

Diamond Drilling Assessment Report

on the

**Ax Property**

79-639-#7738

(Ax and Jen Groups)  
and specifically the  
Ax 2, Ax 3 and Jill 1 Located Mineral Claims

Omineca Mining Division  
Endako, B. C.

N.T.S. 93K/3E

Latitude 54°05'N; Longitude 125°10'W

and owned by



**RIO PLATA SILVER MINES LTD.**

of

Vancouver, B. C.

Work by D.W. Coates Enterprises Ltd.  
Oct. 28 to Nov. 17, 1979.

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT

NO.

7738

Report by

D. R. Cochrane, P. Eng.,  
January 7, 1980,  
Delta, B. C.



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geology  
geophysics  
geochemistry

## TABLE OF CONTENTS

<b>A.</b>	INTRODUCTION .....	1
<b>B.</b>	LOCATION AND ACCESS .....	2
<b>C.</b>	CLAIMS INFORMATION .....	3
<b>D.</b>	HISTORY .....	5
<b>E.</b>	SETTING .....	7
<b>F.</b>	DETAILS OF DRILLING .....	10
<b>G.</b>	CONCLUSIONS .....	12

### Figures

1.	Location Map	Report body
2.	Claims Map	" "
5.	Base Map	Map Pocket
6.	Surveyed Area	" "
7.	Section 79-1	" "
8.	Section 79-2	" "
9.	Section 79-3	" "
10	Section 79-4	" "

### Appendices

I	Diamond Drill Hole Logs
II	Certificate
III	Bibliography
IV	D.W. Coates Enterprises Invoices
V	Assessment Work Distribution



**A. INTRODUCTION**

Commencing on October 28, 1979, and through to November 17, 1979, a diamond drill program was conducted on the Ax and Jen Groups of mineral claims (Ax Property) situated just north of the Endako Molybdenum Mine in the Omineca Area of British Columbia. The drilling was contracted to D.W. Coates Enterprises Ltd., and the drill site and access road (cat) work to R. Orsetti of Endako, B. C. The author is the consultant on the Ax Group property on behalf of Rio Plata Silver Mines Ltd., and personally supervised the program and logged the core.

The purpose of the work was to test anomalous results obtained from earlier percussion drilling and to determine if the Endako mineralization continues through the Ax Property.





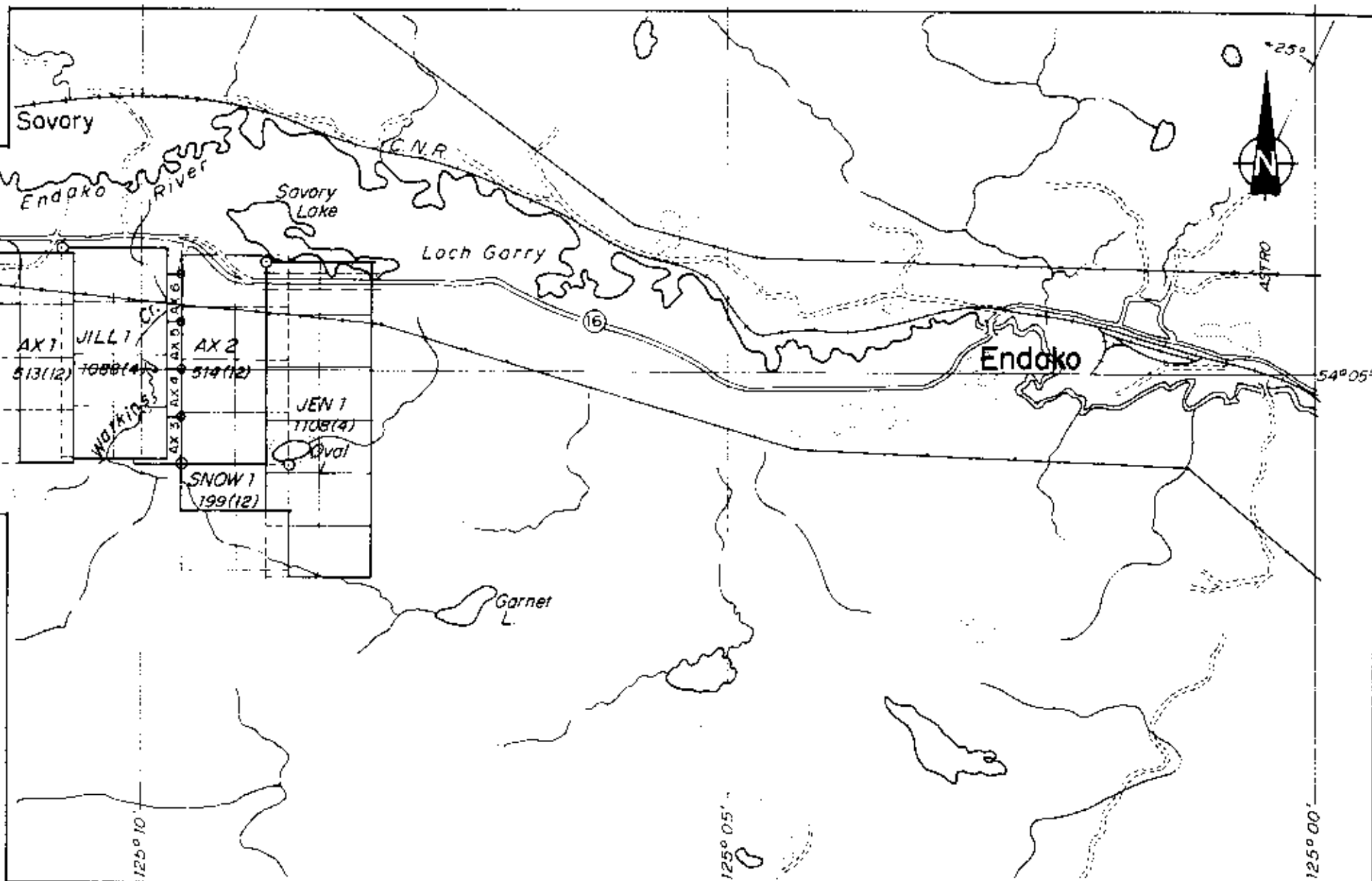
**B. LOCATION AND ACCESS**

The Ax and Jen Groups of mineral claims are centered six (6) kilometres due west of the town of Endako and immediately south of Highway number 16. The claims are 22 road kilometres north west of the village of Fraser Lake (the Endako Mine townsite) and 48 road kilometres south east of Burns Lake. Fraser Lake has a population of 1,500 (estimated 1975 B. C. Dept. of Economic Development) and a full compliment of services. The claims are 580 air kilometres north northwest of downtown Vancouver.


There are a number of 4x4 roads off the highway that provide good access to the claims area.

The N.T.S. code for the area is 93K/3E.





  
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1:50000  2.5 kilometres  
 R.A.C. 5 79, 12-79 Project No 5557

**RIO PLATA SILVER MINES LTD.**  
 Ax & Jen Groups Omineca Mining Division  
 Endako, British Columbia N.T.S. 92K/3 E.  
**CLAIM MAP** **Figure 2**

**C. CLAIMS INFORMATION**

The Ax and Jen Groups consist of five (5) contiguous modified grid claims made up of 40 units and four new two-post claims, all of which are recorded in the Omineca Mining Division, B.C. They are plotted on B.C. Dept. of Mines Mineral Claims Map 93K/3E and as of December 19, 1979, the modified grid claims are registered in the name of Mr. G. Oates of Vancouver, B. C. The four new two-post claims are owned by Mr. Dennis Ivens, of Delta, B. C. Rio Plata Silver Mines holds title by option.

The following table lists pertinent claims information (also accompanying claims map).



TABLE A  
AX PROPERTY

Mr. G. Oates

CLAIM NAME	RECORD NO.	ANNIVERSARY DATE	EXPIRY DATE before credits	DATE after * credits
Ax No. 1	513	December 1	1979	1981
Ax No. 2	514	" "	"	"
Jill No. 1	1088	April 5	1980	1982
Jen No. 1	1108	April 18	1980	1982
Snow No. 1	199	December 9	1979	1981

Dennis Ivens

Ax No. 3	2029	August 22	1980	1982
Ax No. 4	2030	"	1980	1982
Ax No. 5	2031	"	1980	1982
Ax No. 6	2032	"	1980	1982
Ax Group:	Ax No. 1, 3, 4, Jill No. 1, Snow No. 1			
Jen Group:	Ax No. 2, 5, 6, Jen No. 1			

The author inspected several claim posts and claims are well staked and appear to be located in accordance with the regulations set out in the Mineral Act.

