MAP NO.:	ASSESSMENT REPORT	X	DOCUMENT NO: 092684
	PROSPECTUS		MINING DISTRICT: Mayo
106 D 7	CONFIDENTIAL	X	TYPE OF WORK: Geology
	OPEN FILE		

REPORT FILED UNDER: NDU Resources Inc.

DATE PERFORMED: Aug 23, 1988 DATE FILED: March 3, 1989

LOCATION: LAT.: 64° 24' N AREA: Mt. Williams

LONG.: 134° 40' W VALUE $: 30 225.00

CLAIM NAME & NO.:

BLENDE 1-15	YA 43524- YA 43538
BLENDE 16-56	YB 02529- YB 02569
BLENDE 57-66	YB 02700- YB 02709

WORK DONE BY: J. Franzen

WORK DONE FOR: NDU Resources Inc.

DATE TO GOOD STANDING:

REMARKS: #47 BRAINE Interpretation of diamond drilling, trenches, and prospecting were performed.

GEOLOGICAL REPORT

ON THE

092684

BLENDE MINERAL PROPERTY

BLENDE 1 - 66 QUARTZ CLAIMS

FOR

NDU RESOURCES LTD.

MAYO MINING DISTRICT

YUKON TERRITORY

BY

J.P. FRANZEN, P.ENG.

North Vancouver, B.C.

November 29, 1988

This report has been examined by the Geological Evaluation Unit under Section 53 (4) Yukon Quartz Mining Act and is allowed as representation work in the amount of $ 30,225.00 .

W.B. LeBarge

for Regional Manager, Exploration and Geological Services for Commissioner of Yukon Territory.

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

SUMMARY

The BLENDE mineral property, Yukon Territory, is owned by NDU Resources Ltd. The 66 claim property covers a number of carbonate-hosted lead-zinc-silver occurrences. A three hole reconnaissance diamond drill program on one of these, Zone 7, returned significant lead-zinc-silver values over intervals of up to 132 metres. The best intersection was 5.3% lead, 3.0% zinc and 3.1 ounces silver/ton across 86.2 metres. The 1988 drill results indicate that the BLENDE property has potential to host a major lead-zinc-silver deposit.

A two stage work program is recommended to further assess the base metal - silver potential of the property. The proposed program will delineate the extent of mineralization identified in 1988 and test lead-zinc-silver occurrences elsewhere on the property. Stage 1, at an estimated cost of $1,940,000 would consist of bulldozer trenching and a 6,100 metre diamond drilling program. Contingent upon encouraging results from the first stage, Stage 2 would include a fill-in diamond drilling program, metallurgical test work, preliminary engineering and environmental studies at an estimated cost of $3,150,000.

INTRODUCTION

The BLENDE mineral property, Mayo Mining District, Yukon Territory, is owned by NDU Resources Ltd. The property is one of a number of important base metal-silver occurrences in a belt north of the prolific Keno Hill silver camp. The 66 quartz claim property covers ten known carbonate-hosted lead-zinc-silver zones.

Prior to the 1988 diamond drilling program, Zone 5 was considered to be the main mineral occurrence on the largely scree-covered property. This zone averages 25 metres in width and had been traced over a strike length of 900 metres and a vertical range of 300 metres. A three hole drill program, designed to test Zone 5 at depth, returned significant lead-zinc-silver values in the hanging-wall of Zone 5. These mineralized intercepts are up to 132 metres long and indicate that the BLENDE property has potential to host a major lead-zinc-silver deposit.

The writer first reported on the subject property for NDU Resources Ltd. in a report dated June 17, 1987 (Franzen, 1987). In 1988, NDU Resources Ltd. completed prospecting, trenching and a three-hole diamond drilling programs.

NDU Resources Ltd. retained the writer to assess results of the 1988 work and to recommend a program to further test the lead-zinc-silver potential of the property. This report is based on the writer's examination of drill core at the property on August 22, 1988, field examination of the property

on August 23, 1988 and on published and private reports and maps provided by NDU Resources Ltd. and Archer, Cathro & Associates (1981) Limited.

