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04/86

A Geological Report
on the
OX 1 & 3 Claims
situated
1 km South of Aspen Grove
in the
Nicola Mining Division
N.T.S. 92-H/15(E)
Lat: 49°54' N Long: 120°37' W

FILMED

by

D.R. Morgan, P. Eng

Dates of Work: 10 - 16 April, 1985

Date of Report: 24 April 1985

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

14,306

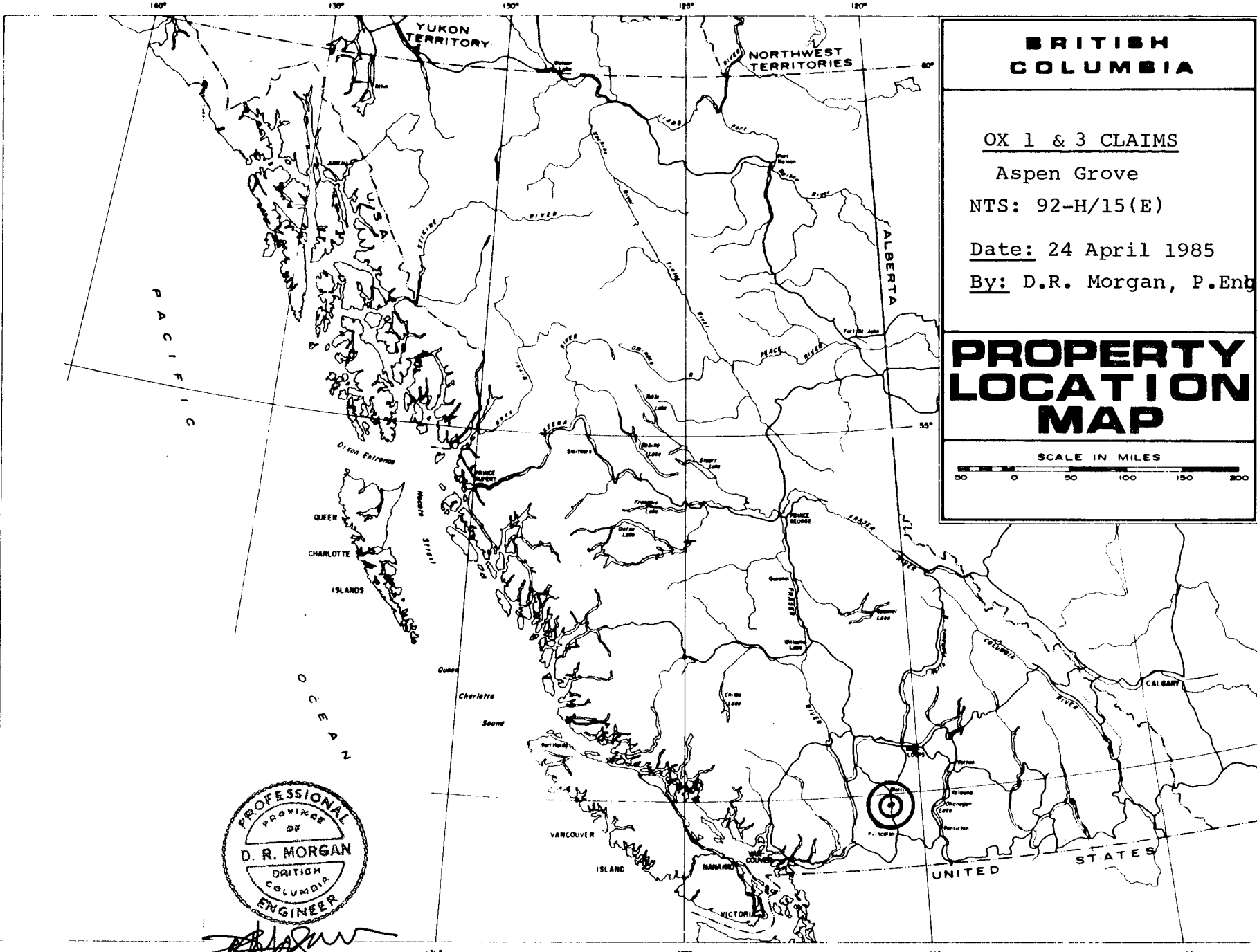
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BRITISH COLUMBIA

