

Geochemical and Geological Report

BUNKER CLAIM GROUP

Lat. 49° 03' 30" Long. 117° 24'

Nelson Mining Division

82F3W

Owner: R. Tjader, D. Tjader
Operator: Ryan Exploration Co. Ltd

by

M. A. Kaufman, P. Engineer

KNOX, KAUFMAN, INC.

August - September, 1984

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,758

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INTRODUCTION

The Bunker Claim Group is comprised of two crown-granted claims and fourteen mineral claims situated in the Nelson Mining Division.

The Bunker mine area is situated approximately 9.5 kilometers NW of Nelway, at elevations from 3,000' to 4,300', on the slopes east of Limpid Creek approximately 2 kilometers NNE from its junction with the Pend Oreille River. Vegetation consists of both coniferous forest and second growth trees and bushes.

A soil geochemical survey and geological mapping were undertaken on behalf of Ryan Exploration Co. Ltd. by Knox, Kaufman, Inc.

FIELDWORK

Fieldwork on the property was carried out by Michael Harris during the period August 16th through August 25th, 1984 under the supervision of M. A. Kaufman, P. Eng., a geologist with the firm of Knox, Kaufman, Inc.

Five E-W survey lines were established by chain and compass with the zero point of each line being at the intersection of the line with a N-S base line. Stations were marked by red flagging at 30 m. intervals along the lines, and soil samples were taken by a trowel-shovel. Soil samples were generally taken at + .5 m depth, and the samples were then sent to a custom laboratory (Bondar-Clegg & Company Ltd.) and analyzed for their Au and W contents using the following procedures.

Analyses Techniques

- Analyses for Au

1. Samples fired in infra red ovens.
2. Soils/seds are screened (-80 mesh unless otherwise directed) and rolled simply.

3. A 20 gm. sample is subjected to a Pb fusion in the presence of strong fluxes to assure a total breakdown of the sample. Samples are inquarted with liquid Ag and covered with an impermeable flux capping to ensure quantitative collection of Au.
4. Dore beads resulting from cupellation are dissolved in aqua regia. Solutions thus obtained are analyzed by an atomic absorption endpoint that is relatively interference free.
5. Results obtained are total, but semi-quantitative in view of the one step process followed in geochemical analysis. Range of accuracy is a positive less than 5 ppb to 10,000 ppb. Normal reproducibility is ± 5 ppb at low levels and +20% or better at the high end. Principal reproducibility problems are ones of sample homogeneity at the -80 or -100 mesh levels. A sparse occurrence of free gold can give a result ranging 0 -1,000 ppb, while perfect analysis of duplicate 20 gm. cuts can give up to $\pm 100\%$ of the mean 500 ppb value based on pulp homogeneity alone (stream sediments are particularly susceptible to this type of problem). Fortunately, (on a 20 gm. sample) results in the 0-100 ppb range and the 1,000+ ppb range are normally very reproducible due to a combination of mode of occurrence in the low range and statistical probabilities with respect to free gold in the higher ranges.

- Analyses for W

1. Extraction by basic oxidation fusion
2. A .2 gram sample is subjected to colorimetric analysis.

Where outcrop was encountered along the lines it was mapped, and rock samples were assayed rather than soils. A number of old prospect shafts situated close to the center of the map area were sampled as were the old Bunker workings at the west end of line 450N.

OBJECT OF GEOCHEMICAL SURVEY

A limited soil and rock chip survey was conducted over portions of the claim area to determine whether there would be evidence of widespread Au and/or W mineralization, and the old workings were sampled to determine whether they might contain indications of economic mineralization.

GEOCHEMICAL RESULTS

135 samples were analyzed for Au and W; the results are plotted on the accompanying 1:2000 map. Generally, except for a few isolated highs, the assay values are low away from the old workings.

Samples of dumps taken from workings in the central portion of the survey area do contain interesting concentrations of Au and W, and their significance will be discussed below under "Geological Interpretation".

