## COMINCO LTD.

EXPLORATION NTS: 82E/5 WESTERN DISTRICT July 25, 1984

ASSESSMENT REPORT

ON ASOIL GEOCHEMICAL SURVEY

OF THE DEANNA PROPERTY

OSOYOOS M.D., B.C.

(work performed June 16 to July 25, 1984)

LONGITUDE: 119°54'33"W

LATITUDE: 49021'35"N

REPORT BY:

D.T. MEHNER

GEOLOGICAL BRANCH ASSESSMENT REPORT

12,583

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EXPLORATION NTS: 82E/5 WESTERN DISTRICT July 25, 1984

## ASSESSMENT REPORT

#### ON A SOIL GEOCHEMICAL SURVEY

## OF THE DEANNA PROPERTY

OSOYOOS M.D., B.C.

#### SUMMARY

The Deanna claims cover a stratabound Au prospect on Apex Mountain 28 km SW of Penticton B.C. In mid June access to the property was cleared, a cut grid in preparation for a later IP survey was started and contour soil geochem sampling completed. The results of this work indicate 8 weak but anomalous Au values in the 11 to 42 ppb range occur at the eastern end of the Apex Mountain ridge and in the cirque to the immediate south. Twenty-one As values in the 51 to 381 ppm range were obtained from the same area. The source of the anomalous values is unknown.

#### INTRODUCTION

The Deanna claim group covers stratabound Au bearing pyrrhotite mineralization occurring in Upper Paleozoic to possibly Triassic sediments and volcanics, 28 km south-west of Penticton B.C.(Plate 1). From June 16 to June 25, 1984, 158 soil samples were collected from 8 km of contour soil lines, 8.3 km of cut grid line were put in and 2.9 km of access road to the work area were cleared. Work was carried out by John Donahue, Chris Suggitt and David Mehner.

#### LOCATION AND ACCESS

The Deanna claim group is centered on Apex Mountain, 12 km east of Hedley and 28 km SW of Penticton, B.C. The claims are immediately south of Apex Mountain Provincial Park, situated at 119054'33" W longitude, 49021'35" N latitude.

Access is via 35 km of paved and gravel road from Penticton to Apex Alpine Ski Resort and then a further 5 km along a bush road to Apex Mtn. Alternate access is via 10 km of 4 wheel drive road along Cedar Creek which leaves Hwy. 3, 3.6 km north of Olalla.

#### TOPOGRAPHY AND VEGETATION

Within the Deanna property topography varies from gently dipping, west facing slopes on the west side of Apex Mtn. to relatively steep dipping, north, south and east facing slopes (up to 30°) in the cirques on the east side of Apex Mtn. Elevation varies from 1580 m along South Keremeos Creek at the south eastern corner of the claim group to 2247 m above sea level at the top of Apex Mtn.

The central part of the property is above tree line. Lower elevations grade from heavily forested with spruce, fir, minor poplar and willows in cirque bottoms to sub-alpine spruce along the mountain slopes.

Aside from spring run-off, water supply within the Deanna property is limited to two small ponds at the headwaters of South Keremeos Creek and the creek itself.

#### PROPERTY AND OWNERSHIP

The Deanna property is located in the Osoyoos Mining Division and consists of 5 claims and 9 reverted crown grants, 8 of which make up three mineral leases. The are:

CLAIM	REC.NO.	UNITS	DUE DATE
Deanna	765	20	June 27/84
Deanna 2	1197	15	Aug. 12/84
Deanna 3	1198	15	Aug. 12/84
Deanna 4	1199	4	Aug. 12/84
Deanna 5	1510	18	Mar. 9/85
REVERTED CROWN GRANT		LOT NO.	DUE DATE
White Grouse		551 <sup>8</sup>	July 2/85
MINERAL LEASE		LOT NO.	DUE DATE
M - 107	256 <sup>S</sup>	(Independence)	Jan. 6/85
	659 <sup>S</sup>	(Apex)	Jan. 6/85
	1101 <sup>8</sup>	(Goldsmith)	Jan. 6/85
	1102 <sup>S</sup>	(Nelson)	Jan. 6/85
M - 116	1103 <sup>8</sup>	(Nelson Fr.)	Aug. 21/84
M - 120	694s	(Acacia)	Nov. 15/84
	695s	(Acadia)	Nov. 15/84
	692s	(Utopia)	Nov. 15/84

#### PREVIOUS WORK

The first recorded work carried out on Apex Mtn. was done in 1902 when McMillan and others made a number of small surface cuts and obtained values up to 7.7% Cu. 2.8 oz/ton Aq and 0.58 oz/ton Au(Cawthorn, 1982).

