutshi Lake area similar schists grade into a weakly foliated gabbroic body. Stuhini Group lithologies are diverse: basic to intermediate subalkaline volcanic flows, pyroclastics and related arc sediments. Characteristic lithologies include coarse augite porphyry and bladed feldspar porphyry, as well as widespread upper Norian carbonate known as the "Sinwa Formation". Two major divisions are developed in the area. A poorly exposed lower, foliated division is intruded by granodioritic plutons which are non-conformably overlain by upper division strata. At the base of the upper division, a granitoid-rich boulder conglomerate gives way upward to pebble conglomerate rich in metamorphic fragments and finally into wackes and argillites. These rocks are succeeded by a thick succession of augite-phyric pillow basalts interlayered with fossiliferous siltstone. Topping

the succession is quartz-rich volcanic sandstone and conglomerate capped by upper Norian limestone. Evidence for the lower division occurs in deformed strata adjacent the Llewellyn fault. Screens and sheared rocks along the fault are dominated by chlorite epidote schist with relict textures showing pyroxene-phyric clasts

Contacts between the Stuhini Group and metamorphic strata of the Boundary Ranges metamorphic suite are not well exposed in the area but may coincide with structural boundaries. An orange to tan weathering, clastsupported limestone boulder conglomerate separates Stuhini Group strata and Sinemurian Laberge Group argillites. It forms a laterally continuous Belt extending from Tagish Lake to Moon Lake. A conglomerate unit that straddles Bennett Lake was previously mapped as Paleozoic to Triassic in age but is now known to be at least as young as Late Triassic. This unit sits above foliated Late Triassic granodiorite and contains abundant clasts of both granodiorite and highly stretched quartz-rich metasediments. Locally it is foliated. Coarse pyroxene-phyric basalt is a characteristic lithology of the Stuhini Group. These basalts commonly display evidence of subaqueous eruption and may be well pillowed or they may comprise massive flows with interflow marine sediments. Dark green to grey or maroon heterolithic lapilli tuffs a common lithology, occurring at several horizons within the Stuhini Group. Late Triassic intrusions are common in northern Stikine terrane, where they are collectively known as the Stikine plutonic suite. They are generally co-spatial with the thickest accumulations of Stuhini Group volcanic rocks, and with hornblendite and hornblende-clinopyroxenite ultramafites. They range from granodiorite to alkali granite to gabbro. Strata of the Lower Jurassic Laberge Group are dominated by immature marine clastics preserved in a northwest trending fold and thrust Belt. They are regionally metamorphosed to prehnite-pumpellyite and epidote-albite facies and, adjacent to plutons, are hornfelsed to higher grade. An informal definition of the Takwahoni and Inklin formations is most suited to the Laberge Group in this area. That is: the name Takwahoni Formation is applied to Stikinia- derived, conglomerate-rich elastic rocks. The name Inklin Formation is applied to a mainly fine grained elastic succession with locally abundant wackes and thin conglomeratic units. Inklin Formation rocks which underlie much of the area are crosscut by numerous granitoid stocks.

Widespread folding and thrust faulting make thicknesses difficult to assess. Typical Laberge Group lithologies include conglomerate, greywacke, diamictite, immature sandstone and siltstone and both non-calcareous and lesser calcareous argillite. The dominant lithology is brown to green weathering, medium grained, thick bedded lithic wacke with thin shale and sand interlayers. Conglomerates and greywackes generally occur as massive beds while argillites and siltstones are normally thinly bedded and may be laminated. Conglomerates commonly form tabular or lensoid bodies reflecting deposition in channels. Contacts between the Laberge Group and older rocks are seen at only a few localities in the area. At two localities in the Tutshi Lake area. fossiliferous Laberge or Laberge-like strata rest unconformably on metamorphic rocks. On the ridges north of Skelly Lake, coarse clastic strata of Laberge Group character rest with angular unconformity on Boundary Ranges metamorphic rocks. Another example is north of Paddy Pass where well exposed Laberge wackes overlie metamorphic rocks.

Although the contact between the Laberge Group and underlying Stuhini Group is commonly disrupted, locally its fundamental character is that of a disconformity. Apparently disconformably overlying the Laberge Group are Lower to Middle Jurassic volcanic strata.

Younger still are Eocene Sloko Group epiclastic and felsic volcanic rocks that overlie deformed Laberge strata. Intermediate pyroclastic and flow units of probable Lower to Middle Jurassic age crop out both northwest and southeast of Tutshi Lake. These volcanics are distinguished from Stuhini Group volcanic rocks because they lack both voluminous augite-phyric basalt flows and granite boulder conglomerate interlayers. Further, they are interlayered with conglomerates most likely derived from the Laberge Group. A variety of lithologies are common within this rock package. These include bladed feldspar porphyry flows and tuffs_ dacitic lapilli ash tuff, dark angular lapilli tuff, rhyolite flows and ash flows, variegated feldspar-phyric flows or coarse pyroclastics_ and polymictic felsic lapilli tuffs. An average composition for the suite is probably andesite to dacite, albeit small amounts of rhyolite to basalt are common. (from Thompson in report 23599)

The Llewellyn fault is a major north-northwest-trending fault that transects the Chilkoot property. It is locally a discreet, near vertical structure only a few tens of metres across but is commonly 1 to 3 kilometres across and comprised of numerous elongate lenses of various, nearly vertical lithologies. Lithologies within the fault zone are commonly silicified, sericitized, argillically altered, and pervasively cleaved. The crustal-scale fault, as well as related secondary faults, provide conduits for pluton emplacement and mineralizing hydrothermal systems. It is an important environment where high mineral potential exists and the juxtaposition of two disparate crustal fragments, Yukon-Tanana terrane and Whitehorse Trough has created mineral exploration opportunities for a number of deposit types.

The overlapping Lower to Middle Jurassic volcanic rocks crop out northwest and southeast of Tutshi Lake. They are composed of andesitic to dacitic bladed feldspar porphyry flows and tuffs, dacitic lapilli tuff, rhyolite flows and ash flows, variegated feldspar-phyric flows or coarse pyroclastics and polymictic felsic lapilli tuffs. In many instances, volcanism appears to have been focused along major structural breaks, such as the Nahlin and Llewellyn faults.

The structural geology of the area is dominated by two major sub-parallel, north-northwest trending faults that divide and define the boundaries between the Cache Creek Terrane and the Whitehorse Trough and between the Whitehorse Trough and the Yukon-Tanana Terrane. The Nahlin Fault more or less marks the western extent of the Cache Creek Terrane and eastern extent of the Whitehorse Trough. It is a steeply dipping to vertical fault, or series of faults and has seen intermittent activity from the Late Triassic to Tertiary time. The Llewellyn

fault marks the boundary between the regionally metamorphosed Yukon-Tanana Terrane and the Whitehorse Trough. It is also steeply dipping and appears to have been active from late Triassic to Tertiary.

The Bennett Lake district is located at the contact between the Intermontane Belt of the western cordillera and the younger volcanic and intrusive rocks of the Coast Intrusions. The Bennett lake portion of the property lies west of the Llewellyn Fault in Yukon-Tanana Terrane. The geology can generally be divided into three northwest-southeast trending packages: Stuhini Group rocks to the east: Boundary Range Metamorphic rocks in the centre; Lower Jurassic Inklin sediments and Lower to Middle Jurassic volcanic rocks to the west. The Stuhini Group rocks consist of dark-green, in part variegated green-maroon. Dense, massive, hornblende feldsparphyric volcanic rocks that contain up to 5% pervasive epidote. In hand specimen, the rock is weakly porphyritic with 10% euhedral, white feldspar phenocrysts to 3 mm long.

In the lower 150 m of the Stuhini Group rocks are at least four intervals of light buff-weathering, light green tremolite marble interbedded with dark grey, fine-grained lapilli tuff. The marble is significantly altered and permeated by micro-fractures. Towards the upper contact with the Inklin Formation is a dark green-grey volcaniclastic breccia, with clasts to 10 cm, interbedded with the volcanics.

The lower Stuhini Group is in fault contact with the Boundary Range Metamorphic Rocks. The Boundary Range Metamorphic Rocks are composed of feldspar-hornblende-biotite+sericite gneiss, and feldspar-quartz-chlorite+ biotite schist. Minor augen gneiss and rare carbonate.

The Chilkoot property area is part of the Tintina Gold Belt that stretches from central Alaska through the Dawson area. Yukon and down to northern British Columbia. This Belt is host to a number of intrusion-hosted or intrusion-related gold and copper-gold deposits. The Cretaceous intrusions on the property are similar in age to many of the intrusions in the Tintina Gold Belt and have a similar geochemical signature. The large Donlin Creek gold deposit in southwest Alaska has various similar characteristics, among which are spatial and temporal associations with Cretaceous granitic to granodiorite magmatism; bismuth-tungsten-tellurium signatures in gold deposits in granitoid stocks and arsenic-antimony+/-mercury signatures where hosted by sedimentary rocks and hypabyssal dikes.

