831220

Summary Geology and Drilling Report
on the
Prosperity, Porter-Idaho Minesite
Skeena Mining Division
55° 54' N. Lat., 129° 57' W. Long.
103P/13W

Owned and Operated by
Pacific Cassiar Limited

Report by
J.M. Kenyon, P.Geol.

Richmond, B.C. November, 1984

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INTRODUCTION

During the period of August 1 to October 3, 1984, Pacific Cassiar Limited undertook a program of limited diamond drilling, percussion drilling, prospecting and sampling on its Prosperity, Porter-Idaho silver property at Stewart, B.C.

Direction of the program was provided by the author with Adanac Drilling and Consulting Ltd. performing diamond drill work and Bauer Enterprises Ltd. conducting underground percussion drilling.

A permanent camp is located on the claims at an elevation of 1,550 meters adjacent to the production portal from previous mining operations. Adequate water is available from adit discharge and the camp is electrically lighted and heated.

PREVIOUS WORK

The property has been owned by Pacific Cassiar Limited or its predecessors since 1952. From 1925 - 1928, small syndicate high-grading operations worked several silver-bearing veins on a seasonal basis with packhorse transport. In late 1929, Premier Gold Mining Co. commenced a 50 ton per day high-grade mining operation utilizing an 8 kilometer tramline from the mine to a barge loading dock at the mouth of the Marmot River on Portland Canal. In April 1931, all operations ceased as the price of silver declined to 26 cents per ounce.

During the production period, all ore shipments were of direct shipping material. The 18 month mining period produced 30,000 tons containing 2,300,000 ounces of silver, 3,000,000 lbs. of lead, 56,000 lbs. of copper and 860 ounces of gold. Zinc content is estimated to be equal to lead production but constituted a smelter penalty at that time and is therefore not reflected in production data.

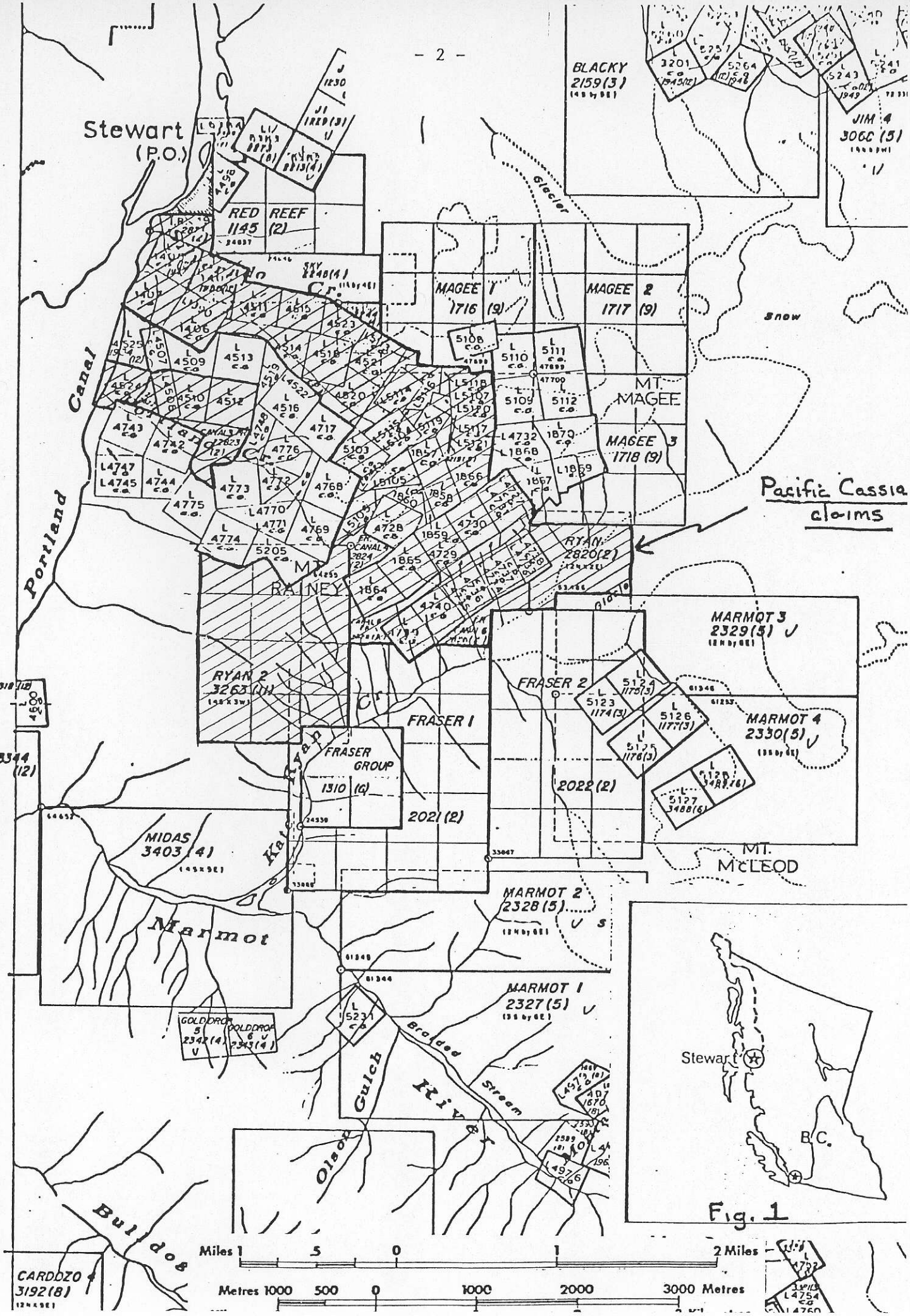

Stewart (P.O.)
BLACKY 2159(3)
JIM 4 3060(5)
Glacier
RED REEF 1145 (2)
MAGEE 1 1716 (9)
MAGEE 2 1717 (9)
MAGEE 3 1718 (9)
Snow
MT. MAGEE
Portland Canal
Pacific Cassia claims
RYAN 2820(2)
MT. RAINEY
RYAN 2 3263(11)
MARMOT 3 2329(5)
FRASER 2
FRASER 1
FRASER GROUP 1310 (6)
2021 (2)
2022 (2)
MARMOT 4 2330(5)
MT. McLEOD
MIDAS 3403 (4)
Marmot
MARMOT 2 2328(5)
MARMOT 1 2327(5)
Bradded Stream
Glacier Gulch
River
Bulldog
CARDOZO 3192(8)
TO WEST SEE MAP 1030/16E
Stewart
B.C.
Miles 1 .5 0 1 2 Miles
Metres 1000 500 0 1000 2000 3000 Metres

Fig. 1

Pacific Cassiar Limited commenced a re-examination of the property in 1980 that has continued to the present. An adequate history of the production period is contained in B.C. Minister of Mines reports from 1925 to 1932.

LOCATION AND ACCESS

The property encompasses 46 crown grant mineral claims, two staked claims and six staked fractions. These claims straddle Mt. Rainey at the head of the Portland Canal several kilometers southeast of the town of Stewart. The centre of the Prosperity, Porter-Idaho site is 55° 54' latitude and 129° 57½' longitude some 6 kilometers southeast of Stewart. Access is currently entirely by helicopter from a permanent base at Stewart, operated by Vancouver Island Helicopters.

TOPOGRAPHY AND CLIMATE

Mt. Rainey rises to 1,950 meters from sea level and is capped by ice fields which descend to 1,150 meters elevation in places. The area is rugged and devoid of vegetation above 1,340 meters.