They worked the ground extensively until at least 1904, exposing numerous chalcopyrite and arsenopyrite showings.

In 1912 the property was obtained by Pickard, Rodgers and Shatford and a contract was let to put in a drift from the bottom of an existing shaft. This likely was the #2 Adit and shaft on the Acacia crown grant. From 1938 to 1939 the Kelowna Exploration Co. Ltd. held the ground. Under the direction of Paul Billingsly they drove a 487 m long adit(The Main Adit) under several Au-bearing pyrrhotite lenses on the Nelson crown grant. In 1945 the property was optioned by Hunston and McLeod and 109 tons of ore yielding 185 oz of Au, 54 oz of Ag and 1518 lbs of Cu were mined from the #2 Adit and shaft. The property remained idle until 1966-67 when Apex Exploration and Mining Co. carried out a ground magnetometer survey and drilled at least three underground holes in the Main Adit(results unavailable). In 1979 Union Carbide optioned the property and carried out a program of geological mapping, rock and soil geochem sampling, ground magnetometer and VLF surveys, trenching and 541.1 m of diamond drilling in seven holes(Korenic, 1982). Cominco optioned the property in 1983 and has since carried out geological mapping and rock geochem sampling in the #2 Adit area(Mehner, 1984).

### GEOLOGY

The area covered by the Deanna and Hex mineral claims(Plate 2) contains a section of Upper Paleozoic to Lower Triassic stratigraphy that includes cherts and greenstones of the Independence Formation, chert, tuff and greenstone of the Shoemaker Formation and Greenstone and minor diorite of the Old Tom Formation. Upper Triassic, Nicola Group argillites, limestones, marbles and coarse clastics overly the sequence to the northwest. Jurassic diorite to granodiorite of the Okanagan Intrusive Complex intrude the entire stratigraphy as dykes and sills and bound the section to the north and west.

Mineralization consists of finely disseminated pyrrhotite(≤5%) with minor pyrite and trace arsenopyrite and chalcopyrite in interbedded chert-dacite tuff beds. Disseminated pyrrhotite(≤15%) is found in hornblende diorite porphyry dykes and 15% disseminated pyrrhotite, 2% chalcopyrite and minor scheelite occurs in skarn zones developed within marble beds. Pods of massive and semi-massive pyrrhotite (≤4 m wide) with minor chalcopyrite and arsenopyrite overly marble beds throughout the stratigraphy.

#### GEOCHEMISTRY

### SOIL GEOCHEMISTRY

As an initial step in evaluating ground on the east side of the Deanna claim group 4 contour soil lines totalling 8 km in length(Plate 3) were put in between June 18-21 1984.

A total of 158 samples were collected at 50 meter intervals from lines put in at the 5900 and 6300 ft elevations on the west side of Keremeos Creek and 5600 and 6000 ft elevations on the east side of Keremeos Creek. Samples collected were analyzed for Au and As by Cominco's laboratory in Vancouver. Results are listed in Appendix "B" and sample locations and results are shown on Plate 3.

All samples were collected from the "B" soil horizon whenever present. In cases where none was obtainable an analysis was made of the available material. In most places the samples were obtained from a medium to dark brown coloured, poorly developed soil horizon that consists largely of finely ground rock material. Aside from line B1, most sample sites were organic deficient and dry. Sample depths range from 10 to 35 cm but average about 25 cm.

Samples are air dried and then sieved through 80 mesh screens. Gold analysis are made using aqua regia decomposition followed by solvent extraction and atomic absorption. Arsenic values are determined using pyrosulphate fusion followed by a colorimetric technique. Coefficients of variation are 10-15%.

