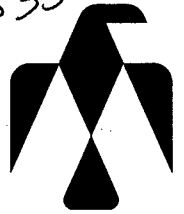


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85-147-13535



May 24, 1985

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
Rec'd MAY 24 1985
SUBJECT _____
FILE _____
VANCOUVER, B.C.

Gold Commissioner
Ministry of Energy Mines
& Petroleum Resources
Parliament Buildings
Victoria, B.C.

GEOLOGICAL BRANCH ASSESSMENT REPORT

Attention: B. Hosking

Dear Sir:

RE: SNOW #1 - 5
SKEENA M.D.

13,535

Enclosed are two copies of the following report:-

Interpretation and Integration of the Results of
a Geochemical Survey and an Airborne VLF-Electromagnetic
and Magnetometer Survey

This will conclude our filing on the above captioned claims.
Two copies of the Airborne VLF-Electromagnetometer and
Magnetometer Survey together with the filing fees were submitted
February 25, 1985.

Thank you for your cooperation in this matter and should there
be any enquiries please contact the writer.

Yours sincerely

MAJOREM MINERALS LTD.

Dawn L. Slavik

encl.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

MAJOREM MINERALS LTD.

GEOPHYSICAL REPORT

on

SNOW 1 - 4 CLAIMS

SKEENA M. D.

Moresby Island, Queen Charlotte Islands

Latitude 53 13'N Longitude 131 48'W

NTS 103G/4W

Author: Clyde L. Smith, Ph.D., P. Eng.

Date of Work: April 22, 1984

Date of Report: January 22, 1985

INTERPRETATION AND INTEGRATION OF THE RESULTS

OF A GEOCHEMICAL SURVEY

And An

AIRBORNE VLF-ELECTROMAGNETOMETER

And

MAGNETOMETER SURVEY

Owner: Robert E. Mickle

Operator: Majorem Minerals Ltd.

By: Clyde L. Smith, Ph.D., P.Eng.

13,535
PART
1 OF 2

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INTRODUCTION

Majorem Minerals Ltd. undertook ground magnetometer and geochemical soil surveys on the Snow property from October 1983 to February 1984 and a subsequent airborne magnetometer and VLF-electro magnetometer survey, flown April 22, 1984. These surveys have located areas of geochemical anomalies (arsenic) magnetic highs and electromagnetic anomalies. This report is an analysis and an integration of the results of these two surveys and was done to locate anomalies that might be associated with encouraging geochemical areas. The presence of any such associations will form the basis for the next stage in the exploration of this property.

PROPERTY

The property consists of 50 contiguous units as listed below and illustrated on Figure 1.

<u>CLAIM NAME</u>	<u>RECORD NO.</u>	<u>UNITS</u>	<u>RECORD DATE</u>
Snow # 1	1100	16	Feb. 26/79
Snow # 2	1101	15	Feb. 26/79
Snow # 3	1102	12	Feb. 26/79
Snow # 4	1103	10	Feb. 26/79

LOCATION & ACCESS

The claims are located on northeast Moresby Island, immediately south of the town of Sandspit, B.C. They lie within the Skeena Mining Division and NTS 103G/4W. Approximate geographical co-ordinates are latitude 53 13'N and longitude 131 48'W.

The area is accessible via a good logging road which runs south from Sandspit through the eastern part of the claim block. Several abandoned spur roads provide access to the western portion of the claims group.

LOCAL GEOLOGY

The following geological and previous work descriptions have been extracted from a geology and geochemistry report of the Snow Mineral claims written by James S. Christie and Gordon G. Richards on February 5, 1982.

Geology:

"Bedrock exposure on the property is relatively sparse other than along the steep scarp bordering the Sandspit fault and the coastline south to Copper Bay. Most of the creeks have occasional exposures of bedrock and the nature of these suggests that overburden consists of a relatively thin veneer of gravely ground moraine and till. No bedrock exposure is known east of the Sandspit fault and numerous old strand-lines are visible on air-photos. Much deeper overburden is probable east of the fault.

The geology differs somewhat from mapping shown in Bulletin #54 - Geology of the Queen Charlotte Islands, by Dr. A. Sutherland-Brown. There are numerous exposure of Honna conglomerate in the creek west of Copper Bay, suggesting that the Honna is much more extensive than indicated in Bulletin 54. Outcrops of Yakoun Formation lapilli tuff and agglomerate occur east of that conglomerate area and extend to the scarp adjacent to the Sandspit fault, as shown in Bulletin 54. These rocks are of Jurassic age and probably are in fault contact with the Upper Cretaceous Honna conglomerate.

