WATSON BAR

GEOLOGICAL AND GEOCHEMICAL REPORT

Watson Bar Creek Prospect, Clinton M.D. CAROLYN 1 - 8 CLAIMS. REC. NO's. 780(6)-787(6) Lat. 51°03'N - Long. 122°03'W

Map Sheet 92 0/1

by

B.J. Price, M.Sc. F.G.A.C. K.W. Livingstone, M.Sc.

W.A. Howell, B.Sc.

JMT Services Corp. 8827 Hudson Street Vancouver, B.C.

for

E. & B. Explorations Inc. 1440 - 800 West Pender St. Vancouver, B.C.

February 15, 1981



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SUMMARY

Eight claims (113 units) were staked in late May 1980 to cover several large alteration zones in Jackass Mountain Group sediments of lower Cretaceous age. The claims are situated between Madsen and Trimble Creeks tributary to Watson Bar Creek near its confluence with the Fraser River, 60 km by gravel road north of Lillooet B.C.

The area is crossed by one splay of the Fraser River fault system, which separates the Cretaceous clastic sediments from Eocene Volcanics. A small stock of granodiorite composition occurs in a steep walled creek canyon and several altered felsic dykes of probable Eocene age cut the sediments. Large alteration zones of silica and carbonate, occasionally with stibnite, arsenopyrite, pyrite, cinnabar and other sulphides occur throughout the property and are the cause of extensive arsenic and mercury anomalies in soil and rock samples. Smaller areas are anomalous for gold. Further soil and rock sampling are recommended with an allowance for subsequent percussion drill sampling. An itemized cost statement is presented to substantiate the work for filing assessment on the claims and a budget is tabled for further exploration costs.

B.J. Price, M.Sc., F.G.A.C.

K.W. Livingstone, M.Sc.

INTRODUCTION

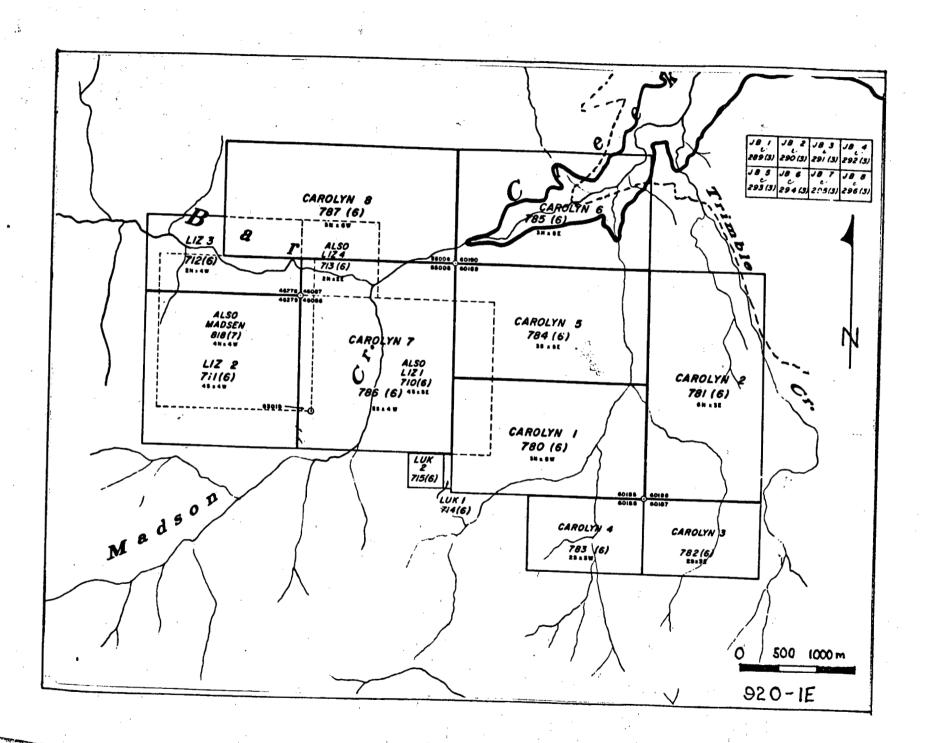
As a result of preliminary reconnaissance prior to the Taseko-Bonapart map sheet geochemical survey release in June 1980 by the B.C. Department of Mines, eight claims were staked near Watson Bar Creek, to cover a broad alteration zone in sediments of the Jackass Mountain group of Early Cretaceous age. Watson Bar Creek was the locus of the highest arsenic value in silt samples in the survey and placer gold had been produced from Stirrup Creek (the first north fork of Watson Bar Creek) and from the lower portion of Watson Bar Creek itself. Disseminated gold showings in Jackass Mountain sediments occur at the "Astonisher" property at the head of Stirrup Creek and gold-silver mineralization was known to occur at Big Bar Creek in Eocene volcanics.