The climate is typical coast range with periods of fog, abundant rain and heavy snowfall in winter. At the camp elevation (1,550 m) snow is possible in any month. Field seasons are limited for surface developments to a period between early June and mid-October.

GEOLOGY

A basically marine volcanic assemblage of Jurassic age and probable Hazelton group affiliation encompasses much of the general area. These rocks are less deformed in the Porter-Idaho exposures than they are further north and northwest towards the Premier and Scotty Gold minesites. Just northeast of the Porter-Idaho area, sedimentary rocks of the Bowser group predominate.

Intrusive rocks of intermediate to acidic composition were emplaced in Cretaceous and Tertiary times and occur as batholiths, stock and dyke swarms. On the Porter-Idaho claims, intrusive roeks occur 900 meters below the mine workings as intermediate dykes and two such north-south striking dykes are known on the Stewart side of the mountain at about 1,100 meters elevation. They appear to have no association with known mineralization and are probably later than primary mineralizing events.

Several lamprophyre dykes less than 1 meter in width cut vein structures on the Porter-Idaho ground, although they do not displace the vein structures nor contribute to mineralization. Their age and affiliation is not known.

MINESITE GEOLOGY

It is currently believed that the Prosperity, Porter-Idaho site is located within the domal collapse portion of a submarine volcanic pile probably near a vent source.

Major rock units include andesitic pyroclastic flows and tuffs, and rhyolitic flows and tuffs some of which may be partly intrusive. Very minor and thin discontinuous sedimentary rocks include volcanic greywackes, graphitic wackes and dirty carbonates.

The predominant andesitic volcanics have a general strike 10° to 20° east of north and dip 70° or more to the west above the Big Rig fault (an east-west structure) located at about 1,340 meters elevation. Below this fault, the same rock units strike east-west and dip an average of 40° to the north. Thus the Big Rig fault may mark the edge of the collapse structure.

Pyroclastic rocks contain clasts up to 1.5 meters in diameter composed of all other rock units on the property except the minor sedimentary units. Flow rock composition is of occasional small quartz eyes and feldspar phenocrysts averaging 5-10 mm set in a finer grained matrix. Irregular flow banding and occasional chill margins are apparent in some sections.

Andesitic tuff units vary in physical appearance and grain size representing depositional variation, but no thin section work has yet been performed to determine any compositional variation. Included in the tuff units are fine-grained, occasionally laminated exposures, medium-grained welded tuffs (perhaps ignimbritic) and crystal tuffs.

Crystal tuffs contain either feldspar, quartz or augite as phenocrysts in a finer green, buff or mauve colored matrix. Welded tuffs are generally over all fine to medium grained rocks with a higher silica content and exhibit filamme textures probably due to glass shards. These rocks are well-jointed and well indurated.

Rhyolitic rocks occur north of the mine workings and are represented by both flows and tuffs. They are white to buff colored and contain quartz eyes in a fine matrix and have a pyrite content of 1-2% rising to 20% in irregular patches apparently unassociated with structures.

The geology map (Map 1 in pocket) shows the distribution of rock types and their relationship to structures.

MINERALIZATION

Hydrothermal, silver-bearing vein-shear zones are the target of interest on the claims group. At least five prominent vein structures are known at approximate 150 meter sub-parallel spacing striking 10° - 20° west of north and dipping 50° - 75° west. Several minor veins of as yet unknown dimensions occur between these major veins. In addition, at least three east-west veins have been uncovered. This latter group both pre-dates and post-dates the prominent north-south set as evidenced by cross-cutting relationships.

The major shear zones have been traced intermittently over lengths of more than 790 meters over a vertical range of 375 meters, without any substantive change in physical or chemical format. Previous mining operations removed important tonnages from three of the five veins and a smaller volume from the remaining two veins.

Mineralization consists of galena, sphalerite, pyrite, tetrahedrite, polybasite, pyrargyrite and chalcopyrite in decreasing order of abundance. Native silver and arsenopyrite occur in trace to 1% amounts. Silver to lead ratios average in the 10:1 range.

The vein structures are conspicuous with their heavy brown to black manganese stain but are recessive weathering leaving few surface exposures. There are no physically apparent alteration halos on surface associated with the veins but drilling has indicated a general bleaching effect in the vicinity of vein structures.

The veins pinch and swell in the horizontal and perhaps vertical dimension from 1.5 to 12 meters in width. Mineralization is localized as massive, high-grade bands associated with footwall and hangwall contacts and usually connected with lower grade patches, streaks, stringers and disseminations of the same mineral suite. In many instances shearing and manganese staining nearly obliterate physical evidence of mineralization and assaying is therefore a necessity for ore shoot definition.

STRUCTURES

Within the veins, slickenside attitudes evidence movement in both horizontal and vertical directions. The overall net resultant movement has not been calculated. However, footwall dips are invariably less than hanging wall dips suggesting a flattening drag effect from normal type faulting. If individual stratigraphy could be correlated, it may prove a small-scale horst and graben system with the veins marking the boundaries of individual blocks.

As mentioned, the Big Rig fault separates two structural domains and also currently marks the southerly extent of mineralization. At this time, no certain age for this fault has been determined. It does contain some discreet patches of mineralization but whether these are segments of vein incorporated in the fault zone or are the locus of the mineralizing event producing the veins, is not known.

Some post-mineral faulting has produced small off-sets on several veins and in some instances, the post-mineral fault is mineralized.

1984 FIELD PROGRAM

Adanac Drilling and Consulting completed a total of 1,060 feet (323 m) in the period August 10 to October 3, 1984 to test amenability of various drilling techniques to maximum core recovery through the broken, sheared vein material of the D vein (see assay map 2 and D vein section).

Both NQ and BQ equipment was tried as well as various types of grouts and cements in six diamond drill holes. Two holes were abandoned short of target with four holes coring through the vein. It soon became apparent that vein recovery with NQ equipment was of little concern, but rather, the welded tuff unit associated with this vein on the southern portion of its length presented a difficult problem. This unit is abrasive, hard and well-jointed and the problems presented in stabilizing this material resulted in the abandonment of two of the holes. This problem is not unsolveable however and experience gained will he advantageous to the commencement of full-scale drill definition.

Of the four holes which did intersect the D vein, core recoveries were good (90% or greater) except for one hole which used BQ equipment and lost 50% or more of the core through the vein. (Drill logs in pocket)

CONCLUSIONS

Diamond drilling employing NQ equipment is a feasible method of rapidly assessing a substantive portion of the Porter-Idaho property without resorting to large scale underground developments.

Several drill intercepts provided new information in a possible tonnage area sufficient to increase the confidence limits to the probable

category, thereby increasing mineral reserves in this sector of the D vein. Drill hole 3 below the D portal demonstrated good grade over appreciable width increasing sampled width to 8 times that reported by Premier Mines from 1930 in the drift above the hole intercept.

PERCUSSION DRILLING

Due to the initial problems encountered with diamond drilling in the welded tuff area, the Shaft or E tunnel segment of the D vein could not be assessed. Therefore, percussion drilling of the drift walls was substituted and 10 short holes (to 4.8 meters) were completed and samples collected every 4 feet in accordance with drill steel lengths.

This work resulted in the partial definition of a shoot on this level with length of 55 meters and a width of at least 4.9 meters. Many holes were not long enough to ensure they covered the vein width and returned good assays over the last sample interval. In comparison to a nearby diamond drill hole beyond the shoot boundary, vein width may be up to 6.5 meters.

CONCLUSIONS

A previous probable tonnage block assigned to this area has been confirmed by this work with a better definition of mineralization distribution as a result, with a demonstrated increase in vein width. (See Shaft Tunnel plan in pocket).

