

EXPLORATION  
NTS 92H/9E

COMINCO LTD.

'81-#1154-#9931

WESTERN DISTRICT

PERCUSSION DRILLING  
ASSESSMENT REPORT  
ON THE OSP MINERAL CLAIMS  
(OSP-81-3 GROUP)  
OWNED BY COMINCO LTD.

OSPREY LAKE AREA  
SIMILKAMEEN - OSOYOOS MINING DIVISION, B.C.

LATITUDE: 49°42' N

LONGITUDE: 120°08' W

WORK PERIOD

JULY 7, 1981 TO DECEMBER 15, 1981

15 DECEMBER 1981

D. L. KURAN

COMINCO LTD.

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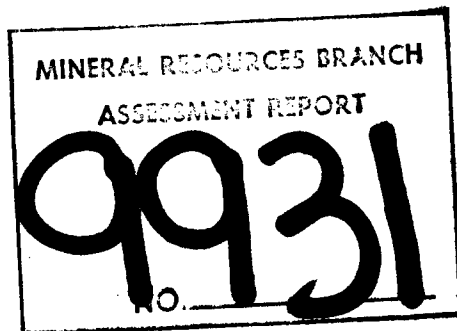
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D. L. KURAN

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15 DECEMBER 1981

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OSPREY LAKE AREA  
SIMILKAMEEN MINING DIVISION, B.C.

INTRODUCTION

(i) LOCATION AND ACCESS:

The OSP-83-3 mineral group claims are located a few kilometres south and east of Osprey Lake, B.C. They cover an area bounded on the north by the Trout Creek valley, on the west by Empress Creek and on the south by Shinish Creek. The surface elevations range from 1,000 metres in the Trout Creek valley to over 1,800 metres on the regional Thompson Plateau.

Osprey Lake is located 42 kilometres northeast of Princeton, B.C. on an all weather road between Princeton and Summerland. The claims are accessible by means of a forestry access road from Osprey Lake to the head of Shinish Creek or on a partially overgrown logging road across Trout Creek approximately 5 km east of Osprey Lake.

Plate 81-1 enclosed with this report is an index map showing the location of the OSP-81-3 claim group relative to adjoining claims and main geographic features in the area.

(ii) PROPERTY DEFINITION:

The OSP-83-3 group is part of the Osprey property which is a molybdenum prospect owned and being explored by Cominco Ltd. It presently consists of 7 OSP claims totalling 100 units. The OSP 1-9 claims were staked and recorded by Cominco in 1978. The OSP 10-13 claims were added to the property by staking in 1980 and 1981.

Most of the ground now covered by the Osprey property was owned and explored by Anaconda in the 1960's. They carried out extensive geochemical and geophysical surveys, bulldozer trenching, and diamond drilling. Anaconda still holds the two blocks of Empress claims which adjoin Cominco's holdings. Cominco has covered most of the property with geochemical soil and silt surveys between 1979 and 1981.

Molybdenum mineralization is locally associated with leucocratic quartz monzonite and aplite which intrude a larger body of coarsely porphyritic granodiorite. All of these intrusive rocks observed on the property are phases of the Okanagan batholith.

(iii) SUMMARY OF WORK DONE:

Four percussion drill holes, two on the OSP-2 claim totalling 185.8 metres, one on the OSP-3 claim of 100.5 metres and one on the OSP-5 claim of 100.5 metres were completed on the OSP-81-3 group between July 7 and September 17, 1981. The drilling contractor was Al Miller, Percussion Drilling Ltd. of Kamloops. Prior to drilling, Broadway Bulldozing of Princeton had been contracted to upgrade and extend the access roads and to prepare the drill sites.

Results and Interpretation

The purpose of the percussion drilling program reported herein was to test molybdenum soil anomalies defined by geochemical surveys in 1980 and early 1981.

Plate 81-2, enclosed with this report indicates the location of the four drill holes relative to the claim boundaries and access roads. All holes are vertical and the individual lengths of the holes in metres are indicated beside each collar location.

