REPORT ON DIAMOND DRILLING PROGRAMon theALLIES PROPERTY
Kamloops Mining Division, British Columbia- Prepared for -
RELAY CREEK RESOURCES LTD.Suite 711, 850 West Hastings Street,
Vancouver, British Columbia V6C 1E1- Covering -
ALLIES CLAIM (20 Units)
andALLIES NO. 2 CLAIM (4 Units)- Work performed -
JULY 1 to DECEMBER 31, 1986- Located -
25 Kilometers Northwest of Kamloops, British ColumbiaNTS Map Sheet No. 92I / 15E$50^{\circ} 52^{\prime}$ North $/ 120^{\circ} 34^{\prime}$ West

- Prepared by -
DAWSON GEOLOGICAL CONSULTANTS LTD.
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V6C 1T1
James M. Dawson, P.Eng.
January 5, 1986


REPORT ON DIAMOND DRILLING PROGRAM ALLIES PROPERTY, Kamloops Mining Division, British Columbia

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## INTRODUCTION

This report describes the results of a programme of core drilling on the Allies property, Kamloops Mining Division, British Columbia. This programme was part of an ongoing effort to evaluate a puzzling and potentially economically significant gold occurrence.

A series of written logs of each drill hole is appended to this report, as are maps showing significant geological features and locations of recent drill holes.

## SUMMARY AND CONCLUSIONS

1. The Allies property consists of two contiguous ancs claims aggregating 24 units, located in relatively moderate terrain about 25 kilometers northwest of the city of Kamloops in south-central British Columbia, and is road accessible.
2. The property was probably discovered in the early 1900 s , but no work was recorded until the period 1924-34. During this time, extensive trenching, prospecting and underground exploration was carried out in an attempt to discover the source of an accumulation of float boulders containing significant gold values. These efforts were unsuccessful. During 1972-78, geochemical and geophysical surveys, trenching and limited diamond drilling was performed; however, the source of the float was not located. In 1984-85, Laramide Resources Ltd. carried out geological mapping, geochemical soil and silt sampling as well as trenching and road construction. The property was optioned to Felay Creek Resources Ltd. in 1985 and further exploration, including an induced polarization survey and backhoe trenching, was performed. In 1986, Relay Creek carried out a diamond drilling programme consisting of 619.2 meters of N6 drilling in five holes.
3. The property is underlain by Miocene plateau basalt within which an erosional/tectonic window exposes older picrite and lesser Nicola 'greenstones'. The older rocks are cut locally by porphyritic felsic dykes. Outcrop of the older rocks is sparse; at two locations, however, clusters of felsic dykes are the loci for quartz veins and stockworks. A third occurrence of such mineralization consists of an accumulation of angular boulders for which a bedrock source has not been found.
4. Mineralization consists of sparse, disseminated pyrite, lesser blebs of chalcopyrite, and traces of galena in or adjacent to sub-parallel sets of glassy to milky, narrow, quartz stringers and veins. Gold values range up to 45.2 grams per tonne for selected samples at the main showing, but average about 3.0 grams per tonne for random grab samples. At
the two 'in place' showings, similar but weaker sulphide mineralization generaly reports only weakly anomalous gold values - the best values being in the 1 gram per tonne range.
5. Weak gold mineralization is present in quartz stockwork over significant widths on the Allies property. The source of the higher grade boulders at the No. 1 or Discovery Showing, however, has not yet been located. It is suggested that the problem is one of complex faulting, intensified by lack of outcrop and the post mineralization plateau basalt cover. Additional drilling will be required to arrive at an understanding of the geometry of the mineralized zones at depth and along strike.
.4.

## PROPERTY

The Allies property consists of two contiguous, MCS claims aggregating 24 units as follows:

| Claim Name | Record <br> Number | Tag Number | Expiry Date |
| :---: | :---: | :---: | :---: |
| Allies | 3617 | 68481 | 23 Jun ${ }^{9} 95$ |
| Allies No. 2 | 6308 | 90852 | 19 Jul '88 |

The registered owner of these claims is Laramide Resources Ltd. The property is currently under option to Relay Creek Resources Ltd.


## LOCATION AND ACCESS

The property is located in south-central British Columbia, about 25 kilometers northwest of the city of Kamloops, at the southern edge of the Bonaparte Plateau. The approximate geographic center of the property is at $50^{\circ} 52^{\prime}$ north and $120^{\circ} 33^{\prime}$ west.