OX 1 & 3 CLAIMS
 Aspen Grove
 NTS: 92-H/15(E)
 Date: 24 April 1985
 By: D.R. Morgan, P.Eng

PROPERTY LOCATION MAP

SCALE IN MILES

PROFESSIONAL
 OF
 D. R. MORGAN
 BRITISH COLUMBIA
 ENGINEER

[Handwritten signature]

1 - 0 SUMMARY: (Fact)

1. The OX 1 & 3 claims (12 units) lie at the western margin of the "Central Belt" of Nicola volcanics in the Aspen Grove area, B.C.
2. Detailed mapping (1:2500) was carried out by the writer between 10th and 16th April 1985.
3. This mapping showed that the eastern (outcropped) area is underlain by red volcanic breccias in northerly striking contact with green volcanic breccias. A narrow limestone bed occupies part of this contact.
4. The rocks at and adjacent to parts of this contact have been fractured and mineralized with chalcopyrite, chalcocite, bornite and native copper. This mineralization was partly explored by diamond drilling in 1972.

2 - 0 CONCLUSIONS: (Opinion)

1. The exploration potential of the OX claims is seen to lie:
 - (a) At and adjacent to the contact between the red and green volcanic breccias.
 - (b) At and adjacent to the green volcanic breccia - limestone contact in the southwest part of the claims and on strike to the north, below Kidd Lake.

3 - 0 INTRODUCTION:

3 - 1 Scope & Dates of Report: This report describes geological mapping carried out by the writer on the OX - 1 & 3 claims between the 10th April 1985 and the 16th April 1985.

This mapping completes the geological mapping carried out by the writer in 1981-82, described in Assessment Report # 10505. The former mapping ended at outcrop # 121.

3 - 2 Title: The writer, David R. Morgan, 3424 West 6th Avenue, Vancouver, B.C., V6R 1T3, is the full and undivided owner of the OX claims as follows:

<u>Units</u>	<u>Claim</u>	<u>Record #</u>	<u>Recorded</u>	<u>Expiry</u>	<u>Mining Division</u>
9	OX-1	1071 (5)	7 May '81	7 May 1987	Nicola
<u>3</u>	OX-3	1246 (5)	6 May '82	6 May 1987	"
<u>12</u>					