Exploration was done on the property in November, about 600 soil and rock samples were taken and analyzed for gold, arsenic and mercury and in some cases antimony.

LOCATION AND ACCESS

The Watson Bar property, comprising the Carolyn 1 - 8 claims with a total 113 units is situated in mapsheet 92 O-1 between Trimble and Madsen Creeks, which enter Watson Bar from the south a short distance above its entry point into Fraser River, 60 km north of Lillooet B.C. Access to the property is by gravel road from Bridge River, on the Lillooet - Bralorne highway.

Logging roads afford easy access to the south-central part of the claim block. Access to the western claims is more difficult but trails allow access to the Madsen Creek area from Hancock Ranch and from Watson Bar Creek crossing.



CLAIMS

The following claims were staked at Watson Bar Creek.

CLAIM	UNITS	RECORD NO.	EXPIRY DATE
CAROLYN 1	15	780 (6)	27 June, 1981
CAROLYN 2	18	781(6)	27 June, 1981
CAROLYN 3	6	782 (6)	27 June, 1981
CAROLYN 4	6	783(6)	27 June, 1981
CAROLYN 5	15	784(6)	27 June, 1981
CAROLYN 6	15	785 (6)	27 June, 1981
CAROLYN 7	20	786 (6)	27 June, 1981
CAROLYN 8	18	787 (6)	27 June, 1981

REGIONAL GEOLOGY

The Watson Bar Creek area is situated in the southern part of the Chilcotin Plateau adjacent to the eastern margin of the Coast Intrusive Complex and west of Fraser River. The Camelsfoot Range, north of Lillooet B.C. is a panel of clastic sediments of upper Jurassic - lower Cretaceous age that are shallowly and openly folded between two splays of the Fraser fault system.

The Yalakom fault, on the southern margin of the block, is characterized by a wide zone of shearing and alteration with included lenses of serpentine and associated mercury showings such as Quartz Mountain and Red Eagle. The northern splay, which crosses the Watson Bar property on its north-east side is a much narrower fault zone and places Jackass Mtn. group sediments on the south against varicolored rhyolitic to dacitic volcanic flows and ash tuffs of Eocene age on the northeast. The Fraser fault seems to be the northeast limit of alteration and mineralization at Watson Bar, although the Eocene volcanics are host to gold-silver mineralization 8 miles north of Watson Bar at Big Bar ferry.

To the east of the afore-mentioned fault, is the main Fraser River Fault, which trends through the confluence of Big Bar Creek and Fraser river, forms the west limit of the bluffs at Chisolm Canyon, cuts across the mouth of Watson Bar Creek and proceeds up Trimble Creek to Leon Creek area. On the northeast of the fault, are grey to grey green shales and tuffs of the Pavillion Group of Triassic age, which are generally steeply dipping and may be isoclinally folded.

Small granitoid intrusives occur at Big Bar Creek, Stirrup Creek, and in the Leon Creek - Kelly Creek portion of the Fraser canyon. These are of early Cretaceous age and are cut by the major faults. The upper limit of age of faulting (Miocene?) is determined by flay-lying "plateau basalts" which are not affected by the faults.