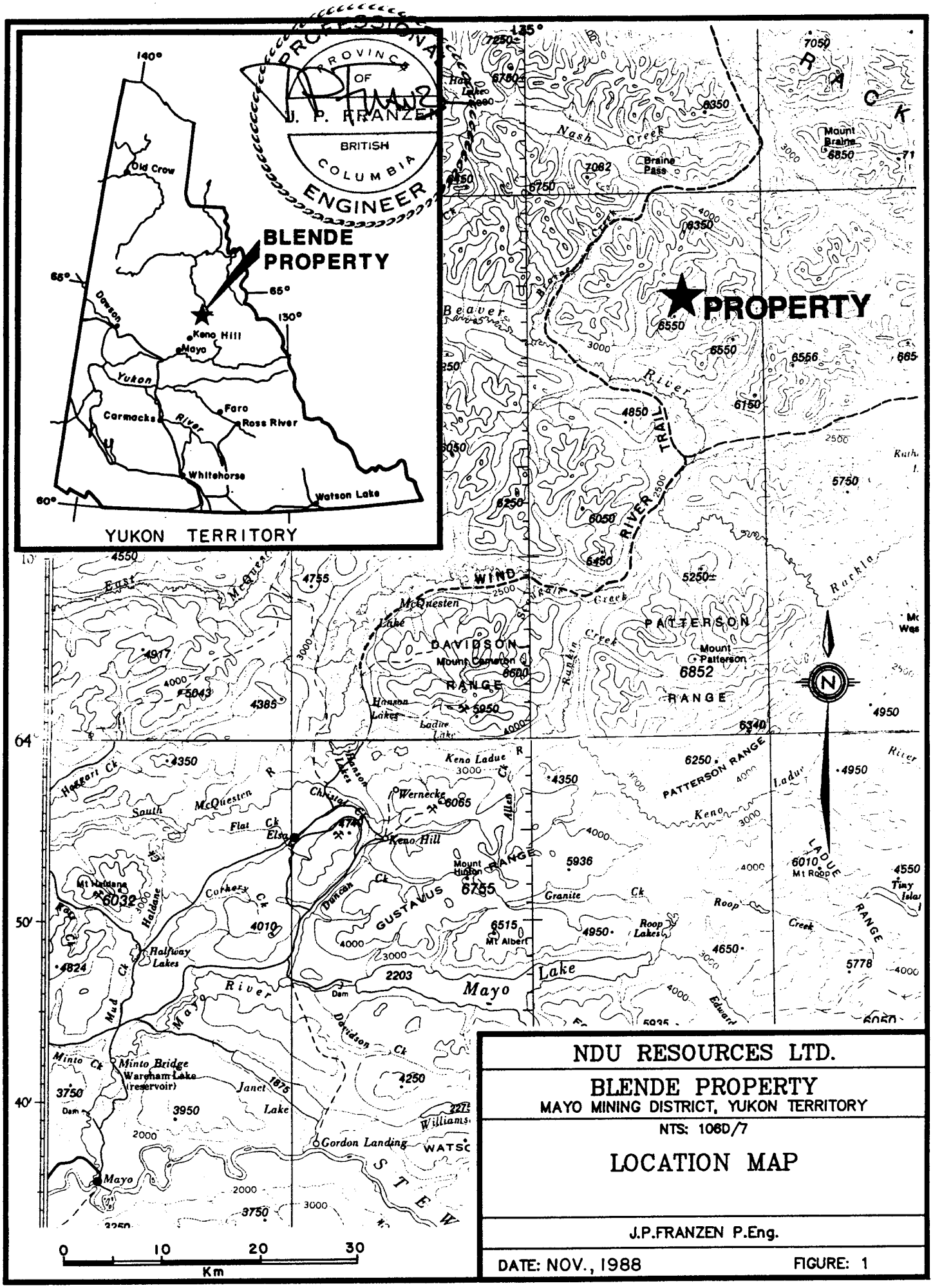
LOCATION AND ACCESS

The BLENDE property is centred on Mt. Williams at latitudes 64°24' north and longitude 134°40' west (Figure 1). The property is 64 kilometres northeast of Elsa, Yukon Territory. Elsa is a company town that is owned and operated by United Keno Hill Mines Limited. Goods and services required for mineral exploration work are available at nearby Mayo.