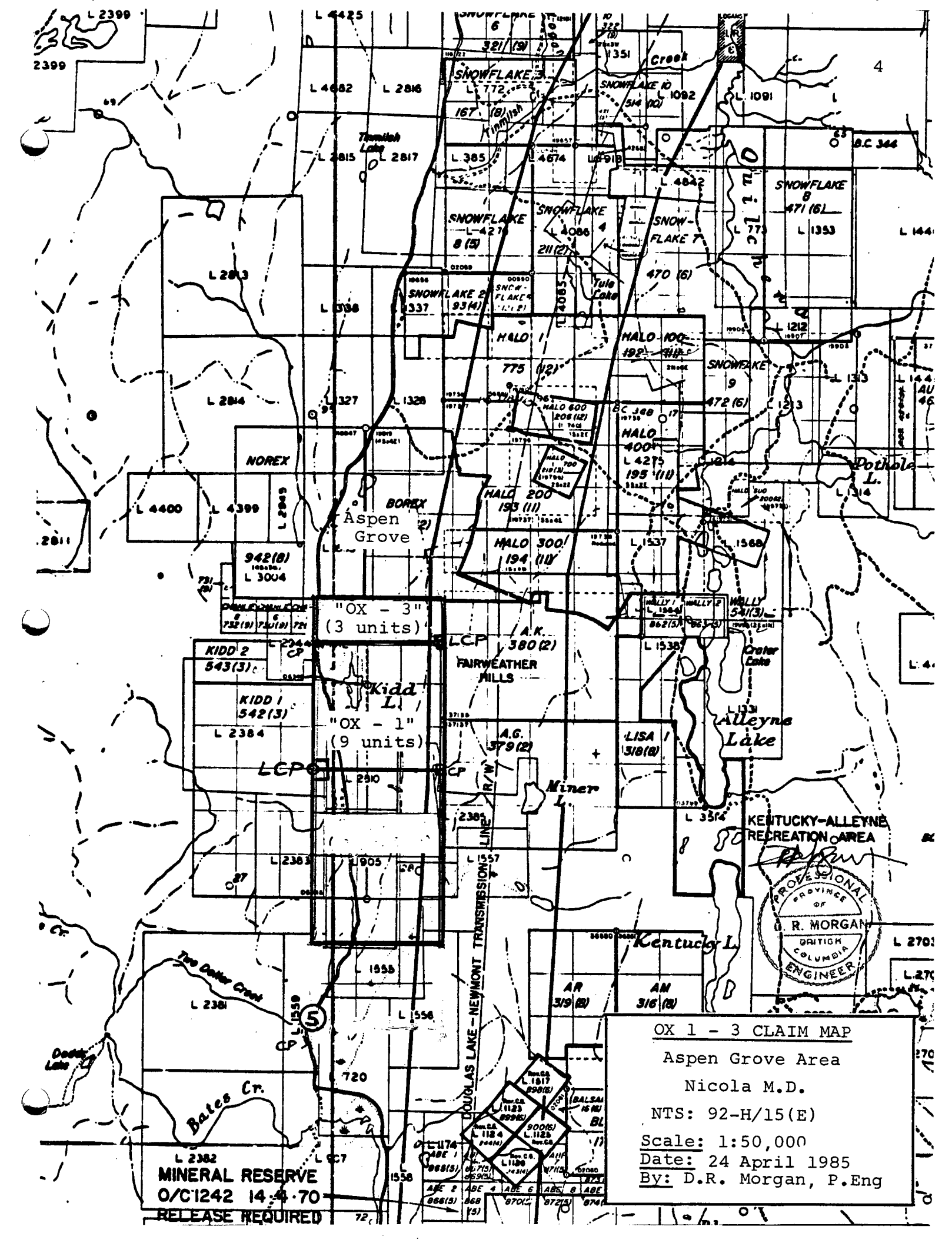
Acceptance of the work described in this report will put these claims in good standing until the expiry date shown above.

A Statement of Exploration & Development was filed at the Sub-Recorder's office in Vancouver on 25th April 1985.

4 - 0 GEOGRAPHY:

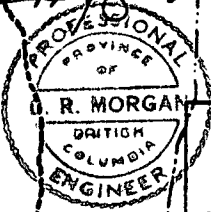
4 - 1 Location: The Legal Corner Post of OX - 1 lies 2.5 km south of Aspen Grove and 350 m west of Highway 5 in south central British Columbia. The claims are in National Topographic System area 92-H/15(E), are in the Nicola Mining Division and have a latitude of 49°55' N and a longitude of 120°37' W.

4 - 2 Access: The claims lie 32 km south of Merritt on Highway 5 which runs through the western part of the property. Logging and other roads in the eastern part of the property give good access. Surface rights are held by the Douglas Lake Cattle Company.