The closest significant mineralization to Watson Bar is the "Astonisher -Monty" gold showing: owned by Robertson, Warren and partners, and situated 5 miles north west of Watson Bar Creek. At this property fine crystalline gold is present on dry fractures and micron gold is present in chalcedonic quartz associated with tellurides. Showings are in Jackass Mountain sediments adjacent to strongly altered felsic porphyry dykes and apparently associated with a strong north-east trending fault. Several showings of cinnabar and antimony occur outside the limit of gold occurrences and in quartz-carbonate altered zones near northeast trending faults. Associated with the showings is a large area with anomalous arsenic, mercury and tellurium in soils. The small creek draining the mineralized area, Stirrup Creek, has produced over \$250,000 in placer gold in the 1940's.

GEOLOGY OF THE PROPERTY

The Watson Bar property, situated between Madsen and Trimble Creek on the south side of Watson Bar Creek, is underlain by sediments of the Jackass Mountain Group - mid-lower Cretaceous age, and on the eastern portion, across the major "Watson Bar" fault, by Eocene "Kingsvale" volcanics.

The Jackass Mountain Group, well described by Trettin (1961), consists of extensive areas of conglomerates, with volcanic and granitoid pebbles, volcanic arenites, greywackes, and silt stones with minor beds of carbonaceous argillite and limestone. The sediments rarely show stratification and were believed to be deposited in a long narrow steep sided trough.

On the Watson Bar property, geology has not been mapped in detail. Near the Watson Bar fault, on the uppermost logging road, grey siltstones and black argillaceous siltstones are weakly stratified. Near the same fault on Watson Bar Creek banks, conglomerates are present. Elsewhere on the property, rocks seen to date were originally sandstones and siltstones but are now strongly altered with carbonization and silicification. A small stock of granodiorite or quartz-diorite compostion is present in the canyon of "Noname Creek" and a number of strongly altered dykes of felsic composition are present in the logged area above Hancock's ranch.. Larger dykes, one of which is strongly altered to silica-sericite is present in the canyon of Watson Bar Creek near Madsen Creek. (Feldspar porphyry dykes such as are common on H. Warren's gold property were not seen at the Watson Bar Creek property, but are present west of the claim boundary.) Boulders of carbonatized, calcite and silca-cemented breccia of probable fault origin are present on the north creek bank near the road crossing at Watson Bar Creek. The main Watson Bar branch of the Fraser fault appears to be offset a few hundred metres here and the breccia boulders may mark the fault lines.

GEOCHEMISTRY

During November 1980 soil and rock sampling was done on two areas of the property by W. Livingstone, B. Price, J. Lucas, W. Howell, and G. Lauzon. One hundred nineteen (119) rock samples and 453 soil and silt samples were taken in two areas - the first at the western end of the logged area above Hancock Ranch in the vicinity of the fork in Noname Creek (south map sheet) and the second near the junction of Madsen and Watson Bar creeks (north map sheet).

Samples were analyzed for gold, arsenic, mercury, and in some cases antimony.

Analytical techniques are described in Appendix I.

Southern Map Sheet:

In the southern portion of the claim block interest is centered on a large area of carbonate-silica alteration associated with a small granodiorite body and pyritized felsic dykes. A geochemical anomaly of arsenic in soil surrounds the Legal Corner Post for Carolyn 1 - 4 claims, trends generally northeast-

southwest and is open in both of these directions although it is sharply demarcated on both southeast and northwest sides. For the purposes of the display maps the following arbitrary designations are used:

20 ppm - background

20 - 49 ppm - weakly anomalous

50 - 99 ppm - moderately anomalous

100 - 499 ppm - anomalous

500 ppm - strongly anomalous

The reader should refer to the geochemical compilation map which shows five areas lettered A to E.

A strongly anomalous arsenic zone marked "A" about 150 metres, is centered on the Legal Corner Post of Carolyn 1 - 4 and is within a larger area 600 X 250 metres with scattered strongly anomalous values. Moderately anomalous values continue southwestward across the south branch of "No Name Creek" where a second zone of anomalous rocks and soils, Zone B, is outlined by samples P1326 - 1330 near the junction of two single northwardly flowing tributaries.