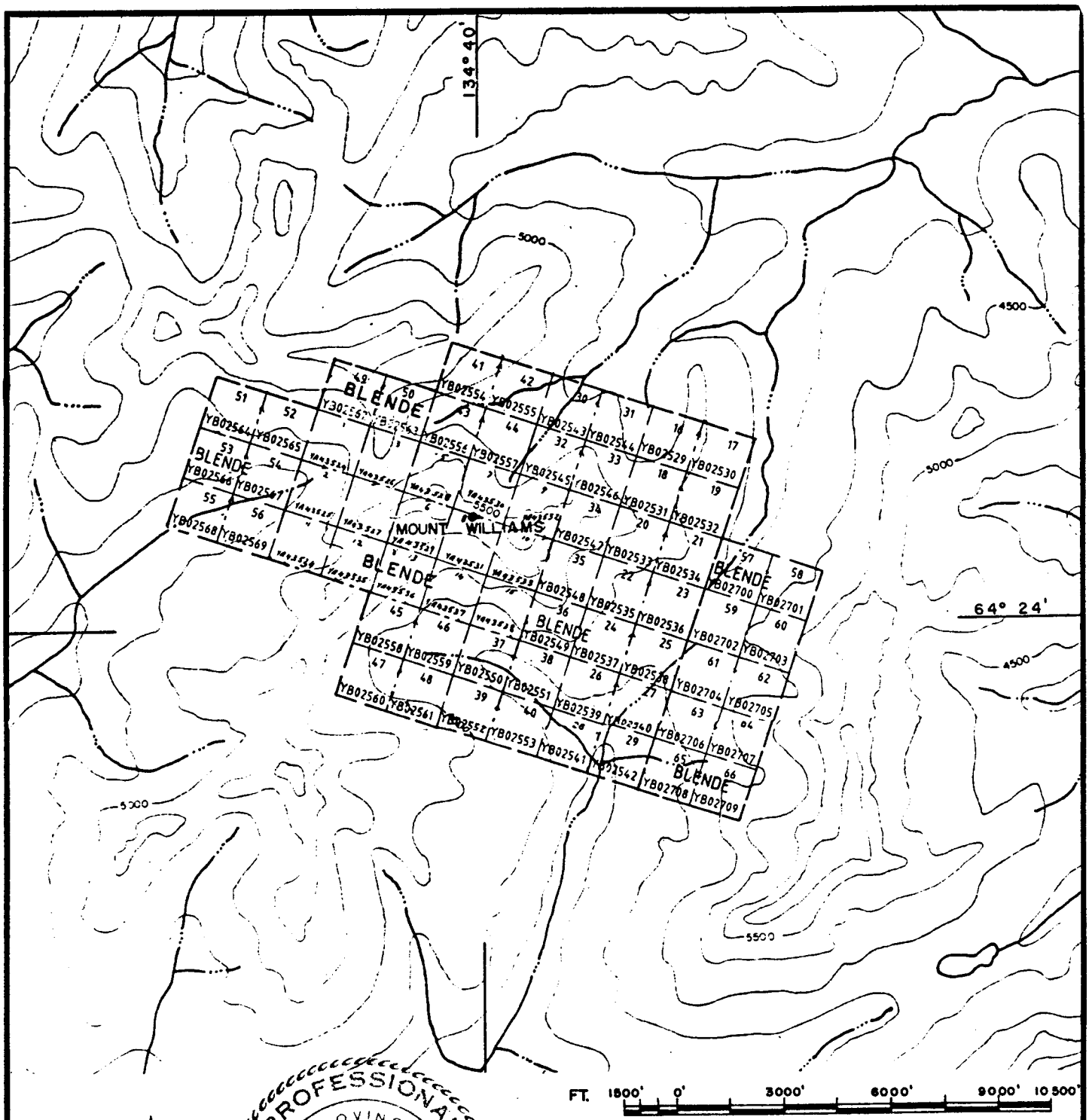
Year round access to the property is by helicopter from Mayo. The Wind River winter bulldozer trail passes within 11 kilometres of the property and will be connected to the property in 1989 with the construction of a 16 kilometre winter bulldozer trail.

