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FILMED

RECONNAISSANCE GEOLOGICAL MAPPING
AND

ROCK SAMPLING

AFT, RODEO, ANDY 22 CLAIMS

Alberni Mining Division, B.C. NTS 92F/2 49°01'N Lat. 124°39'W Long.

For

TP RESOURCES LTD.

May 25, 1988

T.M. Naciuk, BSc.

SUB-RECORDER RECEIVED

MAY 25 1983

M.R. # ..... \$ .....

VANCOUVER, B.C.

GEOLOGICAL BRANCH ASSESSMENT REPORT

17,419



### SUMMARY

Surveys conducted on the Rodeo and Andy 22 claims, February 22 and 23, 1988, include 1:10,000 scale geological mapping over an area of  $3.2~\rm km^2$ , trenching, and detailed chip sampling. Surveys conducted on the Aft claim, February 23 and 24, 1988 include 1:10,000 scale geological mapping over an area of 1.6 km<sup>2</sup> and rock sampling.

Strongly anomalous gold values were returned from chip samples on the Rodeo Claim in an area underlain by dioritic and granodioritic intrusive. Pyrite-sphalerite-chalcopyrite-pyrrhotite bearing quartz and quartz-carbonate veins crosscutting the intrusive returned results of up to 22.01 g/t Au, 60.3 ppm Ag, 2048 ppm Cu, 2442 ppm Pb, 26618 ppm Zn, and 458 ppm Cd across a 1.35 m chip sample length (sample 35205). These veins are exposed on surface and by trenching. Samples from the Aft Claim did not return anomalous gold values; however, values of 172 ppm Cu and 1303 ppm Mn were returned from a float sample from the northern part of the Aft claim.

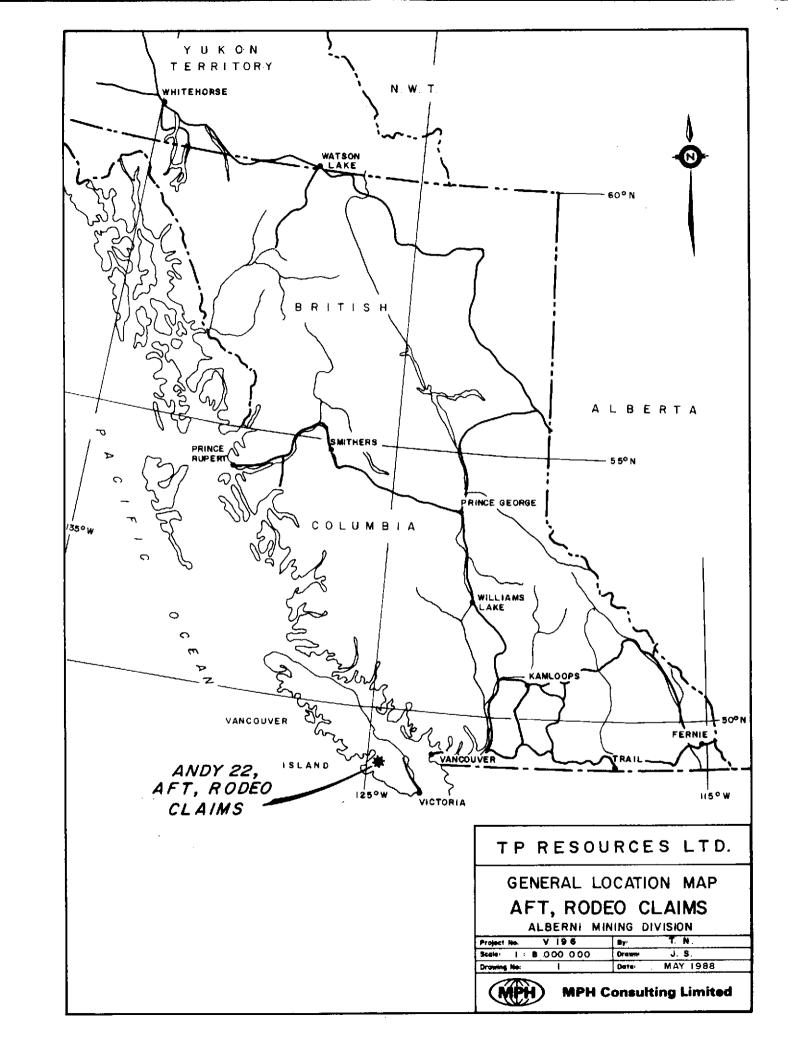
Further exploration of both claims is warranted. On the Rodeo and Andy 22 claims, Phase I rock and soil sampling, VLF-EM geophysics, and 1:2500 scale geological mapping is recommended at an estimated cost of \$28,500. Phase II detailed geological mapping, trenching, and follow-up IP geophysics are recommended given favourable Phase I results. Phase III diamond drilling is recommended contingent on favourable Phase II results. On the Aft Claim, Phase I 1:2500 scale geological mapping and silt and rock sampling are recommended at an estimated cost of \$4400. Phase II soil geochemistry, detailed geological mapping, and VLF-EM geophysics surveys are recommended given favourable Phase I results.



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## 1.0 INTRODUCTION

This report on the Rodeo and Aft claims has been prepared by MPH Consulting Limited at the request of TP Resources Ltd. It represents a compilation of field work carried out on the properties in fulfillment of assessment work requirements. Work carried out includes reconnaissance 1:10,000 scale geological mapping, trenching, and rock sampling for geochemical analysis.

Included in this report is a description of property geology with conclusions and a recommended exploration program designed to explore the economic potential of the properties. A summary of regional geology, mining exploration activity and a discussion of the economic setting of the property are also included.



## 2.0 LOCATION, ACCESS, TITLE

The Aft and Rodeo (including Andy 22) claims are located 24 and 27 km south-southeast, respectively, of Port Alberni. The Aft claim is located in the Corrigan Creek valley and on the northwest slopes of Mount Olsen, centred at approximately 49°02.1'N latitude, 124°39.7'W longitude. The Rodeo claim is located at the headwaters of Corrigan Creek between Mount Olsen and Logan Peak, centred at approximately 49°00.8'N latitude, 124°38.6'W longitude. Both claims are in the Alberni Mining Division of British Columbia and are located on NTS mapsheet 92F/2 (Figures 1 and 2).

Access to the claims is provided by the all-weather, gravel Bamfield Road from Port Alberni to the MacMillan Bloedel Corrigan Main road. This follows Corrigan Creek and runs through portions of both claims. An overgrown railroad grade provides access to the central part of the Aft claim. An overgrown logging road provides access to the Rodeo claim.

The slopes of Mt. Olsen and Logan Peak are very steep to precipitous. Helicopter transport is necessary to effectively access the upper areas of the Rodeo claim. The Aft and upper Rodeo claims are covered by mature conifers; the lower Rodeo claim is covered by an extremely dense 15 year growth conifer stand.

Claim information is summarized below:

Claim	Record No.	Units	Anniversary Date	Year Registered
Andy 22	3267(7)	1	July 2, 1990	1987
Rodeo	1385(2)	20	Feb. 25, 1989	1982
Aft	1389(2)	_8	Feb. 25, 1989	1982
	Tota	$1 \frac{1}{29}$		