A weak arsenic anomaly (position C) is present on the lower logging road approaching the crossing of No Name Creek. This area coincides with weak to moderately anomalous mercury (300 - 920 ppb) and gold (20 - 252 ppb). An area of yellowish gossan is present on the east bank of the creek a short distance below the logging road and may indicate a center of alteration and mineralization. This is a target for further geochemical exploration.

Area D on the east facing slope of the mountain above No Name Creek is characterized by patchy quartz-carbonate alteration which is strongest on the road near the junction of the two main branches of the creek. A double-lobed strongly anomalous arsenic zone is accompanied by one anomalous gold area approximately 250 metres wide and of unknown length. Additional spot high gold values are present within the arsenic zone and a weak mercury anomaly is central to both and expands eastward.

A strong arsenic anomaly centered at E, 650 metres west along the horsetrail from the junction of the two forks of the creek coincides with a prominent rusty resistant rib of strong silica-carbonate alteration in the Jackass Mountain sediments. Arsenic values in rock and soil range generally from 50-350 ppm. Mercury values are strongly anomalous in this central rib of silica-carbonate but grade off to background values (20 - 120 ppb) within a distance of 150 metres northeast or southwest. This prominent mercury anomaly appears to continue southward along the south branch of the creek, where areas of silica-barbonate are common. Small specks of cinnabar (mercury sulphide) were seen at sample P1347 , and rocks and soils here are anomalous as expected. Similarly samples P1312 - 1317 are strongly anomalous and spotty high values continue southward. This long arcuate anomaly E-B may define a zone of faulting Spotty weak to moderate gold values occur along the arcuate trend, but the only cohesive anomalies occur along sample line L1365 - 1376 where values range from It is evident that there are several anomalous areas which have not been sufficiently defined by sampling and additional sampling and mapping is required.

North Map Sheet:

An area of rusty weathering silica-carbonate alteration occurs along the canyon of Madsen Creek, near its junction with Watson Bar Creek. Slopes are steep along Madsen Creek and much angular float along the creek has been derived from several small slides and one large slide of probable intraglacial age. These areas of float contain giant boulders with abundant stibnite, cinnabar, arsenopyrite and pyrite. The mineralization may have originated high on the slope above the creek at the source of the major slide. Two lines of soils, east of the creek delineate a strong arsenic anomaly (100 - 500 ppm) trending northward and extending from Madsen Creek roughly 350 metres eastward.

A weak gold anomaly (14 - 54 ppb) occurs in the same area; silts are somewhat higher (36 - 71 ppb Au) The best rock chip ran 2587 ppb Au. This was an arsenopyrite rich veinlet in a silicified argillite. Mercury values in rock and soil are moderately to strongly anomalous (250 - 10,000 ppb) in a pattern consistent with gold and arsenic.

This zone of alteration, mineralization and geochemically anomalous arsenic, gold and mercury anomalies is roughly on strike with the trend of the silicified rib (anomaly E) on the opposite side of the hill to the southeast.

CONCLUSIONS

Strong arsenic and mercuy anomalies occur in two separate areas sampled on a reconnaissance basis near Watson Bar Creek. Weak to moderately anomalous values of gold accompany the arsenic and mercury in several areas. The geochemical anomalies are related to large areas of silica-carbonate alteration in lower Cretaceous Jackass Mountain sediments and to felsic and porphyritic dykes of probable Tertiary age. Arsenic anomalies are broad and extend over rocks with little or no alteration, but mercury anomalies are narrow and have sharply defined limits and may be related to fault zones coeval with or younger than the alteration. In a general sense alteration, geochemical anomalies and mineralization are thought to be related to faults of the Fraser River system of probable late Eocene age. Arsenic-antimony-mercury mineralization was noted in several places.

The extent of the present geochemical sampling has outlined several areas in which further sampling is required to delineate the anomaly. No work was attempted bewteen the two main areas of sampling because of snow late in the exploration season. However, the area between No Name Creek and Madsen Creek is considered an area of good potential. No formal attempt to map the geology has been made. It is apparent that a gold system is present on the claims and the bedrock geology should now be mapped in detail.

