

REPORT ON THE

SPIRIT CLAIM

152(C)

FOR

EAGLE RESOURCES LTD. (NPL)

Vancouver, B.C.

August 31, 1979

by: IAN G. SUTHERLAND

PROSPECTOR

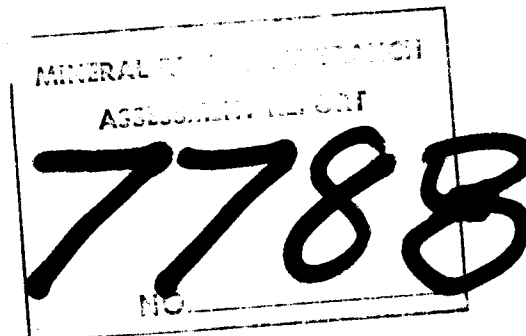


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ENCLOSURES:

MAP GEO CHEM GRID RESULTS
MAP GRID AND ALTEREO AREAS

1. GENERAL COMMENTS

The Spirit Claim Group is the central portion of a much larger area of moderate to intense alteration along or near the contact between the white and red granodiorites stocks of the Otter and Osprey stocks. The red granodiorites being to the west and the whites to the east portions of the claim.

These stocks show considerable aplite and pegmatite dikeing. There are three phases of intrusives underlying the area. A variety of intrusive types have been noted on this property. In short most prerequisites of a porphyry type deposit are present on the claim.

Attempts were made in the past to test the property by geo-chem testing for molybdenum, and a magnetometer survey was carried out in an area already explored to a limited extent by some trenching in an attempt to establish drill targets.

Limited percussion drilling was carried out primarily in the South-East portion of the property in an area of strong sericitic alteration.

Geo Chem testing was ineffective because it was carried on in too limited an area with no attention paid to tracer elements (eg: fluorine). The purpose was to establish targets rather than outline a zone or zones; too little consideration was given to the heavy overburden which makes ineffective any molybdenum testing. The drilling targets were set with insufficient evidence available for a well considered program.

Areas of faulting in this area have a natural tendency to be filled in by glacial till and heavy overburden.

Percussion drilling was carried out with little or no recovery controls although the drilling did indicate a much larger area of alteration than was visible in surface outcropping and did return a sub-commercial molybdenum mineralization wherever the drill holes encountered bed rock.

It is not an overestimation that 50% of the molybdenum was not recovered.

I would at this time point out that, because of the extremely fine flaky nature of the molybdenum mineralization, that diamond drilling for grades would have to be carried out with the largest core available and with the tightest controls possible.

INTRODUCTION

I felt that a possibility existed of outlining a zone or zones of interest with geo-chem testing for fluorine. That, since most molybdenum deposits carry minor amounts of uranium and or other radioactive elements, it might be possible to detect mineralized zones with a scintillometer. With this purpose in mind I commenced a work program on the Spirit Claim.

LOCATION AND ACCESS

The Spirit Claim is located at 49° 46' 30N"; 120° 0' 30" west on Camp Creek near the eastern boundary of the Similkameen Mining District. The claim may be reached by road from Princeton a distance of 38 miles northeast from Princeton or from Peachland a distance of 12 miles westward from Peachland.

The claim is traversed by an all weather dirt road from Peachland to Princeton. A system of logging and hydro access roads adequately service the entire claim.

CLAIM GEOLOGY

It is very difficult to get an accurate picture of the geology of the Spirit Claim as exposed rock does not occur in more than 5% of the claim area. The balance being covered by varying depths of glacial till.

The intensely altered zones, from surface indications, seem fault controlled. There is sufficient evidence to project three faults on the Spirit as follows:

1. A NNE fault passing across the SE corner of the Spirit near the legal corner post.
2. A NW trending fault commencing where Chapman Creek empties into Camp Creek and following the course of Chapman Creek to Chapman Lake.
3. A NW trending fault running parallel to the projected Chapman Creek fault commencing at a point approximately 500 meters south on Camp Creek from the point where Chapman Creek fault starts. This projected fault for reasons of simplification I will call the projected Kathleen Fault. This fault follows the course of an unnamed creek.

Intense quartz sericite pyrites alteration occurs along two linear zones, which I take to be shear zones, between the projected Kathleen and Chapman Creek faults. These shear zones seem to be related to the fore-mentioned projected faults. These shear zones start just south east of Camp Creek in the south east sector of the Spirit Claim and trend in a NW direction for an exposed 250 to 300 meters. Much of this zone has been explored with bulldozer trenching.

Some 350 meters north west, what may be the same zones, are again exposed. Samples from the trenching in these zones taken by Juniper Mines Ltd. in 1967 when the cuts were only 2 years old. Returned from the samples across a 20' cut valves up to .057% MOS₂. Averages for a total of 60 feet were .48% MOS₂. A grab sample assayed .48% MOS₂ (not included in the cut averages).

