

3072

FORT VERMILION RESOURCES LTD

GEOLOGICAL - GEOCHEMICAL

AND MAGNETOMETER

SURVEY

ON THE "LUCKY STRIKE"

"SAM" "M.P." "KAY" and "ARGUS" CLAIMS

WALACHIN, B.C.

MAY - 1971

92 I / 10W & 15 W

BY KEN SPRAGGS

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 3072 MAP

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INTRODUCTION

As per the recommendations of A.P. Fawley Phd., P. Eng., Consulting Geologist, a preliminary geological investigation, magnetometer survey and geochemical survey were done over the "Lucky Strike", "Sam", "M.P.", "Argus", and "Kay" claims optioned by Ft. Vermilion Resources Ltd from Murray Swetz, the prospector. The field work was done by the writer, who was assisted by Mr. Swetz.

PROCEDURE

A Baseline, running North-South was established by chain and instrument and stations were established every hundred feet. Side lines were turned off every five hundred feet and picketed at 200' intervals, to form an east-west grid. Claim posts, roads, streams, fences, outcrops etc were tied into these grid stations.

The calibration of the magnetometer, a Scintrex MF-1 was checked in the morning and in the evening at a known point. Very little adjustment was necessary.

The soil samples were taken below the "grass-roots" at depths varying between 3" and 12". The reason for the shallowness of sampling was the very light overburden cover over much of the area sampled.

LOCATION AND ACCESS

The claims are located just South of Malachin, B.C., a station on the C.P. and C.N. Railway about 35 miles west of Kamloops.

The claims are situated on land that slopes up from the Thompson River in a series of benches to a ridge about four miles south. The lower slopes are covered by sagebrush and bunch grass, typical of the vegetation growing in the more and parts of the interior. The southern most claims are heavily treed by Ponderosa pine and Spruce. On the first bench above the river, the ranchers raise alfalfa on the irrigated fields.

Numerous gulleys are located on the property and provide good exposure of bedrock. On the Area underlain by the conglomerate, dip slopes are very much in evidence.

A trail, presumably built by the rancher, affords access to the Southern end of the property. This trail is passable by car or truck during dry weather.

HISTORY

The property was staked by Mr. Murray Swetz in the summer of 1970 after his discovery of copper mineralization in the ballast quarry operated by the C.P. Railway. Old claim posts were found on the property but no records or evidence of prior work were found. District Lot #403, crown granted in 1887, gives the base metal rights to the owner of the crown-grant. Therefore, the owner of the mining claims has rights to the gold and silver only within the boundaries of the crown grant.

CLAIMS:

<u>NAME</u>	<u>RECORD NO.</u>	<u>EXPIRY DATE</u>
LUCKY STRIKE 1-4	89864-67	JUNE 30/71
SAM 5-24	89868-87	JUNE 30/71
SAM 49 Fr	Recently Staked	
M.P. 1-8	90561-69	AUG. 7/71
M.P. 11-14	90572-74	AUG 7/71
ARGUS 7-14	90575-82	AUG 7/71
KAY 1-10	90633-90642	AUG. 12/71
SAM 25-30	90301-306	JULY 25/71
SAM 31-32	90559-600	AUG. 6/71
SAM 33-48	90643-658	AUG. 12/71

(NOTE SAM 13-14 overstate Chief group entirely)

GEOLOGY

A) PLEISTOCENE AND RECENT.

Alluvial gravels, glacial till

Valley basalt - a thin lava flow covers the Nicola volcanics on the western end of the claims. The flow is undisturbed and level.

B) TERTIARY - MIOCENE.

Kamloops Volcanics - the Kamloops Volcanics outcrop on the extreme south end of the claims. They are andesites and basalts and form the last bench on the property.

C) CRETACEOUS OR TERTIARY

Conglomerate - about 60% of the property is underlain by interbedded conglomerates, sandstones and shales. The conglomerates consists of well-rounded volcanic pebbles, cobbles and boulders. The sandy matrix exhibits iron staining, probably due to weathering of the iron-rich constituents.

