

Geochemical Assessment Report  
on a  
Trenching Program  
on portions of the

Big Kidd Group of Mineral Claims

covering the  
Big Kidd Breccia Pipe

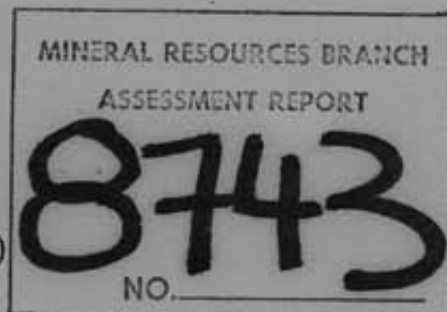
Aspen Grove Area  
Nicola Mining Division

Latitude 49°57'N. Longitude 120°36'W.  
N.T.S. 92H/15E

Field work October 20, 1980 to  
October 25, 1980  
on behalf of



DAVID MINERALS LTD. (N.P.L.)



Report by,  
D. R. Cochrane, P. Eng.

and

W. F. Chase, Prospector  
December 3, 1980



**Cochrane Consultants Limited**  
4882 Delta St., Delta, B.C. V4K 2T8 946-9221  
Geotechnical Consulting / Exploration Services

geology  
geophysics  
geochemistry

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**A. INTRODUCTION**

During the third week of October, 1980, a field crew , with the aid of a D-9 Cat, conducted a trenching program over portions of the Halo Claims, situated near Aspen Grove, in South Central British Columbia. The claims cover the Big Kidd Breccia Pipe, a circular intrusive which is mineralized with varying proportions of magnetite, chalcopyrite and pyrite. The purpose of the trenching was to examine the northern contact of the breccia pipe, since previous work has indicated significant values in this area.

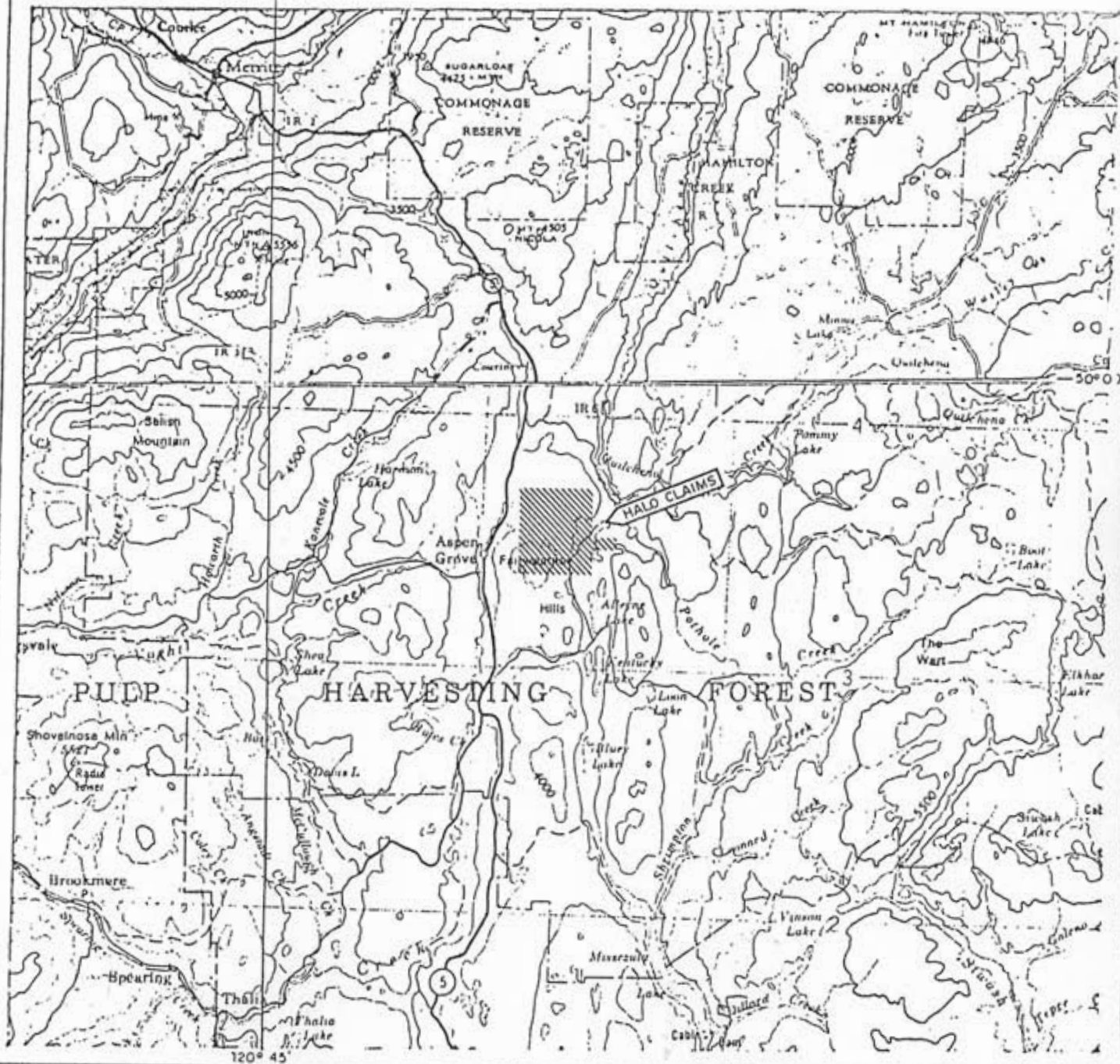
This report was prepared for assessment work credits and assessment work details are appended.



