

Abba Mineral Claims

20964

Exploration Drilling Report - Abba Claims

This report relates to the exploration drilling of the Abba Mineral Claims in the Nicola Mining Division of British Columbia. The claims are located on the Topographic Map 921/2W, 921/2E; 50° latitude, 120° longitude. The claims are recorded in the name of Clarence Hagel of Schuler, Alberta. The work is being paid for by Clarence and Pat Hagel. This report is being prepared by Clarence Hagel and submitted on November 22, 1990.



TYPE OF REPORT/SURVEY(S) Drilling	TOTAL COST 42 632.73
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AUTHOR(S) Clarence Hagel SIGNATURE(S) Clarence Hagel

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED November 26/90 YEARS OF WORK 1989-90

PROPERTY NAME(S) ABBA

COMMODITIES PRESENT Trace copper, lead and zinc

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN

MINING DIVISION Nicola NTS 921/2 W and 2 E

LATITUDE 50° 12' LONGITUDE 120° 44'

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property (Examples: TAX 1-4, FIRE 2 (12 units), PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)):

Open area on all sides

OWNER(S)

(1) Clarence Hagel (2) Patrick Hagel

MAILING ADDRESS

Box 88, Schuler, Alberta TOJ 3B0 61-12 St S.W. Medicine Hat, Alberta T1A 4T4

OPERATOR(S) (that is, Company paying for the work)

(1) Clarence Hagel (2) Patrick Hagel

MAILING ADDRESS

Box 88 Schuler, Alberta TOJ 3B0 61-12 St S.W. Medicine Hat, Alberta T1A 4T4

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):

Altered sediments comprised of argillite, conglomerate and shale with some sections of quartz veins in holes # 1 and #2. Hole #3 is similar with a granite dyke in the quartz vein section carrying trace chalcopyrite.

REFERENCES TO PREVIOUS WORK Unknown

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	COST APPORTIONED
GEOLOGICAL (scale, area)			
Ground			
Photo			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres, number of holes, size)			
Core	376.065 meters, 3 holes, HQ	ABBA # 2305	
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralogic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Legal surveys (scale, area)			
Topographic (scale, area)			
Photogrammetric (scale, area)			
Line/grid (kilometres)			
Road, local access (kilometres)			
Trench (metres)			
Underground (metres)			
			TOTAL COST 42 632.73

FOR MINISTRY USE ONLY	NAME OF PAC ACCOUNT	DEBIT	CREDIT	REMARKS:
Value work done (from report)				
Value of work approved				
Value claimed (from statement)				
Value credited to PAC account				
Value debited to PAC account				
Accepted Date	Rept. No			Information Class

LOG NO: Feb 21/91	RD.
ACTION:	
FILE NO:	

LOG NO: SEP 23 1991	RD.
ACTION: <i>[Handwritten signature]</i>	
FILE NO:	

Exploration Drilling Report - Abba Claims
Assessment Report

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**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

20,964

Introduction

This report relates to the exploration drilling on the Abba Mineral Claims comprising 63 units. The claims are located nine kilometers north of Merrit, British Columbia, on the Nicola Plateau. A total number of three holes were drilled for a total of 183.915 meters. The sixty-three units are bounded by Hector Creek on the north side, Jesse Creek on the south. The mineral claims are traversed by a forestry road on the east side leading to the summit of Swakum Mountain.

Objective

To determine whether the trace mineralization found on surface increases with depth or if it is consistent with the sediment material in which it is embedded.

The findings of the I.C.P. analysis disclose only trace mineralization in the core which to date is uneconomical.

Drilling

Hole #1: The core is HQ in diameter, and 4000 feet (1220 meters) in elevation. The core recovered is from 6.1 meters to 51.8 meters and drilled at an angle of 60 degrees, and is south-20° east. The hole was abandoned because of lost circulation. The objective of the hole was to determine mineralization at depth, and the geological interest is a pond with trace surface mineralization.

Hole #2: The core is HQ in diameter and 4000 feet (1220 meters) in elevation. The core recovered is from 7.62 meters to 176.9 meters and drilled at an angle of 60 degrees, and is south-90 degrees east. The hole was drilled to continue the objective of hole #1. Neither hole disclosed any mineral of economic value. Hole #1 and #2 were drilled in the late

fall of 1989.