The drill cuttings were collected as samples, each representing approximately 3.1 metres of drilling. A random spoonful from each sample was collected at the drill and placed in a separate bag for later microscopic examination in order to prepare a cuttings log. The assay samples were sent to Cominco's exploration laboratory in Vancouver where they were analyzed geochemically for molybdenum. Mo was determined using an  $\text{HNO}_3\text{-HCrO}_4$  digestion/colorimetric method. Appendix A is a tabulated cuttings log including the geochemical results expressed in ppm. The cuttings were examined by the author and M. L. Serack, a graduate geologist. The mineral percentages shown are visual estimates only. The logs of the drill cuttings indicate that the rocks encountered during drilling are quartz-feldspathic and leucocratic. Quartz values range from 7%-30% in PDH-OSP-81-1 and 81-2 in the west of the claim group to uniformly 90%-98% in holes OSP-81-3 and 81-4 in the eastern part of the claim group. Total feldspar ranged from 55% to 85% in holes 81-1 and 81-2 to a low 1% to 10% in holes 81-3 and 81-4. No attempt to determine feldspar compositions was made. Total mafic content ranged from 1%-10% and consisted mainly of biotite in varying degrees of chloritization. Seritization and kaolinization was well developed in rocks containing abundant feldspars. Only minor sulphide was seen in the cuttings consisting of mostly pyrite with trace amounts of chalcopyrite and once molybdenite. Various amounts of magnetite were present in essentially all samples, usually less than 0.5%.

The lowest molybdenum content in any of the samples was 2 ppm which is the same as the normal crustal abundance in granitic rocks (2-3 ppm). Hole OSP-81-4 had a very low Mo content with a total hole average of 4 ppm and a high of 6 ppm. Most samples from the other three holes contained greater than 10 ppm. Total hole averages ranged from 4 ppm Mo/100.6 m in hole OSP-81-4 to 23 ppm Mo/100.6 m in hole OSP-81-3. Mo values were generally consistent with only minor fluctuations and no significant concentrations. The highest value was 84 ppm Mo (0.0084%) at a depth of roughly 97 metres in OSP-81-3. These values indicate that the rocks encountered in the four holes contain Mo concentrations ranging from background to 30 times background but the evidence suggests that no concentrations of economic grade are present.

REPORTED by: Dave Kuran  
D. L. KURAN, GEOLOGIST

ENDORSED by: M. J. Wolfe for  
D. L. COOKE, P. ENG.  
SENIOR GEOLOGIST

APPROVED FOR  
RELEASE by: M. J. Wolfe for  
G. HARDEN, MANAGER  
EXPLORATION  
WESTERN DISTRICT

Distribution:

Mining Recorder (2)  
Western District (1)  
D. L. Kuran (1)

APPENDIX A

PERCUSSION DRILL CUTTINGS LOG  
AND ANALYSIS

- NOTES: (1) Descriptions by D. L. Kuran and M. L. Serack.  
(2) Mineral percentages are visual estimates.

Sample Number	Interval	ppm Mo	% Quartz	% Feldspar	% Mafics	% Pyrite	Alteration, Mineralization, other Remarks
100913	5 to 20 ft.	53	7	85	5	2	
100914	20 to 30 ft.	35	7	85	5	1	Some alteration of biotite to chlorite
100915	30 to 40 ft.	35	10	80	5	1	White Mica 3%; Some chlorite and ? epidote; Clay minerals 2%; Biotite fairly fresh
100916	40 to 50 ft.	11	15	80	3	1	Brown & Black biotite; White Mica 3%; Clay minerals 1%
100917	50 to 60 ft.	12	20	75	5	1	Biotite fairly fresh
100918	60 to 70 ft.	10	15	75	3	1	Biotitic → White Mica; White Mica 1%; Clay minerals 3%
100919	70 to 80 ft.	22	25	72	1	1	Biotite → White Mica; White Mica 1%
100920	80 to 90 ft.	12	25	65	3	tr	"Strange" green mineral; Biotite → White Mica; White Mica 3%; Clay minerals 5%
100921	90 to 100 ft.	4	30	60	7	tr	Biotite fairly fresh; Clay minerals 1%
100922	100 to 110 ft.	11	15	80	3	tr	Biotite fairly fresh
100923	110 to 120 ft.	7	15	85	1	tr	"Strange" green mineral; black biotite going to brown; White Mica 2%
100924	120 to 130 ft.	8	15	80	1	1	Biotite → Chlorite; "Strange" green mineral
100925	130 to 140 ft.	3	15	80	2	tr	Biotite and ? hornblende; White Mica 5%
100926	140 to 150 ft.	10	10	85	1	tr	Biotite → White Mica; White Mica 2%; Clay Minerals 3%