\* Assessment work filed December 20, 1979.





**D. HISTORY**

The central region of British Columbia has a long mining history dating back to the early 1860's and the famous placer gold rush. Much of the placer mining activity declined by the turn of the century and was turned to lode gold mining. In 1940, the famous Pinchi Lake Mercury Mine was brought into production, and in 1927, mineralized float was found near the Endako Molybdenum Mine. In 1962 and 1963 there was extensive surface diamond drilling by Endako Mines and a production announcement was made in 1964. During this period there was an intensive search for copper and molybdenum in the region by such companies as Utica Mines, Torwest Resources, United Buffadison, Copper Ridge, Amax Exploration and other companies. Mr. Oates acquired the claims under consideration during this period, and has conducted periodic exploration work on the property over the years.



A soil sampling survey was conducted over the west half of the property by New Indian Mines in 1964, (B.C. Assessment Report 0555 by F.J. Hemsworth for New Indian Mines.). There is evidence of some bulldozer trenching on the property and there are old cut lines recognizable on various parts of the claims area. Apparently Mr. Oates conducted some EM orientation tests on a portion of the claims several years ago, however, to the author's knowledge there has never been an integrated exploration program conducted over the Ax Property, prior to 1979.



**E. SETTING**

The Ax and Jen Groups of mineral claims are situated in the Nechako Plateau physiographic region of British Columbia. In general, it is very scenic and gently rolling upland surface with broad valleys flanked by rounded hills that rise a few hundred metres above valley floors. The elevation in the claims area is about 750 metres above sea level and the country is quite open with hills lightly forested with spruce, pine, aspen, birch and poplar.

The area is economically tied to the mining, logging and ranching industries.

Highway No. 16 and a major power line runs through the north end of the claims area and the CPR line lies just across the Endako River from the Ax Property. (See maps)



The most important local industry is the Endako Molybdenum Mine, Canada's largest producer and the world's third largest molybdenum producer. The Endako Mine commenced operations in 1965 at a capacity of 12,000 short tons per day, and currently (1979) has a plant capacity of 35,800 tons per day. Ore reserves as of December, 1978, were set at 219 million metric tonnes at an average grade of 0.082% molybdenum at a cut off grade of 0.048% Mo. This is sufficient for approximately 20 years of continued operations if no additional ore is found. (Source: Northern Miner Canadian Mines Handbook, 1979-80).

The vast majority of the Ax Property is overburden covered and there are only a few natural outcrops; therefore knowledge of the bedrock geology is sketchy. There are three small areas of fair natural outcrop exposure and the remainder is covered by a widespread mantle of drift varying from a few ten's of feet (3m) in the southeast section of the claims area, to over one hundred feet (30m) in the southwest section,



to several hundred feet (+30m) along the north portion of the Ax Group. Therefore, soil geochemistry is ineffective in many areas, and many of the indirect methods of geophysical prospecting are suspect. Overburden cover varies from well sorted sand and gravel through less well sorted sand and gravel through less well sorted till, to boulder clay and finally to what appears to be thick sequences of clay.

Most of the Ax Property, however, appears to be underlain by the Endako Quartz Monzonite (Q.M). The host rock for the Endako Molybdenum Mine.



**F. DETAILS OF DRILLING**

As previously mentioned, the diamond drilling was contracted to D.W. Coates Enterprises Ltd., of Richmond, B. C. who supplied all necessary equipment and supplies for the 2,000 ft. minimum contract. Mr. R. Orsetti of Endako, was contracted to supply a cat for moving the drill, building access roads and drill sites ( Allis Chambers TD-11). The author spotted holes, logged core, and surveyed drill hole collars. Sludge samples were collected, and stored on the property, with the core, at a site near Oval Lake. Sludges were collected at 10 ft. intervals (approximately 3 m), and mineralized sections of core were split, double bagged, tagged and delivered by the author to Min-En Labs of North Vancouver, where they were geochemically analyzed for Mo and Cu content in parts per million. All values over 100 ppm Mo were assayed for Mo.



Four (4) N.Q.W.L. (core diameter 47.6 mm, hole diameter 75.7 mm) diamond drill holes were completed for an aggregate total of 670 m (2200 lineal feet).

Specific details as to depth, elevation of collar, inclination, bearing, latitude, and departure are contained in the accompanying logs. (Appendix I).

Drafting and report preparation was carried out by the staff of Cochrane Consultants Ltd., at the Delta, B. C. office.



**G. CONCLUSIONS**

1. Overburden cover in the four holes varies from a few metres to over 30 metres in depth.
2. Most of the cored bedrock is Endako Phase Q.M., with a few intersections of Casey Q.M.
3. The alteration in the first three holes is low temperature (clay, chlorite), and higher grade in the last and fourth diamond drill hole.
4. Continuous, but sub ore grade molybdenite mineralization, was encountered in the last 75 m of D.D.H. 79-4. Additional drilling is warranted in this area.

Respectfully submitted



D. R. Cochrane, P. Eng.





APPENDIX I

D. D. H. Logs





Cochrane Consultants Limited

PROPERTY: AX Group  
(Endako)

## Diamond Drill Record

## DIP TEST

Footage	Angle	
	Reading	Corrected
casing	-45°	

HOLE No. 79-1 Sheet No. 1 of 6  
 Section 79-1  
 Date Begun October 28, 1979  
 Date Finished November 2, 1979

Lat. 2196 N  
 Dep. 146 E  
 Bearing 315°  
 Elev. Collar approx. 808 m

Total Depth 213.4m (700')  
 Logged By D.R.C.  
 Claim Ax-2  
 Core Size N.Q.

DEPTH	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH of SAMPLE	Mo ppm	Cu ppm
0 - 6.7 m (0-22')	Casing						
6.7m-61m (22-200')	Endako Q.M.: Pink, coarse grained, altered-: +90% pink k-spar, qtz - perthitic texture - mafics - biotite: traces diss. py., considerable specularite - hematite: mafics often chloritic traces diss. molybdenite at 10.7 m (35') - blocky, highly fractured calcite; chlorite/hematitic joints: 26.5 m (87') tube did not lock lost 2.1m (7') of core from 26.5 m (87') to 28.7 m (94') From 30.5 m (100') to 39.6 m (130') slightly more massive: Rock shattered 51.8 m (170') - 52 m (170.5'); 53.3 m (175.0') -53.5 m (175.5'); 55.2 m (181') - 55.8 m (182') 56.7 m (186') - 57 m (187')	27576 27577 27578 27579 27580 27581 27582 27583 27584 27585	7.0m 9.1m 10.7m 13.7m 16.8m 19.8m 22.9m 25.9m 28.7m 31.7m	9.1m 10.7m 13.7m 16.8m 19.8m 22.9m 25.9m 28.7m 31.7m 34.7m	2.1m 1.6m 3.0m 3.1m 3.0m 3.1m 3.0m 2.8m 3.0m 3.0m	2 3 1 1 1 1 1 2 1 1	13 6 4 5 3 4 4 4 4 3





PROPERTY AX Group

## Diamond Drill Record



Cochrane Consultants Limited

DIP TEST		
Footage	Angle	
	Reading	Corrected
Casing	-45°	

HOLE No. 79-1 Sheet No. 4 of 6 Lot. 2196 N Total Depth. 213.4 m (700')  
 Section 79-1 Dep. 146 B Logged By. D.R.C.  
 Date Begun. October 28, 1979 Bearing 315° Claim AX-2  
 Date Finished. November 2, 1979 Elev. Collar. approx. 808 m Core Size N.Q.