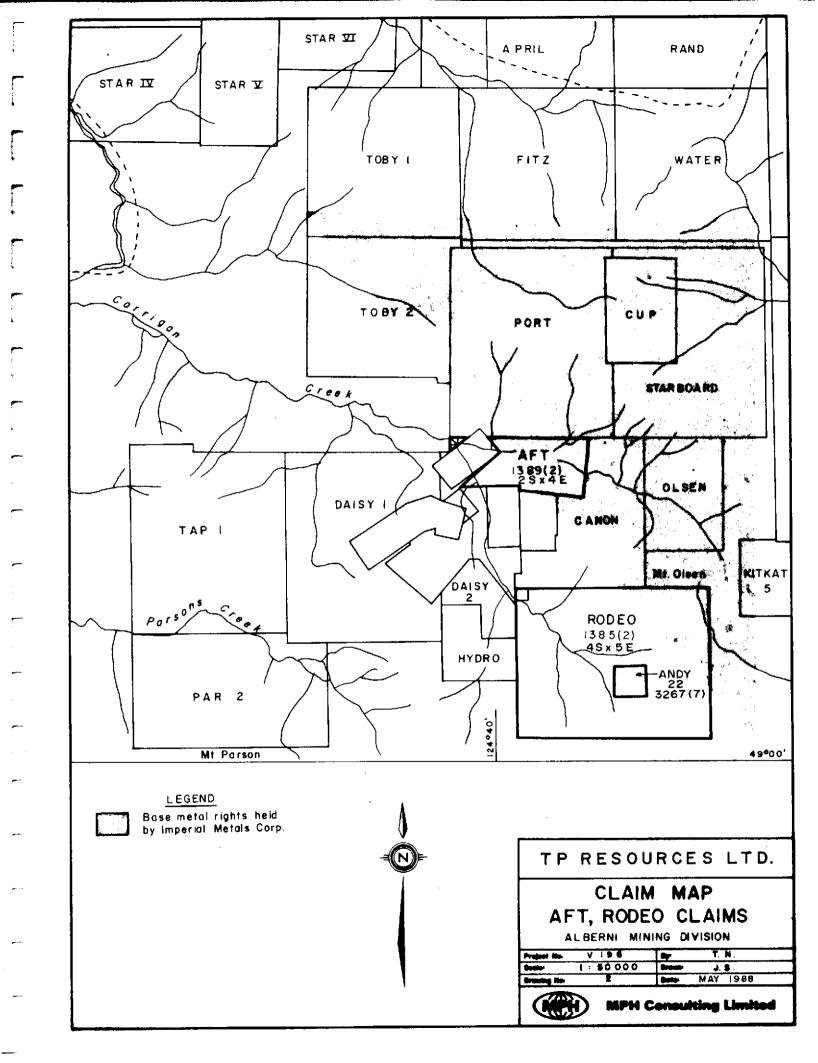
The anniversary date has been updated based on work recorded in this report.





The Aft and Rodeo claims are owned by Ladysmith Minerals Ltd. The Andy 22 claim is owned by Crew Minerals Inc. (became Asia-Pacific Resources Ltd., April 20/88). TP Resources Ltd. is the operator of the claims by virtue of option agreements.

The northeastern corner of the Rodeo claim and the eastern half of the Aft claim lie in an area to which Imperial Metals Corp. owns the base metal rights under an option from Fording Coal Ltd.



### 3.0 PREVIOUS WORK

Recent government geological work in the area includes mapping by J.E. Muller and D.J.T. Carson (1969), and J.E. Muller (1977 and 1980).

During the years 1963 to 1966, Gunnex Ltd. carried out a regional mapping program over a large portion of the E&N Land Grant, with limited prospecting and silt sampling. They compiled a list of all known mineral occurrences in the area and visited many of them.

No other previous work was recorded on the Aft claim prior to 1985. On the Rodeo claim, a Cu-Mo stockwork showing in Island Intrusions granodiorite (Andy claims or Arland's Showing) was explored by Noranda Exploration Co. Ltd. from 1964-70. Noranda carried out silt sampling, soil sampling; EM, magnetometer, and IP surveys; and drilled 19 diamond drill holes totalling 2235 m (Neale and Hawkins, 1986). No results of any of the work are available. In 1970 the property was made up of 66 claims. In 1985 only one claim was in good standing--the Andy 22 claim. The Andy 22 claim lies within the boundaries of the Rodeo claim (Figure 2); when it lapsed, it was restaked for the present owners.

The Golden Slipper and Golden Rule claims were operated in 1899 and 1900 on the present Rodeo claim. A limited amount of work was done on quartz(?) vein(s) carrying values of \$17.50 to \$40.00 in gold, silver, and copper (1900 values). There is no record of any work since 1900 on the Au-quartz veins or since 1970 on the Cu-Mo stockwork.

A brief program of geological mapping, rock sampling and silt sampling was carried out on the Aft and Rodeo claims by MPH Consulting Limited for Ladysmith Minerals Ltd. in February 1985



(Hawkins and Neale, 1985). A zone of anomalous Cu in Bonanza(?) Formation volcanics was located on the Rodeo claim. Silt samples collected from below this zone get more anomalous downstream from the zone, indicating that the sampled zone may be the fringe of a more heavily mineralized zone.

An assessment program (geological mapping, rock and silt sampling) was carried out by MPH Consulting Limited in February 1986 (Neale and Hawkins, 1986). More accessible areas of the claims were mapped and grab samples from abundant quartz veins cutting Island Intrusions and Bonanza Group rocks on the Rodeo claim returned anomalous values up to 3.02 g/t (0.088 oz/ton) Au, 119.3 g/t (3.48 oz/ton) Ag, 4.10% Cu and 866 ppm Mo.

Further assessment work (geological mapping, rock and silt sampling surveys) was carried out by MPH Consulting in January, 1987 (Kang and Getsinger, 1987). Values up to 120 ppb Au, 18.9 ppm Ag, 10,006 ppm Cu, 71 ppm Mo, and 482 ppm Zn were returned from rock samples. Silt samples returned Cu and Mo values of 686 ppm and 15 ppm respectively.

For additional information on the Andy 22, Golden Slipper, and Golden Rule occurrences, refer to the Mineral Occurrence section in the report by Neale and Hawkins (1986).



## 4.0 REGIONAL GEOLOGY, STRUCTURE AND ECONOMIC SETTING

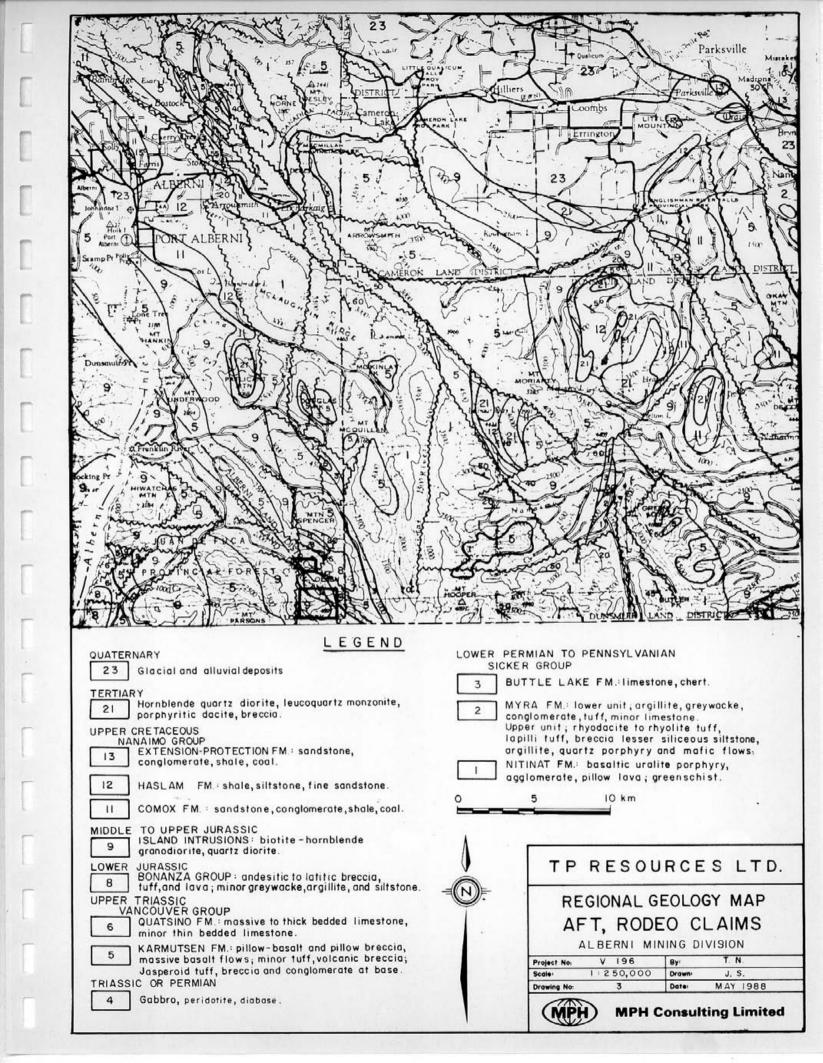
Upper Paleozoic Sicker Group rocks and Lower Mesozoic Vancouver Group rocks are the predominant rock units in the Port Alberni-Nitinat River area. These units are eugeosynclinal sequences of volcanic and sedimentary rock. The Sicker Group has been subdivided by Muller (1980) from oldest to youngest as follows: Nitinat Formation, Myra Formation, Sediment-Sill Unit and Buttle Lake Formation (Figure 3).