Some percussion drilling was carried out on the aforementioned zones. All holes which reached bed rock showed a high degree of quartz sericite dyrite alteration with sub-commercial values in the .025 - .051 percent range MOS₂. From personal knowledge I can freely state that more MOS₂ was lost than recovered because of the extremely fine flaky nature of the molybdenum. Work to the commencement of my work program has been more detrimental to the property than helpful.

From personal experience a sample I took in 1965 from the rotary drill hole area trench (extreme SE section of the sericite alteration zone) which I broke into several smaller pieces, split into two sample bags and assayed. The contents of one bag returned a value of .087% MOS₂. The remainder I kept until 1976. When assayed the values were down to .003% MOS₂ and a very large quantity of oxidized material had leached into the sample bag. As this material was obviously ferro molybdite I saw no point in having it assayed.

Wherever rock exposure occurs on the property it is clearly intrusives. As these intrusives have been extensively described by Ron Philp, 1966 to 1968, Ramalingaswamy 1976 and Dave Taylor 1978, there is no need to repeat said description.

PURPOSE OF PROGRAM

1. To establish a temporary base line and grid on the Spirit Claim.
2. To geo chem for fluorines primarily and molybdenum secondarily in the hope that there would be sufficiently large quantities of fluorine remaining to be informative. Geo chem samples were taken with a mattock from directly below the root line from the "B" horizon.
3. To test known mineralized areas for radioactive emissions, since most molybdenum occurrences have small quantities of radioactive material associated with the mineralized zones, in the hope that a scintilometer would prove a useful tool in extending the known zones. Scintrex B.G.S.-2 Scintillation counter.

RESULTS

As a result of road testing with a scintilometer new highly altered sericitic zones were found in the north northwest.

NB All altered zones were indicated by scint readings of two to four times area background.

Molybdenum and fluorine geo-chemical samples taken on a temporary grid set up to tie in new zones of alteration returned the following results.

- (a) That the general background fluorines were under 200 PPM.
- (b) That an extremely large area had fluorine returns of well over 300 PPM.
- (c) That high fluorine results (in excess of 1000 PPM were attributed to proximity of altered rock exposure).
- (d) That lower fluorine values (300 PPM to 400PPM) within the larger anomalous area, could be directly attributed to heavy overburden.
- (e) That fluorine values between 400 PPM and 1000 PPM were directly related to less overburden.

For detailed mapping of above see accompanying maps.

CONCLUSIONS

- (1) An anomalous area, with an indicated width of at least 800 meters, extends from the south east corner of the Spirit Claim, in a north north-westerly direction across the entire length of the claim.
- (2) Geo-chem testing, particularly flourine, with carefull relating to soil conditions, overburden and proximity to outcrop, can be very informative.
- (3) That the most favourable target areas may be indicated by scintilometer highs.

RECOMMENDATIONS

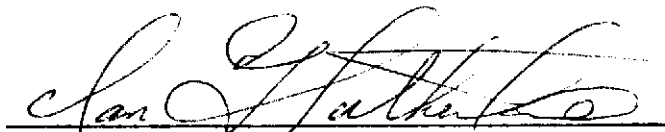
- (1) A permanent base line be established south-north for the length of the Spirit Claim (2½ km.)
- (2) Grid lines be established at 250 m intervals, crossing the base line at right angles, for the entire width of the Spirit Claim (2 km.) A total of 10 grid lines with a total length of 20 km.
- (3) Picketed stations at 100 m intervals on base and grid lines be established for testing sites (225 stations).
- (4) Mo, Cu, Pb, Zn, AS, Mn, F & W geo-chem sampling be carried out at all stations with detailed environmental information noted for each station.
- (5) Induced polarization, magnetometer and electro-magnetometer testing should be undertaken.
- (6) Additional trenching should be carried out, where feasable, based on the information obtained from the recommended program.

LIST OF EXPENDITURES

Base and grid lines	7 days @ \$75.00	\$1,050.00
Scintilometer survey (operator and instrument)	8 days @ \$160.00 per day	1,250.00
4 X 4 truck	15 days @ \$25.00 per day	375.00
Provisions		232.00
Flagging (Fluorescent pink)		48.60
4 X 4 and propane gas (cooking and lighting)		40.00
Batteries for instrument		16.08
	Total	<u>\$3,041.68</u>

NB:

No assay expense has been listed as results were not completed until the assessment report deadline had passed. Geo chem billings will be included in the 1980 assessment report. Estimated cost \$1,620,000.00