SAMPLING AND ANALYSIS

All samples were analysed at Chemex Laboratories Ltd. who performed standard fire assays for silver and gold (where requested) and lead and zinc was determined through atomic absorption spectroscopy of a 2 gram sub-sample treated to hot perchloric-nitric acid digestion.

Diamond drill core was split with half the material remaining in the core box and half being sent for assay. The core is stored on the property in a pre-fabricated core rack at the D portal at 1,430 meters elevation.

Percussion drill samples were obtained employing a small underground jackleg drill with shortened leg due to space constraints. Extension steels of 1 3/8" (3.5 cm.) diameter and 4 foot length (1.2 m) were employed in drilling to a maximum depth of 16 feet (4.8 m). Samples every 4 feet were collected from the hole collar using a fiberglass trough emptying into a plastic pail. The entire contents of each interval were collected and submitted for assay as described above.

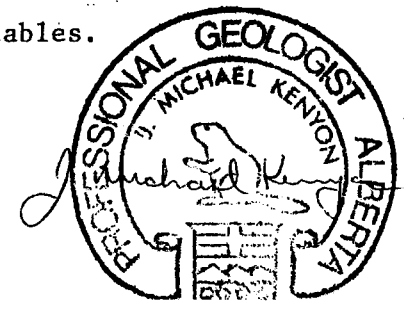
SUMMARY AND RECOMMENDATIONS

A small program of diamond drilling has determined that NQ equipment provides the most practical method of maximizing core recovery through the sheared vein material. Values obtained in 3 of 4 holes completed have increased mineral reserve totals on the D vein.

Ten short percussion drill holes in the Shaft Tunnel on the southern-most extent of the D vein have proven a vein width of at least 16.2 feet (4.9 m) where a 10 foot width was previously assumed. A shoot length of 180 feet (55 m) has been confirmed by this program.

It is recommended that a significant diamond drill program now be undertaken on a grid drilling basis to examine mineralization over the extent of this portion of the D vein. With reference to the assay plan, this would entail drilling the area from mine grid 14,500 N to 12,800 N to an elevation of at least 4,300 feet (1,311 meters). This may be accomplished either in conjunction with drilling on other veins or as a separate and discrete program.

Detail drilling could proceed on 200 foot by 100 foot centres to be further infilled for ore shoot definition as results warrant. A preliminary estimate of necessary drilling is in the 15,000 feet range, at an estimated cost of $20.00 to $22.00 per foot including expendables.



CERTIFICATE

I, John Michael Kenyon certify that:

1. I am a graduate of the University of Alberta with degrees in Geology. (B.Sc. 1974, M.Sc. 1978)

2. I am a Professional Geologist, registered with the Association of Professional Engineers, Geologists and Geophysicists of Alberta.

3. I am a member of the Canadian Institute of Mining and Metallurgy and a Fellow of the Geological Association of Canada.

4. I have been practising my profession for the past 7 years.

5. This report is based on field work and examination carried out during the period August 1 to October 3, 1984.

6. I am a geologist for and a director and officer of Pacific Cassiar Limited and thereby hold an interest in the properties and securities of Pacific Cassiar Limited.

Richmond, B.C.
November, 1984

J. Michael Kenyon
P. Geol.

STATEMENT OF COSTS

Personnel	
J.M. Kenyon - geologist August 1 - October 3 64 days at $185/day -	$ 11,840
K. Bauer - miner August 1 - September 23 54 days at $150/day -	8,100
Contractors	
Adanac Consulting & Drilling Ltd. -	56,678
Equipment Rental	
Truck - $550/mo x 2 mo -	1,100
Radios - $550/mo x 2 mo -	1,100
Transit - $100/mo x 2 mo -	200
Food & Accommodation	
220 man days X $25/man/day -	5,500
Miscellaneous	
Assays - 50 X $20.50 -	1,025
Expediting - $600 x 2 mo -	1,200
Helicopter support - 30 hrs. X $600/hr.	18,000
	$ 104,743

Appendix I

PACIFIC CASSIAR LIMITED CLAIM HOLDINGS - MT. RAINEY*

Reverted Crown Grant

	Lot No.	Record No.
Warden	5121	3215(9)

Staked Claims

Name	Record No.
Ryan	2820(2)
Ryan 2	3263(11)
Canal 4 Fr.	2824(2)
Canal 5 Fr.	2825(2)
Canal 6 Fr.	2826(2)

*all claims in Appendix I are contiguous

Appendix I cont'd.

PACIFIC CASSIAR LIMITED CLAIM HOLDINGS - MT. RAINEY

Crown Grant

Name	Lot No.	Name	Lot No.
Red Reef 2	1406	Prickly Heat	4734
Red Reef 3	1407	Gem of the Mts.	4735
Tea Pot Dome	1857	Gem of the Mts. Fr.	4736
Prosperity	1858	Prickly Heat Fr.	4737
Prosperity Fr.	1859	Never Sweat Fr.	4738
Honest John	1860	Triumph	4739
Copper King	1864	Victoria	4740
Copper Queen	1865	Silver Key Fr.	5103
Gargoyle Fr.	1866	Silver Key 1	5104
Iron Hill	4508	P.G. 1 Fr.	5105
Glenearn	4510	P.G. 2 Fr.	5106
Fortune	4512	Key Fr.	5113
Silver Bow 3 Fr.	4514	Silver Key 3	5114
Glacier Fr.	4515	Silver Key 4	5115
Silver Bow 1	4518	Silver Key 5	5116
Silverado 3	4520	Silver Key 6	5117
Silverado 4	4521	Silver Key 7	5118
Silverado 4 Fr.	4523	Cambria	5119
Canyon	4524	Guard	5120
Melvin 3 Fr.	4727	Silver Key 2	5122
Slide	4728		
Lucille	4729		
Nettie L.	4730		
Sunday	4731		
Eureka	4732		
Never Sweat	4733		

Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Av
North Vancouver, B.
Canada V7J 2
Telephone:(604) 984-02
Telex: 043-525