There are a number of exposures of diorite to quartz diorite intrusive rocks cutting the Yakoun section. These are probably of the same age as plutons mapped by Sutherland-Brown at the northwest corner of the property and southeast of the property at Cumshewa Pt. The plutons appear to form a narrow belt of intrusive elongate parallel to the Sandspit fault.

Alteration & Mineralization

Hydrothermal sulfide mineralization is widespread on the property and a variety of metallic minerals are present. Pyrite and pyrrhotite are common but chalcopyrite, arsenopyrite, sphalerite and galena associated with barite are known at specific showings on the property. Gold values to 0.43 oz. Au/ton have been reported by Falconbridge from grab and selected samples containing visible arsenopyrite mineralization.

The most spectacular sulfides known, ranging as high as 15-20% by volume, occur in the west part of Snow #5. These rocks are strongly bleached clay altered felsite (rhyolite?) with heavy disseminated and fracture controlled pyrite-pyrrhotite. Gold values in 2 rock chip samples are low, but arsenic values of 130 and 190 ppm are anomalous and suggest by analogy with the gold-arsenic association on the property that interesting gold values could occur in the system. The zone of intense mineralization appears to trend northerly and be in excess of 100m wide, indicating that an exploration target of substantial dimensions could be present. Less spectacular but persistent mineralization is known in many other exposures northwest of the LCP for Snow #2 which are rusty weathering outcrops adjacent to the Sandspit fault. The bulk of the sulfide consists of disseminated pyrite-pyrrhotite in pyroclastic rocks but some zones of intense fracture mineralization occur.

The area to yield the best gold values to date (0.43 oz. Au/ton), a selected sample from trench #1, lies on the south side of Baxter Creek. This mineralization is associated with up to 5% fine arsenopyrite needles in bleached silicified rhyolite tuff in a southwest trending shear. Quartz veinlets are present in the areas with abundant arsenopyrite. The mineralized zone is of the order of 5 metres wide with about 1 metre of very intense mineralization in the centre. The zone appears to be controlled by a northeast trending shear. A number of other samples from the same trench and trenches #2, #3 and #4 in the same vicinity have yielded some anomalous gold values to 0.072 oz. Au/ton, but were, for the most part low. Visible arsenopyrite is fairly common.

Lead-zinc and copper mineralization is known in several areas north and south of this gold area, but these showings were not examined in the current programme."

WORK COMPLETED

"The SNOW property was optioned from R. E. Mickle in the spring of 1981 after a previous agreement with Falconbridge Nickel Mines Ltd. had been terminated. Exploration work has been done in the area since about 1969 when part of the property was evaluated for copper and molybdenum by Falconbridge. The most recent work by Falconbridge was directed towards gold potential of the property. Geochemical analyses for Ca - Zn - Pb - Ag - Cd - Co - Hg and As were done to various degrees on samples from three small geochem grids in the most promising areas. Limited programmes of backhoe trenching and hand trenching were done, and three short packsack drill-holes were completed all of which returned very low gold assays.

Review of the Falconbridge results and examination of the property by the writer lead to a conclusion that there was still hope for discovery of economic gold deposits on the property. A comprehensive geochem grid was established over the entire property, and the resulting 568 soils, 32 silts and 10 rock chip samples were run for arsenic by Chemex Labs Ltd., 212 Brooksbank Avenue, North Vancouver. A few samples were run for gold."

In 1982 backhoe trenching was done within part of the gold-arsenic soil anomaly south of Baxter Creek. Interesting gold values were encountered in several trenches.

A grid was cut-out in 1983 in preparation for an I.P. Survey and a magnetometer survey was run on the grid. The gold mineralization exposed in 1982 was shown to occur on the flanks of a large mag. low.

An airborne VLF-electromagnetic and magnetic survey covering 145 kilometres was carried out during April of 1984. This survey located several areas of anomalous magnetic and electromagnetic intensity. The report on that work concluded that the magnetic highs are most likely mapping either direct increases in the amount of pyrrhotite mineralization or areas where the buried pluton is closest to the surface and henceforth mapping the most intense fracturing of the country rock.

PREVIOUS ASSESSMENT REPORTS

- Prospecting Report on the QCBM Calim Group (Snow #1 & #2)
December 27/79, R. E. Mickle.
- Assessment Report on the QCSZ Claim Group (Snow #3 & #4),
Jan. 31/80, S. Zastavnikovich.
- Geochemical Report on the Snow #5 Claim, Feb. 15/80, P.
Burns, I. Elliott.
- Geochemical Report, Feb./81, B.W. Downing.
- Geological and Geochemical. Physical work, Map of Trenches
with Assays. Assessment Report Feb./82, J.S. Christie
and G.G. Richards.
- Magnetometer and Geochemical Survey Assessment Report, April
25, 1984, J.S. Christie, W.A. Howell.
- Geophysical Report on an Airborne VLF-EM and EM Survey.
Assessment Report, June 15, 1984, E. Trent Pezzot.