GEOLOGICAL INTERPRETATION

Although much of the bedrock is obscured by alluvium, the survey area appears to be underlain by Laib formation shaley sediments (pelites) generally northerly striking and steeply dipping. The sediments are cut by a northerly trending granitic dike (?) which is part of a larger pluton.

A number of prospect pits trending roughly N-S which are cut by our line 300N at about 380W follow a zone of hornfels-skarn alteration in the sediments close to the granitic contact. These pits tested areas of high pyrrhotite-pyrite within the altered rock which contain sporadic scheelite and highly anomalous gold values (up to 1,600 ppb). The gold values in this altered zone are far more impressive than those seen at the old Bunker mine (note: all assay values are listed on the accompanying 1:2000 map), but are not high enough to be of economic interest in a mineralized zone of this size. However, they could possibly improve with depth.

CONCLUSIONS

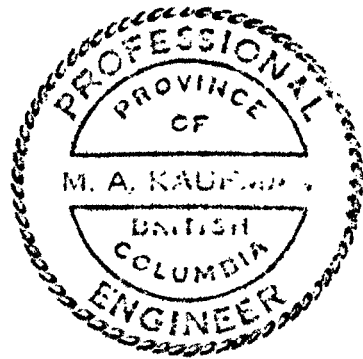
In general, our work has shown interesting but uneconomic Au-W values within a hornfels-skarn zone of a few meters width traced for 140 meters on strike. Geochemical work over a larger area did not detect widespread anomalous conditions, though isolated high gold was found at Line zero N - 240W, Line Zero N - 360W, Line 150N -570W, and Line 450N -360W.

The isolated highs deserve further investigation.

If further testing is undertaken on the anomalous hornfels-skarn zone deep angle core holes drilled from W to E would be suggested.

M. A. Kaufman
P. Eng.

MAK:ps

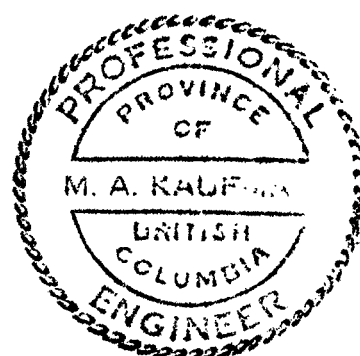


Expiry Date July 18, 1983

M. A. Kaufman
SEPT. 24, 1984

STATEMENT OF COSTS

		(U. S. funds divided by .8) =
	<u>U. S. Funds</u>	<u>Canadian Funds</u>
M. A. Kaufman (Salary)	\$ 720.00	\$ 900
Michael Harris (Salary)	361.98	453
Travel Expenses (Vehicle Rental)	(231.19 (62.82	289 78
Field Expenses (Motel, meals, etc.)	(79.76 (224.99	99 281
Copies	42.04	53
Analyses of Samples		<u>1,674.40</u>
Total		\$ 3,837.40



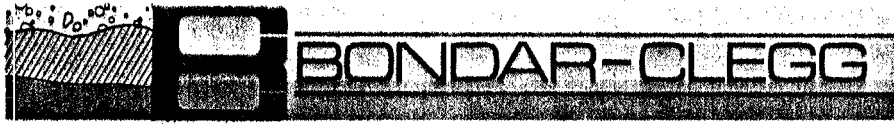
Expiry Date July 18, 1985

M. A. Kaufman
 SEPT. 24, 1984

STATEMENT OF QUALIFICATIONS RE MICHAEL HARRIS

Michael W. M. P. Harris, whose residence is 2530 Florence Lake Road, Victoria, B. C., graduated from the University of Durham, Durham City, England, with a B. Sc. in geology with Second Class Honours (Upper Division) in 1982. He subsequently attended Camosun College in Victoria, B. C., where he was enrolled in its Basic Prospecting Course. His previous field work experience has been in British Columbia and in the Wenatchee gold district of Washington, U. S. A.

