## **EXPLORATION REPORT**

#### ON

## INDUCED POLARIZATION, RESISTIVITY, and MAGNETIC SURVEYS

#### AND

#### **RECONNAISSANCE STREAM SEDIMENT SAMPLING**

## **OVER THE**

## **TAKU PROPERTY**

### **TULSEQUAH AREA**

## ATLIN MINING DIVISION, BRITISH COLUMBIA

LOCATED:	100 km south-southeast of the village of Atlin, BC
	58°37' North Latitude, and 133°26' West Longitude
	NTS: 104K/6, '11, '12, '13, '14
WRITTEN FOR:	<b>OPTIMA MINERALS INC</b> #307 - 1500 Hardy Street Kelowna, British Columbia, V1Y 2H2
WRITTEN BY:	David G. Mark, P.Geo. <b>GEOTRONICS CONSULTING INC.</b> 6204 – 125 <sup>th</sup> Street Surrey, British Columbia V3X 2E1
DATED:	April 21, 2007

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## 1 <u>SUMMARY</u>

The Taku Property is located in northwestern British Columbia (Figure 1) straddling the Taku River basin, just east of the Tulsequah River, and extends south and east of Mount Ogden (Figure 2). The land covered by the present Taku Property is comprised of three areas or blocks of contiguous claims, the Taku Star Block, Taku Gold Block and the Moly Taku Block, each hosting mineralized occurrences (Figure 3). The Taku Property claim groups currently consists of 105 claims totaling 39,897.996 hectares. The property area is about 22 kilometres east-west by 48 kilometres north-south.

Mesozoic rocks of the Taku Property area are dominated by arc-flanking strata of the Whitehorse Trough: parts of the Upper Triassic Stuhini Group and the Lower to Middle Jurassic Laberge Group. These are overlain by Tertiary continental arc volcanic rocks of the Sloko Group which are intruded by partly comagmatic Coast Plutonic Complex plutons. The upper Paleozoic Stikine Assemblage is restricted mainly to the south and western margins of the region, but probably extends beneath much of the Mesozoic and Tertiary cover. On the northern and southern edges of the property area, the geology is influenced by two major crustal structures. Eastern splays of the transcurrent Llewellyn fault system juxtapose ductilely deformed Paleozoic rocks with Mesozoic rocks between Sittakanay River and Stuhini Creek. To the north, southwest-verging frontal thrusts of the King Salmon fault system interleave Jurassic and Triassic Whitehorse Trough strata.

Rocks south of the Taku River, on Sittakanay Mountain, have been correlated with the Stikine Assemblage but extensive subdivision of these rocks has not been possible. Mount Ericksen lies midway between the Mount Metzgar and Sittakanay Mountain areas and is largely underlain by rocks that have been correlated with the Stikine Assemblage. The southern extent of the Llewellyn fault is lost in Taku River valley south of the Tulsequah River where it apparently forms a fanning structure. Two of these traces are thought to affect Paleozoic strata underlying Sittakanay Mountain.

During the Klondike Gold Rush of the late 1890s, the Taku River was used as a route of entry to the interior which led to extensive prospecting of the area. In 1923, the nearby Tulsequah Chief deposit was discovered on the east side of Tulsequah River and active development began in 1929, at which time the Big Bull, Polaris-Taku and the Ericksen-Ashby deposits were also discovered, the latter on the present Taku Property claims.

Ericksen-Ashby received limited exploration up until the early 1950s when Cominco drilled one hole. Significant work is reported for 1964 when eight underground diamond-drill holes were reported to have been drilled from the end of the adit into the mineralized zone. In 1981, eleven holes were drilled to test various zones and in 1990, a helicopter-borne frequency domain electromagnetic survey was completed. In all, thirteen zones of mineralization were identified containing sphalerite, galena and argentite mineralization in a deposit that has variably been defined as skarn and volcanogenic. In 1964, indicated reserves at the Ericksen-Ashby were reported to be 907,100 tonnes grading 214.9 grams per tonne silver, 2.23 per cent lead and 3.79 per cent zinc; the year of reserves is in question (Vancouver Stock Exchange Application for Listing 142/80 as documented in MINFILE 104K 009). This resource estimate was calculated prior to the implementation of National Instrument 43-101 and is not compliant with those standards. Discovered in 1979, the Moly-Taku (Y zone) prospect consists of quartz-feldspar porphyry (alaskite) containing molybdenum-tungsten mineralization. A bulk sample taken in 1980 yielded 0.073 per cent molybdenite and 0.084 per cent tungstic oxide. Hole Y-1 drilled in 1980 to test the zone intersected molybdenite and scheelite-bearing quartz veins throughout the drill cores but not in significant quantity or grade. However, altered and pyritic quartz feldspar porphyry dikes that were encountered suggested a buried stock source responsible for the molybdenite mineralizing event. A mineralized "hood" zone around the buried stock was postulated by Elliott and Clouthier (1981) who stated that future drilling should be undertaken to the south to find it.

On the Yellow Bluff prospect (Figure 3), highly altered ubiquitously pyritized and limonitestained bluffs were geophysically surveyed in 1982 with a helicopter-borne INPUT system. A six-channel anomaly signifying strong conductivity was recorded near the top of a pyritic zone. The cause of this anomaly, thought to reflect a concentration of massive sulphides, was not tested. A subsequent helicopter-borne electromagnetic survey confirmed the original INPUT anomalies over a wide conductive zone corresponding with the Yellow Bluff alteration. The 2006 exploration program was highlighted by an induced polarization (IP) survey on the Yellow Bluff in the area of interest. Each of two inverted IP sections show a chargeable source with the main part of the source being at a depth of about 50 to 60 metres. One correlates with a resistivity low and the other with both a resistivity low and high. It is probable that both sections are reflecting sulphides. The resistivity values are very high suggesting that the rock is quite siliceous. The magnetic highs correlate with high resistivity areas and the lows correlate with low resistivity areas. A possible interpretation is that the low resistivity areas may be reflecting bedrock that has been at least partly altered and thus the magnetite may be altered to a different non-magnetic mineral.

The Spring prospect is capped by a gossan estimated to cover a 2 kilometre length along a ridge north of the Sittakanay River. Although the massive sulphide lenses have attracted the most interest, mineralization occurs mainly within extensive crosscutting fractures and veins associated with a shear zone. Heavy pyrrhotite mineralization with lesser amounts of pyrite, chalcopyrite, sphalerite, galena and molybdenite and associated silver and gold values occur. The property received an airborne electromagnetic-magnetic survey in 1990, a Genie electromagnetic ground survey in 1991 and a follow-up drill hole that intersected 1.52 metres which yielded 0.31 per cent zinc (Taylor, 1992). Prospecting along the Spring prospect in 2006 indicated an extensive mineralized system with base and precious metal values that has received little systematic exploration. Elevated gold up to 133 parts per billion and 1.6 grams per tonne silver were derived from rocks on the edge of the system.

A number of documented smaller mineral occurrences exist on the Taku Property and are discussed in this report. None of these, except the Baker, was visited during the 2006 field season. Stikine Assemblage rocks to the immediate northwest of the Taku Property host the Tulsequah Chief and Big Bull sulphide deposits and the New Polaris mesothermal gold deposit. In light of this, the documented occurrences underlain by Stikine rock in the Sittakanay Mountain area where the traces of the Llewellyn fault also occurs should be fully investigated. Massive sulphide float at the Green Ham showing should be located and traced back to its source.

Stream sediment sampling results from the 2006 field program should be followed up by future property exploration in the Sittakanay Mountain area where highly anomalous gold values (up to 513 parts per billion) and base metal-bearing float has been discovered. Follow-up is also warranted on the Taku Gold block where elevated stream sediment analyses reveal the potential for mineral discoveries.

Landsat iron oxide and hydroxyl (clay alteration) images correlate with zones of mineralization and stream sediment anomalies and should remain a valuable tool in narrowing the exploration focus.

A \$3.14 million exploration program is recommended for the Taku Property. This should consist of a 4300 line-kilometre helicopter-borne magnetics/EM survey over much of the Taku Star and Taku Gold blocks, covering Yellow Bluff and Ericksen-Ashby in the north and Spring to the south. A ground magnetics and induced polarization (IP) program is also recommended for the Ericksen Ashby, Yellow Bluff and Spring prospects. Locating and examining the Y zone and the 1980 drilling and investigating the vicinity toward selecting drill sites on the Moly Taku block should be a priority. A 3000 metre drill program on the Moly Taku block targeting the plutonic source of molybdenite mineralization is recommended. Geophysical and geochemical anomalies on the Ericksen-Ashby and Spring prospects should be drilled; 3000 and 1000 metres of drilling respectively are proposed. The Yellow Bluff chargeable source found in the 2006 IP survey should be investigated and 1000 metres of drilling is recommended.

#### **EXPLORATION REPORT**

# ON INDUCED POLARIZATION, RESISTIVITY, and MAGNETIC SURVEYS AND RECONNAISSANCE STREAM SEDIMENT SAMPLING OVER THE TAKU PROPERTY TULSEQUAH AREA ATLIN MINING DIVISION, BRITISH COLUMBIA

#### 2 INTRODUCTION and GENERAL REMARKS

This report discusses survey procedure, compilation of data, interpretation methods, and the results of induced polarization (IP), resistivity, and magnetic geophysical surveys as well as stream sediment sampling carried out over a portion of the Taku Property belonging to Optima Minerals Inc. The property is located in the Tulsequah/New Taku River area about 100 km south-southeast of the village of Atlin within the Atlin Mining Division, British Columbia.

The Taku Property comprises a large block of claims (Figure 2) that is about 37 kilometres northwest to southeast and up to 18 kilometres east-west. Fieldwork was carried out on the Taku Property by the writer and crew between September 2nd and October 3rd, 2006. Work consisted of geological examination and a stream sediment sampling. program over much of the property as well as induced polarization, resistivity, and magnetic surveys on the Yellow Bluff Prospect, A total of 26 stream sediment (silt) samples and 4 exploration soil samples (Figure 6 and Appendix F); and 3 rock samples (Figure 6 and Table 3) were collected on the Red Cap Property in 2006. Complete analytical results of all sampling may be found in Appendix A.

The 2006 exploration program on the Taku Property of Optima Minerals Inc. was designed to locate and evaluate previously identified mineral prospects; to perform limited grassroots exploration over a large, rugged area not yet fully explored; and to gain a better understanding of the geological setting of the property. The ultimate objective of the program was to locate new mineral deposits and to define drill targets on previously advanced prospects.

Much of this report is taken from Garry Payie's 43-101 technical report on the property.

#### 3 PROPERTY and OWNERSHIP

The Taku Property consists of 105 claims totaling 39,897.996 hectares in three main claim blocks: Taku Star, Taku Gold and Moly Taku. The property area is about 22 kilometres east-west by 48 kilometres north-south. Table 1 lists the overall claims; Tables 2 to 4 lists claims by claim blocks. All claims are 100% owned by Optima Minerals Inc.

The Taku Property has not been legally surveyed. The author is not aware of any planned or existing land use that would adversely affect development of mineral resources on the property.

<u>Tenure Number</u>	<u>Claim Name</u>	Expiry Date	<u>Area</u> (ha)
503526	Border Lake	20080320	33.86
516543		20081128	202.066
522857	OP 1	20081128	420.829
522859	OP 2	20081128	404.273
522860	OP 3	20081128	421.3
522861	OP 4	20081128	421.536
522862	OP 5	20081128	421.803
522863	OP 6	20081128	421.824
522865	OP 7	20081128	421.565
522866	OP 8	20081128	404.498
522867	OP 9	20081128	422.18
522868	OP 10	20081128	421.592
522870	OP 11	20081128	270.177
522873	OP 12	20081128	421.415
522874	OP 14	20081128	421.853
522876	OP 15	20081128	405.263
522907	OP 16	20081128	420.863
522908	OP 17	20081128	421.098
522910	OP 18	20081128	421.335
522913	OP 19	20081128	421.572
522914	OP 20	20081128	421.898
525316	EA 1	20091128	403.784
525356	SUTLAHINE CLAIM	20080320	101.312
525513	OPI 1	20080320	135.563
530323	BLACK 1	20080320	421.965
530324	BLACK 2	20080320	421.958
530326	BLACK 3	20080320	421.935
530327	BLACK 4	20080320	404.837
530623	OP 21	20080327	421.765
530624	OP 22	20080327	422.102
530625	OP 23	20080327	404.931
530626	OP 24	20080327	405.189
530711	OP 25	20080328	404.967

TABLE 1. CLAIMS OWNED BY OPTIMA MINERALS INC.

#### TABLE 1. CONTINUED

<u>Tenure Number</u>	Claim Name	Expiry Date	<u>Area</u> (ha)
530716	OP 26	20080328	421.489
530718	OP 27	20080328	419.937
530719	OP 28	20080328	419.699
530721	OP 29	20080328	419.439
530722	OP 30	20080328	419.431
530723	OP 31	20080328	419.69
530724	OP 32	20080328	419.923
530725	OP 33	20080328	419.92
530726	OP 34	20080328	419.693
530727	OP 35	20080328	419.792
530728	OP 36	20080328	420.125
530729	OP 37	20080328	419.962
530730	OP 38	20080328	167.795
530731	OP 39	20080328	420.244
530732	OP 40	20080328	184.837
530734	OP 41	20080328	420.851
530749	OP 42	20080328	404.215
530750	OP 43	20080328	404.41
530751	OP 44	20091128	16.829
532111	MOLY 7	20080414	423.817
532171	ERIC 1	20091128	387.224
532172	SPRING	20091128	405.244
532173	MOLY	20080415	406.774
532174	MOLY 2	20080415	406.887
532175	SPRING 2	20091128	422.09
532176	MOLY 3	20080415	423.905
532177	MOLY 4	20080415	424.052
532178	MOLY 5	20080415	423.877
532179	ERIC 2	20091128	168.279
532180	ERIC 6	20080415	420.27
532181	ERIC 3	20080415	420.403
532182	MOLY 6	20080415	118.664
532183	ERIC 4	20080415	420.263
532184	ERIC 5	20080415	117.736
532185	ERIC 7	20091128	420.522
532186	ERIC 8	20080415	403.783
532187	ERIC 9	20091128	420.616
532188	ERIC 10	20091128	420.641
532189	ERIC 11	20080415	353.189

TABLE 1. CONTINUED

<u>Tenure Number</u>	<u>Claim Name</u>	Expiry Date	<u>Area</u> (ha)
532190	ERIC 12	20091128	404.229
532191	TAKU 1	20080415	424.042
532192	TAKU 2	20080415	424.169
532193	TAKU 3	20080415	424.264
532194	TAKU 4	20080415	424.211
532195	TAKU 5	20080415	424.106
532196	TAKU 6	20080415	356.093
541877	SB 1	20070922	421.163
541878	SB 2	20070922	421.446
541879	SB 3	20070922	421.567
541880	SB 4	20070922	388.012
542659	TAKE ONE	20071006	422.126
542663	TAKE TWO	20071006	422.435
542665	GRAGY 1	20071006	422.695
542670	YOGI BEAR	20071006	423.044
542671	TAKE CONECTOR	20071006	405.236
542672	BORDER CLAIM	20071006	254.032
542674	LAST SPIKE	20071006	422.727
542675	THE PIPE	20071006	422.165
542719	CU 1	20071006	422.598
542721	ICE 2	20071006	304.133
542723	ICE 3	20071006	185.956
542781	ENDZONE	20071008	254.027
542847	SUT 1	20071009	422.287
542848	SUT 2	20071009	422.395
542849	STU 3	20071009	422.58
542850	STU 4	20071009	422.609
542851	STU 5	20071009	422.797
542852	PID 1	20071009	405.715
542853	LAH 1	20071009	422.672
542854	LAH 2	20071009	405.86
542855	TAKE ANOTHER	20071009	422.424
542856	POR 1	20071009	354.556

<u>Tenure Number</u>	<u>Claim Name</u>	Expiry Date	<u>Area (ha)</u>
516543		20081128	202.066
522857	OP 1	20081128	420.829
522859	OP 2	20081128	404.273
522860	OP 3	20081128	421.3
522861	OP 4	20081128	421.536
522862	OP 5	20081128	421.803
522863	OP 6	20081128	421.824
522865	OP 7	20081128	421.565
522866	OP 8	20081128	404.498
522867	OP 9	20081128	422.18
522868	OP 10	20081128	421.592
522870	OP 11	20081128	270.177
522873	OP 12	20081128	421.415
522874	OP 14	20081128	421.853
522876	OP 15	20081128	405.263
522907	OP 16	20081128	420.863
522908	OP 17	20081128	421.098
522910	OP 18	20081128	421.335
522913	OP 19	20081128	421.572
522914	OP 20	20081128	421.898
525316	EA 1	20091128	403.784
530323	BLACK 1	20080320	421.965
530324	BLACK 2	20080320	421.958
530326	BLACK 3	20080320	421.935
530327	BLACK 4	20080320	404.837
530623	OP 21	20080327	421.765
530624	OP 22	20080327	422.102
530625	OP 23	20080327	404.931
530626	OP 24	20080327	405.189
530711	OP 25	20080328	404.967
530716	OP 26	20080328	421.489
530718	OP 27	20080328	419.937
530719	OP 28	20080328	419.699
530721	OP 29	20080328	419.439
530722	OP 30	20080328	419.431
530723	OP 31	20080328	419.69
530724	OP 32	20080328	419.923
530725	OP 33	20080328	419.92

## TABLE 2. CLAIMS LISTED BY CLAIM BLOCK - TAKU STAR

#### TABLE 2. CONTINUED

<u>Tenure Number</u>	<u>Claim Name</u>	Expiry Date	<u>Area (ha)</u>
530726	OP 34	20080328	419.693
530727	OP 35	20080328	419.792
530728	OP 36	20080328	420.125
530729	OP 37	20080328	419.962
530730	OP 38	20080328	167.795
530731	OP 39	20080328	420.244
530732	OP 40	20080328	184.837
530734	OP 41	20080328	420.851
530749	OP 42	20080328	404.215
530750	OP 43	20080328	404.41
530751	OP 44	20091128	16.829
532171	ERIC 1	20091128	387.224
532172	SPRING	20091128	405.244
532175	SPRING 2	20091128	422.09
532179	ERIC 2	20091128	168.279
532180	ERIC 6	20080415	420.27
532181	ERIC 3	20080415	420.403
532183	ERIC 4	20080415	420.263
532184	ERIC 5	20080415	117.736
532185	ERIC 7	20091128	420.522
532186	ERIC 8	20080415	403.783
532187	ERIC 9	20091128	420.616
532188	ERIC 10	20091128	420.641
532189	ERIC 11	20080415	353.189
532190	ERIC 12	20091128	404.229
541877	SB 1	20070922	421.163
541878	SB 2	20070922	421.446
541879	SB 3	20070922	421.567
541880	SB 4	20070922	388.012

## TABLE 3. CLAIMS LISTED BY CLAIM BLOCK - TAKU GOLD

Tenure Number	<u>Claim Name</u>	Good Until	<u>Area (ha)</u>
525356	SUTLAHINE CLAIM	20080320	101.312
542659	TAKE ONE	20071006	422.126
542663	ΤΑΚΕ ΤΨΟ	20071006	422.435
542665	GRAGY 1	20071006	422.695
542670	YOGI BEAR	20071006	423.044

#### TABLE 3. CONTINUED

Tenure Number	<u>Claim Name</u>	Expiry Date	<u>Area (ha)</u>
542671	TAKE CONECTOR	20071006	405.236
542674	LAST SPIKE	20071006	422.727
542675	THE PIPE	20071006	422.165
542719	CU 1	20071006	422.598
542721	ICE 2	20071006	304.133
542723	ICE 3	20071006	185.956
542847	SUT 1	20071009	422.287
542848	SUT 2	20071009	422.395
542849	STU 3	20071009	422.58
542850	STU 4	20071009	422.609
542851	STU 5	20071009	422.797
542852	PID 1	20071009	405.715
542853	LAH 1	20071009	422.672
542854	LAH 2	20071009	405.86
542855	TAKE ANOTHER	20071009	422.424
542856	POR 1	20071009	354.556

## TABLE 4. CLAIMS LISTED BY CLAIM BLOCK - MOLY TAKU

Tenure Number	<u>Claim Name</u>	Good Until	<u>Area</u> (ha)
503526	Border Lake	20080320	33.86
525513	OPI 1	20080320	135.563
532111	MOLY 7	20080414	423.817
532173	MOLY	20080415	406.774
532174	MOLY 2	20080415	406.887
532176	MOLY 3	20080415	423.905
532177	MOLY 4	20080415	424.052
532178	MOLY 5	20080415	423.877
532182	MOLY 6	20080415	118.664
532191	TAKU 1	20080415	424.042
532192	TAKU 2	20080415	424.169
532193	TAKU 3	20080415	424.264
532194	TAKU 4	20080415	424.211
532195	TAKU 5	20080415	424.106
532196	TAKU 6	20080415	356.093
542672	BORDER CLAIM	20071006	254.032
542781	ENDZONE	20071008	254.027

\*The expiry date for the these claims assumes the assessment work that this report describes will be accepted for assessment credits

## 4 LOCATION AND ACCESS

The Taku Property area is situated in the Atlin Mining Division in the upper northwest corner of British Columbia just east of and along the Alaska-BC border. The centre of the property is about 100 kilometres south of the community of Atlin. The deepwater port at Juneau, Alaska is 75 kilometres southwest. A major portion of the property is located on NTS mapsheet 104K/11, extending south onto 104K/06, to the west on 104K/12, and to the north on 104K/14 and 13. TRIM mapsheet coverage is 104K.062-064, 073, 074, 052-055, 043, 044, and 034. The property is centered at a latitude of 58°37'36.2" N and longitude 133°26'10.4" W (Figure 2).

Access to the region is either by fixed or rotary-wing aircraft or by shallow-draft boat or barge up the Taku River. Nearest centers for aircraft charter are Atlin and Juneau, although helicopters are intermittently based in the Tulsequah Valley. Two gravel airstrips are serviceable. Northwest of the confluence of the Taku and Tulsequah rivers, a strip more than a kilometre long will accommodate STOL (short takeoff and landing) aircraft but is subject to flooding two or more times each summer. A less flood prone, much shorter strip at the New Polaris (Polaris-Taku) minesite, a few kilometres west of the Taku Property, will accommodate small aircraft or those with short takeoff capability. Float equipped aircraft can land on the Taku River and Border Lake. There are several river crossings to negotiate for travel by land between this strip and the project site. There are no roads or established trails within the map area; travel from airstrips to other localities is most effectively done by helicopter.

There is daily scheduled air service into either Whitehorse, Yukon or Juneau, Alaska the two nearest centers with commercial airline airports. Atlin is accessible by either charter aircraft or road and lies approximately 180 kilometres south of Whitehorse via Highways 7 and 1 (the Alaska Highway). These roads are good, all-weather roads for the entire length between Whitehorse and Atlin and are open year-round. The nearest major city centre is Whitehorse, 230 kilometres north of the project area.

## 5 <u>PHYSIOGRAPHY</u>

The Taku Property is situated within the rugged ranges of the Coast Mountains. The topography is mountainous and can be extremely rugged and precipitous at higher elevations. Steep peaks are sculpted by glaciers into jagged spires and narrow saw-toothed ridges. The area includes a sizeable ice field around Mount Sittakanay in the central portion of the property and Mount Ogden in the southern portion. Elevations range from about 20 metres above sea level (ASL) in the Taku River valley to 2263 metres at the top of Mount Ogden.

Braided channels and flanking sloughs of the southwest-flowing Taku River occupy a swath 2.5 kilometres wide through the northern claim block (Taku Star) of the property. Stuhini Creek and major parallel drainages north and south, the Sittakanay River and Zohini Creek respectively, are deeply incised, and meet the Taku River on grade. Other streams occupy U-shaped hanging valleys and freefall into the Taku River. Such streams are in turn, commonly fed from hanging valleys. Travel from one valley to the next is often not possible without technical climbing.

The tree line is at 1000 metres (Figure 4). The lower valleys are choked with alder forest and the slopes to the tree line are composed of fir. Rock and temperate rainforest comprise roughly equal proportions with about 5 per cent outcrop beneath forest canopies. Areas of 100 per cent cover are restricted to glaciers, river bottoms and swamps. Geological fieldwork is challenged by steep topography, snow and ice cover, dense brush in major valley bottoms and generally poor weather.

The southern half of the Ericksen-Ashby portion of the property is mainly outcrop, almost all of which is accessible by foot. The only exception is a steep to nearly vertical cliff to the east side of the mountain. The northern half of this portion of the property is along a gently sloping ridge covered by trees and bushes with relatively limited exposure in areas of economic potential.

The property area has a coastal climate with temperatures which average 20°C in July and -15°C in December and receives somewhat less precipitation than Juneau. The average annual temperature is -6°C. Average annual precipitation is approximately 190 centimetres (75 inches) of which 71 centimetres (28 inches) occurs as rainfall, and 119 centimetres (47 inches) as snow. Winters are mild, however, heavy snowfall often leads to poor flying conditions.

Generally, exploration programs are not carried out in the winter months although the weather would not impact on a mining operation. The practical field season is from May through November dependent on the project's elevation. Snow pack can exist from the treeline to the mountain peaks until late July; however, the valleys will be clear of snow by early to mid-May. Summer conditions can be highly variable from year to year. It is not unusual to have significant periods of rainfall and low cloud cover during the summer months impeding exploration activities.

## 6 PREVIOUS WORK

(This section has been prepared by Garry Payie, P.Geo.)

The general geology of the Taku Property was originally mapped in 1930 and 1932 by Kerr (1931a, b; 1948) followed in 1958 to 1960 by Souther (1971) who completed 1:250,000-scale mapping of the Tulsequah area. Monger (1980) mapped parts of the northern Stuhini Creek area. Regional mapping in 1994 by Mihalynuk extended previous 1:50,000 mapping of the Tulsequah River mapsheet (104K/12) in 1993, (Mihalynuk *et al.*, 1994a, b) eastward into the Stuhini Creek map area (Mihalynuk *et al.*, 1995a, b).

## 6.1 TAKU STAR BLOCK

## 6.1.1 Ericksen-Ashby (MinFile 104K 009)

The Ericksen-Ashby claim group was initially staked in 1929 by Charles Ericksen and "Chuck" Ashby and a small adit was reported to have been started. Prior to 1950, several other prospectors including Harry Bracken from Juneau had visited the property for assessment work on one or more of the showings. Up to that time little had been recorded in terms of mapping and sampling.

In 1950, the property was optioned by Cominco and held as the Badger 1-5, Apex 1-7 and Badger Extension 1-5 claims. In 1951, W.T. Irvine on behalf of Consolidated

Mining and Smelting (Cominco) reported on a geological mapping program. The mapping identified Permian limestone with Tertiary volcanics and volcaniclastics. The mineralization was described as replacement sulphide, predominantly pyrite with sphalerite and galena along bedding planes in limestone, massive lenses within the limestone and disseminated throughout. Bernius (1963) reported that in 1950 and 1951 Cominco had sampled the property and drilled one hole 324 metres long in the east side of the mountain below the Glory Hole area. The hole went through 243.8 metres of quartz monzonite before intersecting limestone and was abandoned when a rock avalanche destroyed the drill platform and supplies. Cominco's results were inconclusive. Between 1953 and 1962 several parties performed annual assessment work.

In 1963, the Ericksen-Ashby Mining Company was formed and conducted more surface exploration directed largely at Zone 8. Assessment Report 543 by G.R. Bernius reports work done during the 1963 field season by Terratest Co. Ltd. The work outlined seven individual showings that make up the Ericksen-Ashby property (Figure 5):

**Zone No. 1** is a massive to fine-grained galena and sphalerite occurrence that was previously known as the 'Main Showing'. Identified over an 8 metre width, some samples yielded high assays of 1203 grams per tonne silver, 23.23 per cent zinc, 20.24 per cent lead and 0.69 gram per tonne gold.

**Zone No. 2**, previously known as "Glory Hole", was difficult to access and consequently only sampled at the north end. Grab samples from the mineralized zone, 5 to 7 metres wide, of fine-grained pyrite, sphalerite, galena and quartz were assayed yielding 1.13 grams per tonne gold, 144.0 grams per tonne silver, 2.14 per cent lead and 5.46 per cent zinc.

**Zone No. 3** was reported to be fairly massive, fine-grained galena, sphalerite, manganite, and quartz. Samples are fairly representative over 1.5 metres assaying 0.69 gram per tonne gold, 411.43 grams per tonne silver, 2.89 per cent lead, and 10.0 per cent zinc.

**Zone No. 4** showed a change in character of mineralization as it cuts across the stratified limestone and therefore may be associated with a Tertiary dike. Small isolated samples were found to contain galena, but they were not large enough to warrant assaying.

**Zone No. 5** as seen on the map contains mostly pyrite and rhodonite scattered within large areas of fractured limestone. Careful examination has detected small exposures rich in sphalerite, and galena. These areas have yielded high silver assays up to 3387.46 grams per tonne and lead and zinc values of 32.46 per cent and 6.68 per cent, respectively.

**Zone No. 6** appeared to contain the same mineralization as No. 1 and No. 2 and may be an offshoot of these zones.

**Zone No. 7** is on a steep slope, where a gossan indicates a predominance of pyrite and manganite.

In 1964, the new company drove an adit southeasterly adjacent to Zones 3 and 13 that were exposed at surface. A sulphide-rich skarn zone was intersected in the adit (Zone 9). Eight or nine underground diamond-drill holes were reported to have been drilled from the end of the adit into the skarn zone. The program ended because of a lack of water for drilling.

Also in 1964, indicated reserves were reported to be 907,100 tonnes grading 214.9 grams per tonne silver, 2.23 per cent lead and 3.79 per cent zinc; the year of the reserves is questionable (Vancouver Stock Exchange Application for Listing 142/80 as reported in MINFILE 104K 009). These "reserves" were calculated prior to the implementation of National Instrument 43-101 and, while relevant and of historic significance, are not deemed to be in accordance with 43-101 standards and cannot be relied upon. The original document reporting the "reserve" was not available for review and could not be obtained by the author.

Work in 1965 included trenching in Zones 5, 8, 8A, 10, 11 and 12 in the northern half of the property. A self-potential (SP) survey outlined several small anomalies between Zones 8 and 11. The ground lapsed between the years 1966 and 1975 and there is no record of work. The property was restaked by Gerry Rayner in 1976 who subsequently optioned it to Anglo Canadian Mining.

In 1979, Dr. John Payne mapped the Ericksen-Ashby deposit for Semco Mining Corporation (Anglo Canadian) (Assessment Report 7707). He reported on the apparent association between the felsic volcanic sequence and the mineralization, suggesting, regardless of the skarn assemblages, a volcanogenic ore genesis similar in origin to the Tulsequah Chief and Big Bull deposits (MINFILE 104K 002, 8). Zones of chert and chert breccia indicate silicification of the limestone prior to skarn mineral enrichment. Payne further outlined some of the zones not previously defined by Bernius in 1963.

Zones 1, 2 and 4 occur in the Footwall Rhyolite (Figure 5). Payne explained that massive sulphides were formed from exhalite solutions related genetically to the rhyolite; most massive sulphides occurring near the upper stratigraphic contact of the rhyolite were probably formed by precipitation at the seawater interface. Zones 3, 5, 6, 8, 9, 10, 11, 12 and 13 occur in the chert or chert breccia (Figure 5). Skarn and minor massive sulphide zones, containing locally high contents of lead, zinc and silver, are associated with chert, chert breccia, and minor limestone with very little to no rhyolite. Payne considered them to have formed at or near exhalite centres on a relatively stable limestone platform. Silica-rich solutions replaced limestone irregularly near the vents, and formed massive to slightly bedded chert along the seawater interface. Continued tectonic activity produced brecciation of some chert in the vent areas. During later exhalative activity, sphalerite and galena were deposited in the brecciated chert along fractures and in small replacement patches, and in places chert and chert breccia and lesser limestone were replaced by skarn.

**Zone No. 8** consists of skarn in limestone or brecciated chert and contains pods and patches of massive sulphide such as pyrrhotite, sphalerite, galena, stibnite and pyrite. The skarn assemblage may also include rhodonite, hornblende, actinolite, pyroxene and tremolite.

**Zone No. 8a** occurs in a complexly folded region along a chert-limestone contact; limited outcrop makes it impossible to determine which contact the zone occurs in. The data suggests that it is along the upper contact of the lower chert unit. Skarn with rhodonite, pyroxene, magnetite and pyrrhotite occur with sphalerite and galena.

**Zone No. 9** is a blind zone intersected by the adit. It consists of a skarn up to 1.5 metres wide over a strike length of 36.6 metres. The zone consists of skarn and chert breccia enclosed mainly in light grey to cream chert. The skarn consists mainly of rhodonite and pyrrhotite, with moderately abundant sphalerite and galena. Diopside, hornblende, and magnetite occur in some samples; mineralogy is very similar to that in Zone 3. Sphalerite and galena occur locally in fractures in brecciated chert, and form scattered pods and patches of high-grade mineralization in the breccia.

**Zone No. 10** consists of chert breccia with rhyolite containing irregular patches and veins of skarn, and a few crosscutting andesite dikes. Skarn consists mainly of rhodonite, with locally abundant pyrrhotite, and minor hornblende and sphalerite. A 2-metre sample yielded 0.17 gram per tonne gold, 96 grams per tonne silver, 2.3 per cent lead and 3.3 per cent zinc (Payne, 1979).

**Zone No. 11** comprises chert, chert breccia, and minor limestone and skarn. The skarn zones are patchy and irregular in outline, some cutting sharply across bedding. Most skarn consists of rhodonite and lesser pyrrhotite, or just rhodonite, with minor sphalerite.

**Zone No. 12** is reported to be similar to that of Zone 11 with scattered skarn zones in chert and chert breccia, and with thin interbeds of limestone. Sulphides are mainly pyrrhotite with local sphalerite and galena.

**Zone No. 13** consists of a large number of skarns between Zones 1 and 3. These skarns are less than 3 metres across, with the largest being about 10 metres. Most skarns are siliceous with abundant rhodonite, scattered but common magnetite and scattered sulphides. Sphalerite and galena are very abundant in Zone 13-1 and form a few patches elsewhere in the skarns. Zone 13-1 is a narrow replacement body consisting of massive sulphide and skarn in the eastern part and mainly of silica and sulphide-poor skarn in the west. Actinolite, diopside and garnet are common. One chip sample over 4.3 metres yielded 0.34 gram per tonne gold, 230 grams per tonne silver, 3.8 per cent lead and 13.9 per cent zinc (Payne, 1979).