DEPTH	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH of SAMPLE	Mo ppm	Cu ppm
108.2-123.9m (355-406.5')	Altered Endako Q.M: Coarse grained pink, mafics pred. altered to chlorite- considerable hematite: - fairly massive- chlorite/calcite on fractures	27587	120.4m	123.4m	3.0m	1	3
123.9-124.5m (406.5-408.5)	Lamp Dike: Black, fine grained groundmass- white feldspar phenocrysts to 1 cm diameter diss. pyrite						
124.5-126.2m (408.5-414')	Altered Endako Q.M: Moderately well fractured - chloritic						
126.2-129.3m (414-424.3')	Lamp Dike: Good upper contact at 40° to C/A lower contact at 80° - fine diss. pyrite						
129.3-130m (424.3-426.5)	Altered Endako Q.M.						
130-132.6m (426.5-435')	Lamp Dike: upper contact slightly brecciated but roughly 45° to C/A- Calcite on joints at 45° to C/A						



PROPERTY... AX GROUP

## Diamond Drill Record



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DIP TEST		
Footage	Angle	
	Reading	Corrected
casing	-45°	

HOLE No. 79-1 Sheet No. 6 of 6 Lot 2196 N  
 Section 79-1 Dep. 146 E Total Depth 213.4m (700')  
 Date Begun October 28, 1979 Bearing 315° Logged By D.R.C.  
 Date Finished November 2, 1979 Elev. Collor. approx. 808 m Claim AX-2  
 Core Size N.Q.

DEPTH	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH of SAMPLE	Mo ppm	Cu ppm
143.6-146.8m (471-481.5')	Altered Endako Q.M.						
146.8-151m (481.5-495.5')	Lamp Dike: Most joints and lower contact 40-50° to C/A - Brecciated lower contact	27588	150.9m	153.9m	3.0m	1	4
151-200.9m (495.5-659')	Endako Q.M: Slightly altered - approx. 50% biotite altered to chlorite: moderately blocky - pink, coarse grained - fractures approx. 1 decimetre apt. mainly 45° to C/A and chloritic - fairly massive	27589	153.9m	156.9m	3.0m	1	6
	167.6m-173.7m (550-570') shattered, highly altered 179.8-180.7m (590-593')	27590	181.4m	184.4m	3.0m	1	3
200.9-202.7m (659-665')	Fault: Lost 1.8 m (6') of core - gouge and blocky either side.						
202.7-213.4m (665-700')	Altered Endako Q.M.- blocky, broken, chloritic - hematitic fractures - slightly more massive towards end.	27591	211.8m	213.4m	1.6m	1	2

213.4m (700')

END HOLE

PROPERTY AX GROUP

## Diamond Drill Record



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DIP TEST		
Footage	Angle	
	Reading	Corrected
casing	-60°	

HOLE No. 79-2 Sheet No. 1 of 4 Lot Line 2187 N. Total Depth 152.4m (500')

Section 79-2 Dep. 100 (m) W of BL. Logged By D.R.C.

Date Begun November 3, 1979 Bearing 270° Claim AX-2

Date Finished November 7, 1979 Elev. Collar approx. 825 m Core Size NQ

DEPTH	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH of SAMPLE	Mo ppm	Cu ppm
0-4.6m	Casing in overburden						
4.6-12.8m (15-42')	Weathered Endako Q.M: Pinkish green (chloritic) coarse grained-rusty- considerable Fe secondary minerals, presumably some after specularite Broken/blocky-main jt. set at 45° C/A Core recovery 80%	27592	4.6m	7.6m	3.0m	10	14
12.8-14m (42-46')	Fault: gouge, crushed rock - 60° C/A core recovery 60%						
14-37.8m (46-124')	Altered Endako Q.M.: a few percent original biotite almost entirely altered to chlorite: Disseminated magnetite altered to hematite: calcite on fractures - pink, coarse grained fairly massive/homogeneous - more clay alt. at end.	27593	26.5m	29.5m	3.0m	1	2



PROPERTY AX GROUP

## Diamond Drill Record



Cochrane Consultants Limited

DIP TEST		
Footage	Angle	
	Reading	Corrected
casing	-60°	

HOLE No. 79-2 Sheet No. 2 of 4 Lat. Line 2187 N.  
 Section 79-2 Dep. 100 (m) W of BL Total Depth 152.4m (500')  
 Date Begun November 3, 1979 Bearing 270° Logged By D.R.C.  
 Date Finished November 7, 1979 Elev. Collar APPROX. 825 m Claim AX-2  
 Core Size N.Q.

DEPTH	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH of SAMPLE		
37.8-39.9m (124-131')	Altered Endako Q.M: 0.2m healed breccia at start of section - finer grained at mid section and 2-3 cm gouge at end section - gouge at 60° C/A entire section quite blocky and chloritic						
39.9-44.8m (131-147')	Pyritic Endako Q.M.: a few percent fracture filling pyrite also in irregular veinlets: mainly with chlorite: Noticable clay alteration of feldspars: Pyrite becomes sparse and diss. at end of section.						
44.8-51.5m (147-169')	Altered Endako Q.M: coarse grained, pink, fairly massive - chloritic - hematitic. Core recovery +90%						
51.5-56.1m (169-184')	Broken-faulted Section - considerable clay, gouge - poor core rec. Core recovery 50%						



PROPERTY AX GROUP

## Diamond Drill Record



Cochrane Consultants Limited

DIP TEST		
Footage	Angle	
	Reading	Corrected
casing	-60°	

HOLE No. 79-2. Sheet No. 4 of 4 Lat. Line 2187 N. Total Depth 152.4m (500')

Section 79-2 Dep. 100m W of BL Logged By D.R.C.

Date Begun November 3, 1979 Bearing 270° Claim AX-2

Date Finished November 7, 1979 Elev. Collar approx. 825 m Core Size NQ

DEPTH	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH of SAMPLE	Mo ppm	Cu ppm
93.9-107m (308-351')	Altered Endako Q.M: Coarse grained, pink						
107-110.2m (351-361.5')	Fine to Med. Grained Q.M.: finer grained phase of Endako - salmon coloured Lower contact sharp, chloritic and 45° C/A						
110.2-113.8m (361.5-373.5')	Course Grained Altered Endako Q.M.						
113.8-152.4m (373.5-500')	Fine to Med. Grained Casey (?) Q.M. Upper contact cored well, is moderately sharp, (gradational over 1 cm or so) and at 50° C/A. Hornblende - slightly altered grain size some what variable over 10' (3m) sections. Traces of fine pyrite on chloritic slips and in knots and clusters. Becomes fairly massive, med. grained and fresher towards end.	27596	118.0m	121.0,	3.0m	1	2
		27597	148.4m	152.4m	4.0m	51	3
	152.4m (500') END HOLE						



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PROPERTY AX GROUP

## Diamond Drill Record

DIP TEST		
Footage	Angle	
	Reading	Corrected
casing	-60°	

HOLE No. 79-3 Sheet No. 1 of 5 Lot. 2187 N Total Depth. 151.5m (497')

Section 79-3 Dep. 300 W Logged By D.R.C.

Date Begun November 9, 1979 Bearing 270° (t) Claim AX-3

Date Finished November 12/79 Elev. Collor approx. 830 m Core Size N.Q.

DEPTH	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH of SAMPLE	Mo ppm	Cu ppm
0-3.4m (0-11')	Casing at -60°						
3.4-26.4m (11-86.5')	Endako Q.M.: Med. to coarse grained, light pink coloured - mafics predominantly biotite - only slightly chloritized - quite massive cores well (recovery +90%). Quite homogeneous: Fractures predominantly at low angles to C/A and are mixtures of chlorite, calcite and hematite.	27598	3.4m	6.4m	3.0m	1	2
26.4-29.3m (86.5-96')	Altered Endako Q.M.: biotite completely chloritized and chlorite content exceeds 10% - Calcite veinlets at 60° C/A traces of fine diss. pyrite.						
29.3-44.8m (96-147')	Endako Q.M.: Biotite, relatively fresh massive coarse grained pink.	27599	29.6m	32.6m	3.0m	1	4

PROPERTY AX GROUP

## Diamond Drill Record



Cochrane Consultants Limited

DIP TEST		
Footage	Angle	
	Reading	Corrected
casing	-60°	

HOLE No. 79-3 Sheet No. 2 of 5 Lot. 2187 N Total Depth 151.5m (497')  
 Section 79-3 Dep. 300 W Logged By D. R. C.  
 Date Begun November 9, 1979 Bearing 270° Claim AX-3  
 Date Finished November 12/79 Elev. Collar approx. 830 m Core Size N.Q.

