

GREAT PLAINS DEVELOPMENT
COMPANY OF CANADA, LTD.

YEAREND REPORT ON THE
LORI #1 CLAIM
AND
J.W. 4, 6, 8, 10, 12 CLAIMS
BRITISH COLUMBIA

N.T.S. 104-G-4

841527

Liard Mining Division
Latitude: 57 degrees 11 minutes North
Longitude: 131 degrees 35 minutes West

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December, 1976

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ILLUSTRATIONS

FIGURE 1: Status of Kennco's J.W. and Great Plains
Development's Lori Claims

FIGURE 2: J.W. and Lori Claims Location Map

PLATE 1: Grid Location Map and Induced Polarization
Survey Results (1 inch to 1,000 feet).

A. SUMMARY

M. D. McInnis of Great Plains Development Company of Canada, Ltd. and J. W. Simpson of Chevron Minerals Ltd. spent one day in 1976 in evaluating the Lori #1 claim which was staked in September of 1975 by Great Plains. The Lori #1 claim was staked over the previous J.W. mineral claims of Kennco Exploration (Western) Limited which were thought to have lapsed. After staking it was discovered that five claims of the J.W. group were still in good standing.

This property, which is located on the north fork of Jack Wilson Creek, six miles northwest of the Galore Creek Camp, is underlain by a quartz monzonite lobe of the Coast Intrusion and by various metamorphic rocks. Copper mineralization occurs in the quartz monzonite along a major shear zone which trends northerly along the north fork of the creek. Geochemically, magnetometer, and induced polarization surveys undertaken by Kennco between 1960 and 1965 indicated that the area would be unable to host a large tonnage - low grade copper deposit.

Evaluation of the property by Great Plains Development in 1976 confirmed that the mineralization appears to be localized along a shear zone and does not have significant lateral extensions. Therefore, further exploratory work is not warranted on the property and the claims should be allowed to lapse.

B. INTRODUCTION

1. History

Discovery of the property occurred in the late fifties as a result of reconnaissance geochemical surveys in the area around the Galore Creek copper deposits. In 1959, a copper geochemical anomaly in stream sediments was located by Kennco Exploration (Western) Limited, in the area of the headwaters of Jack Wilson Creek. Follow up in 1960 resulted in discovery of copper mineralization at showings outcropping in the north fork of Jack Wilson Creek. The area was mapped and further stream silt samples were taken at 1,000 foot intervals on the creeks. A series of chip samples were taken for assay. A group of 32 claims was staked but not recorded due to relatively discouraging results. In 1962, the J.W. 1-14 mineral claims were staked and recorded and one reconnaissance magnetometer line was run. In 1963, a picketed grid was constructed, and geochemical and magnetometer survey were undertaken at 100 foot intervals over this grid. Fifty feet of trenching was excavated in the same area as the 1960 sampling. An induced polarization survey and another magnetic survey were carried out in 1965. No further work was carried out on the claims by Kennco after 1965 but cash in lieu of work was paid to keep 5 of the original 14 claims in good standing. These are the J.W. 4, 6, 8, 10, 12.

In 1975, Great Plains Development Company of Canada, Ltd. staked the present Lori #1 mineral claim consisting of twelve units over the original J.W. group and hold the area excluding the above J.W. units. One day in the summer of 1976 was spent by Great Plains Development in evaluating the property as to its potential for hosting porphyry-type copper mineralization.

2. Ownership

In 1962, Kennco Exploration (Western) Limited staked the J.W. 1-14 mineral claims. This block of claims consisted of two claim units approximately east-west and seven claim units approximately north-south which straddled the north fork of Jack Wilson Creek. Work performed by Kennco and cash payment in lieu of work has kept the J.W. 4, 6, 8, 10, 12 in good standing to the present time. On September 11, of 1975, Great Plains Development Company of Canada, Ltd. staked the Lori #1 claims and holds the property outside the J.W. claims in good standing as shown in Figure 1. The pertinent data on the Lori #1 claim is as follows:

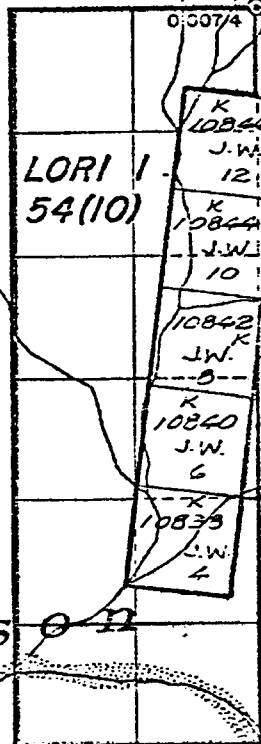
<u>CLAIM NAME</u>	<u>NO. OF UNITS</u>	<u>RECORD NUMBER</u>	<u>METAL TAG NO.</u>	<u>DATE STAKED</u>	<u>DATE RECORDED</u>
Lori #1	2 units E-W 6 units N-S	54(10)	00074	Sept. 11/75	Sept.29/75

FIGURE 1

LOCATION OF KENNCO J.W.
AND
GREAT PLAINS DEVELOPMENT'S LORI #1

1 inch to 1/2 mile

CORNER C



Jack

Wilson

Cr.

SADDLEH
MTN

13873	M/2422
C.M.	C/2422

12827	14207	15845
C.M.	DEVIL M	C
		M 27672

J/K	27669
M	DEVILS CLUB
	33
K	M 27672

3. Location

The Lori #1 claim and the J.W. claims 4, 6, 8, 10, 12 are situated in the Jack Wilson Creek area of the Liard Mining Division at 131 degrees 35 minutes West longitude and 57 degrees 11 minutes North latitude (Figure 2). They are located approximately 53 miles south southwest of Telegraph Creek, British Columbia and about six miles northwest of the Galore Creek Camp on the N.T.S. 104-G-4, Flood Glacier map sheet. The claims straddle the north fork of Jack Wilson Creek, five miles northeast of the confluence of the Jack Wilson Creek and the Stikine River.

4. Economic Considerations

The claims are located 53 miles south southwest of Telegraph Creek and 70 miles southwest of Tatogga Lake Resort on the Stewart Cassiar Highway. Access to the area may be made by helicopter from these locations or from small air strips at the Anuk Landing on the Stikine River or the Galore Creek Camp.

The area is situated in rugged terrain in the Coast Mountain physiographic division. Elevations reach to 7,000 feet and the mountains are being actively glaciated. The claims are located between the 1,000 and 2,500 foot elevations. Timber line is generally around 4,000 feet in the area with progress below this made difficult by thick underbrush of older huckleberry, and Devil's Club. Rainfall is in the range of 75 inches to 100 inches per year.

5. Previous Exploration

Work performed from 1959 to 1965 by Kennco Exploration (Western) Limited is as follows:

- | | |
|-------------|---|
| <u>1959</u> | Reconnaissance stream silt sampling. |
| <u>1960</u> | Prospecting of copper geochemistry anomaly; mapping of area; 1,300 feet of chip sampling; stream silt sampling at 1,000 foot intervals over the anomalous area; staking of 32 claims but these were not recorded. |

