

MAP NO.: ASSESSMENT REPORT X
105 F 8, 9 PROSPECTUS
CONFIDENTIAL X
OPEN FILE

DOCUMENT NO: 092819
MINING DISTRICT: Watson Lake
TYPE OF WORK: Geological, Geochemical

REPORT FILED UNDER: Mountain Province Mining Inc.

DATE PERFORMED: October 10, 1989

DATE FILED: March 2, 1990

LOCATION: LAT.: 61°31'N

AREA: Ketzka River

LONG.: 132°11'W

VALUE \$: 2000.00

CLAIM NAME & NO.: MP 1-20; YB10182-201

WORK DONE BY: C.G. Verley (Amerlin Exploration Services Ltd.)

WORK DONE FOR: Mountain Province Mining Inc.

DATE TO GOOD STANDING:

REMARKS: #14 SHARON During a brief property visit, soil anomalies from the 1988 program were inspected and sampled. The lead-zinc-silver anomaly in the central claims was reproduced in an area of a normal fault between Cambro-Ordov. phyllite & limestone, & Dev-Miss. graphitic shale. In the southern claims another anomaly was an area of gabbro and serpentinite talus, with some felsite boulder. Chip samples of pyrite-bearing felsite contained 34 ppb Au. Quartz-carbonate vein float in the same area contained trace galena.

**GEOLOGICAL AND GEOCHEMICAL REPORT
ON THE MP CLAIMS**

Watson Lake Mining District, Y.T.
NTS 105F/8, 9
(61°31'N, 132°11'W)

for

MOUNTAIN PROVINCE MINING INC.
304 - 850 Burrard Street
Vancouver, B.C. V6Z 2J1
(604)682-4787

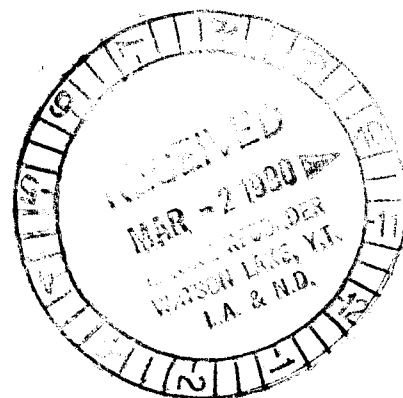
by

CARL G. VERLEY, B.Sc., Geologist
Amerlin Exploration Services Ltd.
812 - 525 Seymour Street
Vancouver, B.C. V6B 3H7
(604)689-1868

February 1990

CLAIMS: MP 1 - 20
LOCATION: 34 miles (55 km) south of Ross River, Y.T.
DATE: October 1, 1989

0928 10



This report has been examined by
the Geological Evaluation Unit
under Section 63 (4) of the Quartz
Mining Act and is allowed for
recovery of non-work in the amount
of \$ 2000.00.

D. A. Emond

for

Regional Manager, Exploration and
Geological Services for Commission of
Yukon Territory.

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Mountain Province Mining Inc.
PROPERTY LOCATION MAP
MP Claims
Watson Lake Mining District, Yukon