DEPTH	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH of SAMPLE	Mo ppm	Cu ppm
44.8-45m (147-147.8')	Lamp Dike: Broken, gouge						
45.-45.7m (147.8-150')	Endako Q.M.						
45.7-47.7m (150-156.5')	Lamp Dike: Porphyritic (white feldspars) dark black/green ground mass: calcite on fractures: Lower contact sharp at 55° C/A						
47.7-53.6m (156.5-176')	Endako Q.M. Only medium grained/becomes more chloritic towards end section. Fairly blocky						
53.6-65.8m (176-216')	Altered Endako Q.M.: Medium grained, pink and green, highly chloritic - biotite completely altered and chlorite/on fractures broken/blocky core. Recovery approx. 90%. Apparently a slight decrease in original biotite content - definite diminishment in grain size.	27600	60.0m	63.0m	3.0m	24	2

60m  
(197')  
Diss. molybdenite

PROPERTY AX GROUP

## Diamond Drill Record



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DIP TEST		
Footage	Angle	
	Reading	Corrected
casing	-60°	

HOLE No. 79-3 Sheet No. 3 of 5 Lat. 2187 N Total Depth 151.5m (497')  
 Section 79-3 Dep. 300 W Logged By D.R.C.  
 Date Begun November 9, 1979 Bearing 270° Claim AX-3  
 Date Finished November 12/79 Elev. Collor. approx. 830 m Core Size N, Q.

DEPTH	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH of SAMPLE	Mo ppm	Cu ppm
	Fault gouge 64.2-64.3m (210.5-211')						
65.8-68m (216-223')	Fine Grained Pink O.M.: Upper contact gradational and irregular over 2dm or so - Calcite veining at low angle to C/A - Lower portion this section rock is mottled - no distinct lower contact. but bugged by open tension vugs						
68-92.4m (223-303')	Same as 53.6-65.8m (176-216') Except uncertain if Endako Phase: rather diff. texture - porphyritic, mottled color: mafics all altered to chlorite, almost no hematite/magnetite a trace. Grain size somewhat variable: Qtz. eyes to 1 cm diameter. Hematitic chloritic (rehealed breccia ?)	27601	90.5m	93.5m	3.0m	1	2
	86.6-87.8m (284-289') One small qtz veinlet 1 cm wide with moly at 72.5m (238') (Box 13)						







PROPERTY AX GROUP

## Diamond Drill Record



Cochrane Consultants Limited

DIP TEST		
Footage	Angle	
	Reading	Corrected
casing	-60°	

HOLE No. 79-4 Sheet No. 1 of 3 Lat. Line 1+75 N. Total Depth 152.7m (502').  
 Section 79-4 Dep. 15+50 W. Logged By D.R.C.  
 Date Begun November 13/79 Bearing 270° Claim Jill No. 1  
 Date Finished November 17/79 Elev. Collor APPROX. 825 m Core Size N.Q.W.L.

DEPTH	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH of SAMPLE	Mo DDM	Cu DDM
0-45.7m	Casing in overburden						
45.7-59.7m	Altered Endako Q.M: highly fractured - very blocky/faulted - Coarse grained-pink biotite highly altered to chlorite and yellow sericite - Fault and several cm gouge at 47.9m (157') and at 30° C/A Fault and gouge at 52.1m (171'), 55.5m (182') etc. Many slickensided slips. Core recovery 80%	27604	45.7m (150')	48.8m (160')	3m (10')	28	6
59.7-60m (196-197')	Fault: Gouge and chlorite 30° C/A						
60-84.1m (197-276')	Altered Endako Q. M. Highly fractured, traces of diss. pyrite - very narrow qtz. veinlets - (hairlike) Many slips hematitic, chloritic, slickensided. Pyrite sparse and patchy - pyrite and fine molybdenite on fractures at 77 m (251.5'): in micro qtz. veinlet (cont'd)	27605 27606 27607	60m (197') 75.3m (247') 78.3m (257')	63.1m (207') 78.3m (257') 81.4m (267')	3m (10') 3m (10') 3m (10')	5 17 28	6 5 3



PROPERTY..... AX GROUP.....

## Diamond Drill Record



Cochrane Consultants Limited

DIP TEST		
Footage	Angle	
	Reading	Corrected
casing	-60°	

HOLE No. 79-4 Sheet No. 3 of 3 Lat. Line 1+75 N. Total Depth 152.7m (502')

Section 79-4 Dep. 15+50 W. Logged By D.R.C.

Date Begun November 13/79 Bearing 270° Claim Jill No. 1


Date Finished November 17/79 Elev. Collar approx. 825 m Core Size N.Q.W.L.

DEPTH	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH of SAMPLE	Mo ppm	Cu ppm
95.3-112.8m (312.5-370')	Altered Endako Q.M.: same as section before 94m (308.5'). Pyrite/moly in fractures 102.1m (335')/104.9m (344')/ 106.7m (350'). - fairly massive	27611	99.7m (327')	102.7m (337')	3m (10')	67	11
		27612	102.7m (337')	105.8m (347')	3m (10')	38	5
		27613	105.8m (347')	108.8m (357')	3m (10')	3.5	3
112.8-122.5m	Altered Endako Q.M.: Chloritic and kaolinized moly. on slip at 118.7m (373') - in veinlet at 114.6m (376'): trace at 117.3m (395') - in 1 cm wide qtz veinlet with chalco at 119.8m (393') - slickensided at 120.4m (395')	27614	108.8m (357')	111.9m (367')	3m (10')	2	15
		27615	111.7m (367')	114.9m (377')	3m (10')	10	9
		27616	114.9m (377')	118m (387')	3m (10')	>100	26
122.5-152.7m	Casey Q.M: or finer grained phase at Endako - pink - biotite - chloritized pyrite/moly on fracture at 126.2m (414'), 129.5m (425'), 132.6m (435') 134.7m (442'), 139.3m (457'), 145.4m (477'): Chloritic slips lower in section - brittle, fractures 1 dm apart	27617	148.4m (487')	151.5m (497')	3m (10')	74	6
	END HOLE 152.7m (502.0')						

CERTIFICATE

I, Donald Robert Cochrane, of the Municipality of Delta, British Columbia, do hereby certify that:

1. I am a consulting geological engineer with an office at 4882 Delta Street, Delta, B. C.
2. I am a graduate of the University of Toronto (1962) with a degree in Applied Geology (B.A.Sc.) and a graduate of Queen's University (1964) with a degree in Economic Geology (M.Sc., Eng.).
3. I have practiced my profession continuously since graduation while being employed by such companies as Noranda Exploration Co. Ltd., Quebec Cartier Mines, and Meridian Explorations Syndicate. I have been in private independent practice since 1969.
4. I have no interest, either direct or indirect in the properties or securities of Rio Plata Silver Mines Ltd., nor do I expect to acquire any such interest.
5. I am a member in good standing of the Association of Professional Engineers (A.P.E.) of the Province of British Columbia, and also a member of the A.P.E. in the Provinces of Ontario, Saskatchewan, Alberta and the Yukon Territories.