The additional geochemical sampling and geological mapping should be completed prior to drill testing any of the known targets.

BIBLIOGRAPHY

Jeletzky, J.A. and Tipper, H.W. (1967). Upper Jurassic and Cretaceous Rocks of Taseko Lakes map area and their bearing on the Geological history of southwestern British Columbia. G.S.C. Paper 67-54.

Trettin, H.P. (1961) Geology of Fraser River Valley between Lillooet and Big Bar Creek. B.C.D.M. Bulletin 44.

Mineral Inventory Map 920 (Ml) Taseko Lakes, B.C.

STATEMENT OF COSTS

WATSON BAR PROPERTY

December 9	JMT Invoice •	\$ 9,546.77
March 11	JMT Invoice *	3,663.45
Chemex	Invoice #41213* #41212*	1,012.40 2,686.15
		\$17,083.77

*copies appended

STATEMENT OF QUALIFICATIONS

- I, BARRY JAMES PRICE of Vancouver, B.C. do hereby certify that,
- 1. I am a consulting geologist residing at 2121 W. 5th Avenue, Vancouver, B.C.
- I am a graduate of the University of British Columbia, B.Sc. (Honours Geology) 1965, M.Sc. (Economic Geology 1972.
- 3. I have practiced my profession as an exploration geologist continuously since 1965.
- 4. I am a Fellow of the Geological Association of Canada.
- 5. This report is based on my personal knowledge of the district and the mapping and sampling done on the property.

B.J. Price

STATEMENT OF QUALIFICATIONS

- I, K. WAYNE LIVINGSTONE of Vancouver, British Columbia do hereby certify that,
- 1. I am a Professional Geologist, working in British Columbia and residing at 6775 West Blvd., Vancouver, B.C.
- I am a graduate of CARLETON UNIVERSITY, Ottawa, Ontario with a B.Sc. honours geology, 1966.
- 3. I am a graduate of the UNIVERSITY OF BRITISH COLUMBIA with a M.Sc. geology, 1968.
- 4. I have practiced my profession as a mining exploration geologist since 1965.
- 5. I am a Member of the Geological Association of Canada.
- 6. I am a Member of the C.I.M.M.
- 7. This report is based on personal knowledge of the geology and mineral potential of the claim area.

K. Wayne Livingstone, M.Sc.

STATEMENT OF QUALIFICATIONS

- I, WILLIAM A. HOWELL of Vancouver British Columbia do hereby certify that,
- 1. I reside at 10611 Ainsworth Crescent, Richmond, B.C.
- 2. I am a graduate of the University of British Columbia and have a Bachelor of Science degree in geology, 1971.
- 3. I have been employed in the mineral exploration industry since 1967, continuously since 1971 in a variety of supervisory capacities.
- 4. This report is based on my personal knowledge of the district, and mapping of the geology at the property.

W.A. Howell

APPENDIX I

ANALYTICAL TECHNIQUES

All geochemical assays were performed by Chemez Labs Ltd., North Vancouver B.C. Soil and silt samples were slowly dried, then sieved, and the - 80 mesh portion analyzed.

Arsenic was analyzed by perchloric-nitric acid digestion with a hydride finish and atomic absorption determination.

Gold was analyzed by fire assay preconcentration and neutron activation determination.

Antimony was analyzed by concentrated HCl digestion with KI, extraction with MIBK TOPO, and atomic absorption determination background corrected.

Mercury was analyzed using the Hatt-Ott procedure and closed cell atomic absorption determination.

IMT Services Corp.