INTERPRETATION AND INTEGRATION OF GEOCHEMICAL
MAGNETIC AND ELECTROMAGNETIC RESULTS

Significant geochemical soil anomalies in arsenic occur within an area of 6km x 2km in the southwestern block of the Sandspit Fault on the Snow property. The region is one of poor outcrop and extensive glacial cover and the presence of the arsenic anomalies is believed to be a strong indication of the presence of gold mineralization over a broad area. The direct relation between gold mineralization and arsenic geochemistry has been established in the Baxter Creek locale. Mineralization occurring in shear zones, over a 300m strike length, assay up to .254 oz/ton Au. over .5m, .118 oz/ton Au. over 2.0m and .08 oz/ton Au. over 5.3m. These occurrences are located in the midst of an arsenic anomaly which reaches peak values of 380 ppm As.

A pronounced ground magnetic low detected by a ground survey is located in the area of the known occurrences and is believed to reflect hydrothermal alteration related to the mineralized area.

Airborne magnetic results have delineated a strong linear magnetic high, averaging 1.5km in width, which stretches over a distance of 5km in a northwesterly direction. This large feature is believed to reflect a buried intrusion, possibly of Cretaceous age and representing a continuation of granitic rocks exposed near the northwest corner of the property.

The anomaly cuts off along its northeast side which is an apparent reflection of a termination by the Sandspit Fault. It is reasonable to expect that this buried intrusion is further indicated by the close correspondence of arsenic soil anomalies with the magnetic anomaly.

In certain locales a close fit occurs between arsenic peaks and points of maximum magnetic response. Those may be reflections of pyrrhotite rich mineralization associated with arsenic-gold.

Airborne VLF-EM results show numerous elongate conductors within the 6km x 2km belt. The general east-west trend of these features may reflect structurally-controlled zones of mineralization related to deformation within the zone of the Sandspit Fault. Again, several anomalies correspond closely with arsenic soil anomalies and magnetic highs.

SUMMARY AND CONCLUSIONS

A close correspondence occurs within a 6km x 2km northwestesrly-trending belt on the Snow property between soil geochemical anomalies in arsenic, a broad magnetic anomaly believed to reflect a buried intrusion and elongate VLF-EM conductors. The occurrence of significant gold mineralization in a trenched area, which has a positive correlation with arsenic geochemistry a local magnetic feature and a prominent conductor, is strongly suggestive that other coincident features on the property deserve advanced exploration.

RECOMMENDATIONS

It is recommended that selected coincident anomalies in arsenic geochemistry, magnetics and VLF-EM conductors be carefully prospected and locations selected for additional backhoe trenching and/or drilling.

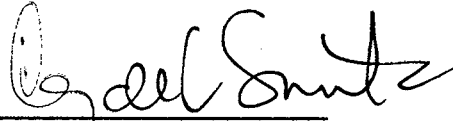
COST BREAKDOWN

<u>Personnel</u>	<u>Dates</u>	<u>Project</u>	<u>Chargeable</u>		
			<u>Time-Days</u>	<u>Rate</u>	<u>Total</u>
C. L. Smith	Aug 15/84	Data Interpretation	1	\$500	\$ 500
C. L. Smith	Aug 16/84	Map Preparation	1	\$500	\$1000
C. L. Smith	Aug 17/84	Report Preparation	1	\$500	\$1500
Sub Total			3 Days		<u>\$1,500</u>
Maps & Report Preparation					<u>300</u>
					<u>\$1,800</u>

STATEMENT OF QUALIFICATIONS

I, Clyde L. Smith, do certify that:

- (1) I am a professional geologist working in British Columbia and resident at 5354 6th Avenue, Delta, B.C. V4M 1L5.
- (2) I am graduate of Carleton College (B.A. 1959), University of British Columbia (M.Sc., 1963), and University of Idaho (Ph.D., 1966).
- (3) I have been employed in the mineral exploration industry as a full-time geologist since 1965.
- (4) I am a Registered Professional Engineer of the Association of Professional Engineers of the Province of British Columbia.
- (5) This report is based on my personal knowledge of the property and district.



Clyde L. Smith
Ph.D., P.Eng.