The claims are accessible by road from Kamloops via approximately 30 kilometers of dirt road from the Batchelor Hills turn-off in North Kamloops and thence to McQueen Lake, Pass Lake and Cannell Creek. Recent construction of drill roads now provides easy access to the more important parts of the property.

## PHYSIOGRAPHY AND VEGETATION

The property lies at the southern edge of the Bonaparte Plateau. A gently rolling upland area with elevations in the 4800 to 5000 foot range is bisected bv the northwest-trending valley of Cannell Creek. Elevations in this valley vary from about 3900 feet above sea leval at the southeast corner of the claim block, to near 4800 feet at the north and west boundaries.

The area is heavily wooded, with mature spruce, fir and pine in the valley of Cannell Creek. Upland areas and southerly-facing slopes are generally more open and predominently forested by lodgepole pine with occasional meadows.

The area of the known showings is poorly drained and for the most part covered with a variable thickness (up to $20+$ meters) of clay-rich glacial material. Even modest amounts of precipitation make the roads virtually impassible with mud.

## HISTORY

The first recorded work on the property was in 1924. It had, however, presumably been discovered some years earlier by prospectors working up Tranquille River and Watching Creek searching for the source of the placer gold found in those creeks. Samples of material grading as high as 1.42 ounces gold per ton were obtained from quartz stringers in a number of large blocks of silicified feldspar porphyry thought at first to be outcrop.

Over the next few years, a considerable amount of prospecting and trenching had not established the dimensions of the showing, or even if the discovery material was in place.

In 1933-34, an extensive programme of underground exploration was carried out in an attempt to find and delineate the source of the gold-bearing porphyry. At least three shafts and five adits totalling approximatley 800 lineal feet were driven at several locations and although several occurrences of similar porphyry intrusions were located in place, the source of the high grade float at the main or No. 1 shaft was not found.

The property was dormant until 1968 when minor trenching was done near some of the original workings.

In 1972-73, the property was controlled by Bon-Val Mines Ltd., who carried out magnetic and VLF electromagnetic surveys as well as geochemical soil sampling. Bon-Val Mines was subsequently reorganized as Yamoto Industries Ltd.

In 1976, an extensive programme of geochemical soil sampling was undertaken with some 800 samples being analyzed for gold and copper. Results showed only a few gold 'highs', presumably because of the heavy, clay-rich overburden.

In 1978, three diamond drili holes totalling 162.5 meters were bored near the No. 1 shaft. Drill logs reported barren 'serpentine' in all holes, with no porphyry or quartz veins encountered.

In 1984, title to the property was awarded to Laramide Resources Ltd. after a leng thy legal dispute over assessment work.

In 1985, a detailed exploration programme was initiated by Laramide. This work consisted of grid layout, geological mapping, road construction and trenching, as well as soil and silt sampling.

In 1985 , the property was optioned by Relay Creek Resources Ltd., which company conducted an exploration programme consisting of induced polarization and excavator trenching. A diamond drilling programme was begun but had to be terminated because of excessively cold weather in November of 1985.

## CURRENT DRILLING PROGRAMME

During September 1986, five NQ-sized core holes aggregating 619.2 meters were drilled on the Allies property. Location of drill collars is shown on Figure $366 \mathrm{~A}-3$ accompanying this report.

Considerable problems were encountered in drilling because of heavy, boulder-rich overburden as well as heavy clay content of the altered picrite. One of the critical holes ( $86-\mathrm{A}-2$ ) could not be completed because of excessive overburden and caving problems.

## GEOLOGY (After Riccio (1985))

The property is largely coverd by Miocene Plateau basalts. Older rocks consisting of picrite, Nicola 'greenstones' and felsic dykes are confined to a $600-$ meter by 400 -meter, erosional-tectonic window. Exposures of pre-wiocene rocks are minimal and almost exclusively confined to areas of workings.

Plateau basalts are black, fine-grained, massive to olivine porphyritic, occasionally amygdaloidal, and columnar jointed. The basalts locally overlie a poorly stratified unit, up to 30 meters thick, composed of volcanic wacke and conglomerate (Kamloops Group?).