Hole #3: The core is HQ in diameter and 4500 feet (1372.5 meters) in elevation. The hole was started in the summer of 1990 and finished in the latter part of 1990. The core recovered is from 2 meters to 183.9 meters and drilled at an angle of 60 degrees and is south-40 degrees west. Again the objective was to determine if mineralization continues at depth, as compared to values which exist from surface grab samples.

No economic value or geological indications of the rock change , to warrant further drilling. Hole #3 is located 1.6 km west of hole #2.

No dip tests were performed on the holes. The core is located at Schuler, Alberta.

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: Pulp

DATE RECEIVED: NOV 9 1989 DATE REPORT MAILED: *Nov 10/89* SIGNED BY: *C. Loring* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Loring Laboratories Ltd. PROJECT 32925 File # 89-4686

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM
B	8	67	2117	557	4.3	3	1	236	.31	393	5	ND	1	405	4	626	2	11	25.94	.017	2	8	.32	58	.01	19	.23	.02	.01	1
D	4	14	266	110	1	1	1	316	.14	38	5	ND	1	457	1	75	2	5	28.12	.017	2	3	.34	62	.01	18	.12	.01	.01	1

Surface samples from the pond at holes #1 and #2.

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: Pulp

DATE RECEIVED: DEC 20 1989 DATE REPORT MAILED: Dec 22/89 SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Loring Laboratories Ltd. PROJECT 33027 File # 89-5115

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	%	%	%	PPM	
256-257	1	42	77	72	.8	8	15	408	5.93	352	5	ND	2	55	1	2	11	56	6.74	.081	6	53	.24	15	.01	6	1.95	.01	.11	20
350-351	2	34	6	106	.5	7	11	497	4.95	18	5	ND	1	130	1	2	2	79	2.52	.071	11	24	1.37	52	.21	7	3.41	.06	.12	1
450-455	1	24	16	94	.3	5	8	1609	3.70	43	5	ND	2	101	1	2	2	64	15.33	.088	13	16	.99	25	.13	10	2.09	.03	.05	2
576-577	5	58	24	277	.3	19	11	383	3.83	14	5	ND	1	153	3	2	2	58	2.82	.070	10	45	.84	70	.16	4	3.05	.04	.18	1
STD C.	18	60	37	132	6.9	67	31	956	4.22	41	22	7	36	48	18	16	19	58	.50	.097	37	56	.94	174	.07	37	2.02	.06	.14	13

Core samples Hole #2:

$$\frac{\text{---}}{\text{---}} \text{ P.P.M. X 10,000 = \%}$$

I.C.P. Analysis from Hole #2:

Sample # 256 -257 is from core section 256 -257 ft. (78 - 78.3 M)

#350 - 351 is from core section 350 - 351 ft. (106 - 107 M)

#450 - 455 is from core section 450 - 455 ft. (137.2 - 138.7 M)

#576 - 577 is from core section 576 - 577 ft. (175.6 - 175.9 M)

GEOCHEMICAL ANALYSIS CERTIFICATE

Loring Laboratories Ltd. PROJECT 33269 File # 90-1035
 629 Beaverdam Road N.E., Calgary AB T2K 4W7