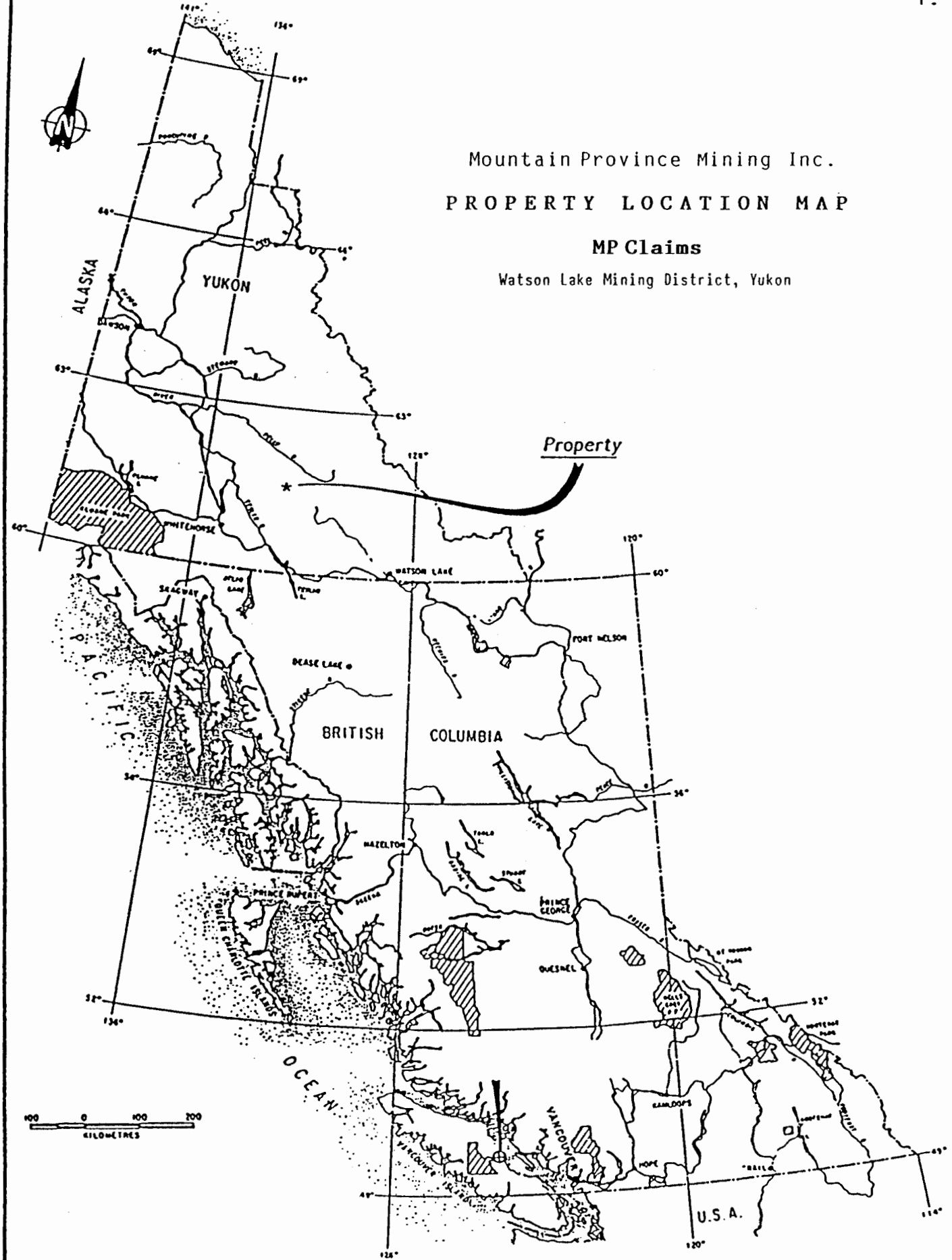


Figure 1.

SUMMARY

Mountain Province Mining Inc. is the owner of the MP 1 - 20 mineral claims. The claims are situated in one contiguous block centered 55 kilometres south of Ross River, in the Pelly Mountains, Watson Lake Mining District (105F/8, 9), Yukon Territory. The property is accessible by helicopter.

The ground is situated in an area underlain by Upper Cambrian to Devono-Mississippian phyllites, carbonates and shales. Rare, intermediate volcanics form thin lenses within the Upper Cambrian sequence.

The current program of work on the claim group consisted of geological mapping and prospecting. In addition, follow-up soil and rock samples were collected at sites that were determined to be anomalous by 1988 soil sampling. This work was partially successful in explaining some of the 1988 anomalous results.

Further evaluation of the claims should be directed to the search for buried massive sulphide mantos in Lower Cambrian carbonates below the Upper Cambrian-Ordovician phyllite-limestone sequence and fault controlled silver-lead mineralization.

INTRODUCTION

This report compiles results of an evaluation of the MP 1 - 20 mineral claims conducted on October 1, 1989. The property is owned by Mountain Province Mining Inc. The object of the work was to map, prospect and follow up anomalies generated by the 1988 program.

LOCATION

The claim group is centered 55 kilometres south of Ross River in the Pelly Mountains, Watson Lake Mining District, Y.T. at latitude $61^{\circ}31'N$ and longitude $132^{\circ}11'W$. The property is situated on map-sheets 105F/8 and 9. Physiographically the ground lies in relatively gentle subalpine to alpine terrain, straddling a south tributary drainage of the Ketzka River. Elevations range from 1400 metres to just under 1700 metres above sea level.