Bondar-Clegg & Company Ltd.
130 Pemberton Ave.
North Vancouver, B.C.
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Telex: 04-352667



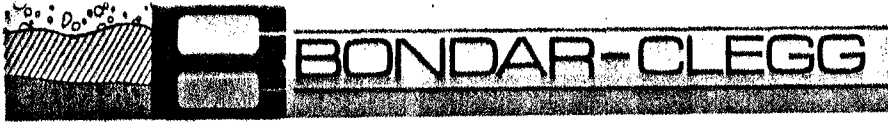
Geochemical
Lab Report

BUNKER 2785

JW 12991 dc.

KNOX KAUFMAN INCORPORATED
KNOX KAUFMAN INC.
P.O. BOX 14336
SPOKANE, WASHINGTON
99214

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Geochemical
Lab Report

REPORT: 124-2785

FROM: KNOX KAUFMAN INCORPORATED

SUBMITTED BY: HARRIS

DATE: 11-SEP-84 PROJECT: NONE GIVEN

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
01	W	2 PPM	CARBONATE SINTER	Color	-80	VARIOUS SAMPLE T	DRY, SEIVE -80
02	Au	5 P/B	AQUA REGIA	Fire Assay AA	-80		

REPORT COPIES TO: KNOX KAUFMAN INC.

INVOICE TO: KNOX KAUFMAN INC.

REMARKS: ASSAY OF HIGH W TO FOLLOW ON 624-2785.



REPORT: 124-2785

PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	W PPM	AU PPB	NOTE	SAMPLE NUMBER	ELEMENT UNITS	W PPM	AU PPB	NOTE
S LON 0W		2	10		S L300N 30W		5	5	
S LON 30W		2	5		S L300N 60W		4	15	
S LON 60W		3	15		S L300N 90W		5	5	
S LON 90W		3	45		S L300N 120W		3	<5	
S LON 120W		2	5		S L300N 150W		3	15	
S LON 150W		2	15		S L300N 180W		3	10	
S LON 180W		3	5		S L300N 210W		5	10	
S LON 210W		5	20		S L300N 240W		3	15	
S LON 270W		3	20		S L300N 270W		3	<5	
S LON 300W		3	15		S L300N 300W		4	<5	
S LON 360W		5	220		S L300N 330W		4	25	
S LON 390W		5	10		S L300N 390W		495	260	
S LON 420W		8	20		S L300N 420W		5	<5	
S LON 450W		23	25		S L300N 450W		3	5	
S LON 480W		2	5		S L300N 480W		5	5	
S LON 510W		4	10		S L300N 510W		4	35	
S LON 540W		3	20		S L300N 540W		3	5	
S LON 570W		4	10		S L300N 570W		3	<5	
S LON 600W		3	5		S L300N 600W		4	<5	
S L150N 0W		2	<5		S L450N 0W		5	5	
S L150N 30W		2	30		S L450N 30W		5	5	
S L150N 60W		3	5		S L450N 60W		5	40	
S L150N 90W		2	15		S L450N 90W		4	10	
S L150N 120W		2	15		S L450N 120W		3	25	
S L150N 150W		2	<5		S L450N 150W		3	5	
S L150N 180W		4	25		S L450N 180W		14	15	
S L150N 210W		4	10		S L450N 210W		8	10	
S L150N 240W		5	20		S L450N 240W		3	<5	
S L150N 270W		4	<5		S L450N 270W		5	25	
S L150N 300W		5	5		S L450N 300W		3	10	
S L150N 330W		5	5		S L450N 330W		5	10	
S L150N 390W		4	15		S L450N 360W		6	280	
S L150N 420W		3	10		S L450N 390W		4	15	
S L150N 450W		4	<5		S L450N 420W		3	<5	
S L150N 480W		3	<5		S L450N 450W		3	10	
S L150N 510W		3	5		S L450N 480W		4	<5	
S L150N 540W		3	<5		S L450N 510W		5	15	
S L150N 570W		3	680		S L450N 570W		3	<5	
S L150N 600W		3	<5		S L450N 600W		3	50	
S L300N 0W		14	10		S L600N 0W		3	5	