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
7210A	6	44	70	220	.2	14	12	760	5.04	16	258	ND	1	85	2	3	2	94	4.30	.071	9	38	1.28	105	.05	8	2.23	.04	.14	1
7211A	1	47	17	81	.1	14	12	691	4.64	9	40	ND	1	97	1	2	2	90	3.29	.076	7	42	1.15	66	.18	9	2.18	.05	.12	1
7212A	1	53	20	78	.1	20	13	681	4.55	9	35	ND	1	92	1	2	2	95	3.07	.077	7	50	1.21	112	.21	16	2.45	.06	.13	1
7213A	1	37	12	82	.1	13	11	613	4.46	9	34	ND	1	99	1	2	2	85	2.44	.073	7	45	1.09	68	.17	8	2.20	.05	.12	1
7214A	3	12	8	20	.1	3	2	170	.24	2	8	ND	1	354	1	3	2	7	14.19	.020	2	9	.41	44	.01	17	.24	.05	.03	1
7215A	7	14	2	45	.1	4	3	578	.54	2	5	ND	1	689	1	3	2	20	20.39	.021	2	12	.67	64	.02	43	.23	.05	.03	1
7216A	1	17	26	111	.1	2	12	915	5.76	2	21	ND	1	182	1	2	2	121	2.07	.069	9	29	1.81	530	.41	13	3.24	.10	.05	1
7217A	9	21	17	110	.2	6	11	878	4.17	42	5	ND	1	152	1	2	2	30	6.35	.058	3	16	.50	31	.01	11	1.79	.03	.18	1
7218A	1	15	21	105	.1	3	12	853	6.68	23	12	ND	1	96	1	3	2	113	3.01	.069	9	26	1.49	41	.42	10	2.78	.10	.06	1
7219A	1	25	24	90	.1	1	11	720	5.06	4	14	ND	1	130	1	2	2	100	2.27	.071	11	24	1.36	90	.34	9	3.17	.13	.05	1
STANDARD C	18	59	39	131	7.3	68	31	1077	4.10	39	17	6	36	47	20	15	18	59	.51	.094	37	57	.96	178	.08	36	1.98	.06	.13	11

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: Pulp

DATE RECEIVED: APR 23 1990 DATE REPORT MAILED: April 24/90 SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

I.C.P. Analysis from Hole #3:

Sample #7210A is from core section 32.6 - 33.2 M.

#7216A is from core section 48.1 - 49 M.

#7217A is from core section 66.1 - 67 M.

#7218A is from core section 76.8 - 77.3 M.

#7219A is from core section 88.1 - 89 M.

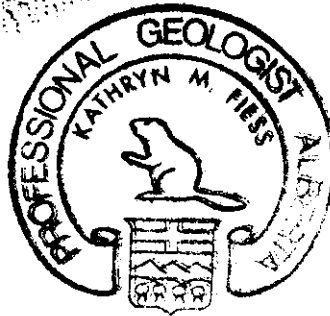
ABBA CLAIMS		Oct. 1989 - Oct. 1990
Diamond Drilling:	Hole #1,2	\$15225.00
	Hole #3	15010.00
Backhoe		300.00
Bank draft & cost of bank draft		<u>1005.00</u>
		31540.00
7 weeks food, lodging, travel:		
Accommodation		1313.53
Meals		2960.25
Fuel		692.52
Transportation		<u>2612.92</u>
		7559.22
Prospecting:		
Miner's Certificates (2)		50.00
Minister of Finance		488.02
Minister of Attorney General		90.00
Equipment Rental		126.10
Stationary		45.41
Report		216.00
Telephone Calls		154.97
Logging est. by Geologist		400.00
Recording Fees		<u>1575.00</u>
		3165.50
I.C.P. & Assays to date:		368.00
	Total:	42632.72

LOG NO: <i>April 2/91</i> RD.
ACTION:
FILE NO:

Merritt Area Core Descriptions

Kathryn M. Fiess , M.Sc. P.Geol.

February 18, 1991



Kathryn Fiess
February 18, 1991

GEOLOGICAL BRANCH
ANNUAL REPORT

21,179

Introduction

Three cores were recovered from shallow drilling of a gold prospect in the Merritt Area of British Columbia. The prospect is owned and operated by Misters Clarence and Patrick Hagel and the following cores were visually examined and logged at the request of the afore mentioned parties.

Core # DDH1

Box #1

(0 - 6.1 meters)
(0 - 20 ft.) - Brown mudstone with abundant large angular black shale clasts up to 3 cm. long x 2 cm. wide.

Box #2

(6.11 - 12.2 meters)
(20.1 - 40 ft.) - Transitional lower contact to friable calcareous shale with white alteration mineralization that grades down into weathered white calcareous fine grained flysch.

Box # 3

(12.21 - 15.25 meters)
(40.1 - 50 ft.) - Weathered white calcareous fine flysch.

Core interpretation

The sediments of this core appear to have a deep water turbidite flysch origin, however they may have been exposed to shallow weathering processes at some point in time. The first 6.1m. of this core may represent a paleosol. These rocks are likely the Cretaceous or Tertiary age sediments described in Geological Survey Memoir # 249 (Cockfield, 1948).