Mihalynuk recognized the similarity of the geological setting and geochemical fingerprint of the Tutshi Lake area to that of the Eskay Creek area of British Columbia (Mihalynuk et al. 2003). Eskay Creek is a gold-silver rich volcanogenic massive sulphide deposit. The ore-forming horizons at Eskay Creek occur at the interface between Middle Jurassic argillaceous strata and felsic volcanic units in the Bowser Basin. The mineralization is interpreted to have formed in a subaqueous, near-shore hotspring environment in an active arc setting. Volcanic textures well preserved in the Tutshi Lake area suggest a similar transition from submarine to subaerial

volcanism. The volcanic strata are coincident with a regional geochemical province displaying an elevated goldantimony arsenic signature; a geochemical fingerprint also seen in Belts hosting shallow submarine volcanogenic massive sulphide (Eskay-style) deposits. Many of these features are observed in the Tutshi Lake area. Like classical polymetallic vein systems, the Tutshi Lake area polymetallic veins occur in regions of high permeability that results from the development of fabric in metamorphic rocks or fracturing associated with faulting. Thus, they are predominantly but not exclusively hosted in medium to high-grade metamorphic rocks. Most are also associated with calcalkaline, granite to diorite intrusions, dikes and dike swarms. Typical veins are discordant, steeply dipping and occur in clusters or subparallel sets which in many cases follow specific structural trends in the host rock. At nearly all occurrences the ore minerals are mainly confined within the veins, but mineralization may also be disseminated in the adjacent wall rocks. Sulphide mineralogy of the polymetallic veins varies between and within vein systems. It is as much a reflection of mineral zoning within the veins as it is of different metal source areas. Most veins consist of vuggy and drusy quartz that is typically iron-oxide stained (both galena- and arsenopyrite-rich veins).

Where the veins are thickest, they are typically banded. Late chalcedonic veins locally crosscut mineralized veins (e.g. the Pike showing; MINFILE 104M 062). An example of a galena-rich polymetallic vein is the Gridiron showing (MINFILE 104M 001); an example of an arsenopyrite-rich polymetallic vein is the Crine showing (MINFILE 104M 081). Chalcopyrite-rich polymetallic veins include the Silver Queen showing (MINFILE 104M 002).

Structural control of polymetallic veins in the Tutshi Lake area appears to vary with the host rock lithology. In metamorphic hostrocks, mineralized veins tend to be discordant and oriented parallel to dominant joint or fracture sets such as at the Crine occurrence. The original Crine vein showing was discovered by BC Geological Survey Branch mapping crews on the eastern flank of Teepee Peak and received considerable work in 198990 by Cyprus Canada (Gold) Ltd. It is near-vertical and tabular to podiform with maximum widths of up to 4 metres and has been traced for 650 metres.

The age of mineralization of polymetallic veins in the Tutshi Lake area is uncertain but based on the wide range of host lithologies, it probably varies. Most appear to be linked to magmatic events concomitant with the development of the Late Cretaceous to Eocene Coast Plutonic Complex. Lead-lead data from the Crine vein suggest a Cretaceous age with isotopic characteristics similar to those of veins related to Cretaceous plutonic intrusions (Mihalynuk. 1999). The widespread occurrence of auriferous polymetallic veins in the Tutshi Lake area is an indication that zones of abundant veining could exist. Such zones might be amenable to bulk mining techniques and are potential exploration targets.

Copper skarn mineralization has historically been prominent just to the north in the Whitehorse copper Belt of the Yukon. Near the north shore of Tutshi Lake, auriferous copper skarn mineralization was encountered in a drill

program conducted by United Keno Hill Mines Ltd. in the summer of 1989. Drilling intersected several extensive zones of massive sulphide which replace conglomerate clasts and matrix within a unit stratigraphically underlying the "Sinwa" limestone of the Upper Triassic Stuhini Group. The massive sulphide mineralization consists of chalcopyrite, pyrite, and pyrrhotite. Copper skarn mineralization at the Mill showing (MINFILE 104M 083) is located at the same stratigraphic interval as other deposits in the Whitehorse copper Belt. Its occurrence in northernmost British Columbia suggests that the Whitehorse copper Belt extends 20 kilometres further south than its present known limit (Mihalynuk, 1999). Iron skarns were once a principal source of Iron, but due to their relatively small size and irregular form, they have been replaced worldwide by iron formations. iron skarns can, however, contain appreciable amounts of gold or have an association with peripheral gold deposits. This is the case for iron skarns in the Tutshi area that are clustered on Teepee Peak and the Selly showing (MINFILE 104M 052). All are hosted in Boundary Ranges metamorphic suite marbles along contacts with Coast Belt granitoid intrusions.

Epithermal gold-silver deposits may occur in almost any type of hostrock, although volcanic rocks are most common because of the association of epithermal deposits with felsic volcanic fields. Two main requirements are large, sustained open fracture systems and extended periods of hydrothermal activity. The Ben-Southeast showing (Minfile 104M 046) consists of vuggy quartz veins striking 060 degrees and dipping vertically. The veins occur in Lower to Middle Jurassic volcaniclastic breccia and tuffaceous conglomerate and contain galena and chalcopyrite mineralization.

Porphyry molybdenum deposits display a strong geochemical signature, both in rocks adjacent to the deposits (molybdenum, tungsten, copper and iron) and peripherally (lead. zinc. silver).

Typical, strong dispersion of molybdenum into stream sediments and water can be effectively utilized in exploration for these deposits. Porphyritic quartz monzonite and monzonite most commonly host porphyry molybdenum deposits, although subvolcanic granite to granodiorite intrusions are also known hostrocks. Thus, intrusions of monzonite composition along the eastern margin of the Coast Belt may have some potential, as do multiphase hypabyssal Coast Belt intrusions and satellite bodies that intrude the Whitehorse Trough strata. The Net 3 (MINFILE 104M 059) is an example of a molybdenum occurrence within quartz monzonitic to granodioritic intrusions. Mineralization at the Net 3 was discovered during a regional uranium exploration program in the late 19705. It comprises veins and veinlets of native silver, molybdenum and scheelite along an intensely altered fracture zone. Given that economic molybdenum deposits are huge and geochemically conspicuous, and that the region has been explored for this type of deposit in the past, it is not likely that an outcropping deposit is present within the map area. Undiscovered deposits of this type may, however, exist in the near subsurface. Upper Triassic arc rocks of the Whitehorse Trough are litho logically and temporally equivalent to those hosting important copper-molybdenum-gold porphyry deposits in southern BC. Upper Triassic arc rocks of the

Whitehorse Trough are lithologically and temporally equivalent to those hosting important copper-molybdenumgold porphyry deposits in southern BC. Minor synsedimentary volcanic rocks in the Early Jurassic trough strata may hold potential for shallow subaqueous hotspring deposits rich in gold and silver like those at the Eskay Creek mine.

The Bennett Lake-Tutshi Lake area has the potential to host several deposits types, from bulk tonnage copper/gold porphyries with associated skarn deposits to high-grade gold veins to volcanogenic massive sulphide (VMS) deposits. This area of northwestern BC and Southern Yukon has had an extensive history of exploration for high-grade gold veins and has had some production from the Venus vein system on Montana Mountain. 15 km east of the property, and from the Mount Skookum Mine. 35 km to the northwest. High-grade gold-bearing arsenopyrite quartz veins have been observed throughout the property. This style of mineralization is similar to the veins at Mt Skookum and Venos. This area is part of the Tintina Gold Belt that stretches from central Alaska through the Dawson area and down to northern British Columbia. This Belt is host to a number of intrusion-hosted or intrusion related gold and copper-gold deposits. The Cretaceous intrusions on the property are similar in age to many of the intrusions in the Tintina Gold Belt and have a similar geochemical signature. The intrusions in the Bennett Lake area exhibit some large-scale alteration features and disseminated mineralization typical of a porphyry copper system. Skarn-type alteration and mineralization has been observed adjacent to these intrusions in the Bennett Lake area.

In many parts of British Columbia the Late Triassic Stuhini Group is enriched in copper mineralization (Mihalynuk. 1999). Mihalynuk recognized the similarity of the geological setting and geochemical fingerprint of the Tutshi Lake area to that of the Eskay Creek area of British Columbia (Mihalynuk et. al. 2003). Eskay Creek is a goldsilver-rich volcanogenic massive sulphide deposit. The ore-forming horizons at Eskay Creek occur at the interface between Middle Jurassic argillaceous strata and felsic volcanic units in the Bowser Basin. The mineralization is interpreted to have formed in a sub aqueous, near shore hot spring environment in an active arc setting. The volcanic strata are coincident with a regional geochemical province displaying an elevated gold-antimonyarsenic signature. This geochemical fingerprint is typical of shallow submarine VMS deposits. Many of these features are observed in the Tutshi Lake area.

Other geological features in the Tutshi Lake area that indicate potential for VMS deposits are: 1.
Bimodal felsic and mafic volcanic rocks overlain by marine sediments

2. Stockwork quartz-carbonate veining in the Carbonate Zone (hydrothermal feeder zone)
3. Soil geochemical anomalies proximal to volcanic-sedimentary interface

4. Copper-lead-zinc-gold-silver metal association in soil and rock samples

The mafic volcanic rocks, carbonate alteration and stockwork veining in the Carbonate Zone are also indications of a potential mafic-hosted VMS-type deposit such as the Besshi-type or Cyprus-type Deposits.