REPORT: 124-2785

PROJECT: NONE GIVEN

PAGE 2

SAMPLE NUMBER	ELEMENT UNITS	W PPM	AU PFB	NOTE	SAMPLE NUMBER	ELEMENT UNITS	W PPM	AU PFB	NOTE
S L600N 30W		2	5		R MH-84-18		1730	460	
S L600N 60W		2	<5		R MH-84-19		990	1600	
S L600N 90W		2	10		R MH-84-20		1710	940	
S L600N 120W		3	<5		R MH-84-21		14	15	
S L600N 150W		4	20		R MH-84-22		11	15	
S L600N 180W		3	15		R MH-84-23	>	2000	1050	
S L600N 210W		2	<5		R MH-84-24		5	20	
S L600N 240WA		4	10		R MH-84-25		5	10	
S L600N 240WB		3	5		R MH-84-29		3	5	
S L600N 270W		3	10		R MH-84-30		4	10	
S L600N 300W		4	5		R MH-84-31		5	15	
S L600N 420W		3	5		R MH-84-32		5	5	
S L600N 450W		3	10		R MH-84-33		3	5	
S L600N 480W		3	10		R MH-84-34		3	<5	
S L600N 510W		2	25		R MH-84-35		3	20	
S L600N 540W		9	10						
S L600N 570W		16	10						
S L600N 600W		5	5						
R LON 240W		2	740						
R L150N 360W		9	35						
R L450N 540W		5	90						
R L600N 330W		4	<5						
R L600N 360W		5	50						
R MH-84-1		2	<5						
R MH-84-2		2	30						
R MH-84-3		3	5						
R MH-84-4		2	25						
R MH-84-5		2	<5						
R MH-84-6		880	240						
R MH-84-7		5	5						
R MH-84-8		4	25						
R MH-84-9		4	<5						
R MH-84-10		70	25						
R MH-84-11		18	5						
R MH-84-12		740	1000						
R MH-84-13		78	60						
R MH-84-14		63	180						
R MH-84-15		90	15						
R MH-84-16		145	360						
R MH-84-17		1190	720						

SUMMARY SHEET

Project- POMI (BE) Lumber

ALL IN U.S. FUNDS
ALL ITEMS USED IN STATEMENT OF
COSTS ARE CIRCLED
Month August, 1984

Date	Reference/Description	Ck	Total Expense	Fees	Liab.	Ins.	Telephone	Office	Sec/Bkpr	Draft/Repro
8/31	DV 1074		73091	<u>720.00</u>		<u>9.11</u>	-	-	-	180
8/31	M.A. Kaufman exp ^{9/5116}		31215							120
8/31	Abscar	5085	4059							<u>4059</u>
										<u>4559</u>
				Living	Vehicle	Air Trvl	Car Rent	Maps, Publ	Entertain	
	M.A. exp ^{af}		incl.	<u>79.76</u>	<u>23.19</u>					
	M. Harris exp ^{af}	510	33259	<u>220.99</u>			<u>62.82</u>			
				<u>3.25</u>						
				Living	Vehicle	Air Trvl	Car Rent	Maps, Publ	Entertain	
	M. Harris exp ^{af}	510		<u>22.6</u>						
				Canada	Canada					
				Salaries	Prk Taxes					
8/31	Geroran	510	4204	<u>42.04</u>						
8/31	M. Harris exp ^{af}	510	incl.	<u>22.17</u>						
8/31	M. Harris pay. 5125		<u>361.98</u>	<u>64.21</u>			<u>361.98</u>			
8/31	Receiver General		1784						<u>1784</u>	
8/31	B/O Tax	DV 1074	2757							<u>2757</u>
			<u>186567</u>							