In 1980, Anglo Canadian attempted to diamond drill Zone 1 on a relatively steep slope above the underground workings but was unsuccessful due to loss of surface water for drilling. In 1981, the property was optioned to Island Mining and Exploration who subsequently drilled six holes beneath Zone 1 from a single setup and also drilled five other holes to test Zones 3 and 8 (Hemingway and Elliott, 1982). The first four holes on Zone 1 were drilled to the north-northeast to east-northeast, all intersecting a zone of mineralization. Hole 3 intersected 20.2 metres of mineralization with the best section from 33.5 to 42.7 metres assaying 4.94 per cent lead, 4.22 per cent zinc, and 567.1 grams per tonne silver. Hole 4 intersected 5.1 metres of mineralization, including a section from 27.1 to 30.1 metres which assayed 6.4 per cent lead, 6.20 per cent zinc, and 627.4 grams per tonne silver. Holes 5 and 6 intersected only minor mineralization. The Site 1 mineralization is found in rhyolite breccia in which the matrix surrounding the fragments is mineralized. The Zones 3 and 8 holes did not provide encouraging results.

In 1987, Northwind Ventures Ltd. of Calgary optioned the Ericksen-Ashby property (EA claims) and purchased the surrounding BC and Bear claims at the same time. The 1987 exploration program as reported by Bojczyszyn (1988) consisted of creating two flagged grids, soil geochemical sampling, geological mapping (1:1250 scale), and VLF-EM surveying. In addition, reconnaissance geological mapping, stream silt sampling, and detailed lithogeochemical sampling of gossans were also completed outside the grid area. Re-sampling of several old trenches and sampling of gossanous areas was completed in the area southeast of the adit.

In 1988, work by Taiga Consultants Ltd. for Northwind Ventures consisted of a comprehensive exploration program which included a collection of 175 rock and 252 soil samples for geochemical analysis (Bojczyszyn, 1988). This work describes Zone 4 as having values for gold, silver, lead and zinc that tend to be higher on both contacts. A complex zone, Zone 8A, was sampled between trenches 8A-3 and 8A-4. One of the samples analysed 2.32 grams per tonne gold, 1620 grams per tonne silver, 6.1 per cent lead, and 1.78 per cent zinc. Zone 7 is a folded 10 metre wide gossanous zone with bands of chert, skarn and marble up to 2 metres wide with disseminated pyrite, and in places, it weathers black due to manganese staining. Trace malachite was observed. No anomalous values of gold, silver or lead were obtained, however anomalous zinc (760 parts per million) was noted in a marble sample.

A comparison of historical drill results and surface sampling from Zone 1 shows an increased silver grade and width with depth. In addition, gold is apparently most anomalous towards the limestone contact. The best silver values are found in Zone 6 toward the marble contact but do not compare to the 752.62 grams per tonne reported from Ericksen-Ashby Trench 6-1. Surface samples consisted of highly oxidized material. Zone 2N consists of massive sulphide with rhyolite. The best silver values (440 grams per tonne) occur near the western contact with the limestone (which locally includes chert fragments). A 1-metre interval averages 105.4 parts per billion gold, 97.33 parts per million silver, 1.24 per cent lead, and 2.18 per cent zinc. Zone 2, the Glory Hole zone was briefly examined, sampled and mapped. Massive sulphide and skarn samples yielded anomalous gold values from 204 to 746 parts per billion; of particular interest here are samples taken by Cominco in 1951 (3767 parts per billion gold), 535 grams per tonne silver, 4.4 per cent lead, and 2.0 metres zinc over 10.7 metres. Another sample assayed 13,698 parts per billion gold (Bojczyszyn, 1988).

Assessment Report 20096 reported on an airborne Dighem III Survey for KRL Resources Corp. flown in 1990 that gave a description of a helicopter-borne frequency domain electromagnetic survey (Smith, 1990). A large portion of the Taku Star block was covered by this survey. The economic mineralization is associated with massive to disseminated sulphides, often hosted by magnetite-rich rocks. Magnetite tends to suppress the amplitude of frequency domain EM responses; therefore it is difficult to assess the relative merits of EM anomalies on the basis of conductance. Smith

recommended that a suite of physical property rock measurements be taken to get the geophysical signatures over areas of interest. A compilation of conductive trends is shown in Figures 6 and 7.

Regional mapping in 1994 by the provincial Geological Survey extended previous 1:50,000 mapping of the Tulsequah River mapsheet (104K/12), (Mihalynuk et al., 1994a, b) eastward into the Stuhini Creek map area (Mihalynuk et al., 1995a, b). This resulted in significant reassignment of stratigraphy, largely of Upper Triassic Stuhini Group strata to the Paleozoic Stikine Assemblage.

In 1996, (Mihalynuk et al., 1995a, b) published an article which showed that isotopic dating of lead taken from the Ericksen-Ashby galena-rich sulphides were Tertiary in age. This indicated that, despite field evidence (Payne, 1979) which more strongly shows a syngenetic volcanogenic setting within the Late Carboniferous to Permian volcanosedimentary strata, the mineralizing event was a skarn probably related to the intrusion of a quartz monzonite sill of Tertiary age.

In 1998, Jon Thorson (1999) reported that the sulphide mineralization on Ericksen-Ashby is associated with a sedimentary unit of chert, chert breccia, limestone, and rhyolitic tuffs and breccias within an andesitic volcanic pile. Thorson conducted prospecting and geological assessment on behalf of Xplorer Gold Corporation on the Erik 1, Erik 2 and Erik 3 claim blocks as part of their ongoing comprehensive evaluation of the mineral potential of the Tulsequah region.

### 6.1.2 Yellow Bluff (MinFile 104K 049)

Yellow Bluff is located on a steep north trending gossanous cliff having 330 metres of vertical relief from the top to river bottom. Pyritic massive sulphide lenses occur with variable copper, lead, zinc, gold, and silver values and are associated with acidic phases of the volcanic rocks. The flows and fragmental andesites dip steeply westward.

In 1980, prospecting and a geochemical survey were conducted on the Yellow Bluff by Redfern Resources Ltd. and Comaplex Resources International Ltd. The Mud claim had been staked to cover a large pyritic alteration zone megascopically similar to the footwall alteration zone at the Tulsequah Chief Mine situated 9 kilometres to the northwest. Lintott describes a 1982 helicopter-borne, time-domain electromagnetic survey of the Yellow Bluff area which was completed for owner Comaplex Resources (Lintott, 1982). The report identified a six-channel response as a probable massive sulphide located at the top of the cliff face. The cause of this anomaly which may reflect a concentration of massive sulphides, has not yet been explained. A 1987 exploration program of prospecting and mapping was initiated on Yellow Bluff by Northwind Ventures Ltd. who held the area as part of their Ericksen-Ashby option (Bojczyszyn, 1988). An attempt was made to sample the entire section but because of the very siliceous rock, anchors could not be secured. Narrow sections of massive pyrite were encountered near the contact of the altered intrusion and rhyolite. This contact was interpreted as the potential cause of the six-channel anomaly previously mentioned. Rhyolite containing 5 to 10 per cent pyrite in fractures yielded an anomalous 0.52 parts per million silver. In 2006, Optima Minerals Inc. flew a geophysical crew in to conduct an induced polarization (IP) survey and limited prospecting. A chargeable high was found by the survey and was interpreted to be sulphide mineralization at 50 to 60 metres depth.

## 6.1.3 Goat (Mt. Manville) (MinFile 104K 094)

In 1982, Cominco Ltd. collected 70 soil samples at 25 metre intervals. Cominco's work targeted an area on its Goat property that contained minor amounts of disseminated chalcopyrite and sphalerite in rhyolitic rocks along the western edge of the survey area. In 1983, a sample taken from the disseminated mineralization in the rhyolite assayed 0.0166 per cent zinc, trace lead, and 0.006 per cent copper (Sorbara, 1983a). In 1983, Cominco conducted a 2.8 kilometre ground magnetic and Max.-Min. II (HLEM) survey, collected 55 soil samples and completed a mapping survey (Sorbara, 1983b). The HLEM survey defined 4 conductive zones of which 3 were explained by graphitic argillite. The area is mapped as belonging to the Carboniferous Stikine Assemblage.

### 6.1.4 Maidas (MinFile 104K 020)

The Maidas group was staked subsequent to the Ericksen-Ashby staking. In 1929, it consisted of the Maidas No. 1 to 11 and was owned by P.E. Hallum, G. Normand and associates of Juneau. The claims adjoined the Ericksen on the southeast and were staked to cover what was presumed to be the easterly extension of the Ericksen zone. This historic showing, which was comprised of Maidas (1-11 claims) and the adjoining Mohawk (1-6 claims) are now part of the Ericksen-Ashby property.

### 6.1.5 Spring (MinFile 104K 096)

A large limonitic and hematitic gossanous zone occurs on the north side of a prominent east-southeast trending valley that drains west into the Sittakanay River. Area stratigraphy has recently been reassigned to the Paleozoic Stikine Assemblage which in this area is intruded by a quartz monzonite stock and associated feldspar porphyry dikes related to the Tertiary Sloko-Hyder Plutonic Suite. In 1980, prospecting on the Spring and Reto claims located an area of heavy pyrrhotite mineralization with lesser amounts of pyrite, chalcopyrite, sphalerite, and galena. The mineralization occurs mainly within crosscutting fractures, and as veins and lenses within the andesitic to intermediate volcanic rocks. Fifty-three rock and 43 soil samples were collected in 1980. One of these samples was a grab from a sulphide lens which assayed 0.17 gram per tonne gold, 356.6 grams per tonne silver, 10.3 per cent zinc, and 0.12 per cent copper (Clouthier, 1981b).

The Spring claims area were later restaked as the Ala group of claims but the only work reported on this group was by owner Georgia Resources Inc. on the Ala 9 claim which largely existed on the south side of the east-southeast trending valley except for its northeast corner which covered a small portion of the original Spring gossan zone across the valley. A soil survey carried out on the Ala 9 claim in 1987 confirmed the presence of anomalous levels of copper, zinc, silver and arsenic. In March of 1990, Goldbelt Resources optioned the Ala 9 claim from Georgia Resources and conducted an airborne EM-Magnetic survey over the northern half of the claim. Numerous electromagnetic conductors were identified in the northeastern corner of the claim underlain by the gossan. A shear zone containing pods of massive sulphide was located later in 1990 and 11 rock samples were collected. Grab samples of the massive sulphide yielded values of up to 0.25 per cent copper, 0.5 gram per tonne

gold and 14.7 grams per tonne silver (Lambert, 1991). Outcrop in this area consisted mainly of siltstone and argillite with some sandstone. East-west trending porphyry dikes crosscut the sediments. In the summer of 1991, a Genie EM survey was carried out to ground truth the earlier airborne work. A follow-up drill program began in late September of 1991 when thirty days were spent preparing for and carrying out a single, 195 metre BQ diamond-drill hole on the Ala 9 claim. The hole was targeted to test two parallel Genie EM conductors which crossed the northeastern corner of the claim. The hole was planned to go to 230 metres but site problems forced premature shutdown of the hole. The only noteworthy mineralization intersected was from 57.61 to 59.13 metres (1.52 metres) which analysed 0.31 per cent zinc (Taylor, 1992). The source for the geophysical anomalies was considered to be pyrrhotite-pyrite mineralization associated with major shear zones striking about 120 degrees and dipping 85 degrees to the southwest.

### 6.1.6 Council (MinFile 104K 017)

In 1930, a group of six claims called the Council was located near the mouth of the south fork of the Taku River and was owned by Joe Hill and associates of Tulsequah. The occurrence consists of a well-defined shear zone traced by several cuts along the west bank of a creek for about 90 metres and occurring from 30 to 50 metres elevation above the river. In 1930, a sample of this band assayed trace gold, silver, and nickel with no copper; a sample of dark, quartzose-sheared material with antimony oxide from the lower showing yielded traces of silver and gold (Minister of Mines Annual Report 1930). No work since 1930 is documented.

### 6.1.7 Baker (MinFile 104K 048)

The Baker occurs on the north side of Stuhini Creek, highlighted by a distinct yellowish alteration zone within rocks of the Early Eocene Sloko Group. In 1981, prospecting was carried out on this alteration zone by Comaplex Resources International Ltd. on the Hini claim which covered the occurrence. A sample of the intermediate, silicified and pyritic pyroclastic from this alteration zone assayed trace gold, 1.37 grams per tonne silver, 0.01 per cent copper, 0.02 per cent lead, and 0.01 per cent zinc (Greig, 1981). In 1990, a five man crew including geologist was contracted to prospect the Baker property for owner Erik Bergvinson. According to Wesa (1990b), analysis of 14 rock and 77 soil samples yielded low values but area alteration has an "epithermal character".

#### 6.1.8 Surveyor (MinFile 104K 016)

In 1930, a group of ten claims was owned by Joe Hill and partner, of Tulsequah and a sample was taken from the quartz-rich part of the zone mineralized with pyrite and minor stibnite. This sample assayed 37 per cent antimony and was totally absent of silver and gold values (Minister of Mines Annual Report 1930). Work performed in the area of the Surveyor in 1991 for Erik Bergvinson consisted of minor geological mapping restricted to a stream gully, limited prospecting and establishment of a small soil grid at the north boundary of the property. Thirty soil samples were collected at 50 metre spacings from 100 metre-spaced lines. Also, 6 rock samples and 1 stream silt were collected from the drainage examined. Only three spotty anomalous gold values were returned from soil samples and no significant values were evident from rock

analysis. Base metal values were low except for one strongly anomalous arsenic value in rock lines (Wesa, 1990). The historic stibnite showings were not examined.

#### 6.1.9 Squat (MinFile 104K 062)

The Squat claims were located 5 kilometres southeast of Tulsequah along Stuhini Creek in 1980 and were owned by Redfern Resources Ltd. and Comaplex Resources International Ltd. (Exploration in British Columbia 1980). Pyrite, chalcopyrite, sphalerite, and galena are reported to occur in a brecciated zone in the Paleozoic schists. The occurrence is reported to have an apparent bedded nature. No other information is available.

### 6.1.10 Anty (MinFile 104K 023)

In 1944, prospectors for the Leta Exploration group staked an occurrence of stibnite on the south bank of Stuhini Creek. In 1965, a report stated that a section 33.5 metres long with an average width of 1.5 metres assayed 3.25 per cent antimony, and another section 73 metres long with an average width of 1.6 metres assayed 9.5 per cent antimony (Minister of Mines Annual Report 1965). Clifford McNeil restaked the ground in 1965 as the Anty 1. In that year, 16 trenches were blasted and hand mucked. Samples from 15 of those trenches reported assays between 0.1 and 40.38 per cent antimony.

In 1966, the claims were transferred 50 per cent to Homestake Mineral Development Company and 50 per cent to New Taku Mines Limited. In 1967, Homestake geologist John Buchholz mapped and sampled the trenches as part of a reconnaissance program of the Anty group (White and Buchholz, 1967). Trenching in 1967 revealed a 107 metre long zone of mineralization carrying massive and disseminated stibnite in a gangue of quartz within tightly folded micaceous quartzites and schists that is related to a pronounced northwest trending shear. Mineralization consists of fracture replacement over a width of 12 metres.

Dominion Explorers Incorporated acquired the RNG and BR claims in 1986. In 1987, a crew was successful at locating, mapping and sampling a number of old trenches. Thirty samples were collected from old trenches. During the latter part of 1989 and early 1990, a lab test to determine the floatability of the stibnite was conducted by Dominion Explorers. A small geological/silt sampling program was also conducted in 1990. A report by Abolins (1990) states "The Durham Mine floatation tests indicate that a fairly clean saleable concentrate can be produced."

## 6.1.11 Green Ham (MinFile 104K 127)

Mineralization occurring in glacial float and moraine debris was found during a provincial government regional mapping program in 1993 (Mihalynuk *et al.*, 1994a, b). Rusty weathering black argillite contains disseminated to massive pyrite, pyrrhotite and chalcopyrite with minor amounts of sphalerite. At the time of discovery, the assumed source of the mineralized debris was deemed inaccessible due to extreme topographic constraints.

## 6.2 TAKU GOLD BLOCK

#### 6.2.1 Stuhini (MinFile 104K 050)

The Stuhini claims were staked in March of 1980 to cover an area in which a goldbearing pyritic zone related to an alaskite dike had been reported by earlier workers in the area. The claims were owned by Frank Onucki and in 1980 Berglynn Resources Inc. collected 10 rock, 5 stream silt and 23 soil samples (Clouthier, 1981b). The plotted MINFILE location is some 3 kilometres southwest of the area actually worked as the Stuhini claims in 1980. The Stuhini claims cover some of the same area previously covered by the Sue claims but the Sue exploration area is much further south (Clouthier, 1980). See the Sue description below. In 1990, a total of 72 units were staked by Solomon Resources Limited as the Take claims (Aspinall, 1991). During a prospecting program two gossan zones were identified, measuring 300 metres long and 25 metres wide, and 50 by 50 metres, respectively. The Take claims cover much of the same ground that was targeted under the Stuhini claims. Only the western part of this explored ground is covered by the ground presently held by Optima Minerals. The previously explored Stuhini claim area was staked by DeCoors Mining Corp. in October 2006 and sold to Optima Minerals Inc. in November 2006 and is now part of Taku Gold block of the Taku Property. Pertinent reports do not substantiate the MINFILE economic mineralization reported.

#### 6.2.2 Sue (MinFile 104K 051)

The Sue 1 and 2 claims were staked by Frank Onucki in 1978 and limited trenching was done in 1979 by Northern Horizon Resource Corporation. The western boundary area of the Sue claims were explored as part of the Grag reconnaissance survey in 1979. In 1980, the Sue claims were being operated by Berglynn Resources Inc. who conducted geological mapping and a sampling program consisting of 3 silts and 31 rocks. This area was south of the area examined by Horizon, near Sittakanay Glacier, and is not part of the claims presently held by Optima Minerals. That part of the area previously held as the Sue claims and examined by Northern Horizon was staked by DeCoors Mining Corp. in October 2006 and sold to Optima Minerals Inc. in November 2006 and are now part of Taku Gold block of the Taku Property.

#### 6.2.3 Grag (MinFile 104K 068)

During September 1979, a 9 day reconnaissance geological and prospecting survey was conducted on the Grag 1 to 4 mineral claims for Northern Horizon Resource Corporation. Fourteen rock chip samples were taken on sulphide mineralized showings, and two of these showings were hand trenched. One stream sediment sample was taken on a major creek. Some of this work may have been done just east of the Grag claim boundary on the Sue claim where the most interesting in situ mineralization was found during the 1979 reconnaissance survey. Parts of the former Grag property were staked by DeCoors Mining Corp. in October 2006 and sold to Optima Minerals Inc. in November 2006 and are now part of the Taku Gold block of the Taku Property.

#### 6.2.4 Eric (MINFILE 104K 059)

The Eric claim was staked by Frank Onucki in 1978 to cover a molybdenum showing indicated on a map accompanying Geological Survey of Canada Memoir 362 (Souther,

1971). The occurrence was not relocated but a large quantity of molybdenum-bearing alaskite float is present at the end of the glacier. It is believed that the source of the material is from Mount Ogden to the south. Berglynn Resources held an option on the property in early 1979 and in that year a trench 30 metres long was put in across a section of limonitic cherts and limestones. In 1980, Berglynn collected 3 soil, 8 silt and 25 rock samples for analysis and prospected the claims. Parts of the former Eric claim were staked by DeCoors Mining Corp. in October 2006 and sold to Optima Minerals Inc. in November 2006 and are now part of the Taku Gold block of the Taku Property.

### 6.2.5 Hi-Yogi (MINFILE 104K 058)

The Hi-Moly and Hi-Yogi claims were staked in the fall of 1978 by Valiant Resources Inc. to follow up on molybdenite-bearing alaskite float. In 1980, Valiant collected nine stream sediments and talus fines samples along the edge of Wright Glacier above the moraine. Parts of the former Hi-Moly and Hi-Yogi property were staked by DeCoors Mining Corp. in October of 2006 and sold to Optima Minerals Inc. in November 2006 and are now part of the Taku Gold block of the Taku Property.

### 6.2.6 Wright Glacier (MinFile 104K 057)

Several tonnes of molybdenite-bearing float occur on terminal and medial moraines, on the surface of an active glacier below the Mount Ogden deposit. A molybdenum occurrence is located here on Geological Survey of Canada Map 1262A but no mineralization has been reported in outcrop at this MINFILE location.

## 6.3 MOLY TAKU BLOCK

Optima Minerals' Moly Taku block of claims covers the area immediately south of the Mount Ogden alaskite molybdenite-bearing stock which includes zones DD, G, L, M, N, O, P, Q and Z. Because of the interrelated history of these zones with that of Y zone these are described as part of the Moly Taku history.

Molybdenite was first reported in the area by a Geological Survey of Canada field party under the leadership of Dr. J.G. Souther in the period 1958-60. The Nan claims were staked for Richard White in 1961 and soon optioned to Totem Minerals Ltd. Geologists K. Valentine and R. Macrae reported work on the claim for Totem in 1961. Work consisted of prospecting and sampling, including sampling from glacial moraines in the vicinity. Molybdenite in coarse quartz veins with rare disseminations in a felsite host was reported. In 1967, Mount Ogden Mines skidded a small drill up the glacier to a drill site north of Mount Ogden (Elliott and Clouthier, 1981). It is reported that only 12 or 15 metres of sparse and uneconomic mineralization was intersected. It was further reported that Mount Ogden Mines completed an airborne EM survey but was of little value in terms of exploration. In 1976, Iskut Silver Mines Ltd. held the ground but allowed the claims to lapse in early 1977. Frank Onucki staked the property later that same year. Nevin Sadlier-Brown Goodbrand Ltd. examined the Moly-Taku claims on behalf of Marge Enterprises Ltd. in 1977. The claims were subsequently optioned to Omni Resources Inc. after preliminary mapping and sampling in 1978. Ninety-six bedrock samples were taken by Nevin Sadlier-Brown Goodbrand Ltd. for Omni at that time. In 1978, Bema Industries sampled and proved the existence of a large, low grade area of molybdenite mineralization. In 1979, Omni Resources Inc. carried out a program of drifting and diamond drilling on the N and Z zones. One hundred and fiftynine metres of drifting and 589 metres of underground drilling failed to substantiate earlier indications of a sizeable orebody. A small high-grade vein, the Serious vein, was found and an estimate of 27,213 tonnes of 1.85 per cent MoS<sub>2</sub> was made (Elliott and Clouthier, 1981). This resource estimate was calculated prior to the implementation of National Instrument 43-101 and is not compliant with those standards. Underground work has not substantiated the surface sampling, however, only a very small portion of the favourable ground has been tested. A 380-metre drill hole on the Z zone failed to intersect economic grade molybdenite mineralization.

A new molybdenite-bearing zone, the Y zone, was found late in the 1979 season about 750 metres south of the area that had been previously been examined in detail (Elliott and Clouthier, 1981). A drill was moved to a site on a ridge above the showing and diamond drilling began in hole Y-1 (Figure 8). Historical location maps (Appendix G and Figure 8) show the location of the Y zone or the Y zone drill hole site on the present Moly Talu block of Optima Minerals, but in close proximity to its western border. The Y zone itself is reported to be downhill to the northeast of the drill site which drill logs place at 1808 metres elevation (Elliott and Clouthier, 1981). The MINFILE location of the Y zone is clearly in error as it plots in the area of the L to Z zones (Appendix H).

A Longyear Super 38 drill was moved to a site on a ridge at 1808 metres elevation, above the Y showing and diamond drilling began in hole Y-1. The hole was stopped after 200.1 metres due to bad weather conditions but the following year (1980) the hole was continued to a depth of 662.9 metres. Drilling consisted of 305.4 metres of NQ core and 157.4 metres of BQ core. Drillhole Y-2, from the same site, terminated at a depth of 332.5 metres. All core recovered was of NQ size. In total, 795.3 metres of drilling was completed with 637.9 metres of NQ core and 157.4 metres of BQ core recovered and logged. In addition, the 200.1 metres of Y-1 core drilled was relogged in 1980 employing a different system of geological drillhole logging to that used in 1979 (Elliott and Clouthier, 1981).

Metal-bearing sulphide mineralization in both drillholes (Y-1 and Y-2) was reported to be ample. The most common type of vein was quartz-pyrite-pyrrhotite-sphalerite which also may contain minor scheelite. Other common vein types were quartz-molybdenite with or without muscovite, quartz-epidote-pyrite-magnetite-scheelite, and quartz-magnetite-epidote. Elliott and Clouthier (1981) further reported that mineralization and alteration types and styles suggested that the drillholes had intersected a thick portion of a strong hydrothermal mineralized system and that the most likely source of mineralization is related to a buried pluton south of the drill area, presently on the Moly Taku block of Optima Minerals.

## 7 <u>GEOLOGY</u>

(This section has been prepared by Garry Payie, P.Geo.)

The following regional setting and the Taku Star block setting is derived in whole or in part from (Mihalynuk *et a*/., 1994a, b; 1995a, b).

## 7.1 <u>REGIONAL</u>

Four major building blocks constitute the terrane superstructure of northwestern British Columbia: a western block of polydeformed, metamorphosed Proterozoic to middle Paleozoic pericontinental rocks (Nisling Assemblage); an eastern block of exotic oceanic crustal and low-latitude marine strata (Cache Creek Terrane); central blocks including Paleozoic Stikine Assemblage and Triassic arc-volcanic and flanking sedimentary rocks of Stikine Terrane; and overlying Late Triassic to Middle Jurassic arc-derived strata of the Whitehorse Trough (including the Inklin overlap assemblage). Mesozoic rocks of the Taku Property area are dominated by arc-flanking strata of the Whitehorse Trough: parts of the Upper Triassic Stuhini Group and the Lower to Middle Jurassic Laberge Group. These are overlain by Tertiary continental arc volcanic rocks of the Sloko Group which are intruded by partly comagmatic Coast Plutonic Complex plutons. The Stikine Assemblage is restricted mainly to the south and western margins of the region, but probably extends beneath much of the Mesozoic and Tertiary cover. On the northern and southern edges of the map area, the geology is influenced by two major crustal structures. Eastern splays of the transcurrent Llewellyn fault system juxtapose ductilely deformed Paleozoic rocks with Mesozoic rocks between Sittakanay River and Stuhini Creek. To the north, southwest-verging frontal thrusts of the King Salmon fault system interleave Jurassic and Triassic Whitehorse Trough strata. Second order normal, or high-angle reverse faults, juxtapose Tertiary volcanics with Mesozoic and Paleozoic rocks. Deformation generally increases in intensity with age.

## 7.2 PROPERTY

## 7.2.1 Taku Star Block

Paleozoic Stikine Assemblage strata underlay the western margin of the Taku Star block north of the Taku River but towards the south end of the claim block where the claim boundary extends westward. The Paleozoic belt comprises over three-quarters of the underlying stratigraphy on the property (Figure 9).

North of the Taku River Paleozoic rocks are traced along the west side of Mount Metzgar and can be correlated on a unit-by-unit basis with well-defined Pennsylvanian to Permian Stikine Assemblage rocks of the Mount Eaton Formation to the northwest which hosts the Tulsequah Chief and Big Bull sulphide deposits. Rocks south of the Taku River, on Sittakanay Mountain, have been confidently correlated with the Stikine Assemblage but unlike well preserved correlative strata to the north, polyphase deformation, indistinct lithologies and precipitous terrain prevent extensive subdivision of these rocks. Mount Ericksen lies midway between the Mount Metzgar and Sittakanay Mountain areas and is largely underlain by rocks that are tentatively correlated by Mihalynuk with the Stikine Assemblage.

A wide variety of arc lithologies crop out along the eastern cirque of Mount Metzgar. From north to south these include: maroon and green, fine-grained lapilli ash tuff; well-bedded, tan bioclastic limestone; bedded to massive chert; sulphidic, calcareous, rusty, black, well-bedded argillite and siltstone; decimetre-thick interbeds of limestone and chert; bright green, chlorite and calcite amygdaloidal, monomict andesite tuff; light grey, stretched limestone-cobble debris flow; purple to green, pyroxene-phyric pillow breccia with a calcareous matrix; pyroxene-phyric pillow breccia with a calcareous matrix; dark green, flattened lapilli tuff of probable basaltic andesite composition; and centimetre to decimetre interbeds of argillite and cherty, tuffaceous siltstone. The last few units apparently change along strike downslope into dark brown and green, fine grained tuffaceous sediments and sparse lapilli tuffite, that form locally developed, albeit inconspicuous, centimetre to decimetre thick beds. More commonly these form disrupted beds with metre-scale close to isoclinal folds. Matrix compositions are typically siliceous with carbonate locally predominating. Hornfelsing is common possibly due to plutonic rocks in the near subsurface. Rhyolite has also been reported in this area. Dark green volcanic breccia and bedded tuff predominate farther west along the southern ridge of Mount Metzgar.

In general, ductile deformation increases in intensity while confidence in correlation decreases both northeast and southwest of Mount Sittakanay. Northeast of Mount Sittakanay in the Stuhini Creek valley, dynamothermally metamorphosed phyllite and schist are cut by discrete shear bands within the Sittakanay shear zone (Figure 9). To the southwest, extensive intrusion by Coast Plutonic Complex plutons caused widespread thermal metamorphism. Primary sedimentary component decreases to the northeast where a lower succession of massive volcanic strata is dominant. Protolith textures are best preserved in a belt of distinctive units that extend south into the Sittakanay River valley. Mapping by Mihalynuk within this belt focused mainly on Mount Sittakanay. Conspicuous white-weathering carbonate layers determined to be of Late Carboniferous age outline the belt. Some distinctive individual units were correlated with those in the Tulsequah River area where unit designations are those of Mihalynuk *et al.* (1994b).

The peak and southern flanks of Mount Ericksen are underlain by green to black, fine to medium grained basaltic pyroxene +/- feldspar porphyry breccia, lesser flows and intrusive equivalents. Epidote-chlorite alteration of matrix and along fractures is pervasive but is less intense in pyroxene phenocrysts that comprise 10 per cent to rarely 50 per cent of the rock. Hypabyssal gabbroic intrusions are believed to be comagmatic with volcanic strata. Both are cut by veins of epidote, hornblende and potassium feldspar.

Sediments and fine-grained basalt dominate northern slopes of Mount Ericksen. Included in the sedimentary package are hornfelsed, dark green and purplish cherty siltstone and conspicuous contorted white and black-banded carbonate and massive white marble layers, 6 metres or more thick. Hornfelsed siltstone is commonly interbedded with green to pink laminated carbonate, at one locality containing basaltic 'clasts' up to 40 centimetres in diameter. Pervasive thermal alteration of these rocks has produced widespread silicification, development of fine-grained biotite and formation of epidote-actinolite-chlorite quartz veins and knots. Grossularite occurs in isolated pockets. These sediments are similar lo those exposed low on the eastern slopes of Mount Metzgar.

Two small areas underlain by rocks of the Upper Triassic Stuhini Group were mapped by Mihalynuk *et al.* in 1994. These include an area of basaltic rock about 2 kilometres

east of Mount Sittakanay and an area of undivided volcanic rocks less than 3 kilometres north of the basalts on the north side of Stuhini Creek.

A part of the northeast section of the Taku Star block (Ericksen-Ashby area) is underlain by a succession of volcanic intrusive clast-dominated conglomerates, sandstone, feldspathic wacke, siltstone, minor metamorphic clast-rich and chertpebble conglomerate and rare tuffite of the Jurassic Laberge Group. This succession covers a vast area to the east and north of the property. Much of the succession represents shallow-marine deposition in a prograding deltaic fan environment. Accumulations of Laberge strata may reach as much as 3000 metres.

Next to the Stikine Assemblage rocks, Early Eocene Sloko Group rocks are the most dominant on the Taku Star block, primarily underlying the west-central to southeast part of the claim area. Geological mapping by Mihalynuk in the region in 1993 and 1994 indicates that Sloko Group lithologies are much more extensive than previously thought. Most of the rocks around Yellow Bluff, Kwashona Creek and Stuhini Creek area were included in the Sloko Group. Unlike typical Sloko volcanics to the north, these strata are steeply dipping and locally folded. Sloko Group volcanics are bimodal, but dominated by felsic lithologies. They rest unconformably upon a high-relief paleosurface that was etched into Mesozoic and Paleozoic strata. Voluminous air-fall units are regionally mappable, but the distribution of flow and epiclastic units is profoundly affected by paleotopography and synvolcanic faulting. These units occur as more isolated and sporadic units. Due to rapid facies changes within the Sloko volcanics, not all units comprising the Sloko Group in the Tulsequah area (Mihalynuk et al., 1994a, b) occur within the Stuhini Creek map area. Previous regional mapping outlined six different mappable units including a basal conglomerate; massive, well indurated, black pyroclastics (Opposer Formation); massive, tan-weathering breccias (Mount Haney Formation); interlayered feldspar-phyric flows and volcaniclastics (Nakonake Formation); rhyolite domes and tuffs; and trachyte flow succession(s). In the Stuhini Creek area, several additional units are required to describe the Sloko Group. Two of these units were persistent enough to warrant informal formation designation by Mihalynuk; coarse sandstone and Laberge Group clast-rich conglomerate and siltstone (Niagara Formation); and vitrophyric tuff containing fragments of feldspar crystals, pumice, coarse ash and fine lapilli (Teepee Formation). Other units include: thick, bleached and silicified, indurated feldspar-phyric flows and lesser interflow breccia and tuff, green hornblende and feldspar-phyric lapilli breccias; chaotic intermediate to felsic feldspar-phyric lapilli tuff to breccia; well-bedded fine tuff or tuffite; and biotite and sanidine-phyric breccias.