CERTIFICATE OF ASSAY

TO : PACIFIC CASSIAR LIMITED

166 - 10551 SHELLBRIDGE WAY
RICHMOND, B.C.
V6X 2W9

CERT. # : A8416744-001
INVOICE # : I8416744
DATE : 17-OCT-84
P.O. # : NONE

Sample description	Prep code	Pb %	Zn %	Ag FA oz/T	Au FA oz/T		Ag
2599 new E trench	207	1.57	0.22	42.27 ✓	0.028	avg Ag 12.83oz/16' + .6Pb, .18Zn	-- 20
2600 " "	207	0.15	0.20	1.56 ✓	<0.003		--
2601 E tnl pdh #1	207	0.50	0.49	4.33	0.014		-- 8.6
2602	207	0.01	0.05	0.16	<0.003	4.39 oz/16' (.41Pb, .38Zn)	--
2603	207	0.62	0.55	6.52	0.006		-- 10.5
2604	207	0.53	0.45	6.56	0.016		-- 12.4
2605 " " #2	207	0.06	0.24	0.51	0.010		--
2606	207	0.23	0.30	6.82	0.018	2.66/15' or 3.66/8' (.14Pb, .27Zn)	-- 29.6
2607	207	0.22	0.28	1.88	0.006		--
2608	207	0.04	0.23	1.02	<0.003		--
2609 " #3	207	0.91	0.60	8.49	0.006		-- 9.3
2610	207	0.04	0.19	0.76	<0.003	6.78 oz/12' (.73Pb, .43Zn)	--
2611	207	1.25	0.52	11.11	0.008		-- 8.9
2612 " #4	207	0.06	0.20	0.50	<0.003		--
2613	207	0.09	0.12	0.78	0.006		--
2614	207	0.87	0.22	11.68	0.020	9.94 oz/14' (.62Pb, .18Zn)	-- 13.4
2615	207	2.34	0.23	43.70	0.014		-- 18.6
2616 " #5	207	6.74	1.04	72.95	0.032		-- 10.8
2617	207	0.20	0.19	1.48	<0.003	21.86/14' or 7.3 oz/4' (1.7Pb, 1.4Zn)	--
2618	207	0.24	0.24	1.70	<0.003		--
2619	207	0.10	0.16	0.78	<0.003		--
2620 " #6	207	0.01	0.17	0.40	<0.003		--
2621	207	0.01	0.13	0.26	<0.003	/12'	--
2622	207	0.01	0.14	0.20	<0.003		--
2623 " #7	207	0.04	0.21	0.36	<0.003		--
2624	207	0.05	0.22	0.29	0.006	/12'	--
2625	207	0.03	0.11	0.28	<0.003		--
2626 " #8	207	1.05	0.74	6.37	0.012		-- 6
2627	207	0.65	0.40	5.21	0.008	5.02 oz/12' (.72Pb, .52Zn)	-- 8
2628	207	0.47	0.36	3.50	0.016		--
2629 " #9	207	1.89	0.79	16.37	0.014		-- 8.6
2630	207	0.06	0.24	0.90	<0.003	8.19 oz/10' (.96Pb, .52Zn)	--
2631	207	0.93	0.47	6.45	0.014		-- 6.9
2632 # 10	207	0.03	0.27	0.38	<0.003		--
2633	207	5.06	0.56	29.48	0.024	12.86 oz/12' (2.1Pb, .43Zn)	-- 5.8
NO NUMBER, SAMPLE 2634	207	1.42	0.48	8.74	0.016		-- 6.1
2651 new D trench	207	0.55	0.17	8.85 ✓	0.006		-- 10.1
2652 " " h.w.	207	0.05	0.13	0.48	<0.003		--
2653 DDH 84-2	207	0.22	0.14	1.02	<0.003		--
2654 " "	207	0.26	0.46	0.92	<0.003		--

Registered Assayer, Province of British Columbia

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CERTIFICATE OF ASSAY

TO : PACIFIC CASSIAR LIMITED

166 - 10551 SHELLBRIDGE WAY
RICHMOND, B.C.
V6X 2W9

CERT. # : A8415854-001
INVOICE # : I8415854
DATE : 16-SEP-84
P.O. # : NONE

Idtfr	Sample description	Prep code	Pb %	Zn %	Ag FA oz/T				Ag
S-21	2551 above D add'l (vein)	207	0.45	0.22	4.26	--	--	--	9.4
mposite	2552 D dump E of add't	207	0.70	1.04	10.14	~3,000t	--	--	14.4
"	2553 " " at end track	207	0.01	0.02	0.04	green volc.	--> 5,000t at 17.8oz	--	
"	2554 dump above D add'l	207	2.06	0.43	29.50	~2,000t	--	--	14.3
	2574 69-74'	207	0.03	0.03	0.26	alt. zone	--	--	--
DH	2575 74-78.5'	207	0.01	0.02	0.36		--	--	--
4-1	2576 120.5'-125'	207	0.01	0.08	0.30	D vein	--	--	--
	2577 125-134'	207	0.02	0.05	0.02		--	--	--
	2578 134'-143' D vein	207	0.01	0.03	0.10	0.10 oz	--	--	--
	2579 143'-145'	207	0.01	0.04	0.08	24.5' (~22' true)	--	--	--

Total D dumps - 13,000t x 12.5oz
5,000t x 17.8oz
18,000t at 13.97oz

Registered Assayer, Province of British Columbi

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CERTIFICATE OF ASSAY

TO : PACIFIC CASSIAR LIMITED

166 - 10551 SHELLBRIDGE WAY
RICHMOND, B.C.
V6X 2W9

CERT. # : A8416744-002-
INVOICE # : I8416744
DATE : 17-OCT-84
P.O. # : NONE

Sample description	Prep code	Pb %	Zn %	Ag FA oz/T	Au FA oz/T			A
2655 DDH 84-2	207	0.29	0.56	1.62	0.012	--	--	
2656 "	207	0.02	0.08	0.24	<0.003	--	--	
2657 Silvado silic. w/ fx	207	0.64	0.98	5.55	0.010	--	--	8.6
2658 " middle vein - grab into	207	0.82	7.49	10.80	0.024	--	--	13.1
2659 " " float	207	1.00	2.92	4.49	0.006	--	--	4.4
2660 DDH 84-3 Down	207	1.06	0.38	19.29	0.010	--	--	18.1
2661 " "	207	0.22	0.29	4.48	<0.003	--	--	20.3

11.88 oz/T
8

core 4 missing

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CTA

Pacific Cassiar Limited **DRILL LOG**

PROPERTY Porter Idaho HOLE 84-1

GRID REF 22,420E ELEVATION 4,608 ft. STARTED Aug. 10 COMPLETED Aug. 11

SECTION 12,995N DEPTH 90 ft. DIP -50° BEARING 086° DRILLER S. Leduc LOGGED BY M. Kenyon

FOOTAGE	DESCRIPTION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS oz/ton Ag	%Pb	%Zn
0-9.5	Casing & overburden							
		2574	69	74	5	0.26	0.03	0.03
9.5-52.5	Welded Tuff - mauve - similar to hole 1A - fracturing 40° & 75° to C.A.	2575	74	78½	3½	0.36	0.01	0.02
	crude orientation of laminae 25-30° to C.A. (1' core lost)							
52.5-78.5	Brown Tuff - altered, fine grained; wispy laminae at 30-45° C.A., 10%							
	clasts all carbonate altered (clasts to 2") core rubbly & gougy							
	(2' at 69') fract. 60° to C.A. (7' core lost 60'-74')							
78.5-90	Pyroclastic - medium, green grey, clasts to 1½", patchy brown carb.							
	alt. from 82' to 90. Fracturing 20° & 70° to C.A. (alt. spreading 4"-6"							
	either side of fractures) (1' core lost)							
	Hole Abandoned							

Pacific Cassiar Limited **DRILL LOG**

PROPERTY Porter Idaho HOLE 84-1A

GRID REF 22,420E ELEVATION 4,608 ft. STARTED Aug. 12 COMPLETED Aug. 24

SECTION 12,995N DEPTH 159 ft. DIP -90° BEARING - DRILLER S. Leduc LOGGED BY M. Kenyon

FOOTAGE	DESCRIPTION	SAMPLE NO.	FROM	TO	WIDTH	oz/ton ASSAYS Ag	%Pb	%Zn
0-12	Casing & overburden							
		2576	120½	125	4½	0.30	0.01	0.08
12-119.5	Welded Tuff - weathered to 23', mauve, hard, light green clasts in dense	2577	125	134	9	0.02	0.02	0.05
	matrix occas. banded. Clasts 20-50% (locally) occas. spotted carbonate alt.	2578	134	143	9	0.10	0.01	0.03
	more pronounced in clasts. Broken & rubbly 24½-42'; 52-53'; 62-63'; 77-93';	2579	143	145	2	0.08	0.01	0.04
	107-109'. Fractures 30° to C.A. (5' core lost in section)							
120.5-145	Vein Zone - altered, abun. carb. alt. in matrix & clasts (.1-4"), broken &							
	fractured from 120-128' and 139-145'; 6" gouge at 143'. Black carbon							
	rich zone (graphite?) at 138-143' with 20% clasts to ½"							
	(no core loss)							
145-159	Pyroclastic - medium grained, slightly silicified. Carbonate alt. at 149-154'							
	and 155-156'. Fracturing at 20° & 70° to C.A.							
	(6" core loss)							