The results of the soil contour sampling indicate Au values are relatively low with only 11 of 158 samples containing between 11 and 58 ppb. These values tend to be scattered over the area tested although a cluster of five anomalous values occur at the east end of the Apex Mountain ridge and another three occur in the cirque immediately south of the ridge.

Arsenic values show a greater dispersion with 21 of 158 samples containing between 50 and 381 ppm. Twenty of these samples encompass the two anomalous Au zones at the east end of the Apex Mountain ridge and in the cirque to the immediate south.

The source of the anomalous values is unknown although it is probably related to the sulphide mineralization seen elsewhere on the property.

A summary of the soil geochem data obtained is as follows:

	Range	Mean	Median	Mode
Au(ppb)	<10-58	<b>&lt; 10</b>	<b>ح10</b>	∠10
As(ppm)	< 2-381	33	14	4

#### GRID PREPARATION

In addition to the geochem sampling 8.3 km of a proposed 40 km grid were put in by June 25, 1984 in preparation for an IP survey to start in July. The baseline was established with topochain, compass and theodolite. Picket lines were turned off at 90° with the theodolite. The lines are marked by flagging and painted wooden pickets every 25 meters and have been cleared by chainsaw and axe. The location of the lines is shown on Plate 3.

#### ROAD CLEARING

In order to gain access to the grid area 2.9 km of road were cleared of fallen trees, boulders and snow drifts. All work was done by hand with those portions of the road cleared shown on Plate 3.

#### CONCLUSIONS

One hundred fifty eight soil samples were collected from four contour soil lines on the Deanna property. Values range from <0-58ppb Au and <2-381ppm As. Weak but anomalous values up to 42 ppb Au and 381 ppm As cluster near the east end of the Apex Mtn. ridge and in the cirque to the immediate south. The source of the anomalous values is unknown.

#### REFERENCES

Cawthorn, N.G., 1982. A Geological Report on the Apex Mountain Property(Brewer Option), Osoyoos M.D., B.C.: Union Carbide Exploration Corp. private report.

Korenic, J.A., 1982. 1982 Property Evaluation and Diamond Drilling Report, Apex Project; Du Pont of Canada Exploration Ltd. private report.

Little, 1961. Map 15-1961; Geology Kettle River(west half) B.C.

Mehner, 1984. Assessment Report on a Rock Geochemical and Geological Mapping Survey of the #2 Adit Area, Deanna Property, Acacia Crown Grant, Osoyoos M.D., B.C.

Reported by:

D.T. Mehner, Geologist II

Endorsed by:

W.J. Wolfe, Assistant Manager Exploration, Western District

Approved for Release by:

G. darden, Manager

Exploration, Western District

Distribution: Dept. of Mines(2) Vancouver(1) Vernon(1)

# APPENDIX "A"

# STATEMENT OF EXPENDITURE

# WORK ON THE DEANNA CLAIMS

SALARII	ES
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SALARIES	
John Donahue 8 days @ \$122/day	976.00
June 16,18-23,25, 1984	
Chris Suggitt 5 days @ \$122/day	610.00
June 18,21-23,25, 1984 David Mehner 4 days @ #204/day	816.00
June 21-23, July 24, 1984	010100
GEOCHEMISTRY	
158 Soil samples for Au, As @ \$9.75 ea.	1,540.50
TRANSPORTATION	
9 truck days @ \$44/day	396.00
DOMICILE	
Rent for 8 days @ \$20/day	160.00
16 man days @ \$17/man day	272.00
MISCELLANEOUS	
Pickets, paint, metal tags, flagging,	
sample bags, shipping	100.00