While smaller stocks consisting of Triassic to Cretaceous rocks occur on the Optima Mineral property, by far the most significant plutonic rocks occurring are those of the Paleocene to Eocene Sloko-Hyder Suite which cover much of the northern quarter of the Taku Star block as well as the eastern extent of the Taku Gold block (Figure 10). The plutons and stocks of this suite are spatially associated with and probably comagmatic with Sloko Group volcanics. The Sloko-Hyder Suite consists of east-west elongated, high-level, multiphase plutons and stocks. In outcrop, these intrusions weather white, light grey, tan, pink or orange. They are compositionally and texturally variable, ranging from fine to medium grained quartz-feldspar porphyritic monzonite

and diorite to granite with as much as 15 per cent biotite, magnetite, and/or hornblende. Contacts with solid country rock are sharp and chilled. The plutons and stocks are crosscut by northeast-trending faults resulting in brittle deformation and subsequent local alteration, hydrothermal alteration and precious and base metal mineralization (i.e. auriferous arsenopyrite with sphalerite and galena in clay alteration zones and molybdenum along fractures in gossanous zones).

## 7.2.2 Moly Taku Block

Volcaniclastics of the Paleozoic Stikine Assemblage extend south from the Taku Star block and underlie much of the area beneath the Moly Taku block. Greenstone and greenschist metamorphic rocks of the Devonian to Mississippian Whitewater Metamorphic Complex underlie the western portion of the block near Mount Ogden (Figure 11).

The oldest rocks exposed on the Moly Taku claims consist of Stikine Assemblage Permian limestones, dolomitic limestones, and minor chert. These occur with fine grained Stikine clastic sediments and intercalated volcanic rocks which are largely altered to greenstone and phyllite. These metasediments and volcanics have been intruded by felsic dikes and plutons of Late Cretaceous and Tertiary age. The sediment series is primarily hornfels sediments intruded by rhyolite, felsite and andesite dikes. Skarn mineralization is relatively common. A Late Cretaceous pluton lies about 2 kilometres west of a Paleocene to Eocene Sloko-Hyder batholith consisting of granite to alkali granite. Surface exposures indicate the Cretaceous stock is about 2 kilometres long and 1 kilometre wide. The pluton is composed of inequigranular to subporphyritic fine-grained alaskite which contains quartz, Kfeldspar, plagioclase, and less than 1 per cent biotite, chlorite, sphene, and fluorite. This alaskite is also molybdenite-bearing. An intrusive body in the Y zone area, to the southeast of the alaskite pluton, is considered to be a compositionally similar but texturally different phase. Prominent and distinctive guartz eyes and feldspar phenocrysts occur in an aphanitic matrix are its defining characteristics.

## 7.2.3 Taku Gold Block

#### 7.2.3.1 Stratigraphy

Northwest trending belts of Stikine Assemblage limestone, andesitic rocks of the Eocene Sloko Group, basaltic volcanics of the Upper Triassic Stuhini Group, and granites of the Paleocene to Eocene Sloko-Hyder Plutonic Suite dominate the stratigraphy beneath the Taku Gold block between Mount Ogden and the Taku Star block (Figure 10). The portion of the Taku Gold block that projects east covers the contact area of Sloko andesitic volcanic rocks and Sloko-Hyder granitic rocks.

#### 7.2.3.2 Structure

Deformation of rocks in the Taku Property region generally increases in intensity with the age of the affected strata. Two to three folding events have affected Paleozoic strata, whereas Tertiary rocks are generally block faulted and rarely tightly folded.

Partitioning of high-angle brittle and ductile fabrics can in part be related to proximity of a major crustal structure, the Llewellyn fault zone. A second crustal scale structure,

the King Salmon fault, is associated with a Jurassic thrust belt that affects the area to the northeast of the Taku Property. A series of Tertiary, high-angle normal and oblique faults is largely responsible for the juxtaposition of Mesozoic and Tertiary strata; although faults with the greatest amount of offset do not have the most prominent topographic expression.

Mihalynuk *et al.* (1994a, b) traced the Llewellyn fault from Atlin Lake, south through the Tulsequah River area, but lost it in the broad Taku River valley. No single dominant trace of the fault could be identified south of the Taku River. Field observations reported here confirm an apparent fanning of the Llewellyn fault with distribution of ductile and later brittle faults over several widely spaced traces. Two of these traces are thought to affect Paleozoic strata underlying Mount Sittakanay.

## 7.3 DEPOSIT TYPES

Significant known mineralization on the Taku Property or nearby in areas of similar geological setting represent key deposit types that are targets for exploration (Figure 3). These include: volcanogenic massive sulphide (VMS), mesothermal gold veins, porphyry molybdenum, porphyry copper, and skarn. It is likely that other types of mineralization have not yet been recognized in this region and cannot be overlooked in the search for new systems.

#### 7.3.1 Volcanogenic Massive Sulphide (VMS)

Kuroko-type volcanogenic massive sulphide deposits occur in the region and include the Tulsequah Chief and Big Bull orebodies, located within 5 kilometres of the western boundary of the Taku Star block. The Tulsequah Chief deposit occurs at the base of a Mississippian package of the Stikine Assemblage consisting of a rhyolite-dominated sequence of volcanic flows and fragmental units. These rocks sit above a thick assemblage of basalts and basaltic andesites. In turn, the rhyolites are overlain by a mafic-dominated sequence of basalt flows, breccias and sills. The nearby Big Bull deposit occurs in a similar setting. Mihalynuk (1994a) reports that similar rocks occur within the Sittakanay block underlying the southwestern portion of the Taku Star claim block.

#### 7.3.2 Skarn

The Ericksen-Ashby massive sulphide deposit occurs in a geological setting that has previously been described as being a VMS deposit with a skarn overprint. More recent evidence (Mihalynuk *et al.*, 1996) has pointed to it being a lead-zinc skarn. Mineralization occurs within at least thirteen different zones enclosed in upper Paleozoic volcanosedimentary strata of the Stikine Assemblage. Sulphides are mostly a mixture of pyrrhotite, sphalerite, pyrite and galena. Assemblages range from massive pyrrhotite or pyrite with up to 25 per cent sphalerite and galena to massive sphalerite or sphalerite and galena in equal proportions. Skarn mineralogy consists of actinolite-rhodonite-diopside-tremolite-magnetite. Potential for other skarns of different types to occur on the Taku Property is likely. One such example is represented by molybdenite-bearing skarn float discovered in the 2006 field season northeast of Sittakanay Mountain by the writer.

## 7.3.3 Porphyry

Porphyry molybdenum mineralization is documented at the Mt. Ogden and Moly Taku (Y zone) occurrences and is a primary target for Optima Minerals. Carboniferous to Permian rocks of the Stikine Assemblage are intruded by a Cretaceous granitic stock exposed in nine locations on Mount Ogden. The mineralized stock is a light coloured, fine-grained alaskite with quartz and feldspar phenocrysts. The alaskite stock is about 1500 metres wide and 1600 metres long. Molybdenite occurs in several modes within the alaskite. It occurs as coarse platy crystals in widely spaced, subhorizontal veins; in networks of thin veinlets with light coloured alteration envelopes; along fractures; as rosettes of coarse or medium grains associated with vuggy quartz; and as fine interstitial grains. Some of the subhorizontal veins host accumulations of molybdenite up to 10 centimetres in thickness and are traceable for 30 metres across an exposure. Most of the molybdenum mineralization is confined to the alaskite with only minor mineralization in dikes and fractures within the overlying tactites. About 600 metres southeast of the Mt. Ogden stock is the Moly Taku (Y zone) occurrence where a 150 metre long exposure of quartz feldspar porphyry, compositionally similar to the Mt. Ogden alaskite, contains molybdenum-tungsten mineralization. In 1980, a bulk sample from this zone assayed 0.073 per cent molybdenite (MoS<sub>2</sub>) and 0.084 per cent tungstic oxide (WO<sub>3</sub>) (Elliott and Clouthier, 1981). Mineralized quartz veins as indicated through drilling consisted of guartz-pyrite-pyrrhotite-sphalerite, guartzmolybdenite, guartz-epidote-pyrite-magnetite-scheelite, and quartz-magnetiteepidote. Quartz veins with pyrrhotite, chalcopyrite, and scheelite occurred as well as quartz veins with just sphalerite or scheelite. Fracture-coating mineralization also occurred as pyrrhotite, chalcopyrite, molybdenite, magnetite, sphalerite and pyrite.

The Red Cap occurrence has a striking gossanous alteration zone developed within volcaniclastics of the Upper Triassic Stuhini Group and a polyphase porphyry intrusion related to the Late Cretaceous Windy Table Complex. A propylitic alteration zone extends well into the clastic country rocks, overprinted by biotite, localized bleaching and argillic alteration within the gossanous cap. Soil geochemistry across the altered zone yielding copper, molybdenum and silver indicate its porphyry copper potential.

Mineralization at the Icefall showing found in 1993 about 8 kilometres north of Tulsequah Chief is suggestive of a high-level porphyry system involving rocks of Sloko age (Mihalynuk *et al.*, 1994a).

Porphyry potential throughout the Taku Property is significant and not necessarily restricted to any one package or intrusive event.

#### 7.3.4 Vein Related

The area adjacent to the Llewellyn fault zone in the region contains numerous small quartz veins with anomalous precious, base metal and arsenic concentrations. Mihalynuk (1994a) reports that this style of mineralization occurs in the Tulsequah area, where numerous shear-related quartz-sulphide veins are in evidence, including the Banker, Sparling and Highland Girl showings, "as well as several others in the Mount Sittakanay area" on the Taku Star block. According to Mihalynuk the previously mined Polaris-Taku mesothermal gold vein system may be genetically related to these smaller occurrences. This deposit is hosted in the upper Paleozoic

Stikine Assemblage where mineralization is associated with disseminated arsenopyrite, pyrite, and stibnite in quartz-carbonate veins and stockworks, and related carbonatized and sericitized alteration zones. The Polaris-Taku zones were developed along principal shear sets adjacent to major crustal breaks. Gold mineralization is late Cretaceous to early Tertiary in age and mesothermal/orogenic in nature.

Mineralization at the Spring prospect has massive elements but most mineralization is reported to occur within crosscutting fractures, as veins and lenses within andesitic to intermediate volcanic rocks of the Stikine Assemblage. Pyrrhotite mineralization with lesser amounts of pyrite, chalcopyrite, sphalerite, galena and molybdenite is reported. Minor silver and gold values also accompany the sulphides. Other significant vein occurrences include the Zohini auriferous antimonial shear-hosted veins within Sloko Group volcanics; auriferous arsenical porphyry-hosted veins at the Go showing hosted by quartz monzonite; magnetite-chalcopyrite veins as at Oksarah that contain silver; tetrahedrite-chalcopyrite-sphalerite veins at Lisadelle; and galena-chalcopyrite-sphalerite veins at Blackfly. The Blackfly, Zohini, Go and Lisadelle showings are located within 5 to 20 kilometres east of the Taku Star block boundary. The new Oksarah showing is located within the Taku Gold block, in the easternmost part (Figure 3). Massive and disseminated stibnite mineralization is found at several localities near Stuhini Creek, occurring in quartz veins and shears.

Mineralized vein systems may occur peripherally to virtually all types of porphyry mineralization and some skarns or as feeder systems in VMS deposits. As such they can be key exploration indicators of more significant deposits.

#### 7.3.5 Exhalative

Exhalite mineralization recognized in the chert and limestone sequence on the north end of Mount Eaton and perhaps in the Sittakanay Mountain block (Mihalynuk *et al.,* 1994a) represents a new potential target on the Taku Property.

#### 7.4 MINERALIZATION

#### 7.4.1 Taku Star Block

#### 7.4.1.1 Ericksen-Ashby (MinFile 104K 009)

The area underlying Mount Ericksen consists of Late Carboniferous to Permian volcanosedimentary strata of the Stikine Assemblage. According to Mihalynuk (1996), the strata are predominantly pyroxene-phyric andesite or basaltic andesite and gabbro. Near the north end of the ridge, the volcanic strata are interrupted by two interlayers comprised of chert and carbonate (Figure 12). They are approximately 100 metres thick due to folding which obscures the original stratigraphic thickness. The structurally highest sedimentary unit bifurcates northward to envelop andesite of approximately the same thickness. It also includes a thin layer of rhyolite. A subjacent, tabular, porphyritic quartz monzonite, 50 to 100 metres thick (and up to 350 meters thick locally), known as the Ericksen sill, thermally metamorphoses the entire section on Mount Ericksen.

Mineralization occurs within at least thirteen different zones, each of which contains one or more discontinuous lens-shaped bodies of disseminated to massive sulphide (Payne, 1979). The sulphides are mostly a mixture of pyrrhotite, sphalerite, pyrite and galena. The skarn mineralogy typically consists of rhodonite, diopside, tremolite and magnetite. All massive sulphide mineralization of economic interest occurs in the upper sedimentary division (SED-2 of Payne, 1979). Within SED-2, sulphide layers with high zinc, lead and silver contents occur above the discontinuous rhyolite layer. Some sulphide pods and lenses are discordant, clearly related to late skarn alteration and/or remobilization of the stratiform sulphides.

The property is divided into two structural blocks by a major fault, called the Bracken fault which strikes north-northwest and is thought to be related to a regional fault system in the Taku River area. A small subsidiary fault occurs just northwest of Bracken fault, and is called Zone 8A fault. Also, a minor north-northwest trending fault occurs within epidotized andesites/basalts south of the mineralized zones.

South of the Bracken fault, which includes Zones 1, 2, 2S, 2N and the Glory Hole, mineralization occurs with and possibly related to the major footwall rhyolite. A typical stratigraphic section consists of a lower zone of rhyolite and pyritic rhyolite, overlain by more pyritic rhyolite with lenses of massive pyrite and of magnetite, which in turn, is overlain by massive sulphides. Commonly, galena and sphalerite are concentrated towards the top of the massive sulphide section. Silver minerals reported include argentite, freibergite and argentiferous galena. Rhodonite and magnetite are abundant in small skarns near the rhyolite and massive sulphides. Drilling in 1981 within Zone 1 indicated ore grade material extends to depth. Mineralization consists of massive sulphides which are roughly lensoid or podiform and plunge about 20 degrees south. The zones of mineralization all occur near the unconformable contact of a slightly metamorphosed, occasionally brecciated limestone-chert sequence with a massive basaltic tuff unit. Rhyolite occurs near the unconformable contact, and dips about 75 degrees southwest and strikes northwest. Mineralization is found in a rhyolite breccia with the matrix that surrounds altered fragments which include chert, andesite and limestone. Locally, garnetiferous zones occur within the breccia.

In 1981, drillhole No. 3 intersected 20.2 metres which assayed 567.1 grams per tonne silver, 4.94 per cent lead and 4.22 per cent zinc; drillhole No. 4 intersected 5.1 metres which assayed 627.4 grams per tonne silver, 6.42 per cent lead and 6.2 per cent zinc (Hemingway and Elliott, 1982). High gold values of up to 1.37 grams per tonne across 3 metres were reported in 1963 from Zone 2 (Bernius, 1963). Encouraging gold values were obtained from several locations south of Zone 2S and include values of 26,200 and 2320 parts per billion, respectively from silicified andesite and skarn outcrops (Bojczyszyn, 1988).

North of the Bracken fault, the lithologies are predominantly chert, limestone, and hornfelsed siltstone. Mineralization is associated with cherts and limestones. This mineralization generally contains massive sulphide zones with lower grades. In 1981, a 15.1 metre drill intersection in mineralized cherts in Zone 8 assayed 173.1 grams per

tonne silver, 1.2 per cent lead and 1.37 per cent zinc (Hemingway and Elliott, 1982). A more complete description of the various zones is found under History (Section 6).

In 1964, indicated reserves were reported to be 907,100 tonnes grading 214.9 grams per tonne silver, 2.23 per cent lead and 3.79 per cent zinc (year of reserves is reported to be questionable) (Vancouver Stock Exchange Application for Listing 142/80 as documented in MINFILE 104K 009). This resource estimate was calculated prior to the implementation of National Instrument 43-101 and is not compliant with those standards.

Massive sulphide mineralization at the Ericksen-Ashby has been referred to as both skarn-related and as volcanogenic in origin. Field evidence has predominantly pointed to a volcanogenic origin for the deposit. Like the volcanogenic massive sulphides to the immediate north (e.g. Tulsequah Chief), it is closely associated with a felsic tuff horizon. Mineralization is dominantly stratiform and mainly restricted to the single SED-2 interval (Payne, 1979). Furthermore, a lithologically similar calcareous layer between SED-2 and the Ericksen sill is unmineralized although, given its closer proximity to the intrusion, it would seem a more likely host for skarn mineralization. Thus, Payne interpreted the Ericksen-Ashby as primarily a volcanogenic massive sulphide deposit with partial late remobilization due to the Ericksen sill. While Mihalynuk et al. (1995b) reported that field observations were consistent with those of Payne and his volcanogenic interpretation, subsequent isotopic dating of lead from galena taken from the massive sulphide lenses were incompatible with the Paleozoic age of the enclosing volcanics and are in keeping with 53.7 +/- 0.7 Ma (Tertiary) age of the Ericksen sill as derived through U-Pb geochronology dating (Mihalynuk et al., 1996).

#### 7.4.1.2 Yellow Bluff (MinFile 104K 049)

Yellow Bluff is a steep, north trending gossanous cliff with 330 metres of vertical relief above the Taku River. Pyritic massive sulphide lenses occur with variable copper, lead, zinc, gold, and silver values that are associated with felsic volcanic rocks. The area stratigraphy has recently been reassigned to the Early Eocene Sloko Group and consists of andesitic feldspar porphyry flows and tuffs, coarse sediments to conglomerates, rhyolitic to dacitic flows and tuffs and coarse volcaniclastic and pyroclastic volcanic rocks. The strata across the bluff area strike at about 325 degrees. A Tertiary granitic dike strikes east-west through the strata.

#### Goat (Mt. Manville) (MINFILE 104K 094)

The Goat property is underlain by interbedded rhyolitic tuffs and breccias of andesitic composition and graphitic argillite with minor volcanic sandstone and subvolcanic andesite. These units strike 230 degrees with vertical to steep dips. Area rocks are mapped as Carboniferous Stikine Assemblage. Minor amounts of disseminated chalcopyrite and sphalerite were found in rhyolitic rocks along the western edge of the survey area.
#### 7.4.1.3 Maidas (MinFile 104K 020)

Rocks are comprised of andesitic flows and fragmentals with limestone belts belonging to a Late Carboniferous to Permian volcanosedimentary unit of the Stikine Assemblage. The strata are crosscut by felsic dikes. Mineralization appears to be associated with the dikes and consists of dark sphalerite with interspersed grains of galena, associated pyrite, pyrrhotite, and a little chalcopyrite. The orebody was reported to be 6.7 metres wide, with a northwest strike and vertical dip. A 2.4 metre wide vein is reported to be well mineralized. A sample taken in 1929 assayed 2.57 grams per tonne gold, 548.56 grams per tonne silver, 8.0 per cent lead, and 26 per cent zinc (Minister of Mines Annual Report 1929). This historic showing, which consisted of the Maidas I-II claims and the adjoining Mohawk 1-6 claims is now part of the Ericksen-Ashby property.

#### 7.4.1.4 Spring (MinFile 104K 096)

A large limonitic and hematitic gossanous zone occurs on the north side of a prominent east-southeast trending valley that drains west into the Sittakanay River. Area stratigraphy has recently been reassigned to the Paleozoic Stikine Assemblage which in the area is intruded by a quartz monzonite stock and associated feldspar porphyry dikes related to the Tertiary Sloko-Hyder Plutonic Suite.

In 1980, prospecting on the Spring and Reto claims by Island Mining & Exploration Co. Ltd. located an area of heavy pyrrhotite mineralization with lesser amounts of pyrite, chalcopyrite, sphalerite, galena and molybdenite. Minor silver and gold also accompany the sulphides. Although the massive sulphide lenses have attracted the most interest, mineralization occurs mainly within extensive crosscutting fractures and veins associated with shear zones within the andesitic to intermediate volcanic rocks. Metal banding was noted in some samples, however, it was reported that there was no indication of a syngenetic (VMS) origin for the sulphides. A grab from the sulphide lens assayed 0.17 gram per tonne gold, 356.6 grams per tonne silver, 10.3 per cent zinc, and 0.12 per cent copper (Clouthier, 1981a). In 1990, Goldbelt Resources located a shear zone containing pods of massive sulphide. Grab samples of the massive sulphide yielded values of up to 0.25 per cent copper, 0.5 gram per tonne gold and 14.7 grams per tonne silver (Lambert, 1991). In 1991, a drill program designed to follow up a previous EM survey consisted of 195 metres of BQ drilling in one hole. The only noteworthy mineralization intersected was from 57.61 to 59.13 metres (1.52 metres) which analysed 0.31 per cent zinc (Taylor, 1992).

# 7.4.1.5 Council (MinFile 104K 017)

In 1930, a group of six claims called the Council was located near the mouth of the south fork of the Taku River. The occurrence consists of a well-defined shear zone traced by several cuts along the west bank of a creek for about 90 metres, from 30 to 50 metres elevation above the river. The shear cuts metamorphosed rocks, mainly Carboniferous metasediments of the Stikine Assemblage. Mineralization consists of massive and disseminated stibnite with some finely disseminated pyrite in a gangue of quartz and lesser calcite. Oxides of antimony are widely distributed. A green diffusion

band about 46 centimetres wide occurs within the mineralized shear that is exposed in an upper cut. It was described as an insoluble silicate coloured by chromium (possibly mariposite) with some iron and trace nickel. In 1930, a sample of this band assayed trace gold, silver and nickel with no copper; a sample of dark, quartzosesheared material with antimony oxide from the lower showing yielded traces of silver and gold (Minister of Mines Annual Report 1930). No work since 1930 is documented.

#### 7.4.1.6 Baker (MinFile 104K 048)

The Baker occurs on the north side of Stuhini Creek, highlighted by a distinct yellowish alteration zone within rocks of the Early Eocene Sloko Group. The vertical exposures on the north side of the creek are limonitic stained and gossanous with pervasive sulphide mineralization and strongly silicified. Locally, felsic volcanics exhibit a tuffaceous texture and may be rhyolite tuffs. Quartz-eye rhyolite tuffs with pervasive sulphide mineralization (>5 per cent finely disseminated pyrite) occur on the west side of the tributary near the confluence with Stuhini Creek. Also occurring nearby are sulphide-rich rhyolite tuff breccias composed of large, angular, dark grey fragments hosted in a silica-sulphide matrix. Locally, the wallrock along the drainage is sheared and slickensided with extensive limonite and manganese oxide staining. A sample of the intermediate, silicified and pyritic pyroclastic from this alteration zone assayed trace gold, 1.37 grams per tonne silver, 0.01 per cent copper, 0.02 per cent lead, and 0.01 per cent zinc (Greig, 1981). Wesa (1990) states that the zone of interest exhibits "advanced argillic alteration with local intense silicification and pervasive pyritization and gossanous limonitic surface weathering. The strong, pervasive silicification of the felsic volcanics...may represent the silica cap covering an epithermal system."

#### 7.4.1.7 Surveyor (MinFile 104K 016)

A mineralized shear zone is hosted by altered Carboniferous arkosic argillite, quartzite, and quartz-mica schists of the Stikine Assemblage. In 1930, a group of ten claims called Surveyor covered the zone. The occurrence consists of a well-defined shear zone about 3.3 metres wide, striking 310 degrees and dipping 50 degrees southwest. The shear is traceable from 15 to 58 metres elevation above the river. The shear zone is banded and reticulated in structure and is well mineralized with streaks, bunches, and veinlets of massive and disseminated stibnite, accompanied by fine disseminations of pyrite, in a gangue of quartz and calcite. In some places the stibnite has been extensively weathered to an antimony oxide, possibly stibiconite or cervantite. In some sections, the gangue contains greenish diffusion bands, which were identified as chromium silicate, thought to be a very fine distribution of mariposite. In 1930, a sample was taken from the guartz-rich part of the zone which was mineralized with pyrite and minor stibnite. This sample assayed 37 per cent antimony and contains no values in silver and gold (Minister of Mines Annual Report 1930). It was reported that the antimony ore is remarkably free from refractory impurities and may possibly be of commercial importance on this account.

#### 7.4.1.8 Squat (MinFile 104K 062)

The Squat claims were located 5 kilometres southeast of Tulsequah along Stuhini Creek in 1980 and were owned by Redfern Resources Ltd. and Comaplex Resources International Ltd. (Exploration in British Columbia 1980). Pyrite, chalcopyrite, sphalerite, and galena are reported to occur in a brecciated zone in the Paleozoic schists. The deposit has an apparent bedded nature. No other information is available.

### 7.4.1.9 Anty (MinFile 104K 023)

The Anty Creek fault hosts massive stibnite mineralization as well as disseminated stibnite and arsenopyrite in quartz vein fissure fillings within the shear zone. Trenching in 1967 revealed a 107 metre zone of mineralization carrying massive and disseminated stibnite in a gangue of quartz within tightly folded micaceous quartzites and schists and is related to a pronounced northwest-trending shear. Mineralization consists of fracture replacement over a width of 12 metres. In 1965, a report stated that a section 33.5 metres long with an average width of 1.5 metres assayed 3.25 per cent antimony and another section 73 metres long with an average width of 1.6 metres assayed 9.5 per cent antimony (Minister of Mines Annual Report 1967). The stratigraphy is assigned to a Carboniferous unit of the Stikine Assemblage.

#### 7.4.1.10 Green Ham (MinFile 104K 127)

The area is underlain by Paleozoic Mount Eaton Formation chert, tuff, tuffaceous sediments and argillite. These rocks have been intruded by Eocene hornblende-biotite quartz diorite, and gabbro. Mineralization occurring in glacial float and moraine debris was found during a provincial government regional mapping program in 1993 (Mihalynuk et al., 1994a, b). Rusty weathering black argillite contains disseminated to massive pyrite, pyrrhotite and chalcopyrite with minor amounts of sphalerite. The head of the cirque (to the southwest) is heavily oxidized and rusty weathering but was inaccessible due to topographic constraints. It is assumed that this is the source of the mineralized debris.

# 7.4.2 Taku Gold Block

#### 7.4.2.1 Stuhini (MinFile 104K 050)

Rocks in the Stuhini showing area are reported to consist of grey andesite with crowded distinctive white to pink phenocrysts. The second type of rock is purple with smaller lath-like fragments, but its colour and surface texture resembles basalt. This rock is more pitted on its weathered surface than the former and in fact could be a tuff. The metamorphic grade is greenschist with well-developed chlorite, epidote and minor calcite. Recent mapping by Mihalynuk et al., (1995a, b) resulted in the assignment of area rocks to the Early Eocene Sloko Group. The country rock is intruded by a strong northeasterly trending alaskite dike swarm. Limited gossans on the property are associated with silicification and pyritization. Gossan zone #1, on the western part of the Take claims, yielded two anomalous gold-in-soil values of 380 and 1160 parts per billion. Silver values of 19.6 and 6.5 parts per million and arsenic

values of 1183 and 3690 parts per million were obtained from the same respective samples (Aspinall, 1991). Rock sample analyses were typically low.

### 7.4.2.2 Grag (MinFile 104K 068)

The Grag area is underlain by basaltic flows of the Upper Triassic Stuhini Group and andesitic rocks of the Early Eocene Sloko Group. Granites and alkali granites of the Paleocene to Eocene Sloko-Hyder Plutonic Suite and the Eocene Major Hart Pluton are mapped in the area. Three types of sulphide mineralization are observed on the Grag property: disseminations of pyrite, pyrrhotite and very minor chalcopyrite in intrusive rock; local lenses of disseminated pyrite, pyrrhotite and minor chalcopyrite in volcanic and gabbro host rock; and the third, considered the most significant, consists of pyrite, pyrrhotite, chalcopyrite, molybdenite, galena and sphalerite associated with intrusive bodies and dike swarms in contact with volcanic and gabbro rock. This type is found to be more widespread and higher grade. The sulphides occur in silicified rock as disseminations, fracture and joint filling, and in quartz veining. The most significant area of the third type of mineralization on the Grag claim consists of pyrite, pyrrhotite and chalcopyrite in a fine to medium-grained gabbro cut by a felsic dike swarm. The zone is approximately 100 metres long and 8 metres thick and occurs in the central part of the lapsed Grag claim. Geochemical rock sampling yielded anomalous values for copper and nickel along 50 metres of length including 225 parts per million copper and 102 parts per million nickel (Kruzick, 1979). The highest concentration of sulphide mineralization, pyrite, pyrrhotite and chalcopyrite, is found in a float train along the lateral moraine on the north side of Sittakanay Glacier. The mineralization is in a fine to medium grained gabbro rock, and can be traced over 700 metres. The origin of this float has not been determined but is thought to have come from up the glacier valley to the east. Chip sampling of float yielded 3200 parts per million copper and 78 parts per million nickel (Kruzick, 1979).

# 7.4.2.3 Sue (MinFile 104K 051)

Mineralization was found on the western boundary of the Sue 2 and northeast corner of the Sue 1 claims in 1979 by Northern Horizon while exploring their adjacent Grag claims. The area is underlain by andesitic rocks of the Early Eocene Sloko Group. Granites and alkali granites of the Paleocene to Eocene Sloko-Hyder Plutonic Suite intrude the stratigraphy. The mineralized zone is marked by a gossan trending approximately 020 to 030 degrees. The gossan is 150 metres wide and approximately 1200 metres long paralleling the pronounced direction of jointing. The rock is a highly silicified andesite with sulphide mineralization found in quartz veining, fracture and joint planes, and as disseminations in the host rock. Pyrite, pyrrhotite, chalcopyrite and molybdenite were observed during the sampling of this structure. Anomalous high geochemical values for molybdenum and copper where obtained from rock chip samples across 8 metres: 45 parts per million molybdenum and 400 parts per million copper; and across 30 metres: 450 parts per million molybdenum and 78 parts per million copper (Kruzick, 1979).

#### 7.4.2.4 Eric (MinFile 104K 059)

The Eric claims are underlain by limestone, limonitic chert and greenstone. The rocks are probably lower greenschist facies with epidote and chlorite common in the greenstones; the carbonates are recrystallized and dolomitized. Small plugs of hornblende diorite were reported as were rhyolite porphyry dikes. The area stratigraphy has recently been reassigned to a Carboniferous volcaniclastic unit of the Stikine Assemblage. A plug of Paleocene to Eocene granite of the Paleocene to Eocene Sloko-Hyder Plutonic Suite appears on government geology maps. With two exceptions, the samples collected in 1980 were not considered significant. Two greenstone samples yielded greater than 4000 parts per million copper. One of these samples also yielded 40 parts per million molybdenum and 11 parts per million silver (Clouthier, 1980).

#### 7.4.2.5 Hi-Yogi (MinFile 10K 058)

The Hi-Moly and Hi-Yogi claims were staked in the fall of 1978 by Valiant Resources Inc. to follow up on molybdenite-bearing alaskite float. Strongly folded metasedimentary and metavolcanic rocks are intruded by Paleocene to Eocene quartz monzonite of the Sloko-Hyder Plutonic Suite. Several varieties of felsite dike of probable similar age to the Tertiary intrusions and later andesite dikes intrude the strata. No visible economic mineralization is reported. Anomalous base metal and silver values were obtained in samples but no showing occurs on the ground investigated by Valiant Resources in 1979 (Payne, 1980).

### 7.4.2.6 Wright Glacier (MinFile 104K 057)

Several tonnes of molybdenite-bearing float occur on terminal and medial moraines on the surface of an active glacier below the Mount Ogden deposit (MINFILE 104K 013). A molybdenum occurrence is located here on Geological Survey of Canada Map 1262A but no mineralization has been reported in outcrop at this MINFILE location.

#### 7.4.2.7 Moly Taku Block

The principal country rock is a Carboniferous to Permian sequence of the Stikine Assemblage consisting of high rank metamorphics which include Permian limestones, dolomitic limestones with chert, and Carboniferous fine grained, hornfelsed clastic sediments and intercalated volcanics which are largely altered to greenstone and phyllite. These rocks are intruded by a Tertiary-Cretaceous granitic stock exposed in nine locations on Mount Ogden.

There are two intrusive types. One is a series of thin, widely-spaced, light coloured dikes and the other is the mineralized intrusive stock which is a light coloured, finegrained alaskite with quartz and feldspar phenocrysts. The alaskite stock is about 1000 metres wide and 2000 metres long and is informally known as the Mt. Ogden stock. Molybdenite mineralization occurs in several modes within the alaskite and the exploration focus prior to 1980 was on zones DD, G, L, M, N, O, P, Q and Z (not on the Taku Property). A new molybdenite-bearing zone, the Y zone, was found late in the 1979 season about 750 metres southeast of the area that had been previously been examined in detail. Location maps from Assessment Report 9085 (Appendix G) and Figure 8 from Karelse (2006) show the only graphic representations of the Y zone or the Y zone drill site. Measurements from all the maps place the Y zone within the present claim boundaries of the Moly Taku block of Optima Minerals. The Y zone is reported as being downhill to the northeast of the drill site which 1980 drill logs indicate is at 1808 metres elevation. The MINFILE location is clearly in error as it plots in the area L to Z zones (Appendix H).

The Y zone is about 600 metres southeast of the Mt. Ogden stock where the other original zones occur. It is a large, 150 metre long outcrop. The exposure consists of quartz-feldspar porphyry containing molybdenum-tungsten mineralization. Compositionally, the Y zone intrusion is similar to the Mt. Ogden stock but texturally it is a distinctly separate intrusive phase. Prominent and distinct quartz eyes and feldspar phenocrysts in an aphanitic matrix distinguish it from the Mt. Ogden alaskite stock. In 1980, a bulk sample from this zone assayed 0.073 per cent molybdenite (MoS<sub>2</sub>); and 0.084 per cent tungstic oxide (WO<sub>3</sub>). Traces of powellite have been detected under ultraviolet lamp, as well as scheelite (Elliott and Clouthier, 1981).

In 1979 and 1980, drillhole Y-1 was drilled to 662.9 metres and Y-2, from the same setup above the Y zone, was drilled to 332.5 metres. Both holes were collared in dark brown to black, banded meta-argillite which has loosely been called "hornfels" as a field term. A thin section of the hornfels showed a recrystallized texture and very fine (0.5 millimetre) bands or laminations of quartz-rich and biotite-rich mineralogy. Approximately one-third of the length of the hornfels section (to a depth of 607.8 metres) in hole Y-1 was intruded by dikes of andesite, dacite, felsite, alaskite, and quartz feldspar porphyry. These dikes vary from 4 centimetres to 25.4 metres in apparent width. The most important dikes in hole Y-I are the four quartz-feldspar porphyry dikes intersected between 486 and 596 metres. These porphyries are strongly altered to chlorite and sericite and contain 2-3 per cent disseminated and fracture pyrite. In general, alteration of the hornfels and dikes varied from weak to extremely strong and consisted of sericitization, chloritization, epidotization, silicification and K-feldspathization. Drillholes Y-1 and Y-2 both ended in alaskite of the Mt. Ogden stock. It was observed that this leucocratic granite was clearly later than the mineralization and alteration found in the upper sections of the drillholes. The alaskite is relatively fresh but does contain some disseminated molybdenite and quartz veins with molybdenite.