ACCESS

The property is best accessed by helicopter from Ross River. However, a four-wheel-drive road from the old Ketzka River airstrip ends 3 kilometres from the eastern property boundary.

HISTORY

There is no record of previous staking on the MP claims. However, considerable exploration activity has occurred in the area immediately surrounding the property since the first silver discoveries were made in the mid-1950's. In particular, underground work conducted in the mid-1970's on the 'Stump' prospect, located 1 kilometre east of the claims, has outlined reserves of 40,000 tons grading 8.4% Pb and 10.3 oz/ton Ag. In addition, trenching in 1968 at the 'Sharon' prospect, located immediately south of the property, exposed veins grading up to 20.6% Pb and 13.9 oz/ton Ag.

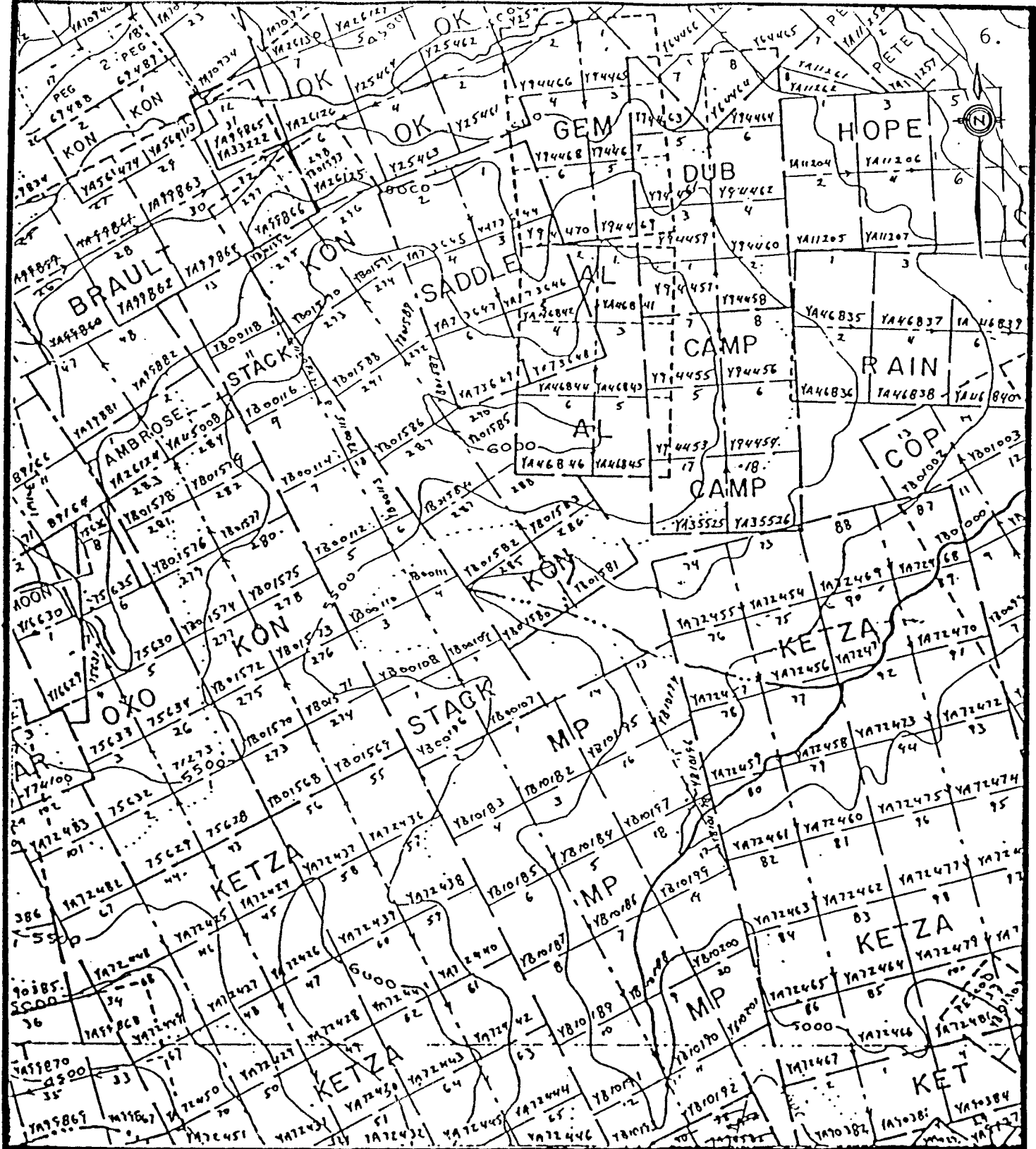
PROPERTY

Mountain Province Mining Inc.'s MP claims in the Ketzka River area consist in total of 20 contiguous, full sized mineral claims as tabulated below and illustrated on Figure 2. The claims are located in the Watson Lake Mining District, Y.T. (NTS 105F/8, 9).

Table 1 MINERAL CLAIMS

<u>Claims</u>	<u>Grant Numbers</u>	<u>Expiry Date</u> *
MP 1 - 20	YB10182-YB10201	December 3/1990

*Pending acceptance of assessment work.



Mountain Province Mining Inc.
 PROPERTY LOCATION MAP
 MP Claims

Watson Lake Mining District, Yukon
 NTS 105F-8,9

Scale 1:31,680

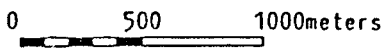


Figure 2.

GEOLOGY

Regionally, the property is situated in the Cassiar terrane, a displaced segment of continental margin (Wheeler, et al., 1988) that consists of a sequence of sediments ranging in age from Precambrian(?) to Upper Triassic. This succession is overlain by allochthonous sediments, volcanics and associated pyroclastics of Upper Devonian to Mississippian age. Rare syenitic intrusives of Mississippian age intrude the sequence in the Ketz River area (Templeman-Kluit, 1977). These formations were deformed by an arc-continent collision event in Mesozoic times (Templeman-Kluit, 1979). Later, dextral strike-slip movement of at least 450 km along the Tintina Fault (Gabrielse, 1985) has undoubtedly influenced structural development in the area. Several large thrust sheets and small domal uplifts document the past deformation.