Structurally the sediments exhibit a series of gentle anticlines and synclines with a maximum observed dip of 17°. These strike N.W./S.E. and plunge at N.W. at less than 5°. The massive nature of the conglomerates and the shallow dips have resulted in the form of dip-slopes and mesas on the crests of the folds. Nowhere on the property is a full section of the sediments exposed, but observations of the deep stream beds show that there is a minimum thickness of 200'.

JURASSIC - LOWER CRETACEOUS

Coast Intrusives - at the west end of the property, a trench for irrigation has exposed a dioritic intrusive. The eastern contact of the intrusive and Nicola Volcanics was located and there is a gradual gradation from one to another. Pink feldspar veinlets are prevalent in this area. Some copper staining was found in this area, but no sulfides were seen. The same intrusive outcrops on the north side of the Thompson River and there are copper showings associated with it as well.

TRIASSIC

Nicola Volcanics - these consist of interbedded andesites, greenstones, agglomerates, tuffs, and limestones. In the area of the quarry, these rocks have been highly altered. Epidote and in places garnet are associated with hematite, magnetite and calcite. Chalcopyrite and bornite occur as fracture fillings and blebs within the altered zones. A narrow limestone band within the volcanics has been silicified and in places replaced by skarn. About 400' south of the pit, the limestone again outcrops, but here it has been recrystallized only. Immediately east of the pit, the volcanics are brecciated and the fractures are filled with calcite. This area is bounded on the east by serpentized olvine basalt (picrite) similar in appearance to the picrite associated with copper occurrences in the Iron Mask Batholith. At Station DOS 8E a narrow shear zone carries calcite and chalcopyrite in siliceous andesite. Near station DOS 20E, some copper staining occurs.

Mineralization within the Nicola group - as well as the mineralization occurring in the pit, the writer examined several other showings

DOS 8E - a narrow shear zone striking S.E. and dipping 48° W.E. carries calcite, chalcopyrite and bornite in siliceous andesite.

00S 17W - a small amount of malachite was found along fractures in the altered volcanics.

00S 44W - copper staining was observed near the contact of the Nicola group with the cretaceous intrusives.

00S 20E - Several occurrences of copper stain were examined. These are in the silicified Volcanics.

00S 52W - in a stream gully, a considerable amount of pyritized rock is exposed. The rock was probably originally interbedded tuffs and sediments and is very similar to the altered Cache Creek series occurring in the Maggie Mine area. This was mapped as altered Nicola group. A very small amount of copper staining was observed in this area.

Magnetometer Survey - a magnetometer survey was run over the property with a Scintrex MF-1 Magnetometer. The calibration of the instrument was checked by taking readings at a fixed point each day. Several magnetic features were noted.

Area #1 - S.E. of the quarry - in an area about 2600' long and 1800' wide trending S.E. from the quarry, the magnetometer readings were 400 to 1200 gammas over the assumed background of 2600 gammas. This response is probably due to the fact that the altered zone is trending in this direction.

Area #2 - Line 00S - 55 8-10W - this is an area about 800' wide and 1800' long. The response is 400 - 600 gammas over background. Probably due to the altered volcanics.

AREA 3,4,5 - no outcrops of altered rocks were observed.

AREA #6 - West end of Property. - in this area the magnetometer readings are between 600 and 1400 gammas below the background of 2600 gammas. The outcrops examined in a gulley in this area show an intensely altered rock. There are no dark minerals evident in this rock and this would account for the magnetic low.

GEOCHEMICAL SURVEY - soil samples were taken at each station on the grid. The depths varied between 3" and 12" because of the shallow overburden. The samples were analysed by Acme Analytical Laboratory and the results expressed in p.p.m.

The samples were screen to - 80 mesh, totally digested in concentrated nitric and perchloric acid and run by the atomic absorption method.

The results of the survey were disappointing. There were two weakly anomalous areas.

Area 1 - 9E - 14E line 00S

Area 2 - 50W - 68W Line 00S - this area is within the "Chief" group of claims which are owned by another company.