7.0 MINERALIZATION

The Chilkoot property area is part of a geochemical province with high background gold, arsenic and antimony regional geochemical stream sediment results (Mihalynuk. 1999). The area encompasses a wide variety of lithotectonic terranes, it records several intrusive events, and it is cut by major, long-lived faults. Thus, it provides tectonic and lithologic environments favorable for a wide variety of mineral occurrences. Potential for other deposit types may become more apparent as new deposit models are developed. There are 10 documented mineral occurrences on the property. Four are gold-bearing polymetallic veins, one an epithermal gold-silver vein, one a copper skarn, one an iron skarn, one a uranium showing, one porphyry molybdenum showing, and one is a limestone showing.

Like classical polymetallic vein systems. Chilkoot property area polymetallic veins occur in regions of high permeability that results from the development of fabric in metamorphic rocks or fracturing associated with faulting. Thus, they are predominantly but not exclusively hosted in medium to high-grade metamorphic rocks. Most are also associated with calcalkaline, granite to diorite intrusions, dikes and dike swarms. Typical veins are discordant, steeply dipping and occur in clusters or subparallel sets which in many cases follow specific structural trends in the hostrock. At nearly all occurrences the ore minerals are mainly confined within the veins, but mineralization may also be disseminated in the adjacent wallrocks. The four gold-bearing polymetallic vein occurrences are the Gridiron. Silver Queen, Ben-Southeast and Crine. The Crine occurrence is located on the eastern flank of Teepee Peak over a 1 kilometre area and comprises a series of strike persistent, precious and base metal-bearing quartz veins that occupy zones of weakness parallel to the Llewellyn fault system. The Crine showing consists of the Crine. Crine #I. Crine #3 and Scotia veins, and the BX and Quartz zones (Figure 5). The Crine, Crine #1, Crine #3 and Scotia veins are all arsenopyrite-rich veins with gold, silver, galena, sphalerite, tetrahedrite and minor chalcopyrite. Areas of the veins exhibit a massive nature to the galena and sphalerite although along strike the veins change to dominant arsenopyrite in a quartz host with a lower base metal content. The width of the veins vary from 10 centimetres to 4.1 metres and can be traced intermittently on surface for up to 1.7 kilometres. The veins strike between 150 to 160 degrees and dip 44 to 70 degrees west. The BX zone, exposed along a steep hillside, is the northerly extension of the Crine #1 vein. The Quartz zone is located at the southeast end of the projected Scotia vein. The Crine vein occurs in a vertical, brecciated, sheared and silicified zone. The quartz vein is podiform, pinching and swelling up to 4 metres in width and has been traced for 650 metres at a strike of 150 degrees. The vein becomes wider where crosscutting, sometimes multiple parallel andesitic dikes occur. The faulted western margin is in some places well defined. The vein has zones of massive arsenopyrite and scorodite, pyrite and disseminated galena with small amounts of sphalerite. Some sections of the vein contain up to 50 per cent sulphide mineralization as lenses of pyrite, pyrrhotite, arsenopyrite and/or stibnite. Samples from the vein assayed 3.64 to 33.2 grams per tonne gold (Durfeld. 1989). Fourteen chip samples of 1 to 3 metres width over the 650 metre strike length average 4.45 grams per tonne gold. 29.8 grams per tonne silver and 5.45 per cent arsenic (Cuttle. 1989).

The Crine #1 and Crine #3 arsenopyrite-rich veins strike 150 degrees and may be persistent along strike for up to 700 metres as traced by float. These contain small pods of massive to disseminated dark brown sphalerite and galena with disseminated pyrite.

Drilling on the Crine #3 vein intersected narrow vein material, up to 0.50 metre, dipping steeply to the west between 69 and 73 degrees. A drill core sample across 0.50 metre assayed 0.78 gram per tonne gold, 20.22 grams per tonne silver. 0.92 per cent arsenic, 0.78 per cent lead and 1.46 per cent zinc (Cuttle. 1989). The Crine #1 vein, up to 4.1 I metres wide is podiform. The vein is highly brecciated and silicified and dips 43 to 50 degrees west. Massive and disseminated arsenopyrite, galena, sphalerite and lesser pyrite are common. Drilling suggests this vein to be fairly shallow, tabular and possibly zoned, becoming more silver-rich to the south. A feldspar porphyry dike commonly occurs as a footwall marker. A drill core sample across the 4.1 1 metre width assayed 3.70 grams per tonne gold. 326.69 grams per tonne silver. 3.45 per cent arsenic. 0.67 per cent lead and 2.30 per cent zinc (Cuttle, 1989).

The BX zone, exposed along a steep hillside, is the northerly extension of the Crine #1 vein and due to the low gold values, possibly indicates mineral zonation. The zone exhibits intense quartz stockwork and brecciation in a clay altered felsite dike. Mineralization consists of disseminated chalcopyrite, tetrahedrite, galena, arsenopyrite, pyrite and minor sphalerite. The zone outcrops over 100 metres and is 0.50 to 1.8 metres wide. Chip samples assayed from 34.28 to 377.08 grams per tonne silver (Cuttle. 1989).

The Scotia vein is about 550 metres west of the Crine #3 vein. This arsenopyrite-rich vein trends 160 degrees and pinches and swells over a 700 metre strike length as indicated by float samples.
Drilling in 1989 indicated that the vein is narrow, less than 1 metre and dips 69 degrees west.
Drilling in 1990 indicated that there is a small higher grade pod of mineralization plunging southeast. A drill core sample taken in 1989 over 0.95 metre assayed 7.98 grams per tonne gold, 14.05 grams per tonne silver. 8.70 per cent arsenic, 0.13 per cent lead and 0.84 per cent zinc (Cuttle. 1989).

The Quartz zone, located at the southeast end of the projected Scotia vein, consists of a quartz-graphite mix with high gold values. The vein is generally narrow, less than I metre, poddy and dips 60 to 70 degrees west. Minor pyrite and arsenopyrite occur with small amounts of silver indicated from assays. Drilling shows a flat lying zone, while float found on the surface indicates a steeply west dipping zone; faulting is suggested ta explain this. Drilling has also indicated the similarity between this zone and the Crine and Scotia veins. A drill core sample over 3 metres assayed 4.76 grams per tonne gold. 15.08 grams per tonne silver. 0.69 per cent arsenic. 0.09 Percent lead and 0.09 per cent zinc (Cuttle, 1989).

In the northwest portion of the property the Gridiron showing is located on the west shore of Bennett Lake where an adit follows a crushed zone of quartz and talcose matter carrying several per cent galena, tetrahedrite, arsenopyrite, pyrite and minor sphalerite. This showing is an example of a galena-rich polymetallic vein. A sample of the quartz vein taken in 1982 assayed 3.2 grams per tonne gold. 315 grams per tonne silver. 2.05 per cent lead and 1.34 per cent arsenic (Neelands and Copland, 1982).

The Silver Queen showing, located 3 kilometres south of the Gridiron and on the east side of Bennett Lake, consists of a 300-metre long adit that was driven (ca. 1916-17) to intersect pyrargyrite (ruby silver) mineralization. Pyrite, chalcopyrite and malachite occur in material below the old aerial tramway constructed below the adit portal. A quartz-arsenopyrite vein occurs in a quartz-eye porphyry dike above the ad it. A grab sample assayed 14.8 grams per tonne gold (Lueck. 1989). This showing is an example of a chalcopyrite-rich polymetallic vein. Polymetallic veins at the Ben-Southeast occurrence are hosted in Lower to Middle Jurassic volcaniclastic breccia and tuffaceous conglomerate. Galena and chalcopyrite mineralization occurs as either disseminations within fracture and shear zones or in veins with cockscomb and vuggy textures. The vuggy quartz veins strike 060 degrees and dip vertically. The vein is about 30 centimetres wide pinches out at one end and is talus covered at the other. A grab sample assayed 253.7 grams per tonne silver, 1.34 per cent lead and 0.07 gram per tonne gold (Lhotka and Olson, 1983).

A number of models have been developed over the last decade to aid exploration for epithermal veins. Epithermal gold deposits may occur in almost any type of hostrock, although volcanic rocks are most common because of the association of epithermal deposits with felsic volcanic fields. Two main ingredients are large, sustained open fracture systems and extended periods of hydrothermal activity. The Pike showing is located on the east side of Tutshi Lake across from Paddy Pass. The showing outcrops in a creek bed between 900 and 1060 metres elevation and is hosted in pyritic Stuhini Group andesite. The andesite is argillically altered and intense gossans occur along with numerous highly fractured zones. The zones range from one to several metres across and contain intense alteration associated with slickensides on the margins. Very fine grained quartz stringers and small veins, up to 2 centimetres wide, contain pyrite and minor amounts of chalcopyrite. The highest value came from a grab sample of quartz veinlets in the andesite which assayed of 0.59 gram per tonne gold and 0.5 gram per tonne silver (Copland. 1987). Late chalcedonic veins locally crosscut mineralized veins (Mihalynuk. 1999). Copper skarn mineralization has historically been prominent just to the north in the Whitehorse copper Belt of the Yukon. Near the north shore of Tutshi Lake, auriferous copper skarn mineralization was encountered in a drill program conducted by United Keno Hill Mines Ltd. in the summer of 1989. Drilling intersected several extensive zones of massive sulphide which replace conglomerate clasts and matrix within a unit stratigraphically underlying the "Sinwa" limestone of the Upper Triassic Stuhini Group. The massive sulphide mineralization consists of chalcopyrite, pyrite and pyrrhotite. The copper skarn mineralization at the Mill showing is located at the same stratigraphic interval as other deposits in the Whitehorse copper Belt. Its occurrence in northernmost British Columbia suggests that the Whitehorse copper Belt extends 20 kilometres

further south than its present known limit (Mihalynuk. 1999). The zone is strongly fractured and brecciated with extensive epidote and chlorite alteration. Geochemical results from drill core yielded 2.06 grams per tonne gold. 41.14 grams per tonne silver and 1.58 per cent copper over l.40 metres (Ouellette, 1990). Several small intrusive apophyses have been mapped in the vicinity of the drillholes and drill core revealed numerous felsic dikes at depth. Iron skarns can contain appreciable amounts of gold or have an association with peripheral gold deposits.