The Nitinat Formation consists of predominantly mafic flow breccias, agglomerates including massive flow and rare pillow basalts, with local interbedded basaltic tuff. Uralitized gabbroic rocks underlie and intrude the volcanics and are believed to be feeder dykes, sills and magma chambers to the volcanics.

The Myra Formation unconformably overlies the Nitinat Formation and in the Nitinat-Cameron River area comprises a lower basaltic tuff and breccia unit, a middle banded pelitic feldspathic tuff and argillite unit, and an upper thick-bedded feldspathic tuff and breccia unit. At Myra Creek at the south end of Buttle Lake, volcaniclastic rocks consisting of dominantly rhyodacitic and rhyolitic tuff, lapilli tuff and breccia with quartz porphyry and minor mafic flows and argillite, are host to Westmin Resources' Myra, Lynx, Price and H-W massive sulphide (Cu, Zn, Pb, Au, Ag, Cd) deposits.

The Sediment-Sill Unit contains thinly bedded to massive argillite, siltstone and chert with interlayered sills of diabase. It is transitional between the Myra and Buttle Lake Formations.

The Buttle Lake Formation comprises a basal green and maroon tuff overlain by crinoidal and calcarenitic limestone with minor





chert nodules and lesser amounts of argillite, siltstone grey-wacke and chert.

The Middle and Upper Triassic Vancouver Group Karmutsen Formation unconformably overlies the Buttle Lake Formation limestone, and is the thickest and most widely distributed sequence of rocks on Vancouver Island. The Karmutsen Formation, which is well exposed southeast of Port Alberni, comprises pillowed basalt, massive basalt and pillow breccia. Pillow lavas occur locally near the base of the section. Flows are commonly aphanitic and amygdaloidal.

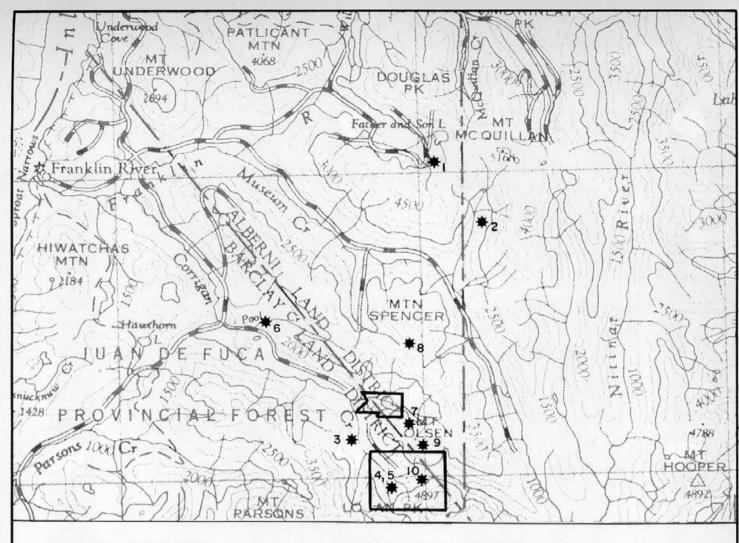
The Upper Triassic Quatsino Formation massive to thick-bedded limestone occurs south of Mt. Spencer, and in contact areas with intrusive rocks, is host to the majority of known economic skarn deposits on Vancouver Island.

North-northwesterly trending axial uplifts are believed to be the oldest (before Late Cretaceous) structural features of south-central Vancouver Island. Additional tilting, folding and uplift occurred after the Late Cretaceous. Sicker Group rocks occur at the core of these uplifts. Asymmetric northwest-trending, southwest-verging antiforms with subvertical southwest limbs and moderately dipping northwest limbs, mapped in the Buttle Lake and Cameron-Nitinat River areas, are thought to have formed during the Jurassic.

## Economic Setting

Mineral occurrences in the area of the Aft, Rodeo and Andy 22 claims are shown in Figure 4. For detailed descriptions, refer to Neale and Hawkins (1986) and Neale (1984).

Volcanogenic massive sulphide deposits have traditionally been the most economically significant exploration targets within



## GOLD OCCURRENCES

- 1. Thistle
- 2. Black Panther
- 3. 3-W
- 4 Golden Slipper
- 5. Golden Rule
- 6. Starlight
- 7. Canon

## OTHER OCCURRENCES

- 8. Cup
- 9. Mt. Olsen
- IO. Andy



# TP RESOURCES LTD.

MINERAL OCCURRENCE LOCATION MAP AFT, RODEO CLAIMS

Project No: V 196	By: T. N.
Scale: 1:125 0 0 0	Drawn J. S.
Drawing No: 4	Date: MAY 1988



**MPH Consulting Limited** 



Sicker Group volcanic rocks. Known deposits include Westmin Resources Ltd.'s Buttle Lake Mine deposits, 94 km northwest of the Rodeo and Aft claims, where ore minerals include sphalerite, chalcopyrite, galena, tetrahedrite-tennantite, minor bornite and covellite hosted by pyritic rhyolitic to rhyodacitic volcanic and pyroclastic rocks of the Myra Formation. Total reserves of the Lynx and Price deposits are 839,800 t grading 1.00% Cu, 0.91% Pb, 7.79% Zn, 2.22 g/t Au (0.065 oz/ton), 74.52 g/t Ag (2.18 oz/ton) (1983). Mineable ore reserves of the H-W deposit based on a 2700 t/day production rate and \$33 Cdn. cut-off grade, are 13,302,000 tonnes grading 2.02 g/t Au (0.059 oz/ton), 30.38 g/t Ag (0.886 oz/ton), 1.91% Cu, 0.27% Pb, 4.48% Zn (McKnight, 1987).

The Twin J Mine volcanogenic massive sulphide orebodies near Duncan on Mt. Sicker, approximately 46 m apart, contain pyrite, chalcopyrite, sphalerite and minor galena in a barite-quartz-calcite gangue and chalcopyrite in quartz and occur in schists derived from the Myra Formation. Total production from 1898 to 1964 was 277,400 t producing 1,383,803 g Au, 29,066,440 g Ag, 9,549,590 kg Cu, 20,803,750 kg Zn, 164,590 kg Pb and 4.5 kg Cd.

Recent exploration on Abermin Corp.'s Lara property (54 km southeast of the Rodeo and Aft claims) has traced volcanogenic massive sulphides in the Coronation and Coronation Extension zones along a strike length of 1500 m, over a true width averaging 3.3 m. Published indicated and inferred reserves are 1,125,000 tonnes grading 2.88 g/t Au, (0.084 oz/ton), 67.9 g/t Ag (1.98 oz/ton), 3.59% Zn, 0.67% Cu, and 0.72% Pb (Vancouver Stockwatch, Feb. 9, 1988). Underground exploration totalling 823 m is scheduled to begin in early 1988 with a decline on the Coronation zone to provide access to the ore zone on three levels. Two kilometres to the north, four diamond drill holes intersected several polymetallic horizons over a strike length in excess of 2.4 km (Northern Miner, January 1987).

Five past producing mines, as well as numerous showings, are located in the Port Alberni area (Figure 4). The Thistle Mine



(7 km north of the Rodeo and Aft claims) contains disseminated and massive sulphide mineralization within pyritic, quartz-sericite schists and at their contact with chlorite altered mafic volcanics of the Sicker Group. Production from 1938 to 1942 totalled 6276 tonnes of ore yielding 85,844 g Au, 65,438 g Ag, and 309,739 kg Cu (13.7 g/t Au, [0.40 oz/T]; 10.5 g/t Ag [0.31 oz/T], 4.92% Cu).

Exploration by Westmin Resources Ltd. has located 16 Cu and/or Au occurrences over a strike length of 4.6 km grading up to 16.8 g/t Au (0.049 oz/ton) over 2.1 m (Benvenuto, 1984).