Triple Cassiar Limited **DRILL LOG**

PROPERTY Porter Idaho HOLE 84-2

GRID REF 22,290E ELEVATION 4,638 ft. STARTED Aug. 30 COMPLETED Sept. 9

SECTION 13,000N DEPTH 173 ft. DIP -75° BEARING 106° DRILLER S. Leduc LOGGED BY M. Kenyon

FOOTAGE	DESCRIPTION	SAMPLE NO.	FROM	TO	WIDTH	oz/ton ASSAYS Ag	%Pb	%Zn	
0-14	Casing & overburden								
		2653	39	41½	1½	1.02	0.22	0.14	
14-29	Welded Tuff - green grey - fine filamme 11 to C.A. Carbonate alt. spotty	2654	41½	43	1½	0.92	0.26	0.46	
	(to .2") may be alt. feldspars.								
		2655	136½	138½	2	1.62	0.29	0.56	
29-32	Welded Tuff - green brown - increased alt. & small vugs.	2656	138½	141½	3	0.24	0.02	0.08	
32-39	Welded Tuff - as 14-29', thin veinlets pyrite & qtz at 30° C.A., some talc								
	& chlorite on slicken sides at 40° C.A.								
39-43	Vein - 1' lost - Mn stain & good bleaching & silic - thin qtz stringers with								
	traces Pb & Zn with pyrite at 41.4' for .7' - contacts irregular to								
	Mn stained to end. No. vis. min. with Mn stained sections (1' core lost)								
43-91	Welded Tuff - green grey - largely as above - occ. foliation 40-60° to C.A.								
	57-61' qtz & calcite stringers to ½" - core broken 68-91'. (6" core lost)								
91-93	Altered Zone - crushed & gougy (fault probably) minor Mn & limonite								
93-136.5	Welded Tuff - green to mauve - fine grained to 110' - 110' to end well spotted								
	with pink felds (xtals & clasts) filamme 45° to C.A.								
136.5-141.5	Vein - Mn contact (1") to 2' silicic zone with traces Pb & Zn stringers (qtz & calc)								
	then 2" Mn contact - broken to end. Broken area soft, chloritic with Mn								
	& Limonite. (1' core lost)								

~~[illegible] Limited~~ DRILL LOG

PROPERTY _____ HOLE _____

GRID REF _____ ELEVATION _____ STARTED _____ COMPLETED _____

SECTION _____ DEPTH _____ DIP _____ BEARING _____ DRILLER _____ LOGGED BY _____

FOOTAGE	DESCRIPTION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS			
141.5-173	Welded Tuff - green & mauve - lineations & filamme 70° to C.A. - 146-154'								
	healed breccia; 161' to end very fractured & broken (1½' core lost)								
	Hole Abandoned								

Pacific Cassiar Limited **DRILL LOG**

PROPERTY Porter Idaho HOLE 84-3

GRID REF 22,492E ELEVATION 4,772 ft. STARTED Sept. 11 COMPLETED Sept. 20

SECTION 13,380N DEPTH 171 ft. DIP -90° BEARING - DRILLER S. Leduc LOGGED BY M. Kenyon

FOOTAGE	DESCRIPTION	SAMPLE NO.	FROM	TO	WIDTH	oz/ton ASSAYS Ag	%Pb	%Zn
0-12	Casing & overburden							
12-64.5	Welded Tuff - green grey to 22', mostly mauve to end, fine to med. clasts 10-40%							
	over interval no real lineations at 20' for 2' is brecciated Mn stained	2662	20	22	2	0.01	0.17	0.21
	zone (vein?) (3' core lost)							
64.5-73.5	Pyroclastic - green, upper contact broker, lower is chill zone at 65° to C.A.							
	Clasts 25% up to 3/4" in fine matrix							
73.5-144.5	Welded Tuff Breccia - green to mauve - not well healed - fragments angular to							
	sub rounded & up to ½". Thin carbonate ± qtz veinlets at 5/ft. at 45° to	2660	144½	148½	4	19.29	1.06	0.38
	C.A. (4½' core lost) *Reduced to BQ at 143'(?)	2661	148½	152½	4	4.48	0.22	0.29
144.5-152.5	D Vein - good typical alteration, shearing & Mn staining - upper contact							
	50% to C.A., lower missing. No gouge recovered. Minor mineralized clasts							
	set in well altered & stained ground mass. Mineralization hard to see,							
	looks minor. (4-5' core lost)							
152.5-171	Pyroclastic - medium to coarse, bleached with carbonate clots and patches -							
end	soft matrix (6' core lost)							

GRID REF 22,210E | ELEVATION 5,223 ft. | STARTED Sept. 22 | COMPLETED Sept. 26

SECTION 14,100N | DEPTH 198 ft. | DIP -55° | BEARING 070° | DRILLER S. Leduc | LOGGED BY M. Kenyon

FOOTAGE	DESCRIPTION	SAMPLE NO.	FROM	TO	WIDTH	oz/ton ASSAYS		
						Ag	%Pb	%Zn
0-14	Casing & overburden							
		2663	14	17½	3½	0.28	0.01	0.03
14-26	Vein Alt. Zone - in medium pyroclastic, thin ¼" stringers qtz ± carb. at 60°							
	angles to C.A. - bleaching 1" either side - is patchy over thin interval.	2664	19.6	20.6	1	0.14	0.01	0.01
	Dissem. pyrite in veinlets.							
		2665	24.8	26.2	1.4	0.26	0,09	0.13
26-110.5	Pyroclastic - medium clasts - clasts tuffaceous & andesitic - has normal							
	composition, fractures 65° C.A. with some parallel - thin stringers	2666	124	125.8	1.8	0.28	0.08	0.12
	qtz 40° to C.A. between 57' & 70' (lost 1 foot)							
		2647	172	173.2	1.2	0.2	0.01	0.29
110.5-123	Altered Pyroclastic - similar to 14-26' but less bleaching & alteration. Qtz ±	2648	173.2	176	2.8	0.44	0.01	0.41
	carb. stringers at random angles - no mineralization, core broken	2649	176	182	6	9.57	0.86	1.99
		2650	182	183½	1½	0.54	0.06	0.28
123-130	Vein Alt. Zone - same as 14-26 - alt. & bleaching plus pink aplitic material							
	core very broken - at 125' traces Pb in silicic area (lost 6")							
130-137.5	Chert - grey green fine grained - brecciated & rehealed - hint of foliation 60° to							
	C.A., occasional thin qtz stringers.							
137.5-144	Pyroclastic - as 26-110½							
144-151.5	Chert - as above							
151.5-164	Pyroclastic - as 26-110½, weak foliation 55° to C.A.							