Picrite is usually a green to dark greenish-black rock composed of subrounded serpentinized olivine grains (two to five millimeters) set in a dark chloritic matrix. Outcrops of picrite are generally deeply weathered and decomposed. The 'greenstones' consists of light green, chloritized and carbonatized, feldspar porphyritic to aphanitic rocks which can be interpreted as either flows or tuffs. Age relationships between 'greenstones' and picrite cannot be established in the field; however, according to Monger (1984), the picritic rocks at the Allies property are probably coeval with or slightly younger than the 'greenstones'.

Felsic, porphyritic dykes are found cutting the older picrite and Nicola volcanics and have been noted in place at Dodd's Showing and the Southwest Showing. Identical dyke rocks as a series of large angular blocks have been found in the vicinity of the Main or Discovery Showing. These are usually grey to buff coloured rocks composed of $20 \%$ to $30 \%$, small feldspar (two to five millimeters) and minor hornblende phenocrysts set in a grey, aphanitic groundmass. Data from surface and drilling indicate that these dykes strike easterly to northeasterly and dip steeply south. At both the Southeast and Dodd's Showings, the dykes occur as a cluster or swarm over a 20 - to 30 -meter width, with intervening screens of chloritized country rock.

Cockfield (1961) noted lizht and dark porphyries in his mapping. The writer has seen two other outcrop areas at No. 2 and No. 3 adits where 'light' porphyry cuts the surrounding, friable picrite. This dyke rock is paler and more siliceous than the previously described 'dark' porphyries and does not contain any quartz veining.

## MINERALIZATION

At the Main or Discovery Showing, boulders of quartz-veined, 'dark' porphyry are found over an area roughly 150 meters (east-west) by about 40 meters (north-south) adjacent to the contact with the overlying (or faultbounded) sediments and volcanics. Within this area at least 50 such boulders varying in size from two meters square down to fist-size have been found. These boulders are almost always angular, but seem to decrease in size towards the west. Typically, such boulders are cut by sub-parallel sets of milky and glassy quartz stringers and veins, one to twenty centimeters wide, carrying disseminated pyrite, blebs of chalcopyrite and minor galena. Vein density accounts for $10 \%$ to $30 \%$ of the rock volume. Country rock between quartz veins is strongly silicified and ankeritized. Samples of quartz stringers are reported to have assayed up to 45.2 grams/tonne (?) gold over 20 centimeters (Cockfield, 1961). A number of samples from mineralized boulders have been taken over the last several years by the writer and others. These samples varied from 0.44 ounces/ton to trace gold. The average of all grab samples from mineralized boulders (in this area) averaged about 0.1 ounces gold per ton.

The original Southwest Showing was developed by one main adit and several pits. Here, there are series of quartz-veined porphyry dykes in place cutting altered, friable picrite and silicified and opalized (locally) pyritic 'greenstone'. The porphyry dykes here are generally more pyritic, more chloritized and less silicified than the collection of float boulders near No. 1 (Discovery) Shaft. Here, low but anomalous ( 100 to 1000 ppb ) gold values are found in similar quartz-veined, 'dark' feldspar porphyry dykes.

Narrow ( $\pm 1$ meter) quartz-veined and carbonatized, east-west trending, feldspar porphyry dykes containing minor disseminated pyrite and chalcopyrite are exposed in a new road cut on line 55 near Cannell Creek (Dodd's Showing). All porphyry samples collected in 1984 from this locality returned low but anomalous ( 35 to 1032 ppb ) gold values. It should be noted that this showing as well as the Southwest Showing is located adjacent to the contact with the overlying plateau basalt.

## DISCUSSION OF RESULTS

Drilling beneath the Southwest and Dodd's Showings has demonstrated significant ( 10 - to 20 -meter) widths of quartz and quartz-carbonate stockwork mineralization whieh is quite similar to that found in the boulder accumulation at the Main Showing. Gold values at both these locations, rowever, are only in the anomalous range (up to 1300 ppb ).

The minealized zone exposed at Dodd's Showing appears to be cut off to the east by a northwesterly-trending fault which probably closely follows the valley of Cannell Creek. Presumably, it continues some distance to the west beneath the plateau basalt cover.

Drilling beneath the area of the Main Showing was only partly completed. Heavy overburden and caving prevented the completion of drill hole 86-A-2. Hole $86-\mathrm{A}-2$ demonstrated that the younger plateau basalt is down-faulted against the picrite north of the mineralized boulder accumulation.