The Black Panther Mine is a quartz vein deposit hosted by a shear zone in Sicker Group andesite and Island Intrusions diorite located 6 km north of the Rodeo and Aft claims. Production of 1715 t yielded 15,830 g Au (509 oz), 29,640 g Ag (953 oz), 5587 kg Pb and at least 2030 kg Zn and 226 kg Cu.

The 3-W Mine consists of gold-bearing quartz veins in Island Intrusions diorite and granodiorite. Production amounted to 105 t of ore grading 137 g/t Au (4.0 oz/ton), 147.4 g/t Ag (4.3 oz/ton), 0.23% Cu, 1.1% Pb. The 3-W Mine is located 1.0 km west of the Aft claim.

The Havilah Mine (950 t produced 8,056 g Au [259 oz], 43,670 g Ag [1,404 oz]) and the Vancouver Island Gold Mine (438 t produced 11,944 g Au [384 oz], 1617 g Ag [52 oz]) are quartz vein deposits hosted by andesite and andesite tuff of the Sicker Group and are located 8 km and 15 km respectively, north of the Rodeo and Aft claims.

Exploration on the Debbie and Yellow properties, surrounding the old Vancouver Island Gold Mine, has located three zones of gold mineralization. The 900 Zone has provided the best results to date, including 14.36 m (47.1') grading 139.82 g/t Au (4.078 oz/T) and 13.50 m (44.3') of 38.98 g/t Au (1.137 oz/T). At the



900 Zone, the gold occurs in a silicified quartz stockwork zone hosted by a variety of Sicker Group volcanic rocks. The Mineral Creek Zone, which is fault-controlled, has been outlined for about 250 m on the Debbie property and 150 m on the adjacent Yellow property. Gold intersections are lower grade, generally wider, than in the 900 Zone, and include 21.06 m (69.1') of 3.53 g/t Au (0.103 oz/T). The Linda Zone, which may be an extension of the Vancouver Island Gold Mine, consists of a in of auriferous quartz veins barren wall Intersections from this zone include 1.40 m (4.6') of 44.91 g/t Au (1.310 oz/T) and 2.00 m (6.6') of 47.35 g/t Au (1.381 oz/T)(Westmin News Release; Jan. 11, 1988).

Drilling in areas away from the known zones has also intersected gold mineralization (18.75 g/t Au [0.547 oz/T] over 1.0 m, 475 m north of the Mineral Creek Zone; and 8.40 g/t Au [0.245 oz/T] over 0.61 m, 300 m west of the Mineral Creek Zone). A total of 30,580 m of diamond drilling in 163 holes was carried out in the 1987/88 season on the Debbie and Yellow properties. Over \$5 million is to be spent in 1988 on the properties, including the driving of a 1.9 km adit to provide access to the Mineral Creek and Linda zones (Westmin News Release; Jan. 29, 1988).

The Cup showings are located on the Cup claim, which is enclosed by the adjacent Port and Starboard claims. Vancouver Group volcanics and limestone host Cu-Zn-Pb-Ag-Au mineralization in quartz veins, shear zones, and skarns. Assays include 2.23% Zn, 11.3 g/t Au (0.33 oz/T) over 0.6 m; 2.72% Cu, 6.22% Pb, 0.65% Zn, 990 g/t Ag (28.9 oz/T) from a grab sample; and 6.8 g/t Au (0.20 oz/T), 867 g/t Aq (25.3 oz/T) also from a grab sample.

Complete descriptions of the showings located in the area of the Rodeo and Aft claims (Figure 4) are described in Neale and Hawkins (1986) and are not repeated in this report.



### 5.0 1988 ASSESSMENT WORK

### 5.1 Introduction

This section on property geology is based on field work performed by MPH Consulting Limited during the period February 22 to 24, 1988. Work completed on the Rodeo claim includes 1:10,000 scale geological mapping, trenching, and rock sampling. Work completed on the Aft claim includes 1:10,000 scale geological mapping and rock sampling (a total of four rock samples) All samples were subsequently analyzed geochemically for gold and 30 elements by ICP. Property plan, geology and sample locations are shown in Figure 5. Rock sample descriptions and lithogeochemical results are found in Appendix II. Certificates of analyses and analytical techniques are located in Appendices IIIa and IIIb respectively.

## 5.2 Geology and Mineralization

### 5.2.1 Aft Claim

The Aft claim is predominantly underlain by various intrusive rocks of Jurassic Island Intrusions ranging from granodiorite to more mafic diorite, medium- to coarse-grained and generally grey in colour. Large blocks of mafic volcanic, probably of Karmutsen Formation basalt, are found downslope from the southern claim boundary, and in the valley bottom on either side of the creek. While the intrusive contact was not observed in outcrop, the presence of blocky inclusions of slightly maroon dark green aphanitic volcanic rocks within granodioritic to dioritic outcrops suggests a proximal contact, perhaps 250 to 350 m south of the north fork of Corrigan Creek.

Structurally, the property is bisected into north and south portions by an assumed fault oriented east-west. No evidence



of fault displacement was observed in outcrop; however, the north fork of Corrigan Creek is a strong lineament, suggesting faulting.

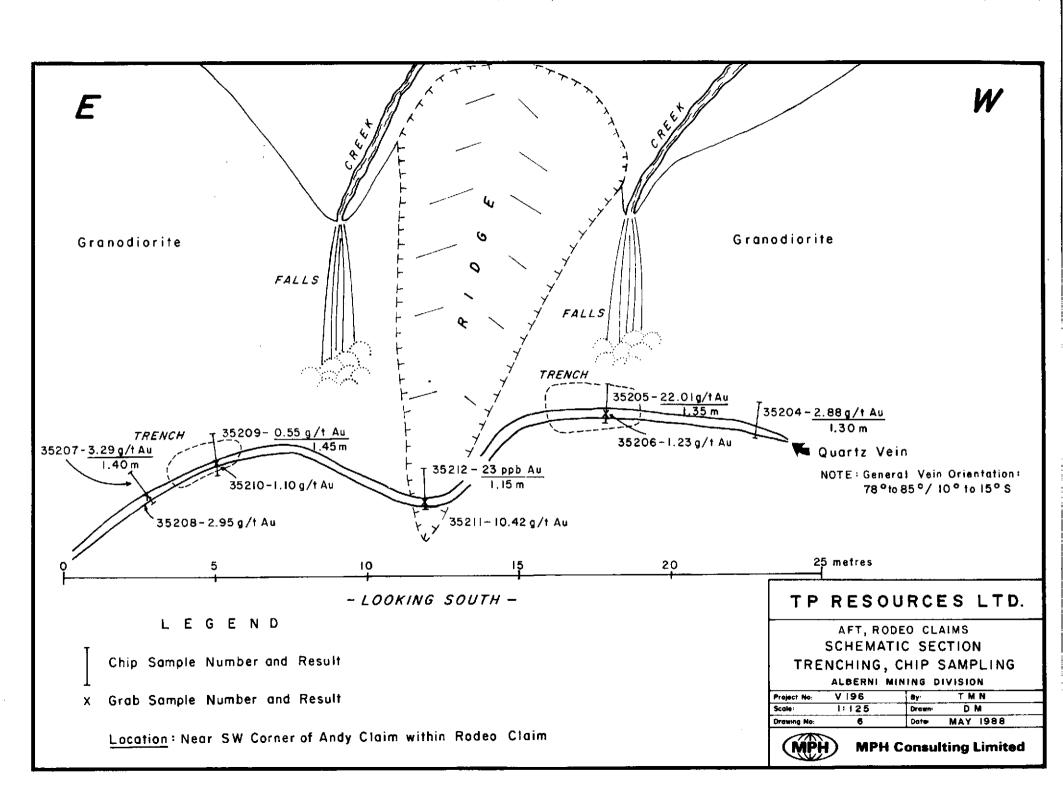
Mineralization on the Aft claim consists of trace to 2% finely disseminated and micro-fracture filling pyrite. Samples from the Aft claim did not return anomalous values for gold. Sample #35156, an oxidized lapilli tuff, contains anomalous copper (172 ppm) and manganese (1303 ppm); no other anomalous lithogeochemical values were returned from the Aft claim.