This is the case for iron skarns in the Tutshi Lake area that are clustered on Teepee Peak and at the Selly showing. The Selly showing, located just south of Skelly Lake, consists of small skarn zones developed in rocks of the Boundary Ranges metamorphic suite adjacent to a north trending intrusive contact with Coast Plutonic Complex granodiorite. Mineralization consists of minor disseminated pyrite, pyrrhotite, chalcopyrite and galena. Limestone outcrops in several locations on Bennett Range. 0.5 to 2.5 kilometres northwest of Bennett Lake. The Bennett Lake limestone showing occurs within the Boundary Ranges metamorphic suite which is intruded to the west by granite and granodiorite of the Coast Plutonic Complex. The strata have been warped into a gently plunging, tight to open syncline-anticline pair.

The Net 6 showing is located east of Bennett Lake between the Gridiron showing, to the north, and the Silver Queen showing in the south. Uranium exploration began in the area near Partridge Lake in 1979 when E & B Exploration Ltd. ran a regional exploration program. The area of the showing is underlain by feldspar porphyry biotite quartz monzonite of the Coast Plutonic Complex in contact with Stuhini Group volcanics and sediments. The plutonic rocks are cut by radioactive aplite and pegmatite dikes. A sample of an aplite dike assayed 0.034 per cent uranium (Beaty and Culbert, 1978). Porphyritic quartz monzonite and monzonite most commonly host porphyry molybdenum deposits, although subvolcanic granite to granodiorite intrusions are also known hostrocks. Thus, intrusions of monzonite composition along the eastern margin of the Coast Belt may have some potential as do multiphase hypabyssal Coast Plutonic Complex intrusions and satellite bodies inat intrude the Whitehorse Trough strata. The Net 3 showing is an example of a molybdenum occurrence within quartz monzonitic to granodioritic intrusions. Mineralization at the Net 3 was discovered during a regional uranium exploration program in the late 1970s. It comprises veins and veinlets of native silver, molybdenum and scheelite along an intensely altered fracture zone (Mihalynuk. 1999).

Arsenopyrite-quartz veins also occur on North Mountain and South Mountain on the Tannis Property. The veins on the North Mountain are hosted in rhyolitic intrusions and in the Boundary Range Metamorphic rocks and were described by Copeland in 1986. On South Mountain, the mineralized veins are confined to a fine-grained rhyolite host. The veins are up to 0.6 m wide and occur below 1385m elevation and above 1400 m elevation. Mihalynuk (1999) reported discovering an antimony-rich tuff horizon in the Lower to Middle Jurassic volcanics, which overlie the Inklin Formation (Laberge Group) shale along the western pan of the property. In 1988. Mihalynuk collected a sample of this material that contained 975 ppm antimony. Gold mineralization has been

document to occur with hydrothermal alteration related to either a shear zone in mafic volcanic rocks or to occur as disseminations in the altered mafic volcanic rocks. In the drill logs prepared by Noranda (Duke, 1989) they reported a high degree of propylitic alteration accompanied by silicification carbonatization and disseminated and fracture-filed pyrite and pyrrhotite, which contained gold.

The mineralization occurs as chalcopyrite and pyrite in quartz carbonate veins that form a weak to moderate stockwork zone in the cliffs at the north end of the zone. An iron-rich mineral seep occurs 200 m east of the stockwork zone and may indicate an extension of the stockwork zone eastward. Sampling of the iron-rich seep material by previous workers. However, did not return any significant precious or base metals values. The soilsampling program above the stockwork zone returned a number of samples anomalous for copper and gold.

Fieldwork carried out by Xplorer Minerals on the Chilkoot property claims by the writer between June 1 and July 5, 2007 consisted of limited geological examination and rock chip and stream sediment sampling.

This work was relevant to the exploration of precious and base metal-bearing mineralization. Fieldwork resulted in 5 rock chip, and 412 stream sediment samples sent for analysis. Each rock sample consisted of about 2-5 kilograms of rock chips (1-4 centimetres width). The stream sediment samples were taken from active creek beds and where creeks were dry from appropriate channel material. One moss mat sample was taken from a dry creek bed/avalanche chute that contained rock fragments and/or felsenmeer. All samples were sent for analysis to Eco Tech Laboratories Ltd. Whitehorse, Y.T. for 28 element aqua regia ICP-ES analysis. Examination of rock outcrops was carried out along roadcuts on the South Klondike Highway east the property and exposes most of the major lithologic units that host mineralization in the project area. The author identified quartz monzonite of the Late Cretaceous to Tertiary Coast Plutonic Complex, mafic volcanic rocks and pebble conglomerate of the Upper Triassic Stuhini Group, argillites and wackes of the Lower Jurassic Laberge Group schists and metaquartzite of the Devonian to Middle Triassic Boundary Ranges metamorphic suite andesitic tuffs assigned to the Lower to Middle Jurassic 'unnamed volcanics', and limestone of the 'Sinwa Formation' (Stuhini Group). A helicopter and all-terrain vehicle (ATV) was used to gain access to the ridges on the west and east side of Bennett Lake and to the Skelly Lake area. Both showings were examined and rock chip samples taken. Across the Chilkoot property numerous streams drain the major lithologic units; access to stream sediment sample sites was from the South Klondike Highway.

8.0 SATELLITE IMAGERY INTERPRETATION

Spectral analysis exploits spectral properties of rocks in order to interpret lithological variations or rock alterations that are expressed as variations in color intensity values within color composite images. Landsat 7, launched on April 15, 1999, is the seventh satellite of the Landsat program. Landsat 7's primary goal is to refresh the global archive of satellite photos, providing up-to-date and cloud-free images. The Landsat

Program is managed and operated by the USGS, and data from Landsat 7 is collected and distributed by the USGS. The NASA World Wind project allows 3D images from Landsat 7 and other sources to be freely navigated and viewed from any angle. The satellite's companion, Earth Observing-1, trails by one minute and follows the same orbital characteristics. Landsat 7 was built by Lockheed Martin Space Systems Company. In August 1998, NASA contracted EarthSat to produce Landsat GeoCover (*Geocover 2000* in NASA World Wind) — a positionally accurate orthorectified Landsat Thematic Mapper and Multispectral Scanner imagery covering the majority of the Earth's land mass. GeoCover was later enhanced to EarthSat NaturalVue, a simulated natural color Landsat 7 derived c. year 2000, orthorectified, mosaicked and color balanced digital image dataset. False color (or false colour) refers to a group of color rendering methods used to display images in color which were recorded in the visible or non-visible parts of the electromagnetic spectrum. A false-color image is an image that depicts an object in colors that differ from those a photograph (a "true-color" image) would show.

MSS images are shown that where digitally processed to enhance the diagnostic spectral characteristics of hydrous and anhydrous ferric-oxide minerals (referred to as limonite). Limonitic areas are shown in red. Areas where only scattered pixels are indicated as being limonitic in the MSS images are shown in yellow. TM color-ratio composite image of the Paddy Pass area are displayed as red, green, and blue. The limonitic areas appear in reds on the FeO map and the areas with hydroxyl-bearing minerals appear in greens, and blues on the hydroxal map. Interpretation of TM color-ratio composite image indicating areas which contain limonite and/or hydroxyl bearing minerals.
LANDSAT TM band 7 is used primarily for mineral and rock discrimination.