Mineralized quartz veins occurred throughout the drill core. The most common type of vein intersected was quartz-pyrite-pyrrhotite-sphalerite which also contains minor scheelite. Other common vein types were quartz-molybdenite, quartz-epidote-pyrite-magnetite-scheelite and quartz-magnetite-epidote. Quartz veins with pyrrhotite, chalcopyrite, and scheelite also occurs as well as quartz veins with just sphalerite or scheelite. Fluorite-bearing and magnetite-bearing veins were intersected in drillhole Y-1. Fracture-coating mineralization also occur but less commonly than mineralized veins. The fracture coatings include pyrrhotite, chalcopyrite, molybdenite, magnetite, sphalerite and pyrite.

Elliott and Clouthier (1981) reported the following conclusions. Diamond-drill holes Y-1 and Y-2 intersected sections of a large halo of alteration, quartz veining and mineralization which is thought to be associated with a buried felsic stock. Both drillholes ended in the post-mineral Mt. Ogden alaskite stock which crops out to the north. Although an orebody was not intersected the following information was obtained:

- (1) Molybdenite and scheelite-bearing quartz veins occur throughout the drill cores.
- (2) Sericitization of the "hornfels" occurs throughout 600 metres of drillhole Y-I. Commonly this alteration results in sections of complete sericitization.
- (3) Silicification, K-feldspathization, and chloritization all increase below 400 metres in depth in drillhole Y-1.
- (4) The intensity of quartz veining increases with depth in both drillholes Y-I and Y-2.
- (5) Fluorite-bearing and magnetite-bearing veins occur at depth in drillhole Y-1.

These above indicators suggest that drillholes Y-1 and Y-2 have intersected a thick portion of a strong hydrothermal, mineralized system. The four altered and pyritic quartz feldspar porphyry dikes that were intersected in drillhole Y-1 may be associated with a buried pluton responsible for the molybdenite mineralization; a mineralized "hood" zone around the buried stock was postulated by Elliott and Clouthier (1981) who stated that future drilling should be undertaken to the south to find it. The ground south of the drill sites is held as part of the Moly Taku block of the Taku Property, owned by Optima Minerals.

# 8 STREAM SEDIMENT and ROCK SAMPLING

(This section has been prepared by Garry Payie, P.Geo.)

# 8.1 <u>SAMPLING PROCEDURE</u>

Between September 5<sup>th</sup> and October 6<sup>th</sup>, 2006, Garry Payie, P.Geo, geologist, performed limited geological examination, and conducted and supervised sampling relevant to the exploration of precious and base metal-bearing mineralization. Fieldwork resulted in a total of 26 rock and 79 stream sediment samples sent for analysis. Rock chip samples were collected from bedrock using a rock hammer and each sample consisted of about 2-5 kilograms of rock chips (1-4 centimetres width). The stream sediment samples were taken from active and non-active creek beds. The rock chip and stream sediment samples were placed in individually marked bags and shipped to ALS Chemex, North Vancouver, B.C. for gold FA-AA (fire assay-atomic absorption) finish and 34 element aqua regia ICP-AES analysis. In the author's opinion the sampling procedures are consistent with accepted industry practice.

The ALS Chemex analytical certificates in Appendix A show the results, methods and procedures for fire assay and multi-element ICP analysis.

# 8.2 TAKU STAR BLOCK

#### 8.2.1 Stream Sediment Sampling

The helicopter-supported stream sampling program on the Taku Star block was coordinated by the writer and resulted in the collection of 59 samples that were sent for analysis. In general, all streams draining the Taku Star block were targeted for sampling; success was only limited by the availability of safe helicopter landing sites. Most helicopter stream sampling was completed by the author and field assistants Sheldon Fox and Wes Ogden. The stream sediment samples were taken from active creek beds and, where creeks were dry, from appropriate channel material. Stream silts, sands or fine gravels were placed in kraft bags and given a unique sample identification label. This material was sent to ALS Chemex analytical laboratory for analysis. The nature of the stream and the sample material was described and the location recorded by GPS. A number of stream sediment samples yielded anomalously high analyses that should be followed up by future exploration programs. These samples are summarized in Table 5 with full analytical results available for viewing in Appendix A. Sample locations are shown on Figure 13 and given in Appendix F.

Results from sample 06GPA082 were the most noteworthy of the program. Material was taken from a minor southeast-flowing stream, located about 3 kilometres northeast of Sittakanay Mountain. The stream drains from a ridge that forms the western wall of a valley containing a north-flowing tributary of Stuhini Creek. The stream sampled is about 900 metres in length and was sampled near the break in slope just above where the stream flows onto the broad valley flats and turns north. The sample yielded 513 parts per billion gold, 0.7 parts per million silver, 151 parts per million copper, 175 parts per million lead, 272 parts per million zinc and 176 parts per million arsenic. The valley wall and ridge that is drained by the sampled stream is underlain by volcaniclastics, pyroclastics, conglomerate and coarse clastic sediments of the Eocene Sloko Group; volcaniclastics of the Carboniferous Stikine Assemblage and guartz diorite from a Cretaceous to Tertiary stock. Sample 06GPA081 of pyritic diorite taken by the author about 300 metres north of the anomalous stream sample is the closest observed outcrop but is not considered to have significant elevated values. A few hundred metres south, a moraine contains granite float, limestone and heavily limonitic and dense boulders consisting of a skarn assemblage of garnet, epidote and specks of a grey-silver metallic mineral. Three samples (06GPA083, 84, 85) taken of this material were not elevated in gold, silver, lead or zinc. However, they were significantly elevated in molybdenum, containing 33, 187 and 172 parts per million respectively. The source of this skarn float was not found but was traced up the main valley for about 400 metres where maps indicate that granite intrudes basaltic rock of the Upper Triassic Stuhini Group and volcaniclastics of the Stikine Assemblage. The material of the highly anomalous stream sample has a distinctly different geochemistry from the skarn samples and is therefore not considered to be of the same provenance. Stream sediment sample 06GPA086 was taken from an eastflowing stream draining the same ridge as 06GPA082 but about 400 metres further south; it yielded 11 parts per billion gold, 0.3 parts per million silver, 148 parts per million copper and 102 parts per million zinc. The analytical results from this second sample, while not as anomalous as 06GPA082, confirms the ridge area contains base metal mineralization with associated and potentially significant precious metal content.

# 8.2.2 Prospecting and Rock Sampling

Examination and sampling of rock outcrops was made possible through helicopter support and was largely carried out along ridges or in valley bottoms. Elsewhere, traverses were planned to access key target locations. A total of 22 rock samples were taken and sent for analysis.

Sample Number	Au daa	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Comments
06GPA033	20					06GPA33-43 and 055 from Hydroxyl Landsat target about 7 km north of Yellow Bluff area in area underlain by Tertiary granite of Sloko-Hyder plutonic suite.
06GPA038	34					As above
06GPA039	28					As above
06GPA042	14					As above
06GPA049	14		66		105	Spring Showing area. Underlain by Stikine Assemblage volcanics and sediments.
06GPA055	25				105	See 06GPA033 comment.
06GPA080	NSS		90		83	This east flowing side stream converges with north flowing stream that drains into Stuhini Creek. Sample is about 3.3 km southeast of Baker showing. This stream was flowing on broad valley flats and the sediments were very coarse and extremely well sorted, i.e., little fines and hence non-sufficient sample for gold
06GPA082	513	0.7	151	175	272	Same stream as 06GPA080 but taken at base of steep valley slope. Stream drains area of Sloko and Stikine volcaniclastics, pyroclastics and sediments and quartz diorite intrusion.
06GPA086	11	0.3	148		102	Small east flowing stream 400 metres south of 06GPA082.
06SFO134	17		333			Stream draining south into Stuhini Creek east of Squat showing. Underlain by Stikine Assemblage volcaniclastics intruded by granite stock.
06SFO135	24		112			Same drainage as 06SFO134.
06SFO136		0.4	124			Drains same ridge as that drained by 06GPA082 but from the next valley over, to the west.
06SFO143	43	0.5			104	Sample from west-flowing tributary to stream that drains north into Stuhini Creek, west of Baker showing. Sample area is underlain by Sloko Group volcaniclastic and pyroclastic rocks.
06SFO149		0.4				Sample from east-flowing tributary to same main valley stream as for 06SFO143
06SFO155			116		121	From stream that drains Stikine Assemblage rocks northeast of Big Bull mine.
06SFO163	24		280			From a west flowing stream about 5 km southeast of Big Bull mine. Area rocks are Stikine Assemblage.
06SFO165		0.8		124	179	From an east draining stream 4 km northeast of

# Table 5. 2006 Anomalous Stream Sediment Samples\* - Taku Star Block

				Ericksen-Ashby prospect in area of Sloko andesite.
06SFO202	NSS	210		Headwater area of main valley stream where 06GPA080 and 082 samples collected. Sample area underlain by Stikine Assemblage volcaniclastics.
06WMO033			139	From large tributary draining southeast into the Taku River about 3 km northeast of Yellow Bluff. The area is underlain by Tertiary granite of Sloko-Hyder plutonic suite.
06WMO034			152	As above. Same drainage system.
06WMO052			100	See 06GPA033 comment. Same drainage system.
06WMO054		93		Sample of main drainage just upstream from gossan at Spring prospect. See 06GPA049 (above) and rock samples 06GPA044-050
06WMO058	17	167		From stream that drains Squat showing area south into Stuhini Creek. Underlain by Stikine Assemblage volcaniclastics intruded by granite stock.
06WMO059	24	167		Sampled 1.7 km east of Anty showing from stream that drains north into Stuhini Creek. Underlain by Stikine Assemblage volcaniclastics and coarse clastic sediments intruded by granite stock.

Rock chip and grab sample material was placed in a labeled plastic sample bag and later shipped to ALS Chemex, North Vancouver, B.C. for gold FA-AA (fire assay-atomic absorption) finish and 34 element aqua regia ICP-AES analysis. Analytical results are shown in Appendix A. Each rock chip and grab sample consisted of about 2-5 kilograms of material. The rock chips were from 1 to 4 centimetres wide and the rock grab samples varied in size up to 20 centimetres. The sample material was described in the writer's field notebook and the UTM location recorded by GPS.

A number of rock samples yielded anomalously high analyses that should be followed up by future exploration programs. These samples are summarized in Table 6 and full analytical results are included in Appendix A. Sample locations are shown on Figure 13 and given in Appendix F.

Prospecting was conducted along the base of the gossanous zone of the Spring occurrence. See Sections 6 (History) and 9 (Mineralization) for further details based on previous work. The gossanous zone occurs on very steep terrain along the north side of a valley that drains to the northwest before eventually turning west and then south draining into the Sittakanay River. The gossan is estimated to cover a 2 kilometre length along a northwest trending segment of the ridge that is mapped as Carboniferous Stikine Assemblage. Rocks have been described in the past as intermediate and felsic volcanics.

Sample Number	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Mo ppm	Comments
06GPA045	14	1.6	129	86	1221		Spring showing area. Pyritic rhyolite talus that came from cliffs above. Area underlain by Stikine Assemblage volcanics and sediments. Intruded by a quartz monzonite stock and associated feldspar porphyry dikes related to the Tertiary Sloko-Hyder Plutonic Suite.
06GPA047	133	1.6	93	30	630		Spring showing area. Pyritic black aphanitic rock. Basalt? Sediment? See above comment for more details.
06GPA048		0.5	110				Spring showing area. Pyritic siliceous rock, probably rhyolite. See 06GPA045 for more details.
06GPA050	8	0.6	241				Rhyolite or silicified intermediate to mafic volcanic from Spring showing area. See 06GPA045 comment for more details.
06GPA084		0.4	115			187	Skarn float in amongst moraine material. Patches of grey-silver sulphide (molybdenite?). Garnet, epidote and pyrite noted in skarn assemblage.
06GPA085		0.5	79			172	Aplitic (granite) rock moraine float. Patches of grey-silver sulphide (molybdenite?) disseminated aplite matrix.

Table 6. 2006 Rock Samples Showing Anomalous Values\* - Taku Star Block

\*Only values deemed elevated are indicated.

A total of six rocks and two stream sediment samples were collected in the Spring gossan area by the Payie in 2006 (06GPA044-48, 50; 06WM0054; 06SFO146). Rocks encountered and sampled were pyritic rhyolite; aphanitic and locally siliceous black rock that is possibly a mafic volcanic but could be of sedimentary origins; limestone; silicified intermediate rock (rhyolite?); and granodiorite. Some faint layering was noted in an aphanitic black rock at one location. A sample (06GPA045) of a pyritic rhyolite (possibly silicified intermediate to mafic volcanic rock) yielded 1220 parts per million zinc, 1.6 grams per tonne silver and slightly elevated values in gold and copper. A grab of a pyritic aphanitic black rock yield 133 parts per billion gold, 1.7 grams per tonne silver, 630 parts per million zinc and 93 parts per million copper.

Samples taken along the edge of the Spring gossan, while pyritic and locally silicified, were not strongly altered or mineralized. Still, samples were significantly elevated in base and precious metal values even though being derived from the periphery of the zone. The Spring area merits further exploration in order to investigate more fully the gossanous zone, rather than just the margin. Ultimately, some advanced exploration must penetrate below the oxidized limonitic cap which extends for a considerable distance.

Molybdenite-bearing skarn float was found in a north-flowing tributary to Stuhini Creek (samples 06GPA084, 85). These samples were discussed in the Stream Sediment Sampling section above as part of the discussion of sample 06GPA082 that yielded an exceptionally high gold value.

Several days were spent in the Yellow Bluff showing area by Garry Payie, in part planning and expediting the anticipated IP and ground magnetics program reported on above. A limited geological examination by the Payie in the area of the IP survey (Figure 14) indicated intermediate volcanic rocks that were variably feldspar porphyritic; volcanic breccia with small black fragments; and thin bedded tuffaceous rocks with a strike of 170 degrees and 30 degrees west dip. In the northwest area of Yellow Bluff, rocks found along the bluff base as talus and in outcrop consisted of rhyolite, amygdaloidal feldspar porphyritic andesite to basalt, welded tuff, ash tuff and crystal tuff. Payie collected five grab samples from the Yellow Bluff area for analysis (06GPA111-115); locations are plotted on Figures 13 and 14. Samples 06GPA111 and 112 were very weakly anomalous in copper and all were weakly anomalous in zinc. Analytical results for these samples are reported in Appendix A.

An observation of the unique and striking yellowish limonitic oxidation on the face of Yellow Bluff cliff and similar alteration at the nearby Big Bull mine and further south at the Baker showing initially suggest a similar geological setting. However, regional mapping in these areas has defined the Yellow Bluff and Baker areas as Eocene Sloko Group volcanics, while the Big Bull is found, as is the Tulsequah Chief deposit, to occur within Mississippian bimodal volcanics of the Stikine Assemblage.

The Ericksen-Ashby property was visited by Payie and the author for the purpose of surveying the deposit setting and designing an exploration program consisting initially of ground magnetics and induced polarization. The ultimate objective in collecting geophysical data is towards the selection of suitable drill targets. It was determined that the steep terrain would limit the usefulness of line IP and therefore a mix of line IP and downhole IP is being considered in the forthcoming field season.

# 8.3 MOLY TAKU BLOCK

A short visit was made to the Moly Taku block area by Payie. Helicopter access was significantly impeded by cloud and fog cover. An examination of the ridge that was the purported Y zone drill site was observed from the air. A landing was made on a glacier at the base of a cliff where a recent rockslide had brought a considerable amount of material down onto the glacier. Examination of the material revealed molybdenite-bearing alaskite. The fallen blocks contained molybdenite as thin seams (less than 3 millimetres) and as blebs along fractures. No definitive primary molybdenite was noted by the author.

# 8.4 TAKU GOLD BLOCK

A limited exploration program in the area covered by this block resulted in the collection of 20 stream sediment samples and 4 rock samples. A grab (06GPA090) was taken of very limonitic altered felsic rock that yielded 1.1 grams per tonne silver. The altered rock could be traced for several hundred metres in an east-northeast direction. Several stream sediment samples taken towards the eastern extension of the claim block have yielded anomalous values. A follow-up program aimed at investigating the anomalous stream sediment samples as indicated in Table 7 is

warranted. Full analytical results are included in Appendix A; sample locations are shown on Figure 13 and given in Appendix F.

Sample Number	Au ppb	Ag ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm	Comments
06GPA116		0.4				88	Area of Tertiary granite of Sloko-Hyder Plutonic Suite.
06GPA117		0.4				129	Area of Tertiary granite of Sloko-Hyder Plutonic Suite.
06GPA120		0.4			150	172	Area of Tertiary granite of Sloko-Hyder Plutonic Suite.
06GPA121		0.5	45		76	183	Area of Tertiary granite of Sloko-Hyder Plutonic Suite.
162	9	0.5			83	182	Area of Tertiary granite of Sloko-Hyder Plutonic Suite.
165	8	0.5				82	Area of Tertiary granite of Sloko-Hyder Plutonic Suite.
168	6	0.4		9		117	Area of Tertiary granite of Sloko-Hyder Plutonic Suite.
182	6	0.7		13	92	115	Area of Tertiary granite of Sloko-Hyder Plutonic Suite.
06SFO188	NSS	1.2				119	Area of Eocene Sloko Group volcanics.
06SFO190	NSS	1.6			102	170	Area of Eocene Sloko Group volcanics.
06SFO191		0.5				94	Area of Eocene Sloko Group volcanics.
06SFO197		0.3				100	Area of Eocene Sloko Group volcanics.

Table 7. 2006 Anomalous Stream Sediment Samples\* - Taku Gold Block

\*Only values deemed elevated are indicated.

# 9 GEOPHYSICAL SURVEYS

# 9.1 MAGNETIC SURVEY

# 9.1.1 Instrumentation

The magnetic survey was carried out with two model G-856 proton precession magnetometers manufactured by Geometrics of San Jose, California. One was used as a base station and the other was used as the field unit. This instrument reads out directly in nanoTeslas (nT) to an accuracy of  $\pm 1$  nT, over a range of 20,000 - 100,000 nT. The operating temperature range is -40° to +50° C, and its gradient tolerance is up to 3,000 gammas per meter.

# 9.1.2 Theory

Only two commonly occurring minerals are strongly magnetic, magnetite and pyrrhotite and therefore magnetic surveys are used to detect the presence of these minerals in varying concentrations, as follows:

• Magnetite and pyrrhotite may occur with economic mineralization on a specific property and therefore a magnetic survey may be used to locate this mineralization.

- Different rock types have different background amounts of magnetite (and pyrrhotite in some rare cases) and thus a magnetic survey can be used to map lithology. Generally, the more basic a rock-type, the more magnetite it may contain, though this is not always the case. In mapping lithology, not only is the amount of magnetite important, but also the way it may occur. For example, young basic rocks are often characterized by thumbprint-type magnetic highs and lows.
- Magnetic surveys can also be used in mapping geologic structure. For example, the action of faults and shear zones will often chemically alter magnetite and thus these will show up as lineal-shaped lows. Or, sometimes lineal-shaped highs or a lineation of highs will be reflecting a fault since a magnetite-containing magmatic fluid has intruded along a zone of weakness, being the fault.

#### 9.1.3 Survey Procedure

Readings of the earth's total magnetic field were taken every 12.5 meters along the two survey lines, 000, and 001. The total amount of surveying is 825 meters.

The diurnal variation was monitored in the field by a base station.

#### 9.1.4 Data Reduction

The data was dumped from the two magnetometers into a computer. It was then checked for diurnal variation and then placed in the following table. The southern 225 meters is repeated for both lines.

Line	Station	Reading	Instr No.	Date	Time	Reading No.
000	-225	57246	2	Oct 8/06	102507	63
000	-212.5	57187	2	Oct 8/06	102555	64
000	-200	57389	2	Oct 8/06	102631	65
000	-187.5	57188	2	Oct 8/06	102710	66
000	-175	57053	2	Oct 8/06	102741	67
000	-162.5	56884	2	Oct 8/06	102817	68
000	-150	56882	2	Oct 8/06	102903	69
000	-137.5	56909	2	Oct 8/06	102950	70
000	-125	57138	2	Oct 8/06	103045	71
000	-112.5	57246	2	Oct 8/06	103134	72
000	-100	57174	2	Oct 8/06	103157	73
000	-87.5	57168	2	Oct 8/06	103231	74
000	-75	56606	2	Oct 8/06	103302	75
000	-62.5	56499	2	Oct 8/06	103336	76
000	-50	56712	2	Oct 8/06	103400	77
000	-37.5	56777	2	Oct 8/06	103426	78
000	-25	56874	2	Oct 8/06	103455	79

### Table 8. Magnetic Survey Results for Yellow Bluff

Line	Station	Reading	Instr No.	Date	Time	Reading No.
000	-12.5	56797	2	Oct 8/06	103542	80
000	0	56691	2	Oct 8/06	103608	81
000	12.5	57819	1	Oct 9/06	113226	82
000	25	57464	1	Oct 9/06	113410	83
000	37.5	57714	1	Oct 9/06	113520	84
000	50	57578	1	Oct 9/06	113608	85
000	62.5	57445	1	Oct 9/06	113642	86
000	75	57974	1	Oct 9/06	113853	87
000	87.5	58127	1	Oct 9/06	113948	88
000	100	57659	1	Oct 9/06	114323	89
000	112.5	57674	1	Oct 9/06	114519	90
000	125	57618	1	Oct 9/06	114557	91
000	137.5	57664	1	Oct 9/06	114632	92
000	150	57566	1	Oct 9/06	114700	93
000	162.5	57619	1	Oct 9/06	114840	94
000	175	57537	1	Oct 9/06	114914	95
000	187.5	57112	1	Oct 9/06	114959	96
000	200	57146	1	Oct 9/06	115024	97
000	212.5	57064	1	Oct 9/06	115054	98
000	225	57174	1	Oct 9/06	115123	99
001	-225	57246	2	Oct 8/06	102507	63
001	-212.5	57187	2	Oct 8/06	102555	64
001	-200	57389	2	Oct 8/06	102631	65
001	-187.5	57188	2	Oct 8/06	102710	66
001	-175	57053	2	Oct 8/06	102741	67
001	-162.5	56884	2	Oct 8/06	102817	68
001	-150	56882	2	Oct 8/06	102903	69
001	-137.5	56909	2	Oct 8/06	102950	70
001	-125	57138	2	Oct 8/06	103045	71
001	-112.5	57246	2	Oct 8/06	103134	72
001	-100	57174	2	Oct 8/06	103157	73
001	-87.5	57168	2	Oct 8/06	103231	74
001	-75	56606	2	Oct 8/06	103302	75
001	-62.5	56499	2	Oct 8/06	103336	76
001	-50	56712	2	Oct 8/06	103400	77
001	-37.5	56777	2	Oct 8/06	103426	78
001	-25	56874	2	Oct 8/06	103455	79
001	-12.5	56797	2	Oct 8/06	103542	80
001	0	56691	2	Oct 8/06	103608	81
001	12.5	57494	1	Oct 9/06	122154	100

Line	Station	Reading	Instr No.	Date	Time	Reading No.
001	25	57763	1	Oct 9/06	122233	101
001	37.5	57661	1	Oct 9/06	122329	102
001	50	57745	1	Oct 9/06	122401	103
001	62.5	58415	1	Oct 9/06	122448	104
001	75	57529	1	Oct 9/06	122719	106
001	87.5	57524	1	Oct 9/06	122741	107
001	100	58153	1	Oct 9/06	122927	108
001	112.5	58214	1	Oct 9/06	123023	109
001	125	57651	1	Oct 9/06	123103	110
001	137.5	57736	1	Oct 9/06	123442	111
001	150	57910	1	Oct 9/06	123528	112
001	162.5	58118	1	Oct 9/06	123610	113
001	175	57775	1	Oct 9/06	123728	114
001	187.5	57222	1	Oct 9/06	123809	115
001	200	57146	1	Oct 9/06	123845	116
001	212.5	57216	1	Oct 9/06	123912	117
001	225	56853	1	Oct 9/06	123950	118
001	237.5	56656	1	Oct 9/06	124015	119
001	250	56944	1	Oct 9/06	124312	120
001	262.5	57473	1	Oct 9/06	124440	121
001	275	57061	1	Oct 9/06	124546	122
001	287.5	57294	1	Oct 9/06	124614	123
001	300	57157	1	Oct 9/06	124703	124
001	312.5	57102	1	Oct 9/06	124739	125
001	325	56727	1	Oct 9/06	124819	126
001	337.5	56666	1	Oct 9/06	124902	127
001	350	57213	1	Oct 9/06	124937	128
001	362.5	57514	1	Oct 9/06	124959	129
001	375	56073	1	Oct 9/06	131630	130

# 9.2 INDUCED POLARIZATION AND RESISTIVITY SURVEYS

#### 9.2.1 Instrumentation

The transmitter used was a BRGM model VIP 4000. It was powered by a Honda 6.5 kW motor generator. The receiver used was a six-channel BRGM model Elrec-6. This is state-of the-art equipment, with software-controlled functions, programmable through a keyboard located on the front of the instrument. It can measure up to 6 chargeability windows and store up to 2,500 measurements within the internal memory.

## 9.2.2 Theory

When a voltage is applied to the ground, electrical current flows, mainly in the electrolyte-filled capillaries within the rock. If the capillaries also contain certain mineral particles that transport current by electrons (mostly sulphides, some oxides and graphite), then the ionic charges build up at the particle-electrolyte interface, positive ones where the current enters the particle and negative ones where it leaves. This accumulation of charge creates a voltage that tends to oppose the current flow across the interface. When the current is switched off, the created voltage slowly decreases as the accumulated ions diffuse back into the electrolyte. This type of induced polarization phenomena is known as electrode polarization.

A similar effect occurs if clay particles are present in the conducting medium. Charged clay particles attract oppositely-charged ions from the surrounding electrolyte; when the current stops, the ions slowly diffuse back to their equilibrium state. This process is known as membrane polarization and gives rise to induced polarization effects even in the absence of metallic-type conductors.

Most IP surveys are carried out by taking measurements in the "time-domain" or the "frequency-domain".

Time-domain measurements involve sampling the waveform at intervals after the current is switched off, to derive a dimensionless parameter, the chargeability "M", which is a measure of the strength of the induced polarization effect. Measurements in the frequency domain are based on the fact that the resistance produced at the electrolyte-charged particle interface decreases with increasing frequency. The difference between apparent resistivity readings at a high and low frequency is expressed as the percentage frequency effect, or "PFE".

The quantity, apparent resistivity,  $\rho_a$ , computed from electrical survey results is only the true earth resistivity in a homogenous sub-surface. When vertical (and lateral) variations in electrical properties occur, as they almost always will, the apparent resistivity will be influenced by the various layers, depending on their depth relative to the electrode spacing. A single reading, therefore, cannot be attributed to a particular depth.



The ability of the ground to transmit electricity is, in the absence of metallic-type conductors, almost completely dependent on the volume, nature and content of the pore space. Empirical relationships can be derived linking the formation resistivity to the pore water resistivity, as a function of porosity. Such a formula is Archie's Law, which states (assuming complete saturation) in clean formations:

 $R_o = O^{-2} R_w$ 

Where: R<sub>o</sub> is formation resistivity

R<sub>w</sub> is pore water resistivity

O is porosity

# 9.2.3 Survey Procedure

A survey consisting of two lines of induced polarization and resistivity readings was carried out on the Yellow Bluff zone from September 28<sup>th</sup> to October 9<sup>th</sup>, 2006. In addition to the IP/Resistivity survey, the work consisted of building of a helicopter pad, linecutting, and magnetic surveying. It was attempted to take soil samples at several stations, but there was very little soil development with the soil consisting of organic material overlying bedrock.

The placement of the two survey lines was entirely dependent on where overburden occurred since the survey area consisted almost entirely of rock outcrop. The result was two lines essentially running up the central part of the rock promontory with the first line, labeled L-000E going in a 340 degree direction and then at about station 10S changing direction to run along a fault striking in a 010 degrees direction. The second line, labeled L-001E (Spline Line), continues from the 10S point of the first line but continuing in the 340 degrees direction. The stations south of 10S are common to both lines. Figure 14 shows the location of survey.

The IP and resistivity measurements were taken in the time-domain mode using an 8second square wave charge cycle (2-seconds positive charge, 2-seconds off, 2-seconds negative charge, 2-seconds off). The delay time used after the charge shuts off was 80 milliseconds and the integration time used was 1,760 milliseconds divided into 10 windows.

**DIPOLE-DIPOLE ARRAY** 

The array chosen was the dipole-dipole, shown as follows:



The electrode separation, or 'a' spacing, and reading interval was chosen to be 25 meters read to 12 separations, which is the 'na' in the above diagram, for the two

lines. The 12 separations give a theoretical depth penetration of about 175 meters, or 575 feet.

Stainless steel stakes were used for current electrodes as well as for the potential electrodes.

The total amount of IP and resistivity surveying carried out, was 1'050 meters.

# 9.2.4 Compilation of Data

All the data were reduced by a computer software program developed by Geosoft Inc. of Toronto, Ontario. Parts of this program have been modified by Geotronics Surveys Inc. for its own applications. The computerized data reduction included the resistivity calculations, pseudosection plotting, survey plan plotting and contouring.

The chargeability (IP) values are read directly from the instrument and no data processing is therefore required prior to plotting. However, the data is edited for errors and for reliability. The reliability is usually dependant on the strength of the signal, which weakens at greater dipole separations. In the case of this survey, many of the values at greater dipole separations and therefore at greater depths, had to be edited out because of weak signals due to the very low resistivity values.

The resistivity values are derived from current and voltage readings taken in the field. These values are combined with the geometrical factor appropriate for the dipoledipole array to compute the apparent resistivity. The resistivity data were relatively reliable to the 12 separations.

All the data have been plotted in pseudosection form. One map has been plotted for each of the two pseudosections, as shown in the Table of Contents. The pseudosection is formed by each value being plotted at a point formed from the intersection of a line drawn from the mid-point of each of the two dipoles. The result of this method of plotting is that the farther the dipoles are separated, the deeper the reading is plotted. The resistivity pseudosection is plotted on the upper part of the map for each of the lines, and the chargeability pseudosection is plotted on the lower part.

All pseudosections were contoured at an interval of 0.5 milliseconds for the chargeability results, and at a logarithmic interval to the base 10 for the resistivity results.

The self-potential (SP) data from the IP and resistivity surveys were plotted and profiled above the two pseudosections for each line at a scale of 1 cm = 100 millivolts with a base of zero millivolts. It is not expected that the SP data will be important in the exploration of the property, especially with the dipole length used, but considering that the data was taken, it was plotted and profiled for its possible usefulness.

An inversion interpretation was then run over the two lines each producing a resistivity and an IP section.

# 9.3 DISCUSSION OF RESULTS

Each of the two inverted IP sections show a chargeable source with the main part of the source being at a depth of about 50 to 60 metres. The first one occurs at 50N of L-

000E and correlates with a resistivity low. The second one occurs at the southern end of L-001E and correlates with both a resistivity low and high. It is quite probable that both highs are reflecting sulphides, that in part, may consist of base metal sulphides containing gold or silver mineralization. These two highs are considered drill targets.

The resistivity values are quite high commonly being above 20,000 ohm-meters. This would suggest that the rock is quite siliceous.

The magnetic readings varied from a low of 56,499 nanoTeslas (nT) to a high of 58,414 nT. The magnetic highs correlate with high resistivity areas and the lows correlate with low resistivity areas. A possible interpretation is that the low resistivity areas may be reflecting bedrock that has been at least partly altered and thus the magnetite may be altered to a different non-magnetic mineral.

# 10 **<u>RECOMMENDATIONS</u>**

(This section has been prepared by Garry Payie, P.Geo.)

The potential for expanding the size of the known mineral occurrences and for discovering new mineralization on the Taku Property is high and should be further evaluated. Previous literature and exploration by several mining companies has outlined significant mineralized zones that will require additional follow-up fieldwork to determine economic viability. Based on the high potential for discovery of new mineralization and extending known mineralization, a program of geological mapping, geochemical sampling, airborne and ground geophysical surveying, and core drilling is recommended.

A program of airborne geophysics is recommended for the Taku Property. This should consist of airborne magnetics and frequency-domain EM along flight lines spaced 100 metres apart oriented east-west, approximately perpendicular to the regional structural trends on the Taku Property. This survey should extend north 27 kilometres from the southern boundary of the Taku Star block and consist of lines that average 10 kilometres in length. Key target areas around the Spring showing to the south and the Ericksen-Ashby and Yellow Bluff prospects to the north should be covered. On the Taku Gold block, the survey should be about 8 kilometres north to south, consisting of east-west trending flight lines that extend approximately 20 kilometres. This recommended airborne survey would cover most of both claim blocks and total approximately 4300 line kilometres.

A combined induced polarization/ground magnetics survey is recommended for the lower treed sections of the Ericksen-Ashby area. Five lines, spaced 100 metres apart and up to 1.5 kilometres in length, may be attainable. A similar survey is recommended for the Spring prospect area with lines up to 2 kilometres in length possible, paralleling the drainage below the steeper ridge area. Two to three lines spaced 100 metres apart is recommended. These surveys should be expanded significantly if terrain allows and other target areas should be considered for ground geophysics based on preliminary exploration results.

Drilling should target the area south of the Y zone on the Moly Taku block in search of a buried plutonic source for the molybdenum mineralization found to occur in that zone and weakly throughout the core of the Y-1 and Y-2 drillholes. It is recommended that 3000 metres of drilling in 6 to 12 holes be completed on the Moly Taku block. Known geological attributes of the Ericksen-Ashby and Spring prospects should be considered in conjunction

with anomalies defined through geochemical and geophysical surveys to define drill targets. It is recommended that the Ericksen-Ashby should be tested with 3000 metres of drilling in 20 to 25 holes and the Spring with 1000 metres of drilling in 5 to 8 holes. The Yellow Bluff chargeable source found through the 2006 induced polarization survey should be targeted with 1000 metres of drilling in 8 to 12 holes.