## 5.2.2 Rodeo and Andy 22 Claims

The Rodeo and Andy 22 claims are predominantly underlain by rocks mapped as Island Intrusions. They are overlain by hornfelsed andesites and basalts of the Bonanza Group. The contact roughly parallels topographic contours, so it is assumed to be relatively flat-lying. The intrusive is medium-grey granodiorite, exhibiting local deformation in the form of oriented mafic components and indistinct crystal boundaries. The volcanic rock is dark green-grey, fine-grained basalt with local subhedral feldspar phenocrysts (<3 mm) and euhedral amphibole crystals (<3 mm).

An east-west sinistral fault displaying local mylonitization in Corrigan Creek and crosscutting north-south dextral faults south of Corrigan Creek were observed by Neale and Hawkins (1986). This year's assessment work did not confirm their presence.

Sulphide mineralization on the Rodeo claim occurs as finegrained disseminated grains within granodiorite/diorite and in structurally controlled quartz and quartz-carbonate veins. A granodiorite sample (35219) with 4-7% fine-grained disseminated pyrrhotite and 1-3% fine-grained disseminated pyrite returned anomalous gold and copper of 135 ppb and 560 ppm respectively.





A 1987 granodiorite sample (#15564; Kang and Getsinger, 1987) containing disseminated pyrite, chalcopyrite, and bornite returned anomalous gold, silver, and copper values of 120 ppb, 18.9 ppm, and 10,006 ppm, respectively.

A structurally controlled quartz vein, exposed along a 25 m east-west strike length in a shallow, south dipping joint plane, was trenched by explosive in two locations for a linear total of 5 metres. Chip and grab samples were taken from the two trenches and elsewhere along the exposure (see Figure 6). The peak chip sample returned values of 22.01 g/t Au, 60.3 ppm Ag, 2048 ppm Cu, 2442 ppm Pb and 26618 ppm Zn across 1.35 metres (sample 35205). The peak vein grab sample (35210) returned values of 10.42 g/t Au, 127.9 ppm Ag, 7229 ppm Cu, 3163 ppm Pb, 46444 ppm Zn, and 793 Cd. Minimal arsenic lithogeochemical values diminish its usefulness as a pathfinder element. Samples from similar quartz veins exposed along the abandoned logging road returned anomalous gold values of 22 ppb and 31 ppb (sample numbers 35151 and 35152 respectively). A silt sample taken from a tributary south of Corrigan Creek did not return anomalous geochemical values.

## 6.0 PROPOSED WORK PROGRAM

### 6.1 Plan

A Phase I exploration program including geological mapping, rock sampling, soil sampling, and a VLF-EM survey is proposed for the Rodeo claim. Geological mapping, rock and silt sampling is proposed for the Aft claim.

On the Rodeo claim, 1:2500 geological mapping and rock sampling should be conducted over all accessible parts of the property to trace known gold bearing quartz veins and to isolate other similarly positive features. A flagged grid with north-south trending lines spaced 100 m apart is to be established over the southern portion of the claim. Results indicate that this area is anomalous in Au, Cu, Ag, Zn and Mo. Soil samples are to be collected at 25 m intervals along grid lines and VLF-EM readings will be taken at 12.5 m intervals on all grid lines. VLF-EM surveys aid in locating mineralized quartz veins.

If warranted by the results of Phase I exploration, the Phase II program for the Rodeo claim is to consist of detailed geological mapping, trenching, and rock sampling of anomalous grid areas with IP surveying to define drill targets. Phase III work, if warranted by Phase II results, will consist of diamond drilling of priority targets.

On the Aft claim, Phase I geological mapping and rock sampling should be conducted in the areas not covered by previous assessment work, particularly in the higher areas.

On the Aft claim, Phase II exploration is to include detailed geological mapping, rock sampling, grid soil sampling, a VLF-EM survey, and trenching, contingent upon favourable Phase I results.



The following cost estimates are for Phase I exploration of the Rodeo and Aft claims. Phases II and III are contingent upon results of Phase I exploration.

# 6.2 Budget

# 6.2.1 Rodeo Claim Phase I

Personnel:						
Geologist	(1)	8 days	@	\$375	\$3,000	
Soil Samplers/						
Geophysical Technicians	(3)	8 days	0	150	3,600	
						\$ 6,600
						•
Support Costs:						
Food/Accommodation	32 m	andays	a	55	1,760	
4WD Truck		8 days	@	110	880	
Miscellaneous Supplies		_			200	
					-	2,840
						_,
VLF-EM, Base Station, Comp	uter	8 days	9	250		2,000
Analyses:						
100 rocks @ \$14.00 (Au,	ICP)				1,400	
5 rocks @ 20.00 (who	le roc	k)			100	
400 soils @ 11.75 (Au,	ICP)				4,700	
						6,200
						17,640
Administration @ 15% (on \$	6,400)					960
- , , ,						18,600
Contingency @ 15%						2,790
	Fiel	d Work	Si	ubtota	1	\$21,390
			_			<u> </u>



6.2.1	Rodeo	Claim-Phase	T.	cont.

Consulting/Supervision: 2 days @ \$500 Expenses		\$1,000 200	\$ 1,200
Report: Geologist Geophysicist Drafting Materials, Typing, Copying	7 days @ \$375 1 day @ 350 30 hrs @ 25	2,625 350 750 1,000	5.836
Administration @ 15% (on \$1,9) Contingency @ 15%	50)		5,925 293 6,218 933
0	ffice/Consulting sul		\$ 7,151 \$28,500
6.2.2 Aft Claim Phase I			
Geological Assistant 1	days @ \$375 day @ 250	\$ 750 250	\$ 1,000
•	ndays @ 55 days @ 110	165 220 100	485
Analyses: 35 rocks @ \$14.00 (Au, ICP			490 1,975
Administration @ 15% (on \$590 Contingency @ 15%	<b>)</b>		89 2,064 310
F	ield Work Subtotal		\$ 2,374



## 6.2.2 Aft Claim-Phase I cont.

Consulting/Supervision: 0.5 day @ \$500 Expenses		\$ 250 75	\$ 325
Report:			
Geologist	2 days @ \$375	750	
Drafting	8 hrs @ 25	200	
Materials, Typing, Copyi	ng	400	
		· · · · · · · · · · · · · · · · · · ·	1,350
			1,675
Administration @ 15% (on \$6	75)		101
			1,776
Contingency @ 15%			266
	Office/Consulting su	btotal	\$ 2,042
	Phase I Total,	say	\$ 4,400

## 6.3 Schedule

Individual budgets have been proposed for Phase I exploration on the Rodeo and Aft claims (Section 6.2). The time required for field work is about 10 days; for report completion is 5 to 7 days after results are in. Estimated total cost for proposed work on the Rodeo and Aft claims is \$32,900.



## 7.0 CONCLUSIONS

- 1. The Rodeo and Andy 22 claims are underlain by Jurassic dioritic and granodioritic Island Intrusions and Bonanza Group volcanics.
- 2. Highly anomalous lithogeochemical values have been recovered from quartz veins and surrounding wall rock on the Rodeo claim. Values of up to 22.01 g/t Au over 1.35 m and 10.42 g/t Au from a grab sample have been returned.
- 3. Additional exploration of the Rodeo claim to follow up results of the 1988 assessment work is warranted.
- 4. The Aft claim is underlain by Jurassic Island Intrusions granodiorite and diorite containing xenoliths of Karmutsen Formation volcanics.
- 5. The Aft claim is located adjacent to the 3-W Mine property (gold in quartz veins) and in an area with a long history of gold mining.
- 6. Additional work is required to establish the economic potential of the Aft claim.
- 7. A Phase I exploration program, consisting of geological mapping, rock sampling, soil sampling, and a VLF-EM survey on the Rodeo claim, and geological mapping, rock and silt sampling on the Aft claim, is recommended at a total estimated cost of \$32,900. Further work may be recommended contingent on Phase I results.