Core DDH #2

Boxes 1 - 25

(44.225 - 58.225 meters)
(145 - 191 ft.) - Intensely brecciated friable black shale and siltstone. Approximately 30 % replaced with calcite and calcite veins. Core appears friable and sometimes rubbly.

(58.225 - 92.72 meters)

(191 - 304 ft.) - Blackish brown silty shale. approximately 20 % replaced by calcite. Abundant small vertical fractures filled with calcite.

(92.72 - 176.9 meters)

(304 - 580 ft.) - Massive black shale with up to 20 % replcive calcite. Interval(400 - 425 ft.)with some intervals of rubbly core.

Core Interpretation

The sediments found in this core were deposited in a deep water basinal shale environment. The replcive calcite might have a burial diagenetic origin. These rocks might be the Paleozoic age Cache Creek Group argillites of Geological Survey Memoir # 249 (Cockfield, 1948).

Core # DDH #3

Box #1

(4.576 - 4.88 meters)

(15 - 16 ft.) - Missing core.

(4.91 - 6.1 meters)

(16.1 - 20.0) - Rusty orange colored argillaceous rubble zone.

(6.13 - 7.625 meters)

(20.1 - 25.0 ft.) - Greenish brown coarse pebble conglomerate. Well sorted subrounded pebble clasts up to 3 cm. in size. Clasts comprised of feldspar porphyritic volcanics, black shale, and argillaceous sandstone.

(7.65 - 10.675 meters)

(25.1 - 35.0 ft.) - Greenish brown medium grained pebble conglomerate with green shaley matrix. Abundant calcite lined subvertical fractures. Clasts are subrounded, 1 - 2 cm. sizes and compositionally similar to(20.1 - 25.0 ft) interval.

(6.13 - 7.625 meters)

Box #2

(10.70 - 12.2 meters)

(35.1 - 40.0 ft.) - Dominantly rubbly core. Lithology as above.

(12.23 - 13.725 meters)

(40.1 - 45.0 ft.) - Very coarse grained pebble conglomerate. Subangular to subrounded lithic clasts up to 5 cm. in size comprised of shale, sandstone, and feldspar porphyry andesitic(?) volcanics floating in a brownish green shale matrix. Sequence fines upwards to dominantly fine grained (1 to 2 mm sized clasts) sandstone pebble conglomerate with a green shale matrix. Subvertical fractures present.

(13.75 - 15.25 meters)
(45.1 - 50.0 ft.) - As above. Dominantly rubbly core.
(15.28 - 16.775 meters)
(50.1 - 55.0 ft.) - Very coarse arkosic arenite in green and red shale matrix.

Box #3
(16.80 - 23.18 meters)
(55.1 - 76.0 ft.) - Lithology as above. Lowermost 5 ft. core appears rubbly with a pinkish white coloration. This zone appears highly altered possibly as a result of a hydrothermal heating event.

Box #4
(23.21 - 29.585 meters)
(76.1 - 97.0) - Very coarse arkosic arenite. Possible white hydrothermal surface alteration minerals. Core appears very fractured and up to 40% occurs as core rubble.

Box #5
(29.61 - 31.11 meters)
(97.1 - 102.0 ft.) - Very coarse angular lithic clast conglomerate with a greenish grey shale matrix.
(31.14 - 32.63 meters)
(102.1 - 107.0 ft.) - Black shale interbedded at the cm. scale with arkosic arenite. Contorted bedding (slump features).
(32.66 - 34.16 meters)
(107.1 - 112.0 ft.) - Arkosic arenite floating in black shale matrix. interval very brecciated.
(34.19 - 35.685 meters)
(112.1 - 117.0 ft.) - Greenish medium grained argillaceous sandstone. Sparse subangular lithic fragments. Interval is fractured. Fractures lined with calcite cement.

Box #6
(35.715 - 40.87 meters)
(117.1 - 134.0 ft.) - Medium to coarse grained pebble conglomerate with greenish black shale matrix. Pebble clasts 3 to 5 cm. in size, subangular to subrounded, comprised of volcanics, sandstone, and shale.