  
D. R. COCHRANE, P. Eng.  
January 7, 1980,  
Delta, B. C.



## APPENDIX III

### BIBLIOGRAPHY

- Holland, Stuart      Annual Report of the Minister  
1963:                of Mines.
- Carr, J. M.:            1964 and 1965 Annual Reports of  
                         the Minister of Mines.
- Hemsworth, F. S.      Assessment Report No. 0555 on the  
1964:                Geochemical Soil Sampling Survey  
                         Ax and Bx Mineral Claims
- Armstrong, J. E.      G. S. C. Memoir 252  
1965:



APPENDIX IV

D. W. Coates Invoices





**D.W. COATES**  
ENTERPRISES LTD.

2560 A Simpson Road, Richmond, B.C. V6X 2P9 — Phone: (604) 273-0985

**STATEMENT**

TO:

RIO PLATA SILVER MINES LTD.  
C/O COCHRANE CONS. LTD.  
4892 DELTA STREET  
DELTA, B. C.  
V4E 2T8

CUSTOMER
2730

STATEMENT DATE
30 NOV 79

DATE	INVOICE	DETAILS	DEBIT	CREDIT	BALANCE
31 OCT 79	1615	INVOICE	8,736.59		8,736.59
15 NOV 79	1624	INVOICE	33,140.89		33,140.89
30 NOV 79	1638	INVOICE	3,669.54		3,669.54
			<b>CURRENT</b>	<b>OVER-DUE</b>	<b>TOTAL DUE</b>
			35,546.99	8,736.59	44,283.58





**D.W. COATES ENTERPRISES LTD.**

2560 A Simpson Road.  
Richmond, B.C. V6X 2P9

INVOICE NO. 1615

JOB NO. 388

DATE: Nov 13/79

Rio Plata Silver Mines Ltd.  
c/o Cochrane Consultants Ltd.  
4632 Delta Street  
Delta, B. C.  
V4K 2T8

Endako area, B. C. Drilling

Period: October 28, 31, 1979

Drilling Detail  
Water Supply  
Mobilization  
Travelling Time  
Drilling with Mud

\$6,551.60 ✓  
115.80 ✓  
1,872.00 ✓  
163.00 ✓  
34.19 ✓

\$8,736.59

8484.52

Drilling Detail

Hole#	Size	From	To	Footage	Rate	Amount
79-1	NQ	0	22	22	\$17.80	\$ 391.60
79-1	NQ	22	372	350	17.60	6160.00
				<u>372</u>		<u>\$6551.60</u>

Water Supply

Labour & Equipment

Date	Hole#	Memo	ManHrs.
Oct 29D	79-1	Lay 1600' hoseline	8
Oct 30D	79-1	" " "	4
			<u>12</u>
		Less Coates Ent. Portion $\frac{1200}{1600}$	9 3
		Labour: 3 hrs. @ 21.00/hr.	63.00
		Coilstove : 48 hrs. @ 1.10/hr.	52.80
			<u>\$115.80</u>

Mobilization

(a) Lump Sum

Base to unload point (50' x 2200.00) \$1100.00

(b) Labour & Equipment

<u>Date</u>	<u>Memo</u>	<u>ManHrs. 4 x 4</u>		
Oct 29D	Unload and move to hole #1	24	2	
Oct 30D	Line up drill	12	-	
	Labour: 36 hrs. @ 21.00/hr.	756.00		
	4 x 4 : 2 hrs. @ 8.00/hr.	16.00		\$772.00
				<u>\$1872.00</u>

Travelling Time

Labour & Equipment

<u>Date</u>	<u>Memo</u>	<u>ManHrs. 4 x 4</u>		
Oct 29	Travel to and from drill	2	-	
Oct 30	" " "	3	1	
Oct 31	" " "	2	1	
		7	2	
	Labour: 7 hrs. @ 21.00/hr.	147.00		
	4 x 4 : 2 hrs. @ 8.00/hr.	16.00		\$163.00
				<u>\$163.00</u>

*Handwritten signature or initials*

Drilling with Mud

4 bags Super Gel @ 4.52/bag	18.08	
Freight: 200# @ 6.50/100	13.00	
	<u>31.08</u>	
Plus 10%	3.11	
		<u>\$34.19</u>

*Handwritten scribble*

**D.W. COATES ENTERPRISES LTD.**

2560 A Simpson Road.  
Richmond, B.C. V6X 2P9

INVOICE NO.: 1624

JOB NO.: 388

DATE: Nov 23/79

Rio Plata Silver Mines Ltd.  
c/o Cochrane Consultants Ltd.  
4882 Delta Street  
Delta, B. C.  
V4K 2T8

Endako Area, B. C. Drilling

PERIOD: November 1 - 15, 1979

Drilling Detail	\$29,697.50
Overburden	830.21
Water Supply	919.98
Drilling with Mud	324.79
Ream Casing & Hole Stabilizing	252.80
Core Boxes	410.41
Travelling Time	600.00
Standby Time	105.00
	<u>\$33,140.69</u>

[REDACTED]		TYPE
[REDACTED]		G.L. DATE
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

POSTED

DEC 14 1979

Drilling Detail

Hole#	Size	From	To	Footage	Rate	Amount
79-1	NQ	372	500	128	\$17.60	\$2252.80
79-1	NQ	500	700	200	18.10	3620.00
79-2	NQ	0	15	15	17.80	267.00
79-2	NQ	15	500	485	17.60	8536.00
79-3	NQ	0	11	11	17.80	195.80
79-3	NQ	11	497	486	17.60	8553.60
79-4	NQ	0	25	25	17.80	445.00
79-4	NQ	25	50	25	18.50	462.50
79-4	NQ	50	100	50	20.00	1000.00
79-4	NQ	100	150	50	Field Cost	-----
79-4	NQ	150	398	248	17.60	4364.80
				<u>1723'</u>		<u>\$29,697.50</u>

Overburden - Field Cost

(a) Labour & Equipment

Date	Hole#	Memo	ManHrs. Drill	
Nov 14D	79-4	Tricone 100' - 117'	4	2
Nov 14N	79-4	Tricone 117' - 150'	16	8
			<u>20</u>	<u>10</u>
		Labour: 20 hrs. @ 21.00/hr.		420.00
		Drill : 10 hrs. @ 18.50/hr.		185.00
		Pump : 10 hrs. @ 2 x 1.35		27.00
				<u>\$632.00</u>

(b) Materials

<u>Date</u>	<u>Hole#</u>	<u>Memo</u>	<u>Amount</u>	
Nov 14N	79-4	1 3 7/8" Tricone	\$128.88	
		Plus 15%	19.33	
		Casing Usage: 50' @ 1.00/ft.	50.00	\$198.21
				<u>\$830.21</u>

Water Supply

(a) Labour & Equipment

<u>Date</u>	<u>Hole#</u>	<u>Memo</u>	<u>ManHrs.</u>
Nov 3D	79-2	Lay 2400' hoseline	2
		Less Coates Ent. Portion $\frac{1200}{2400}$	<u>1</u> 1
Nov 7D	79-3	Lay 2200' hoseline	4
Nov 8D	79-3	Lay 2200' hoseline	4
Nov 9D	79-3	Lay 2200' hoseline	2
Nov 9N	79-3	Thaw frozen hoseline	8
Nov 10D	79-3	" " "	18
Nov 12D	79-3	Drain & roll hoseline	4
			<u>40</u>
		Less Coates Ent. Portion $\frac{1200}{2200}$	<u>22</u> 18
			19

Labour:	19 hrs. @ 21.00/hr.	399.00	
Coilstove:	264 hrs. @ 1.10/hr.	290.40	
Coilstove Fuel:	270 gais. @ .854/gal	230.58	\$919.98
			<u><u>\$919.98</u></u>

Drilling with Mud

38 Bags Super Gel @ 4.52/bag	171.76	
Freight: 1900# @ 6.50/100	123.50	
	<u>295.26</u>	
Plus 10%	29.53	<u>\$324.79</u>

Ream Casing & Hole Stabilizing

Labour & Equipment

<u>Date</u>	<u>Hole#</u>	<u>Memo</u>	<u>ManHrs. Drill</u>	
Nov 20	79-1	Cave in hole	2	1
Nov 6N	79-2	" "	2	1
Nov 10N	79-3	" "	4	2
			<u>8</u>	<u>4</u>
		Labour: 8 hrs. @ 21.00/hr.	168.00	
		Drill: 4 hrs. @ 18.50/hr.	74.00	
		Pump : 4 hrs. @ 2 x 1.35/hr.	10.80	\$252.80
			<u>10.80</u>	<u>\$252.80</u>

Core Boxes

84 NQ core boxes @ 3.90/box	327.60	
Freight: 700# @6.50/100	45.50	
	<u>373.10</u>	
Plus 10%	37.31	<u>\$410.41</u>



# D.W. COATES ENTERPRISES LTD.

2560 A Simpson Road,  
Richmond, B.C. V6X 2P9

INVOICE NO.: 1638

JOB NO.: 388

DATE: Dec 11/79

Rio, Plata Silver Mines Ltd.  
c/o Cochrane Consultants Ltd.  
4882 Delta Street  
Delta, B. C.  
V4K 2T8

Endako Area, B. C. Drilling

PERIOD: November 16 - 17, 1979

Drilling Detail	\$1,813.30
Demobilization	1,709.00
Core Boxes	97.24
Travelling Time	50.00
	<u>\$3,669.54</u>