\$ 4,870.50

# APPENDIX "B"

# CONTOUR SOIL LINE GLUCHEM VALUES

DEANNA

Job V84- 02728 cz698

REPORTIN	NG DATE 9 JUL	1984				0 269 \$	
SAMPLE NUMBER	FIELD NUMBER	TYPE MAP/ ZONE	EASTING	NORTHING	Au PPS	WT AU GRAM	As PPM
			170	us 20 filologica (september 2015) kali teritiri. Para filologica (september 1 filologica) filologica (filologica)		STATE SA NOT THE STATE OF THE S	
\$84 03266		S	B1	+100	<10	10	9
S84_03267		- S	Bi	+150	(10	10	12
584 03268		S	Bi	+200	<10	10	11
S84 03269		S	B1	+250	<10	10	12
S84 03270		S	B1	<b>÷300</b>	<10	10	18
S84 03271		S	B1	+350	(10	10	10
SB4 03272		S	B1	+400	<10	10	7
S84 03273	* / ***********************************	- S	B1	+450	(10	10	10_
584 03274		S	Bi	+500	<10	10	7
S84 03275		S	B1	+550	(10	10	6
S84 03295		S	B1	+600	(10	10	10
S84 03296		S	B1	+650	<10	10	7
FT4 03297		S	B1	+700	(10	10	11
5€4 0329B		S S	B1	+750	<10	10	7
S84 03299 -			B1_	+800	<10	10	8
984 03300		S	B1	+850	26	10	B
SB4 03301		s s	B1	+950	(10	10	6
S84 03302		S	Bi	+1000	<10	10	14
S84 03303		S	B1	+1050	(10	10	9
S84 03304		S S	B1	+1100	<10	10	3
S84 03305		S	B1	+1150	(10	10	3
S84 03306		S	B1	+1200	<10	10	
584 03307		S	BI	+1250	(10	10	2 5 3
S84 03308		S	B1	+1300	<10	10	3
584 03309		S	B1	+1350	(10	1.0	11
S84 03310		5 5 5 5	B1	+1400	<10	10	ß
584 03311	84 4 (- 414 (1) + 4 (1) + 11 (1) (1) (1) (1) (1) (1) (1) (1) (1)	S	B1	+1450	(10	10	4
S84 03312		S	B1	+1500	<10	10	4
584 03313		S	B1	+1550	(10	10	3
S84 03314		Š	B1	+1600	₹10	10	7
S84 03315		S	B1	+1.650	(10	10	6
584 03316		G	B1	+1700	(10	10	
584 03317 -		S S	B1	+1750	(10	_ 10	4
584 03318			B1	+1800	(10	10	5 2
584 03319		s s s	B1	+1850	(10	10	4
SB4 03320		9	B1				6
S84 03321		9		+1900	<10	10	4
		S	B1	+1950	(10	10	3
SP4 03322		5	B1	+2000	<10	10	2

As PPM	WT AU GRAM	AU PPB	NORTHING	EASTING	ZONE	NUMBER TYPE	FJELD	MPLE IMBER	
4	10	<10	+0	B2		S		03276	4
(2	10	58	+50	B2		S		03277	
7	10	(10	+100	B2		S		03278	
- 4	10	(10	+150	B2		S		03279	
11	10	(10	+200	B2		S		03280	
(2	10	(10	+250	B2		S		03281	
4	10	(10	+300	B2		S		03282	
14	10	(10	+350	B2		S		03283	
16	10	<10	+400	B2		S			- DT- OLD
13	10	(10	+500	B2	-	S		03285	T
9	10	<10	+550	B2		S		03286	
5	10	(10	+600	B2		S		03287	
1	10	(10	+650	B2		S		03288	

-							
S84	03325	S	B3	+0	(10	10	295
S84	03326	S	B3	+50	<10	10	20
S84	03327	S	B3	+100	(10	10	21
S84		S	B3	+150	(10	10	75
_S84	03329	S S S S	B3	+200	(10	10	58
584	03330	S	B3	+250	20	10	72
584	03331	S	B3	+300	(10	10	30
S84		S	B.3	+350	<10	10	23
584		S	B3	+400	(10	10	32
584		S	B3	+450	(10	10	30
S84		S S S S	B3	+500	22	10	44
584		S	B3	+550	<10	10	29
S84	03337	 S	B3	+600	30	10	39
	03338	S	B3	+650	<10	10	82
584	03339	S	B3	+700	(10	10	35
584		S	B3	+750	11	10	61
584		S S S S	B3	+800	(10	10	36
	03342	S	B.3	+850	<10	10	27
S84		 S	B3_	+900	(10	10	23
S84	03344	S	B3	+950	<10	10	.31
584	03345	S S	B3	+1000	(10	10	26
584	03236	S	B3	+1050	<10	10	24
984		S	B3-	+1100	(10	10	22
	03238	S	B3	+1150	<10	10	22
	03239	S S	B3	+1200	(10	10	31.
1770							
	· ·						

