

STIKINE NORTH GROUP

692

C O N T E N T S

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ATTACHMENTS

Statement of Qualifications - Ralph D. Falconer

Evidence of Expenditures

#1 Topographic Map, 1" = 500'. (Map #1)

#2 Magnetic Contour Map, 1" = 500' (Map #2)

25 May 1965

GEOPHYSICAL REPORT

(MAGNETOMETER SURVEY)

ON

MINERAL CLAIMS BIK 227 - 269 (Inclusive)

AND

BIK 1-3 (FR) (Inclusive)
(herein called the Stikine North Group)

57°N 131°W S.E.

SUMMARY

A magnetometer survey, covering approximately ten line miles, was carried out on the Stikine North Group in the period September 3-12, 1964. About half of the lines used were claim location lines, while the remainder were cut for the magnetometer survey. Readings were taken at 100' intervals and the results are presented as an overlay to the topographic map, scale 1"=500'. Contour interval is 200 gammas total field.

The magnetic picture developed from this work does not show any direct evidence of an extension of the "Galore Creek Stock" of Stikine Copper Company (Kennco) underlying the area, but such a possibility is not ruled out. Sufficient similarities exist to warrant additional effort on the ground.

INTRODUCTION

In mid-summer 1964, it was realized that the ground north of the Stikine Copper Company (Kennco) claims was a favourable area for an extension of Kennco's "Central" orebody. As a result, the 46 claims of the Stikine North Group, situated at approximately 131°25'W, 57°10'N in Northern B.C., were staked and geological and geophysical work planned.

The geophysical work carried out consisted of a magnetometer survey during the period September 3-12, 1964,

covering ten line miles. About half of the lines covered were claim location lines, while the remainder were cut for the magnetometer survey. Helicopter transportation was used to get to the survey area from base camp located on the East Fork of Galore Creek. Weather during this period was excellent, most days being bright and sunny.

The results are presented on an overlay (Map #2) to the topographic map (Map #1) of the area.

WORK PERFORMED

The magnetometer survey was carried out, taking readings at 100' intervals on the lines shown on the accompanying topographic map. Coverage amounted to approximately one line mile per field day. This low figure is due to the rugged topography, heavy bush, and waiting for helicopter transportation.

The instrument used was a Barringer GM-102 nuclear precession magnetometer, measuring the absolute total magnetic field to an accuracy of 10 gammas. Diurnal corrections were not applied as there is no instrument drift and a base recording station was not used. Traverses were adjusted to match at common points. In no case was the adjustment required greater than 40 gammas. Normally an adjustment of 20 gammas or less was required.

INTERPRETATION

Anomalies discussed are located on the overlay (Map #2) by corresponding numbers.

The three anomalies labeled (1) are believed to be the result of a small magnetite content in glacial moraine and outwash. All three areas are relatively flat, with a gentle slope towards Galore Creek, and have the appearance of outwash plains. The higher magnetic readings over these areas terminate as soon as the edge of the flat area is reached. Where these areas are cut by gullies, over 100' of glacial material (mostly clay) is visible.

If the highs in these three areas are removed from the magnetic map, a fairly uniform central area (2), bordered on the northwest by a zone of higher readings (3) and a low (4) on the south remains.

The central area has lower readings generally following Galore Creek. This could represent a fault zone which the creek is following; or an absence of a slightly magnetic rock in the canyon cut by the creek. A combination of these two is thought to be most probable.

The low at (4) corresponds to an almost right angle change of course of Galore Creek and is thought to represent the intersection of two faults, one paralleling the creek in a N-3 direction, and the other E-W. The high just to the north of this low was noted on one reading only, and no significance is attached to it.

The zone of higher readings (3) probably represent either a change in rock type or a minor accumulation of magnetite in the near surface volcanics. The magnetic survey wasn't extensive enough to determine if this zone of higher readings extends any distance.

Considering the magnetics in trying to answer the question, "Does the Galore Creek Stock extend under this area?", an interpretation can only be made by comparison with Kennco's results. These show; generally, a fairly featureless, magnetically low central region, bordered by zones of higher magnetic readings. This is interpreted as being the magnetite deficient core of the "Galore Creek Stock", bordered by contact or skarn zones in which magnetite has been developed. There are also, apparently, several areas in the central region in which magnetite zones exist.

Comparing the Stikine North Group magnetics to Kennco's, the following similarities exist:

1. As far as can be determined, the magnetic level is approximately the same over Kennco's Central Region and the central area (2) of the Stikine North Group. An exact comparison is not possible as Kennco readings are relative vertical field, while the readings in the survey of the Stikine North Group are absolute total field.
2. The magnetic trend of Kennco's central anomaly is apparently continued through the Stikine North Group, although there is a gap of over 1/2 mile between surveys. This trend also parallels the valley of Galore Creek.