9/1/84

BONDAR-CLEGG

KNOX KAUFMAN INCORPORATED
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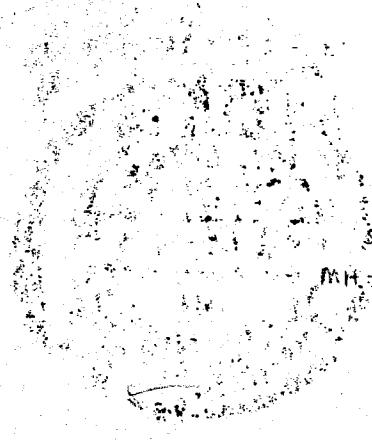
Invoice: 12991 *Cl.*
Date: September 12, 1984
Report No: 124-2785
Project: NONE GIVEN
PCMI (BC) BUNKER

12991

135 Analyses of Gold Fire Assay	at	6.50	877.50 ✓	
Subtotal			877.50	877.50
135 Analyses of Tungsten	at	4.50	607.50	
Subtotal			607.50	607.50
Sample Preparation				
98 Samples of DRY, SEIVE 80	at	0.80	78.40 ✓	
37 Samples of CRUSH, PULVERIZE 100	at	3.00	111.00 ✓	
Subtotal			189.40	189.40
Invoice Total:				\$1674.40

PAID
5146

THIS IS A PROFESSIONAL SERVICE
ACCOUNTS DUE WHEN RENDERED



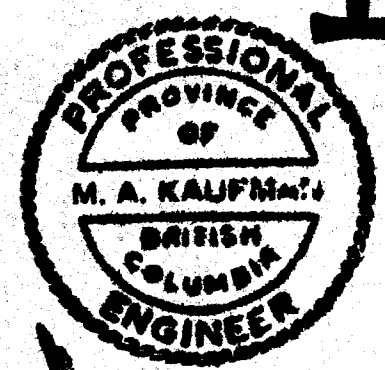
ROCK SAMPLES

SAMPLE NO.	AU (PPB)	W (PPM)
MH-84-1	-5	2
2	30	2
3	5	3
4	25	2
5	-5	2
6	240	880
7	5	5
8	25	4
9	-5	4
10	25	70
11	5	18
12	1060	740
13	60	78
14	180	62
15	15	90
16	360	145
17	720	1190
18	440	1730
19	1600	990
20	940	1710
21	15	14
22	15	11
23	1050	+2000
24	20	5
25	10	5
26		
27		
28		
29	5	3
30	10	4
31	15	5
32	5	5
33	5	3
34	-5	3
35	20	3