Sample Number	Interval	ppm Mo	% Quartz	% Feldspar	% Mafics	% Pyrite	Alteration, Mineralization, other Remarks
100927	150 to 160 ft.	20	10	75	1	1	Black Biotite → Brown Biotite; Some chlorite; 10% white clay minerals; White Mica 1%
100928	160 to 170 ft.	6	20	75	2	tr	Biotite → chlorite
100929	170 to 180 ft.	14	30	65	3	2	"Strange" green mineral; Black biotite → chlorite or Brown biotite
100930	180 to 190 ft.	9	35	60	3	2	Biotite fresh
100931	190 to 200 ft.	5	35	60	2	1	Biotite → chlorite
100932	200 to 210 ft.	8	20	60	1	1	White clay minerals/3%; ? Flake Molybdenum
100933	210 to 220 ft.	0	25	50	tr	tr	Biotite → chlorite; White clay minerals 25%
100934	220 to 230 ft.	0	15	85	tr	tr	
100935	230 to 240 ft.	4	25	75	1	tr	Magnetite; Biotite → Chlorite
100936	240 to 250 ft.	4	25	70	2	1	Some chlorite but biotite relatively fresh
100937	250 to 260 ft.	7	15	80	5	tr.-1	Some chlorite but biotite relatively fresh
100938	260 to 270 ft.	5	25	65	10	tr	Clay minerals tr.; Some chlorite but biotite relatively fresh
100939	270 to 280 ft.	7	20	75	3	1	Clay minerals 3%; biotite fairly fresh
	END OF HOLE						

Sample Number	Interval	ppm Mo	% Quartz	% Feldspar	% Mafics	% Pyrite	Alteration, Mineralization, other Remarks
99201	27 to 40 ft.	5	20	75	5	tr	Black Biotite with some alteration to chlorite; ? Magnetite; Clay minerals 1%; "Strange" green mineral
99202	40 to 50 ft.	22	10	85	2	tr	Some alteration of biotite; Feldspar going to clay minerals; Clay minerals 3%
99203	50 to 60 ft.	7	10	85	5	tr	Flake molybdenum; Black biotite with some alteration to chlorite; Some brown biotite
99204	60 to 70 ft.	5	30	65	2	tr	Biotite → Chlorite; Clay minerals 1%
99205	70 to 80 ft.	4	15	80	2	tr	Black Biotite → Chlorite & Brown Biotite; Feldspar → clay minerals; Clay minerals 2%
99206	80 to 90 ft.	6	10	85	1	tr	White Mica 1%; Clay minerals 5%; Feldspar → Clay minerals; Biotite → Chlorite
99207	90 to 100 ft.	4	10	75	3	tr	Clay Minerals 5-10%; Feldspar → Clay Minerals; Biotite → Chlorite
99208	100 to 110 ft.	7	15	70	3	tr	Biotite → Chlorite; Clay minerals 10%
99209	110 to 120 ft.	7	15	75	10	-	Biotite → Chlorite; Clay minerals 1%
99210	120 to 130 ft.	4	15	85	2	tr	Biotite → Chlorite
99211	130 to 140 ft.	5	20	70	10	1	Biotite → Chlorite
99212	140 to 150 ft.	11	15	80	3	tr	Biotite with some alteration to Chlorite; Clay minerals 2%
99213	150 to 160 ft.	4	10	85	2	tr	Biotite fairly fresh; Clay Minerals 5%
99214	160 to 170 ft.	26	20	70	7	tr	Fresh brown & black biotite