	MPLE 1BER	FIELD NUMBER	ZONE	EASTING N	ORTHING	AU PPB	MT AU GRAM	AS PPM
584	03240		S	В3	+1250	(10	10	15
34	03241		S	B3	+1300	(10	10	9
584	03242		S	B3	+1350	<10	10	2
584	03243		S	B3	+1400	(10	10	3
	03244		S	B3	+1450	39	10	3
	03245		S	B3	+1500	42		4:
	03246			B3	+1550	<10	10	
	03247		SSS	B3	+1600	(10		1
	03248		S	B3	+1650			1
	03249		S	B3	+1700	(10	10	19
	03250		S	B3	+1750	₹10	10	
	03251		S	В3	+1800	(10		1:
	03252		S	B3	+1850	(10	10	1
	03253			В3	+1900		10	1
	03254		S S S	B3	+1950			1
	03255		30	B3	+2000	(10	10	4
								1
	03403		S	В3	+2050	(10	10	
	03383		S	B3A	+0	(10	10	38
84	0.3384		S	B3A		₹10	10	12
84	03385		S	B3A		(10	10	
84	03386		S	B3A	+150	<10		
84	03387		-S -	B3A	+200	(10	10	
84	03388		S	B3A	+250	<10	10	1
84	03389		S	B3A	+300	(10	10	1
84	03390		S	B3A	+350	<10	10	1
	03391		S	B3A	+400	10	10	2
34	03392		S	B3A	+450	<10	10	2:
84	03393		S	B3A	+500	(10	10	2
	03394		S	B3A		(10	10	1
	03395		S	B3A	+600	(10	10	1
	03396		S	B3A	+650	<10	10	4
	03397		S	B3A	+700	26	10	21
	03398		S	B3A	+750	<10		2
	03399		S	B3A	+800	(10	10	3
	03400		S	B3A	+870	₹10	10	-
	03401		S	B3A	+960	(10	7.3	1
	03402		S	B3A	+1000	(10	10	î
	03367		S	B3A	+1050	(10	10	
	03368		S	B3A	+1100	<10	10	1
84	03369		S	B3A	+1150	(10	10	1
84	03370		S	B3A	+1200	<10	10	2
	03371		S	B3A	+1250	(10	10	
	03372		S	B3A	+1300	<10	10	
	03373		S	B3A	+1350	(10	10	1
	03374		S	ВЗА	+1400	(10	10	
	03375	2 14 2	5		+1450	(10	10	= 4
	03376		S	B3A	+1500	10	10	
	03377		S	B3A	+1550	(10	10	
	03378		Š	B3A	+1600	<10	10	
	03379		S	B3A	+1650	(10	10	
	03380		s	ВЗА	+1700	<10	10	
	03381		S	B3A	+1750	(10	10	
100	A PARTY TO		S	BJA	+1800	(10	10	3