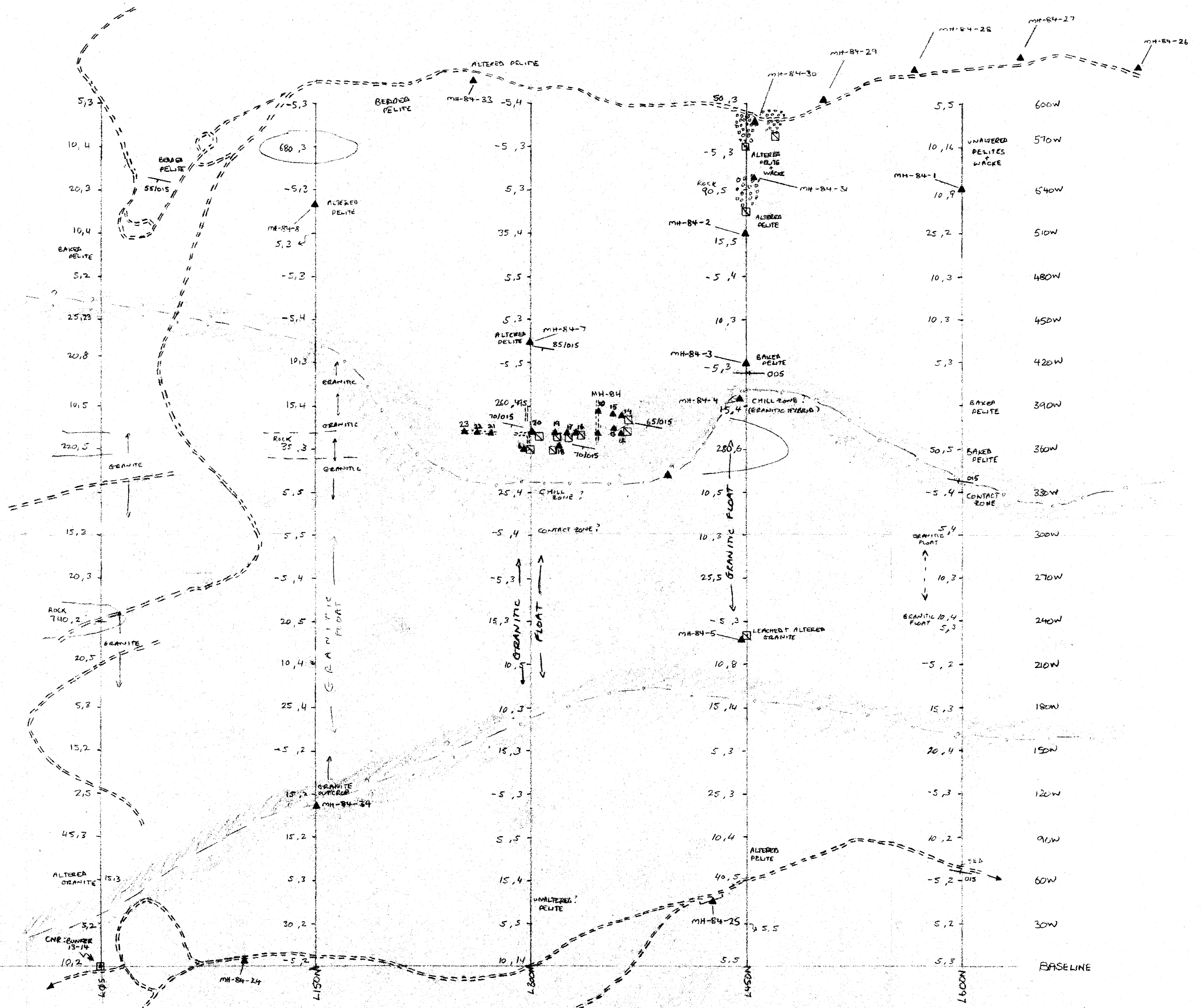
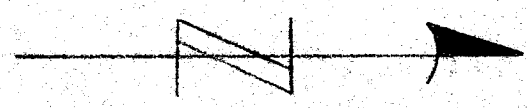
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GEOLOGICAL BRANCH
DEPARTMENT OF GEOL.