In summary, significant widths of stockwork mineralization are known to exist on the Allies property; however, the zone from which the higher grade boulders was derived has not yet been located. Further drilling will be necessary to attain an understanding of the geometry of the mineralized zones at depth and along strike.


Respectfully submitted,
DAWSON GEOLOGICAL CONSULTANTS LTD.

January 5, 1987
Vancouver, British Columbia

## APPENDIX "A"

PERSONNEL

## PERSONNEL

J. M. Dawson, P.Eng.

Geologist
12 Days
F. L. Wynne, P.Eng. Geologist
13 Days
D. Mehner, B.Sc.

Geologist
12 Days
L. Loranger

Prospector
3 Days

August 15, 16, 28, 29, 30, 31
September 1, 9
December 15, 23, 29, 30

September 1, 2, 3, 5, 6, 8, 10, 11,
$12,15,18,19,20$

September 19, 20, 21, 24, 25, 27, 30
October 1, 2, 3, 4, 5

August 31
September 1
October 7

## APPENDIX "B"

PROJECT COSTS

## PROJECT COSTS

## A. PERSONNEL

J. M. Dawson, P. Eng.

12 days @ \$300/day \$ 3,600.00
F. L. Wynne, P. Eng.

13 days © $\$ 300$ /day $3,900.00$
D. Mehner, B.Sc.

12 days @ $\$ 250 /$ day $3,000.00$
L. Loranger

3 days @ $\$ 180 /$ day $\quad 540.00$
\$11,040.00

## B. EXPENSES AND DISBURSEMENTS

## Contract Drilling Costs

Truck Rental
Assays and Analyses
Travel
Drafting
Miscellaneous Field Equipment
Photocopying, Blueprints, Secretarial, Office Supplies, Telephone, Freight, etc.

$$
\$ 57,188.96
$$

$$
2,874.40
$$

$$
426.30
$$

$$
486.65
$$

$$
612.32
$$

$$
392.78
$$

$377.60 \quad 62,359.01$
$\$ 73,399.01$

## APPENDIX "C"

DRILL LOGS

## KERR-DAWSON \& ASSOCIATES LTD. - DIAMOND DRILL RECORD

PROPERTY ...ALILIES
HOLE No. $\quad$ 86-A-1

| DIP AND AZIMUTH TEST |  |  |
| :--- | :---: | :---: |
|  | Corrected |  |
| Footage | Angle | Azimuth |
|  |  |  |
|  |  |  |
|  |  |  |


| Core Size | NQ | Total Depth |
| :---: | :---: | :---: |
| Angle of Hole | $-48^{\circ}$ | \% Recovery |
| Claim |  | Elev. Collar |
| Section |  | Latilude |
| Bearing | 155 T | Departure |

Sheet No.
Logged by
Date Begun
Date Finished
1
JMD/FLW/DTM of
26 Aug 186
204 Sep 86

| DEPTH | $\begin{aligned} & \text { CORE } \\ & \text { LOST } \\ & \hline \end{aligned}$ | DESCRIPTION | SAMPLE No. | WIDTH of SAMPLE |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-7.9 |  | Casing. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 8-11 |  | Red brown to dark brown, plateau basalt; vesicular |  |  |  |  |  |  |
|  |  | in part. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 11-15 | 3.00 | Greenish grey to brown, fairly fresh "Plateau" |  |  |  |  |  |  |
|  |  | basalt; vesicular in part. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 15-19 | 0.30 | From 15 to 15.55, similar fresh basalt; from |  |  |  |  |  |  |
|  |  | 15.55 to 16.7, greenish, friable and broken picrite |  |  |  |  |  |  |
|  |  | from 16.7 to 19, typical picrite with rounded grains |  |  |  |  |  |  |
|  |  | of olivine and ? pyroxene (up to 5 mm ) in paler |  |  |  |  |  |  |
|  |  | greenish, olivine rich matrix; much of section |  |  |  |  |  |  |
|  |  | is sheared and friable. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 19-23 | 0.20 | Similar picrite with rounded orbicular grains of |  |  |  |  |  |  |
|  |  | olivine and pyroxene; frequent zones of chloritizat | on |  |  |  |  |  |
|  |  | and serpentinization. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 23-27 | 0.05 | Similar to last section. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