**B. LOCATION AND ACCESS**

The Big Kidd property lies immediately east of the Aspen Grove store on highway No. 5 and some 61 kilometres north of the town of Princeton and 29 kilometres south of Merritt in the southern interior of British Columbia. Access by car or truck to the center of the claims area may be made via dirt road which proceeds southeasterly, then east, from the highway at a point 3 kilometres north of the store in Aspen Grove. The National Topographic System code for the area is 92H/15E: the latitude  $49^{\circ}57'N$ . and longitude  $120^{\circ}36'W$ . (See Figure 1)

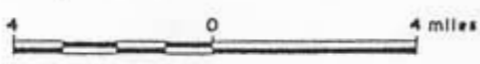




**D** DAVID MINERALS LTD. (N.P.L.)  
 Big Kidd Property (Halo Claims). 92H/15  
 Aspen Grove, B.C. Nicola M.D.

Figure 1  
 Location Map

Scale: 1 to 250000 or 1 inch equals approx. 4 miles



Cochrane Consultants Limited  
 6883 Duna St., Duna, B.C. V4A 2J2 602-9271

**C. CLAIMS INFORMATION**

The Halo claims are located on Mineral Titles Reference Map 92H/15E. These claims represent the abandonment and restaking of an original "old" set, named the Halo, Broach, Lou, Ram, Touch, Magnus, etc. The present claims also cover an abandoned group of crown granted claims located in the early 1900's and which included the Golden Sovereign, Canada, Yankee, Big Dutchmen, Big Sioux, Copper, King, Copper Age, Copper Queen, Hit or Miss, Big Kidd, Black Prince, Copper Standard, Amelia and Vernon.

All Halo claims are owned by David Minerals Ltd., Suite 1016, 475 Howe Street, Vancouver, B.C. The following table summarizes pertinent claims information:



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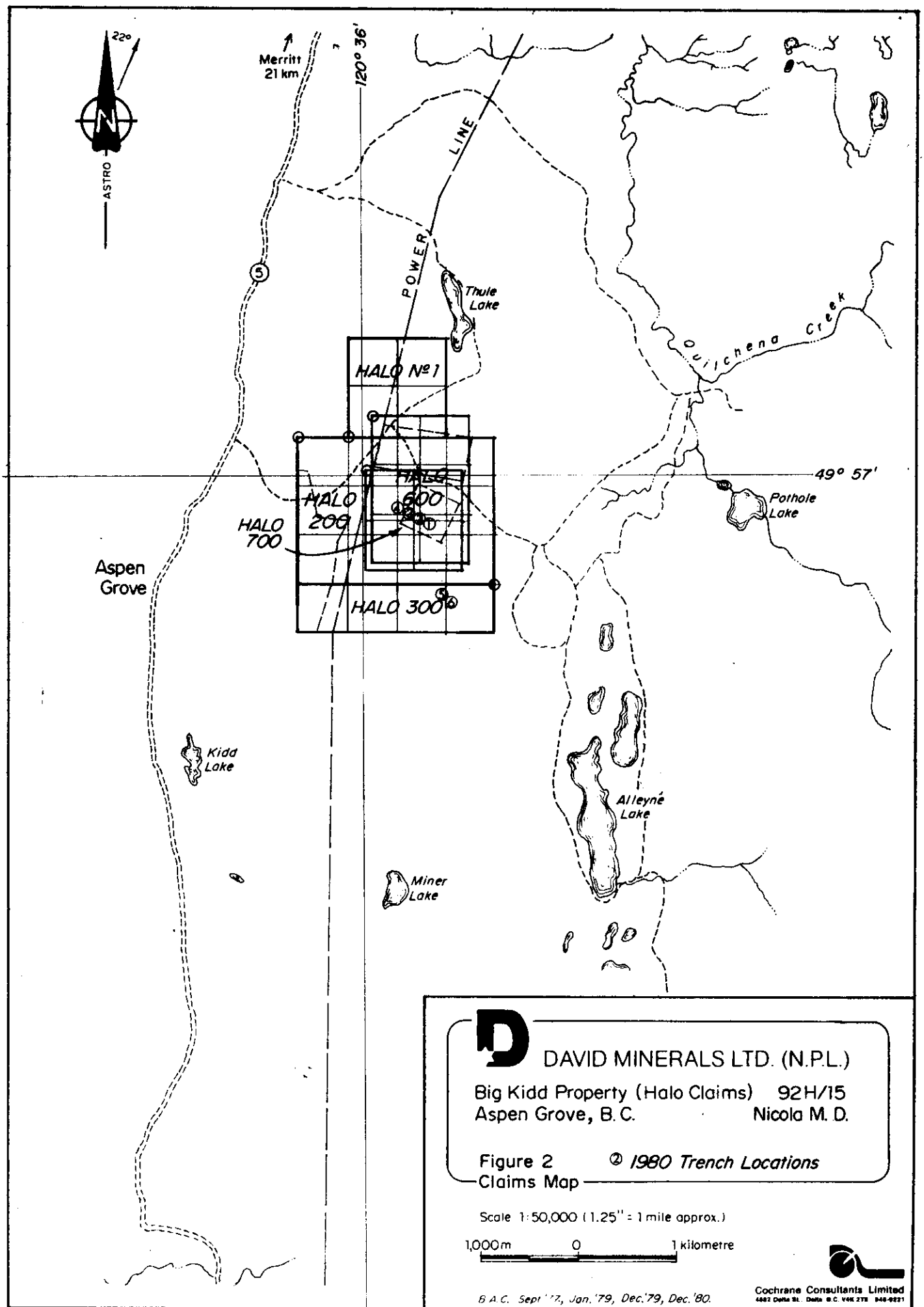
BIG KIDD GROUP

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CLAIM NAME	RECORD NO.	UNITS	ANNIVERSARY DATE	EXPIRY	
				BEFORE CREDITS	AFTER CREDITS
Halo No. 1	775	4	December 3	1981	1983
Halo 200	193	12	November 22	1980	1982
Halo 300	194	4	November 22	1980	1982
Halo 600	206	6	December 30	1980	1982
Halo 700	219	4	March 23	1981	1983

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Big Kidd Property (Halo Claims) 92H/15  
 Aspen Grove, B.C. Nicola M. D.