12,758



Expire Date July 18, 1990
M. A. Kaufman
SEPT. 24, 1984

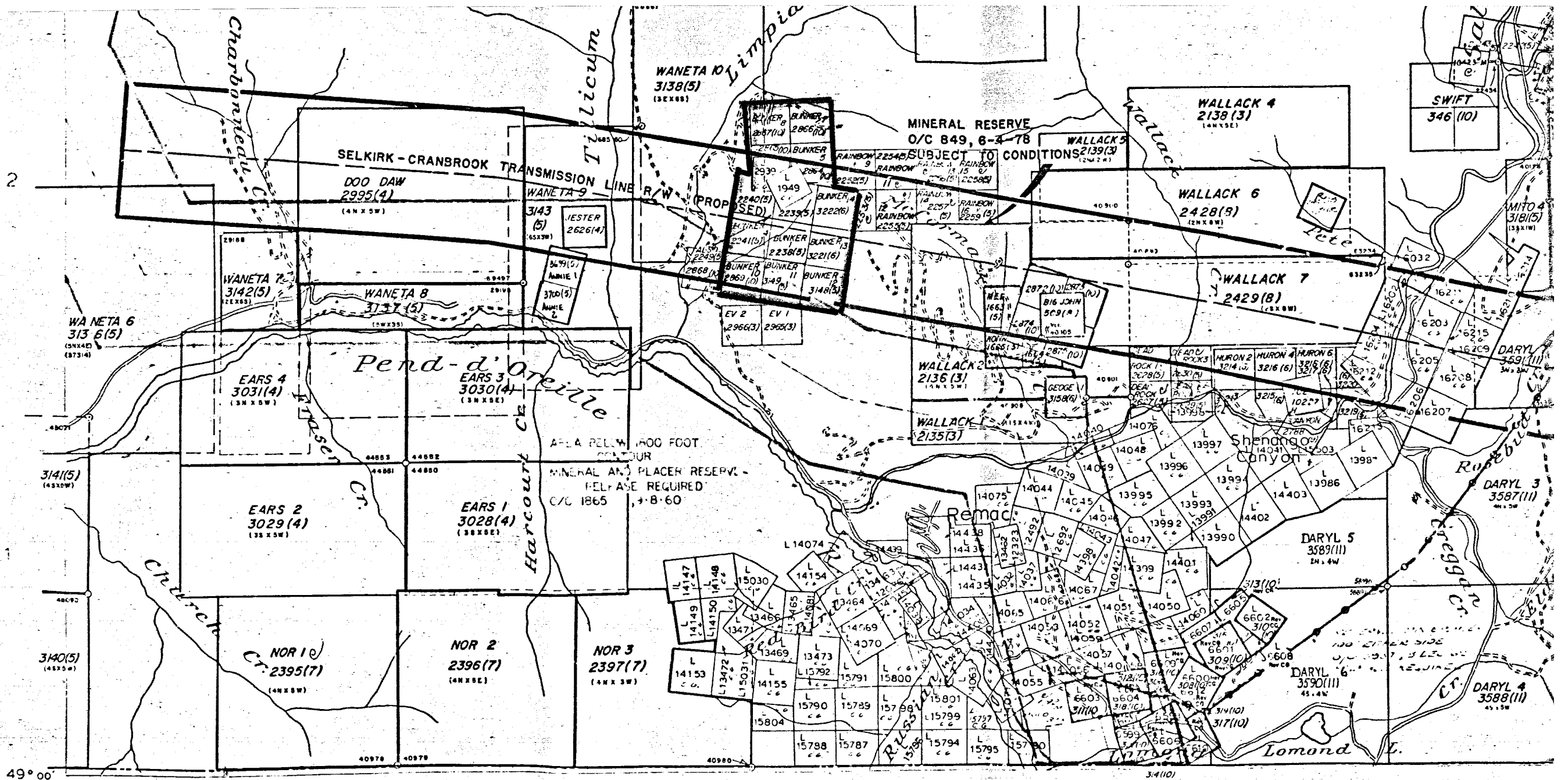


PCMI (BC) PROJECT
BUNKER PROSPECT AREA
GENERALIZED GEOLOGY/ROCK SAMPLES

--- ROAD	○ ○ ○ ○ OLD WORKINGS JUMP	▣ GRANITE INTRUSIVE (HYDRATED AT MARGINS)
- - - LITHOLOGICAL CONTACT (APPROX)	--- STRUCTURAL INFORMATION	▣ PELITES (INTERBEDDED SHALE/MUSTONE/WACKE)
- ? - ? - INTERBED WITH CONTACT	○ ○ ○ ○ SOIL LINES WITH STATION LOCALITIES	
▲ MH-84-6 } ROCK SAMPLE LOCALITY	□ CLAIM CORNER	
□ PIT / ADIT		

MICHAEL HARRIS 8/84
SCALE = 1:2000

GEOCHEM.
AU (PPB), W (PPM)
SOIL UNLESS DESIGNATED
AS ROCK



International Boundary

82 F 3 W

DEPARTMENT OF MINES AND PETROLEUM RESOURCES
VICTORIA, B. C.