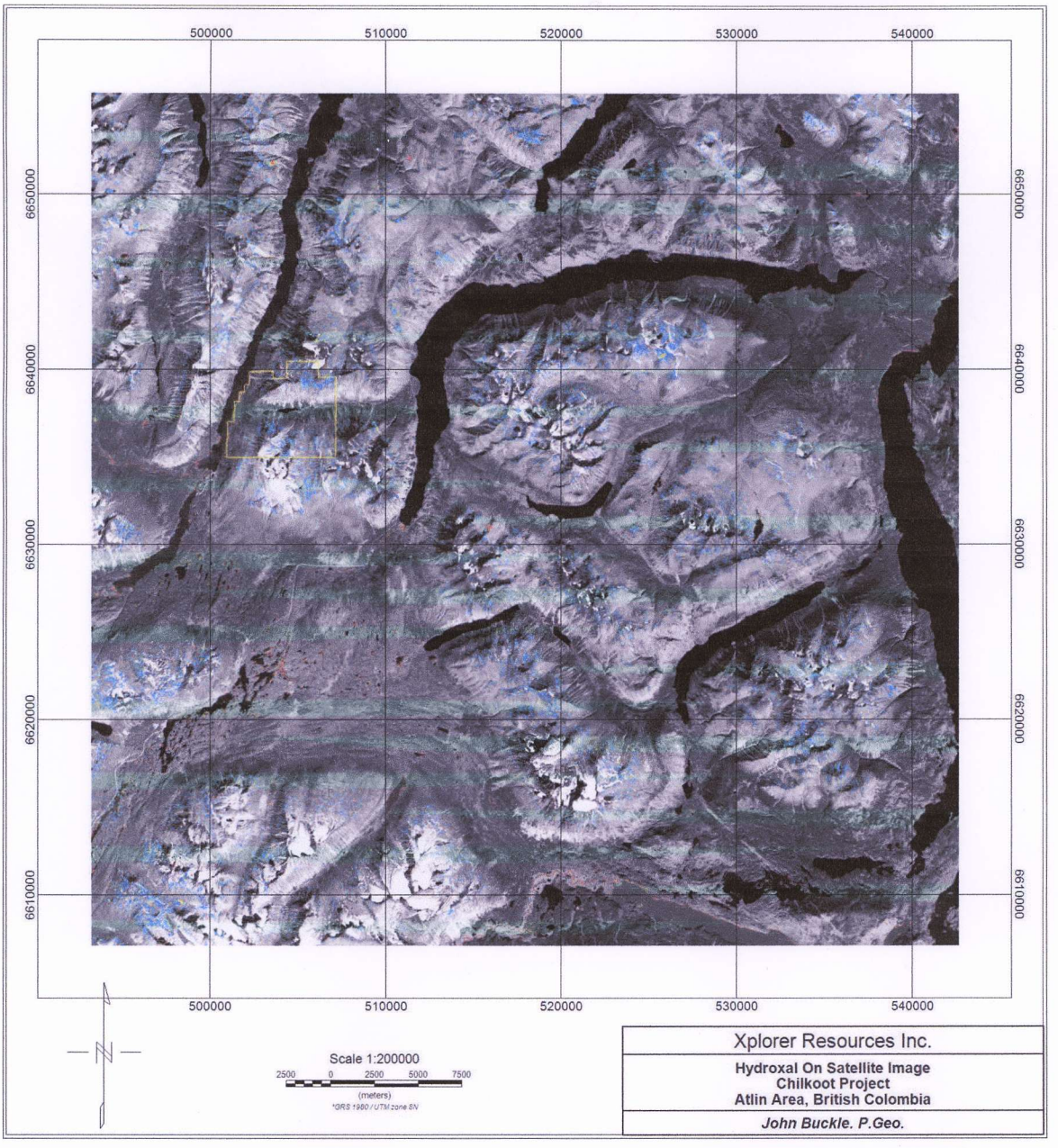

Figure 2 Windowed Paddy Pass project area Landsat Image

The above image has been windowed from a larger image in order to highlight the specific project area. Interpretation of the Landsat images has focussed on this block.

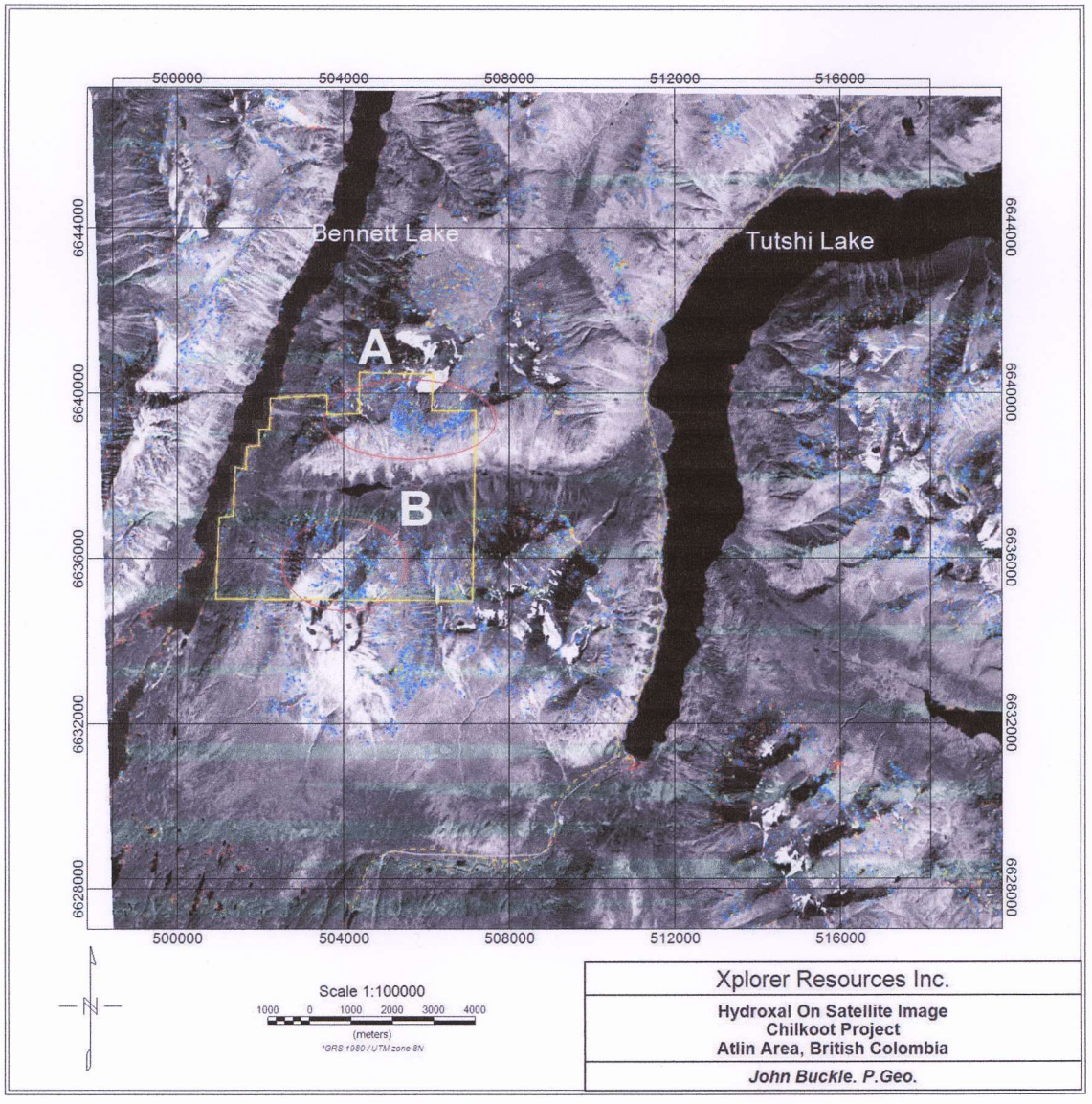

Figure 3 False Colour Hydroxal Image

The Hydroxal image indicates areas with elevated clay alteration minerals. Two zones appear anomalous in the Paddy Pass claim block area. Anomaly A in the northeast corner of the claim block is a well-defined collection of pixels along a ridge on the north side of the interpreted Paddy Pass fault. Anomaly B is more diverse however it appears to be somewhat confined to the peak on the south-central border of the claim block. It appears to be the downhill erosion from the peak. Also of interest is a circular structure in the image that could be a reflection of an intrusive or collapsed caldera.