The property is underlain by a relatively flat lying Upper Cambrian to Ordovician formation containing phyllite, chloritic phyllite, calcareous phyllite and argillaceous limestone with local volcanic flows - massive and amygdaloidal - as well as sections of tuff and agglomerate. In general, this package of rocks is thinly bedded, recessive and forms pale yellowish-orange weathering talus slopes. Abundant, irregular quartz-carbonate veins are an ubiquitous feature of this unit. Overlying the Upper Cambrian-Ordovician unit on the southern part

of the property is a small exposure of orangish weathering, Siluro-Devonian dolostone. A small stockwork of barren quartz stringers occurs at the northern most end of the exposure of this unit. An easterly trending normal fault striking across the southern part of the property has down dropped graphitic shales of Upper Devonian-Mississippian age against both the Siluro-Devonian and Cambro-Ordovician units.

The Cambro-Ordovician sequence hosts silver-lead mineralization at the adjacent Stump deposit and Sharon occurrence. This unit also hosts gold mineralization on Canamax's property, to the north, at the Knoll zone. The carbonate sequence immediately underlying the Cambro-Ordovician hosts the majority of the gold-bearing massive sulphide mantos in the district. The massive sulphide mantos typically contain the magnetic sulphide mineral pyrrhotite. Therefore, to evaluate the potential of the MP claims for hosting such deposits a magnetometer survey is recommended.

GEOCHEMISTRY

During the 1988 program (Williams, 1989), soil sampling along claim lines generated several Cu, Pb, Zn and Ag anomalies. An examination of these samples sites was undertaken as part of the 1989 program.

Soil and rock samples were collected at or near the previously located anomalous sites. All sample sites were flagged and labelled. Samples were placed in numbered bags and delivered to ACME Analytical Laboratories Ltd. in Vancouver, B.C. There samples were dried. Soils were sieved to -80 mesh, rocks were crushed and pulverized to -100 mesh. The prepared samples were digested in 3 ML of a 3:1:2 solution of HCl, HNO₃ and H₂O at 95⁰C for one hour, then diluted with water to a 10 ML solution. Gold analysis was by atomic absorption from a 10 gram sample. Inductively coupled argon plasma (ICP) technique was used to analyze 0.5 grams samples for Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Al, Na, K, and W.