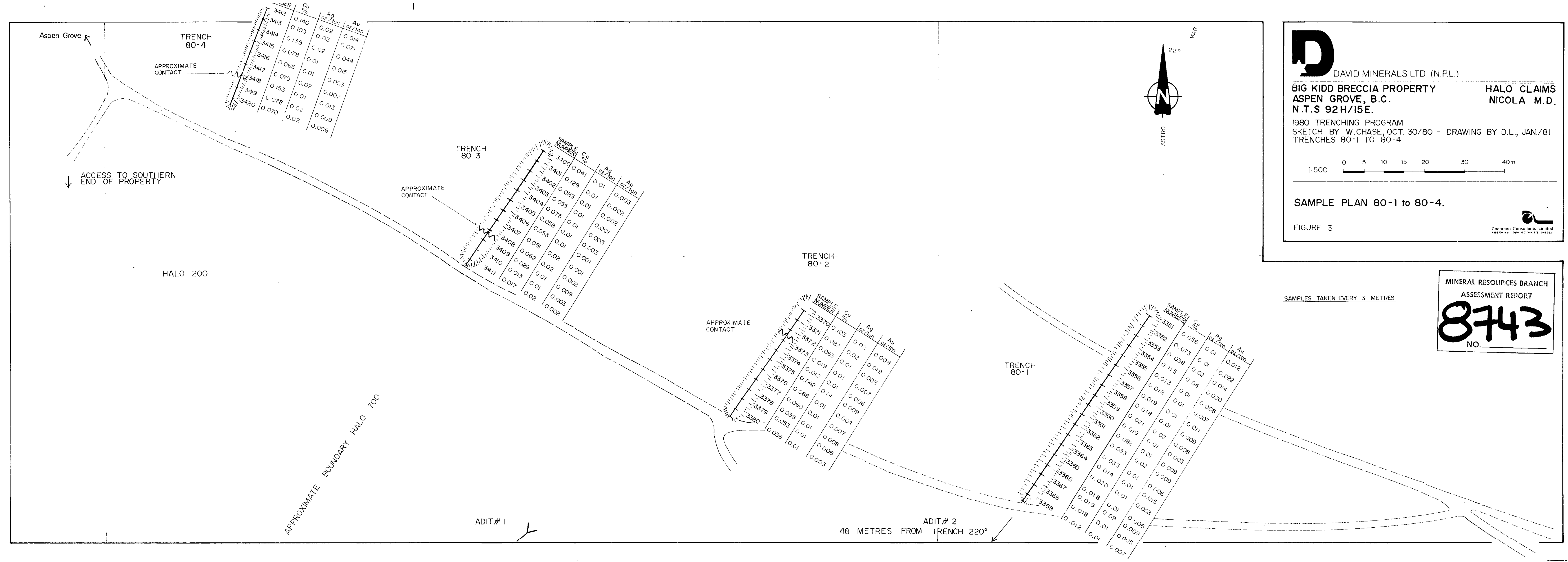
Figure 2 © 1980 Trench Locations  
 Claims Map

Scale 1:50,000 (1.25" = 1 mile approx.)

1,000m 0 1 kilometre

B.A.C. Sept '77, Jan. '79, Dec. '79, Dec. '80.





SAMPLE NUMBER	Cu %	Ag oz/ton	Au oz/ton
3412	0.140	0.02	0.014
3413	0.103	0.03	0.071
3414	0.138	0.02	0.044
3415	0.079	0.01	0.015
3416	0.065	0.01	0.013
3417	0.075	0.02	0.007
3418	0.153	0.01	0.013
3419	0.078	0.02	0.009
3420	0.070	0.02	0.006

SAMPLE NUMBER	Cu %	Ag oz/ton	Au oz/ton
3400	0.041	0.01	0.003
3401	0.129	0.01	0.002
3402	0.083	0.01	0.002
3403	0.055	0.01	0.001
3404	0.075	0.01	0.003
3405	0.058	0.01	0.001
3406	0.053	0.01	0.001
3407	0.081	0.02	0.001
3408	0.062	0.02	0.002
3409	0.029	0.01	0.002
3410	0.013	0.01	0.003
3411	0.017	0.01	0.002

SAMPLE NUMBER	Cu %	Ag oz/ton	Au oz/ton
3370	0.103	0.02	0.008
3371	0.082	0.01	0.008
3372	0.063	0.01	0.007
3373	0.019	0.01	0.006
3374	0.012	0.01	0.004
3375	0.042	0.01	0.007
3376	0.068	0.01	0.008
3377	0.060	0.01	0.009
3378	0.059	0.01	0.004
3379	0.053	0.01	0.007
3380	0.058	0.01	0.006

SAMPLE NUMBER	Cu %	Ag oz/ton	Au oz/ton
3351	0.056	0.01	0.012
3352	0.073	0.02	0.022
3353	0.038	0.01	0.014
3354	0.115	0.04	0.020
3355	0.013	0.01	0.008
3356	0.018	0.01	0.007
3357	0.019	0.01	0.011
3358	0.021	0.02	0.009
3359	0.019	0.01	0.008
3360	0.021	0.01	0.003
3361	0.082	0.01	0.003
3362	0.053	0.01	0.009
3363	0.033	0.02	0.006
3364	0.014	0.01	0.015
3365	0.020	0.01	0.003
3366	0.018	0.01	0.006
3367	0.019	0.01	0.009
3368	0.018	0.01	0.006
3369	0.012	0.01	0.005