Pacific Cassiar Limited — DRILL LOG

PROPERTY Porter Idaho — HOLE 84-5

GRID REF 22,210E — ELEVATION 4,223 ft. — STARTED Sept. 27 — COMPLETED Sept. 29

SECTION 14,100N — DEPTH 269 ft. — DIP -75° — BEARING 070° — DRILLER S. Leduc — LOGGED BY M. Kenyon

FOOTAGE	DESCRIPTION	SAMPLE NO.	FROM	TO	WIDTH	oz/ton ASSAYS Ag	%Pb	%Zn
0-5	Casing & overburden							
		2676	8	12	4	0.24	0.09	0.11
5-8	Pyroclastic - as described	2677	12	16	4	0.12	0.01	0.02
8-20.5	Vein Alt. Zone - as described in 84-4, heavy Mn 18½-20' - upper & lower	2678	18½	20½	2	0.40	0.19	0.35
	contacts 50° to C.A. - traces Pb in thin veinlets.							
		2675	225.2	227.2	2	0.2	0.06	0.12
20.5-198	Pyroclastic - as described - occ. larger clasts to 2", lineation +/or thin	2667	227.2	229	1.8	4.18	1.31	2.17
	qtz veinlets 45° to 60° C.A. - some thin bleaching zones around	2668	229	229.6	0.6	0.9	0.22	1.41
	veinlets at 65', 91', 122', 138', 147' & 182' vary between 2" & 6"	2669	229.6	232.8	3.2	8.89	1.63	5.74
	wide	2670	232.8	233.6	0.8	5.91	0.53	0.74
		2671	233.6	237	3.4	8.53	1.34	3.65
198-208	Altered Pyroclastic - some shearing with qtz veinlets in bleached areas traces							
	Pb; Mn & Lim on fractures, occ. thin silicic sections							
		2672	237	238.6	1.6	1.2	0.14	0.47
208-227.3	Chert - with in mixed pyroclastic - some qtz stringers 80° to C.A. (up to	2673	238.6	240.8	2.2	0.1	0.02	0.16
	15 per foot) traces Pb with qtz & carb & chl. fracture coatings							
		2674	245	246.5	1.5	0.12	0.04	0.77
227.3-236.5	D vein - Mn stained, heavy alt. & brecciation & gouge; appears well mineralized							
	with Pb, Zn, pyrite, greenockite (?) upper & lower contacts 65° to C.A.							
	8" gouge at 229' and at 232½' (lost 6" core)							
	lower contact more diffuse than upper							
236.5-246.5	Alt. Zone - probably pyroclastic - very bleached, similar to 8-20.5',							
	2' unaltered at 241 (pyroclastic) traces Pb & Zn in qtz ± carb veinlets							

Pacific Cassiar Limited **DRILL LOG**

PROPERTY _____ HOLE _____

GRID REF _____ ELEVATION _____ STARTED _____ COMPLETED _____

SECTION _____ DEPTH _____ DIP _____ BEARING _____ DRILLER _____ LOGGED BY _____

FOOTAGE	DESCRIPTION	SAMPLE NO.	FROM	TO	WIDTH	oz/ton ASSAYS Ag	%Pb	%Zn	
	at 65° to C.A., veinlets 1/16" on avg.								
		2679	254	257.3	3.3	0.68		0.66	
246.5-247.5	Brecciated Tuff - fine grained & rehealed								
247.5-254	Alt. Zone - as above								
	gradational to								
254-257.3	Vein Zone - typical Mn, stain, brecciation, carbonate clasts, limonite on								
	fractures, trace Pb.								
	gradational to								
257.3-266.7	Alt. Zone - as described, thin qtz stringers								
266.7-269	Welded Tuff - mauve, competent, some lim. on fractures.								
end									

Pacific Cassiar Limited **DRILL LOG** B4-4 (p 2)

PROPERTY _____ HOLE _____

GRID REF _____ ELEVATION _____ STARTED _____ COMPLETED _____

SECTION _____ DEPTH _____ DIP _____ BEARING _____ DRILLER _____ LOGGED BY _____

FOOTAGE	DESCRIPTION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS			
164 - 166.5	Altered Pyroclastic - as 110½-123 except addition of Mn stain								
166.5-173.2	Pyroclastic - as described - course clasts predominate 167-170'								
173.2-183.5	D vein - (173-177) - thin veinlets in mod. alt. pyroclastic, veinlets Mn & limonite								
	and occ. greenokite (?) stains (177-182) very altered & bleached, heavy Mn,								
	stringers & clots Pb & Zn - heavy black gouge at 181½ (lost next foot)								
	(182-183½) similar to first interval - both top and bottom contacts broken.								
183.5-187	Crystal Tuff - competent & compact version of welded tuff - no clasts though.								
187-198	Welded Tuff - mauve, very broken & fractured, coarse clasts (lost 2½' core)								
end									

21,000 E | 21,500 E | 22,000 E | 22,500 E | 23,000 E | 23,500 E

16,500 N

16,000 N

15,500 N

15,000 N

14,500 N

14,000 N

13,500 N

13,000 N

12,500 N

12,000 N

11,500 N

Glacier

Glacier

Glacier

Glacier

Glacier

Glacier

TEA POT DOME
L. 1837

PROSPERITY FR.
L. 1859

LUCILLE
L. 4729

COPPER QUEEN
L. 1865

VICTORIA FR.
L. 4741

GEM OF THE MOUNTAINS FR.
L. 4736

GARGOYLE FR.
L. 1866

PROSPERITY
L. 1858

NETTIE L.
L. 4730

PRICKLY HEAT FR.
L. 4737

PRICKLY HEAT
L. 4734

GEM OF THE MOUNTAINS
L. 4735

NEVER SWEAT FR.
L. 4738

NEVER SWEAT
L. 4733

MELVIN 1 FR.
L. 1868

SUNDAY
L. 4731

RUIN
EL. 4936'

MELVIN ADIT

EL. 5060.8'
EL. 5058.3'

X 10'—0.36 oz

"D" VEIN

EL. 5516' X 15.5'—23.4 oz

VEIN

X 8'—11.45 oz

X 17'—7.95 oz

X 2 27'—1.9 oz
X 1

3'—26.9 oz / 205'

4'—33.2 oz / 195'

P.C. 47'—9.5 oz / 65'

2.6'—117.4 oz / 81'

2.4'—18.1 oz / 23'

3.5'—10.1 oz / 64'

2.9'—12 oz / 190'

4.2'—69 oz / 190'

1.8'—28.8 oz / 52'

2.2'—31.1 oz / 110'

P.C. 15.5'—31.6 oz / 375'

2.6'—23.4 oz / 125'

2.3'—56.6 oz / 100'

1.2'—91.2 oz / 23'

9'—0.22 oz X

14'—16.7 oz

11'—26.1 oz

4'—2.9 oz

2.5'—44.8 oz / 123'

23'—16.3 oz P.C. / 600'

16'—12.8 oz

"A" TUNNEL
EL. 5272'

EL. 5235'

PORTAL OF No. 2 TUNNEL PROSPERITY
EL. 5384'

PORTAL OF No. 3 TUNNEL PROSPERITY
EL. 5085'

TRAM TERMINAL

PORTAL OF "N" No. 1 TUNNEL PROSPERITY
EL. 5392'

PORTAL OF "B" TUNNEL
EL. 5271'

PORTAL OF "C" TUNNEL
EL. 5246'

3.5'—2.4 oz

9'—5.4 oz

D.D.H 485

D.D.H. 3

1.1'—20.8 oz / 123'

21'—5.76 oz

PORTAL OF "D" TUNNEL
EL. 4691'

X 13.9 oz

2'—4.8 oz

4'—9.1 oz

P.C. 16.2'—19.7 oz / 180'

D.D.H. 2

P.C. 4.4'—60.11 oz / 170'

D.D.H. 181A

SHAFT TUNNEL "E"
EL. 4511'

5'—13.97 oz

1.95'—75 oz / 45'

CAMP TUNNEL "F"
EL. 4490'

PORTAL OF SLIDE TUNNEL "G"
EL. 4422'

PORTAL OF "H" TUNNEL
EL. 4360'

PORTAL OF "I" TUNNEL
EL. 4222'

"I" TUNNEL APPROACH

EL. 5085'

Vertical Blurt

Prosperity West

301 X-CUT

301 dr.