# DEANNA

REPORTING DATE 9 JUL 1984

- T/A V V V V V	AMPLE JMBER	FIELD	NUMBER	TYPE	MAP/ ZONE	EASTING	NORTHING	AU PPB	WT AU GRAM	As PPM
584	03346			S		B4	+0	⟨10	10	46
584	03347			S		B4	+50	(10	10	39
584	03348			. 8		B4	+100	(10	10	59
584	03349			S		B4	+150	(10	10	203
584	03350			S		B4	+200	<10	10	91
<b>SB4</b>	03351			S		B4	+250	10	10	64
584	03352			S		B4	+300	(10	10	34
<b>SB4</b>	03353			S		B4	+350	(10	10	57
584	03354			S		B4	+400	<10	10	46
S84	03355			S		B4	+450	(10	10	38
<b>SB4</b>	03356			S		B4	+500	<10	10	45
<b>SB4</b>	03357			S		B4	+550	(10	10	33
<b>S84</b>	03358			S		B4	+600	(10	10	34
	03359			SSS		B4	+650	(10	10	35
S84	03360			S		B4	+700	<10	10	41
	-03361	14 175				B4		(10	10	
	03362			S		B4	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	<10		
	03363					B4	+850	(10	10	62
1.00	03364			S		B4	+900	(10	10	35
S84	03365			S		B4	+950	(10	10	226
584	03366			S		B4	+1000	20	10	78
584	03404			S		B4A	+0	(10	10	25
184	03405			S	-	B4A	+50	10	10	43
S84	03406			S		B4A	+100	<10	10	45
S84	03407			S		B4A	+150	<10	10	43
584	03408			S		B4A	+200	(10	10	22
	03409			S		B4A	+250	15	10	
	03410			S		B4A		(10		36
	03411			S		B4A		(10		53
	03412			s		B2	+1000	(10	10	19