FIGURE 2

J.W. AND LORI #1 CLAIMS LOCATION MAP

1:250,000

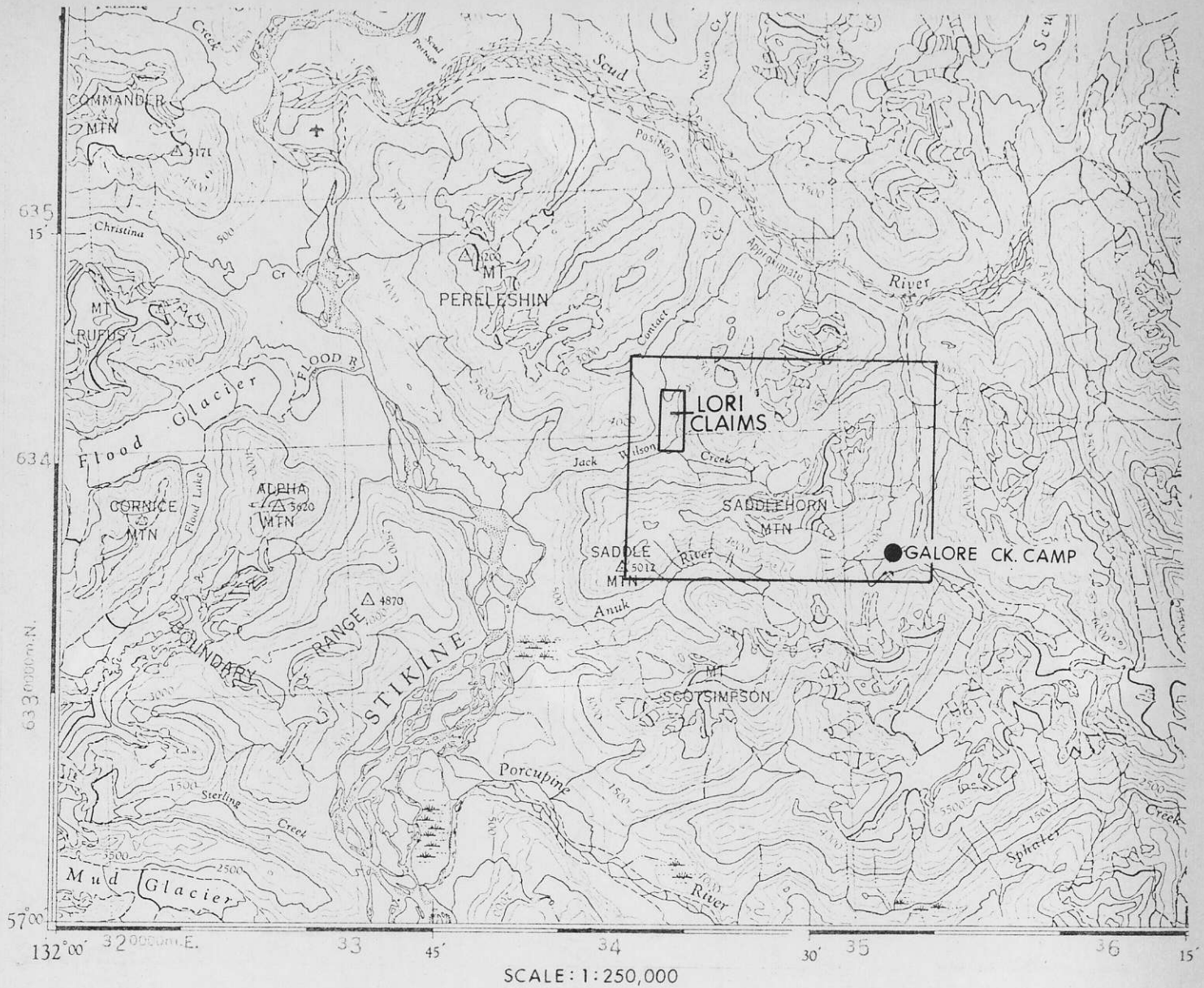


FIGURE 2 : J.W. AND LORI #1 CLAIMS LOCATION MAP

- 1962 Limited prospecting; staking and recording of the J.W. 1-14 Mineral Claims; one reconnaissance magnetometer line of 8,500 feet running up the middle of the original J.W. 1-14 claims at 200 foot intervals.
- 1963 Construction of a grid with a 2,800 foot base line and six cross-lines totalling 5,200 feet, picketing of the grid at 100 foot intervals; geochemical survey at 100 foot intervals; magnetometer survey at 100 foot intervals; fifty feet of trenching was done in the same area as the 1960 sampling.
- 1965 Induced polarization survey, magnetic survey Great Plains Development Company of Canada, Ltd. performed the following work in 1975 and 1976:
- 1975 The staking of the Lori #1 claim of 12 units on September 11.
- 1976 Evaluation of the claim as to its potential for copper mineralization.

C. EXPLORATION AND DEVELOPMENT

1. Results of Previous Work By Kennco Exploration (Western) Limited

a) Geology

Jack Wilson Creek cuts through granitic rocks on the eastern flank of the Coast Intrusions. Its headwaters are underlain by sedimentary and volcanic rocks of probable Triassic age. Metamorphic phyllites, schists, gneisses, and hornfels, occur as northerly-trending roof pendants in a granitic body on the north side of Jack Wilson Creek. The north fork of Jack Wilson Creek, which bisects the claims was mapped as fine to medium grained, epidotized syenite or quartz monzonite by Kennco. The northern margin of the claims is underlain by banded hornfels near the intrusive contact with the country rock. The rocks are invariably altered to sericite and epidote. Several porphyritic andesite dykes occur as northerly to northeasterly trending structures from ten to twenty feet in width. As well, several quartz latite dykes and a gabbro dyke occur in the same approximate trend. Quartz veining, from one inch to four feet in thickness, occurs on the west side of the Creek and trends northwesterly.

b) Mineralization

Kennco delineated the sections of mineralization along the north fork of Jack Wilson Creek. The lower section occurs approximately 2,500 feet upstream from the mouth of the north fork. The mineralization in this section occurs in a sheared, silicified, propylitized intrusive rock for a length of 500 feet northerly and across a forty to fifty foot width. The mineralization consists of chalcopyrite, pyrrhotite, pyrite, and malachite which is occasionally offset by minor east-west faults.