Sample Number	Interval	ppm Mo	% Quartz	% Feldspar	% Mafics	% Pyrite	Alteration, Mineralization, other Remarks
99215	170 to 180 ft.	32	15	55	2	-	Clay Minerals 30%
99216	180 to 190 ft.	37	15	80	2	-	Brown & Black Biotite; 3% Clay minerals
99217	190 to 200 ft.	20	15	80	2	-	Clay Minerals 1%
99218	200 to 210 ft.	24	15	70	10	-	Biotite → Chlorite; Clay Minerals 5%
99219	210 to 220 ft.	14	10	80	2	tr	White clay minerals 10%
99220	220 to 230 ft.	23	30	60	7	-	Black biotite fairly fresh
99221	230 to 240 ft.	29	10	75	2	-	Biotite fresh; Clay minerals 10%
99222	240 to 250 ft.	32	10	70	2	tr	Biotite fresh; Clay minerals 15%; Flake Molybdenum
99223	250 to 260 ft.	33	10	85	3	tr	Clay minerals 3%; Biotite → chlorite
99224	260 to 270 ft.	32	15	75	3	1	Biotite → Chlorite; White Mica 1%; Clay minerals 5%
99225	270 to 280 ft.	18	10	75	2	-	Clay Minerals 10%; Biotite → Chlorite
99226	280 to 290 ft.	13	10	85	5	-	Some biotite → chlorite; Feldspar → Clay Minerals; Clay Minerals 2%
99227	290 to 300 ft.	10	10	70	10	-	Biotite fairly fresh; Clay minerals 10%
99228	300 to 310 ft.	14	15	75	2	-	Clay minerals 5-10%



Sample Number	Interval	ppm Mo	% Quartz	% Feldspar	% Mafics	% Pyrite	Alteration, Mineralization, other Remarks
99258	14 to 30 ft.	16	94	<1	4	-	1% fine magnetite in rusty quartz.
99259	30 to 40 ft.	6	95	<1	4	-	Brown biotite fresh; Fine magnetite
99260	40 to 50 ft.	8	97	<1	2	-	Brown-black biotite fresh; Trace magnetite.
99261	50 to 60 ft.	6	96	<1	3	-	Magnetite; Quartz rusty
99262	60 to 70 ft.	7	97	<1	2	-	Brown biotite fresh; Quartz rusty and weathered
99263	70 to 80 ft.	9	96	<1	3	-	Quartz Fe stained; Slightly weathered fine magnetite; Biotite fresh
99264	80 to 90 ft.	6	96	<1	3	<1	Trace muscovite; Quartz has hematite staining; fine magnetite.
99265	90 to 100 ft.	7	97	<1	2	-	Some magnetite; Biotite fresh
99266	100 to 110 ft.	9	97	<1	2	-	Fine magnetite; Rusty stained quartz.
99267	110 to 120 ft.	10	97	<1	2	tr	Quartz rusty stained; Fine disseminated magnetite in quartz.
99268	120 to 130 ft.	34	96	1	3	-	Trace magnetite; Brown and black biotite; Trace muscovite
99269	130 to 140 ft.	15	96	1	2	<1	<1% Clay; Biotite fresh
99270	140 to 150 ft.	24	97	1	2	-	Biotite fresh; Magnetite
99271	150 to 160 ft.	-	98	tr	1	tr	Fine magnetite; Biotite fresh