#### APPENDIX "C"

#### COMINCO LTD.

#### EXPLORATION

WESTERN DISTRICT

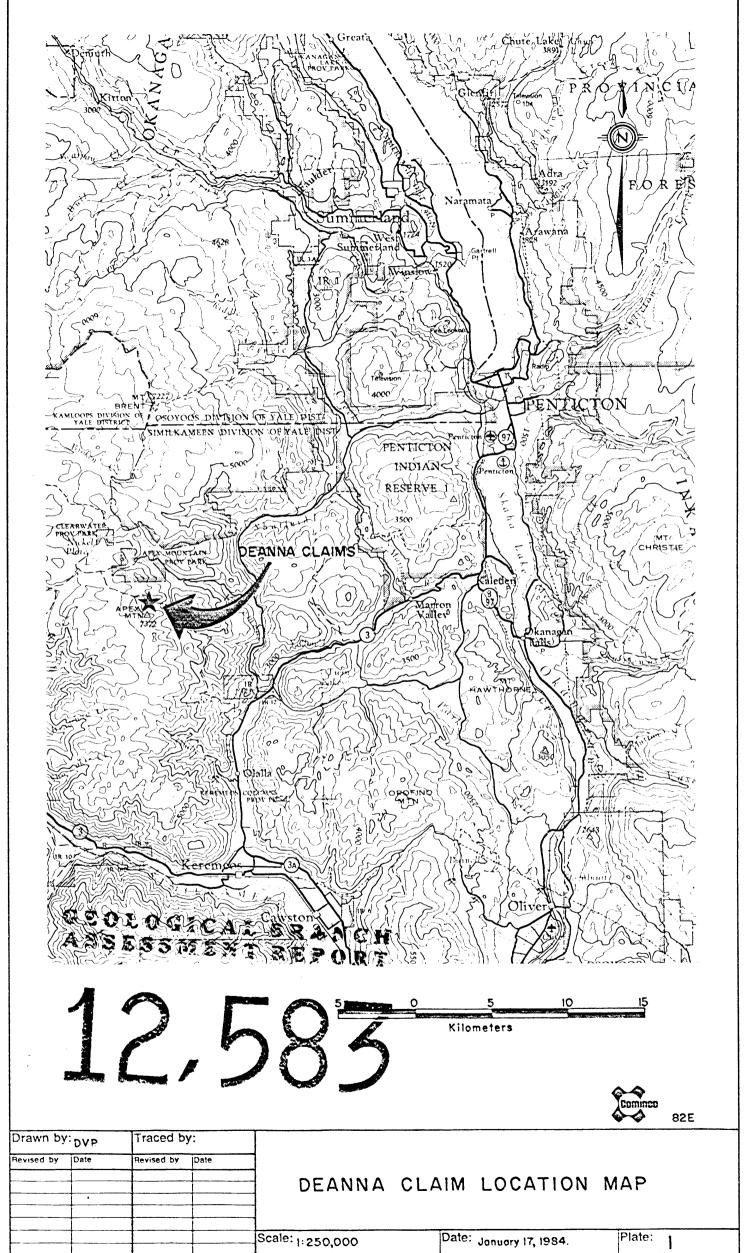
## STATEMENT OF QUALIFICATIONS

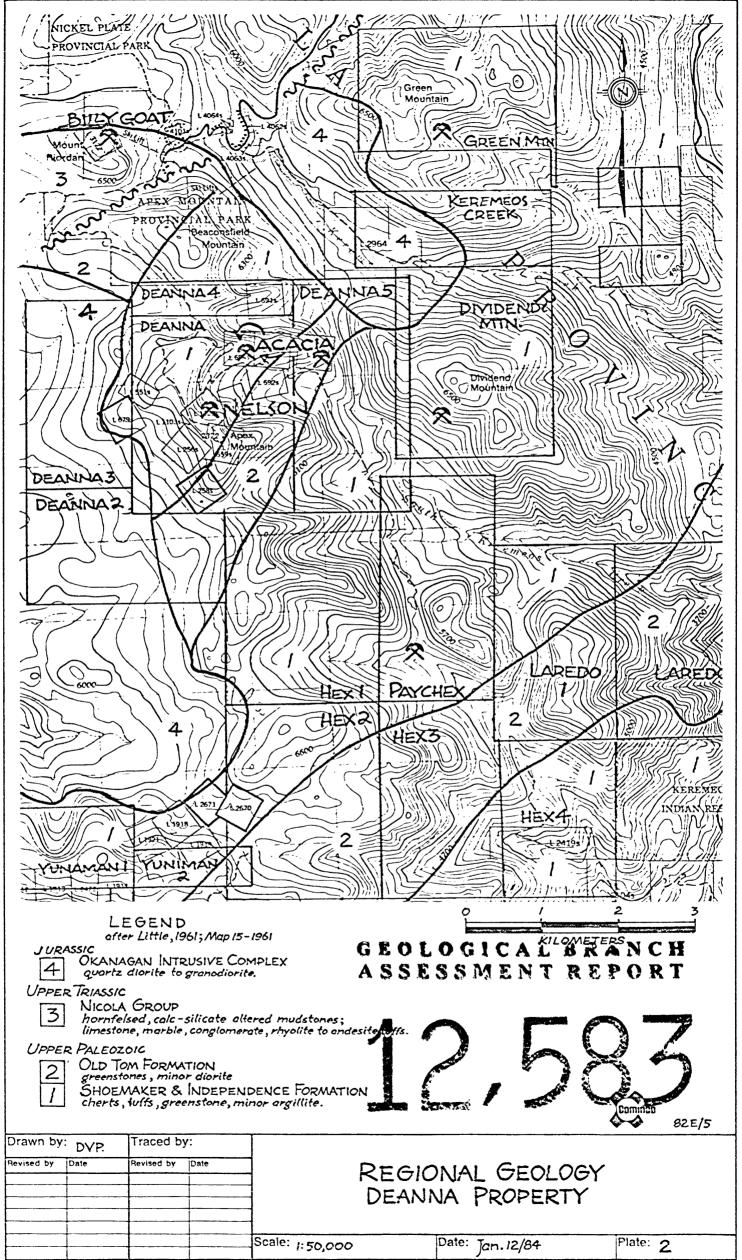
- I, DAVID T. MEHNER, OF THE CITY OF VERNON, BRITISH COLUMBIA, HEREBY CERTIFY:
- THAT I AM a Geologist residing at 6576 Orchard Hill Drive, Vernon, British Columbia, with a business address at 4405 - 28th Street, Vernon, British Columbia.
- 2. THAT I GRADUATED with a B.Sc. Hon. Degree in Geology in 1976 and a M.Sc. Degree in 1982 from the University of Manitoba.
- 3. THAT I HAVE practised geology with Cominco Ltd. from October 1979 to present and as such have a personal knowledge of the facts which I hereinafter depose.