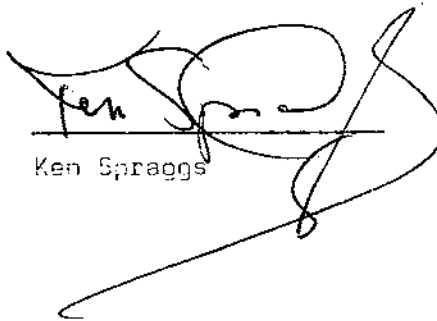
Conclusions and Recommendations - although the quarry is a reasonably good showing, the property has several points against it.

1) D.L. 403 (C.G.) - the base metals on this crown grant are held by the owner of the surface. Therefore the claims staked over the quarry and for a distance of 800' south from the quarry only carry the gold and silver rights.

2) Poor geochemical results - the very low values in copper would indicate that the copper mineralization is not very wide-spread. Although the conglomerates would undoubtedly mask any copper occurring in the underlying rock, there is no physical evidence that this might be the case.

Therefore, it is recommended that no further work be done on the property at this time.

Respectfully submitted


Ken Spraggs

Approved


Dr. A.P. Fawley, P. Eng.



COST OF SURVEY

Field Expenses

Wages - Geologist 16 days @ \$75.00	\$ 1,200.00
- Helper 16 days @ \$35.00	560.00
- Consulting Engineer 1 day @ \$125.00	125.00
Room and board 32 man days @ \$15.00	480.00
Vehicle - 800 miles @ .15¢	120.00
Misc. pickets, flagging and supplies	120.00
Geochemical analyses 350 @ \$1.00	350.00

Equipment Rental

Magnetometer $\frac{1}{2}$ month @ \$300.00	150.00
Transit etc. $\frac{1}{2}$ month @ \$150.00	75.00

Office Expenses

Drafting, report writing etc. 2 days @ \$50.00	100.00
<u>Printing, phone etc.</u>	35.00

TOTAL:- \$ 3,315.00

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 15th
day of June 1971, A.D.

Ken Jones

G. Phillips
A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

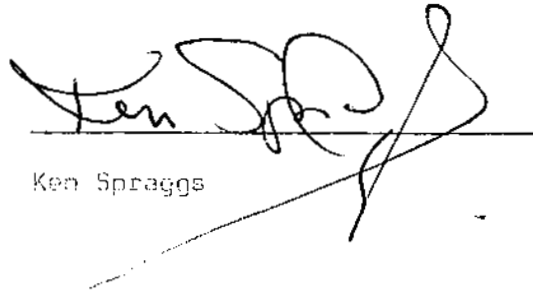
SUB-MINING RECORDER

C E R T I F I C A T E

I Kenneth David Robertson Spraggs of the city of North Vancouver do hereby say that:-

- 1) I have studied mining engineering and geology at the University of British Columbia.
- 2) I have worked in all phases of mining exploration and property evaluation for five years.
- 3) I am currently in the process of obtaining my professional engineers standing.

DATED THIS 29th DAY OF MAY, 1971


Ken Spraggs



Department of
Mines and Petroleum Resources
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FT. VERMILION RESOURCES LTD.

WALACHIN COPPER PROJECT

LEGEND

- PERMIAN (VALLEY BASIN)
 - 6 - Shale and siltstone
 - 7 - (VALLEY BASIN) Shale and siltstone
 - TERTIARY (KANLODIE GROUP)
 - 5 - Sandstone, siltstone, shale
 - CRETACEOUS (?)
 - 4 - Conglomerate, minor sandstone and shale
 - JURASSIC (GRANT INTERFLUVE)
 - 3 - Red granitic sandstone, siltstone, shale
 - TRIASSIC (NICOLA GROUP)
 - 2 - Sandstone, siltstone, shale, conglomerate, minor breccia
 - 1 - Alluvial sand - siltstone, breccia etc.
- do all features
 show rock
 indicate
 Spines
- Boundary of D.L. 403 (CG)
 dip - strike-slip
 do - normal
 fold - anticline
 fault - strike-slip
 fault - normal
 spine - strike-slip

KAY 1-10 GROUP
NO FEELS
LOCATED

3072
M-2

Approved, Helen J. ...
 MAY 1971