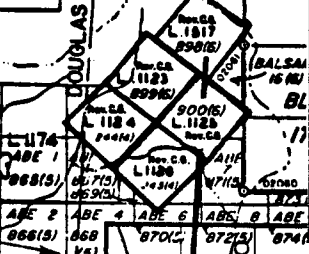


OX 1 - 3 CLAIM MAP
 Aspen Grove Area
 Nicola M.D.
 NTS: 92-H/15(E)
 Scale: 1:50,000
 Date: 24 April 1985
 By: D.R. Morgan, P.Eng

L 2382
MINERAL RESERVE
 O/C1242 14.4.70
 RELEASE REQUIRED



DOUGLAS LAKE - NEWMONT TRANSMISSIONS LINE



4 - 3 Topography: The claims cover the valley of south-flowing Otter Creek. The valley sides have gentle slopes and elevations range from 3,400 to 3,900 feet.

5 - 0 HISTORY:

The Aspen Grove area has been prospected intermittently for copper since the discovery of Copper Mountain around 1900.

Most of the previous work on the ground now covered by the OX claims was carried out by White River Mines in 1972 when the property was known as the "DAGO - OPEN" claims. In that year magnetometer, I.P., gravity, geochemical and geological surveys were carried out, followed by 6,318 feet of diamond drilling in 14 holes. The best results from this drilling were as follows:

<u>Drill Hole</u>	<u>From</u>	<u>To</u>	<u>Intersection</u>	<u>Cu %</u>
72-2	50'	85'	35'	0.38
	305'	320'	15'	1.45
72-5	50'	102'	52'	0.83
72-7	95'	125'	30'	1.40
	205'	230'	25'	0.78

In 1977, 255m of percussion drilling were carried out in two holes. No results were indicated in the assessment report.

Besides this work described above, numerous bulldozer trenches have been dug on the property. These appear on the accompanying geological map.

The assessment reports covering this work are numbered as follows: 3787, 3788, 3789, 4089, 6215, 6642 & 10505. This report describes the completion of the geological mapping which was begun in 1981-82 and described in Assessment Report # 10505.

6 - 0 REGIONAL GEOLOGY:

The OX claims lie in a 40 km wide belt of Upper Triassic volcanics, sediments and intrusives known as the Nicola Group. This belt extends from the U.S. border to Kamloops Lake.

"The dominating geological elements in the map area are two northerly trending high-angle fault systems which divide the Nicola rocks into 3 sub-parallel belts. These large structures represent deep seated crustal fractures which dominated the geology of the region in late Triassic time and caused volcanic centres to be aligned in northerly direction, thus producing a Central Zone of dominantly volcanic rocks flanked to the east and west by basins of deposition.

The prominent northerly geological fabric of the map area is also apparent in the distribution of mineral deposits. The Central Belt, being the richest in intrusive rocks and the most intensely fractured and faulted of the three contains by far the largest number of prospects, particularly those of the porphyry type which occur within sub-volcanic intrusions and their associated extrusive rocks" (Preto, ref.3)

The OX claims lie in this Central Belt.

7 - 0 GEOLOGY OF THE PROPERTY:

7 - 1 Mapping Procedure: Air photos enlarged to a scale of 1:2500 were used to prepare a base map and were used in the field for location in un-forested areas. In forested areas traverses were run using compass and topofil thread chain with tie-ins on the road system.

As in the previous mapping on this property described in Assessment report # 10505, outcrops were numbered consecutively and specimens taken marked with these numbers. A set of specimens numbered 122 - 219 is retained in Vancouver together with the set numbered 1 - 121 from the earlier mapping by the writer.

7 - 2 General: Areas of outcrop on the OX claims are confined to the eastern part of the property formed by the western slopes of the Fairweather Hills. The western part of the property covers the broad valley bottom of Otter Creek and the lower slopes of the hills to the west; it is devoid of outcrop.