Results of the 1988 program indicate that sample FKD 403 is anomalous in lead (306 ppm), zinc (824 ppm) and silver (2.0 ppm). Follow-up sample MPS-2, taken at the same site as FKD 403, analysed 189 ppm Pb, 409 ppm Zn and 1.3 ppm Ag. These values are still in range of anomalous values for each of the elements.

Samples taken adjacent MPS-2, MPS-3 and 4, show anomalous values in only one sample: MPS-4 (139 ppm Pb, 319 ppm Zn and 51 ppm Cu). The area around FKD 403 consists of small overburden covered hillocks in a subalpine environment. A major normal fault is inferred to pass through the area and may be a site where silver-lead-zinc deposition has occurred. A small soil grid in this area would define the extend of the anomalous zone. Prospecting and trenching would aid in explaining results generated from such a program.

Sample FKD 413 is anomalous in Cu (126 ppm), Zn (511 ppm) and Ag (1.2 ppm), however examination of this sample site revealed that it was located in a swampy area beside a creek. It is therefore believed that the values obtained for FKD 413 are not a reflection of bedrock mineralization, but more likely a result of hydromorphic action in an organic-rich catchment area.

Samples FKD 416 and 417 are both anomalous in Cu (152, 140 ppm), Zn (487, 406 ppm) and Ag (1.4 and 1.1 ppm respectively). These samples were collected in a talus slide area, sample material would therefore have consisted essentially of talus fines. A resample of this material, MPS-1, analysed 153 ppm Cu, 148 ppm Pb, 468 ppm Zn and 0.5 ppm Ag; as well the sample was high in gold, 28 ppb and molybdenum, 23 ppm. Prospecting in the area located a number of boulders of a leucocratic rock - presumably a felsite - that contained pyrite rich lenses several centimetres thick to at most a few tens of centimetres long.

Chips of this material analysed up to 159 ppm Cu, 177 ppm Pb, 37 ppm Zn and 34 ppb Au. A piece of quartz-carbonate vein float was found in the area and contained a trace amount of galena. Another float sample contained a quartz stringer with purple fluorite. Gabbro and serpentine float are also common constituents of the talus in this area. The source for this material is the ridge situated immediately south of the claims.

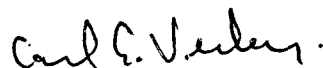
CONCLUSIONS and RECOMMENDATIONS

Mountain Province Mining Inc. is the owner of the 20 full-sized MP mineral claims located in the Ketzka River area, Watson Lake Mining District, Yukon. The claims are situated 55 kilometres south of Ross River. Access is by helicopter, however a road leads to within a few kilometres of the property boundary.

The property is underlain by a succession of Upper Cambrian to Mississippian phyllites, carbonates and shale.

A program of further work, consisting of magnetometer surveys, is recommended to evaluate the potential of the claims for hosting auriferous massive sulphides. In addition, a small soil grid should be established to test for silver-lead mineralization associated with the easterly striking normal fault on the southern part of the claims.

Respectfully submitted,
Amerlin Exploration Services Ltd.



Carl G. Verley, F.G.A.C.
Geologist

Vancouver, B.C.
February 19, 1990.

REFERENCES

- Gabrielse, H., 1985: Major transcurrent displacements along the northern Rocky Mountain trench and related lineaments in north-central B.C., Geol. Soc. Am. Bull., Vol. 96, p. 1-14.
- Templeman-Kluit, D.J., 1977: Geology of Quiet Lake and Finlayson Lake map areas, Yukon Territory(105F and G), Geol. Surv. Can. Open File 486.
- Templeman-Kluit, D.J., 1979: Transported cataclasite, ophiolite and granodiorite in Yukon: evidence of arc-continent collision, Geol. Surv. Can., Paper 79-14.
- Wheeler, J.O. and A.J. Brookfield, H. Gabrielse, J.W.H. Monger, H.W. Tipper, G.J. Woodsworth, 1989: Terrane Map of the Canadian Cordillera, Geol. Survey of Canada, O.F. 1894.
- Williams, S. P., 1989: Preliminary Geochemical Report on the MP and STACK Claims, Assessment Report 092657 for Mountain Province Mining Inc.