HUDSON STREET · VANCOUVER, B.C. V6P 4N1 · TELEPHONE 266-8344



JAMES S. CHRISTIE, PhD K. WAYNE LIVINGSTONE, MSc GORDON G. RICHARDS, M.A.Sc., P.Eng. GERALD LAUZON, Mgr. W.A. HOWELL, Gool

DECEMBER 9,1980

WATSON BAR PROPERTY (CAROLYN CLAIMS)

TIME CHARGES:

K.W.LIVINGSTONE, Geologist

Nov.12-22, Nov. 24,25, Nov.28 14 days @ 175.00

\$ 2450.00

B.PRICE, Geologist

Nov. 42, Nov.13-19, Nov.24, Nov.28. 92 days @ 175.00

1662.50

W.A.HOWELL, Geologist

Nov. 18-22, Nov.24. 6 days @ 175.00

1050.00

J.K.LUCAS, Assistant

Nov.13-19 6 days @ 75.00

450.00

G. LAUZON, Assistant

Nov.18-22 5 days @ 90.00

450.00

DISBURSEMENTS:

B.PRICE (RAPITAN) expenses	73.19
K.W.LIVINGSTONE expenses	147-15
ROR ENTERPRISES truck rental	646.76
SKYBIRD HOLDINGS truck rental	219.25
GAS (Chevron receipts)	52.25
HUDSON BUILD.SUP. Invo.	3.01
22587 .	189.81
22708	193.44
21038	187.20
WESTERN Invo. H 5942 50%	36.37
subtotal	1748.43

plus 10%

1923.27

	TOTAL	\$ 9,546.77
•	1561.00	1561.00
7 days insurance	35.00	
Nov. 13-19 7 days @ 25.00 480.Km @ 10¢	175.00 48.00	
JMT Vehicle rental	175 00	
SEX - 11 rental Nov. 11-22 12 days @ 5.00	60.00	
Meals in field 34 man days @ 22.00	748.00	
Chain saw rental Nov.11-22 12 days @ 5.00	60.00	
Trail bike rental:Honda 90 and Honda 70 Nov.11-22 12 days @15.00	360.00	
Camp rental	50.00	
Misc. supplies notebooks etc.	25.00	

PLEASE REMIT \$

GEOLOGIST.

ENCL. KWL/fk

RE: WATSON BAR PROPERTY

TIME CHARGES

W.A.Howell, Geologist	
Jan. 19,20 2 days ● \$ 200.00	400-00
B.Price, Geologist	
Jan.14($\frac{1}{2}$) Feb.5($\frac{1}{2}$) 6($\frac{1}{2}$), 7, 10($\frac{1}{2}$), 11,12,13($\frac{1}{2}$) 4 $\frac{1}{2}$ days \bullet \$ 200.00	900.00
K.W.Livingstone, Geologist	
Jan. 14($\frac{1}{2}$), 24,26 Feb.5, 8($\frac{1}{2}$),11($\frac{1}{2}$) 4 $\frac{1}{2}$ days • \$200.00	900.00
DISBURSE ENTS:	
Altair Drafting Inv.14228,108862,108641 \$ 907.01 + 10%	997-71

Chemex Inv. # 8011460, 8011461 \$ 420.00 + 10%

Vancal Inv. 84331 \$ 3.40 + 10%

TOTAL \$3663.45

462.00

3-74

PLEASE REMIT \$ 3,663.45





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TELEPHONE: 984-0221
AREA CODE: 604

TELEX: 04-352597

TO: JMT Services Corp.

8827 Hudson St.

Vancouver, B.C.

ROCKS

240- Watson Bar

CERTIFICATE NO. A8011374-001-A

INVOICE NO.

41213

DATE

ATTN: V6B 4N1

	VOD 4NI		15-DE	C-80
		DESCRIPTION	SUB-TOTAL	TOTAL
	26 105 101 105	Analyzed for Ag & Sb @ \$5.15 Analyzed For As @ \$3.00 Analyzed for Hg @ \$3.50 Prepared @ \$2.00	\$133.90 \$315.00 \$353.50 \$210.00	
	:	02-240-601		\$1012.40
~ \	e samey mannature			



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V7J 2C1

984-0221

TO: JMT Services Corp.

8827 Hudson St.

Vancouver, B.C. V6B 4N1

240-Watson Bar

CERTIFICATE NO. A8011373-001-A

CANADA

TELEPHONE:

INVOICE NO.

41212

DATE

SUB-TOTAL	TOTAL
\$1320.00 \$1141.00 \$5.15 \$220.00	,
	\$2686.15