Broadly speaking, the Nicola rocks on the property are represented by a red volcanic breccia in the eastern and northeastern areas and a green volcanic breccia to the west. The well defined contact between these breccias strikes 340°. A narrow (20m - 50m) limestone bed occurs at this contact. All of the copper mineralization found to date on the property lies at or near to this breccia

limestone contact. In the southwest corner of the outcropped part of the property there is another limestone bed in contact with the green volcanic breccia. The westerly fault at the southern margin of the property is assumed to have offset this limestone bed westerly from the limestone in the southeast corner whose relationships to the green breccia are similar. If this interpretation is correct the copper mineralization that occurs at this limestone-breccia contact in the southeast corner, may recur near outcrop # 204 and to the north below Kidd Lake.

7 - 3 Rock Types: The writer has continued to use the rock groupings of Preto (refs. 2 & 3) as follows:

Massive Red Augite Andesite & Basalt: (MRA): A massive maroon coloured, aphanitic volcanic with prominent, tabular, dark green phenocrysts of augite and scattered, pin-head sized hematite fragments. The weathered surface of this volcanic is often pock marked and has a vesicular appearance.

Red Volcanic Breccia and Lahar: (RVB) : A generally massive, tough splintery, greyish red volcanic with dark green and red volcanic fragments. Underlies large areas in the northeast part of the property, forming prominent ridges and cliffs.

Green Volcanic Breccia: (GVB): A dark green volcanic fragmental containing dark green and red volcanic fragments. Also, locally, containing fragments of fine grained white or pink syenite. Fragments are typically in the 5 to 20 mm size range and form 35% of the rock mass. The weathered surface is often ragged and rough.

Massive Green or Grey Andesite: (MGA): A dark green or grey, massive, aphanitic volcanic. Feldspar laths are usually visible with a lens.

Limestone: (LST): Typically dark grey and massive in beds over 2m thick. Coral fossils (horn coral) were observed at outcrop # 100. It should be noted that the extension of the limestone bed to the north of outcrop # 100 is based on diamond drill results appearing in assessment report # 3789; there is no limestone outcrop in that area.

7 - 4 Structures: Generally speaking strikes are north to northwesterly and dips are close to vertical, but the rocks in the map area show the sudden breaks in continuity and attitude typical of a strongly faulted area.

The clearest indication of the attitude of the volcanics and associated sediments is provided by the mapped contact between the red and the green volcanic breccias which strikes 340° . This agrees fairly closely with the strike of the limestone exposed in the southwest, outcrop # 204, where the strike is 347° and the dip 70° east. Dips are typically vertical or steeply inclined.

Fracturing on the property is most strongly developed in a 20m wide ankeritic shear extending at 318° from outcrop # 75 to outcrop # 112. No evidence of this shear appears in the logs of drill holes 72-10 and 72-11, so it may follow and indeed be controlled by the red breccia-green breccia contact and have a more northerly swing to the north of outcrop # 112. A parallel but narrower fracture system appears 275 m to the southwest at outcrop # 213.

7 - 5 Mineralization: No new mineralization was noted during this year's mapping. For the sake of consolidation of data the mineralization found in former programs is set out below.

Mineralization of economic interest found to date consists of chalcopyrite, bornite, chalcocite and native copper. The most important copper mineralization found to date on the property was revealed by diamond drilling in 1972. The results of that drilling taken from assessment report # 3789 are tabulated overleaf.

Summary of Diamond Drilling
on
the "DAGO" prospect, near Aspen Grove, B.C.
in 1972.

(Note: Now part of OX 1 & 3 claims)