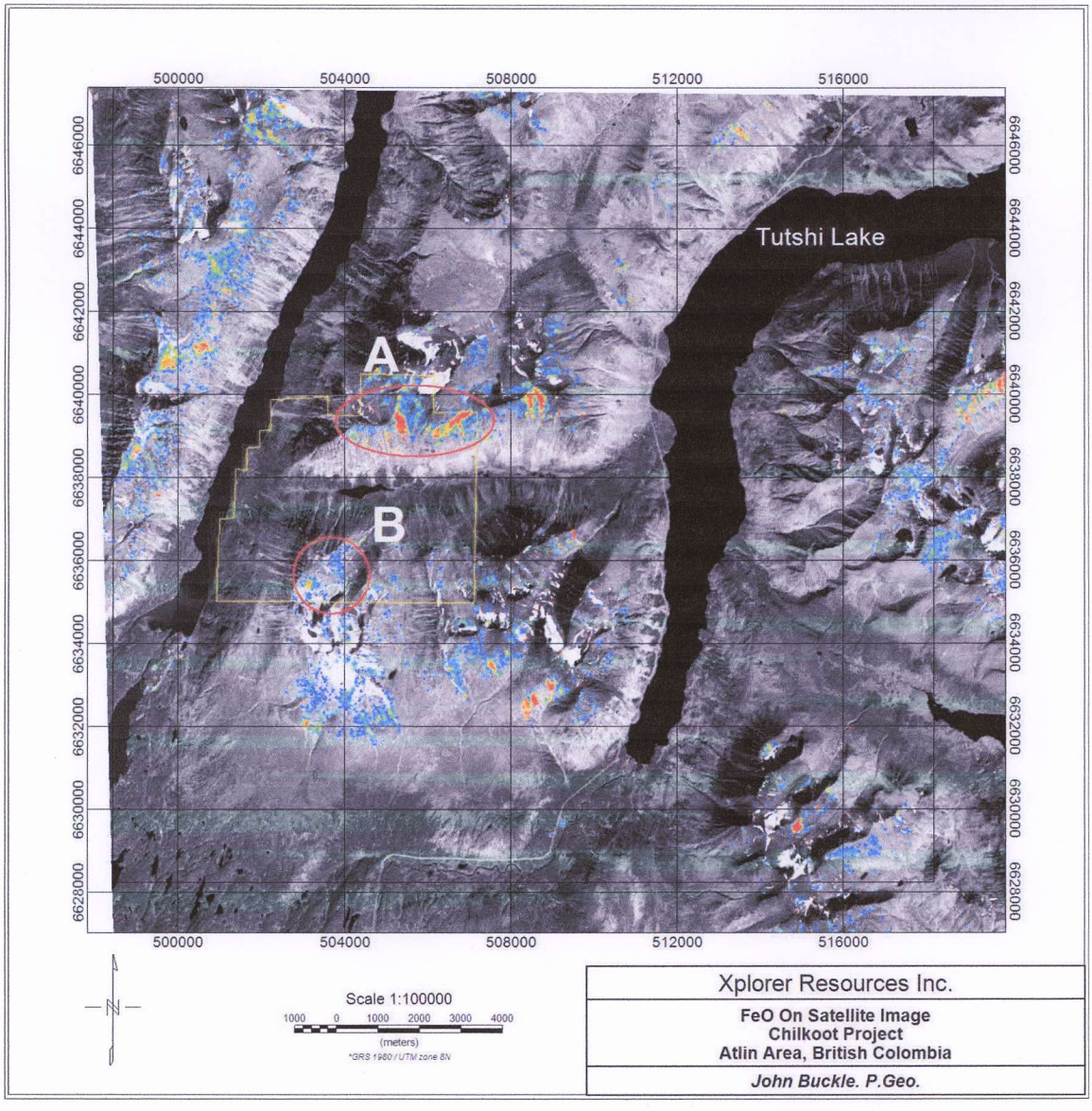

Figure 4 False Colour FeO Image

In the iron oxide image (FeO), anomaly is clearly shown as a strong red grouping of targets that correspond very well with the hydroxal response in the same area. The site investigation of this target identified a large gossan zone on the ridge where the FeO response is strongest.

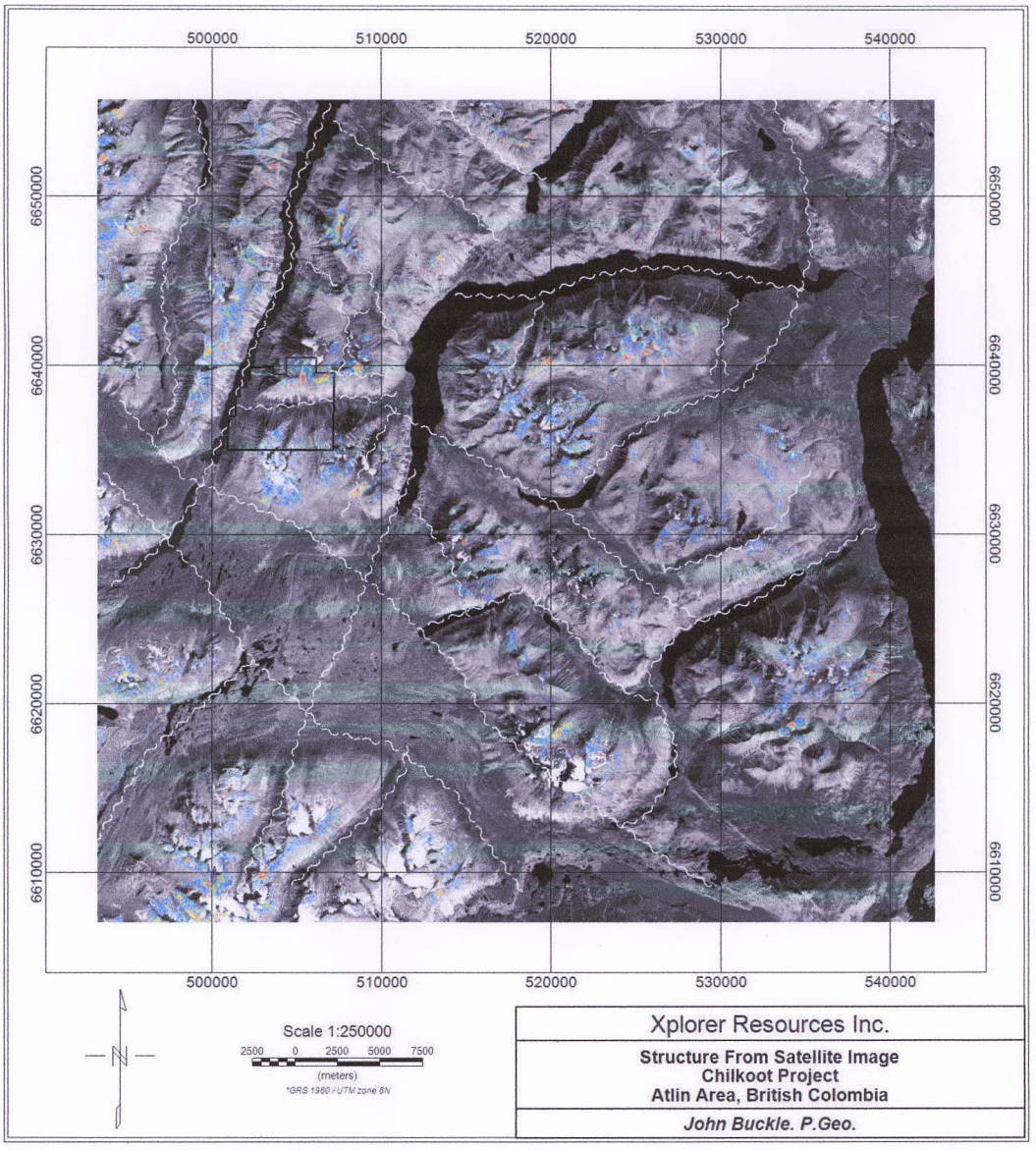

Figure 5 Structural Interpretation Image

The interpretation of the faulting in the project area suggests three dominant strike directions to the area faulting. The strongest of these is the north-north-east set that mark the length on Bennett Lake and the western shore of Tutshi Lake. These fault lines are roughly parallel to the Llewellyn fault zone that could be a guiding structure for mineralizing fluids. The second set is north-west and corresponds to a broad valley to the south of the Paddy Pass claim block and to the north and west of the Paddy Pass block. The off-set on this set could indicate a horst in the project area. The third structure is east-west and cuts the claim block. This is the Paddy Pass itself. This fault bisects the hydroxal and FeO anomalies.