Property scale geological mapping and detailed geological mapping of showing areas is recommended in conjunction with soil, stream sediment and rock sampling to outline or expand mineralized zones, and identify favourable stratigraphy that may host potential new deposit-type targets. Follow-up of anomalous stream sediment sampling from the 2006 field season is recommended with subsequent higher density stream sampling and prospecting.

The proposed program will cost approximately \$3,146,000 to implement.

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# 12 **GEOPHYSICIST'S CERTIFICATE**

I, DAVID G. MARK, of the City of Surrey, in the Province of British Columbia, do hereby certify that:

I am registered as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

I am a Consulting Geophysicist of Geotronics Consulting Inc., with offices at 6204 – 125<sup>th</sup> Street, Surrey, British Columbia.

I further certify that:

- 1. I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.
- 2. I have been practicing my profession for the past 39 years, and have been active in the mining industry for the past 42 years.
- 3. This report is compiled from data obtained from stream sediment sampling, induced polarization, resistivity and magnetic surveying along with grid emplacement carried out by a crew of Geotronics Consulting headed by me over parts of the Taku Property during the period of September 5<sup>th</sup> to October 6<sup>th</sup>, 2006.
- 4. I do not hold any interest in Optima Minerals Inc, nor in the Taku Property, nor in any other property of Optima, nor do I expect to be receiving any interest as a result of writing this report.

David G. Mark, P.Geo. Geophysicist April 21, 2007

# 13 AFFIDAVIT OF EXPENSES

Regional stream sediment sampling, helicopter pad emplacement, line cutting, as well as IP, resistivity, and magnetic, surveying was carried out over a portion of the Taku Property, which occurs on and around New Taku River near Tulsequah, located 100 km south-southeast of the village of Atlin, B.C, from September 5<sup>th</sup> to October 6<sup>th</sup>, 2006, to the value of the following:

FIELD:		
Mob/demob from Vancouver - Atlin, return, (Optima's		
for Yellow Bluff work)	\$1,690.00	
Helicopter	106,860.00	
Geologist, Garry Payie, P.Geo, 9 days @ \$600/day	\$5,400.00	
4-man IP crew, 4.5 days @ \$2200/day	9,900.00	
3-man crew, 3 days @ \$1200/day	3,600.00	
2-man crew, 3 days @ \$900/day	2,700.00	
1 man as assistant to Garry Payie, P.Geo, stream		
sediment sampling, (9 days @ \$325/day)	2,925.00	
TOTAL	\$133,275.00	\$133,275.00
LABORATORY:		
Stream sediment testing, 79 samples @ \$14/sample	1,343.00	
Rock Sample testing, 26 samples @ \$20/sample	520.00	\$1,626.00
DATA REDUCTION:		
Geophysicist, David Mark, P.Geo, 50 hrs @ \$60/hr	\$3,000.00	
Geologist, Garry Payie, P.Geo, 3 days @ \$600/day	\$1,800.00	
Geophysical technician, 25 hours @ \$30/hour	750.00	
Computer Drafting	2,500.00	
Report compilation and photocopying	250.00	
TOTAL	\$8,300.00	\$8,300.00
GRAND TOTAL		\$143,201.00

Respectfully submitted, Geotronics Consulting Inc.

David G. Mark, P.Geo, Geophysicist

April 21, 2007

# 14 APPENDIX A

**ALS CHEMEX ANALYTICAL CERTIFICATES** 



# ALS Chemex

ALS Canada Ltd. 212 Brooksbank Avenue North Vancouver BC V7J 2C1 Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: OPTIMA MINERALS INC.	
#307-1500 HARDY STREET	
KELOWNA BC V1Y 2H2	

Page: 1 Finalized Date: 31-OCT-2006 This copy reported on 27-NOV-2006 Account: OPTMIN

CEF	RTIFICATE VA061049	76		SAMPLE PREPARATION					
			ALS CODE	DESCRIPTION					
Project: Optima-Erksan P.O. No.: This report is for 97 Stream Se Canada on 22-SEP-2006	diment samples submitted to o	ur lab in Vancouver, BC,	WEI-21 LOG-22 SCR-41	Received Sample Weight Sample login - Rcd w/o BarCode Screen to -180um and save both					
The following have access t	o data associated with this	certificate:		ANALYTICAL PROCEDUR	ES				
ACCOUNTS PAYABLE	JOHN BUCKLE	GARY PAYLE	ALS CODE	DESCRIPTION	INSTRUMENT				
			Au-AA23 ME-ICP41	Au 30g FA-AA finish 34 Element Aqua Regia ICP-AES	AAS ICP-AES				

To: OPTIMA MINERALS INC. ATTN: GARY PAYLE #307-1500 HARDY STREET KELOWNA BC V1Y 2H2

Referred Cogo

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature: Keith Rogers, Executive Manager Vancouver Laboratory



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EXCELLENCE IN ANALYTICAL CHEMISTRY ALS Canada Ltd.

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CERTIFICATE OF ANALYSIS VA06104976

Project: Optima-Erksan

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	Au-AA23 Au ppm 0.005	ME-ICP41 Ag ppm 0.2	ME-ICP41 Al % 0.01	ME-ICP41 As ppm 2	ME-ICP41 B ppm 10	ME-ICP41 Ba ppm 10	ME-ICP41 Be ppm 0.5	ME-ICP41 Bi ppm 2	ME-ICP41 Ca % 0.01	ME-ICP41 Cd ppm 0.5	ME-ICP41 Co ppm 1	ME-ICP41 Cr ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Fe % 0.01
06SF0-134 06SF0-135 06SF0-136 06SF0-137 06SF0-138		0.50 0.60 0.76 0.58 0.54	0.017 0.024 <0.005 0.005 <0.005	0.2 0.2 0.4 0.2 0.2	2.41 2.89 1.59 1.30 1.52	40 75 26 22 39	<10 <10 <10 <10 <10	50 30 50 150 140	<0.5 <0.5 <0.5 0.5 0.8	2 3 ♀ ♀ 3	1.61 1.16 0.89 0.50 1.01	<0.5 <0.5 <0.5 <0.5 <0.5	28 32 18 13 18	189 134 78 12 123	333 112 124 21 35	4.15 5.28 3.47 3.66 7.01
06SF0-139 06SF0-140 06SF0-141 06SF0-142 06SF0-143		0.66 0.54 0.62 0.70 1.16	<0.005 0.008 <0.005 <0.005 0.053	0.2 0.2 <0.2 0.2 0.5	1.72 1.25 1.60 1.37 2.23	12 12 23 18 45	<10 <10 <10 <10 <10	60 40 90 90 120	0.6 0.5 0.5 0.6 1.0	3 <2 3 2 2	0.90 0.64 0.64 0.47 1.68	<0.5 <0.5 <0.5 <0.5 <0.5	19 9 17 13 23	107 16 102 10 58	30 14 45 14 48	6.62 2.76 5.66 5.02 5.78
06SF0-144 06SF0-145 06SF0-146 06SF0-147 06SF0-148		0.64 0.60 0.60 0.58 0.70	<0.005 <0.005 <0.005 <0.005 <0.005	<0.2 <0.2 <0.2 0.2 <0.2 <0.2	1.07 1.87 1.07 1.36 1.33	2 11 10 15 17	<10 <10 <10 <10 <10	70 80 90 50 50	<0.5 <0.5 <0.5 <0.5 <0.5	<2 2 <2 2 <2 2 <2 2 <2 2	0.33 0.50 0.44 0.36 0.35	<0.5 <0.5 <0.5 <0.5 <0.5	12 20 11 13 12	13 131 15 58 52	17 55 22 35 33	3.01 4.13 4.64 3.18 2.98
06SF0-149 06SF0-150 06SF0-151 06SF0-152 06SF0-153		0.74 0.60 0.54 0.52 0.60	<0.005 <0.005 <0.005 <0.005 <0.005	0.4 <0.2 0.3 0.2 <0.2	1.82 1.37 1.56 1.28 1.22	116 20 45 9 11	<10 <10 <10 <10 <10	90 40 50 120 150	0.7 0.5 0.5 0.6 0.7	<2 2 2 2 2 2 2 2	0.88 0.87 0.72 1.15 0.61	<0.5 <0.5 <0.5 <0.5 <0.5	19 11 14 6 11	42 17 34 3 5	38 18 24 6 12	4.28 2.57 3.55 2.53 3.44
06SF0-154 06SF0-155 06SF0-156 06SF0-157 06SF0-157		0.52 0.22 0.60 0.58 0.44	<0.005 <0.005 <0.005 <0.005 NSS	0.3 0.3 <0.2 <0.2 0.2	1.38 3.12 3.25 4.22 2.59	19 45 18 18 20	<10 <10 <10 <10 <10	90 190 140 210 60	0.6 0.5 <0.5 <0.5 0.6	2 <2 2 2 <2	0.48 1.25 1.06 1.62 2.34	<0.5 <0.5 <0.5 <0.5 <0.5	10 25 24 20 29	12 65 130 64 67	9 116 80 96 58	3.98 4.55 4.04 3.59 5.92
06SF0-159 06SF0-160 06SF0-161 06SF0-162 06SF0-163		0.48 0.54 0.60 0.60 0.44	<0.005 <0.005 <0.005 <0.005 0.024	<0.2 <0.2 0.3 1.5 0.3	1.29 1.16 1.19 1.71 3.27	26 45 48 198 16	<10 <10 <10 <10 <10	210 120 130 100 110	0.7 0.5 0.5 0.6 <0.5	2 <2 2 3 2	0.51 0.41 0.54 0.65 1.61	<0.5 <0.5 <0.5 1.4 <0.5	11 9 9 17 33	4 5 13 99 109	21 18 20 33 280	3.66 2.98 3.26 4.69 4.87
06SF0-165 06SF0-167 06SF0-168 06SF0-169 06SF0-170		0.56 0.54 0.54 0.52 0.52	<0.005 <0.005 <0.005 0.007 0.010	0.8 <0.2 0.4 <0.2 <0.2	1.46 1.85 2.14 1.92 2.09	17 28 51 19 31	<10 <10 <10 <10 <10	70 60 50 60 90	0.7 <0.5 0.5 0.5 0.5	8 8 8 8 8	0.52 0.62 0.69 0.58 0.67	1.0 <0.5 <0.5 <0.5 <0.5	11 14 17 14 16	11 22 42 17 26	31 25 54 20 28	3.94 3.88 4.69 4.00 4.24
06SF0-171 06SF0-172 06SF0-173 06SF0-174 06SF0-175		0.46 0.60 0.42 0.44 0.52	0.008 0.020 NSS 0.013 0.008	0.3 0.2 1.1 0.3 0.3	1.85 2.18 1.57 1.92 1.61	18 20 57 49 33	<10 <10 <10 <10 <10	70 60 140 100 60	0.5 <0.5 0.7 0.9 0.6	2 <2 2 <2 <2 <2	0.62 0.66 0.55 0.63 0.50	<0.5 <0.5 0.8 <0.5 <0.5	15 15 10 15 14	9 14 9 11 8	31 25 51 24 16	4.40 4.21 3.45 3.59 4.03



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VA06104976

Project: Optima-Erksan

CERTIFICATE OF ANALYSIS

ME-ICP41 Method Analyte Ga Hg κ La Mg Mn Mo Na NI Þ Pb s Sb Sc Sr Units 96 % % pom ppm pom ppm pom % ppm pom ppm pom ppm ppm Sample Description LOR 10 0.01 10 0.01 5 10 0.01 0.01 2 2 1 1 1 1 1 06SF0-134 10 <1 0.24 <10 2.56 681 1 0.03 103 1190 11 0.08 5 6 47 06SF0-135 10 <1 0.07 <10 2.57 1110 1 0.01 55 1190 19 0.04 5 9 42 36 13 46 06SF0-136 1 <10 1.18 389 1160 0.12 2 4 <10 0.21 1 0.07 32 06SF0-137 <10 <1 0.08 10 0.75 711 2 0.01 7 1330 0.05 5 3 41 06SF0-138 10 <1 0.10 20 1.16 730 11 0.02 19 2660 52 0.17 3 6 50 16 15 5 5 06SF0-139 10 <1 0.31 20 1.73 784 1 0.02 2970 0.02 35 <10 <1 0.11 10 0.66 504 2 0.06 7 1030 19 0.07 3 56 06SF0-140 4 06SF0-141 10 1 0.09 10 1.39 708 2 0.01 28 1860 16 0.12 4 5 34 1070 06SF0-142 <10 <1 0.07 10 0.74 742 4 0.02 7 18 0.42 5 4 36 06SF0-143 10 <1 0.17 20 2.01 1025 5 0.01 17 2610 36 0.87 4 7 81 06SE0-144 <1 0.04 10 0.74 485 9 1200 8 0.03 2 2 24 <10 1 0.01 06SF0-145 <10 <1 0.06 10 1.90 723 <1 0.01 57 1040 10 0.04 2 6 28 06SF0-146 <10 <1 0.04 10 0.66 566 1 0.02 10 1220 10 0.02 4 2 34 24 10 3 5 29 06SE0-147 <10 <1 0.06 10 1.04 680 1 0.02 770 0.10 06SF0-148 1 0.05 10 1.00 631 1 0.02 22 760 9 0.06 4 5 28 < 101.52 1160 26 1670 30 5 06SF0-149 <1 10 4 0.02 0.23 3 49 10 0.11 06SF0-150 <10 1 10 0.64 447 0.08 10 970 8 0.33 3 3 65 0.11 1 06SF0-151 10 1 0.09 10 1.12 642 2 0.04 15 1390 21 0.35 4 3 48 06SF0-152 <10 <1 0.21 20 0.51 643 1 0.03 2 720 20 0.05 3 4 41 06SF0-153 <10 <1 0.10 20 0.64 696 1 0.02 6 980 13 0.04 2 4 43 06SF0-154 10 0.08 20 0.76 862 3 0.02 7 790 21 0.04 <2 4 22 <1 2 06SE0-155 10 0.50 <10 1.64 618 <1 0.16 35 890 17 0.12 4 9 82 53 06SF0-156 10 <1 0.26 <10 2.23 832 <1 0.11 73 790 6 0.03 3 7 10 <1 0.52 2.07 448 44 4 0.03 6 83 06SF0-157 <10 1 0.21 890 5 06SF0-158 <10 <1 0.11 10 2.64 741 <1 0.02 61 1610 9 0.17 5 6 73 06SF0-159 <10 <1 0.09 20 0.59 678 0.01 4 1380 15 0.13 4 3 61 1 06SF0-160 <10 <1 0.08 10 0.49 490 1 0.01 6 1070 15 0.07 2 3 42 06SF0-161 <10 <1 0.07 10 0.57 491 1 0.01 10 1210 17 0.13 3 3 51 06SF0-162 <10 <1 0.11 10 1.45 857 2 0.03 63 1130 127 0.20 13 5 60 10 740 66 15 0.04 <2 8 124 06SF0-163 <1 0.48 <10 232 <1 0.11 1330 124 5 32 06SF0-165 10 <1 0.08 20 0.75 1335 11 0.03 5 610 0.17 5 2 19 52 06SF0-167 10 <1 0.08 10 1.05 798 0.04 16 980 0.09 3 4 06SF0-168 10 <1 0.08 10 1.36 892 3 0.04 25 1050 14 0.26 5 6 55 10 2 10 22 2 49 <1 0.07 10 796 0.04 1040 0.04 4 06SF0-169 1.03 10 <1 2 15 06SF0-170 0.10 10 1.15 894 0.05 18 1140 0.03 3 6 70 06SF0-171 10 <1 0.08 10 0.99 909 4 0.04 6 1140 73 0.14 <2 4 51 <1 839 2 23 2 52 06SE0-172 <10 0.07 10 1.09 0.04 6 970 0.02 4 06SF0-173 10 <1 0.12 10 0.62 1040 35 0.03 9 1110 248 0.23 <2 3 77 06SF0-174 10 <1 20 0.82 948 3 0.03 1090 30 0.02 4 4 62 0.10 11

Comments: NSS is non-sufficient sample.

10

<1

0.07

10

0.81

814

3

0.02

7

1110

20

0.07

3

4

28

06SF0-175



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CERTIFICATE OF ANALYSIS VA06104976

Project: Optima-Erksan

Sample Description	Method Analyte Units LOR	ME-ICP41 Ti % 0.01	ME-ICP41 TI ppm 10	ME-ICP41 U ppm 10	ME-ICP41 V ppm 1	ME-ICP41 W ppm 10	ME-ICP41 Zn ppm 2	
06SF0-134 06SF0-135 06SF0-136 06SF0-137 06SF0-138		0.13 0.11 0.11 0.03 0.06	<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	106 128 95 45 178	<10 <10 <10 <10 <10	57 78 40 75 74	
06SF0-139 06SF0-140 06SF0-141 06SF0-142 06SF0-143		0.12 0.12 0.08 0.12 0.04	<10 <10 <10 <10 <10	<10 <10 <10 10 <10	184 49 134 73 105	<10 <10 <10 <10 <10	74 72 83 77 104	
06SF0-144 06SF0-145 06SF0-146 06SF0-147 06SF0-148		0.02 0.06 0.06 0.05 0.05	<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	39 90 105 62 58	<10 <10 <10 <10 <10	49 71 61 51 48	
06SF0-149 06SF0-150 06SF0-151 06SF0-152 06SF0-153		0.08 0.10 0.08 0.09 0.05	<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	56 44 54 33 44	<10 <10 <10 <10 <10	75 41 69 68 63	
06SF0-154 06SF0-155 06SF0-156 06SF0-157 06SF0-158		0.12 0.14 0.12 0.15 0.10	<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	69 131 100 101 72	<10 10 <10 <10 <10	74 121 65 55 89	
06SF0-159 06SF0-160 06SF0-161 06SF0-162 06SF0-163		0.01 0.01 0.01 0.04 0.17	<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	34 26 31 69 161	<10 <10 <10 <10 <10	79 76 76 197 84	
06SF0-165 06SF0-167 06SF0-168 06SF0-169 06SF0-170		0.09 0.13 0.14 0.13 0.14	<10 <10 <10 <10 <10	<10 <10 <10 <10 10	44 70 95 67 74	<10 <10 <10 <10 <10	179 104 90 86 77	
06SF0-171 06SF0-172 06SF0-173 06SF0-174 06SF0-175		0.14 0.15 0.05 0.11 0.13	<10 <10 <10 <10 <10	10 <10 <10 <10 <10	73 75 35 49 58	<10 <10 <10 <10 <10	101 88 208 90 75	



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VA06104976

Project: Optima-Erksan

CERTIFICATE OF ANALYSIS

ME-ICP41 ME-ICP41 ME-ICP41 ME-ICP41 WEI-21 Au-AA23 ME-ICP41 ME-ICP41 ME-ICP41 ME-ICP41 ME-ICP41 ME-ICP41 ME-ICP41 ME-ICP41 ME-ICP41 Method Analyte Recvd Wt. Au Ag AI As в Ba Be BI Ca Cd Co Cr Cu Fe Units % kg ppm ppm ppm ppm pom ppm ppm 96 ppm ppm pom ppm % Sample Description LOR 0.02 0.005 0.2 0.01 10 10 0.5 0.01 0.5 0.01 2 2 1 1 1 06SF0-176 0.34 NSS 0.3 3.01 96 <10 220 0.9 2 0.90 <0.5 17 31 46 4.07 06SF0-177 0.54 < 0.005 < 0.2 1.45 4 <10 50 0.5 2 0.83 <0.5 9 17 16 3.66 <2 06SF0-178 < 0.005 1.52 16 <10 60 <0.5 0.63 < 0.5 9 14 3.36 0.64 0.2 7 60 06SF0-179 0.42 0.016 0.3 2.09 43 <10 70 0.9 <2 0.58 <0.5 19 34 4.71 06SF0-180 0.42 NSS 0.6 2.73 461 <10 120 2.0 <2 0.65 1.2 22 22 59 4.30 7 <2 <0.5 10 17 06SF0-182 0.52 < 0.005 0.2 1.59 <10 260 1.0 1.61 9 3.44 0.42 < 0.005 1.2 1.44 68 <10 120 0.7 2 0.35 1.2 13 7 16 4.22 06SF0-183 06SF0-184 0.56 0.012 0.4 1.05 3 <10 30 < 0.5 <2 0.59 < 0.5 9 12 15 2.35 40 <2 <0.5 8 22 06SF0-185 0.42 < 0.005 0.2 1.07 3 <10 0.5 0.66 15 2.72 20 06SF0-186 0.44 < 0.005 0.2 1.01 5 <10 30 0.5 2 0.63 <0.5 9 17 3.07 06SE0-187 < 0.005 02 1.08 5 <10 40 <0.5 2 0.60 <0.5 6 6 10 2.23 0.42 06SF0-188 0.38 NSS 1.2 1.44 6 <10 50 0.5 7 0.73 0.6 10 12 27 3.04 06SF0-189 0.56 < 0.005 0.3 1.03 <2 <10 30 0.5 <2 0.67 <0.5 8 17 16 2.93 62 70 16 16 25 06SE0-190 0.54 NSS 1.6 1.45 <10 1.1 2 0.51 1.0 4.04 06SF0-191 0.40 < 0.005 0.5 1.36 8 <10 40 0.5 <2 0.78 0.6 12 18 28 3.00 3.03 32 <10 <2 0.75 24 69 06SF0-192 0.017 12 70 3.5 6.6 45 4.97 0.40 06SF0-193 0.42 < 0.005 0.3 0.99 <2 <10 30 0.5 <2 0.65 <0.5 8 19 20 3.35 06SF0-194 0.46 < 0.005 0.2 1.04 <2 <10 30 < 0.5 <2 0.62 < 0.5 8 13 14 2.34 06SF0-195 0.34 NSS 0.6 1.50 4 <10 30 0.9 <2 0.63 0.6 12 23 28 2.66 06SF0-196 0.56 < 0.005 0.3 0.95 2 <10 30 0.6 <2 0.36 <0.5 5 5 14 1.72 06SF0-197 0.36 < 0.005 0.3 1.12 6 <10 40 <0.5 <2 0.62 0.7 9 6 12 2.69 2 06SE0-198 0.40 0.006 0.2 0.88 <10 40 0.5 <2 0.49 <0.5 4 7 10 1.84 50 10 06SF0-199 0.56 < 0.005 0.4 0.95 26 <10 < 0.5 2 0.50 0.8 5 5 2.23 0.40 < 0.005 <0.2 1.52 4 50 2 <0.5 9 13 15 2.93 06SF0-200 <10 0.5 0.73 13 06SF0-201 0.48 < 0.005 < 0.2 1.45 <2 <10 50 0.5 <2 0.85 <0.5 8 15 2.71 06SF0-202 0.44 NSS < 0.2 2.51 17 <10 50 <0.5 <2 2.10 <0.5 27 210 136 4.79 23 06GPA-059 0.84 < 0.005 0.2 0.84 6 <10 120 < 0.5 2 0.19 < 0.5 142 400 6.93 0.04 06GPA-060 0.48 < 0.005 < 0.2 0.25 <2 <10 10 <0.5 <2 < 0.5 115 558 12 5.77 06GPA-061 0.36 < 0.005 < 0.2 0.26 <2 <10 10 < 0.5 <2 0.04 < 0.5 93 651 11 4.86 0.58 16 360 <2 12 27 3.32 06GPA-063 0.020 0.8 0.63 <10 0.5 3.07 1.7 20 <2 <0.5 10 06GPA-069 0.42 < 0.005 0.2 1.11 17 <10 60 0.6 0.24 11 6 4.02 0.62 70 <2 <0.5 15 06GPA-070 < 0.005 < 0.2 1.11 53 <10 1.1 0.26 20 5 4.12 13 0.72 < 0.005 0.3 1.49 23 <10 90 < 0.5 <2 0.54 <0.5 13 9 3.87 06GPA-071 32 70 <2 15 5 12 < 0.2 <10 0.8 0.27 < 0.5 06GPA-072 0.72 < 0.005 1.14 4.00 20 <2 7 06GPA-074 0.50 0.011 < 0.2 1.00 <10 70 0.7 0.32 < 0.5 8 5 3.06 06GPA-076 0.68 < 0.005 < 0.2 0.91 18 <10 50 0.5 <2 0.36 <0.5 7 6 6 3.39 15 70 <2 10 06GPA-077 0.48 < 0.005 02 1.38 <10 0.6 0.52 <0.5 10 12 3.75 0.58 0.007 < 0.2 0.96 13 <10 60 0.5 <2 0.39 < 0.5 7 4 5 2.73 06GPA-078 06GPA-080 0.76 NSS <0.2 47 <10 70 0.5 <2 0.54 <0.5 29 223 90 4.96 2.76 06GPA-082 0.66 0.513 0.7 2.87 176 <10 150 0.6 <2 0.63 3.4 32 135 151 5.77



Sample Description

06SF0-176

06SF0-177

DRCED 170

06GPA-060

06GPA-061

06GPA-063

06GPA-069

06GPA-070

06GPA-071

06GPA-072

06GPA-074

06GPA-076

06GPA-077

06GPA-078

06GPA-080

06GPA-082

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ME-ICP41

κ

%

0.01

ME-ICP41

La

ppm

10

ME-ICP41

Mg

%

0.01

ME-ICP41

Mn

ppm

5

ME-ICP41

Mo

ppm

1

ALS Canada Ltd.

ME-ICP41

Ga

ppm

10

<10

<10

<10

<10

<10

<10

<10

<10

<10

<10

<10

10

10

<1

<1

<1

1

2

<1

3

<1

1

<1

<1

<1

2

Method Analyte

Units

LOR

212 Brooksbank Avenue North Vancouver BC V7J 2C1

ME-ICP41

Нg

ppm

1

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Page: 3 - B Total # Pages: 4 (A - C) Finalized Date: 31-OCT-2006 Account: OPTMIN

ME-ICP41

Sc

ppm

1

4

2

3

3

3

8

6

8

8

4

3

4

4

4

3

3

5

3

10

15

37

31

34

73

86

69

8

2

1

240

15

18

29

15

17

14

27

15

27

42

ME-ICP41

Sr

ppm

1

VA06104976

ME-ICP41

Sb

ppm

2

2

<2

<2

<2

2

6

3

<2

<2

4

<2

<2

<2

2

<2

<2

<2

<2

<2

7

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ME-ICP41

Na

%

0.01

ME-ICP41

NI

ppm

1

CERTIFICATE OF ANALYSIS

ME-ICP41

P

ppm

10

ME-ICP41

Pb

ppm

2

23

10

27

18

11

8

<2

2

<2

67

16

20

16

16

25

13

17

11

16

175

0.16

0.05

0.06

0.02

0.02

0.18

0.03

0.01

0.01

0.25

0.16

0.66

0.08

0.30

0.05

0.05

0.03

0.03

0.02

0.09

830

580

700

1030

1070

1820

380

110

40

860

800

880

1220

840

730

750

1050

730

1290

1290

ME-ICP41

s

%

0.01

<2 10 <1 0.19 10 1.06 1005 4 0.05 24 960 82 0.05 5 132 2 10 <1 0.14 10 0.60 503 1 0.08 12 1130 14 0.03 3 88 4.0 -1 0.00 10 n ee 822 0.05 16 0.04 3 59 1150 <2 22 6 1270 0.05 4 50 1250 99 0.09 2 4 104 56 0.01 3 1020 4 62 960 94 0.29 3 3 21 950 12 0.07 <2 2 49 18 2 1000 0.10 3 54 1030 20 0.13 <2 2 53 740 17 0.12 <2 3 38 910 27 0.11 3 4 51 1110 18 0.05 <2 2 59 1320 102 0.68 4 2 30 1170 30 0.22 2 3 50 1730 179 0.06 5 76 3 1110 22 0.06 3 2 57 1030 10 0.01 3 2 56 1010 39 0.06 2 3 60 25 2 23 480 0.01 3

06SF0-179 06SF0-190	10	<1	0.05	20	1.14	1035	3	0.05	25 25
005F0-160	10	1	0.13	20	0.00	1300	8	0.03	30
003F0-102	<10	1	0.10	20	0.83	1115	-	0.03	0
00SF0-183	<10	<1	0.10	20	0.79	834	1	0.02	4
00SFU-184	<10	<1	0.11	10	0.55	450	1	0.05	8
06SF0-185	<10	<1	0.11	10	0.55	465	1	0.05	8
06SF0-186	<10	<1	0.11	10	0.52	463	1	0.05	10
06SF0-187	<10	<1	0.17	10	0.50	468	1	0.05	2
06SF0-188	10	<1	0.23	10	0.76	635	2	0.05	7
06SF0-189	<10	<1	0.09	10	0.52	469	2	0.05	12
06SF0-190	<10	<1	0.12	20	0.89	1220	4	0.02	10
06SF0-191	<10	<1	0.11	10	0.75	619	3	0.03	10
06SF0-192	10	<1	0.14	70	1.56	2630	9	0.02	32
06SE0-193	<10	<1	0.09	10	0.50	479	1	0.04	9
06SE0-194	<10	<1	0.09	10	0.54	450	1	0.05	9
08SE0-105	10	<1	0.00	10	0.80	736	3	0.00	14
08550-108	<10	<1	0.14	10	0.00	440	2	0.04	4
00010-100	<10	~1	0.14	10	0.52			0.04	
06SF0-197	<10	<1	0.19	10	0.60	560	1	0.04	3
06SF0-198	<10	<1	0.15	10	0.31	368	<1	0.05	5
06SF0-199	<10	<1	0.10	20	0.31	498	1	0.05	3
06SF0-200	10	<1	0.14	10	0.63	538	3	0.07	8
06SF0-201	10	<1	0.14	10	0.62	481	1	0.08	7
06SF0-202	10	<1	0.15	10	2.86	1005	1	0.02	95
06GPA-059	<10	<1	0.03	<10	15.55	1495	1	0.01	2130

0.01

< 0.01

0.15

0.08

0.09

0.07

0.09

0.09

0.06

0.08

0.06

0.14

0.11

<10

<10

10

20

20

10

20

20

10

20

10

<10

10

18.05

17.90

0.76

0.58

0.44

0.88

0.53

0.54

0.53

0.71

0.56

2.84

2.23

991

779

1690

615

777

786

728

649

491

715

496

1140

1500

1

<1

2

5

9

2

6

2

1

2

1

3

2

0.01

0.01

0.05

0.01

0.02

0.03

0.01

0.01

0.01

0.02

0.01

0.02

0.01

2270

1900

34

10

11

6

6

3

1

4

1

92

63



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CERTIFICATE OF ANALYSIS VA06104976

Project: Optima-Erksan

Sample Description	Method Analyte Units LOR	ME-ICP41 Ti % 0.01	ME-ICP41 TI ppm 10	ME-ICP41 U ppm 10	ME-ICP41 V ppm 1	ME-ICP41 W ppm 10	ME-ICP41 Zn ppm 2	
06SF0-176 06SF0-177 06SF0-178 06SF0-179 06SF0-180		0.07 0.17 0.14 0.02 0.02	<10 <10 <10 <10 <10	10 <10 <10 <10 40	72 71 52 76 61	<10 <10 <10 <10 <10	168 58 74 115 278	
06SF0-182 06SF0-183 06SF0-184 06SF0-185 06SF0-185		0.10 0.03 0.13 0.14 0.15	<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	45 43 40 46 52	<10 <10 <10 <10 <10	87 176 70 73 70	
06SF0-187 06SF0-188 06SF0-189 06SF0-190 06SF0-191		0.16 0.18 0.16 0.05 0.12	<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	42 61 49 31 48	<10 <10 <10 <10 <10	83 119 69 170 94	
06SF0-192 06SF0-193 06SF0-194 06SF0-195 06SF0-195		0.04 0.16 0.13 0.11 0.10	<10 <10 <10 <10 <10	80 <10 <10 10 <10	76 55 38 45 22	<10 <10 <10 <10 <10	410 71 65 98 67	
06SF0-197 06SF0-198 06SF0-199 06SF0-200 06SF0-201		0.19 0.11 0.09 0.14 0.17	<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	53 28 41 55 55	<10 <10 <10 <10 <10	100 46 78 63 56	
06SF0-202 06GPA-059 06GPA-060 06GPA-061 06GPA-063		0.10 0.02 ⊲0.01 ⊲0.01 ⊲0.01	<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	105 36 19 20 51	<10 <10 <10 <10 <10	70 88 37 28 354	
06GPA-069 06GPA-070 06GPA-071 06GPA-072 06GPA-074		0.05 0.05 0.13 0.06 0.06	<10 <10 <10 <10 <10	<10 20 <10 10 <10	29 26 65 31 33	<10 <10 <10 <10 <10	74 86 67 71 83	
06GPA-076 06GPA-077 06GPA-078 06GPA-080 06GPA-082		0.07 0.13 0.08 0.11 0.03	<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	49 71 32 124 143	<10 <10 <10 <10 <10	55 63 60 83 272	



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Project: Optima-Erksan

CERTIFICATE OF ANALYSIS VA06104976

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	Au-AA23 Au ppm 0.005	ME-ICP41 Ag ppm 0.2	ME-ICP41 Al % 0.01	ME-ICP41 As ppm 2	ME-ICP41 B ppm 10	ME-ICP41 Ba ppm 10	ME-ICP41 Be ppm 0.5	ME-ICP41 BI ppm 2	ME-ICP41 Ca % 0.01	ME-ICP41 Cd ppm 0.5	ME-ICP41 Co ppm 1	ME-ICP41 Cr ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Fe % 0.01
06GPA-086 06WM0-084 06WM0-085 06WM0-086 06WM0-087		0.62 0.58 1.12 0.82 1.10	0.011 0.008 NSS <0.005 0.005	0.3 <0.2 <0.2 <0.2 <0.2	2.01 2.27 3.24 4.05 1.73	43 6 <2 3 15	<10 <10 10 10 20	160 170 50 60 50	0.6 0.5 ⊲0.5 ⊲0.5 ⊲0.5	8 8 8 8 8	0.78 0.43 1.24 1.84 0.59	<0.5 <0.5 <0.5 <0.5 <0.5	32 53 39 39 65	90 386 303 226 770	148 36 73 95 27	5.68 6.90 4.37 5.05 5.49
08WM0-088 08WM0-089 08WM0-070 08WM0-071 08WM0-072		0.96 0.82 0.56 0.58 0.92	<0.005 <0.005 0.009 0.006 NSS	<0.2 <0.2 0.3 <0.2 <0.2	1.58 2.72 2.14 2.22 2.47	2 <2 50 44 4	30 10 20 30 20	40 50 40 40 60	<0.5 <0.5 <0.5 <0.5 <0.5	8 8 8 8 8	0.60 1.13 0.70 0.73 1.07	<0.5 <0.5 <0.5 <0.5 <0.5	66 40 54 57 54	837 371 731 716 601	27 56 37 45 42	4.96 4.58 4.70 4.94 5.24
08WM0-073 08WM0-074 08WM0-075 08WM0-076 08WM0-077		0.86 1.00 1.04 1.00 0.94	0.018 NSS 0.050 NSS <0.005	0.3 <0.2 <0.2 <0.2 <0.2	2.34 2.77 1.90 2.41 1.00	16 6 4 8 2	20 10 10 10 <10	90 50 80 50 120	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5	8 8 8 8 8 8	0.66 1.21 0.60 1.02 0.29	<0.5 <0.5 <0.5 <0.5 <0.5	57 44 60 48 95	581 461 707 604 356	44 51 25 44 30	4.93 4.86 5.56 5.11 6.04
06WM0-078 06WM0-079		0.78 0.70	<0.005 <0.005	<0.2 <0.2	0.29 0.30	12 <2	<10 <10	<10 <10	<0.5 <0.5	<2 <2	0.29 0.25	<0.5 <0.5	93 96	957 964	12 12	5.11 5.33