KERR-DAWSON \& ASSOCIATES LTD. - DIAAOND DRILL RECORD

| PROPERTY ALLIES HOLE No. 86-A- |  |  |  |  | SHEET No. 2 |  |  | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEPTH | CORE | description | SAMPLE No. | $\begin{gathered} \text { WIDTH } \\ \text { of SAMPLE } \end{gathered}$ |  |  |  |  |
| 27-31 | 0.05 | Similar to last section; core is uniformly weakly |  |  |  |  |  |  |
|  |  | magnetic; magnetite and ? chromite present. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 31-35 | 0.05 | Similar to last section; light to dark green |  |  |  |  |  |  |
|  |  | depending upon degree of shearing and plae green |  |  |  |  |  |  |
|  |  | friable gouge. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 35-39 | 0 | Similar to last section. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 39-43 | 0 | Similar to last section; uniformly magnetic as |  |  |  |  |  |  |
|  |  | before. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 43-47 | 0.10 | Similar to last section. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 47-51 | 0 | Similar to last section. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 51-55 | 0 | Similar to last section. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 55-59 | 0 | Similar picrite, friable and brecciated; cut by |  |  |  |  |  |  |
|  |  | minor white, narrow calcite ? stringers in places. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 59-63 | 0.35 | Primarily brecciated and friable picrite. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 63-67 | 0.40 | Similar soft, gougy picrite. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 67-71 | 0.30 | Similar to last section; few minor 'fragments' of |  |  |  |  |  |  |
|  |  | less friable picrite. |  |  |  |  |  |  |





ALLIES
PROPERTY

86-A-1
hOLE No. $\qquad$

- SAMPLE Mo.
 Similar dark green partly serpentinized and chlor
picrite - sheared and friable in places; rims of magnetite surround some of the rounded olivine grains; minor hematite on some slickensided surfaces.


## 79-83

0.10
broken towards end of section.

Similar to last section.

Picrite grades to a more homogeneous weakly serpentinized peridotite; less prominent orbicular texture; weakly magnetic, perhaps some chromite amoung the spinels; core is definitely harder.

Peridotite, as above, shattered and less competent.

Intensely fractured, brecciated picrite; clay alteration throughout; locally serpentinized; minor calcite filled fractures (less than $1 \%$ ); diss. pyrite cubes (less than $1 \%$ ).

SHEET No. 3 3 -of 6

KERR-DAWSON \& ASSOCIATES LTD. - DIAMOND DRILI RECORD



KERR-DAWSON \& ASSOCIATES LTD. - DIAMOND DRILL RECORD


## KERR-DAWSON \& ASSOCIATES LTD. - DIAMOND DRILL RECORD







KERR-DAWSON \& ASSOCIATES LTD. - DIAAHOND DRILL RECORD

| P | ALLIES hole No. 36-A-3 |  |  |  | SHEET No. 5 of 5 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEPTH | CORE LOST | description | SAMPLE No. |  |  |  |  |  |
| 133.3- |  | As above but calcite filled fractures and weak |  |  |  |  |  |  |
| 136.7 |  | calcite stockwork; amygdales leached out in part. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 136.7- |  | As 128.9 to 133.3; weak manganese on fractures. |  |  |  |  |  |  |
| 142.3 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 142.3- | 0.20 | Breccia pipe; hydrothermal; rounded to subrounded |  |  |  |  |  |  |
| 152.1 |  | fragments - mainly altered picrite - peridotite in |  |  |  |  |  |  |
|  |  | altered, clay rich matrix; fragments to 3 cm ; looks |  |  |  |  |  |  |
|  |  | brecciated/shattered like upper part of hole; some |  |  |  |  |  |  |
|  |  | hematite (?) replacement in some fragments; calcite |  |  |  |  |  |  |
|  |  | on fractures; clay alteration less than 10. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 152.1- |  | Picrite brecciated by calcite stockwork; crackle |  |  |  |  |  |  |
| 156.3 |  | breccia; fragments angular to subangular, 5-8\% calc | te. |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 156.3- |  | Relatively massive picrite; minor calcite fractures |  |  |  |  |  |  |
| 158.1 |  | - |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 158.1- | 0.30 | Amygdaloidal basalt; 1-3\%, 1-1.5nm pumpellyite |  |  |  |  |  |  |
| 159.7 |  | amygdales; broken core. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 159.7 |  | END OF HOLE. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |