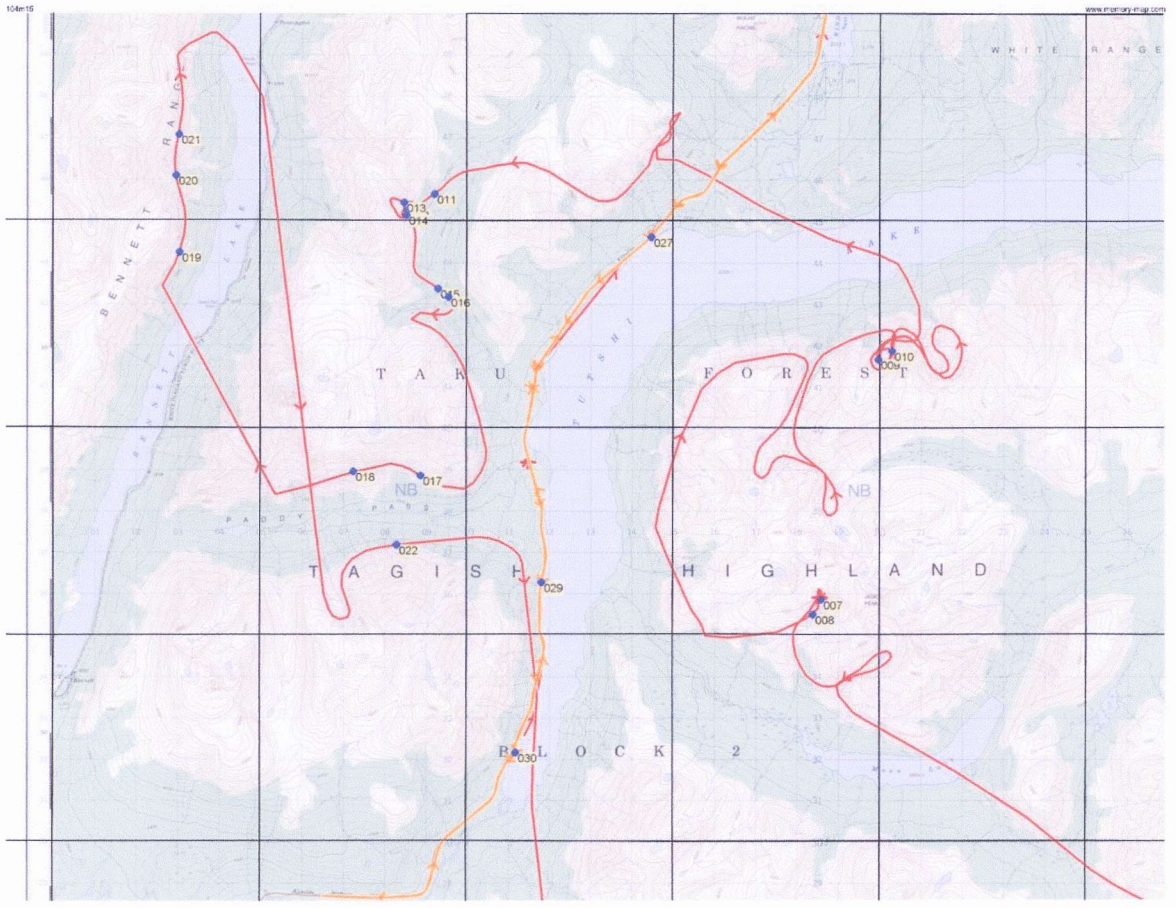

Figure 6 Helicopter and road traverse map

Figure 6 shows the helicopter traverses (in red) and the road and foot traverses (in orange) that were undertaken to investigate the sources of the hydroxal and FeO anomalies.

9.0 CONCLUSIONS AND RECOMMENDATIONS

Multispectral remote sensing (LANDSAT+) image enhancement and interpretation proved to be useful in identification, detection, and delineation of lithological rock units, hydrothermal alterations, and geologic structures associated with auriferous sulphides deposits in the project area along the flanks of a domal feature that was identified by mapping of geologic lineaments in the claim block area.

High mineral potential exists on the Chilkoot property for a number of deposit types with the juxtaposition of Yukon-Tanana Terrane and Whitehorse Trough lithologies. A number of geologic tracts in the area have moderate to high mineral potential particularly for precious metals. Ten of the most prospective tracts are presented here:

(1) Quartz veins in the Boundary Ranges metamorphic suite rocks

Exploration for occurrences of this type should focus on late crosscutting metal-bearing veins rather than the abundant, concordant quartz sweats which are generally barren. Like classical polymetallic vein systems the Tutshi Lake area polymetallic veins occur in regions of high permeability that results from the development of fabric in metamorphic rocks or fracturing associated with faulting. Thus, they are predominantly but not exclusively hosted in medium to high-grade metamorphic rocks. Most are also associated with calcalkaline granite to diorite intrusions dikes and dike swarms. Typical veins are discordant steeply dipping and occur in clusters or subparallel sets which in many cases follow specific structural trends in the hostrock.

[2] Veins adjacent to the Llewellyn fault zone

The most prospective veins are those hosted by Laberge Group strata and associated with fault splays faultrelated folds and dioritic intrusions and volcanics adjacent to the splays.

(3) Quartz-carbonate-clay-altered shear zones

Several altered shear zones within and adjacent to the Llewellyn fault zone are known to be anomalous in gold. Structurally controlled calcareous sediment-hosted disseminated gold-silver deposits of the Carlin type may occur in such environments. They are recagnized mainly in passive continental margin successions which ave affected by much younger deformation and intrusions, but are also known to occur in arc settings. Two settings are most prospective in the area: extensively faulted and intruded 'Sinwa Formation' and underlying. fine grained calcareous sediments; and well bedded. fine grained calcareous strata within the Laberge Group. Especially where it is near the Llewellyn fault or its subsidiary splays.

(4) Contacts between Boundary Ranges metamorphic suite and Eocene volcanic or subvolcanic intrusive rocks

An example are the volcanic rocks at Teepee Peak. Skarn development and/or polymetallic replacement in Boundary Ranges suite marbles are good exploration targets.

(5) Contacts between Stuhini Group and Laberge Group where adjacent to Cretaceous plutons

For example, copper skarn mineralization is recognized in the subsurface conglomerates that overlie the 'Sinwa Formation' at the Mill showing. This may be the southern limit of the Whitehorse copper Belt a string of deposits formed within and adjacent to Sinwa carbonates as far north as Whitehorse.

(6) Quartz-carbonate+/-mariposite alteration of mafic and ultramafic bodies

Potential for lode gold quartz veins of the mesothermal Mother lode type is greatest adjacent to a crustal scale fault like the Llewellyn fault.

(7) Copper-gold porphyry mineralization in alkali phases of the Stikine plutonic suite

Mapping at the margins of these bodies reveals striking textural and structural similarities to border phases of the Hogem and Copper Mountain bodies, both of which host porphyry copper deposits. However, no obvious correlation exists between elevated regional geochemical copper values and these plutons.

(8) Shallow submarine hotspring gold-silver deposits

A prime example is the Eskay Creek mine which is hosted within strata that have age equivalents in the Whitehorse Trough.

(9) Boundary Ranges metamorphic suite rocks and volcanic-associated deposits

These rocks appear to offer a high potential for discovery of volcanic-associated deposits based upon the Big Thing occurrence (MINFILE 104M 071) located near the southeast end of Tutshi Lake. The showing may be an

isolated lens of Kuroko-type volcanogenic massive sulphide mineralization. Age data and correlations suggest that the Boundary Ranges suite is a metamorphosed equivalent of the Stikine assemblage which hosts the Tulsequah Chief volcanogenic massive sulphide deposit located approximately 125 kilometres south-southeast of the property boundary.

(10) Intrusion-hosted, or intrusion-related gold and copper-gold deposits

The Cretaceous intrusions on the property are similar in age to many of the intrusions in the Tintina Gold Belt that stretches from central Alaska through the Dawson area. Yukon and down to northern British Columbia and have a similar geochemical signature. The large Donlin Creek gold deposit in southwest Alaska has various similar characteristics, among which are spatial and temporal associations with Cretaceous granitic to granodiorite magmatism: bismuth-tungsten-tellurium signatures in gold deposits in granitoid stocks and arsenicantimony+/-mercury signatures where hosted by sedimentary rocks and hypabyssal dikes. While the property has seen several years of exploration including 23 diamond-drill holes on the Crine veins prospective vast areas of the property remain untested and further exploration is required to fully delineate its potential. The varied mineralization types known to occur on and in the vicinity of the Chilkoot property represent significant targets and opportunities for new discoveries. The potential for discovering new mineralization on the Chilkoot property is very high and should be further evaluated. Previous literature and exploration by several mining companies has outlined mineralized zones, and the potential of discovering new deposit types will require additional follow-up fieldwork to determine their economic viability. Based on the high potential for discovery of new mineralization and extending known mineralization, a 2 phase program of geological mapping, geochemical sampling, airborne geophysical surveying, and core drilling is recommended.

PHASE 1

Property scale geological mapping and detailed geological mapping of showing areas is recommended in conjunction with a sampling program to outline or expand mineralized zones, and identify favourable stratigraphy that may host potential new deposit-type targets. The budget for phase I totals C$105,000. In the author's opinion, the proposed recommendations are warranted as outlined. The data compilation should be conducted prior to any other work being initiated in order to prioritize the follow-up work as efficiently as possible. Mapping, prospecting and ground geophysics in these areas will help to define targets further. Much of the remaining work need not be staged and can be run simultaneously to affect efficiencies with camp, crew and helicopter costs. The data compilation should be conducted prior to any other work being initiated in order to prioritize the follow-up work as efficiently as possible.

Mapping, prospecting and ground geophysics in these areas will help to define targets further. Much of the remaining work need not be staged and can be run simultaneously to affect efficiencies with camp, crew and helicopter costs.

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10.0 PROPOSED BUDGET - PHASE 1

Item Description Amount (Cdn$] proposed

budget

Personnel: I	
Geologists (x2) 45 days x $500/day =45,000	$45,000
Accommodation, food. travel, fuel, rental vehicle, helicopter, expenses, field supplies	$38,000
Analytical — rock, 400 samples @ $30/sample	$12,000
Communication — telephone. fax, mobile/satellite phone	$2,000
Report and drafting	$8,000
Total Phase 1	$105,000

11.0 REFERENCES

Beaty, RJ. and Culbert, R.R. (1978): Geological and Geochemical Report on the Net Property. Bennett Lake, B.C.; B. C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 6882.

Buckle, John E., 2009 Stream Sediment Sampling Assessment Report on the 2007 Mineral Exploration Programs on the Chilkoot Project, Atlin Mining Division Northwestwern British Columbia, Assessment report for Xplorer Minerals Inc.

Bodruddoza Mia, Md. and Yasuhiro Fujimitsu, Mapping hydrothermal altered mineral deposits using Landsat 7 ETM+ image in and around Kuju volcano, Kyushu, Japan, Department of Earth Resources Engineering, Graduate School of Engineering, Kyushu University, Kyushu, Japan. 2Department of Geology, University of Dhaka, Dhaka1000, Bangladesh. 3Department of Earth Resources Engineering, Kyushu University, Kyushu, Japan.