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212 Brooksbank Avenue North Vancouver BC V7J 2C1 To: OPTIMA MINERALS INC. #307-1500 HARDY STREET KELOWNA BC V1Y 2H2 Page: 4 - B Total # Pages: 4 (A - C) Finalized Date: 31-OCT-2006 Account: OPTMIN

Project: Optima-Erksan

CERTIFICATE OF ANALYSIS VA06104976

000-0000 000MA0-005   <	Sample Description	Method Analyte Units LOR	ME-ICP41 Ga ppm 10	ME-ICP41 Hg ppm 1	ME-ICP41 K % 0.01	ME-ICP41 La ppm 10	ME-ICP41 Mg % 0.01	ME-ICP41 Mn ppm 5	ME-ICP41 Mo ppm 1	ME-ICP41 Na % 0.01	ME-ICP41 NI ppm 1	ME-ICP41 P ppm 10	ME-ICP41 Pb ppm 2	ME-ICP41 S % 0.01	ME-ICP41 Sb ppm 2	ME-ICP41 Sc ppm 1	ME-ICP41 Sr ppm 1
DeVMAD-088 <10 <11 0.02 <10 175 816 <1 0.02 1280 3 0.02 <2 9 23   DeVMAD-070 10 1 0.04 10 8.00 7764 2 0.02 460 550 5 0.02 3 0.02 <3 0.02 3 0.02 3 0.05 11 444   DeVMAD-070 10 1 0.04 10 9.30 7764 1 0.02 466 510 3 0.05 11 444   DeVMAD-071 10 1 0.04 10 9.55 811 2 0.03 848 270 <2 0.02 3 10 25   DeVMAD-073 10 2 0.05 10 0.02 460 4 0.02 2 0.02 3 10 23   DeVMAD-075 10 2 0.04 10 17.5 1010 0.02 484<	08GPA-088 06WM0-084 06WM0-085 06WM0-086 06WM0-087		<10 10 10 10 10	<1 2 <1 1 <1	0.11 0.06 0.04 0.05 0.03	10 10 <10 <10 <10	1.52 5.16 5.03 4.29 12.45	1320 1500 822 939 828	3 1 1 1	0.02 0.02 0.02 0.02 0.02 0.03	87 734 360 295 1170	1450 450 310 340 280	18 6 4 2 2	0.09 0.02 0.03 0.03 0.02	2 V V 2 V	13 10 10 13 10	61 22 18 26 24
DeWM0-073 10 2 0.05 10 0.80 1 0.02 049 400 5 0.03 2 11 32   DeWM0-074 <10	06WM0-068 06WM0-069 06WM0-070 06WM0-071 06WM0-072		<10 10 10 10 10	<1 <1 1 <1	0.02 0.05 0.04 0.04 0.04	<10 <10 10 10 <10	13.75 5.00 9.30 10.55 9.55	819 794 708 803 811	<1 2 1 1 2	0.02 0.02 0.02 0.02 0.02 0.03	1260 400 965 1060 848	280 350 510 620 270	3 5 3 4 2	0.02 0.02 0.05 0.06 0.02	<2 3 12 9 3	9 9 11 11 10	23 22 44 46 25
08WM0-078 <10 1 <0.01 <10 18.50 785 1 <0.01 1920 40 <2 0.01 3 8 1   08WM0-079 <10	06WM0-073 06WM0-074 06WM0-075 06WM0-076 06WM0-077		10 <10 10 <10 <10	2 <1 2 <1 <1	0.05 0.03 0.04 0.03 0.04	10 <10 10 <10 10	9.50 6.32 10.70 8.78 13.75	1030 898 828 796 1010	1 1 <1 1 1	0.02 0.02 0.03 0.02 0.02	949 485 1070 729 1800	400 340 290 300 570	5 4 2 3 2	0.03 0.02 0.02 0.02 0.02 0.03	2 V 3 V V	11 10 10 9 7	32 23 28 20 10
	06WM0-078 06WM0-079		<10 <10	1	<0.01 <0.01	<10 <10	18.50 19.55	785 835	1	<0.01 0.01	1920 1930	40 50	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	0.01	3 <2	8	1



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CERTIFICATE OF ANALYSIS VA06104976

Project: Optima-Erksan

Sample Description	Method Analyte Units LOR	ME-ICP41 TI % 0.01	ME-ICP41 TI ppm 10	ME-ICP41 U ppm 10	ME-ICP41 V ppm 1	ME-ICP41 W ppm 10	ME-ICP41 Zn ppm 2	
06GPA-086		0.02	<10	<10	119	<10	102	
06WM0-065		0.07	<10	<10	85 94	<10	70	
06WMD-066		0.22	<10	<10	131	<10	82	
06WM0-067		0.08	<10	<10	74	<10	48	
06WM0-068		0.07	<10	<10	63	<10	44	
06WM0-069		0.27	<10	<10	112	<10	67	
06WM0-070		0.07	<10	<10	90	<10	60	
06WM0-071		0.08	<10	<10	87	<10	63	
06WM0-072		0.15	<10	<10	93	<10	55	
06WM0-073		0.08	<10	<10	82	<10	55	
06WM0-074		0.20	<10	<10	101	<10	62	
06WM0-075		0.11	<10	<10	87	<10	60	
06WM0-076		0.15	<10	<10	90	<10	5/	
0000000-077		0.05	10	<10	42	<10	72	
06WM0-078		<0.01	<10	<10	23	<10	32	
00/////01/9		<0.01	<10	<10	24	10	33	



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CE	RTIFICATE VA061048	60		SAMPLE PREPARATION	N
			ALS CODE	DESCRIPTION	
Project: Optima-Erksan P.O. No.: This report is for 32 Rock san 22-SEP-2006. The following have access	nples submitted to our lab in Vanc to data associated with this c	ouver, BC, Canada on	WEI-21 LOG-22 CRU-31 SPL-21 PUL-31	Received Sample Weight Sample login - Rcd w/o BarCode Fine crushing - 70% <2mm Split sample - riffle splitter Pulverize split to 85% <75 um	
ACCOUNTS PAYABLE PETER SHORTS	JOHN BUCKLE	GARY PAYLE		ANALYTICAL PROCEDUR	ES
			ALS CODE	DESCRIPTION	INSTRUMENT
			ME-ICP41 Au-AA23	34 Element Aqua Regia ICP-AES Au 30g FA-AA finish	ICP-AES AAS

To: OPTIMA MINERALS INC. ATTN: GARY PAYLE #307-1500 HARDY STREET KELOWNA BC V1Y 2H2

Popula Bogo

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature: Keith Rogers, Executive Manager Vancouver Laboratory



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VA06104860

Project: Optima-Erksan

CERTIFICATE OF ANALYSIS

ME-ICP41 ME-ICP41 ME-ICP41 ME-ICP41 ME-ICP41 ME-ICP41 ME-ICP41 ME-ICP41 ME-ICP41 WEI-21 Au-AA23 ME-ICP41 ME-ICP41 ME-ICP41 ME-ICP41 Method Analyte Recvd Wt. Au Ag AI As в Ba Be BI Са Cđ Co Cr Cu Fe Units % kg ppm ppm ppm ppm pom ppm ppm % ppm ppm pom ppm % Sample Description LOR 0.02 0.005 0.2 0.01 2 10 10 0.5 0.01 0.5 0.01 2 1 1 1 <2 <2 06GPA056 0.88 < 0.005 < 0.2 0.06 90 20 < 0.5 0.35 <0.5 107 155 7 5.87 0.02 25 18 06GPA057 1.42 < 0.005 < 0.2 0.15 <2 <10 50 < 0.5 <2 <0.5 1 0.76 1300 <2 4.90 52 8 06GPA058 < 0.005 < 0.2 0.17 10 10 <0.5 < 0.5 336 3.30 1.38 <2 17 16 06GPA065 1.44 < 0.005 < 0.2 1.90 46 10 80 0.5 3.30 <0.5 8 4.32 06GPA066 0.98 < 0.005 0.2 0.55 33 10 80 0.5 2 7.41 < 0.5 5 8 11 4.22 5 0.5 <2 0.30 2 3 3 06GPA067 1.86 < 0.005 <0.2 0.43 <10 110 <0.5 0.67 0.94 < 0.005 < 0.2 1.27 7 <10 80 0.5 <2 1.73 <0.5 8 6 14 2.43 06GPA068 3 06GPA073 1.68 < 0.005 < 0.2 0.38 2 <10 40 0.5 <2 0.08 < 0.5 <1 5 0.88 50 <2 <0.5 3 06GPA075 1.14 < 0.005 < 0.2 0.27 9 <10 0.6 0.11 <1 8 0.58 06GPA079 2.10 < 0.005 < 0.2 0.63 7 <10 50 0.7 <2 0.51 <0.5 <1 5 3 1.25 06GPA081 0.006 <0.2 1.91 7 <10 70 0.7 <2 0.78 <0.5 9 13 22 2.56 2.16 06GPA083 2.06 0.007 0.2 0.67 21 <10 70 < 0.5 <2 0.47 < 0.5 7 9 39 2.35 06GPA084 1.48 < 0.005 0.4 0.45 5 <10 40 <0.5 <2 0.65 <0.5 17 7 115 2.69 30 <0.5 <2 <0.5 7 16 70 06GPA085 2.36 < 0.005 0.3 0.67 16 <10 1.52 1.76 06GPA088 1.14 < 0.005 <0.2 0.98 103 <10 100 0.5 <2 0.39 <0.5 3 7 7 2.30 < 0.005 0.72 21 <10 <2 0.34 <0.5 5 9 2.43 06GPA089 3.8 70 <0.5 7 1.02 06GPA090 1.68 < 0.005 1.1 1.23 46 <10 90 <0.5 <2 0.02 <0.5 4 8 10 3.69 06GPA091 1.74 < 0.005 0.3 1.31 9 <10 80 < 0.5 <2 1.08 <0.5 13 9 64 3.87 06GPA092 2.40 < 0.005 < 0.2 0.77 61 <10 30 0.9 <2 0.99 < 0.5 16 7 31 4.12 26 06GPA093 5.12 < 0.005 0.3 1.09 78 <10 40 <0.5 <2 0.48 <0.5 15 6 5.28 06GPA094 3.14 < 0.005 0.5 0.34 <2 <10 60 <0.5 <2 0.06 <0.5 <1 11 1 0.49 30 7 06GPA095 1.56 < 0.005 <0.2 0.84 <10 140 0.6 <2 0.21 <0.5 2 7 2.07 39 <2 2 11 06GPA096 0.78 < 0.005 0.5 1.30 <10 80 0.8 0.30 13.2 3 2.52 0.92 < 0.005 0.94 9 <10 0.6 <2 0.61 <0.5 2 8 5 06GPA097 02 110 2.10 06GPA098 0.82 < 0.005 0.3 0.33 <2 <10 10 < 0.5 <2 0.01 <0.5 <1 7 3 0.58 06GPA099 1.02 < 0.005 1.6 2.38 7 <10 90 0.7 3 0.73 18.4 10 41 42 3.34 32 23 06GPA100 1.82 < 0.005 0.2 1.65 <10 80 0.6 <2 0.27 < 0.5 14 10 4.33 06GPA101 1.56 < 0.005 < 0.2 1.26 27 <10 100 <0.5 <2 0.24 <0.5 10 9 20 4.10 06GPA102 0.94 < 0.005 < 0.2 1.59 15 <10 210 0.8 <2 1.31 < 0.5 12 8 24 3.43 1.40 0.6 155 0.5 <2 <0.5 20 121 51 06GPA103 0.009 2.17 <10 40 0.96 4.93 2 60 <2 3 18 06GPA104 1.38 < 0.005 < 0.2 0.82 2 <10 < 0.5 0.06 < 0.5 1.55 2.00 0.40 3 160 <0.5 <2 06GPA105 < 0.005 < 0.2 <10 0.01 <0.5 <1 6 <1 1.09



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Project: Optima-Erksan

CERTIFICATE OF ANALYSIS VA06104860

Sample Description	Method Analyte Units LOR	ME-ICP41 Ga ppm 10	ME-ICP41 Hg ppm 1	ME-ICP41 K % 0.01	ME-ICP41 La ppm 10	ME-ICP41 Mg % 0.01	ME-ICP41 Mn ppm 5	ME-ICP41 Mo ppm 1	ME-ICP41 Na % 0.01	ME-ICP41 NI ppm 1	ME-ICP41 P ppm 10	ME-ICP41 Pb ppm 2	ME-ICP41 S % 0.01	ME-ICP41 Sb ppm 2	ME-ICP41 Sc ppm 1	ME-ICP41 Sr ppm 1
06GPA056 06GPA057 06GPA058 06GPA065 06GPA065		<10 <10 <10 <10 <10	1 <1 6 5 1	0.01 0.11 0.04 0.13 0.11	<10 <10 <10 20 10	15.55 0.06 9.31 1.93 0.43	984 38 640 1790 3520	<1 <1 <1 2 2	0.03 <0.01 0.01 0.07 0.01	1820 11 1160 12 16	30 70 10 1070 420		0.04 0.14 0.65 4.80 4.84	3 <2 123 11 7	3 1 5 6 2	17 3 152 50 63
06GPA067 06GPA068 06GPA073 06GPA075 06GPA079		<10 10 <10 <10 <10	<1 1 1 1	0.25 0.22 0.24 0.22 0.30	20 30 20 30 30	0.02 0.65 0.01 0.01 0.06	58 551 221 159 535	3 <1 5 1 <1	0.03 0.04 0.05 0.03 0.04	2 1 1 1	130 820 90 50 140	10 8 26 20 19	0.21 0.34 0.14 0.01 0.04	<2 <2 2 2 2 2	1 2 1 <1 1	20 64 4 7 13
06GPA081 06GPA083 06GPA084 06GPA085 06GPA085		10 <10 <10 <10 <10	1 <1 1 <1	0.16 0.21 0.07 0.05 0.19	10 10 10 <10 20	1.08 0.32 0.24 0.13 0.25	511 179 143 144 603	1 33 187 172 6	0.10 0.12 0.10 0.05 0.06	11 3 18 14 2	1080 800 1260 1260 480	11 9 6 8 20	0.19 0.89 1.28 0.64 0.30	3 2 <2 4 3	2 2 2 1 2	109 35 40 27 18
06GPA089 06GPA090 06GPA091 06GPA092 06GPA093		<10 <10 <10 <10 <10	1 <1 <1 <1	0.19 0.33 0.40 0.33 0.15	20 10 10 10 10	0.31 0.27 1.05 0.42 0.21	1050 1290 396 577 583	3 2 2 1 5	0.05 0.01 0.04 0.03 0.18	<1 5 15 12 <1	530 310 1640 1370 90	20 21 8 12 14	1.58 0.76 3.58 3.94 5.44	2 <2 3 5	3 2 2 2 1	12 5 33 69 41
06GPA094 06GPA095 06GPA098 06GPA097 06GPA098		<10 <10 10 10 <10	<1 <1 <1 <1 1	0.21 0.25 0.25 0.19 0.16	10 20 40 30 10	0.01 0.13 0.37 0.30 0.01	74 249 1300 777 181	9 6 3 3 2	0.04 0.09 0.06 0.06 0.06	<1 <1 2 3 <1	40 400 450 330 10	64 100 54 18 24	0.08 0.99 0.03 0.19 0.10	<2 2 2 2 2 2 2	<1 1 2 2 <1	4 19 12 22 2
06GPA099 06GPA100 06GPA101 06GPA102 06GPA103		10 <10 <10 <10 10	1 1 <1 <1	0.14 0.40 0.37 0.34 0.21	20 10 10 10 10	1.32 1.05 0.79 0.89 1.43	1740 432 336 704 457	2 3 2 <1 10	0.17 0.02 0.02 0.02 0.15	17 13 10 11 53	1200 1490 1610 1900 1630	136 11 17 12 21	0.54 3.35 2.46 1.68 2.86	<2 6 4 5 4	2 3 2 3 7	61 14 12 107 70
08GPA104 08GPA105		<10 <10	<1 <1	0.15 0.27	10 20	0.29 0.02	222 30	<1 2	0.02 0.03	1 <1	260 60	5 13	0.01 0.19	♥	1 1	3 4



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CERTIFICATE OF ANALYSIS VA06104860

Project: Optima-Erksan

	Method	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	
	Analyte	TI	TI	U	v	w	Zn	
Samula Decerintian	Units	%	ppm	ppm	ppm	ppm	ppm	
Sample Description	LOR	0.01	10	10	1	10	2	
06GPA056		<0.01	<10	<10	4	<10	19	
06GPA057		0.04	<10	<10	3	<10	10	
00GFA036		<0.01	<10	<10	10	<10	14	
DECRADES		0.30	<10	<10	42	<10	8/	
00GPA000		0.10	<10	<10		<10	31	
DEGPADE/		<0.01	<10	<10	2	<10	16	
06GPA068		<0.01	<10	<10	37	<10	08	
00GFA075		<0.01	<10	10		<10	20	
06GPA075		<0.01	<10	10	1	<10	14	
U0GFAU/9		0.02	<10	<10	1	<10	40	
06GPA081		0.10	<10	<10	34	<10	59	
06GPA083		0.16	<10	<10	34	<10	24	
08GPA084		0.16	<10	<10	43	<10	16	
06GPA085		0.14	<10	10	49	<10	17	
U6GPAU88		<0.01	<10	<10	8	<10	55	
06GPA089		0.03	<10	<10	22	<10	32	
06GPA090		0.01	<10	<10	18	<10	49	
06GPA091		<0.01	<10	<10	28	<10	38	
06GPA092		<0.01	<10	<10	13	<10	100	
06GPA093		0.02	<10	<10	5	<10	24	
06GPA094		<0.01	<10	<10	<1	<10	15	
06GPA095		0.01	<10	<10	5	<10	81	
06GPA096		<0.01	<10	<10	10	<10	610	
06GPA097		0.01	<10	<10	11	<10	61	
06GPA098		<0.01	<10	<10	<1	<10	22	
06GPA099		0.07	<10	<10	59	<10	1940	
06GPA100		0.01	<10	<10	24	<10	46	
06GPA101		0.02	<10	<10	19	<10	40	
06GPA102		0.04	<10	<10	21	<10	77	
06GPA103		0.27	<10	<10	98	<10	47	
06GPA104		0.01	<10	<10	13	<10	31	
06GPA105		<0.01	<10	<10	1	<10	15	



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CEI	RTIFICATE VA0609137	78		SAMPLE PREPARATION	
			ALS CODE	DESCRIPTION	
Project: Chilkoot RedCap P.O. No.: This report is for 125 Stream S Canada on 15-SEP-2006. The following have access to J. BUCKLE PETER SHORTS	ediment samples submitted to ou to data associated with this ce JOHN BUCKLE	ur lab in Vancouver, BC, ertificate: J. BUCKLE	WEI-21 LOG-22 SCR-41 LOG-24 CRU-31 SPL-21	Received Sample Weight Sample login - Rcd w/o BarCode Screen to -180um and save both Pulp Login - Rcd w/o Barcode Fine crushing - 70% <2mm Split sample - riffle splitter	
				ANALYTICAL PROCEDURE	ES
			ALS CODE	DESCRIPTION	INSTRUMENT
			Au-AA23 ME-ICP41	Au 30g FA-AA finish 34 Element Aqua Regia ICP-AES	AAS ICP-AES

To: XPLORER RESOURCES INC. ATTN: J. BUCKLE 307 - 1500 HARDY STREET KELOWNA BC V1Y 8H2

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Plack No

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature: Keith Rogers, Executive Manager Vancouver Laboratory



Sample Description

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ME-ICP41

Ag

ppm

0.2

ME-ICP41

AI

%

0.01

ME-ICP41

As

ppm

2

ME-ICP41

в

ppm

10

ME-ICP41

ва

ppm

10

ALS Canada Ltd.

WEI-21

Recvd Wt.

kg

0.02

0.60

0.58

0.46

0.62

0.60

< 0.005

0.005

< 0.005

< 0.005

< 0.005

< 0.2

0.4

0.2

0.2

<0.2

0.81

2.17

1.21

1.15

0.81

12

94

58

46

24

Method

Analyte

Units

LOR

212 Brooksbank Avenue North Vancouver BC V7J 2C1

Au-AA23

Au

ppm

0.005

To: XPLORER RESOURCES INC. 307 - 1500 HARDY STREET KELOWNA BC V1Y 8H2 Page: 2 - A Total # Pages: 5 (A - C) Finalized Date: 13-OCT-2006 Account: XPLRES

ME-ICP41

Cu

ppm

1

ME-ICP41

Fe

%

0.01

3.38 7.57 5.64 3.44 3.60 2.23 3.24 2.05 1.85 5.09 2.98 2.49 4.32 3.51 6.53 1.53 3.07 2.48 1.40 5.09 2.40 5.46 3.40 3.45 2.91 3.95 2.59 3.06 3.39 2.67 3.52 2.50 3.68 2.64 4.51

VA06091378

ME-ICP41

Cr

ppm

1

Project: Chilkoot RedCap

ME-ICP41

ВΙ

ppm

2

ME-ICP41

Ве

ppm

0.5

CERTIFICATE OF ANALYSIS

ME-ICP41

Cd

ppm

0.5

ME-ICP41

Co

ppm

1

ME-ICP41

Са

%

0.01

0.41

3.58

0.53

0.41

0.96

< 0.5

<0.5

<0.5

< 0.5

<0.5

4

22

9

9

8

6

56

18

16

10

19

96

37

40

49

2.76

5.09

3.09

3.27

4.46

<2

<2

<2

<2

<2

06WM0-001	0.60	<0.005	<0.2	0.81	13	<10	80	<0.5	8 8 8 8 8	0.27	<0.5	4	14	5
06WM0-002	0.60	<0.005	0.3	1.23	27	<10	70	<0.5		0.57	<0.5	28	260	37
06WM0-003	0.62	<0.005	<0.2	0.73	3	<10	30	0.5		0.34	<0.5	5	34	3
06WM0-004	0.50	0.028	0.3	1.98	211	<10	120	0.7		0.51	0.8	11	18	34
06WM0-005	0.70	<0.005	<0.2	0.74	9	<10	60	0.5		0.32	<0.5	5	13	4
06WM0-006 06WM0-007 06WM0-008 06WM0-009 06WM0-010	0.48 0.46 0.62 0.06 0.68	<0.005 <0.005 0.006 <0.005 0.067	<0.2 0.4 <0.2 0.6 0.4	0.78 1.49 0.48 1.40 2.61	3 6 20 22 218	<10 <10 <10 <10 <10	70 100 50 140 50	0.5 0.8 ⊲0.5 0.9 0.5	8 8 8 8 8	0.26 0.40 0.09 1.79 1.17	<0.5 3.5 <0.5 1.7 0.8	4 11 2 10 22	9 37 7 46 52	3 70 3 131 74
06WM0-011	0.26	0.010	0.7	2.40	73	<10	180	<0.5	8 8 8 8 8	0.78	0.6	14	42	76
06WM0-012	0.68	<0.005	0.2	1.30	60	<10	100	<0.5		0.52	<0.5	8	16	17
06WM0-013	0.46	0.010	<0.2	2.69	21	<10	140	<0.5		0.69	<0.5	16	103	68
06WM0-014	0.18	0.025	<0.2	2.72	34	<10	150	<0.5		1.12	0.5	20	85	41
06WM0-015	0.50	<0.005	<0.2	1.09	111	<10	30	<0.5		0.28	<0.5	93	701	18
06WM0-016 06WM0-017 06WM0-018 06WM0-019 06WM0-02D	0.56 0.52 0.64 0.54 0.50	<0.005 <0.005 <0.005 <0.005 <0.005	<0.2 <0.2 <0.2 <0.2 <0.2	0.56 0.42 0.64 0.39 0.88	5 3 3 4 32	<10 <10 <10 <10 <10	40 20 30 30 20	<0.5 <0.5 <0.5 <0.5 <0.5	2 \$2 \$2 \$2 \$2 \$2 \$2 \$2 \$2	0.13 0.18 0.19 0.15 0.56	<0.5 <0.5 <0.5 <0.5 <0.5	3 1 2 2 6	2 5 13 2 28	6 3 3 2 20
06WM0-021	0.62	<0.005	<0.2	0.66	7	<10	30	<0.5	8 8 8 8 8	0.20	<0.5	2	11	4
06WM0-022	0.42	<0.005	<0.2	0.89	39	<10	30	<0.5		0.43	<0.5	7	32	18
06WM0-023	0.72	<0.005	0.2	2.14	35	<10	60	0.9		0.54	<0.5	13	33	29
06WM0-024	0.68	0.010	<0.2	1.65	72	<10	80	2.3		0.32	1.7	9	15	4
06WM0-025	0.58	<0.005	<0.2	0.65	5	<10	30	0.6		0.22	<0.5	2	8	6
06WM0-026	0.66	0.007	<0.2	1.60	59	<10	60	1.0	8 8 8 8 8	0.23	<0.5	5	13	3
06WM0-027	0.66	0.009	0.4	0.92	15	<10	80	1.2		0.34	0.5	3	11	22
06WM0-028	0.70	<0.005	<0.2	0.47	2	<10	20	⊲0.5		0.19	<0.5	2	3	5
06WM0-029	0.70	0.005	0.2	1.90	21	<10	50	2.1		0.41	0.5	4	10	11
06WM0-030	0.24	<0.005	<0.2	0.58	<2	<10	30	⊲0.5		0.22	<0.5	2	6	7
06WM0-031	0.72	<0.005	<0.2	0.71	2	<10	30	0.5	8 8 8 8 8	0.25	<0.5	3	9	6
06WM0-032	0.54	<0.005	<0.2	0.77	10	<10	30	⊲0.5		0.28	0.5	4	10	14
06WM0-033	0.68	<0.005	0.2	1.22	41	<10	90	0.8		0.32	<0.5	7	11	11
06WM0-034	0.54	<0.005	<0.2	1.19	31	<10	50	0.7		0.37	0.5	3	9	10
06WM0-035	0.64	<0.005	<0.2	1.41	56	<10	160	0.6		1.31	<0.5	18	15	78

<10

10

<10

<10

<10

30

130

40

50

140

<0.5

0.5

<0.5

<0.5

<0.5

Comments: NSS is non-sufficient sample.

06WM0-036

06WM0-037

06WM0-038

06WM0-039

06WM0-040



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212 Brooksbank Avenue North Vancouver BC V7J 2C1 To: XPLORER RESOURCES INC. 307 - 1500 HARDY STREET KELOWNA BC V1Y 8H2 Page: 2 - B Total # Pages: 5 (A - C) Finalized Date: 13-OCT-2006 Account: XPLRES

Project: Chilkoot RedCap

CERTIFICATE OF ANALYSIS VA06091378

Sample Description	Method Analyte Units LOR	ME-ICP41 Ga ppm 10	ME-ICP41 Hg ppm 1	ME-ICP41 K % 0.01	ME-ICP41 La ppm 10	ME-ICP41 Mg % 0.01	ME-ICP41 Mn ppm 5	ME-ICP41 Mo ppm 1	ME-ICP41 Na % 0.01	ME-ICP41 NI ppm 1	ME-ICP41 P ppm 10	ME-ICP41 Pb ppm 2	ME-ICP41 S % 0.01	ME-ICP41 Sb ppm 2	ME-ICP41 Sc ppm 1	ME-ICP41 Sr ppm 1
06WM0-001 06WM0-002 06WM0-003 06WM0-004 06WM0-005		<10 <10 10 10 <10	ণ ণ ণ ণ	0.17 0.06 0.09 0.29 0.06	30 <10 60 30 30	0.27 1.59 0.28 0.65 0.30	525 548 519 707 477	2 1 2 6 1	0.01 0.02 0.01 0.03 0.01	5 59 14 20 6	600 500 660 870 790	32 20 13 17 12	0.01 0.02 <0.01 0.03 <0.01	8 8 8 8 8	2 7 2 5	14 32 18 69 47
06WM0-006 06WM0-007 06WM0-008 06WM0-009 06WM0-010		<10 10 <10 <10 10	<1 <1 1 <1 1	0.06 0.18 0.07 0.09 0.10	30 30 40 20 20	0.32 0.62 0.09 0.60 1.54	494 882 338 438 890	2 2 5 4 4	0.01 0.01 0.02 0.03	5 20 5 43 25	670 900 220 1290 830	12 41 11 18 35	<0.01 0.01 <0.01 0.24 0.17	V V V 2 3	1 4 1 3 9	39 35 7 117 52
06WM0-011 06WM0-012 06WM0-013 06WM0-014 06WM0-015		10 <10 10 10 <10	1 <1 1 1	0.17 0.20 0.38 0.28 0.02	10 10 10 10 <10	0.93 0.54 2.01 1.72 13.10	518 560 659 603 978	23 2 2 1 1	0.04 0.05 0.05 0.08 0.01	23 9 56 78 1700	1100 690 1070 1190 400	15 14 12 14 3	0.05 0.06 0.02 0.04 0.03	8888	5 4 5 9	50 29 59 77 8
06WM0-016 06WM0-017 06WM0-018 06WM0-019 06WM0-020		<10 <10 <10 <10 <10	<1 <1 1 <1 <1	0.10 0.04 0.08 0.07 0.05	10 30 20 20 30	0.16 0.16 0.25 0.11 0.70	482 497 631 354 536	1 6 4 1 5	0.03 0.01 0.01 0.02 0.01	2 4 9 <1 18	330 510 490 310 810	17 16 18 9 15	<0.01 <0.01 <0.01 <0.01 0.04	88888	2 2 3 2 3	7 8 6 7 20
06WM0-021 06WM0-022 06WM0-023 06WM0-024 06WM0-025		<10 <10 10 <10 <10	<1 1 1 1	0.06 0.06 0.10 0.06 0.06	20 30 20 30 30	0.24 0.67 0.47 0.16 0.23	606 579 1800 5400 808	5 7 28 84 6	0.01 0.01 0.02 0.01 0.01	9 20 25 10 5	490 860 640 430 480	22 15 22 42 22	<0.01 0.04 0.04 0.01 <0.01	8 8 8 8 8	2 3 3 2 3	8 16 25 15 10
06WM0-026 06WM0-027 06WM0-028 06WM0-029 06WM0-030		10 <10 <10 10 <10	1 <1 <1 <1 1	0.05 0.13 0.05 0.08 0.04	40 40 30 40 20	0.19 0.27 0.18 0.38 0.23	3280 1205 631 1480 600	50 8 5 3 4	0.01 0.01 0.01 0.01 0.01	9 10 1 9 5	360 560 480 840 460	53 49 17 55 26	0.02 0.01 <0.01 0.04 <0.01	8 8 8 8 8	3 2 5 2	10 13 9 31 9
06WM0-031 06WM0-032 06WM0-033 06WM0-034 06WM0-035		10 <10 10 10 <10	<1 1 <1 1	0.04 0.05 0.07 0.10 0.11	30 20 30 40 10	0.29 0.39 0.47 0.34 0.60	739 598 1190 1055 892	5 4 7 9 <1	0.01 0.02 0.02 0.01 0.02	6 8 9 5 24	650 520 650 580 1570	24 36 43 45 8	<0.01 0.01 0.03 0.04 0.13	8 0 8 0 8	3 3 4 3 9	9 17 20 23 107
06WM0-036 06WM0-037 06WM0-038 06WM0-039 06WM0-040		<10 10 <10 <10 <10	1 <1 1 1	0.07 0.10 0.07 0.07 0.05	20 10 10 20 20	0.36 1.34 0.67 0.61 0.44	560 966 606 656 697	3 <1 1 3 3	0.02 0.01 0.02 0.02 0.01	4 52 14 13 9	650 1320 760 840 850	13 6 11 12 9	0.02 0.17 0.08 0.07 0.15	<2 14 6 5	3 12 5 4 8	32 150 36 32 61



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212 Brooksbank Avenue North Vancouver BC V7J 2C1 To: XPLORER RESOURCES INC. 307 - 1500 HARDY STREET KELOWNA BC V1Y 8H2 Page: 2 - C Total # Pages: 5 (A - C) Finalized Date: 13-OCT-2006 Account: XPLRES

CERTIFICATE OF ANALYSIS VA06091378

Project: Chilkoot RedCap

Sample Description	Method Analyte Units LOR	ME-ICP41 TI % 0.01	ME-ICP41 Ti ppm 10	ME-ICP41 U ppm 10	ME-ICP41 V ppm 1	ME-ICP41 W ppm 10	ME-ICP41 Zn ppm 2	
06WM0-001 06WM0-002 06WM0-003 06WM0-004 06WM0-005		0.09 0.10 0.07 0.10 0.05	<10 <10 <10 <10 <10	20 <10 30 40 10	55 227 100 54 58	<10 10 <10 <10 <10	68 42 48 101 28	
06WM0-006 06WM0-007 06WM0-008 06WM0-009 06WM0-009		0.04 0.08 0.06 0.03 0.09	<10 <10 <10 <10 <10 <10	10 20 <10 20 <10	29 50 16 30 104	<10 <10 <10 <10 <10 <10	30 456 50 96 118	
06WM0-011 06WM0-012 06WM0-013 06WM0-014 06WM0-015		0.09 0.08 0.17 0.11 0.03	<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	68 41 105 74 71	<10 <10 <10 <10 <10	71 81 89 78 51	
06WM0-016 06WM0-017 06WM0-018 06WM0-019 06WM0-020		0.04 0.06 0.10 0.03 0.15	<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	9 20 18 6 63	<10 <10 <10 <10 <10	55 54 82 41 48	
06WM0-021 06WM0-022 06WM0-023 06WM0-024 06WM0-025		0.08 0.14 0.11 0.08 0.07	<10 <10 <10 <10 <10	10 10 30 60 <10	16 66 64 23 17	<10 <10 10 10 <10	78 55 81 128 84	
06WM0-026 06WM0-027 06WM0-028 06WM0-029 06WM0-030		0.08 0.05 0.08 0.06 0.07	<10 <10 <10 <10 <10	10 10 <10 10 <10	30 12 21 19 20	<10 <10 <10 <10 <10	106 120 57 162 66	
06WM0-031 06WM0-032 06WM0-033 06WM0-034 06WM0-035		0.09 0.06 0.07 0.07 <0.01	<10 <10 <10 <10 <10	<10 20 10 200 <10	25 23 37 21 65	<10 <10 <10 <10 <10	86 81 139 152 90	
06WM0-036 06WM0-037 06WM0-038 06WM0-039 06WM0-040		0.07 0.01 0.05 0.05 0.07	<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	33 99 50 49 59	<10 <10 <10 <10 <10	63 109 67 73 69	



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ME-ICP41

Ag

ME-ICP41

AI

ME-ICP41

As

ME-ICP41

в

ME-ICP41

Ва

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WEI-21

Recvd Wt.