3. The area of higher readings (3) could relate to a contact zone of magnetite, although the concentration would be probably less than in the vicinity of the Kennco stock.

Other factors which have to be considered and may be favorable or unfavorable are:

1. There appears to be no significant difference in magnetics over volcanic and intrusive rocks. The only magnetic differences known are the contact magnetite zones and a more magnetic, younger volcanic rock which occurs quite high topographically, which was not encountered in this survey.
2. Kennco's central zone has several zones of magnetite in the intrusive which show up on the magnetometer survey. There are no such zones apparent in the North Stikine Group, unless possibly the highs in the northwest represent such an occurrence.
3. The only possible correlations with surface geology are the low at (4), which is approximately where Gale shows intersecting faults, and the area to the north-west (3) where the higher readings correspond to an area of weak to moderately altered andesite, cut by a few syenite dikes. The best mineralization, sparse magnetite and chalcopyrite, observed on the Stikine North Group, also occurs in this area.

Another feature to be noted is the low at (5) in the northeast section of the map. This occurs where the inferred Scud Fault Zone crosses a small glacial creek that was traversed with the magnetometer.

CONCLUSIONS

Direct evidence of the "Galore Creek Stock" extending under the Stikine North Group is not evident from the magnetic survey, but sufficient similarities exist to warrant additional effort in the area.

Ralph D. Falconer

R.D. Falconer.

25 May 1965


TO ACCOMPANY Geophysical Report (Magnetometer Survey)
on Mineral Claims BIK 227 - 269 (Inclusive)
and BIK 1-3 (FR) (Inclusive), herein called the Stikine North
Group, Liard Mining Division, British Columbia.

BY: Ralph D. Falconer

DATED: 25 May 1965

RALPH D. FALCONER, Geophysicist

- (1) Division Geophysicist, American Smelting & Refining Company - one and one-half years.
- (2) Geophysicist, Sherritt Gordon Mines Limited, four and one-half years.
- (3) Member, Society of Exploration Geophysicists.
- (4) Academic Requirements for M.S. in Geophysics completed; Thesis not completed, Michigan Technological University, Houghton, Michigan.
- (5) B.S. (with Honor) in Geological Engineering (Geophysics option), Michigan Technological University, Houghton, Michigan.


Ralph D. Falconer,
Geophysicist.

EVIDENCE OF EXPENDITURES INCURRED

SALARIES:

R.D. Falconer	10 days @ \$ 27.00/day	\$ 270.00
J.J. Tickner	10 days @ 400.00/mo.	150.00
D. McPhee	10 days @ 16.00/day	160.00
J. Canlick	10 days @ 16.00/day	160.00
P. McClusky	10 days @ 16.00/day	<u>160.00</u>

TOTAL SALARIES: \$ 900.00

LIVING EXPENSES: 470.00

HELICOPTER: 21 hrs. @ \$130.00/hr. 2,730.00

TOTAL EXPENDITURES CLAIMED: \$ 4,100.00

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if it were made under oath of by virtue of the "Canada Evidence Act".

Declared before me at the

CITY of VANCOUVER in the

Province of British Columbia,

this 27 of Oct., 1965, A.D.


A.C. Ritchie

Susan Matty



HORN

CONWEST

NORTH

STIKINE

KEMWOC

STIKINE EAST

692
M1a



LEGEND

- OVERBURDEN
- STREAM GRAVELS
- SYENITE PORPHYRY
- PORPHYRY BRECCIA
- AUGITE PORPHYRY BASALT
- ANDESITIC VOLCANIC ROCKS
- SEDIMENTARY ROCKS
- FAULT (DASHED-INFERRED)
- FISSILITY
- BEDDING
- ROCK CONTACT (DASHED-INFERRED)
- FOLD AXIS
- COPPER OCCURRENCE
Cpy - Chalcopyrite
 Py - Pyrite
 Mag - Magnetite
- CLAIM POST (G.W.P. WITNESS POST)
- CLAIM LINE (ALSO MAGNETOMETER LINE)
- MAGNETOMETER SURVEY LINE
- CLAIM BOUNDARY
- HELICOPTER PAD
- BULLDOZER TRAIL
- DIAMOND DRILL HOLE COLLAR