**D** DAVID MINERALS LTD. (N.P.L.)

**BIG KIDD BRECCIA PROPERTY**  
**ASPEN GROVE, B.C.**  
**N.T.S 92H/15E.**

**HALO CLAIMS**  
**NICOLA M.D.**

1980 TRENCHING PROGRAM  
 SKETCH BY W.CHASE, OCT. 30/80 - DRAWING BY D.L., JAN./81  
 TRENCHES 80-1 TO 80-4

1:500

0 5 10 15 20 30 40m

**SAMPLE PLAN 80-1 to 80-4.**

FIGURE 3

Cochrane Consultants Limited  
 4882 Delta St. Delta B.C. V4A 2T8 248 2221

MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT

**8743**

NO.

RIO PLATA  
DDH 77-2  
180° at 45°

SHAFT

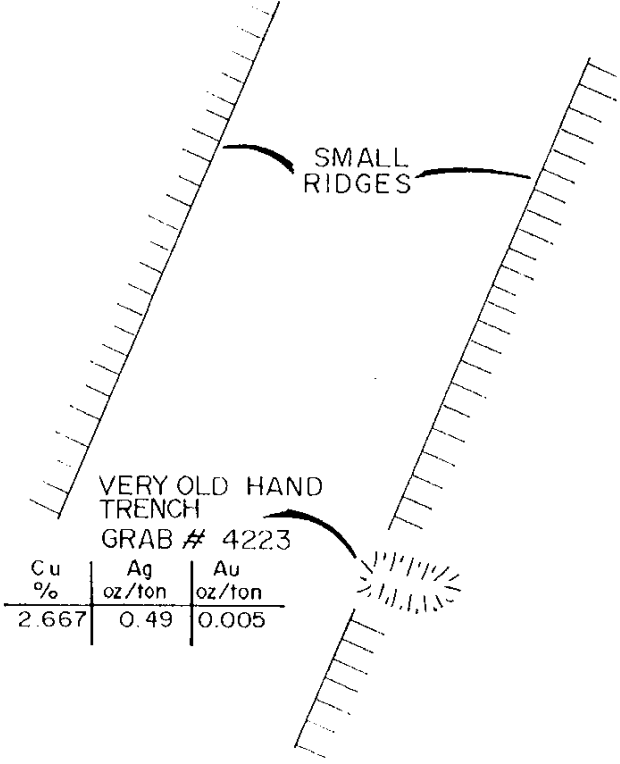
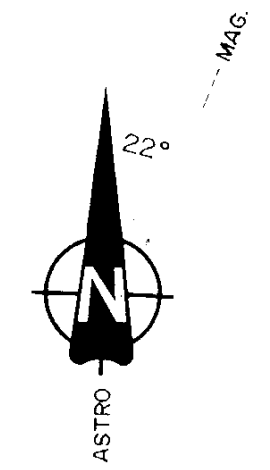
OLD TRENCH (ROAD)

SAMPLES TAKEN EVERY 3 METRES

SAMPLE NUMBER	Cu %	Ag oz/ton	Au oz/ton
4202	0.003	0.01	0.002
4203	0.015	0.02	0.003
4204	0.003	0.01	0.002
4205	0.007	0.01	0.003
4206	0.003	0.01	0.005
4207	0.013	0.01	0.001
4208	0.002	0.01	0.002

TRENCH 80-5

S.P. GRID (1979)  
L.2750N. - 850E.



Cu %	Ag oz/ton	Au oz/ton
2.667	0.49	0.005

GOSSAN

TRENCH 80-6

SAMPLE NUMBER	Cu %	Ag oz/ton	Au oz/ton
4209	0.003	0.01	0.001
4210	0.009	0.01	0.002
4211	0.025	0.01	0.006
4212	0.063	0.03	0.003
4213	0.012	0.01	0.002
4214	0.020	0.01	0.003
4215	0.007	0.01	0.002
4216	0.008	0.01	0.003
4217	0.007	0.01	0.002
4218	0.018	0.01	0.003
4219	0.015	0.01	0.004
4220	0.004	0.01	0.004
4221	0.007	0.01	0.005

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**8743**  
NO.