# KERR-DAWSON \& ASSOCIATES LTD. - DIAMOND DRILL RECORD 

| PROPERT |  | ALLIES HOLE No | -4 |  |  | ET No. | 2 | -of 6 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEPTH | CORE LOST | deschiption | SAmple No. | $\underset{\text { of SAMPLE }}{\text { WIDH }}$ |  |  |  |  |  |
| 10.9- |  | As 10.1 to 10.5; fragments angular to subangular |  |  |  |  |  |  |  |
| 11.1 |  | supparted in green brown clay |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 11.1- |  | Missing. |  |  |  |  |  |  |  |
| 11.4 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 11.4- | 0.40 | As 10.9 to 11.1; clay becomes most abundant and |  |  |  |  |  |  |  |
| 15.2 |  | clasts decrease in number. |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 15.2- | 0.20 | Broken gabbro; fractures; $1 \%$ dolomite-quartz |  |  |  |  |  |  |  |
| 16.9 |  | veining; poor recovery; trace of diss. pyrite. |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 16,9- |  | Missing. |  |  |  |  |  |  |  |
| 17.2 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 17.2-20 | 0.40 | As 15.2 to 16.9 ; less than $1 \%$ dolomite-quartz |  |  |  |  |  |  |  |
|  |  | veining; badly broken core; clay on fractures. |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 20-21.3 |  | Missing. |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 21.3- |  | Clay and some sand; fault zone ? |  |  |  |  |  |  |  |
| 22.1 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 22.1- |  | As 17.2 to 20. |  |  |  |  |  |  |  |
| 22.3 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |



KERR-DAWSON \& ASSOCIATES LID. - DIAMOND DRILL RECORD

| PROPERTY ALLIES |  |  | 86-A-4 |  | SHEET No. $\qquad$ 4 |  |  | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEPTH | $\begin{aligned} & \hline \text { CORE } \\ & \text { LOST } \end{aligned}$ | description | SAMPLE No. | $\begin{aligned} & \text { WIDTH } \\ & \text { of SAMPLE } \\ & \hline \end{aligned}$ |  |  | Au |  |
|  |  |  |  | (m) |  |  | (ppb) |  |
| 38.7- |  | As above but green coloured |  |  |  |  |  |  |
| 39.5 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 39.5- | 0.1 | Silicified, slightly maroon feldspar - hornblend |  | 1.0 | 39.5 | 40.5 | 57 |  |
| 44.3 |  | andesite or trachyandesite sulphides start porphyry |  | 1.0 | 40.5 | 41.5 | 36 |  |
|  |  | with well developed quartz dolomite stockwork; $5 \%$ |  | 1.0 | 41.5 | 42.5 | 810 |  |
|  |  | dolomite and 8-10\% quartz; 1-2\% diss. pyrite and |  | 1.0 | 42.5 | 43.5 | 615 |  |
|  |  | $0.5 \%$ diss. and fractured chalcopyrite; trace finely |  |  |  |  |  |  |
|  |  | diss. steely grey mineral - hematite? sulphides in |  |  |  |  |  |  |
|  |  | veins and volcanic; relatively competent core; |  |  |  |  |  |  |
|  |  | hornblendes chloritized and leached out; plagioclas |  |  |  |  |  |  |
|  |  | laths gone to clay - kaolinite? chlorite and clay on |  |  |  |  |  |  |
|  |  | fracture surfaces |  |  |  |  |  |  |
|  |  |  |  | 1.0 | 43.5 | 44.5 | 1320 |  |
| 44.3- | 0.1 | Weakly maroon feldspar-hornblende andesite- |  | 1.0 | 44.5 | 45.5 | 175 |  |
| 48.0 |  | trachyandesite porphyry; only $1 \%$ quartz - dolomite |  | 1.0 | 45.5 | 46.5 | 76 |  |
|  |  | veining and trace fract., veinlet and diss. pyrite; |  | 1.0 | 46.5 | 47.5 | 93 |  |
|  |  | plag. crystals to clay and hornblendes, chloritized |  |  |  |  |  |  |
|  |  | chlorite and clay and minor hematite, particularly |  |  |  |  |  |  |
|  |  | where slickensides occur on fractured surfaces. |  |  |  |  |  |  |
|  |  |  |  | 1.0 | 47.5 | 48.5 | 180 |  |
| 48.0- |  | As above but quartz veining/stockwork $=3-5 \%$; |  | 1.0 | 48.5 | 49.5 | 385 |  |
| 53.4 |  | $1 \%$ diss., fracture \& veinlet pyrite; locally, 5-10ch |  | 1.0 | 49.5 | 50.5 | 87 |  |
|  |  | wide zones contain $5-8 \%$ pyrite. |  | 1.0 | 50.5 | 51.5 | 240 |  |
|  |  |  |  | 1.0 | 51.5 | 52.5 | 300 |  |
|  |  |  |  | 0.9 | 52.5 | 53.4 | 170 |  |