Two chips samples were taken across this section and returned assays of 0.60% copper and 0.02 oz./ton gold over a twenty-two foot width and 0.77% copper and 0.02 oz./ton gold across a twenty-seven foot width.

A chip sample approximately 250 feet southeast of the previous sampling returned a 0.04% copper assay over a twenty-eight foot width.

The middle section of mineralization occurs some 3,000 feet upstream from the lower section in cliffy outcrops along the north fork. Copper mineralization is exposed on the west side of the creek for a length of 500 feet and across a width of 90 feet. Average grade in the section is 0.08% copper.

The upper section occurs approximately 1,400 feet upstream from the middle section where three small streams merge into the north fork. Mineralization is similar to the lower and middle sections; chalcopyrite and malachite associated with pyrite, pyrrhotite and magnetite occur in sheared and altered intrusive. Chip samples taken on the west side of the stream indicated a grade of 0.09% copper over an area 400 feet by 100 feet elongated in a northerly direction.

c) Geochemical Survey

In 1960, followup stream geochemistry was conducted along the Jack Wilson Creek with sample density increasing to one site per 1,000 feet in the vicinity of mineralization along the north fork. Highest values for cold extractable (Holman Method) and total copper (Perchloric Method) were obtained near mineralized outcrops in the north fork and decreased systematically downstream in Jack Wilson Creek. Sulfate in water correlated well with sulphide mineralization and a typical decay pattern occurred downstream. Molybdenum values from water and stream sediment were consistently low and did not aid in delineating any mineralization.

The 1963 program included soil geochemistry at 100 foot intervals on the grid. Results suggested division into three distinct groups which were related to soil types and physiographic features. These areas are as follows:

- i) Areas of stream sand and gravel - both Holman and total copper values were high and erratic and were thought to be due to detrital copper derived from low grade copper showings further upstream.
- ii) Areas of glacial and local overburden - both Holman and total copper values were moderately low. Only one total copper value and three Holman copper values appeared significant. The locations of these values were trenched but results were negative.
- iii) Areas of weakly mineralized outcrop where overburden was shallow or absent - both Holman and total copper values were consistently high as would be expected.

Unfortunately no geochemical maps of Kennco are available so geochemical patterns in relation to mineralization can not be visualized.

d) Magnetometer Survey

Early prospecting in the mineralized area indicated that a relationship between magnetite and mineralization might exist. In 1962, one reconnaissance magnetometer line was carried out north-south along the midline of the

claims. The information obtained from this survey was too meager to give any indication of such a relationship. In 1963, another magnetometer survey was undertaken over the same grid as the geochemical survey. Results indicated that an anomalous magnetic zone was striking to the northeast in the southeast corner of the grid, but trenching found no copper mineralization.

(e) Induced Polarization Survey and Magnetic Survey

In 1965, 2.7 miles of induced polarization surveying was completed over the southerly eight claims of the J.W. property using a 200 foot electrode interval. The area covered was of high resistivity and only occasional readings of less than 100 ohm - feet were obtained.

Only one anomaly of moderate intensity was located, this being centered at 125N on the base line (100E). Weaker I.P. effects extended to the north to 128N and to the south to 120N. This anomaly occurred over known copper mineralization and indicated that the mineralized zone might extend to the north at depth. Another, weak anomaly was recorded at depth toward the east end of lines 105N and 110N but topography limited the further extension of these lines.

A second weak group of anomalies was found to occur trending northeasterly across the southern part of the grid. These anomalies lie at depth and were thought to be caused by a narrow source.

A third group of anomalies presented itself near the east end of line 130N, line 138N, and line 146N. Although quite strong, these anomalies were downgraded due to the high background resistivity of the area. As well, topography made definite location of these anomalies difficult.

In conjunction with the I.P. survey, a total 2.2 line miles of magnetic survey were carried out at 100 foot intervals. The data obtained correlated poorly with the induced polarization results and showed little in the way of structural trends. The largest magnetic anomaly occurred between 116N and 121N, immediately south of the I.P. anomaly on the base line. A single anomalous value of 300 gammas occurred on the east end of line 105N and may be related to the weak I.P anomaly in that area.

From the geophysical data obtained, Kennco concluded that the property could not host a large tonnage of ore with a low stripping ratio, but rather that the mineralization occurred in narrow zones which would have to have higher grades than indicated to be economic.