POSTED

DEC 14 1979

Drilling Detail

<u>Hole#</u>	<u>Size</u>	<u>From</u>	<u>To</u>	<u>Footage</u>	<u>Rate</u>	<u>Amount</u>
79-4	NQ	398	500	102	\$17.60	\$1795.20
79-4	NQ	500	501	1	18.10	18.10
				<u>103</u>		<u>\$1813.30</u>

Demobilization

(a) Lump Sum

Load point to - base (50% x 2200.00) \$1100.00

(b) Labour & Equipment

<u>Date</u>	<u>Memo</u>	<u>ManHrs.</u>
Nov 16	Teardown on last hole	8
Nov 17	Haul equipment to load point	21
		<u>29</u>

Labour: 29 hrs. @ 21.00/hr. \$609.00

\$1709.00

Core Boxes

20 NQ core boxes @ 3.90/box	78.00	
Freight: 160# @ 6.50/100	10.40	
	<u>88.40</u>	
Plus 10%	8.84	\$97.24
		<u><u>97.24</u></u>

Travelling Time

Labour & Equipment

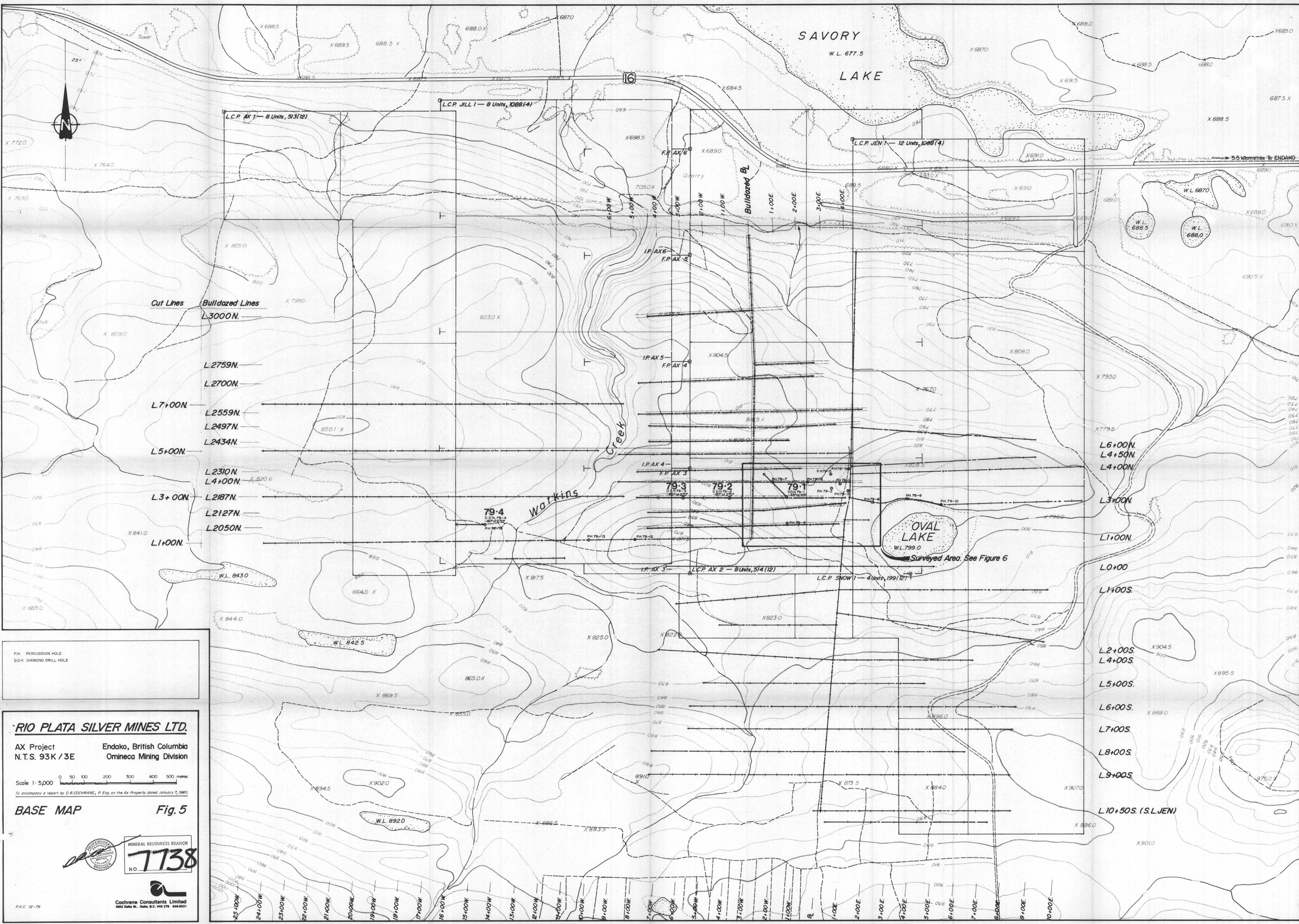
<u>Date</u>	<u>memo</u>	<u>ManHrs. 4 x 4</u>		
Nov 16	Travel to and from drill	2	1	
	Labour: 2 hrs. @ 21.00/hr.			42.00
	4 x 4 : 1 hr. @ 8.00/hr.			8.00
				<u>50.00</u>
				<u><u>50.00</u></u>

APPENDIX V

ASSESSMENT WORK DISTRIBUTION

Assessment Work applied to Ax Group (Ax No. 1, 3, 4, Jill 1 and Snow 1) .....	\$ 6,000.00
Assessment Work applied to Jen Group (Ax No. 2, 5, 6, and Jen 1) .....	\$ 5,600.00
Assessment Work applied to Portable Assessment Credit (PAC) Account of Rio Plata Silver Mines Ltd. ....	\$34,346.82
<u>Total Work applied .....</u>	<u>\$45,946.82</u>
Total Diamond Drilling Costs as per statement from D.W. Coates Enterprises Ltd. ..	\$45,546.82
Report preparation (partial cost) .....	<u>400.00</u>
<u>Total Cost .....</u>	<u>\$45,946.82</u>





PH. PERCUSSION HOLE  
 DDH. DIAMOND DRILL HOLE

**RIO PLATA SILVER MINES LTD.**  
 AX Project Endako, British Columbia  
 N.T.S. 93K/3E Omineca Mining Division

Scale 1:5,000

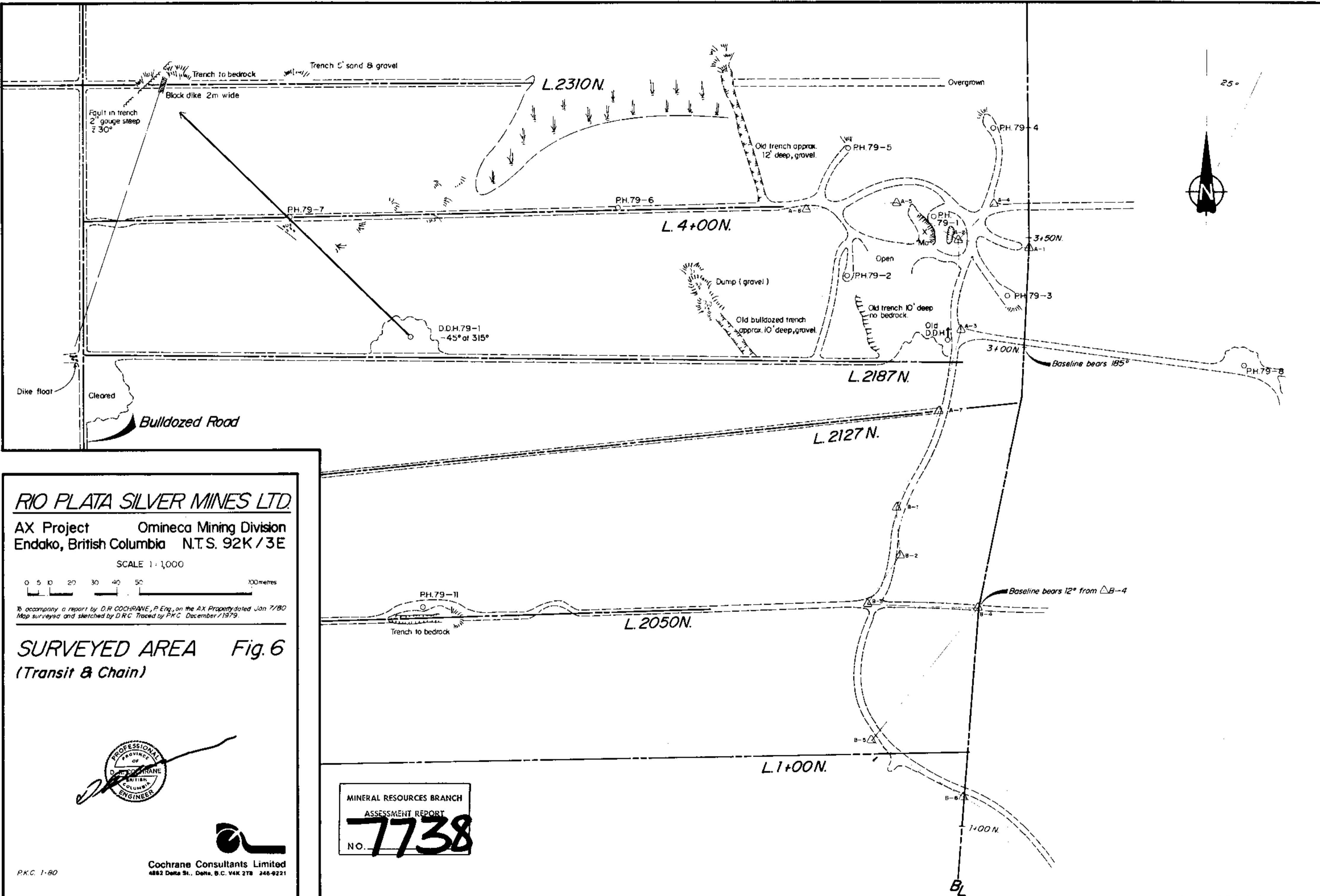
To accompany a report by D.R. COCHRANE, P. Eng. on the Ax Property dated January 7, 1980