Casselman, S. (2005): Report on the 2003 and 2004 Mineral Exploration Programs on the Golden Eagle Project; B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 27674.

Christie, R.L. (1957): Bennett, Cassiar District, British Columbia; Geological Survey of Canada, Preliminary Map 19-1957.

Copland, H. (1987): Geological and Geochemical Report on the Pike Claims; B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report I5808.

Culben, R.R. (1979): Geological and Geochemical Report on the Net 1. 2. 3, 5 and 6 Mineral Claims, Bennett Lake, B.C.; B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 7417.

Cuttle, J. (1989): Teepee Mountain Project 1989; B. C. Ministry of Energy, Mines and Petroleum Resources. Assessment Report 19438.

Cuttle, J. (1990): Teepee Mountain Project 1990; B. C. Ministry of Energy, Mines and Petroleum Resources. Assessment Report 20790.

Durfeld, R.M. (1989): Report on the Teepee Property; B. C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 18766.

Gabrielse, H. and Taylor, G.C. (1982): Geological Maps and Cross Sections of the Northem Canadian Cordillera from Southwest of Fort Nelson, British Columbia to Gravina Island.
Southeastem Alaska: Geological Survey of Canada, Open File 864.

Lambert, M.B. (1974): The Bennett Lake cauldron subsidence complex, British Columbia and Yukon Territory; Geological Survey of Canada, Bulletin 227.

Lhotka, P.G. and Olson, R.A. (1983): Exploration on the TP Mineral Claim; B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 11300.

Lhotka, P.G. and Olson, R.A. (1983): Exploration on the Ben Mineral Claim; B.C. Ministry of Energy. Mines and Petroleum Resources, Assessment Report 12554.

Lueck, B.A. (1989): Summary Report on the Pavey and Willard Property (Pavey I-6, LQ and Ben I~4 Claims) Bennett Lake Area; B. C. Ministry ofEnerg1I, Mines and Petroleum Resources, Assessment Report 19186.

MacKay, G. (1988): Geological and Geochemical Report on the Fin Claims: B.C. Ministry of Energy. Mines and Petroleum Resources, Assessment Report 17992.

Mark, D.G. (1997): Geophysical Report on a VLF-EM Survey over the Bennett Lake Claim Group, Tutshi Lake Area; B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 25095.

McMillan. R.H. (1995): Geological, Geophysical and Geochemical Report on the Pike 1 & 2 Claims; B. C Ministry of Energy, Mines and Petroleum Resources, Assessment Report 23736.
Mihalynuk, M.G. and Reuse, J.N. (1988): Geology and Regional Geochemical Survey of the

Tutshi Lake Map Area (104M/I 5): B. C. Ministry of Energy, Mines and Petroleum Resources, Open File 1988-5.

Mihalynuk, M.G. and Rouse, .I.N. (1988): Preliminary Geology of the Tutshi Lake Area, Northwestern British Columbia (104M/15); in Fieldwork 1987, B. C. Ministry of Energy, Mines and Petroleum Resources, Paper 1988-1, pages 217-231.

Mihalynuk, M.G., Mountjoy, K.I., Currie, L.D., Smith, M.T. and Rouse, J.N. (1997): Geology of the Tagish Lake Area, NTS 104M/8, 9, 10E, I5 and 104N/12W; B.C. Ministry of Energy.
Mines and Petroleum Resources, Geoscience Map 1997-1.

Mihalynuk, M.G. (1999): Geology and Mineral Resources of the Tagish Lake Area, NTS 104M/8, 9, 10E, 15 and 104N/12W), Northwestem British Columbia; B.C. Ministry of Energy, Mines and Petroleum Resources, Bulletin 105.
Mihalynuk, M.G. (2003): Marksmen Partnership - Potential for Shallow Submarine VMS (Eskay-Style) and Intrusive-Related Gold Mineralization, Tutshi Lake; B. C. Ministry of Energy, Mines and Petroleum Resouraes, GeoFile 2003-9.

Neelands, J.T. (1982): Geological. Geochemical Report on the Late, Lame, Flood, Tail. Aloon, Yat, Eglen. Antz, Lure, Anki Claim Groups Liard Mining Division and the Narrs, Haker, Akum, Race, Creed, Keap, Take, Peng, Tshik, Annig, Undas Claim Groups Atlin Mining Division: B. C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 10417.

Neelands, I.T. and Copland, HJ. (1982): Geological and Geochemical Report on the Ange Claims; B.C. Ministry of Energy, Mines and Petroleum Resources. Assessment Report 10425.

Neelands, J.T. and Copland, H.J. (1982): Geological and Geochemical Report on the Crine Claims; B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 10426.
Neelands, J.T. and Strain, D.M. (1982): Geological and Geochemical Report on the Selly Property: B. C. Ministry tyf Energy, Mines and Petroleum Resources. Assessment Report 10428.

Neelands. .I.T. and Copland, H.J. (1982): Geological and Geochemical Report on the Shui Property; B. C. Ministry of Energy, Mines and Petroleum Resources. Assessment Report 10429.

Ouellette, DJ. (1988): Report on the Geophysical Survey of the Rigel I Claim; B.C. Ministry of Energy, Mines and Petroleum Resources. Assessment Report 17583.

Ouellette, DJ. (1989): Report on the Geophysical Survey of the Mill I Claim; B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 18649.

Ouellette, D.J. (I990): 1989 Diamond Drilling Report on the Mill 1 & 2 Claims; B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 20032.

Owsiacki, G. (2006) Report on the 2006 Reconnaissance Sampling Program Ministry of Energy. Mines and Petroleum Resources, Assessment Report 23736 on the Chilkoot Property, Northwest British Columbia Pegg, R.S. (198l): Geochemical and Geological Report, Net Claims. Bennett Lake Area; B.C.
Ministry of Energr, Mines and Petroleum Resources, Assessment Report 9454.

Purdy, L., Bryan L., Bailey, Land Dwyer, John L. , UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY, Open-File Report 85-461, Landsat Multispectral Scanner and Landsat Thematic Mapper Images and Interpretations of Hannapah and the Royston Hills, Nevada,

Schroeter. T.G. (I 986): Bennett Project; in Geological Fieldwork 1985. B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 1986-l, pages 184489.

Stephen, J.C. and Webster, M.P. (I982): Geological, Geochemical Report on the Key Mineral Claim; B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 10740.
Wheeler, J.O., Brookfield, A.I., Gabrielse, H., Monger, .I.W.H., Tipper, H.W. and Woodsworth, G..I. (1991): Terrane map of the Canadian Cordillera; Geological Survey of Canada, Map 1713A.

12.0 STATEMENT OF QUALIFICATIONS

John Buckle, P.Geo.

1116-1450 Chestnut St., Vancouver, BC. V6J 3K3

Email: geosol2000@hotmail.com

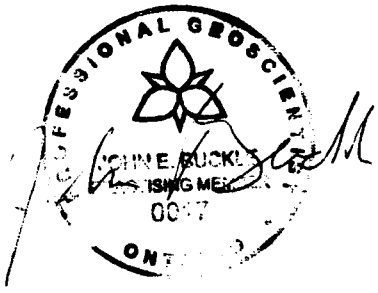
I. John Buckle. am a self-employed Professional Geoscientist and do hereby certify that:

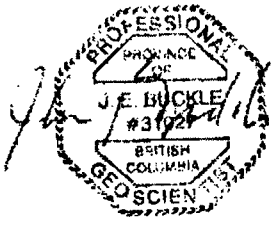
1. I. 1 graduated with Geological Technical Certificate from Sault College in 1972 and a Bachelor of Science degree from York University, Toronto, Ontario in 1980.
2. I am registered as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia #31027 and with the Association of Professional Geoscientists of Ontario #0017.
3. I have worked as a geologist for thirty-five years since my graduation from college.
4. I am responsible for all sections of the assessment report titled "Assessment Report On the Interpretation of Landsat Imaging ON THE CHILKOOT PROJECT, ATLIN MINING DIVISION NORTHWESTERN BRITISH Columbia" and dated September 15, 2014. I Examined and sampled the property between June I and July 4. 2007 and was responsible for the Overall supervision of the stream sediment sampling program.

Dated this 15th day of September 2014.

John Buckle, P.Geo.

Geological Solutions
1116-1450 Chestnut St.,
Vancouver,
BC V6J 3K3





13.0 STATEMENT OF EXPENDITURES FOR 2014

XPLORER MINERALS INC.

STATEMENT OF EXPENDITURES

Invoice for interpretation and report by GEOLOGICAL SOLUTIONS

Consulting for XPLORER MINERALS INC.. Aug. 1 to Sep. 15, 2014:

- Download data, images and reports
- Research of regional and local geology
- Import Landsat images
- Georeference the images and UTM register them for Geosoft
- Data processing, data download, analysis and database creation
- Data quality review and correction
- Window data to Paddy Pass claim block
- Create interpretation maps and images
- Interpret windowed images for FeO alteration
- Interpret windowed images for Hydroxal alteration
- Interpret windowed images for structure
- Co-interpret satellite images, geochemical and geological data
- Report on data and recommendations

Days 8 days @ $750 per day	$6000
GST	300
	$6,300

Geological Solutions
John Buckle, P. Geo, P. Geoph.