### 8.0 RECOMMENDATIONS

- 1. It is recommended that Imperial Metals Corp. be approached with respect to the areas of both claims to which they hold the base metal rights, before any work is commenced.
- 2. It is recommended that results from Noranda's 1964-1970 exploration of the Rodeo claim area be obtained, if possible, and considered in planning future exploration of the Rodeo claim.
- 3. Phase I exploration of the Rodeo claims consisting of geological mapping and sampling, soil sampling and VLF-EM is recommended at an estimated cost of \$28,500.
- 4. It is recommended that particular attention be paid to the area of the Rodeo claim south of Corrigan Creek, where gold mineralization was encountered in quartz veins sampled during 1988 assessment work. Geological mapping, soil sampling, and a VLF-EM grid is recommended to cover this area.
- 5. Contingent upon favourable Phase I results, Phase II exploration consisting of detailed geological mapping, sampling, trenching, linecutting, and IP surveying is recommended on the Rodeo claim.
- 6. Contingent upon favourable Phase II results, Phase III work consisting of diamond drilling on the Rodeo claim is recommended.
- 7. Phase I exploration of the Aft claim consisting of geological mapping, rock sampling, and prospecting is recommended at an estimated cost of \$4,400.



- 8. Contingent upon favourable Phase I results, Phase II work consisting of a soil geochemistry survey, detailed geological mapping and a VLF-EM geophysics survey is recommended.
- 9. It is strongly recommended that any future work on either or both of the claims be done in the summer so that snow does not cause access and safety problems.

Respectfully submitted MPH CONSULTING LIMITED

TM Nounk

T.M. Naciuk, BSc.

May 25, 1988



### CERTIFICATE

- I, T.M. Naciuk, do hereby certifiy:
- 1. That I am a graduate in geology from the University of Alberta (BSc. 1985).
- 2. That I have practised as a geologist in mineral exploration for three years.
- 3. That the opinions and conclusions contained herein are based on field work carried out on the Aft, Rodeo, and Andy 22 claims from February 22 to 24, 1988 and supervised by me.
- 4. That I own no direct, indirect, or contingent interests in the subject property or shares or securities of TP Resources Ltd. or associated companies.

T.M. Naciuk, BSc.

Vancouver, B.C. May 25, 1988

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Appendix I

List of Personnel

and

Statement of Expenditures



## LIST OF PERSONNEL AND STATEMENT OF EXPENDITURES

The following expenses have been incurred on the Aft, Rodeo and Andy 22 claims for the purpose of mineral exploration during the period of February 22 to 24, 1988. The distribution of expenditures between the claims is 29.38% to the Aft claim, 66.46% to the Rodeo claim, and 4.16% to the Andy 22 claim.

## Field Costs

Personnel:	
T.M. Naciuk, BSc., Project Manager	
3 days @ \$375 \$1,1	25.00
K. Lund, BSc., Geophysicist	
2.5 days @ 350 8	75.00
T. Hayes, Blaster	
1 day @ 3503	50.00
	\$2,350.00
Support Costs:	
Accommodation 7 mandays @ \$ 55 3	85.00
4WD Truck 3 days @ 1103	30.00
	715.00
Laboratory Analyses:	
Rocks (Au, ICP) 27 @ 14.50 3	91.50
Silt (Au, ICP) 1 @ 13.50	13.50
Gold Fire Assays 8 @ 8.50	68.00
4	73.00
Shipping	35.75
Copying	21.02
Miscellaneous Expenses	
(explosives, phone, gas, etc.)	76.71
	606.48
Administration	90.97
Total Field Costs	\$3,762.45



\$6,601.47

# Report Costs

Personnel:					
T.M. Naciuk, BSc.					
3.5 days @ \$375			\$1,31	2.50	
T. Neale, BSc.					
.25 day @ 350			8	7.50	
J. Getsinger, PhD					
1 day @ 350			35	0.00	
S. Blacquiere, Office	Asst.				
1 day@ 150			15	0.00	
					\$1,900.00
Typing			28	5.00	
Drafting			37	5.00	
Copying			1	4.64	
Supplies, Courier, etc.			14	1.90	
					816.54
Administration @ 15%					122.48
	Total	Report	Costs		\$2,839.02

TOTAL COSTS



# Appendix II

Rock Sample Descriptions and Lithogeochemical Results

								/ iáit	<u>,</u> [
Sample No.	Description	<b>Au</b> ppb	<b>Ag</b> ppm	<b>As</b>	<b>Cu</b>	<b>Pb</b> ppm	<b>Zn</b> ppm	Other ppm	
35151	Location: Rodeo Claim - 750 m up road from 3W clearing.  Quartz Vein. Grab from outcrop. Vein exposed across 8-10 m. 20 cm quartz vein within diorite is host to 5-10% disseminated pyrite, 3-5% chalcopyrite, 1-3% pyrrhotite, trace magnetite, trace arsenopyrite(?). Vein is oriented 048/50SE.	22	0.7	2	1157	2	27	57 Mo	
35152	Location: Rodeo Claim - access road, Day 1 Creek intersection.  Quartz Vein. Grab from outcrop. Vein exposed for 5-7 m. 4-6 cm quartz vein hosted in diorite carries 1-3% pyrite, 1-3% pyrrhotite, and 1-3% chalcopyrite. Vein is oriented 000/85E.	31	4.3	2	4671	2	126	333 Mo	
35153	Location: North Aft Claim. Diorite. Grab from outcrop. Mottled dark green/white crystalline intrusive. Crystals have diffuse boundaries. Sample is crosscut by 2 sets of quartz-carbonate veinlets. Trace fine-grained pyrite throughout.	1	0.1	2	9	2	43		
35154	Location: North Aft Claim.  Very fine-grained Tuff(?). Grab from outcrop.  Dark green aphanitic homogeneous basaltic groundmass is crosscut by epidote and calcite veinlets to 3 mm. Minor epidote alteration.	1	0.1	2	57	2	58		
35155	Location: North Aft Claim. Hornblende Feldspar Porphyry. Grab from rock outcrop. Light green silicified hornblende and white feldspar phenocrysts, rounded to 2 mm, in a light green aphanitic groundmass. Sample is crosscut by Fe-carbonate veinlets to 5 mm and slightly epidote-altered. Trace fine-grained pyrite throughout.	1	0.1	2	7	3	59		

Sample No.	Description	<b>Au</b> ppb	<b>Ag</b>	<b>As</b>	<b>Cu</b> ppm	<b>Pb</b> ppm	<b>Zn</b> ppm	Other ppm
35156	Location: Aft Claim - North fork, Corrigan Creek.  Lapilli Tuff. Grab sample from rock float.  Dark green aphanitic homogeneous angular clasts, up to 15 mm occur in a fine-grained medium green tuffaceous groundmass. Minor crosscutting quartz veinlets, 2 sets, up to 1 mm carry trace pyrite. Boulder is iron-oxidized.	1	0.1	7	172	9	72	1303 Mn
35201	Location: Rodeo Claim - approx. 400 m up road from 3W clearing.  Quartz. Grab sample from float, approx.  20x40x30 cm. Hematite- stained quartz vein float, highly angular (probably local), hosts 2-4% disseminated pyrite. Source not found.	1	0.1	2	54	2	4	513 Mo
35202	Location: Rodeo Claim - 680 m up road from 3W clearing.  Quartz Vein. Grab sample from outcrop.  3-5 cm quartz vein, exposed 2-4 m, within diorite hosts 2-4% pyrite, 1-3% magnetite, and trace chalcopyrite (all disseminated).  Vein orientation is 013/35E.	1	0.1	4	145	4	52	
35203	Location: Rodeo Claim - 750 m up road from 3W clearing.  Quartz Vein. Grab from outcrop; vein exposed over 3-4 m. 5-15 cm quartz vein (vein width pinches and swells) at 045/40SE within diorite is host to 5-10% pyrite, 3-5% magnetite, and 1-3% chalco-pyrite. Sample is from same outcrop (possibly same vein with intervening offset) as 35151.	14	0.1	2	415	3	21	
35204	Location: Rodeo Claim - 275 m up  Day 1 Creek.  Granodiorite hosting Quartz Vein. Chip sample (1.3 m) from outcrop. Mottled	2.88 g/t 0.084 oz/T	78.2	36	5519	1366	6508	