## KERR-DAWSON \& ASSOCIATES LTD. - DIARMOND DRILL RECORD

| PROPERTY ALLIES |  |  | 86-A-4 |  | SHEET No._-5_of 6 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEPTH | CORE LOST | description | SAMPLE No. | $\begin{gathered} \text { WIDTH } \\ \text { of SAMPLE } \end{gathered}$ |  |  | Au |  |
| 53.4- | 0.10 | Fractured picrite, calcite and green clay on 1-4mm |  | (m) |  |  | (ppb) |  |
| 56.7 |  | fractures (approx 1\% of rock); weak quartz - dolomite |  | 1.0 | 53.4 | 54.4 | 8 |  |
|  |  | stockwork within 0.5 m of contact. |  | 1.0 | 54.4 | 55.4 | 3 |  |
|  |  |  |  |  |  |  |  |  |
| 56.7- |  | Strongly brecciated picrite; hydrothermal breccia or |  |  |  |  |  |  |
| 59.1 |  | pipe? rounded picirite clasts and/or olivine $\pm$ |  |  |  |  |  |  |
|  |  | pyroxene crystals + lithic frags (foreign volcanic |  |  |  |  |  |  |
|  |  | fragments) supported by green to grey clay. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 59.1- |  | Picrite altered entirely to clay. |  |  |  |  |  |  |
| 60.15 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| $60.15-$ |  | Fractured picrite; green clay and calcite along |  |  |  |  |  |  |
| -65.6 |  | fractures; minor dolomite veining (less than 1\%); |  |  |  |  |  |  |
|  |  | minor clay rich seams - quartz crackle breccia at |  |  |  |  |  |  |
|  |  | 64.7 to 65.3 . |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 65.6- |  | Missing Core. |  |  |  |  |  |  |
| 65.8 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 65.8- |  | Fractured picrite; 1-3\% clay and calcite rich seams; |  |  |  |  |  |  |
| 68.6 |  | minor dolomite veining (less than $1 \%$ ) as 60.15- |  |  |  |  |  |  |
|  |  | 65.6; some zones with intense clay alteration. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 68.6- | 0.20 | Hydrothermal breccia (?); as 56.7-59.1. |  |  |  |  |  |  |
| 70.2 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

# KERR-DAWSON \& ASSOCIATES LTD. - DIAMOND DRIL RECORD 




## KERR-DAWSON \& ASSOCIATES LID. - DIAHOND DRILI RECORD

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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| -eers | \%em |  | dememe | \% |  |  | \% |  |
|  |  |  |  | ${ }^{1.0}$ | ${ }^{19,2}$ | 150 | , |  |
|  |  |  |  |  |  |  |  |  |
| 150.1 |  | ano of fue |  |  |  |  |  |  |
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APPENDIX "D"

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## LIST OF REFERENCES

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## APPENDIX "E"

## WRITER'S CERTIFICATE

## CERTIFICATE

I, JAMES M. DAWSON of Vancouver, British Columbia do hereby certify that:

1. I am a geologist employed by Dawson Geological Consultants Itt. of Suite 203, 455 Granville Street, Vancouver, British Columbia.
2. I am a graduate of the Memorial University of Newfoundland, B.Sc. (1960), M.Sc.(1963), a fellow of the Geological Association of Canada, and a member of the Association of Professional Engineers of British Columbia. I have practised my profession for twenty-three years.
3. I am the author of this report, which is based on many personal examinations of the subject property during the period 1981 to 1986 as well as my familiarity with the Kamloops District.


Vancouver, British Columbia
January 5, 1987



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## LEGEND

1 AMYGDALOIDAL BASALT

2 PICRITE

3 PORPHYRITIC GABBRO

4 TRACHYANDESITE

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