**BASE MAP** Fig. 5

MINERAL RESOURCES BRANCH  
**7738**  
 NO.

Cochrane Consultants Limited  
 4882 Delta St. Delta, B.C. V1K 2T8 666-2221

P.K.C. 12-79



**RIO PLATA SILVER MINES LTD.**

AX Project      Omineca Mining Division  
 Endako, British Columbia    N.T.S. 92K/3E

SCALE 1:1,000



To accompany a report by D.R. COCHRANE, P. Eng., on the AX Property dated Jan 7/80  
 Map surveyed and sketched by D.R.C. Traced by P.K.C. December/1979.

**SURVEYED AREA    Fig. 6**  
 (Transit & Chain)

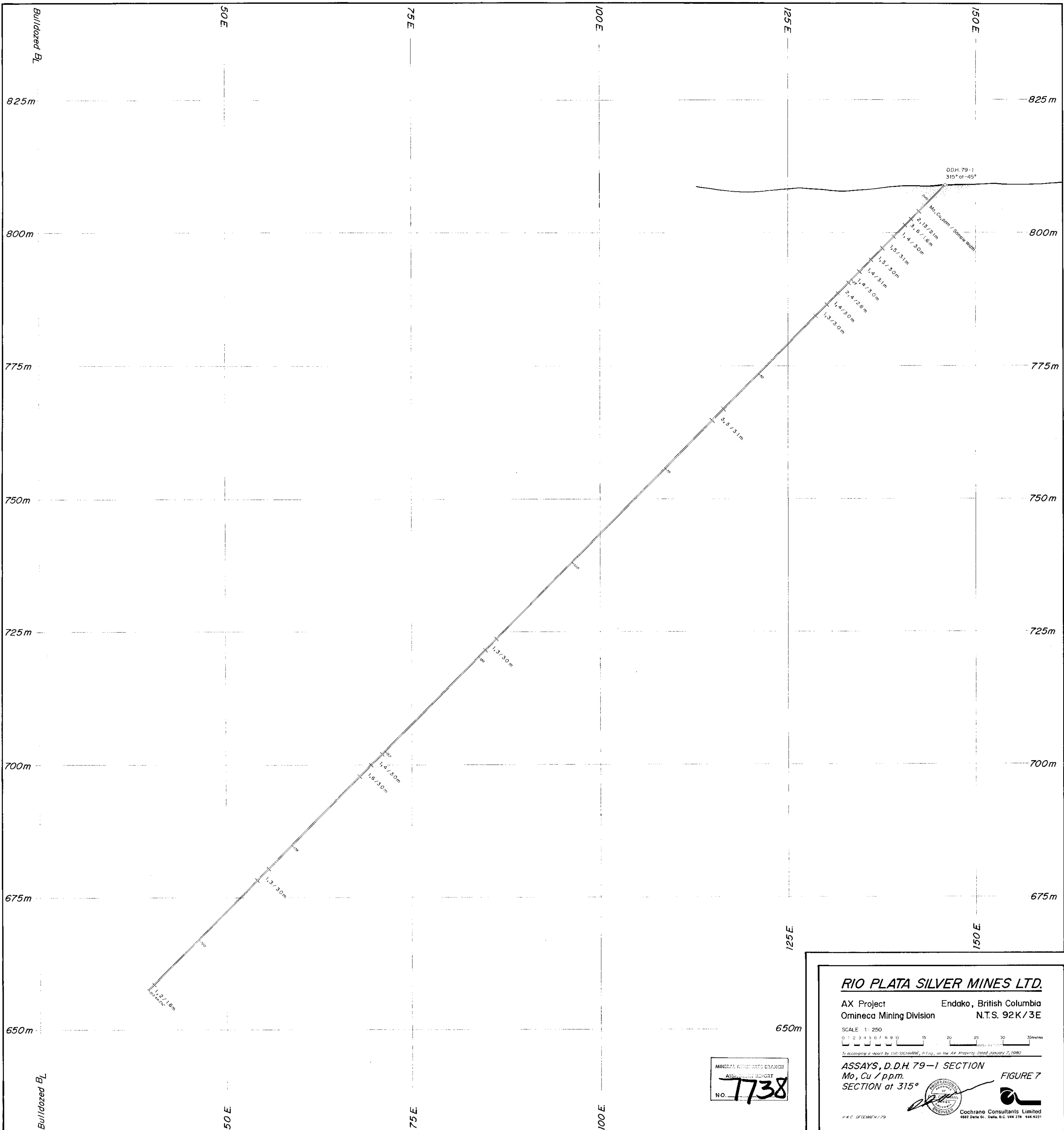


Cochrane Consultants Limited  
 4882 Delta St., Delta, B.C. V4K 2T8 248-9221

P.K.C. 1-80

MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT

NO. **7738**



MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
 NO. **7738**

**RIO PLATA SILVER MINES LTD.**

AX Project Endako, British Columbia  
 Omineca Mining Division N.T.S. 92K/3E

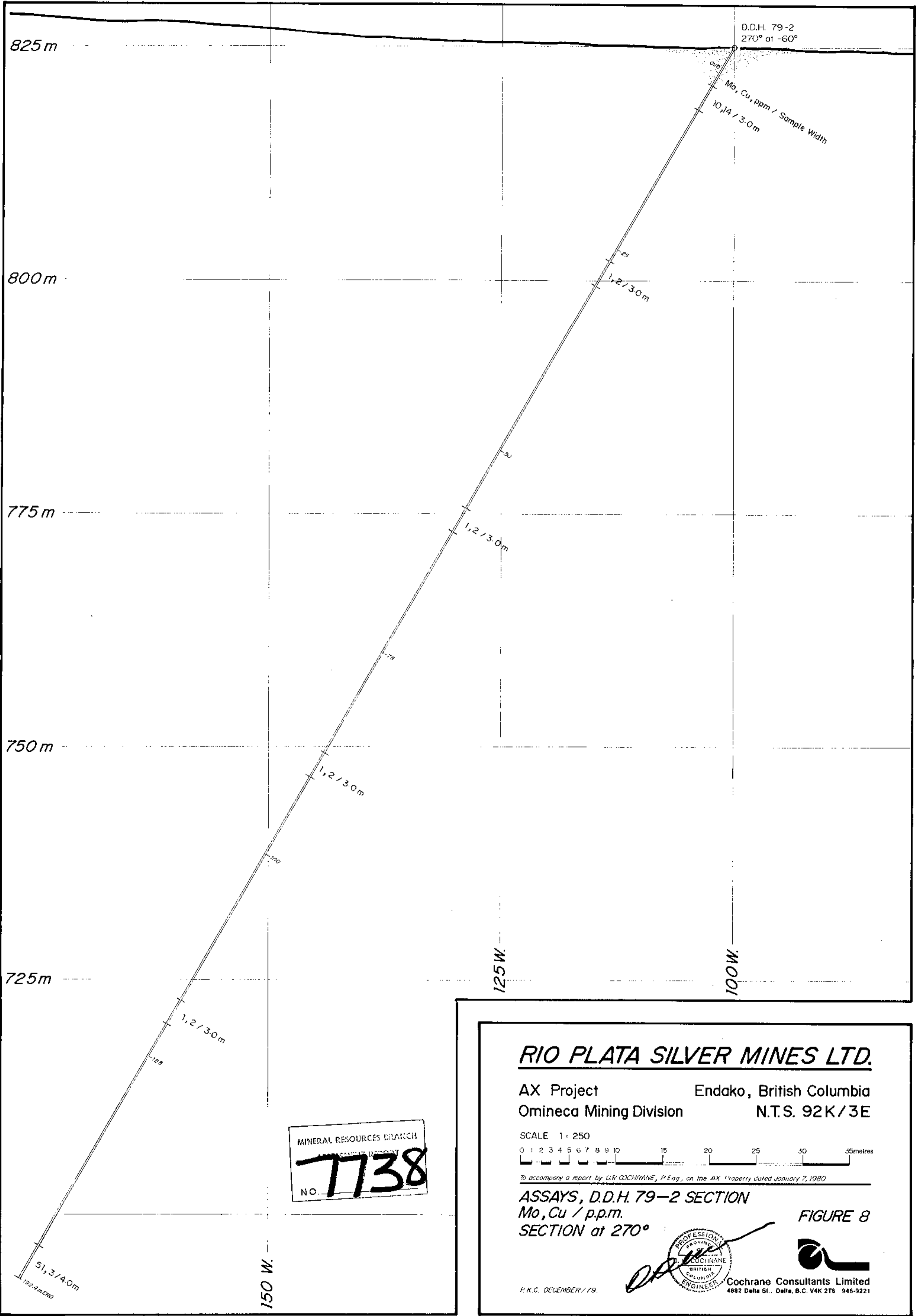
SCALE 1:250  
 0 1 2 3 4 5 6 7 8 9 10 15 20 25 30 35 metres

In accordance with a report by I.M. TUCHMAN, P. Eng., on the AX Property dated January 7, 1990

**ASSAYS, D.D.H. 79-1 SECTION**  
 Mo, Cu / ppm.  