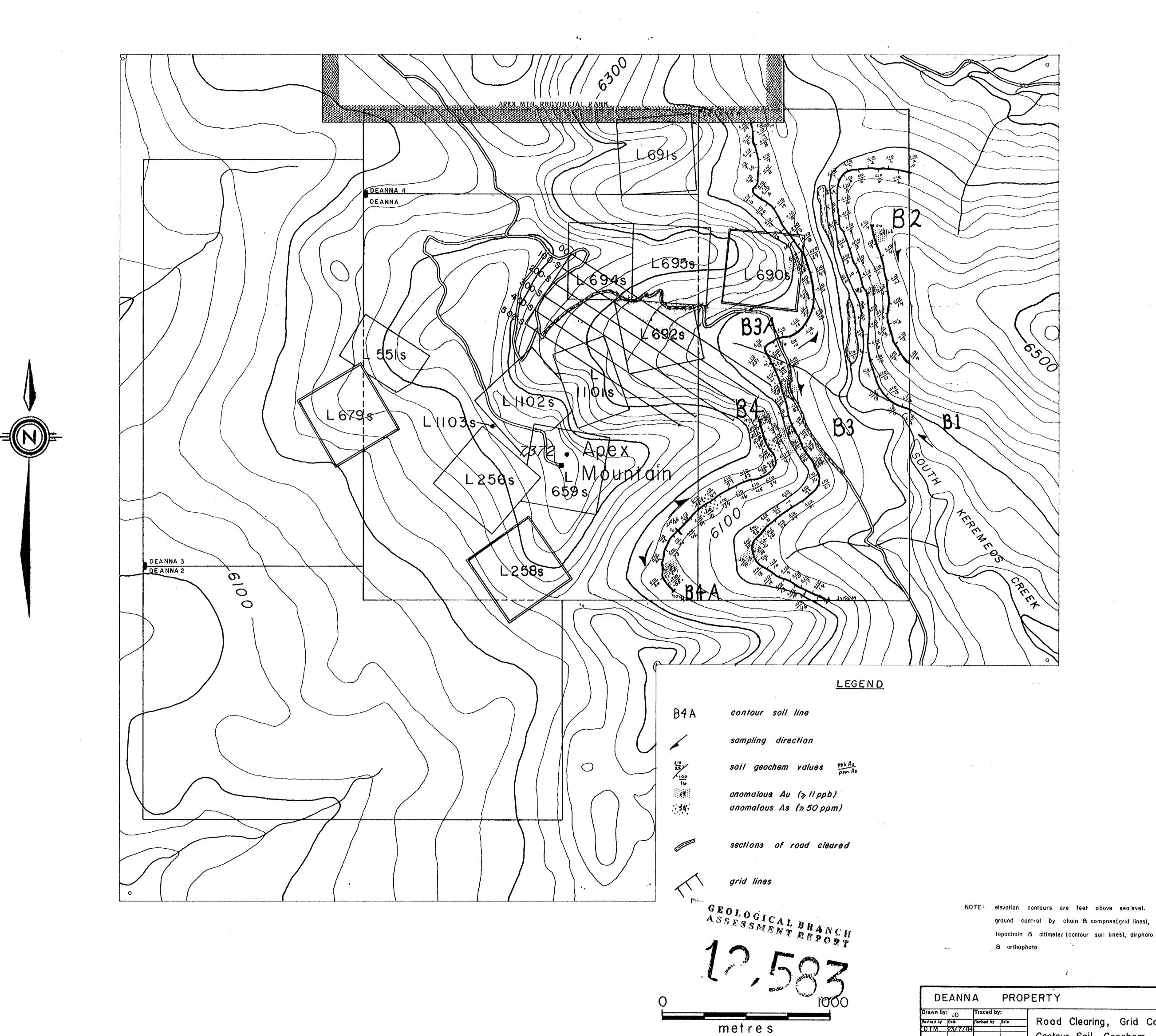
DATED THIS 24th DAY OF JULY, 1984, AT VERNON, BRITISH COLUMBIA.

SIGNED:

David T. Mehner, Geologist







Gunnes 82 E - 5

Orawn by: JD Traced by:

| Play | Scale: 1: 10,000 | Date: JULY 23, 1984 | Plate: 3