303 dr. N

304 dr. N

305 dr. N

201 dr. N

101 dr. N

304 dr. S

305 dr. S

BLIND VEIN

PROSPERITY VEIN

WAKE VEIN

ANGELO VEIN

Big Rig Fault

50°-70°

LEGEND

X P.C. Surface Sample — Width(ft) — oz/ton Ag

Sample Width(ft) — oz/ton Ag P.C. / Length

P.C. Pacific Cassiar

inches 0 1 2
centimetres 0 1 2 3 4 5

BRITISH COLUMBIA GEOLOGICAL SURVEY

This reference scale bar has been added to the original image. It will scale at the same ratio as the original image and can be used as a reference for the original size.

20 10 0 20 40 60 80 Meters

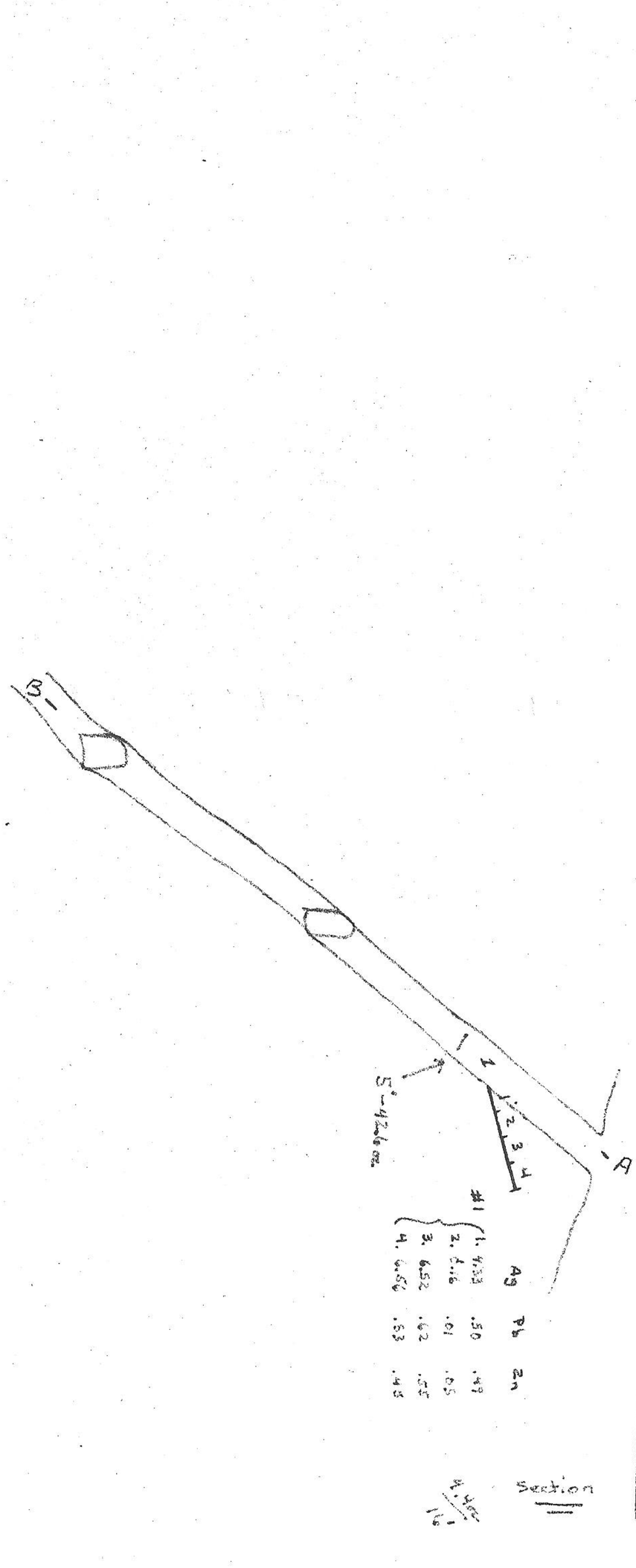
100 50 0 100 200 300 Feet

PROFESSIONAL GEOLOGIST J. MICHAEL KENYON

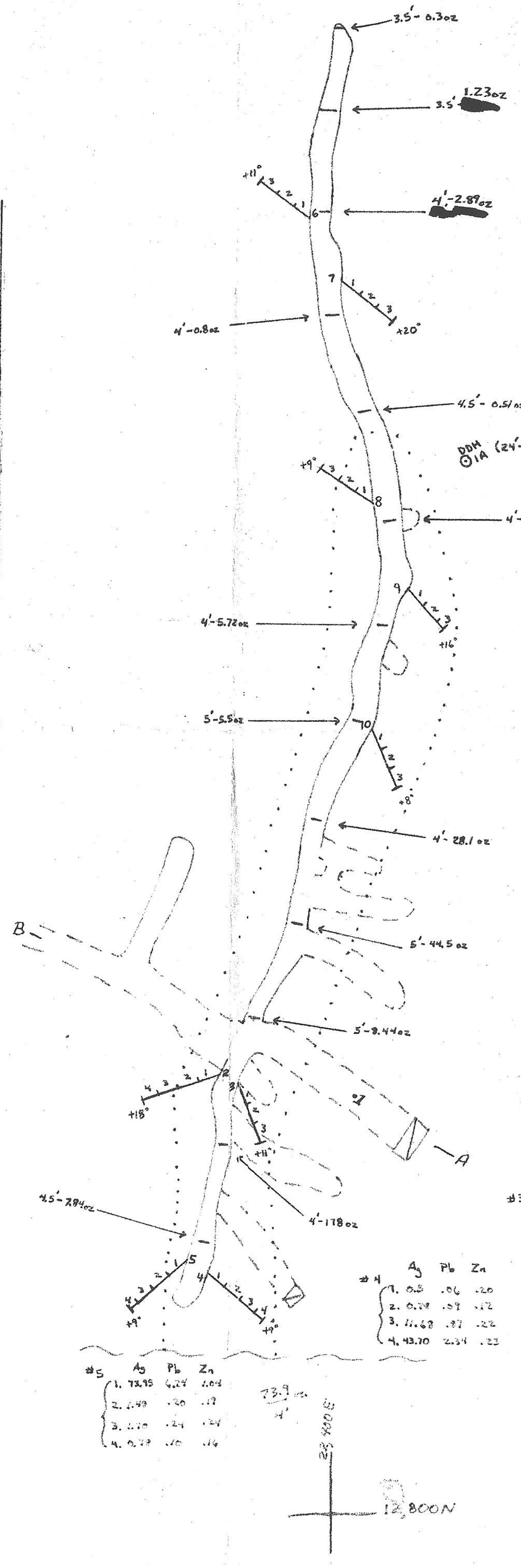
Pacific Cassiar Limited

—ASSAY PLAN—

DWN. BY: T.M.	PROJECT No.	FIG. No.
CHK. BY:		
DATE: DEC. 1984		



Section



#6
Ag Pb Zn
1. 0.40 .01 .17
2. 0.36 .01 .13
3. 0.20 .01 .14

#7
1. 0.36 .04 .21
2. 0.29 .05 .22
3. 0.28 .03 .11

#8
Ag Pb Zn
1. 6.37 1.05 .74
2. 5.23 .65 .40
3. 3.50 .47 .36
5.02 oz/12'

#9
1. 16.76 1.39 .79
2. 0.90 .06 .24
3. 6.45 .93 .47
8.2oz/10'