Box # 7
(40.9 - 46.36 meters)
(134.1 - 152.0 ft.) - As above.

Box #8
(46.39 - 51.85 meters)
(152.1 - 170 ft.) - Medium grained argillaceous sandstone in black shale matrix. Brecciated interval. Fractures filled with calcite.

Box #9
(51.88 - 53.68 meters)
(170.1 - 176.0 ft.) - As above.

(53.71 - 57.34 meters)
(176.1 - 188.0 ft.) - Medium to coarse grained pebble conglomerate as above.

Box #10
(57.37 - 63.135 meters)
(188.1 - 207 ft.) - As above. Very fractured and weathered appearance. 206 - 207 ft may represent a paleosol.

Box #11
(63.165 - 68.32 meters)
(207.1 - 224.0 ft.) - Paleosol(?) as above. Minor amounts of red haematite staining. Core very friable, brecciated appearance with fractures lined with calcite cement.

Box #12
(68.35 - 74.115 meters)
(224.1 - 243.0 ft.) - Medium to coarse grained pebble conglomerate as above. At ~~68.32m~~ very intensely brecciated. Fractures filled with calcite cement.

Box # 13
(74.145 - 79.60 meters)
(243.1 - 261.0 ft.) - Coarse to fine grained pebble conglomerate as above. Subangular to subrounded shale clasts 5 cm. x 1.5 cm. to mm. sizes. poorly sorted.

Box #14
(79.635 - 85.095 meters)
(261.1 - 279.0 ft.) - Lithology as above. Spodic very coarse 2 cm. x 4 cm. granite pebbles. Intercalations of green colored arkosic arenite.

Box #15
(85.125 - 86.62 meters)
(279.1 - 284.0 ft.) - Lithology as above. Abundant porphyritic andesite (?) clasts.

Boxes #16 to #19 Missing.

Box #20
(88.48 - 94.55 meters)
290.1 - 310.0 ft. - Grey colored coarse pebble conglomerate. Some clasts up to 16 cm. in size. Clasts comprised of porphyritic rhyolite, andesite, and shale. Matrix is coarse grained arkosic arenite. Minor fracture development.

Boxes #21 to #26
(94.58 - 130.54 meters)
(310.1 - 428.0 ft.) - Lithology as above.

Box #27

(130.57 - 136.64 meters)
(428.1 - 448.0 ft.) - Lithology as above. Minor calcite replacement of matrix. Portions of core appear friable.

Box #28
(136.67 - 142.74 meters)
(448.1 - 468.0 ft.) - Lithology as above. Minor replacive calcite. Local brecciated and rubbly intervals (fault zone?). Possible hydrothermal alteration.

Box #29 and #30
(142.77 - 154.94 meters)
(468.1 - 508 ft.) - Lithology as above. Matrix becoming silty. Brecciated replacive calcite zone.

Box #31
(154.97 - 158.90 meters)
(508.1 - 521.0 ft.) - Upper 10 ft. brecciated medium grained arkosic arenite with minor calcite replacement of matrix. Grades downward to interbedded sandstone, siltstone, and shale.

Box # 32
(161.07 - 167.14 meters)
(528.1 - 548 ft.) - Upper 5 ft. muddy siltstone with horizontal elongate 3 cm. x 4 cm. black shale clasts. Moderate sorting. Gradational to argillaceous lime mudstone interbedded with siltstone and shale. Subvertical fractures present.

Box #33 and #34
(167.17 - 174.765 meters)
(548.1 - 573.0 ft.) - Brecciated dark grey pebble conglomerate and arkosic arenites. Calcite cement lined fractures.

Box #35
(174.795 - 180.865 meters)
(573.1 - 593.0 ft.) - Lithology as above. Transitional lower contact to horizontally laminated black shale.

Box #36
(180.895 - 183.915 meters)
(593.1 - 603 ft.) - Black shale. Abundant hairline fractures lined with calcite throughout core.

Core Interpretation

The sediments of this core appear to have a deep water turbidite flysch origin. It is possible that sections of this core may have experienced hydrothermal alteration, however, most of the core is characterized by a low degree of thermal metamorphism. It is likely that these rocks are

the Cretaceous or Tertiary age rocks described in Geological Survey Memoir # 249 (Cockfield, 1948).