APPENDIX A

ASSAY AND ANALYTICAL DATA

MP CLAIMS: 1989 ANALYTICAL DATA
 (Acme file #89-4251)

	Au	Ag	As	Cu	Pb	Zn	Cd	Ba	Mn	Fe	Mo	Sb	Bi	W	U	Th	Sr	Ni	Co	Cr	V	La	B	Ca	Na	K	Al	Mg	P	Ti	
	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	
SOILS																															
MPS-1	28	0.5	67	153	148	468	2	105	1232	9.43	23	2	2	12	5	27	31	42	20	5	8	89	9	0.31	0.04	0.21	0.79	0.13	0.209	0.01	
MPS-2	5	1.3	27	46	189	409	1	96	462	4.44	2	3	2	1	5	3	31	35	12	12	13	18	9	2.13	0.01	0.03	0.63	0.96	0.090	0.01	
MPS-3	2	0.2	9	15	45	139	1	96	142	2.00	2	2	2	1	5	1	8	16	3	9	15	23	2	0.11	0.01	0.03	0.80	0.18	0.083	0.01	
MPS-4	2	0.7	28	51	139	319	1	75	529	4.55	2	7	2	1	5	5	89	40	19	14	10	11	2	9.05	0.01	0.05	0.43	1.39	0.077	0.01	
ROCKS																															
VKR 404	34	0.6	40	54	177	16	1	21	153	5.32	1	2	2	2	5	6	7	36	16	1	2	2	6	0.29	0.01	0.19	0.27	0.03	0.029	0.01	
VKR 405	5	0.3	26	159	42	37	1	22	210	9.01	1	2	2	2	5	5	12	131	30	11	11	3	3	1.10	0.02	0.17	0.38	0.18	0.119	0.01	

APPENDIX B

PERSONNEL

APPENDIX B - PERSONNEL

Carl G. Verley
8191 Osler Street
Vancouver, B.C.

Project Supervisor

Stephen P. Williams
1191 W. 40th Avenue
Vancouver, B.C.

Geologist

APPENDIX C
WRITER'S CERTIFICATE

WRITER'S CERTIFICATE

I, Carl G. Verley of Vancouver, British Columbia
hereby certify that:

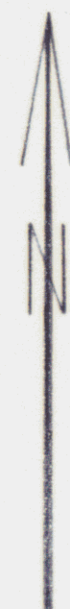
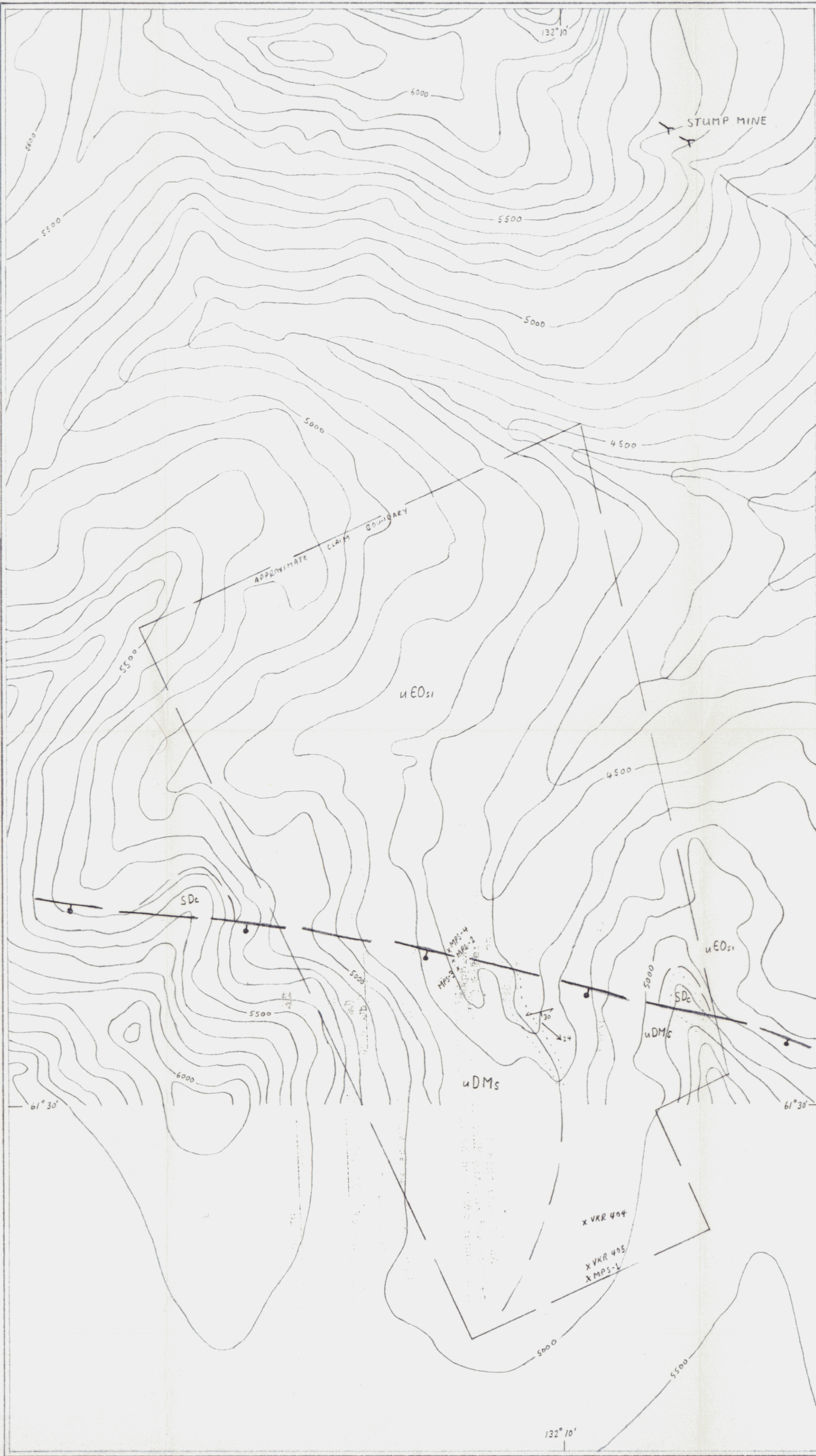
1. I am a geologist residing at 8191 Osler Street,
Vancouver B.C.
2. I am a graduate of the University of British Columbia,
B.Sc. in 1974, and have practised my profession since
that time.
3. I am a Fellow of the Geological Association of Canada.
4. I am the author of this report which is based on the
work program described herein conducted on the MP claims
on October 1, 1989.

Amerlin Exploration Services Ltd.

Carl G. Verley

Carl G. Verley, F.G.A.C.

February 19, 1990.
Vancouver, B.C.



LEGEND

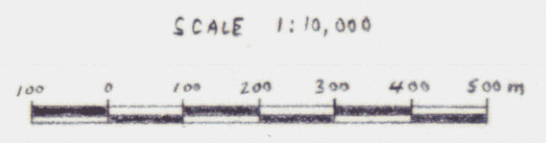
- DEVONO-MISSISSIPPIAN
- uDMs GRAPHITIC SHALE
- SILURO-DEVONIAN
- SDc ORANGE WEATHERING DOLOSTONE
- UPPER CAMBRIAN-ORDOVICIAN
- uEOs1 PHYLLITE AND LIMESTONE
- APPROXIMATE OUTCROP DISTRIBUTION
 - FOLIATION
 - LINEATION
 - NORMAL FAULT, BALL ON DOWN THROWN SIDE
 - X MPS-1 SOIL SAMPLE SITE
 - X VKR-404 ROCK

NOTE:
 TOPOGRAPHY NORTH OF 61° 30' FROM DEPT. OF ENERGY, MINES AND RESOURCES 1:50,000 MAP.
 TOPOGRAPHY SOUTH OF 61° 30' FROM DEPT. OF ENERGY, MINES AND RESOURCES 1:250,000 MAP
 CONTOURS IN FEET

332 105 F 8,9
 MOUNTAIN PROVINCE MINING INC.

GEOLOGY
MPI-20 CLAIMS

CLOUTIER CREEK MAP SHEET NTS 105 F/9 #8
 WATSON LAKE MINING DISTRICT, YUKON



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