Sample Number	Interval	ppm Mo	% Quartz	% Feldspar	% Mafics	% Pyrite	Alteration, Mineralization, other Remarks
99272	160 to 170 ft.	25	99	<1	<1	-	Trace fine magnetite
99273	170 to 180 ft.	33	97	<1	1	<1	Biotite fresh; Trace chlorite, magnetite
99274	180 to 190 ft.	31	96	<1	3	tr	Trace magnetite; 2 flakes Mo; Quartz rusty; Brown biotite fresh
99275	190 to 200 ft.	12	97	<1	1	tr	Trace sericite and clay
99276	200 to 210 ft.	15	97	<1	2	-	Trace chlorite
99277	210 to 220 ft.	10	97	1	1	tr	Trace chlorite; Magnetite → hematite
99278	220 to 230 ft.	58	97	1	1	1	Biotite → chlorite; Magnetite → hematite
99279	230 to 240 ft.	18	96	2	2	tr	Biotite → chlorite; Feldspar → clay
99280	240 to 250 ft.	31	96	2	2	tr	Biotite → chlorite; Feldspar → clay; Trace magnetite
99281	250 to 260 ft.	20	96	3	1	-	5% Chlorite; Trace sericite
99282	260 to 270 ft.	7	93	6	tr	tr	Trace chlorite; Sericite, pyrite; chalcopyrite, sericite
99283	270 to 280 ft.	13	93	5	1	tr	Trace chlorite; pyrite, sericite, magnetite
99284	280 to 290 ft.	25	94	4	1	tr	Trace chlorite, pyrite
99285	290 to 300 ft.	45	92	6	1	tr	1% Chlorite; Trace sericite



Sample Number	Interval	ppm Mo	% Quartz	% Feldspar	% Mafics	% Pyrite	Alteration, Mineralization, other Remarks
99289	16 to 30 ft.	6	92	3	3	2	Biotite → chlorite, 1% chlorite; Abundant Fe stain
99290	30 to 40 ft.	5	90	4	6	tr	Biotite → chlorite;
99291	40 to 50 ft.	2	90	3	7	-	Biotite fresh; Feldspar → clay; 10% pink quartz
99292	50 to 60 ft.	2	93	3	4	-	Trace chlorite; 50% feldspar → clay; 20% pink quartz
99293	60 to 70 ft.	5	94	3	3	tr	Trace chlorite; Feldspar → clay
99294	70 to 80 ft.	4	95	3	5	<1	Trace chlorite; Feldspar → clay; trace epidote?
99295	80 to 90 ft.	4	95	.5	4	.5	Biotite fairly fresh; trace chlorite; 5% pink quartz
99296	90 to 100 ft.	4	95	1	3	1	Biotite → chlorite; 10% pink quartz
99297	100 to 110 ft.	5	95	1	3	1	Biotite → chlorite; Feldspar → clay
99298	110 to 120 ft.	4	96	2	2	tr	Trace chlorite
99299	120 to 130 ft.	3	95	<1	5	tr	Biotite fresh; Trace epidote
99300	130 to 140 ft.	3	95	<1	5	<1	Biotite fresh; Trace chlorite and epidote?
99301	140 to 150 ft.	3	94	1	5	tr	Biotite → chlorite, Trace epidote?; 1% Fe stained quartz
99302	150 to 160 ft.	4	94	2	4	-	Biotite fresh; Trace chlorite; Trace epidote?



Sample Number	Interval	ppm Mo	% Quartz	% Feldspar	% Mafics	% Pyrite	Alteration, Mineralization, other Remarks
99303	160 to 170 ft.	4	95	1	4	-	Biotite fresh; Trace clay
99304	170 to 180 ft.	5	90	5	5	-	Biotite fresh; Trace chlorite; 1% feldspar → clay
99305	180 to 190 ft.	4	90	3	7	-	Biotite → chlorite; Feldspar → clay; 2% quartz pink
99306	190 to 200 ft.	3	90	3	7	-	Biotite fresh; 1% pink quartz; Feldspar → clay
99307	200 to 210 ft.	4	93	4	3	-	Trace chlorite; Feldspar → clay; 5% of quartz Fe stained
99308	210 to 220 ft.	2	95	2	3	-	Biotite fresh; Trace chlorite; Clay; Pink quartz
99309	220 to 230 ft.	3	97	1	2	tr	Biotite fresh
99310	230 to 240 ft.	2	96	2	2	-	Biotite fresh; Trace chlorite; Trace magnetite
99311	240 to 250 ft.	6	96	2	2	-	Trace grey calcite
99312	250 to 260 ft.	4	96	1	3	tr	Biotite fresh; 1% black quartz
99313	260 to 270 ft.	4	94	2	4	tr	Biotite fresh; 5% black quartz; Trace magnetite
99314	270 to 280 ft.	3	96	<1	4	tr	Trace chlorite; Trace Fe stain on quartz
99315	280 to 290 ft.	3	95	1	4	tr	Trace chlorite; Black biotite looks fresh
99316	290 to 300 ft.	3	95	2	3	tr	20% black quartz; Trace sericite