(MPH	
Other	

Sample No.	Description	Au ppb	Ag ppm	As ppm	Cu ppm	PP PPm	Zn ppm	Other
35204	cont. black/white crystalline intrusive consisting of 20% hornblende, 10% biotite, 50% quartz, 15% feldspar, 2-4% pyrite hosts a 10 cm quartz vein with 1-3% pyrite, 1-3% chalcopyrite, and 2-4% pyrrhotite. Chip is of host and vein.							
35205	Location: Rodeo Claim - 275 m up  Day 1 Creek.  Granodiorite hosting Quartz Vein. Chip sample (1.35 m) from outcrop. Mottled black/white crystalline intrusive consisting of 20% hornblende, 10% biotite, 40-50% quartz, 25% feldspar, 3-5% disseminated pyrite hosts a 15 cm quartz vein (see sample 35206). From 5 m E of 35204. Chip is of host and vein. Vein mineralization consists of 2-4% pyrite, 1-3% sphalerite, 2-4% chalcopyrite, and 5-10% pyrrhotite.	22.01 g/t 0.642 oz/T	60.3	32	2048	2442	26618	458 Cd
35206	Location: Rodeo Claim.  Quartz Vein. Grab from outcrop. 10-30 cm  vein is exposed over 25-30 m. High grade  sample from Day 1 showing. Vein trends  ENE-WSW, dipping 10-15°S. Sulphides:  5-10% pyrrhotite, 2-4% pyrite, 2-4%  chalcopyrite, 1-3% sphalerite. 35205 is  chip sample 1 m above and 0.2 m below  35206. Sample area is 5 m E of 35204.	1.23 g/t 0.036 oz/T	96.1	2	5796	943	7884	
35207	Location: Rodeo Claim - 75 m up Day 1 Creek.  Granodiorite hosting Quartz Vein.  Chip sample across 1.40 m from outcrop.  Granodiorite consisting of approximately 20% hornblende, 10% biotite, 50% quartz, 15% feldspar, 3-5% disseminated pyrite.	3.29 g/t 0.096 oz/T	5.2	9	282	118	1809	

Sample No.	Description	<b>Au</b> ppb	<b>Ag</b> ppm	<b>As</b>	<b>Cu</b> ppm	<b>Pb</b> ppm	<b>Zn</b> ppm	Other PPm
35207	cont. Sample includes 20 cm interval of quartz vein (see 35208). Sample area is 25 m E of 35204.							
35208	Location: Rodeo Claim - 275 m up Day 1 Creek.  Quartz Vein. Grab sample from outcrop; vein exposed along 25 m. Quartz vein within granodiorite hosts 1-3% chalco- pyrite, 1-3% pyrite, trace galena?, and trace arsenopyrite. Sample is 25 m E of 35204.	2.95 g/t 0.086 oz/T	36.3	80	2835	474	17708	249 Cđ
35209	Location: Rodeo Claim - 275 m up Day 1 Creek.  Granodiorite hosting Quartz Vein. Chip sample across 1.45 m from outcrop. Mottled black/white crystalline intrusive consisting of 20% hornblende, 10% biotite, 50% quartz, 15% feldspar; 2-4% pyrite hosts a 15 cm quartz vein (see 35210) with 1-3% pyrite, 1-3% chalcopyrite, and 2-4% pyrrhotite. From 23 m E of 35204.	0.55 g/t 0.016 oz/T	4.2	30	200	103	791	
35210	Location: Rodeo Claim - 275 m up Day 1 Creek.  Quartz Vein. Grab sample from outcrop; vein exposed over 25 m. Quartz vein (0.15 m wide) hosts 1-3% pyrite, 1-3% chalcopyrite, trace pyrrhotite and trace arsenopyrite(?) Sample is from 23 m E of 35204.	1.10 g/t 0.032 oz/T	5.5	40	259	109	2293	
35211	Location: Rodeo Claim - 275 m up Day 1 Creek.  Quartz Vein. Grab sample from outcrop.  White vein is 6-20 cm thick, approximately 25 m long (exposed). Sulphide mineral- ization consists of 2-5% pyrite, 2-5%  pyrrhotite, and 3-5% sphalerite.	10.42 g/t 0.304 oz/T	127.9	152	7229	3163	46444	793 Cd

Sample No.	Description	<b>Au</b> ppb	<b>Ag</b> ppm	As ppm	<b>Cu</b> ppm	<b>Pb</b> ppm	<b>Zn</b> ppm	Other ppm
35212	Location: Rodeo Claim - 275 m up Day 1 Creek.  Granodiorite hosting Quartz Vein. Chip sample across 1.15 m from outcrop. Mottled black/white crystalline intrusive consist- ing of 20% hornblende, 10% biotite, 40-50% quartz vein (see 35211). From 16 m E of 35204.	23	3.4	44	176	239	933	
35212A	Location: Rodeo Claim - access road.  Quartz Vein. Grab from float (boulder 1.0 m x 0.5 m x 0.5 m). 15-20 cm quartz vein occurs in a granodioritic host. Boulder highly angular. Vein has strong Fe-oxide stain and carries 4-7% chalcopyrite and 1-3% pyrite.	12	36.0	2	23124	25	477	
35213	Location: Rodeo Claim - Access road.  Quartz Vein. Grab sample from outcrop;  1-3 cm vein, traceable over 3 m. Fe-oxide stained quartz vein, hosted in granodiorite, carries 3-5% disseminated pyrite. Vein fills joint fracture oriented 028/85 NW.	8	0.3	4	1084	2	45	29 Mo
35214	Location: Central Rodeo Claim.  Mafic Sill (diabase?). Grab from outcrop.  Traceable over 5 m. Fine-grained mafic crystals (amphibole?) occur in a very fine-grained mafic ground- mass. Pyrite (fine-grained, disseminated) associated with local epidote alteration.	6	0.6	12	201	18	204	
35215	Location: Central Rodeo Claim. Silt.	2	0.1	2	200	9	65	
35216	Location: Central Rodeo Claim. Granodiorite. Grab from outcrop; exposed over 3 m. Mottled white/dark green crystal- line intrusive. Adjacent to quartz-carbonate veins associated with 0.5 m wide shear zone (000/63E). 2-4% pyrite disseminated throughout.	1	0.3	12	100	3	69	

Sample No.	Description	<b>Au</b> ppb	<b>Ag</b>	<b>ya</b>	<b>Cu</b> ppm	<b>Pb</b> ppm	<b>zn</b> ppm	Other ppm
35217	Location: Rodeo Claim - 50 m S of Corrigan Creek.  Altered Diorite. Grab sample from outcrop, milky orange. Sulphide mineralization is associated with quartz-carbonate veins occurring within an Fe-carbonate altered shear zone. Host is diorite. Trace pyrite; trace chalcopyrite. Shear zone is traceable over 12 m.	5	0.6	343	478	3	92	
35218	Location: Rodeo Claim - Corrigan Creek. Mafic Volcanic. Grab float from boulder 0.5 m x 0.4 m x 0.5 m. Dark green volcanic, aphanitic homogeneous groundmass, is brecci- ated by crosscutting epidote veinlets (at least 3 sets). Quartz veins, 1 set up to 1.0 cm wide, carrying trace chalcopyrite and pyrite also occur.	7	8.0	7	834	7	103	185 Sr
35219	Location: Rodeo Claim - Corrigan Creek. Granodiorite. Grab sample from outcrop, milky orange. Sulphide mineralization is associated with quartz-carbonate veins occurring within an Fe-carbonate altered shear zone. Host is diorite. Trace pyrite; trace chalcopyrite. Shear zone is traceable over 12 m.	135	1.0	6	560	6	237	
35220	Location: Rodeo Claim - Corrigan Creek. Granodiorite. Grab sample from outcrop. Mottled white/black crystalline intrusive hosts trace pyrite and chalcopyrite within a 3 cm quartz vein, exposed over 6 m.	5	0.5	3	773	2	34	
88T101	Location: Rodeo Claim - 75 m west of 35211. Diorite. Grab sample from outcrop. Mottled grey-white chlorite, with 5% pyrite disseminated through host. Outcrop exposed over 100 m.	14	1.0	3	717	16	103	

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Appendix III

Certificates of Analysis

## GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 BRAM SAMPLE IS DIBESTED NITH 3ML 3-1-2 MCL-HN03-H20 AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML NITH WATER.

THIS LEACH IS PARTIAL FOR MN FE CA P LA CR ME BA TI B W AND LIMITED FOR MA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

- SAMPLE TYPE: PI SILT P2-3 ROCK: AUG ANALYSIS BY AA FROM 10 GRAM SAMPLE.