TRIASSIC

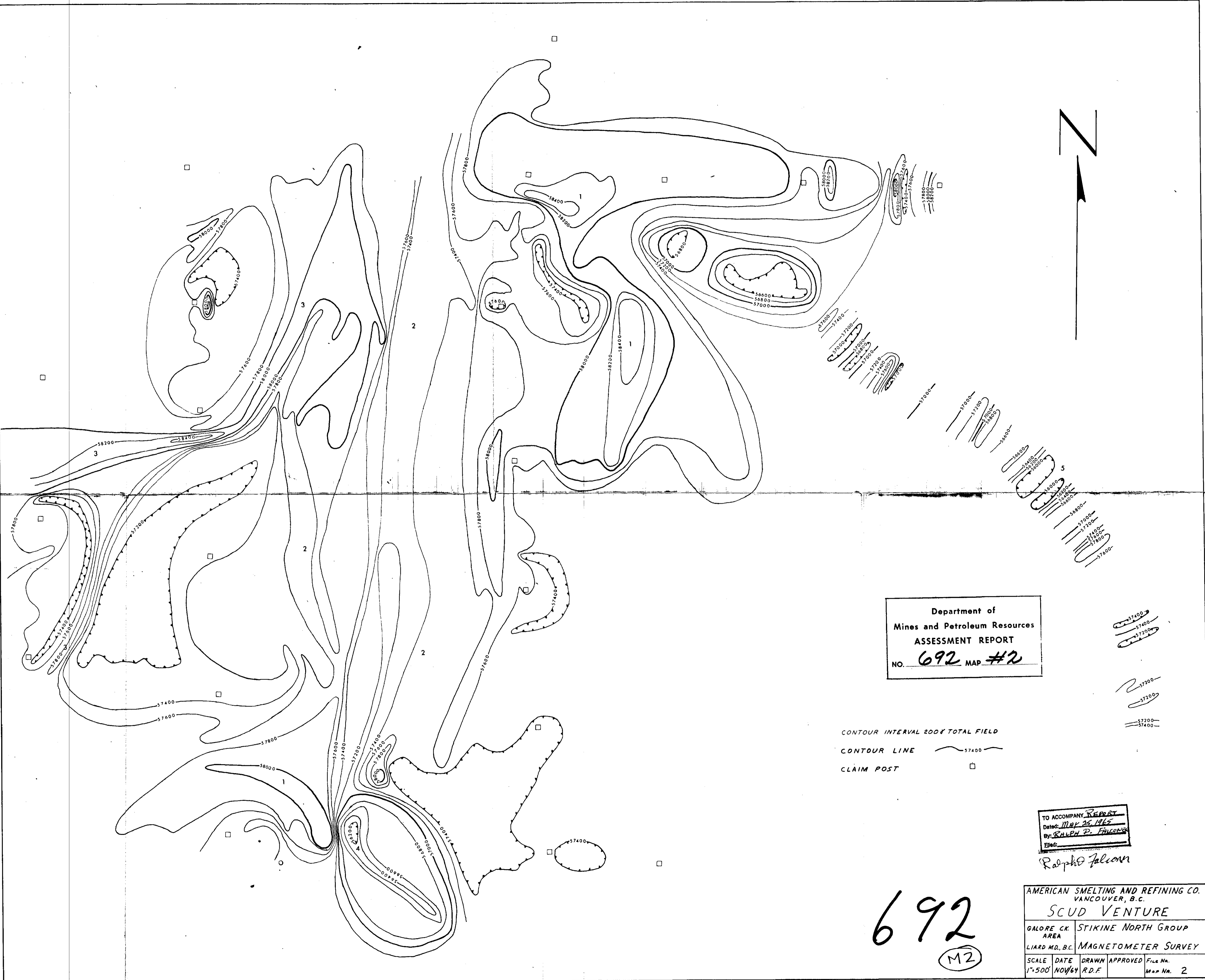
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. 692 MAP #1

TO ACCOMPANY REPORT
 DATED MAY 25 1964
 BY *Ralph J. Falcous*
Ralph J. Falcous

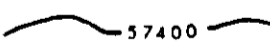

5 760 MAGNETOMETER READINGS GAMMAS TOTAL FIELD
 NUMBERS PLOTTED
 STREAM SEDIMENT SAMPLES - Cu. P.P.M.
 ○ 46-90 ○ 181-360
 ○ 91-180 ○ 361-500

AMERICAN SMELTING & REFINING CO. VANCOUVER B.C.	
SCUD VENTURE	
SCUD RIVER DISTRICT	STIKINE NORTH GP. GEOLOGY
LIARD M.D. B.C.	
DATE NOV. 30 1964	SCALE 1"=500' CONTOURS 50'
DRAWN R.E.G.	APPROVED FILE NO. MAP NO.

692
 (M10)



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **692** MAP #2

CONTOUR INTERVAL 200' TOTAL FIELD
CONTOUR LINE  57400
CLAIM POST 

TO ACCOMPANY REPORT
Dated: MAY 25 1965
By: RALPH P. FALCONER
Elev: _____

Ralph Falconer

692
(M2)

AMERICAN SMELTING AND REFINING CO. VANCOUVER, B.C.				
SCUD VENTURE				
GALORE CK. AREA	STIKINE NORTH GROUP			
LIARD MD., B.C.	MAGNETOMETER SURVEY			
SCALE 1"=500'	DATE NOV/64	DRAWN R.D.F.	APPROVED	FILE No. Map No. 2