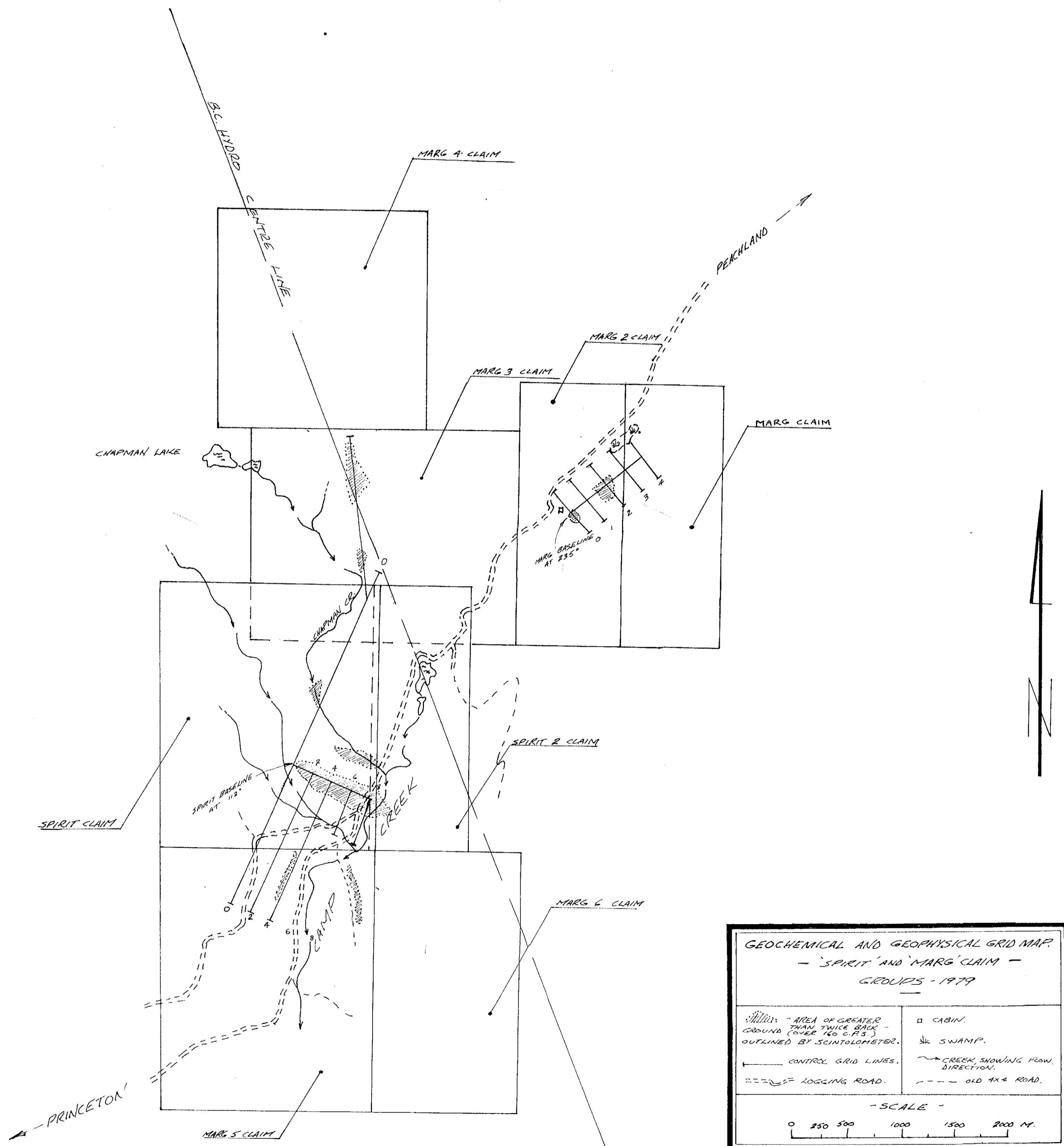


Ian Sutherland

The writer has 34 years experience in the mining exploration field.

The writer currently has a property at Salmo in the second year exploration by B.P. Minerals and another being looked at by B.P. Minerals this year.

5518 000
 285 000
 4800 ft



GEOCHEMICAL AND GEOPHYSICAL GRID MAP
 - 'SPIRIT' AND 'MARG' CLAIM -
 GROUPS - 1979

Legend:

- Area of greater ground than twice back - outlined by scintillometer.
- CABIN.
- SWAMP.
- CREEK, SHOWING FLOW DIRECTION.
- OLD AX4 ROAD.

Scale: 0 250 500 1000 1500 2000 M.

MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
7788
 NO.

PREPARED FOR -
 I.G. SUTHERLAND
 JUNE 1979



SPIRIT L.C.P.

CAMP CR

B.C. HYDRO

POWELL

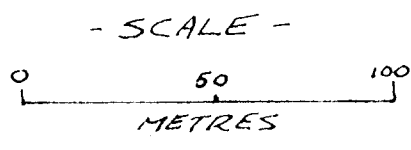
LINE

RIGHT

CHAPMAN CR

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- SPIRIT CLAIM -
GEOCHEM MAP FOR
MOLYBDENUM AND FLUORINE
P.P.M.
MoS₂ + 1 | 560 → FLUORINE
(5.8) PH TEST
=== DIRT ROAD
--- CLAIM LINE