 SECTION at 315°

FIGURE 7





D.D.H. 79-2  
270° at -60°

Mo, Cu, ppm / Sample Width  
10, 14 / 3.0m

825 m

800 m

775 m

750 m

725 m

125 W.

100 W.

MINERAL RESOURCES BRANCH  
NO. 7738

**RIO PLATA SILVER MINES LTD.**

AX Project Endako, British Columbia  
Omineca Mining Division N.T.S. 92K/3E

SCALE 1:250  
0 1 2 3 4 5 6 7 8 9 10 15 20 25 30 35 metres

To accompany a report by U.R. COCHRANE, P.Eng., on the AX Property dated January 7, 1980

ASSAYS, D.D.H. 79-2 SECTION  
Mo, Cu / p.p.m.  
SECTION at 270°

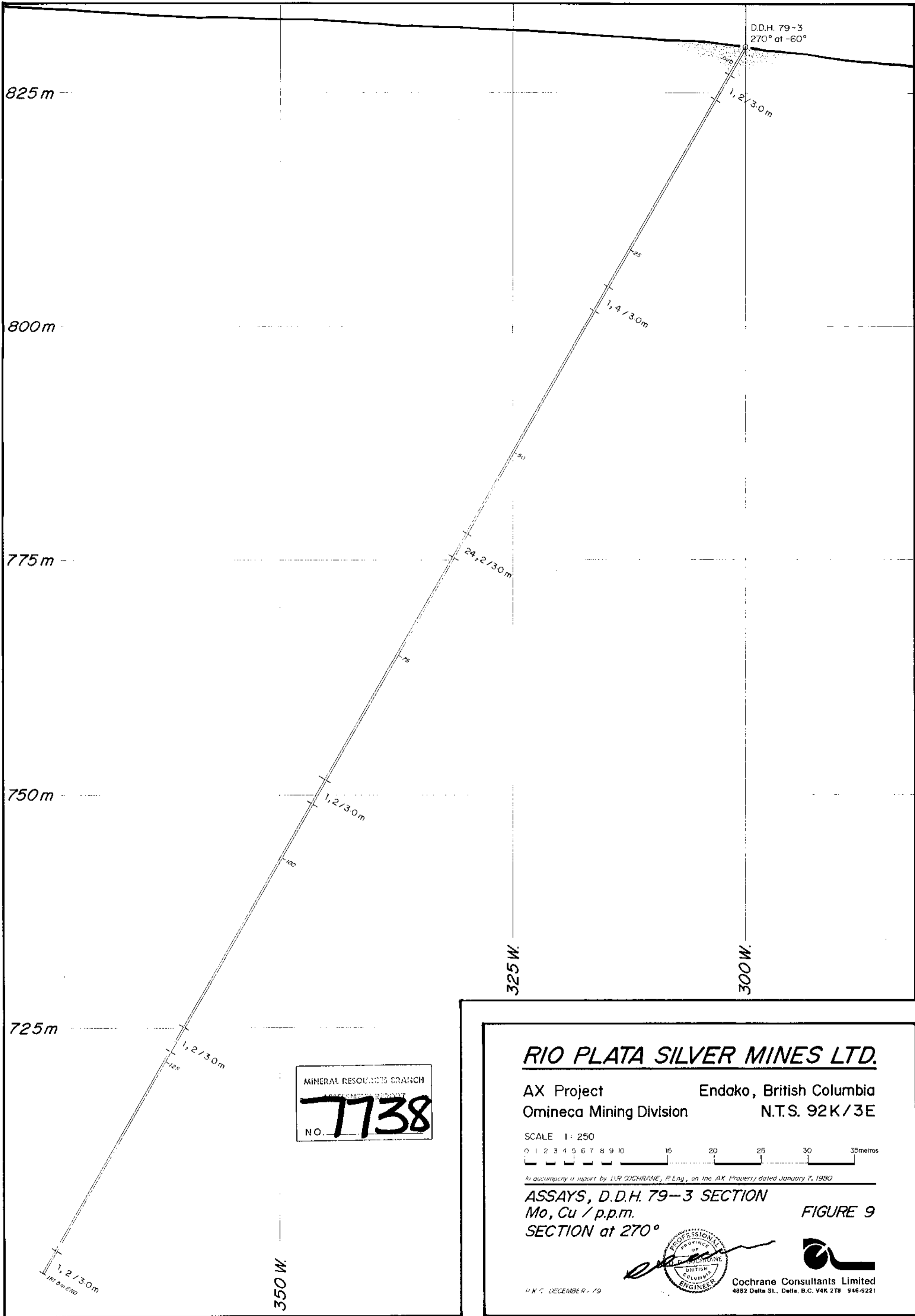
FIGURE 8



H.K.G. DECEMBER / 79.

Cochrane Consultants Limited  
4892 Delta St., Delta, B.C. V4K 2T8 946-9221





**RIO PLATA SILVER MINES LTD.**

AX Project Endako, British Columbia  
 Omineca Mining Division N.T.S. 92K/3E

SCALE 1:250  
 0 1 2 3 4 5 6 7 8 9 10 15 20 25 30 35 metres

*In accordance with report by D.R. COCHRANE, P.Eng., on the AX Property, dated January 7, 1990*

**ASSAYS, D.D.H. 79-3 SECTION**  
**Mo, Cu / p.p.m.**  
**SECTION at 270°**

FIGURE 9



H.K.C. DECEMBER, 79



Cochrane Consultants Limited  
 4852 Delta St., Delta, B.C. V4K 2T8 946-9221