For up-to-date information on claims in any area you should

This map is prepared to show the positions of located and Placer Mining Leases

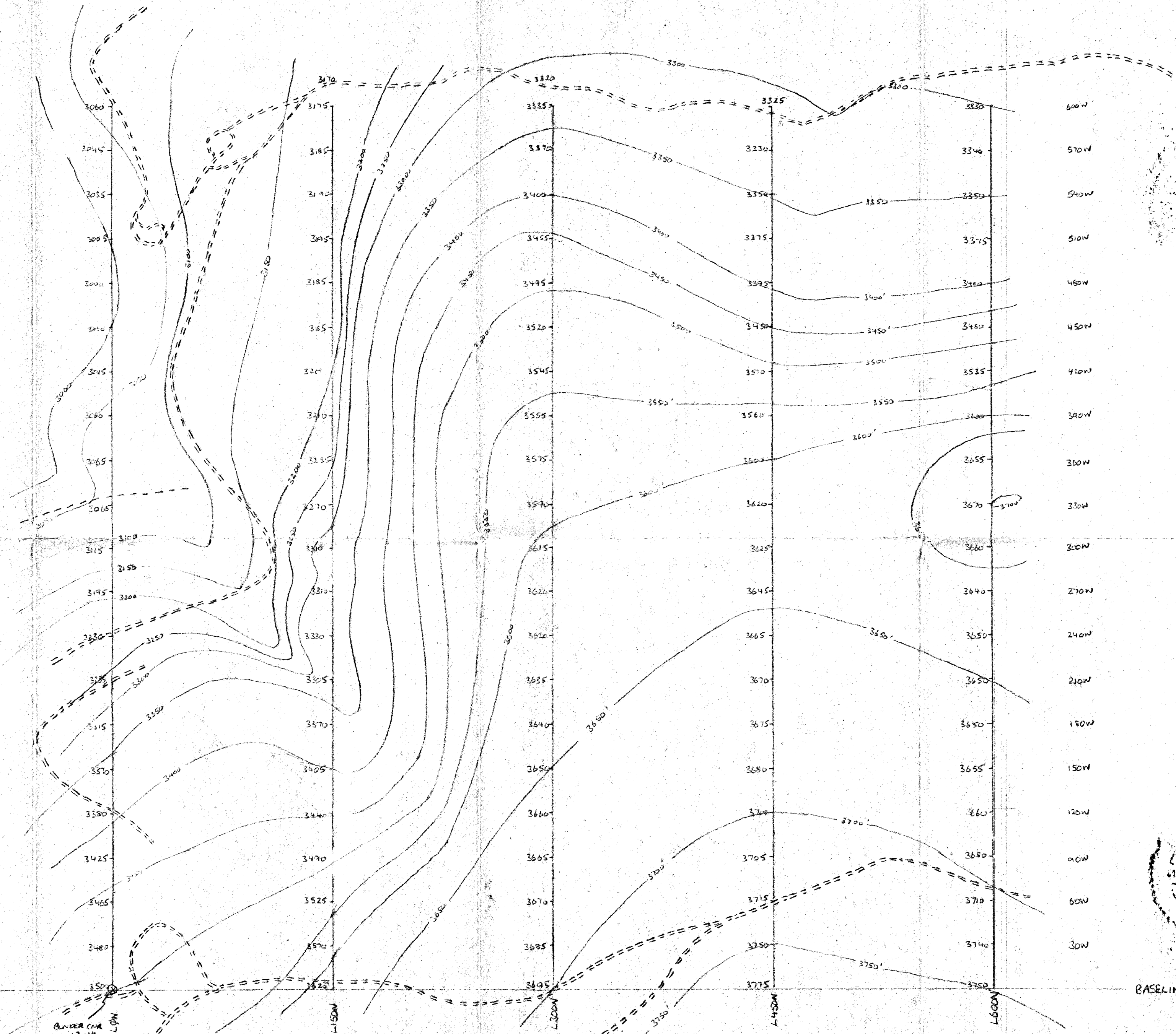
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SEPT 24, 1984



PCMI (OC) PROTECT
BUNKER PROSPECT AREA
RELATIVE ALTITUDE OVERLAY

ALTITUDE RELATIVE TO: BUNKER 1314 CNR = 3500'
ALTITUDES GIVEN IN FEET
SCALE: 1:2000 MICHAEL HARRIS
8/84