DATE RECEIVED: FEB 29 1988

DATE REPORT MAILED, Man 9/88

MPH CONSULTING PROJECT V196/<del>227</del> File # 88-0571 Fage 1

35215 2 100 9 65 .3 B 12 601 3.77 t2 5 NO 1 27 1 2 2 73 .60 .056 5 11 .92 89 .12 13 3.07 .05 .10 1

SAMPLED	NO PPN	CU PFM	PB PFM	ZN PPM	AG PPM	NI PFM	CO PPM	MN PPM	FE 7	AS PPM	U PPM	AU PPH	TH PPM	SR PPM	CD FFH	SB PPM	91 PF#	V PPM	CA Z	P Z	LA PPM	CR PPM	MG I	BA PPM	11 Z	B PPM	AL Z	NA Z	K Z	N PPM	AUT PPB
35151	57	1157	2	27	.7	3	23	159	3.95	2	5	MD	1	21	1	2	2	21	. 39	.013	2	6	46	107	.06	17	1.03	. 13	.39	2	22
35152	333	4671	2	126	4.3	2	8	299		2	5	ND	3	19	i	2	5	32	. 40	.017	ì	3	90	122	.08		1.51	.10	46	2	31
35153	1		2	43	1	1	3		1.94	2	5	MD	1	33	1	2	2	10	, 45	.031	5	2	.37	104	,09		1.04	.06	.13	ī	1
35154	2	57	2	58		Ģ	17			2	5	ND	i	34	î	2	3	113	2.00	.058	5	7	1.89	56	.23		2.82	.07	.02	•	i
35155	3	7	3	59	1	4	13		3,46	2	5	NĐ	3	85	1	2	3	53	2.16	.039	2	4	1.50	21	.10		2.11	.03	.04	i	i
78124		170	q							-	_					_	-	44.								_					
35156	! F:7	172		72	ı.l.	25	24		6.16	, <u>,</u>	5	ND		60	1	2	/	107	5.36	.088	3	66	1.71	54	. 22		2.77	.02	. 28	1	1
35201 35202	513 2	54 145	2	52	l i	2	10	68 335	.98 5.59	4	5	ND ND	1 2	5 26	1	2	2	83	.11	.003	3	4	.05 .84	10 198	.01	2	.16 1.47	.02	.02	1	1
		415	•	21		4			10.31	7	5	МĐ	4	13	1	2	3	36	-46 19	.008	3	2	10	37	.13	2	.57	.08	.11	1	14
35203	12				.! 78.2	-	10			71	-	3	:		110		54	20			4					-		.04			-
35204	0	5510	1366	6508	/6.2	2	41	384	11.67	36	5	3	2	17	118	2	34	,	.53	. 029	-	1	į o	35	.04	7	. 59	.04	. 20	2	2320
35205	18	2048	2442	26618	60.3	1	26	607	9.90	32	5	15	2	14	458	2	81	27	.56	.036	5	2	.42	47	.07	5	.87	.04	. 16	1 :	21500
35206	7	5796	943	7884	96.l	1	44	177	16.15	2	5	ND	1	1	151	2	162	1	.04	.001	2	Ţ	.02	12	.01	ą	.05	.01	.04	2	855
35207	3	292	118	1809	5.2	2	8	634	3.19	9	5	2	4	36	28	2	14	61	.83	.034	6	8	.BO	82	.11	15	1.78	.13	.31	1	4050
35208	14	2835	474	17708	36.3	ı	11	101	3.13	80	5	ND	ı	Ţ	749	3	65	1	.01	.001	7	2	.02	9	.01	2	.07	.01	.02	1	3850
35209	3	200	103	791	4.2	2	12	545	3.70	30	5	ND	2	41	ģ	2	5	40	. 56	.042	6	2	.67	127	.11	2	1.60	, 14	.53	1	455
35210	3	259	109	2293	5.5		6	85	1.64	40		ND			75	7			42	000	,		10.	24	.01		1.4	.01	.00	2	710
	-	7229		46444		:	-	337		40	3		•	:	35 793	3 5			.02	, 035	2	7	.31	24	.05	19 6	. 16 . 74	.01	.14	2	5640
35211						1	13		4.73	t52	3	2	1	71		_	164	15	.14		3	2		23				. 12	.55	4	
35212	5	176	239	933	3.4	3	10	704	5.40	44	2	ND	3	31	6	2	9	64	.63	.067	,	,	1.00	180	.14	,	2.06	.02	.02	3	23 122
35212A		23124	25	477	36.0		. i	73		2		ND	:	3 179	<i>!</i>	- 2	2	2	.03	.004	2	4	06 77	147	.01	3	.15	.02	.02	ა 2	9
35213	27	1084	2	45	.3	3	11	157	4.60	9	3	NĐ	١.	(/8	1	7	3	48	.38	.027	2	,	13	147	.07	J	\$ • * 3	* 63	133	£	9
35214	1	201	18	204	. 6	1	17	981	5.00	12	5	NĐ	1	79	1	5	2	136	3.56	.068	2	13	2.21	473	.22	3	7.53	. 46	2.15	3	ð
35215	3	200	3	69	. 1	1	7	388	2.91	2	5	ND	7	38	1	2	3	27	1.14	.032	6	4	.50	77	. 11	2	2.20	. 27	. 20	1	2
35217	5	478	3	92	. ô	3	13	716	4.90	343	6	ND	4	70	1	6	3	29	5.87	.054	14	2	.93	19	.01	13	.53	.01	. 15	1	5
35218	В	834	7	103	.0	6	14	500	3.98	7	5	ND	t	185	- 1	4	3	65	2.14	, 051	2	8	1.00	113	. [4	11	3.62	، 31	. 47	3	7
35212	2	540	b	237	1.0	19	Ģ	474	4.16	6	5	NĐ	1	22	2	2	•	44	.50	. 047	3	20	1. t7	32	.08	5	1.73	.06	. 12	28	135
35220	11	773	2	34	.5	10	14	161	3.64	3	6	NĐ	3	23	1	2	7	30	.53	. 027	4	7	.80	60	.04	7	1.16	.08	. 15	1	5
88-F-101	5	717	16	103	1.0	3	16	639	5.92	3	5	ND	- 1	114	1	2	2	142	1.80	.063	3	3	1.87	62	.22	6	5.20	.53	1.74	1	14
STD C/4U-R	19	60	42	132	7.5	69	29		4.20	44	17	8	37	48	19	18	23	57	, 47	.093	30	60	80	178	.07	33	1.83	.08	.13	12	505

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: MAR 10 1988 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE (604) 253-3158 FAX (604) 253-1716 DATE REPORT MAILED:  $\frac{1}{2}$ 

## ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp AU++ BY FIRE ASSAY FROM 1/2 A.T.

ASSAYER: Y. : / P.Y. D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

MPH CONSULTING PROJECT-V196/227 File # 88-0571R

SAMPLE# AU\*\*
oz/t

35204 .084 35205 .642

35206 .036

35207 .096 35208 .086

35209 .016

35210 "032 35211 .304



# Appendix IV

Conversion Factors for Metric Units



# CONVERSION FACTORS FOR METRIC UNITS

1	inch	3	25.4 millimetres	(mm)
			or 2.54 centimetres	(cm)
1	cm	=	0.394 inch	
1	foot	=	0.3048 metre	(m)
1	m	=	3.281 feet	
1	mile	=	1.609 kilometres	(km)
1	km	=	0.621 mile	
				•
1	acre	=	0.4047 hectares	(ha)
1	ha	=	2.471 acres	
1	ha	=	100 m x 100 m - 10,000 m <sup>2</sup>	
1	km <sup>2</sup>	=	100 ha	
1	troy ounce	=	31.103 grams	(g)
1.	g	=	0.032 troy oz	
1	pound	=	0.454 kilogram	(kg)
1	kg	=	2.20 lb	
1	ton (2000 lb)	=	0.907 tonne	(t)
1	tonne	=	1.102 ton = 2205 lb	
1	troy ounce/ton (oz/ton)	=	34.286 grams/tonne	(g/t)
1	g/t	=	0.0292 oz/ton	
1	g/t	=	1 part per million	(ppm)
1	ppm	=	1000 parts per billion	(ppb)
10	),000 g/t	=	1%	