APPENDIX B

ITEMIZED COST STATEMENT

OSP 81-3 GROUP

STAFF SALARIES

D. L. Cooke	(Report)	2 days @ \$251.33	=	\$ 502.66	
H. P. Wilton	(Field)	7 days @ 233.93	=	1,637.51	
	(Office)	3 days @ 233.93	=	701.79	
R. K. Stelck		2 days @ 117.92	=	235.84	
R. L. Mawer		2 days @ 80.96	=	161.92	
M. L. Serak		1 day @ 94.40	=	94.40	
D. L. Kuran		7 days @ 117.92	=	<u>825.44</u>	\$ 4,159.56

PERCUSSION DRILLING

Contract Charges	10,811.00
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BULLDOZING

Access and Site Preparation	4,586.60
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ASSAYS AND ANALYSES

Geochemical Analyses - 62 samples @ \$4.65	288.30
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DOMICILE

Expense Accounts	2,575.00
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TRANSPORTATION

Truck Rental	<u>1,667.03</u>
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TOTAL EXPENDITURES	<u><u>\$24,087.49</u></u>
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D, L. Cooke  
December 8, 1981

APPENDIX C

STATEMENT OF QUALIFICATIONS

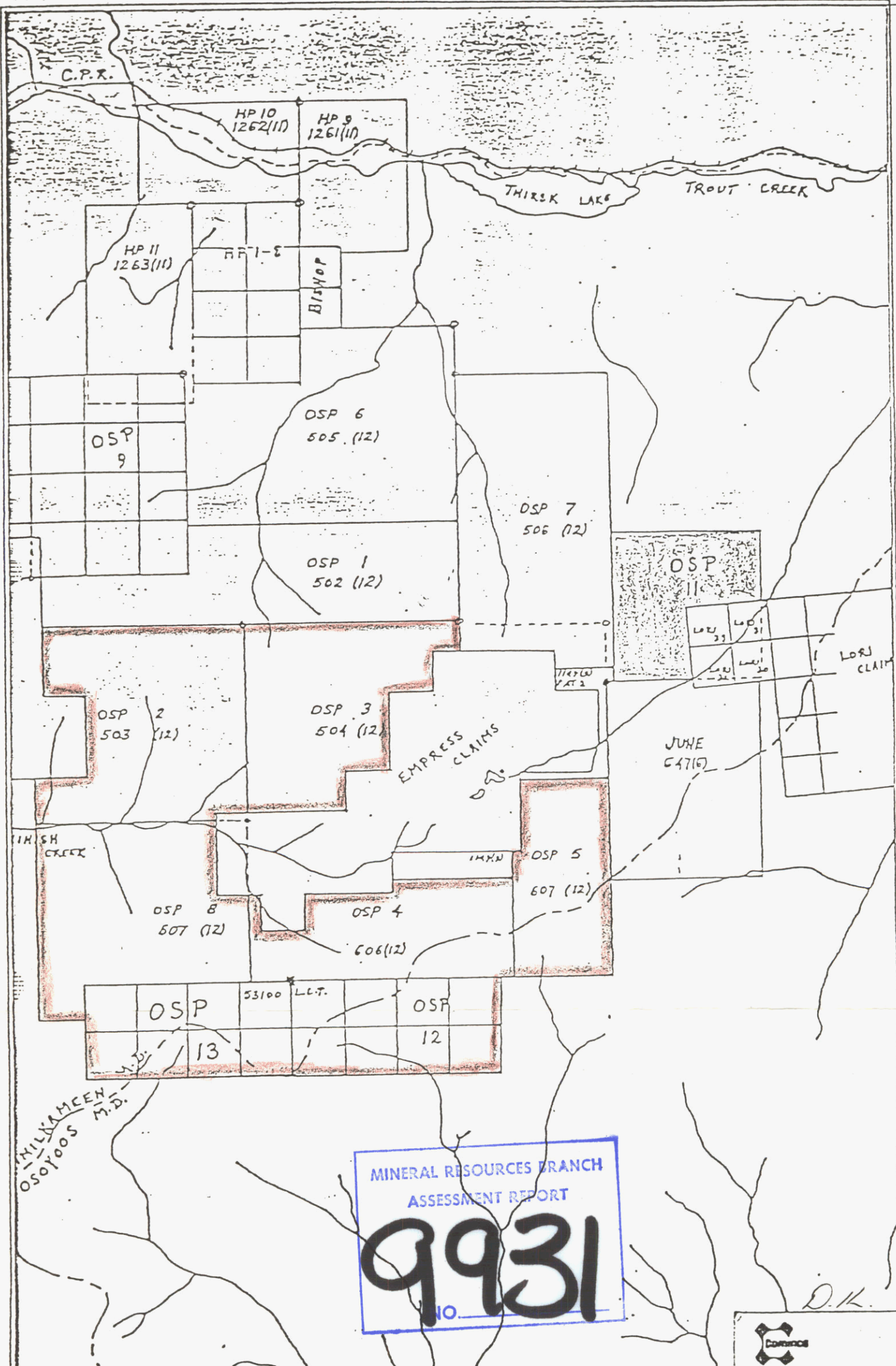
I, D. L. KURAN OF THE CITY OF VANCOUVER IN THE PROVINCE OF BRITISH COLUMBIA,  
DO HEREBY CERTIFY:-

- 1) THAT I am a Geologist presently residing at 101 - 1742 Pendrell Street, Vancouver, B.C., with a business address of 700 - 409 Granville Street, Vancouver, B.C.
- 2) THAT I am a graduate in Geology with a BSc. from the University of Manitoba in 1978.
- 3) THAT I have practiced my profession since May, 1979.

DATED THIS            DAY OF DECEMBER, 1981 AT VANCOUVER, BRITISH COLUMBIA

Signed: *Dave Kuran*  
D. L. KURAN

15 December 1981



MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
**9931**  
 No.