<u>D.D.H</u>	<u>Brg.</u>	<u>Dip</u>	<u>Length</u>	<u>Lat.</u>	<u>Dep.</u>	<u>El.</u>	<u>From</u>	<u>To</u>	<u>Int</u>	<u>Cu %</u>
72-1	--	-90°	147'	68+00N	3+40W	3,470				
72-2	270°	-55°	633'	72+56N	2+08W	3,506	50'	85'	35'	0.38%
							* 305'	320'	15'	1.45%
72-3	354°	-52°	65'	50+02N	7+38E	3,684				
72-4	270°	-53°	639'	68+00N	0+48W	3,533				
72-5	270°	-50°	397'	76+27N	2+85W	3,524	50'	102'	52'	0.83%
72-6	090°	-50°	453'	68+00N	0+35W	3,533				
72-7	--	-90°	399'	72+56N	2+05W	3,506	95'	125'	30'	1.40%
							205'	230'	25'	0.78%
72-8	270°	-50°	706'	51+40N	11+52E	3,719				
72-9	--	-90°	387'	76+27N	2+82W	3,524				
72-10	090°	-47°	482'	59+45N	1+70W	3,480				
72-11	270°	-49°	492'	59+45N	1+80W	3,480				
72-12	270°	-49°	461'	55+48N	0+03E	3,530				
72-13	270°	-52°	557'	80+00N	2+92W	3,525				
72-14	270°	-48°	500"	61+52N	6+93W	3,428				
<u>Total:</u>			<u>6,318'</u>							

* Note: D.D.H. 72-2 315'-320' - 5 ft Au(ozs/ton) Ag(ozs/ton) Cu%
0.07 0.8 3.97%

(Source: Assessment Report # 3789)

8 - 0 REFERENCES:

1. Rice, H.M.A. "Geology & Mineral Deposits of the Princeton Map Area," Memoir 243, G.S.C., 1947.
2. Preto, V.A. "Geology of the Aspen Grove Area," Map 15, B.C.D.M., 1974.
3. Preto, V.A. "Geology of the Nicola Group Between Merritt and Princeton," Bul 69, B.C. Min. of E.M. & P.R.
4. Assessment Reports, B.C. Min. of E.M. & P.R.: 3787, 3788, 3789, 4089, 6215, 6642 & 10505.
5. G.E.M. 1972 (p.137) & 1977 (p.135) B.C. Min. of E.M. & P.R.

9 - 0 STATEMENT OF COSTS:

I hereby certify that the following costs were incurred in carrying out the geological mapping of the OX 1 and OX 3 claims in the Aspen Grove area, 92-H/15(E), between the 10th and 16th of April, 1985, and in report preparation.

Geologist: (D.R. Morgan)

Geological mapping, April 10-16 (7 days), report writing 5 days, Total: 12 days at \$350/day: 4,200.

Room & Board:

Motel: 220.31

Meals & food: 145.

Transportation:

700 miles at 25¢/mile: 175.00

Printing, Xeroxing & Report Preparation: 55.00

Miscellaneous:

Plastic flagging, work sheets, phone calls: 25.00

TOTAL EXPENSES: 4,820.31

Signed,



David R. Morgan, Geologist, P. Eng.

Vancouver, B.C.

24 April 1985



10 - 0 STATEMENT OF QUALIFICATIONS:

I, David R. Morgan of 3424 West 6th Avenue, Vancouver, B.C., V6R 1T3, do hereby certify that:

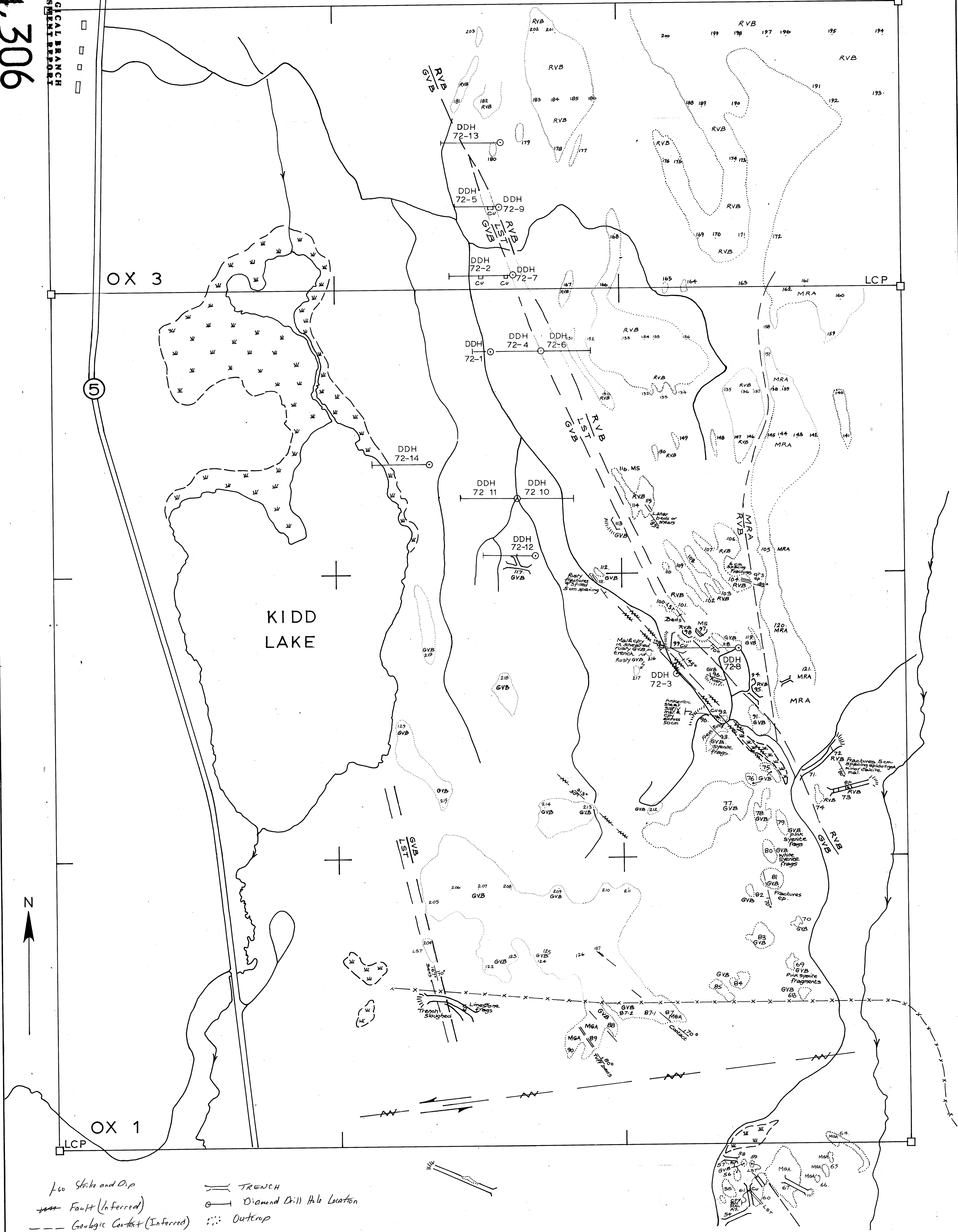
1. I am a 1954 graduate of McGill University, Montreal with a B.Sc degree in Honours Geology.
2. I am a registered member of the Association of Professional Engineers of the Province of British Columbia.
3. I personally carried out the geological mapping of the OX claims near Aspen Grove B.C. as described in this report.