3 METRE DEEP SHAFT  
GRAB # 4222

Cu %	Ag oz/ton	Au oz/ton
0.055	0.01	0.004

OLD DRILLSITE HEADED EAST  
APPROX. 45° ANGLE INTO  
HILLSIDE - SOME MAGNETIC  
CORE LAYING ABOUT

SMALL DRAW

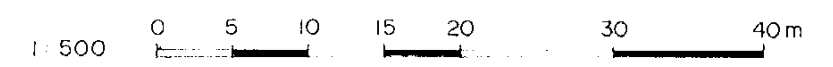
HALO 300

**D** DAVID MINERALS LTD. (N.P.L.)

BIG KIDD BRECCIA PROPERTY  
ASPEN GROVE, B.C.  
N.T.S. 92H/15E.

HALO CLAIMS  
NICOLA M.D.

1980 TRENCHING PROGRAM  
SKETCH BY W.CHASE, OCT./80 - TRACED BY D.L., JAN./81  
TRENCHES 80-5 AND 80-6



SAMPLE PLAN 80-5, 80-6.

FIGURE 4

**D. GENERAL SETTING**

The Halo group is situated in the Thompson plateau sub-division of the British Columbian interior plateau physiographic system. This is, in general, a gently rolling upland of low to moderate relief. The local Aspen Grove area, lies within the Fairweather Hills, with elevations normally between 1000 and 1400 metres above sea level. It is a rather impressive area of British Columbia, with a moderately dry climate, open fields, bush draws and the landscape dotted with lakes.

The general region is underlain predominantly by the Upper Triassic Nicola group of intermediate volcanics and minor sediments. It is intruded by stocks, plugs and dikes of Jurassic (?) Coast Acidic intrusions. A series of north striking faults trend across the claims area. One of the focal points of economic interest is the Big Kidd Breccia, consisting of altered brecciated diorite, with silicification, carbonatization and sections



mineralized with magnetite, pyrite, chalcopyrite, bornite and chalcocite. A number of pits, adits, trenches and drill holes have partially explored the breccia and the area around the Breccia Pipe.

It is believed that only a relatively thin mantle of glacial drift covers much of the bedrock.



**E. HISTORY**

The Aspen Grove Copper Camp has had a long and somewhat notorious mining history. The original discoveries were made late in the century and in 1901, there were "one hundred or more claims" reported in the camp. Even at this early stage the Minister of Mines for 1901 reports:

"In Aspen Grove camp a number of the prospectors seem to have either been led astray by false assays or have wilfully deceived themselves as to values, for their statements of assays previously obtained on certain cuts are not borne out by official assays of samples taken -- sometimes by the prospector himself - for the avowed purpose of checking such claimed values."

By 1913 the camp was described as consisting "of about 60 Crown Granted mineral claims and 100 other claims held by annual assessment." It is further reported in 1913 that ... "It seems probable that, in this great extent of copper-bearing rocks, concentrations will eventually be discovered which will permit of profitable mining. At present these remain



t o be found, but it would seem as though this was one of the most promising fields in the Province for prospecting."

In 1916, the Golden Sovereign, now covered by the Halo group, had shipped 10 tons and recovered 1,000 pounds of copper. Other small producers from the present claims area include: the Big Sioux, which in 1918 shipped 48 tons containing 96 ounces of silver and 9483 pounds of copper, and the Copper King which shipped 79 tons containing 2 ounces of gold, 86 ounces of silver and 8156 pounds of copper.

(B.C. Dept. of Mines Table of Recorded Lode-Metal Production).

Exploration work in the late teens was quite intense but died out in the 20's. There was a small revival of interest in the camp in the late 20's and Morgan Copper Mines Ltd. consolidated properties and commenced work but exploration was suspended by economic conditions



arising from the Great Depression.

The next period of exploration interest in the camp occurred in the late 50's and throughout the 60's when copper exploration and development was intense in British Columbia. The claims area was optioned and worked by various companies including Noranda Exploration, Friday Mines, Norrenco Mining and Refining, Amax Potash (in 1971 and 1972) and most recently by David Minerals Ltd.

Exploration work has included driving several short adits, test pitting, trenching, geological, geophysical and geochemical surveys, and diamond drilling and sampling.



**F. FIELD PROCEDURE**

From October 21, 1980 to October 25, 1980, a D-9H Cat from Pooley Bros. Construction of Merritt, B. C., was employed for 8 1/2 hours per day to dig a series of trenches along the northerly side of the breccia pipe, in order to examine the contact, as previous work has indicated significant values in this area. As well, the cat was used to explore an interesting self-potential anomaly from a S.P. survey conducted in 1979, on the southern side of the property.