#10
1. 0.39 .03 .27
2. 29.48 5.06 .56
3. 8.74 1.42 .48
12.86 oz/12'

Plan

#2
Ag Pb Zn
1. 0.51 .04 .24
2. 6.82 .23 .30
3. 1.88 .22 .28
4. 1.02 .04 .33
3.6 oz/5'

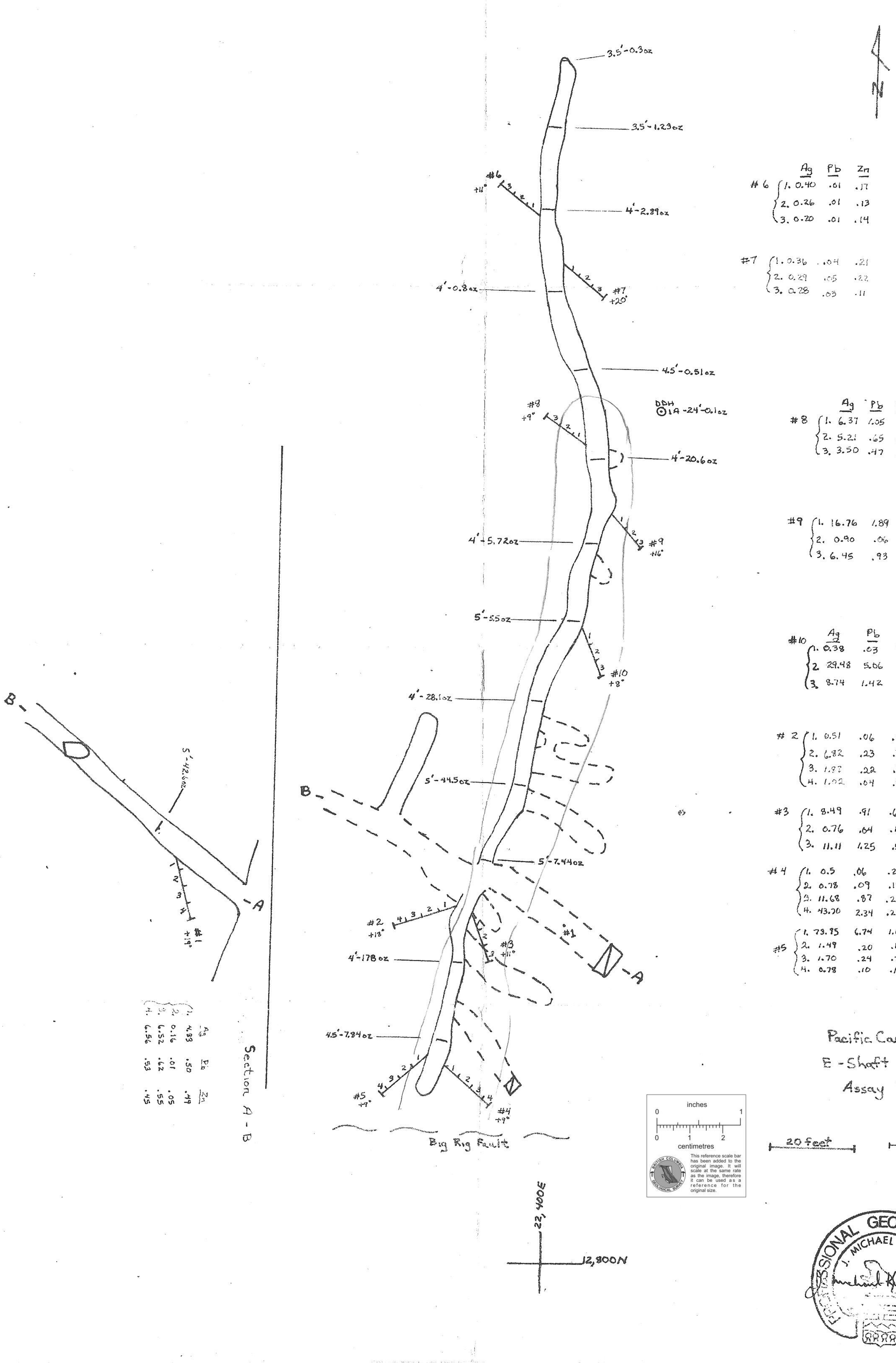
#3
1. 8.49 .91 .60
2. 0.76 .04 .11
3. 11.11 1.25 .32
6.78/12'

#4
Ag Pb Zn
1. 0.5 .06 .20
2. 0.79 .09 .12
3. 11.68 .87 .22
4. 43.70 2.34 .22
9.34/14'

#5
Ag Pb Zn
1. 73.95 6.24 1.04
2. 2.49 .30 .17
3. 1.70 .24 .24
4. 0.78 .10 .14
73.9 oz/4'

Pacific Bassar Limited
E/Shaft Tunnel - 1984
percussion drilling + channel samples
20 ft.

inches
0 1
0 1 2
centimetres
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.



	Ag	Pb	Zn
#6 1.	0.40	.01	.17
#6 2.	0.26	.01	.13
#6 3.	0.20	.01	.14
#7 1.	0.36	.04	.21
#7 2.	0.29	.05	.22
#7 3.	0.28	.03	.11

	Ag	Pb	Zn
#8 1.	6.37	1.05	.74
#8 2.	5.21	.65	.40
#8 3.	3.50	.47	.36
#9 1.	16.76	1.89	.79
#9 2.	0.90	.06	.24
#9 3.	6.45	.93	.47

	Ag	Pb	Zn
#10 1.	0.38	.03	.27
#10 2.	29.48	5.06	.56
#10 3.	8.74	1.42	.48
#2 1.	0.51	.06	.24
#2 2.	6.82	.23	.30
#2 3.	1.93	.22	.28
#2 4.	1.02	.04	.23
#3 1.	8.49	.91	.60
#3 2.	0.76	.04	.19
#3 3.	11.11	1.25	.52
#4 1.	0.5	.06	.20
#4 2.	0.78	.09	.12
#4 3.	11.68	.87	.22
#4 4.	43.70	2.34	.23
#5 1.	73.95	6.74	1.04
#5 2.	1.49	.20	.19
#5 3.	1.70	.24	.24
#5 4.	0.78	.10	.16

Section A - B

	Ag	Pb	Zn
1.	4.33	.50	.49
2.	0.16	.01	.05
3.	6.52	.62	.55
4.	6.56	.53	.45

Pacific Cassiar Limited

E-Shaft Tunnel

Assay Plan

SME - Nov/'84

20 feet

5 meters

inches 0 1

centimetres 0 1 2

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

PROFESSIONAL GEOLOGIST J. MICHAEL KENYON ALBERTA

N.

S.

Longitudinal Section (looking east)

D vein

100 ft

inches
0 1
0 1 2
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

14,200 N

13,800 N

13,400 N

13,000 N

5200 ft

5000 ft

4700 ft

4500 ft

4200 ft

talus

↑11'-24oz

56,900t
13.7oz
avg 11.7' wide

talus

16'-12.8oz

talus

↑14'-14oz
3 level

#4
@ 5.7oz
10'

#3
7.1oz
9'

surface trace of D vein (talus)

410,000 tons at 11oz
20' avg.

D2

D1

D level

↑21'-5.7oz

dumps 18,000t -14oz

talus

#5
11.9oz
8'

Total
33,300t at 23.4oz
14.2' avg

25,000t
19.7oz

Big Rig Fault

E level

#10
@ 5.0'

#9
@ 5.0'

16' avg

8,400t
at 23oz

H level (projected east)

I level (projected west)

559,900t at 16.2oz
avg width ~18.5'

Cat/84
dmk