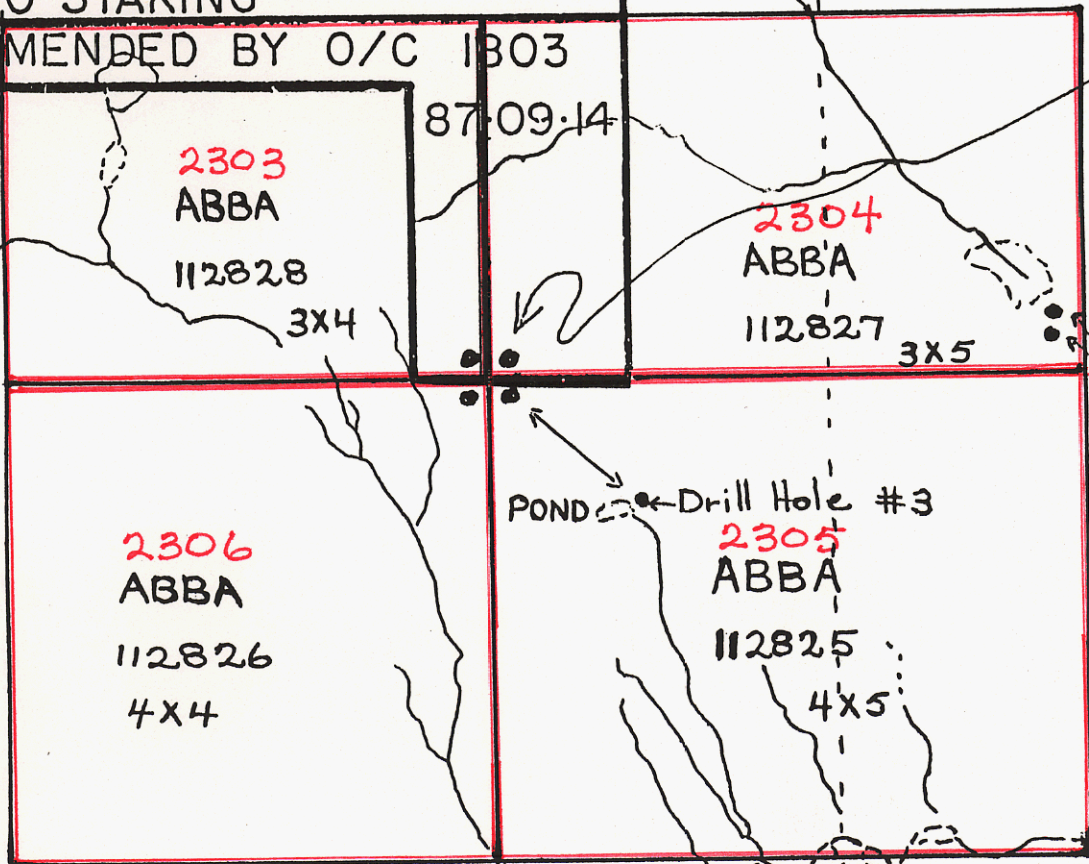
MAP of DRILL
HOLE SITES
#s 1, 2 and 3

SCALE :
1 - 31688

Notice to Group Map
Abba 2303
2304
2305
2306

MINERAL & PLACER
RESERVE
O/C 1480 83-08-31
NO STAKING
AMENDED BY O/C 1803

87-09-14



NORTH

LEGAL
CORNER
POSTS
375 METERS
SOUTH - 40° EAST
FROM POND

DRILL HOLES
#s 1 and 2

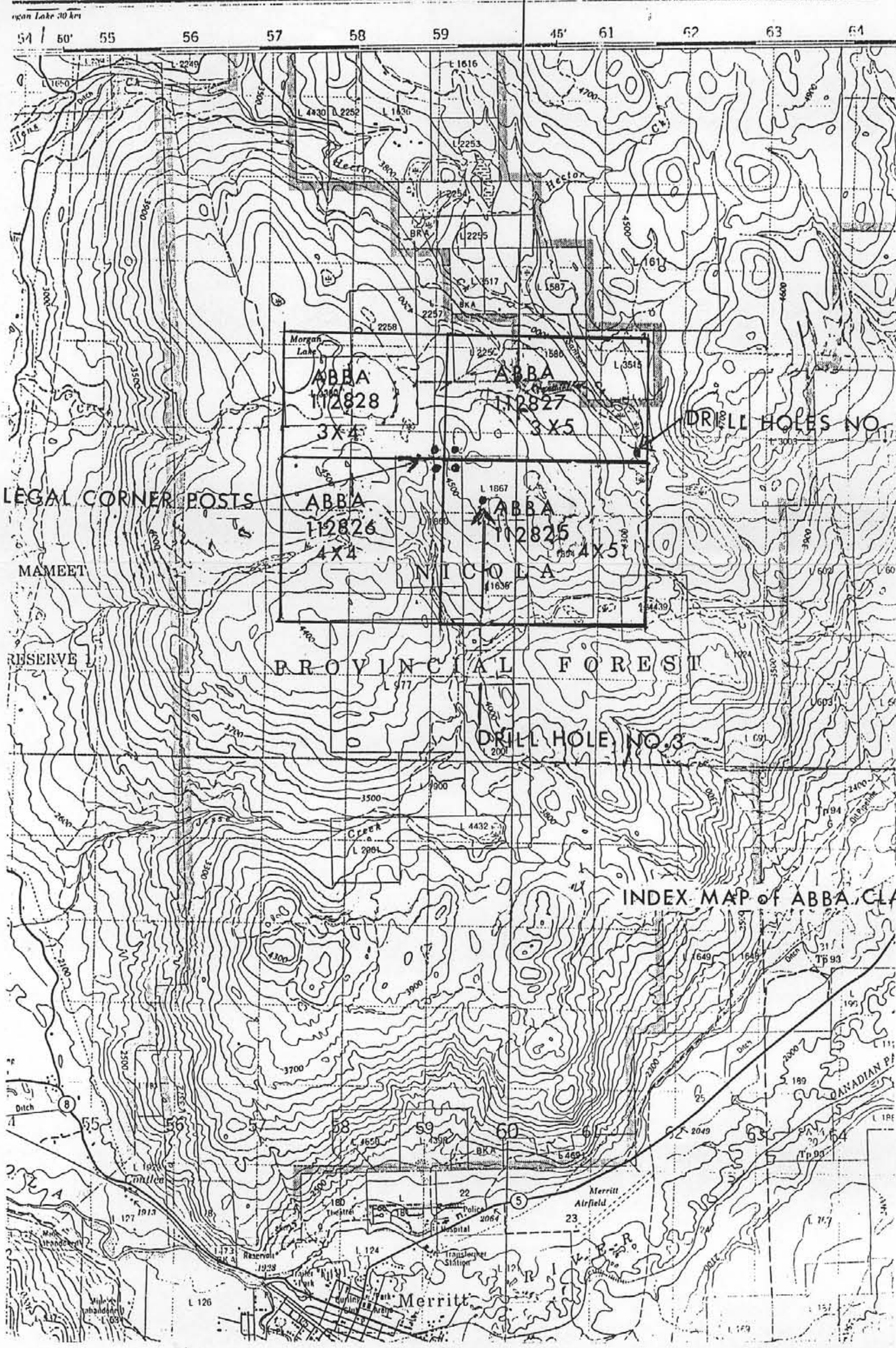
POND ← Drill Hole #3

Sheet # 921 / 2 E

Sheet # 921 / 2 W

SCALE: 1-50,000

NORTH
CANADA



AUTHOR'S QUALIFICATIONS

I was involved with Cypress Hills Gas and Oil development of natural gas in 1959, now known as Cypress Resources.

I managed the initial field exploration of Toluma Mining from 1960-63, which involved work related to dip needle geo-chem, magnetometer surveying and core drilling.

During this same period I was involved with Quilchena Mining.

I participated in the development of the Curlew Mineral Property at Victor, Montana, from 1963 to 1965, a high grade value lead ore.

Since then, I have been involved with various exploration properties in Montana, British Columbia, and Alberta.

CONCLUSION

The findings of the I.C.P. analysis disclose only trace mineralization in the core of no economic value.