Method

Analyte

212 Brooksbank Avenue North Vancouver BC V7J 2C1

Au-AA23

Au

To: XPLORER RESOURCES INC. 307 - 1500 HARDY STREET KELOWNA BC V1Y 8H2 Page: 3 - A Total # Pages: 5 (A - C) Finalized Date: 13-OCT-2006 Account: XPLRES

ME-ICP41

Cu

82

3.84

ME-ICP41

Fe

VA06091378

ME-ICP41

Cr

Project: Chilkoot RedCap

ME-ICP41

ы

ME-ICP41

Ве

CERTIFICATE OF ANALYSIS

ME-ICP41

Cd

ME-ICP41

Co

ME-ICP41

Са

Sample Description	LOR	kg 0.02	ppm 0.005	ppm 0.2	% 0.01	ppm 2	ppm 10	ppm 10	ppm 0.5	ppm 2	% 0.01	ppm 0.5	ppm 1	ppm 1	ppm 1	% 0.01
06WM0-041		0.64	<0.005	<0.2	1.39	32	10	90	0.5	<2	0.91	<0.5	10	25	41	3.85
06WM0-042		0.40	<0.005	<0.2	1.54	11	<10	490	0.8	<2	1.18	<0.5	7	31	30	2.44
06WM0-043		0.46	<0.005	< 0.2	0.47	16	<10	110	<0.5	<2	0.49	<0.5	4	7	16	7.04
06WM0-044		0.70	0.012	<0.2	1.35	15	<10	240	0.7	<2	0.52	<0.5	12	16	37	4.20
000000000000000000000000000000000000000		0.08	<0.005	<u.2< td=""><td>0.77</td><td>12</td><td>&lt;10</td><td>4/0</td><td>1.0</td><td>~2</td><td>0.54</td><td>&lt;0.5</td><td>8</td><td>21</td><td>21</td><td>2.08</td></u.2<>	0.77	12	<10	4/0	1.0	~2	0.54	<0.5	8	21	21	2.08
06WM0-046		0.50	<0.005	<0.2	1.63	7	20	130	0.9	<2	1.08	<0.5	6	14	15	1.77
06WM0-047		0.48	<0.005	<0.2	1.14	6	20	230	0.8	<2	0.74	<0.5	8	24	31	2.75
06WM0-048		0.50	0.006	0.2	1.17	94	<10	150	0.6	<2	5.25	1.8	14	31	59	3.90
06WM0-049		0.56	0.019	1.8	2.05	1/9	<10	100	0.5	4	0.94	3.3	16	26	102	4.91
UCU-UMWV0U		0.00	<0.005	1.0	1.84	34	<10	00	<0.5	~2	1.30	0.5	15	31	00	4.14
06WM0-051		0.60	NSS	0.2	0.61	8	<10	40	0.5	<2	0.26	<0.5	3	2	6	2.39
06WM0-052		0.54	NSS	0.2	0.86	24	<10	40	0.5	<2	0.31	<0.5	4	6	13	3.04
06WM0-054		0.74	<0.005	0.2	1.90	40	<10	50	<0.5	<2	5.10	<0.5	16	162	93	2.61
06WM0-055		0.46	<0.005	<0.2	1.76	27	<10	70	<0.5	<2	1.27	<0.5	14	71	82	3.10
0CU-UMW00		0.62	0.040	0.3	2.10	3/2	<10	70	<0.5	<2	0.68	<0.5	19	4/	60	5.//
06WM0-057		0.56	0.009	0.2	1.57	68	<10	100	<0.5	<2	0.90	<0.5	15	96	58	4.54
06WM0-058		0.74	0.017	0.5	2.78	21	<10	120	<0.5	<2	1.63	0.6	22	122	167	4.20
06WM0-059		0.42	0.024	0.2	2.43	62	<10	70	0.5	<2	0.84	<0.5	17	78	167	4.14
06WM0-060		0.30	<0.005	<0.2	0.25	4	<10	40	<0.5	<2	0.04	<0.5	4	49	7	1.01
06WMD-061		0.62	0.016	0.3	2.70	223	<10	140	1.2	<2	0.08	0.6	52	56	119	6.99
06WM0-062		0.36	NSS	0.3	1.48	72	<10	120	0.7	<2	2.77	0.6	22	31	71	4.93
06WM0-063		0.28	0.017	<0.2	1.78	191	<10	120	<0.5	<2	0.03	<0.5	14	53	57	4.17
06WM0-080		1.08	0.059	0.9	0.61	17	<10	340	0.5	<2	2.94	1.5	10	19	25	3.18
06HTR-001		0.26	0.015	0.4	2.31	139	<10	110	0.7	<2	0.54	1.0	10	32	29	2.79
06HTR-002		0.48	0.013	0.2	2.52	74	<10	230	<0.5	<2	0.84	<0.5	15	57	47	3.75
06HTR-003		0.26	NSS	<0.2	1.81	34	<10	120	0.6	<2	0.71	<0.5	15	43	81	4.19
06HTR-004		0.32	< 0.005	<0.2	0.64	19	<10	110	<0.5	<2	0.31	<0.5	3	19	8	1.72
06HTR-005		0.40	<0.005	<0.2	0.73	3	<10	100	<0.5	<2	0.28	<0.5	4	20	11	1.58
06HTR-006		0.50	<0.005	0.2	2.04	3	<10	180	<0.5	<2	0.69	<0.5	20	21	96	3.53
06BM1-001		0.38	<0.005	1.6	0.62	67	<10	40	0.7	<2	0.18	1.2	3	6	7	2.09
06BM1-002		0.56	<0.005	0.4	1.00	29	<10	40	0.7	<2	0.42	<0.5	5	7	16	1.96
06BM1-003		0.26	<0.005	0.7	2.74	204	<10	180	1.1	4	0.71	0.6	22	12	75	4.97
06BM1-004		0.42	NSS	0.2	0.99	16	<10	70	1.0	<2	0.48	<0.5	5	16	10	1.78
06BM1-005		0.62	<0.005	0.2	1.24	15	<10	70	0.5	<2	0.51	1.0	8	33	36	2.98
06BM1-006		0.52	NSS	<0.2	0.49	6	<10	40	<0.5	<2	0.12	<0.5	2	4	3	1.28
06BM1-007		0.46	<0.005	<0.2	0.84	5	<10	50	<0.5	<2	0.26	<0.5	6	33	8	2.26
06BM1-008		0.56	< 0.005	<0.2	0.73	5	<10	50	<0.5	<2	0.23	<0.5	6	24	5	1.98
06BM1-009		0.46	<0.005	0.5	2.25	262	<10	150	0.6	<2	0.60	0.6	10	30	36	3.56
06BM1-010		0.32	<0.005	0.4	2.30	165	<10	200	0.6	<2	0.66	1.3	12	30	35	3.59

Comments: NSS is non-sufficient sample.

06BM1-011

0.64

< 0.005

0.2

2.42

34

<10

240

<0.5

<2

2.05

<0.5

14

81



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Project: Chilkoot RedCap

CERTIFICATE OF ANALYSIS VA06091378

Sample Description	Method Analyte Units LOR	ME-ICP41 Ga ppm 10	ME-ICP41 Hg ppm 1	ME-ICP41 K % 0.01	ME-ICP41 La ppm 10	ME-ICP41 Mg % 0.01	ME-ICP41 Mn ppm 5	ME-ICP41 Mo ppm 1	ME-ICP41 Na % 0.01	ME-ICP41 NI ppm 1	ME-ICP41 P ppm 10	ME-ICP41 Pb ppm 2	ME-ICP41 S % 0.01	ME-ICP41 Sb ppm 2	ME-ICP41 Sc ppm 1	ME-ICP41 Sr ppm 1
08WM0-041 08WM0-042 08WM0-043 08WM0-044 08WM0-044		10 <10 <10 <10 <10	1 <1 <1 <1	0.08 0.07 0.04 0.08 0.10	20 10 30 10 10	0.80 0.49 0.21 0.63 0.40	753 689 732 864 613	2 <1 12 <1 <1	0.02 0.02 0.01 0.02 0.01	18 14 <1 9 10	980 1330 770 1150 1050	11 10 10 13 12	0.06 0.09 0.06 0.04 0.03	4 ♥ ♥ 2 ♥	5 3 5 5	55 158 31 63 69
08WM0-048 08WM0-047 08WM0-048 08WM0-049 08WM0-050		10 <10 <10 <10 10	1 <1 1 1	0.07 0.09 0.14 0.08 0.11	10 10 10 10 10	0.72 0.63 1.02 1.39 1.11	347 455 662 980 678	<1 <1 14 14 1	0.01 0.02 0.01 0.04 0.06	10 16 96 47 27	530 810 1190 1100 1050	11 11 12 101 99	<0.01 0.01 1.22 0.44 0.16	<2 <2 8 10 2	4 4 7 5 5	129 169 184 72 83
08WM0-051 08WM0-052 08WM0-054 08WM0-055 08WM0-056		<10 10 <10 <10 10	<1 1 1 1	0.06 0.09 0.17 0.15 0.07	20 30 <10 <10 10	0.22 0.39 1.92 1.16 1.39	722 731 438 381 967	4 3 <1 <1 <1	0.01 0.01 0.04 0.07 0.02	2 6 59 35 40	410 590 780 850 1220	22 26 6 4 10	0.01 0.02 0.07 0.05 0.25	<2 2 5 <2 2	2 3 7 5 5	12 19 318 76 38
08WM0-057 08WM0-058 08WM0-059 08WM0-080 08WM0-081		<10 <10 10 <10 <10	<1 1 <1 1 1	0.12 0.39 0.26 0.01 0.14	<10 <10 10 <10 20	1.21 1.72 1.35 0.27 1.77	531 534 609 578 2180	<1 6 <1 2 3	0.05 0.08 0.05 <0.01 0.01	47 58 34 32 188	1080 1080 2110 80 1620	8 58 20 13 30	0.06 0.10 0.02 <0.01 0.02	<2 3 7 ♀ 6	5 7 6 1 11	54 85 51 5 12
08WM0-082 08WM0-083 08WM0-080 06HTR-001 06HTR-002		<10 <10 <10 10 <10	1 <1 <1 <1 1	0.09 0.15 0.14 0.11 0.25	10 10 10 60 10	1.62 1.05 0.68 0.83 1.28	1965 528 1650 641 587	4 <1 7 <1	0.01 <0.01 0.04 0.03 0.09	95 59 27 20 35	920 920 860 610 1090	18 15 79 17 11	0.09 0.02 0.27 0.04 0.04	8 11 2 <2 2	8 9 4 6 8	70 5 235 46 70
06HTR-003 06HTR-004 06HTR-005 06HTR-006 06BM1-001		<10 <10 <10 <10 <10	1 <1 <1 <1 <1	0.10 0.08 0.11 0.19 0.11	20 20 20 <10 40	1.12 0.32 0.38 1.01 0.19	740 199 260 373 671	<1 18 4 <1 6	0.02 0.01 0.02 0.07 0.01	40 8 7 13 2	1260 630 660 960 420	25 4 7 11 122	0.04 0.01 <0.01 0.01 0.01	5 V V V V	5 2 2 4 2	66 33 24 71 24
06BM1-002 06BM1-003 06BM1-004 06BM1-005 06BM1-006		<10 10 <10 <10 <10	1 1 <1 <1	0.13 0.21 0.08 0.16 0.06	30 30 40 20 20	0.38 0.55 0.41 0.61 0.10	584 1040 540 564 302	1 5 5 <1 3	0.01 0.03 0.01 0.01 <0.01	4 18 8 20 2	770 980 730 1150 200	23 41 12 104 17	0.01 0.08 0.05 0.01 <0.01	Q ~ Q Q Q Q Q Q	2 6 2 4 1	47 239 50 40 9
06BM1-007 06BM1-008 06BM1-009 06BM1-010 06BM1-011		<10 <10 10 10 10	<1 1 1 <1 1	0.10 0.06 0.26 0.32 0.61	10 20 30 30 10	0.52 0.41 0.86 0.89 1.65	374 428 526 1070 704	3 12 2 5 3	0.01 0.01 0.04 0.05 0.08	18 15 21 19 64	670 640 1000 840 960	7 7 15 33 10	<0.01 <0.01 0.10 0.03 0.06	<2 <2 5 2 2	2 2 6 7 8	16 14 77 45 139



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CERTIFICATE OF ANALYSIS VA06091378

Project: Chilkoot RedCap

Sample Description	Method Analyte Units LOR	ME-ICP41 TI % 0.01	ME-ICP41 TI ppm 10	ME-ICP41 U ppm 10	ME-ICP41 V ppm 1	ME-ICP41 W ppm 10	ME-ICP41 Zn ppm 2	
06WM0-041		0.06	<10	<10	65	<10	78	
06WM0-042		0.03	<10	<10	53	<10	69	
06WM0-043		0.18	<10	<10	64	<10	44	
06WM0-044		0.05	<10	<10	81	<10	68	
06WM0-045		0.02	<10	<10	5/	<10	54	
06WM0-046		0.09	<10	<10	40	<10	56	
06WM0-047		0.11	<10	<10	75	<10	68	
06WM0-048		0.01	<10	<10	48	<10	217	
06WM0-049		0.06	<10	<10	71	<10	363	
000-000		0.13	<10	<10	111	<10	120	
06WM0-051		0.06	<10	10	14	<10	77	
06WM0-052		0.12	<10	10	26	<10	100	
06WM0-054		0.10	<10	<10	76	<10	43	
06WM0-055		0.11	<10	<10	94	<10	47	
0CU-UMVV0U		0.07	<10	<10	/0	<10	92	
06WM0-057		0.11	<10	<10	117	<10	49	
06WM0-058		0.18	<10	<10	135	<10	88	
06WM0-059		0.11	<10	<10	116	<10	69	
06WM0-060		<0.01	<10	<10	33	<10	21	
06VVMU-061		0.01	<10	<10	67	<10	203	
06WM0-062		0.01	<10	<10	45	<10	166	
06WM0-063		0.01	<10	<10	61	<10	67	
06/WM0-080		<0.01	<10	<10	51	<10	344	
06HTR-001		0.09	<10	20	62	<10	83	
00HTR-002		0.08	<10	<10	02	<10	75	
06HTR-003		0.05	<10	<10	51	<10	110	
06HTR-004		0.06	<10	80	36	10	23	
DOM I K-UUS		0.07	<10	20	30	<10	28	
06BM1-001		0.11	<10	<10 80	29	10	00	
000001-001		0.05	- 10		20	10	00	
06BM1-002		0.05	<10	10	27	<10	63	
06BM1-003		0.05	<10	<10	56	<10	100	
00BM1-004		0.02	<10	30	20	<10	30	
06BM1-000		0.12	<10	<10	11	10	48	
0000000		0.00	~10	-10		-10		
06BM1-007		0.07	<10	10	44	<10	32	
06BM1-008		0.06	<10	<10	34	<10	2/	
00DM1-009		0.00	<10	10	62	<10	157	
06BM1-010		0.11	<10	<10	03	<10	03	
0000011-011		0.10	- 10	~ 10	<del>01</del>	- 10	83	



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ME-ICP41

Ag

ppm

ME-ICP41

AI

%

ME-ICP41

As

ppm

ME-ICP41

в

ppm

ME-ICP41

Ва

ppm

ALS Canada Ltd.

WEI-21

Recvd Wt.

kα

Method

Analyte

Units

212 Brooksbank Avenue North Vancouver BC V7J 2C1

Au-AA23

Au

ppm

To: XPLORER RESOURCES INC. 307 - 1500 HARDY STREET KELOWNA BC V1Y 8H2 Page: 4 - A Total # Pages: 5 (A - C) Finalized Date: 13-OCT-2006 Account: XPLRES

ME-ICP41

Cu

ppm

ME-ICP41

Fe

%

VA06091378

ME-ICP41

Cr

pom

Project: Chilkoot RedCap

ME-ICP41

ы

ppm

ME-ICP41

Ве

ppm

CERTIFICATE OF ANALYSIS

ME-ICP41

Cd

ppm

ME-ICP41

Co

ppm

ME-ICP41

Са

%

Sample Description	LOR	0.02	0.005	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01
06BM1-012		0.58	<0.005	0.3	2.58	52	<10	140	<0.5	<2	0.69	<0.5	17	111	53	3.09
06BM1-013		0.30	<0.005	0.3	2.16	19	<10	150	<0.5	<2	0.80	<0.5	17	117	70	3.06
06BM1-014		0.66	<0.005	<0.2	2.89	22	<10	60	0.6	<2	0.56	<0.5	20	106	87	5.12
06SF0-001		0.50	0.051	0.5	0.94	20	<10	60	0.5	<2	0.33	<0.5	3	10	4	2.41
06SF0-002		0.24	0.006	0.5	1.71	61	<10	160	<0.5	<2	10.00	<0.5	13	93	46	2.42
06SF0-003		0.44	<0.005	<0.2	0.46	<2	<10	20	<0.5	<2	0.17	<0.5	1	5	1	1.56
06SF0-004		0.28	2.83	0.9	3.03	937	<10	110	1.1	<2	1.34	3.0	18	18	116	6.67
06SF0-005		0.50	<0.005	<0.2	1.16	3	<10	100	0.6	<2	0.23	<0.5	4	8	6	1.88
06SF0-006		0.48	<0.005	0.4	2.61	65	<10	140	0.7	2	0.83	1.0	20	88	97	4.48
06SF0-008		0.58	0.029	0.2	2.07	34	<10	180	0.5	<2	0.77	0.6	14	53	45	3.98
06SF0-009		0.72	<0.005	<0.2	1.14	58	<10	60	<0.5	<2	0.42	0.5	7	24	16	3.07
06SF0-010		0.70	<0.005	<0.2	0.63	36	<10	40	<0.5	12	0.22	<0.5	7	8	5	1.47
06SF0-011		0.64	0.035	4.9	3.95	527	<10	150	0.5	<2	2.23	2.4	27	42	80	4.49
06SF0-012		0.60	0.007	1.7	3.71	240	<10	160	<0.5	<2	1.70	1.1	25	54	66	4.36
06SF0-013		0.60	0.009	<0.2	1.73	21	10	80	0.6	<2	7.48	<0.5	21	56	85	4.26
06SF0-014		0.56	0.007	<0.2	1.26	101	<10	90	<0.5	2	0.43	<0.5	8	25	26	2.78
06SF0-015		0.66	0.005	<0.2	1.65	22	<10	150	<0.5	<2	0.66	<0.5	9	37	25	2.98
06SF0-016		0.72	0.017	<0.2	1.56	56	<10	80	0.6	<2	2.54	0.5	23	58	70	4.54
06SF0-017		0.16	0.019	0.5	2.29	33	<10	230	<0.5	2	1.24	1.4	13	46	33	3.22
06G9A-012		0.58	0.090	0.7	1.94	42	<10	120	<0.5	<2	5.30	0.6	14	37	52	3.23
06G9A-013		0.70	0.013	0.3	3.23	1885	<10	130	1.1	2	1.16	1.1	24	16	115	6.80
06G9A-014		0.62	<0.005	0.2	1.33	89	<10	110	0.9	<2	0.63	<0.5	13	21	51	3.02
06G9A-015		0.74	<0.005	<0.2	1.37	4	<10	240	0.7	2	0.48	<0.5	6	17	8	2.54
06G9A-016		0.78	<0.005	<0.2	1.64	23	<10	160	0.8	<2	0.44	<0.5	7	25	11	2.49
06G9A-017		0.72	<0.005	<0.2	1.03	<2	<10	110	<0.5	<2	0.28	<0.5	9	61	17	3.51
06GPA-021		0.70	0.026	0.6	3.33	879	<10	160	0.8	<2	2.69	1.8	28	44	107	6.82
06GPA-022		0.40	<0.005	<0.2	1.96	13	10	220	0.5	2	1.73	<0.5	25	88	111	4.60
06GPA-023		0.48	<0.005	0.3	1.75	68	<10	120	<0.5	2	0.66	0.8	10	23	39	3.10
06GPA-024		0.68	0.018	0.4	2.27	300	<10	150	<0.5	3	0.54	0.8	12	31	51	3.42
06GPA-025		0.46	<0.005	<0.2	1.31	9	<10	80	0.5	<2	0.58	<0.5	9	116	32	2.47
06GPA-026		0.52	<0.005	<0.2	2.29	17	<10	110	0.6	2	0.53	<0.5	12	37	37	3.15
06GPA-027		0.62	0.010	0.5	3.56	58	<10	220	0.8	<2	0.92	1.0	22	76	92	4.90
06GPA-028		0.84	0.158	0.2	1.23	41	<10	80	<0.5	2	0.55	0.5	11	37	30	3.62
06GPA-029		1.00	<0.005	0.2	1.19	46	<10	100	<0.5	<2	0.35	0.5	9	24	32	2.36
06GPA-030		0.54	0.016	<0.2	1.83	21	<10	70	0.5	<2	0.72	<0.5	12	66	56	4.24
06GPA-033		0.72	0.020	0.2	1.58	17	<10	40	1.0	<2	0.24	0.6	5	9	14	3.62
06GPA-035		0.68	<0.005	<0.2	0.58	6	<10	30	<0.5	<2	0.11	<0.5	1	2	3	2.02
06GPA-036		0.56	0.031	0.2	1.27	31	<10	40	0.7	2	0.30	0.5	3	4	8	3.55

Comments: NSS is non-sufficient sample.

0.54

0.60

0.034

0.028

< 0.2

<0.2

1.44

1.45

32

18

<10

<10

50

40

1.0

0.8

2

2

0.35

0.25

0.8

<0.5

4

3

4

3

10

6

3.69

3.04

06GPA-038

06GPA-039



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Project: Chilkoot RedCap

CERTIFICATE OF ANALYSIS VA06091378

Sample Description	Method Analyte Units LOR	ME-ICP41 Ga ppm 10	ME-ICP41 Hg ppm 1	ME-ICP41 K % 0.01	ME-ICP41 La ppm 10	ME-ICP41 Mg % 0.01	ME-ICP41 Mn ppm 5	ME-ICP41 Mo ppm 1	ME-ICP41 Na % 0.01	ME-ICP41 NI ppm 1	ME-ICP41 P ppm 10	ME-ICP41 Pb ppm 2	ME-ICP41 S % 0.01	ME-ICP41 Sb ppm 2	ME-ICP41 Sc ppm 1	ME-ICP41 Sr ppm 1
06BM1-012 06BM1-013 06BM1-014 06SF0-001 06SF0-002		10 <10 10 10 <10	1 <1 1 1	0.20 0.24 0.11 0.17 0.35	10 <10 10 40 <10	1.59 1.57 2.12 0.35 6.04	436 391 892 656 501	<1 <1 1 2	0.04 0.07 0.02 0.01 0.03	72 73 72 6 36	880 940 1170 520 630	19 12 16 22 16	0.03 0.02 0.01 0.01 0.07	2 \$2 \$2 \$2 \$4	5 5 9 3 5	39 51 44 20 149
06SF0-003 06SF0-004 06SF0-005 06SF0-006 06SF0-008		<10 10 <10 10 <10	<1 1 <1 1 <1	0.07 0.18 0.06 0.48 0.24	30 20 20 10	0.10 0.76 0.32 1.67 1.03	271 954 430 748 616	<1 23 9 3 5	<0.01 0.04 0.01 0.05 0.08	1 41 5 59 39	260 1170 750 990 1000	10 51 14 40 15	<0.01 0.14 0.02 0.03 0.05	√2 17 √2 2 3	1 5 2 10 7	10 240 42 88 91
06SF0-009 06SF0-010 08SF0-011 06SF0-012 06SF0-013		<10 <10 10 10 <10	<1 <1 <1 <1 <1	0.09 0.10 0.24 0.30 0.07	50 20 <10 <10 10	0.51 0.29 1.58 1.72 1.39	339 261 1360 890 956	3 2 <1 <1 4	0.01 0.03 0.06 0.07 0.01	11 4 29 35 46	670 340 950 1200 1050	12 6 152 47 13	0.02 <0.01 0.14 0.07 0.09	√2 √2 6 3 3	3 2 8 9 8	29 13 107 98 146
08SF0-014 08SF0-015 08SF0-016 08SF0-017 08G9A-012		<10 10 <10 <10 <10	1 1 <1 <1	0.11 0.33 0.11 0.09 0.27	10 20 10 10 10	0.63 0.90 1.16 0.92 2.76	372 537 1050 969 490	1 2 1 1 2	0.03 0.05 0.01 0.03 0.09	16 19 50 32 19	750 1270 1320 1210 1160	10 12 22 6 43	0.01 0.01 0.02 0.19 0.18	2 V 5 V V	4 4 6 3 4	24 52 84 46 151
08G9A-013 08G9A-014 08G9A-015 08G9A-016 08G9A-017		10 <10 <10 10 <10	<1 <1 <1 <1 <1	0.21 0.15 0.11 0.11 0.07	20 30 20 30 20	0.92 0.86 0.51 0.55 0.52	1095 636 940 694 426	8 17 8 31 1	0.05 0.02 0.02 0.01 0.01	34 21 10 11 23	1400 830 830 750 600	34 14 23 13 15	0.12 0.05 0.01 0.06 <0.01	17 7 2 2 2	6 6 2 2 2	232 196 134 45 23
08GPA-021 08GPA-022 08GPA-023 08GPA-024 08GPA-025		10 <10 <10 10 <10	1 <1 1 <1	0.29 0.08 0.18 0.25 0.22	10 10 10 10 10	2.17 1.78 0.68 0.88 0.93	850 1025 546 617 387	8 1 1 2	0.08 0.01 0.05 0.04 0.03	82 48 23 20 52	1160 1320 880 930 1100	29 8 15 18 10	0.18 0.06 0.02 0.03 0.05	15 2 3 2 <2	8 9 5 6 2	200 49 42 30 48
08GPA-026 08GPA-027 08GPA-028 08GPA-029 08GPA-030		10 10 <10 <10 10	<1 <1 <1 <1 <1	0.18 0.46 0.14 0.14 0.11	10 10 20 10 10	0.88 1.62 0.71 0.61 1.17	559 852 479 507 491	1 1 1 1	0.04 0.05 0.03 0.02 0.04	22 44 23 21 32	800 1130 730 560 850	15 31 14 15 8	0.02 0.05 0.01 0.01 0.07		5 11 4 3 6	81 141 25 20 55
08GPA-033 08GPA-035 08GPA-036 08GPA-038 08GPA-039		10 <10 10 10 10	<1 1 <1 <1 <1	0.08 0.06 0.12 0.15 0.13	40 30 60 60 60	0.40 0.12 0.39 0.38 0.32	1405 471 853 1305 1075	11 3 11 11 12	0.01 0.01 0.01 0.02 0.01	7 2 3 1 3	850 350 670 720 560	35 15 70 48 38	0.02 <0.01 0.04 0.04 0.04	2 0 0 0 0 0 0 0 0	4 2 4 4 3	13 4 12 15 10



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CERTIFICATE OF ANALYSIS VA06091378

Project: Chilkoot RedCap

Sample Description	Method Analyte Units LOR	ME-ICP41 TI % 0.01	ME-ICP41 TI ppm 10	ME-ICP41 U ppm 10	ME-ICP41 V ppm 1	ME-ICP41 W ppm 10	ME-ICP41 Zn ppm 2	
06BM1-012		0.11	<10	<10	74	<10	99	
06BM1-013		0.11	<10	<10	81	<10	62	
00BM1-014		0.12	<10	<10	101	<10	125	
005F0-001		0.09	<10	130	29	<10	/9 47	
00010-002		0.07	<10	~10	24	<10		
065F0-003		0.02	<10	30	21	<10	34 240	
06SF0-005		0.04	<10	10	24	<10	36	
06SF0-006		0.17	<10	<10	110	<10	138	
06SF0-008		0.06	<10	<10	83	<10	108	
06SF0-009		0.06	<10	<10	54	<10	53	
06SF0-010		0.05	<10	<10	17	<10	31	
06SF0-011		0.09	<10	<10	83	<10	320	
06SF0-012		0.11	<10	<10	93	<10	162	
06SF0-013		0.03	<10	<10	69	<10	96	
06SF0-014		0.06	<10	<10	56	<10	54	
06SF0-015		0.17	<10	30	70	<10	64	
06SF0-016		0.04	<10	<10	57	<10	95	
06SF0-017		0.05	<10	<10	60	20	92	
06G9A-012		0.09	<10	<10	66	<10	61	
06G9A-013		0.08	<10	20	73	<10	144	
06G9A-014		0.06	<10	<10	63	<10	58	
00G9A-015		0.06	<10	30	30	<10	58	
06G0A-017		0.05	<10	10	42	10	37	
00084-017		0.04	<10	10		<10		
06GPA-021		0.08	<10	<10	82	<10	230	
08GPA-022		0.03	<10	<10	82	<10	01	
08GPA-024		0.00	<10	10	71	<10	88	
06GPA-025		0.06	<10	40	53	<10	38	
06GPA-026		0.11	<10	<10	67	<10	86	
06GPA-027		0.18	<10	<10	112	<10	153	
06GPA-028		0.06	<10	<10	78	<10	50	
06GPA-029		0.05	<10	<10	40	<10	58	
06GPA-030		0.12	<10	<10	90	<10	67	
06GPA-033		0.04	<10	110	28	10	107	
06GPA-035		0.05	<10	<10	16	<10	39	
06GPA-036		0.13	<10	60	26	<10	177	
06GPA-038		0.11	<10	80	25	<10	153	
06GPA-039		0.11	<10	30	23	<10	156	



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Project: Chilkoot RedCap

									C	ERTIFI	CATE C	OF ANA	LYSIS	VA060	91378	
Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	Au-AA23 Au ppm 0.005	ME-ICP41 Ag ppm 0.2	ME-ICP41 Al % 0.01	ME-ICP41 As ppm 2	ME-ICP41 B ppm 10	ME-ICP41 Ba ppm 10	ME-ICP41 Be ppm 0.5	ME-ICP41 Bi ppm 2	ME-ICP41 Ca % 0.01	ME-ICP41 Cd ppm 0.5	ME-ICP41 Co ppm 1	ME-ICP41 Cr ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Fe % 0.01
06GPA-042 06GPA-049 06GPA-054		0.56 0.62 Not Recycl	0.014 0.014	<0.2 <0.2	0.99 1.56	9 69	<10 <10	30 70	0.7 <0.5	2 <2	0.19 16.9	<0.5 1.0	3 14	4 166	4 66	3.32 2.57
08GPA-055 08GPA-064		0.72	0.025	<0.2 0.3	2.02 0.64	20 11	<10 <10	30 150	0.8 0.6	<2 <2	0.19	<0.5 1.7	2 24	5 240	5 52	1.95 4.40



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Page: 5 - B Total # Pages: 5 (A - C) Finalized Date: 13-OCT-2006 Account: XPLRES

Project: Chilkoot RedCap

								-								
									0	CERTIFI	CATE C	F ANA	LYSIS	VA060	91378	
Sample Description	Method Analyte Units LOR	ME-ICP41 Ga ppm 10	ME-ICP41 Hg ppm 1	ME-ICP41 K % 0.01	ME-ICP41 La ppm 10	ME-ICP41 Mg % 0.01	ME-ICP41 Mn ppm 5	ME-ICP41 Mo ppm 1	ME-ICP41 Na % 0.01	ME-ICP41 NI ppm 1	ME-ICP41 P ppm 10	ME-ICP41 Pb ppm 2	ME-ICP41 S % 0.01	ME-ICP41 Sb ppm 2	ME-ICP41 Sc ppm 1	ME-ICP41 Sr ppm 1
08GPA-042 08GPA-049 08GPA-054		10 <10	<1 <1	0.05 0.12	40 <10	0.25 1.65	726 426	6 2	0.01 0.04	2 63	610 910	16 17	0.02 <0.01	8 8 8	3 6	8 1240
06GPA-055 06GPA-064		<10 <10	<1 <1	0.06 0.08	50 10	0.19 4.55	398 655	7 8	0.01 0.01	3 352	620 480	27 12	0.04 0.24	<2 2	2 8	10 113

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Page: 5 - C Total # Pages: 5 (A - C) Finalized Date: 13-OCT-2006 Account: XPLRES

Project: Chilkoot RedCap

T

								CERTIFICATE OF ANALYSIS VA06091378
Sample Description	Method Analyte Units LOR	ME-ICP41 TI % 0.01	ME-ICP41 TI ppm 10	ME-ICP41 U ppm 10	ME-ICP41 V ppm 1	ME-ICP41 W ppm 10	ME-ICP41 Zn ppm 2	
Sample Description 08GPA-042 08GPA-049 08GPA-054 08GPA-055 08GPA-064	LOR	0.01 0.06 0.06 0.01	10 <10 <10 <10 <10	10 20 <10 30 <10	1 26 95 17 67	10 <10 <10 10 <10	2 79 105 71 211	



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#307-1500 HARDY STREET KELOWNA BC V1Y 2H2

Page: 1 Finalized Date: 5-NOV-2006 This copy reported on 27-NOV-2006 Account: OPTMIN

ICP-AES

AAS

CEF	RTIFICATE VA0610520	)7		SAMPLE PREPARATION	
			ALS CODE	DESCRIPTION	
Project: OPT-YZ-YB			WEI-21	Received Sample Weight	
PO No <sup>-</sup>			LOG-22	Sample login - Rcd w/o BarCode	
This report is for 0 Back sample	as submitted to our lab in Vancou	uvor BC Canada on	CRU-31	Fine crushing - 70% <2mm	
17-0CT-2006	es submitted to our lab in vancor	uver, bo, canada on	SPL-21	Split sample - riffle splitter	
The following have access t	to data associated with this ce	ertificate:	PUL-31	Pulverize split to 85% <75 um	
JOHN BUCKLE	GARY PAYLE		1		
				ANALYTICAL PROCEDURES	
	-		ALS CODE	DESCRIPTION	INSTRUMENT

To: OPTIMA MINERALS INC.