2. Work Performed By Great Plains Development

Apart from the staking of the Lori #1 claim in 1975, one day in 1976 was spent in evaluating the property for its potential for economic copper mineralization. The results of this work are described in the following section.

D. GEOLOGY

The work performed by Great Plains Development was found to correlate well with the conclusions made by earlier work done by Kennco.

1. General Geology

The area in which the J.W. and Lori claims are located is underlain by volcanic, sedimentary, intrusive, and metamorphic rocks. Granitic rocks, forming eastern lobes of the main mass of the Coast Intrusions have intruded volcanic and sedimentary rock of probable Triassic age on the northern side of Jack Wilson Creek. Northerly trending pendants of phyllites, schists, gneisses, and hornfels occur in the intruding granitic rocks.

2. Local Geology

The Lori #1 claim and the J.W. 4, 6, 8, 10, 12 claims are underlain predominantly by a quartz monzonite porphyry which is moderately altered in places. In areas near the intrusive contact, the country rocks are reported to have been metamorphosed to phyllites, schists, gneisses, and hornfels.

In the 1976 evaluation by Great Plains Development, two mineralized sections exposed in the north fork of Jack Wilson Creek were examined in detail by M. D. McInnis of Great Plains and J. Simpson of Chevron. These are Kennco's lower and middle mineralized sections. At the lowermost showing on J.W. 4, at an elevation of 1,150 feet, the quartz monzonite porphyry is altered and often appears to be more dioritic. Abundant epidote occurs lining fractures and as amorphous replacement pods of plagioclase. specularite is common as tiny flakes, lining fractures, or as a welded, black massive vein-filling along shear planes. At this showing, pyrite occurs as disseminated grains and occasionally as massive, granular pods, in places marked by limonitic staining up to four feet in diameter. Only minor quartz veining occurs.

The higher showing in the canyon between the 1,200 and 1,300 foot elevations occurs again within quartz monzonite porphyry, which is similar to the lower showing. Alteration is similar, but more chloritic. Limonitic zones at this showing are more pyritic and are silicified but these patches do not exceed 100 feet in length.

3. Structural Geology

All outcrops observed at the showings and along the north fork of Jack Wilson Creek are highly fractured and sheared. Slickensided north-south fracturing and north-south shearing suggests substantial structural deformation in that orientation and this is reflected as a major linear by the orientation of the north fork. Minor quartz veining in the upper showing trends in a northerly direction. Two strong east-west cross fracturing trends occur at the lower showing; one dipping steeply and the other dipping at a low angle. Epidote was observed as an alteration envelope around fractures oriented in an east-west direction.

4. Mineralization

Copper mineralization at both showings occurs as trace amounts of disseminated chalcopyrite or as coatings on fracture planes. Some bornite may possibly exist but has not been positively identified. Abundant malachite and azurite staining occurs at both showings. Copper grades are generally less than 0.10% although trenching performed by Kennco has yielded higher grades locally. Mineralization tends to follow the creek and appears to be offset by minor east-west faulting.

5. Alteration

Alteration on the claims appears to be associated with intrusion of the monzonite into the country rocks. Abundant epidote occurs throughout the showing areas along fractures and are plagioclase replacements. Hematite, as specularite, may occur as disseminated flakes, along fractures, or in veinlets. Magnetite is quite abundant and occurs as disseminations, or along fracture planes. Carbonate has been noted in some thin sections examined by Kennco and occurs as an alteration of plagioclase or as a replacement of eroded pyrite grains. Chlorite appears to become more prevalent northwards on the property.

6. Ore Controls

Mineralization on the property appears to be controlled by a major north-south trending shear zone which defines the north fork of Jack Wilson Creek.

E. CONCLUSIONS

1. Mineralization on the claims appears to be restricted to the quartz monzonite intrusive.

2. Mineralization is controlled by a northerly trending shear zone which is occasionally offset by minor east-west dislocations.

3. Geochemical surveys did not present data which would suggest a significant extension of mineralization away from the mineralized outcrops associated with the shearing in the north fork.

4. Induced polarization and further magnetic surveys indicate that mineralized zones are narrow and are unlikely to host tonnages necessary to define a low grade copper deposit.

F. RECOMMENDATIONS

In view of the fact that the mineralization appears to be restricted to a shear zone and does not appear to extend significantly outwards from it, no further work is warranted on the claims. It is recommended that the claims be allowed to lapse.