Signed,



David R. Morgan, Geologist, P. Eng
Vancouver, B.C. 24 April 1985





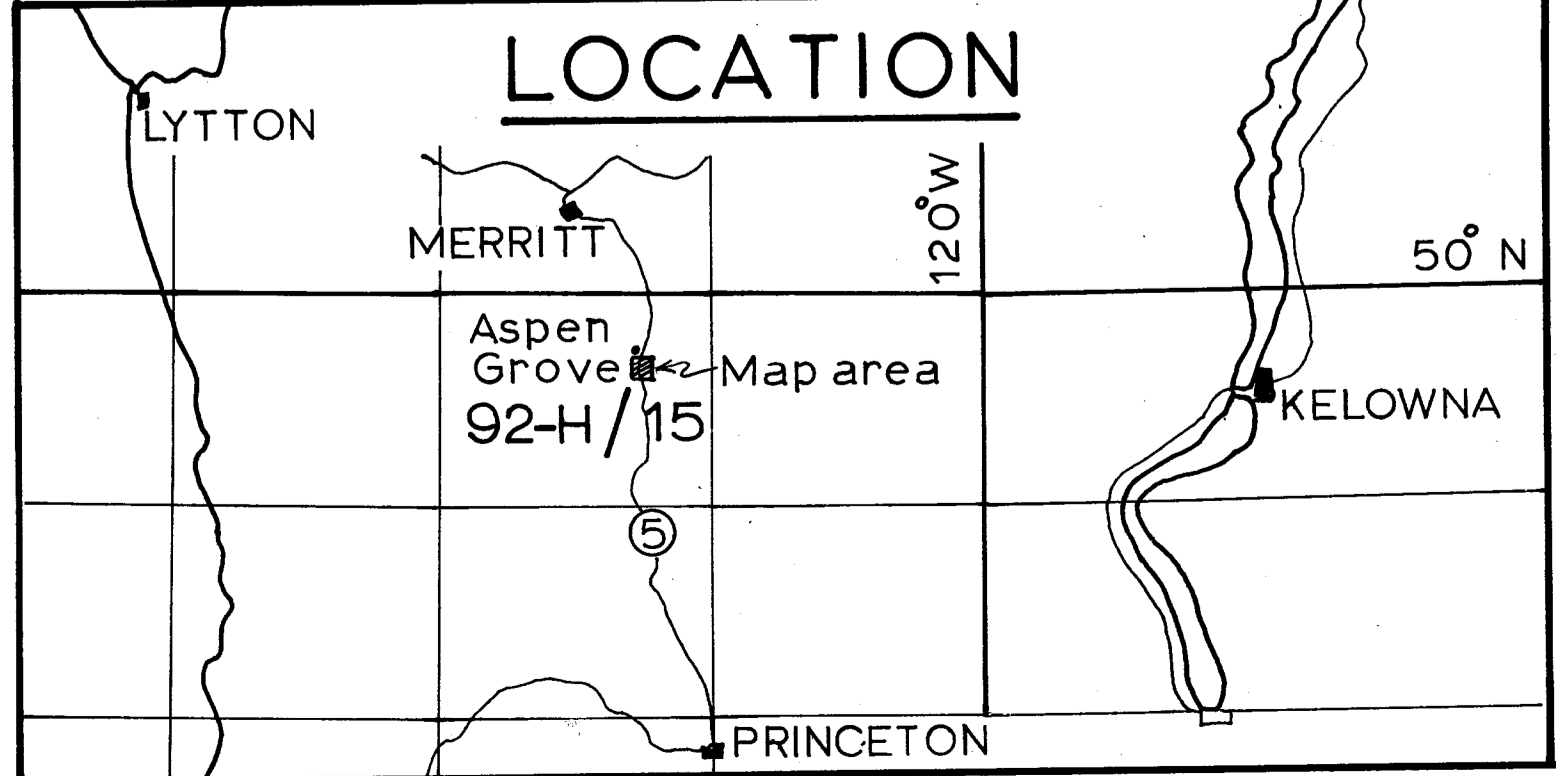
/60 Strike and Dip
 --- Fault (Inferred)
 --- Geologic Contact (Inferred)

TRENCH
 ○ Diamond Drill Hole Location
 :::: Outcrop

LEGEND

- MRA Massive red augite andesite & basalt
- RVB Red volcanic breccia & lahar
- GVB Green " " "
- MGA Massive green or grey andesite
- LST Limestone grey, reefoid
- Cu Copper mineralization

LOCATION



OX 1 & 3 CLAIMS

Aspen Grove Area, B.C.
GEOLOGY

Scale: 1:2 500
Date: 5 May 1985
By: D.R. Morgan P.Eng.