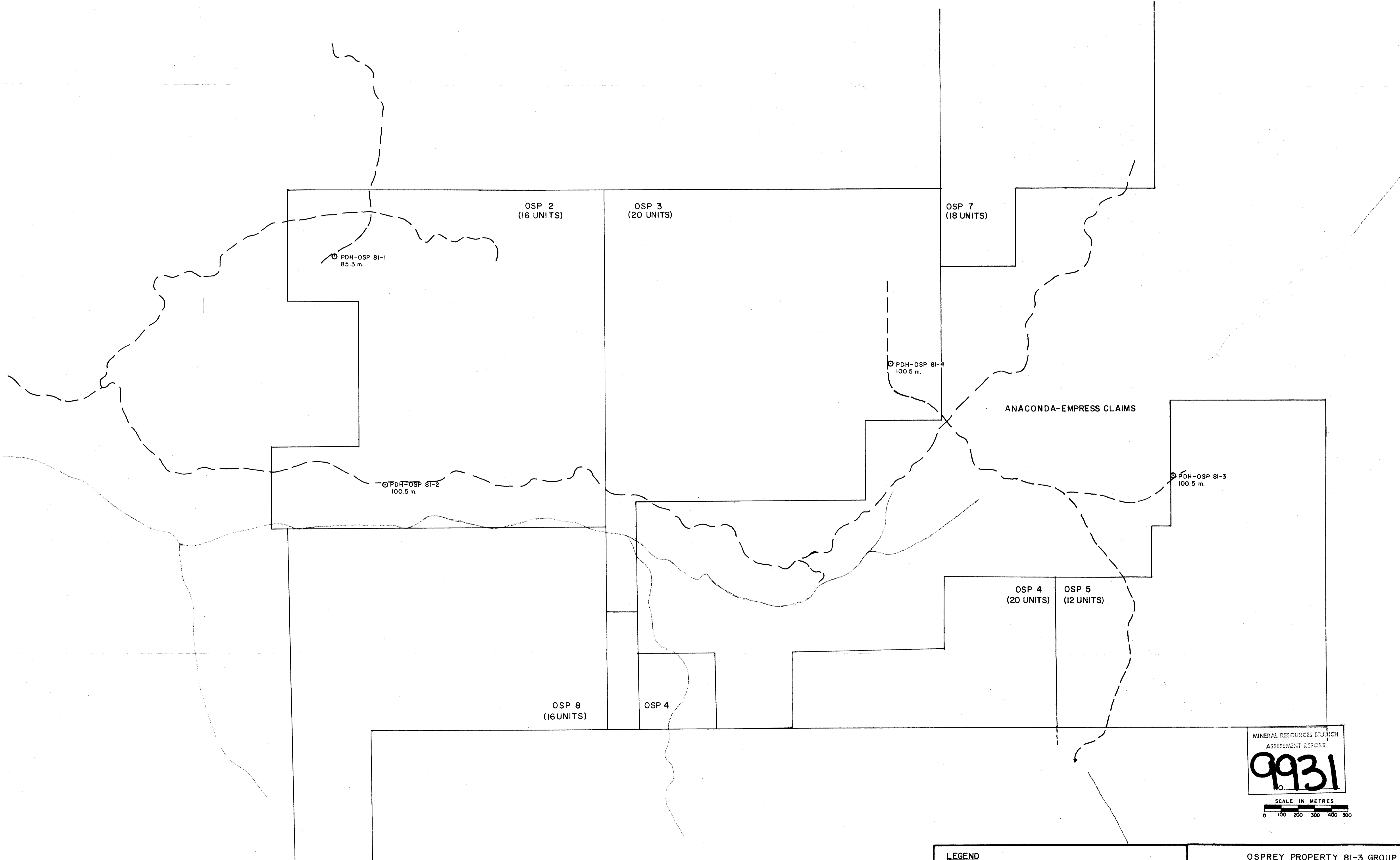
D.K.



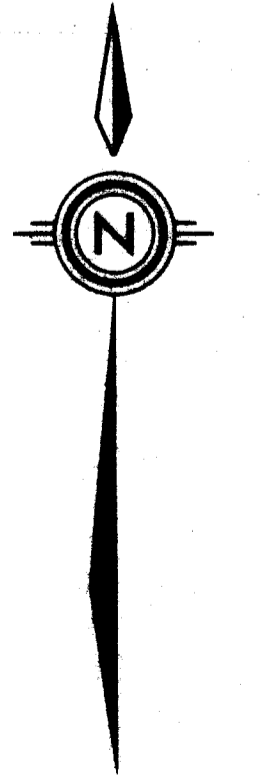
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Revised by	Date	Revised by	Date

OSPREY PROPERTY  
 OSP-81-3 GROUP  
 INDEX MAP

Scale: 1:50,000      Date: DEC 15, '81      Plate: 81-1



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**9931**  
SCALE IN METRES  
0 100 200 300 400 500



<b>LEGEND</b>		<b>OSPREY PROPERTY 81-3 GROUP</b>	
— CLAIM BOUNDARY	— ROADS	Drawn by:	Traced by:
— STREAMS	○ PERCUSSION DRILL HOLE	Revised by:	Revised by:
		Date:	Date:
		Scale:	1/10,000
		Date:	DEC. 11, 1981
		Plate:	81-3