All exposures were sampled, using 30 cm x 46 cm plastic bags and a sample length of 3 metres, except for two grab samples. The average sample weighed 13 lbs (6 kg ).

All samples were shipped by common carrier from Merritt, B. C., to Min-En Labs, of North Vancouver, B. C., where they were analyzed for copper (Cu) silver (Ag) and gold (Au).





All sample locations were "rough-surveyed", i.e. Brunton style compass and metric chain. All dangerously deep trenches were back-filled after sampling in compliance with government regulations.



**G. DISCUSSION OF RESULTS**

Seventy three (73) samples were collected and shipped to Min-En Labs, 705 West 15th Street, North Vancouver, B. C. All samples were analyzed for copper (Cu) and silver (Ag) by acid digestion and chemical analysis, and for gold (Au) by the fire and atomic absorption process.

The average copper content of all 73 samples was 0.08%, the highest sample (a grab sample from an old cut near trench 80-5) assaying 2.667% copper (Cu), and the lowest sample assaying 0.002% Cu.

The average silver content of all 73 samples was 0.02%, the highest assay (from a grab sample) containing 0.49 troy ounces per ton, and the lowest assay containing 0.01 troy ounces per ton (from several locations in the trenches).

The average gold content of all 73 samples was 0.007 troy ounces per ton, the highest assay being 0.071 troy ounces per ton (sample No. 3413)



across 3 metres. The lowest gold value was 0.001 ounces per ton (samples 4207 and 4209, across 3 metres each).

The most significant values in gold are to be found in trench 80-4 (Figure No. 3), where sample No. 3413 at 0.071 ounces per ton and sample No. 3414 at 0.044 ounces per ton average at 0.115 troy ounces per ton across 6 metres. Further work is suggested in this area.

Respectfully submitted



A large, bold, handwritten signature in black ink, which appears to read 'D. R. Cochrane', is written over a circular professional seal.

D. R. Cochrane, P. Eng.

W. F. Chase  
December 3, 1980  
Delta, B. C.



APPENDIX I

ASSESSMENT WORK DETAILS

W. Chase, prospector, October 2, 15, 19 to 25 and 28, 1980 7 1/2 days at \$150/day .....	\$ 1,125.00
R. Williams, field man, October 19 to 25, 1980 6 1/2 days, at \$120/day .....	780.00
D. R. Cochrane, P. Eng., various dates throughout project. 1 1/2 days at \$300/day .....	450.00
Vehicle Expense, 6 1/2 days at \$27.50/day ...	178.75
959 miles at \$0.30/mile .....	287.70
Pooley Bros. Construction .....	3,965.91
(D 9H Cat rental)	
Food and Accommodation .....	453.95
Field Supplies .....	17.95
Min-En Labs. Ltd., (assays) .....	1,277.50
Sample delivery .....	50.10
Drafting, 49 hrs at \$17.50/hour .....	57.50
Typing, 8 hours at \$12/hour .....	96.00
Reproduction, binding, collating .....	120.00
Total .....	<u>\$ 9,660.36</u>



APPENDIX II

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 (1963) with a degree in Economic Geology (M.Sc., Eng.)
3. I have practised 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 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 Province of Ontario, Saskatchewan, Alberta and the Yukon Territories.



D. R. Cochrane, P. Eng.  
December 4, 1980,  
Delta, B.C.



APPENDIX II (cont'd)

CERTIFICATE

I, William Francis Chase, of 13022 14A Avenue, White Rock, B. C., do hereby certify that:

1. I am a geophysical instrument operator/pro prospector with an office at 4882 Delta Street, Delta, B. C.
2. I am a graduate of Ladner Secondary School (1970).
3. I have completed the B. C. and Yukon Chamber of Mines Prospecting and Mining School course (1975).
4. I have completed the Ministry of Energy, Mines and Petroleum Resources/Ministry of Education, Mineral Exploration for Prospectors Course (Selkirk College, 1980)
5. I have been employed in the mining industry as a field man/instrument operator/pro prospector for seven of the last ten years while being employed by Semco and Cochrane Consultants Ltd.

W. F. Chase  
December 4, 1980,  
Delta, B. C.