ME-ICP41

Au-AA23

T

To: OPTIMA MINERALS INC. ATTN: GARY PAYLE #307-1500 HARDY STREET KELOWNA BC V1Y 2H2

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Cherthe Dog

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature: Keith Rogers, Executive Manager Vancouver Laboratory

34 Element Aqua Regia ICP-AES

Au 30g FA-AA finish



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CERTIFICATE OF ANALYSIS VA06105207

Project: OPT-YZ-YB

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	Au-AA23 Au ppm 0.005	ME-ICP41 Ag ppm 0.2	ME-ICP41 Al % 0.01	ME-ICP41 As ppm 2	ME-ICP41 B ppm 10	ME-ICP41 Ba ppm 10	ME-ICP41 Be ppm 0.5	ME-ICP41 Bi ppm 2	ME-ICP41 Ca % 0.01	ME-ICP41 Cd ppm 0.5	ME-ICP41 Co ppm 1	ME-ICP41 Cr ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Fe % 0.01	
06GPA106		1.60	0.008	<0.2	0.94	32	<10	50	<0.5	<2	0.11	<0.5	2	4	11	2.07	
06GPA108		2.24	<0.005	<0.2	0.13	7	<10	10	<0.5	2	0.02	<0.5	<1	23	2	0.31	
06GPA109		1.26	<0.005	0.2	0.34	9	<10	30	<0.5	2	0.04	<0.5	1	16	2	0.76	
06GPA110		1.80	<0.005	<0.2	1.27	10	<10	90	0.6	<2	0.16	<0.5	3	2	3	1.88	
06GPA111		2.38	<0.005	<0.2	2.29	3	<10	260	0.7	3	0.63	<0.5	6	11	14	2.55	
06GPA112		3.28	< 0.005	<0.2	2.49	3	<10	240	0.7	3	0.78	<0.5	6	10	9	2.46	1
06GPA113		1.30	<0.005	<0.2	1.20	<2	<10	30	<0.5	2	0.52	<0.5	6	8	1	1.90	
06GPA114		0.60	<0.005	<0.2	1.36	3	<10	100	<0.5	<2	0.57	<0.5	3	2	1	3.19	
06GPA115		0.76	< 0.005	<0.2	1.37	3	<10	90	<0.5	<2	0.58	<0.5	2	4	1	3.46	



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CERTIFICATE OF ANALYSIS VA06105207

Project: OPT-YZ-YB

																	-
								•									
	Method	ME-ICP41															
	Analyte	Ga	Hg	к	La	Mg	Mn	Mo	Na	NI	P	Pb	s	Sb	Sc	Sr	
	Units	ppm	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	
Sample Description	LOR	10	1	0.01	10	0.01	5	1	0.01	1	10	2	0.01	2	1	1	
06GPA106		<10	<1	0.14	10	0.34	400	1	0.04	<1	560	14	0.05	2	1	7	Î
06GPA108		<10	1	0.07	<10	0.02	32	1	0.01	2	40	<2	0.01	<2	<1	4	
06GPA109		<10	1	0.13	<10	0.04	97	4	0.01	1	220	6	0.01	<2	<1	4	
06GPA110		<10	<1	0.25	10	0.33	322	5	0.02	1	840	11	0.01	<2	1	6	
06GPA111		<10	<1	0.78	10	0.56	533	3	0.21	12	550	3	0.33	<2	2	88	
06GPA112		10	<1	0.68	10	0.62	554	2	0.24	11	570	4	0.24	<2	2	105	Ĩ
06GPA113		10	<1	0.06	10	0.71	381	<1	0.03	4	730	3	0.01	<2	2	32	
06GPA114		<10	<1	0.81	10	0.79	690	<1	0.11	1	1520	<2	0.01	<2	4	34	
06GPA115		<10	<1	0.86	10	0.78	727	<1	0.12	<1	1490	<2	< 0.01	3	3	29	



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Project: OPT-YZ-YB

								CERTIFICATE OF ANALYSIS VA06105207
Sample Description	Method Analyte Units LOR	ME-ICP41 TI % 0.01	ME-ICP41 Ti ppm 10	ME-ICP41 U ppm 10	ME-ICP41 V ppm 1	ME-ICP41 W ppm 10	ME-ICP41 Zn ppm 2	
06GPA106 06GPA108 06GPA109 06GPA110 06GPA111		<0.01 <0.01 0.01 0.02 0.11	<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	11 3 5 12 20	<10 <10 <10 <10 <10	41 4 17 60 37	
06GPA112 06GPA113 06GPA114 06GPA115		0.11 0.15 0.20 0.21	<10 <10 <10 <10	<10 <10 <10 <10	21 35 20 22	<10 <10 <10 <10	43 61 84 77	



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CE	RTIFICATE VA060913	77		SAMPLE PREPARATION	1
			ALS CODE	DESCRIPTION	
Project: Chilcoot Red Cap P.O. No.: This report is for 19 Rock sam 15-SEP-2006.	ples submitted to our lab in Vand	couver, BC, Canada on	WEI-21 LOG-22 CRU-31 SPL-21 PUL-31	Received Sample Weight Sample login - Rcd w/o BarCode Fine crushing - 70% <2mm Split sample - riffle splitter Pulverize split to 85% <75 um	
J. BUCKLE ACCOUNTS PAYABLE	JOHN BUCKLE PETER SHORTS	J. BUCKLE			
			ME-ICP41 Au-AA23	34 Element Aqua Regia ICP-AES Au 30g FA-AA finish	ICP-AES AAS

To: XPLORER RESOURCES INC. ATTN: J. BUCKLE 307 - 1500 HARDY STREET KELOWNA BC V1Y 8H2

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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature: Keith Rogers, Executive Manager Vancouver Laboratory



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Project: Chilcoot Red Cap

CERTIFICATE OF ANALYSIS VA06091377

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	Au-AA23 Au ppm 0.005	ME-ICP41 Ag ppm 0.2	ME-ICP41 Al % 0.01	ME-ICP41 As ppm 2	ME-ICP41 B ppm 10	ME-ICP41 Ba ppm 10	ME-ICP41 Be ppm 0.5	ME-ICP41 BI ppm 2	ME-ICP41 Ca % 0.01	ME-ICP41 Cd ppm 0.5	ME-ICP41 Co ppm 1	ME-ICP41 Cr ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Fe % 0.01
08GPA018 08GPA019 08GPA020 08GPA031 08GPA032		1.08 1.40 2.12 3.68 3.20	0.029 <0.005 0.005 <0.005 <0.005	8.5 <0.2 0.3 <0.2 <0.2	0.62 1.06 0.48 0.02 0.04	5000 32 27 103 29	<10 <10 <10 120 20	120 110 140 10 10	0.5 <0.5 <0.5 <0.5 <0.5	4 V V V V	0.06 0.50 0.07 0.15 0.31	28.2 <0.5 <0.5 <0.5 <0.5	<1 4 1 70 62	5 7 13 105 194	50 12 27 6 11	1.85 2.96 1.19 3.87 4.25
08GPA034 08GPA037 08GPA040 08GPA041 08GPA043		1.00 1.38 0.62 0.92 1.12	<0.005 <0.005 <0.005 <0.005 <0.005	0.3 <0.2 <0.2 <0.2 <0.2	0.87 0.42 0.51 0.56 0.55	32 5 7 8 3	<10 <10 <10 <10 <10	30 60 110 40 60	0.6 <0.5 <0.5 <0.5 <0.5	♀ 2 ♀ ♀ ♀ ♀ ♀ ♀ ♀	0.09 0.05 0.11 0.04 0.26	<0.5 <0.5 <0.5 <0.5 <0.5	1 <1 1 2 2	8 8 7 7 8	8 5 4 5 3	1.82 2.01 1.93 1.59 2.00
08GPA044 08GPA045 08GPA046 08GPA047 08GPA048		0.74 0.90 0.42 0.70 0.54	<0.005 0.014 0.008 0.133 <0.005	0.4 1.6 0.6 1.7 0.5	1.47 2.34 0.66 1.01 1.60	28 22 33 108 5	<10 <10 <10 <10 <10	40 10 30 60 200	<0.5 <0.5 <0.5 <0.5 <0.5	2 2 2 8 2 8 2	1.26 1.66 1.00 1.16 0.76	<0.5 20.7 <0.5 10.1 <0.5	8 11 16 9 10	5 12 14 21 6	118 129 190 93 110	2.08 3.41 2.44 2.67 3.17
08GPA050 08GPA051 08GPA052 08GPA053		1.00 1.46 2.76 0.62	0.008 <0.005 <0.005 <0.005	0.6 1.0 0.9 <0.2	2.24 0.44 0.75 1.92	13 47 39 12	<10 <10 10 <10	70 170 230 130	<0.5 <0.5 <0.5 <0.5	11 <2 <2 <2	1.34 0.03 0.20 2.78	<0.5 <0.5 <0.5 <0.5	9 1 2 16	50 3 14 150	241 10 8 29	2.96 0.62 0.81 3.16



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Project: Chilcoot Red Cap

CERTIFICATE OF ANALYSIS VA06091377

Sample Description	Method	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41
	Analyte	Ga	Hg	K	La	Mg	Mn	Mo	Na	NI	P	Pb	S	Sb	Sc	Sr
	Units	ppm	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm
	LOR	10	1	0.01	10	0.01	5	1	0.01	1	10	2	0.01	2	1	1
08GPA018		<10	<1	0.44	30	0.01	84	211	0.02	<1	80	906	0.10	13	1	57
08GPA019		10	<1	0.24	30	0.49	352	2	0.10	1	1100	10	0.01	3	5	24
08GPA020		<10	<1	0.21	20	0.08	192	4	0.08	<1	100	42	0.04	6	2	10
08GPA031		<10	<1	0.01	<10	13.25	608	<1	0.01	1680	20	2	0.07	≪2	3	4
08GPA032		<10	<1	0.01	<10	12.00	610	<1	0.01	1425	30	<2	<0.01	2	5	4
08GPA034 08GPA037 08GPA040 08GPA041 08GPA043		<10 <10 <10 <10 <10	1 <1 <1 <1	0.18 0.18 0.15 0.09 0.13	20 10 10 10 20	0.27 0.11 0.21 0.15 0.23	333 73 215 411 595	8 4 1 1	0.02 0.06 0.06 0.06 0.07	21 6 3 <1 1	280 350 310 120 310	12 18 5 22 10	0.11 0.44 0.81 <0.01 0.03	8 8 9 8 8 8 8 8 8	2 1 2 2 4	4 5 7 4 10
08GPA044 08GPA045 08GPA048 08GPA047 08GPA048		<10 10 <10 <10 10	<1 <1 <1 <1 <1	0.08 0.03 0.03 0.07 0.68	<10 <10 10 <10 <10	0.16 0.11 0.11 0.11 1.24	134 139 83 55 109	<1 7 3 6 <1	0.23 0.28 0.15 0.14 0.19	9 13 40 58 23	970 1060 2040 820 1150	21 86 19 30 12	0.65 2.09 1.24 1.40 1.13	3 9 5 8 2	1 1 1 5	71 75 45 102 144
08GPA050		<10	1	0.18	<10	0.38	113	3	0.40	18	780	2	0.97	2	3	107
08GPA051		<10	<1	0.23	10	0.02	144	2	0.02	3	160	153	0.06	<2	<1	8
08GPA052		<10	<1	0.26	10	0.20	230	2	0.04	9	190	47	0.07	2	1	21
08GPA053		<10	1	0.13	10	2.63	786	<1	0.03	155	600	8	1.94	7	11	319



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CERTIFICATE OF ANALYSIS VA06091377

Project: Chilcoot Red Cap

	Method	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	
	Analyte	TI	TI	U	v	w	Zn	
Sample Description	Units	%	ppm	ppm	ppm	ppm	ppm	
Comple Description	LOK	0.01	10	10	1	10	2	
06GPA018		<0.01	<10	10	3	<10	183	
06GPA019		0.17	<10	<10	41	<10	53	
06GPA020		0.06	<10	<10	7	<10	17	
06GPA031		<0.01	<10	<10	6	<10	17	
06GPA032		<0.01	<10	<10	10	<10	20	
06GPA034		<0.01	<10	<10	4	<10	42	
06GPA037		<0.01	<10	<10	4	<10	17	
06GPA040		0.04	<10	<10	6	<10	23	
06GPA041		0.01	<10	<10	6	<10	68	
06GPA043		0.10	<10	<10	11	<10	49	
06GPA044		0.19	<10	<10	37	<10	39	
06GPA045		0.08	<10	<10	37	<10	1220	
06GPA046		0.20	<10	<10	29	<10	23	
08GPA047		0.08	<10	<10	31	<10	630	
06GPA048		0.20	<10	<10	106	<10	20	
06GPA050		0.15	<10	<10	50	90	16	
06GPA051		<0.01	<10	<10	<1	<10	79	
06GPA052		<0.01	<10	<10	5	<10	32	
06GPA053		<0.01	<10	<10	62	<10	31	



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CEF	RTIFICATE VA0610520	8		SAMPLE PREPARATION	
			ALS CODE	DESCRIPTION	
Project: OPT-YZ-YB			WEI-21	Received Sample Weight	
P.O. No.			LOG-22	Sample login - Rcd w/o BarCode	
This report is for 12 Stream Se Canada on 17-OCT-2006.	diment samples submitted to our	lab in Vancouver, BC,	SCR-41	Screen to -180um and save both	
The following have access t	o data associated with this ce	rtificate:		ANALYTICAL PROCEDURES	
JOHN BUCKLE	GARY PAYLE		ALS CODE	DESCRIPTION	INSTRUMENT
			Au-AA23	Au 30g FA-AA finish	AAS
			ME-ICP41	34 Element Aqua Regia ICP-AES	ICP-AES

To: OPTIMA MINERALS INC. ATTN: GARY PAYLE #307-1500 HARDY STREET KELOWNA BC V1Y 2H2

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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature: Keith Rogers, Executive Manager Vancouver Laboratory



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VA06105208

Project: OPT-YZ-YB

CERTIFICATE OF ANALYSIS

#### WEI-21 Au-AA23 ME-ICP41 Method Analyte Recvd Wt. Au Ag AI As в ва Ве ВΙ Са Cđ Co Cr Cu Fe Units ppm % % ppm % kg ppm ppm ppm ppm ppm ppm ppm ppm ppm Sample Description LOR 0.02 0.005 0.2 0.01 10 10 2 0.01 0.5 0.01 2 0.5 1 1 1 06GPA107 0.80 < 0.005 0.3 1.60 11 <10 110 1.0 <2 0.22 <0.5 8 14 11 1.84 17 06GPA116 0.44 < 0.005 0.4 0.50 3 <10 60 < 0.5 2 0.49 0.9 4 6 2.31 06GPA117 <0.005 2.17 4 <2 1.16 1.2 12 20 0.74 0.4 <10 70 0.5 12 3.89 06GPA118 0.78 <0.005 <0.2 0.33 <2 <10 50 <0.5 <2 0.31 <0.5 2 5 10 3.01 06GPA119 0.68 < 0.005 0.2 0.38 5 40 <0.5 2 0.20 0.6 2 8 7 2.32 <10 7 06GPA120 0.62 <0.005 0.4 1.76 3 <10 120 0.7 <2 0.66 1.0 12 34 2.53 06GPA121 0.56 < 0.005 0.5 2.36 5 <2 0.58 1.3 8 21 45 3.00 <10 80 0.6 25 162 0.52 0.009 0.5 1.98 <2 <10 50 0.6 3 1.12 1.4 11 22 3.61 22 3 6 165 0.42 0.008 0.5 0.56 <10 60 < 0.5 <2 0.41 1.0 4 2.87 0.58 <2 1.27 0.5 9 20 22 166 < 0.005 < 0.2 1.85 6 <10 60 0.6 4.16 <2 0.73 8 26 168 0.006 1.63 9 <10 1.3 3.37 0.42 0.4 170 0.8 10 182 0.44 0.006 29 230 0.8 2 1.29 0.8 19 26 3.23 0.7 2.14 <10 11



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Project: OPT-YZ-YB

### CERTIFICATE OF ANALYSIS VA06105208

Sample Description	Method Analyte Units LOR	ME-ICP41 Ga ppm 10	ME-ICP41 Hg ppm 1	ME-ICP41 K % 0.01	ME-ICP41 La ppm 10	ME-ICP41 Mg % 0.01	ME-ICP41 Mn ppm 5	ME-ICP41 Mo ppm 1	ME-ICP41 Na % 0.01	ME-ICP41 NI ppm 1	ME-ICP41 P ppm 10	ME-ICP41 Pb ppm 2	ME-ICP41 S % 0.01	ME-ICP41 Sb ppm 2	ME-ICP41 Sc ppm 1	ME-ICP41 Sr ppm 1
06GPA107		<10	1	0.13	20	0.41	1680	5	<0.01	13	720	40	0.03	<2	1	17
06GPA116		<10	<1	0.06	20	0.28	461	2	0.01	5	560	41	0.24	<2	2	24
06GPA117		10	<1	0.16	10	1.13	730	2	0.04	4	1100	57	0.02	<2	6	88
06GPA118		<10	<1	0.04	20	0.19	302	3	<0.01	1	570	18	0.08	<2	1	15
06GPA119		<10	<1	0.04	20	0.25	373	1	<0.01	8	450	25	0.04	<2	1	11
06GPA120		10	<1	0.11	20	0.74	1030	2	0.01	8	840	150	0.01	<2	3	122
06GPA121		10	<1	0.07	10	0.49	838	5	0.01	14	1010	76	0.03	<2	2	49
162		10	<1	0.12	10	1.14	870	2	0.02	12	1190	83	0.08	<2	5	80
165		<10	1	0.06	20	0.31	439	3	<0.01	4	660	40	0.24	<2	2	22
166		10	<1	0.15	10	0.63	556	<1	0.10	8	1340	25	0.04	<2	4	128
168		10	<1	0.13	20	0.62	848	9	0.02	5	890	58	0.03	2	4	73
182		10	<1	0.13	20	1.02	960	13	0.01	13	1170	92	0.10	3	4	198



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212 Brooksbank Avenue North Vancouver BC V7J 2C1 Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com To: OPTIMA MINERALS INC. #307-1500 HARDY STREET KELOWNA BC V1Y 2H2 Page: 2 - C Total # Pages: 2 (A - C) Finalized Date: 4-NOV-2006 Account: OPTMIN

Project: OPT-YZ-YB

#### CERTIFICATE OF ANALYSIS VA06105208

Sample Description	Method Analyte Units LOR	ME-ICP41 TI % 0.01	ME-ICP41 TI ppm 10	ME-ICP41 U ppm 10	ME-ICP41 V ppm 1	ME-ICP41 W ppm 10	ME-ICP41 Zn ppm 2	
06GPA107		0.02	<10	<10	24	<10	72	
06GPA116		0.05	<10	<10	33	<10	68	
06GPA117		0.25	<10	<10	87	<10	129	
06GPA118		0.04	<10	10	54	<10	30	
06GPA119		0.04	<10	<10	39	<10	40	
06GPA120		0.06	<10	10	40	<10	172	
06GPA121		0.07	<10	10	64	<10	183	
162		0.23	<10	<10	72	<10	182	
165		0.07	<10	10	46	<10	82	
166		0.23	<10	<10	85	<10	83	
168		0.08	<10	40	50	<10	117	
182		0.06	<10	<10	50	<10	115	

### 15 APPENDIX F

SAMPLE LIST

•

Sample	UTM Coo (NAD Zon	rdinates 9 83) e 8	Sample Type	Comments
110.	Northing	Easting		
06GPA033	6514223	587626	stream sediment	
06GPA034	6514223	587626	rock/grab	Granite with several thin quartz veinlets. Possible fault zone at 034/65- 85 degrees SE dip.
06GPA035	6514369	587613	stream sediment	
06GPA036	6515356	587666	stream sediment	
06GPA037	6515356	587666	rock/grab	Coarse-grained granodiorite with rusty surfaces and specks of pyrite. Some "blebs" of quartz.
06GPA038	6515357	587540	stream sediment	
06GPA039	6515351	587510	stream sediment	
06GPA040	6515306	587481	rock/grab	Rusty granite.
06GPA041	6515212	587372	rock/chip	Three metre chip sample across 3 metres. Contains stockwork of quartz veins up to several centimetres thick within granite. Stockwork zone is at least 30 metres wide but extent hidden by overburden.
06GPA042	6515434	587389	stream sediment	
06GPA043	6515574	587386	rock/grab	Granite with pyrite along fractures.
06GPA044	6491638	589892	rock/grab	Pyritic rhyolite (dike? Layer?) with <2% pyrite. Spring gossan zone.
06GPA045	6491661	589830	rock/grab	Angular piece of talus from Spring zone cliffs above. Pyritic rhyolite or silicified intermediate to mafic volcanic.
06GPA046	6491689	589780	rock/grab	Black fine-grained rock from talus/scree slope from Spring zone cliffs above. Mafic volcanic or meta-sandstone. Vague layering observed on one piece.
06GPA047	6491797	589450	rock/grab	Pyritic aphanitic, black rock as in 06GPA046. Spring zone.
06GPA048	6491786	589439	rock/grab	Pyritic siliceous rock (rhyolite?). Up to 2% pyrite. Spring zone.
06GPA049	6491726	588894	stream sediment	
06GPA050	6491999	588628	rock/grab	Rhyolite or silicified mafic to intermediate volcanic rock. Very limonitic with up to 1% pyrite as disseminations.
06GPA055	6515306	587481	stream sediment	
06GPA076	6501638	593527	stream sediment	
06GPA077	6502888	592606	stream sediment	
06GPA078	6502863	592590	stream sediment	
06GPA079	6503343	592411	rock/grab	Spherulitic rhyolite with occasional speck of pyrite. From talus blocks from cliffs above Kwashona Creek.
06GPA080	6494526	592746	stream sediment	Coarse well-sorted sands with some silt component. Sample where stream flows along main valley flats.
06GPA081	6494522	592716	rock/grab	Pyritic diorite with chlorite-epidote alteration. Patches, specks and a few small pyrite cubes noted in association with fractures. Non gossanous though the fracture faces are rusty.
06GPA082	6494281	592579	stream sediment	Medium to coarse sands with gravel and silty elements. Two close parallel channels - active channel has 70 cm wide flow while broader channel is dry. Same stream as 06GPA080.
06GPA083	6494053	592539	rock/float	Quartz monzonite with specks of grey-silver metallic mineral.

06GPA084	6494053	592539	rock/float	Skarn float in amongst moraine material. Patches of grey-silver sulphide (molybdenite?). Garnet, epidote and pyrite noted in skarn assemblage.
06GPA085	6494053	592539	rock/float	Aplitic (granite) rock moraine skarn related float. Patches of grey-silver sulphide (molybdenite?) disseminated aplite matrix.
06GPA086	6493864	592499	stream sediment	
06GPA087	6492724	592055	rock/float	Rusty felsite float.
06GPA090	6493032	601072	rock/grab	Very limonitic altered felsic rock. The altered rock could be traced for several hundred metres in an east-northeast direction.
06GPA091	6492951	601390	rock/grab	Limonitic altered felsic rock.
06GPA093	6491748	600169	rock/grab	Rusty tonalite(?) sample with 5-10% disseminated pyrite.
06GPA094	6496000	596000	rock/grab	Baker showing. Felsic intrusive/rhyolite containing quartz eyes.
06GPA107	6493408	598199	stream sediment	
06GPA108	6493400	598199	rock/chip	Quartz vein which is up to 5 metres wide locally. No sulphides observed. Hostrocks are intermediate to felsic rocks and welded tuffs. This sample was taken across a three metres.
06GPA111	6508453	588767	rock/grab	Rusty black, siliceous, conchoidal-fracturing talus piece picked up at western base of Yellow Bluff cliffs. This rhyolitic sample has pyritic film on fractures and appears to have come from the rusty zone about 30 metres above.
06GPA112	6508453	588767	rock/grab	Same location and rock type as 06GPA111 but possibly more finely disseminated pyrite.
06GPA113	6507916	589577	rock/grab	Fragmental/clastic rock with weakly rusty surfaces. Dark, epidotized fragments occur in a fine-grained matrix. Yellow Bluff.
06GPA114	6507586	589657	rock/grab	Greenish black, massive, andesitic rock. A little rusty stain is noted but no sulphides. On Yellow Bluff.
06GPA115	6507616	589603	rock/grab	Same description as 06GPA0114. On Yellow Bluff.
06GPA116	6485851	605911	stream sediment	
06GPA117	6486531	606279	stream sediment	
06GPA118	6487609	609430	stream sediment	
06GPA119	6488637	612227	stream sediment	
06GPA120	6490655	612128	stream sediment	
06GPA121	6491431	613229	stream sediment	
06SFO134	6496946	589843	stream sediment	
06SFO135	6497027	589842	stream sediment	
06SFO136	6496437	590704	stream sediment	
06SFO137	6496935	591724	stream sediment	
06SFO138	6496914	592925	stream sediment	
06SFO139	6496937	592995	stream sediment	
06SFO140	6495599	595889	stream sediment	
06SFO141	6495961	595146	stream sediment	
06SFO142	6495997	596078	stream sediment	
06SFO143	6494646	594859	stream sediment	
06SFO144	6492815	595020	stream sediment	
06SFO145	6492757	594695	stream sediment	
06SF0146	6492248	588965	stream sediment	
06SF0149	6493480	595269	stream sediment	
06SF0151	6493480	595269	stream sediment	
	0-00-00	000209	sa cam sediment	I

065	SFO153	6501772	593452	stream sediment
065	SFO154	6503119	592623	stream sediment
065	SFO155	6506488	586126	stream sediment
065	SFO156	6507123	586453	stream sediment
065	SFO157	6507642	587094	stream sediment
065	SFO158	6508759	588208	stream sediment
065	SFO159	6500845	590897	stream sediment
065	SFO160	6501897	589985	stream sediment
065	SFO161	6503396	590558	stream sediment
065	SFO162	6506693	588623	stream sediment
065	SFO163	6500316	587527	stream sediment
065	SFO165	6506153	591256	stream sediment
065	SFO187	6492045	600257	stream sediment
065	SFO188	6491591	600864	stream sediment
065	SFO189	6491886	600686	stream sediment
065	SFO190	6491667	601290	stream sediment
065	SEO101	6401681	602070	stream sediment
060	SEO106	6490521	500023	stream sediment
000	SEO107	6/00759	600149	stream sediment
000	SEO109	6/000/1	500791	stream sediment
000	SF0190	6400000	599761	stream and ment
000	5F0202	0492920	592105	stream sediment
06V	VMO016	6516946	587674	stream sediment
06V	VMO017	6516949	587778	stream sediment
06V	VMO018	6516056	586736	stream sediment
06V	VMO020	6516356	586040	stream sediment
06V	//MO021	6516350	586056	stream sediment
06V	VMO030	6511978	589591	stream sediment
06V	VMO031	6512000	589599	stream sediment
06V	VMO032	6512649	588794	stream sediment
06V	VMO033	6511060	590697	stream sediment
06V	VMO034	6512816	590924	stream sediment
06V	VMO052	6515772	587336	stream sediment
06V	//MO054	6491253	589571	stream sediment
06V	VMO055	6491267	586036	stream sediment
06V	VMO057	6497727	586738	stream sediment
06V	VMO058	6497817	588663	stream sediment
06V	VMO059	6496566	589625	stream sediment
162	2	6485937	605423	stream sediment
165		6486403	606785	stream sediment
168	3	0400009 6487468	610345	stream sediment
182	2	6491407	612409	stream sediment




Figure 2. Taku Property Claim Blocks.



## MINFILE OCCURRENCES

Anty Baker	104K 023 104K 048
Banker	104K 007 not on property
Big Bull	104K 008 not on property
Blackfly	104K new not on property
Council	104K 017
Eric	104K 059
Ericksen-Ashby	104K 009
Ericksen-Ashby Zone 8	104K 021
GO	104K 074 not on property
Grag	104K 068
Green Ham	104K 127
Hi Yogi	104K 058
Highland Girl	104K 012 not on property
Lisadelle	104K new not on property
Maidas	104K 020

## Moly-Taku (Y Zone)

Mt. Manville Mt. Odgen (Moly-Taku) New Polaris Oksarah Sparling Spring Squat Stuhini Sue Surveyor Tulsequah Chief Wright Glacier Yellow Bluff Zohini

## 104K 047 104K 094 104K 013 not on property 104K 003 not onproperty 104K new

104K new 104K 006 not on property 104K 096 104K 062 104K 050 104K 051 104K 016 104K 002 not on property 104K 057 104K 049

104K 052 not on property

Refer to MINFILE, www.minfile.ca

Figure 3. Showings and Deposits on the Taku Property.



Figure 4. Landsat Image of Taku Property.



Figure 5. Ericksen-Ashby Geology and Showings Map.



Figure 6. Taku Star Block Airborne Survey Interpretation Map.



Figure 7. Taku Star Block Compilation Map.



Figure 8. Moly Taku Mineralization Zones.







tic intrusive rocks			

uTrSvb	basaltic volcanic rocks	

	CSsc	coarse clastic sedimentary rocks
	CScg	conglomerate, coarse clastic sedimentary rocks
	CSlm	limestone, marble, calcareous sedimentary rocks
	CSvc	volcaniclastic rocks
D		



# **Geology Legend**



Carboniferous			
Stikine Assemblage			
CSsc	coarse clastic sedimentary rocks		
CScg	conglomerate, coarse clastic sedimentary rocks		
CSIm	limestone, marble, calcareous sedimentary rocks		
CSvc	volcaniclastic rocks		
Pennsylvanian			
PnSdo	dolomitic carbonate rocks		
PnSsf	mudstone, siltstone, shale fine clastic sedimentary rocks		
PnSv	undivided volcanic rocks		
Mississippian			
MSbm	bimodal volcanic rocks		
MSv	undivided volcanic rocks		
Devonian to Ca	arboniferous		
DCqm	quartz monzonitic intrusive rocks		
Devonian to Mississippian			
Whitewater Metamorphic Complex			
DMWgs	greenstone, greenschist metamorphic rocks		
Coological man and	legend compiled from:		
Geological map and			

Mihalynuk, M.G., Smith, M.T., Hancock, K.D., Dudka, S. and Payne, J.G. (1994): Geology of the Tulsequah River and Glacier Creek Area (104K/12, 13); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1994-3.

Mihalynuk, M.G., Meldrum, D.G., Sears, W.A., Johannson, G.G., Madu, B.E., Vance, S., Tipper, H.W.

and Monger, J.W.H. (1995): Geology and Lithologeochemistry of the Stuhini Creek Map Area (104K/11); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1995-5.



Lower Jurassic to Early Middle Jurassic

Laberge Group

**ImJL** mudstone, siltstone, shale fine clastic sedimentary rocks

Early Jurassic

Aishihik Plutonic Suite



Lower Jurassic

Laberge Group



Takwahoni Formation: andesitic volcanic rocks



- Takwahoni Formation: argillite, greywacke, wacke, conglomerate turbidites
- **IJLTcg Takwahoni Formation**: conglomerate, coarse clastic sedimentary rocks











MTrSdr dioritic intrusive rocks

- **MTrSgb** gabbroic to dioritic intrusive rocks
- **MTrSIm** limestone, marble, calcareous sedimentary rocks
  - f mudstone, siltstone, shale fine clastic sedimentary rocks
- **ITrSmd** mudstone/laminite fine clastic sedimentary rocks



uluananci locks

MTrSv undivided volcanic rocks

Taku Gold Block Claim Boundary







# **Geology Legend**





Figure 12. Stylized Geology of the Ericksen-Ashby Deposit, modified after Payne (1979) and Mihalynuk *et al.* (1995).





Figure 14. Location Map of IP Lines, Yellow Bluff Showing Area.







## IP SURVEY PARAMETERS

### INSTRUMENTATION:

IP Receiver: BRGM IRIS ELREC 6 IP Transmitter: BRGM VIP 4000 IP Generator: 6.5 kWatt Honda

Survey Mode: Time Domain Array: Dipole-Dipole Dipole Length: 50 meters (164 feet) Dipole Separation: n=1 to n=12 Delay Time: 240 milliseconds Integration: 1600 milliseconds Charge Cycle: 8 second square wave

## OPTIMA MINERALS INC.

## YELLOW BLUFF PROPERTY TULSEQUAH AREA, ATLIN MD, BC

IP and RESISTIVITY SURVEYS GEOTOMO INVERSION

# LINE 000E

NTS:	DATE:	FIG NO:
104K/11	OCT '06	GP-1B



## IP SURVEY PARAMETERS

### INSTRUMENTATION:

IP Receiver: BRGM IRIS ELREC 6 IP Transmitter: BRGM VIP 4000 IP Generator: 6.5 kWatt Honda

Survey Mode: Time Domain Array: Dipole-Dipole Dipole Length: 50 meters (164 feet) Dipole Separation: n=1 to n=12 Delay Time: 240 milliseconds Integration: 1600 milliseconds Charge Cycle: 8 second square wave

PTIMA MINERALS INC.			
.OW I	BLUFF P	ROPER	ТΥ
RESISTIVITY SURVEYS GEOTOMO INVERSION SPLINE LINE			
NO.:	NTS:	DATE:	FIG NO .:

	DATE:	FIG NO.:
K/11	OCT '06	GP-2B