MINERAL PROPERTY

The BLENDE property is in the Mayo Mining District, Yukon Territory. The property consists of 66 contiguous quartz claims covering approximately 1,380 hectares (Figure 2). These claims are believed to have been properly located according to The Act Respecting Quartz Mining in Yukon Territory.



NDU RESOURCES LTD.
BLENDE PROPERTY MAYO MINING DISTRICT, YUKON TERRITORY
NTS: 106D/7
LOCATION MAP
J.P.FRANZEN P.Eng.
DATE: NOV., 1988 FIGURE: 1



PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
J. P. FRANZEN

ISSUED UNDER THE AUTHORITY OF THE MINISTER OF NORTHERN AFFAIRS AND NATIONAL RESOURCES

● 1988 DRILL HOLE COLLAR

NDU RESOURCES LTD.

BLENDE PROPERTY
MAYO MINING DISTRICT, YUKON TERRITORY

NTS: 106D/7

CLAIM MAP

J.P.FRANZEN P.Eng.

DATE: NOV., 1988 FIGURE: 2

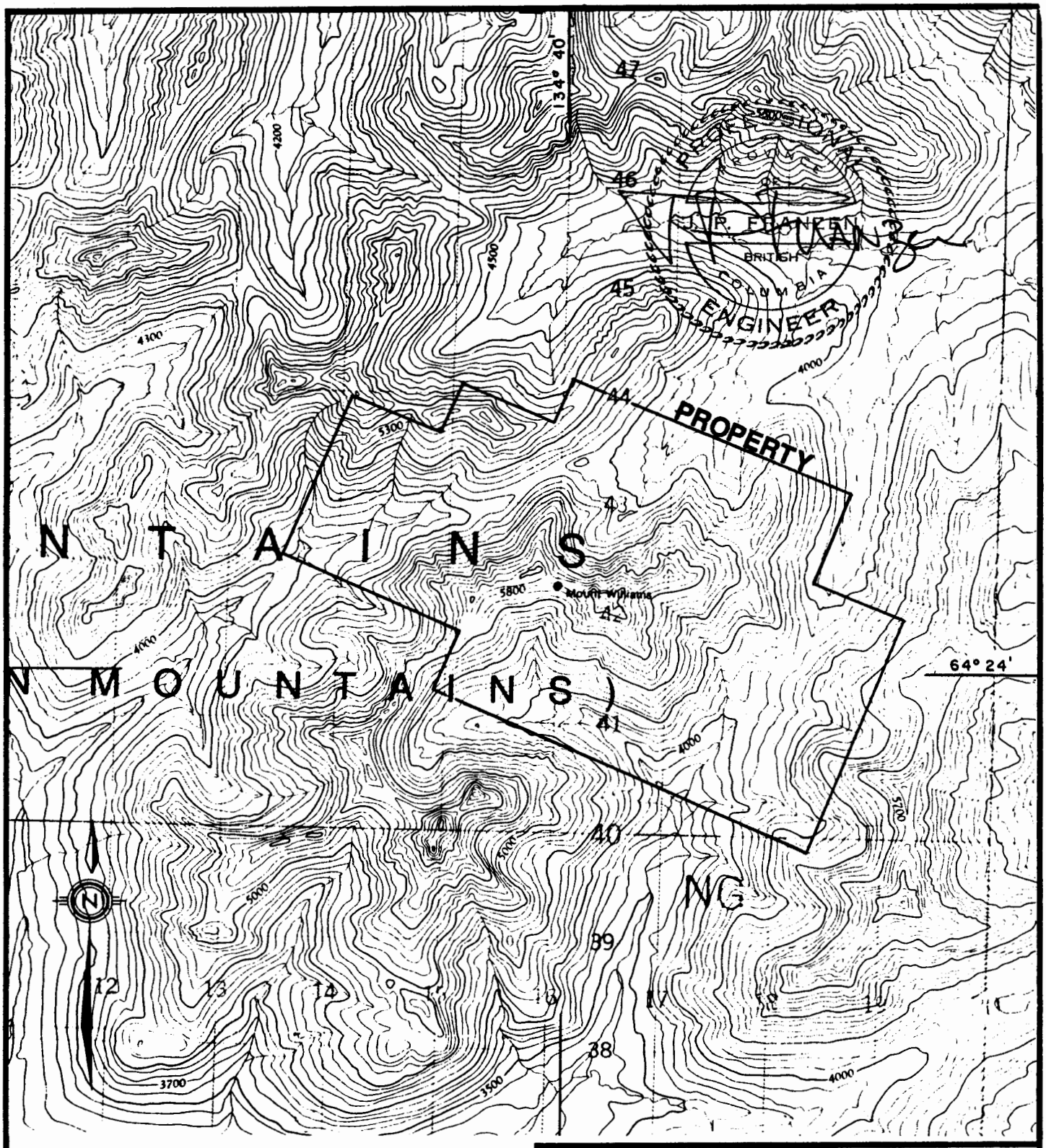
Details of claims, as provided by the Mining Recorder - Mayo Mining District, follow:

Quartz Claim Name	Grant Numbers	Recorded Owner	Renewal Date
BLENDE 1-15	YA 43524-YA 43538	Archer, Cathro & Associates (1981) Limited	11 March 1990
BLENDE 16-56	YB 02529-YB 02569	Archer, Cathro & Associates (1981) Limited	18 July 1989
BLENDE 57-66	YB 02700-YB 02709	Archer, Cathro & Associates (1981) Limited	22 August 1989

Archer, Cathro & Associates (1981) Limited is managing exploration on the property and holds the claims in trust for NDU Resources Ltd.

PHYSICAL FEATURES

The BLENDE property is on the southern flank of the Wernecke Mountains (Figure 1). These mountains are formed from resistant rocks and are characterized by irregular, jagged ridges incised with numerous cirques. The property is centred on Mt. Williams where elevations range from 1,200 to 1,860 metres on the mineral claims and from 900 metres to 1,990 metres in the surrounding area (Figure 3). Treeline is at approximately 1,300 metres; property vegetation is restricted to sparse grass and lichen.



0 1000 2000 3000 4000

METRES

● 1988 DRILL HOLE COLLAR

NDU RESOURCES LTD.

BLENDE PROPERTY

MAYO MINING DISTRICT, YUKON TERRITORY

NTS: 106D/7

TOPOGRAPHIC MAP

J.P.FRANZEN P.Eng.

DATE: NOV.,1988 FIGURE: 3

Cirques are common at elevations above 1,400 metres. Outcrop is most abundant on steep, north-facing cirque walls, ridge tops and in active stream cuts. South-facing exposures are normally blanketed by talus and scree.

PROPERTY HISTORY

Work programs on the BLENDE property are summarized below:

1975 Staked as the WILL claims by Cyprus Anvil Mining Corp. Work program: detailed geochemical silt and soil sampling, prospecting and geologic mapping (Roberts and Dean, 1975). Cost of 1975 program = $10,000.

1981 Staked as the BLENDE claims by Archer, Cathro & Associates (1981) Limited.

1981-1983 Archer, Cathro & Associates (1981) Limited work programs: rock and chip sampling of mineralized zones, prospecting and air photograph interpretation of linear structures. Cost of programs = $22,500.

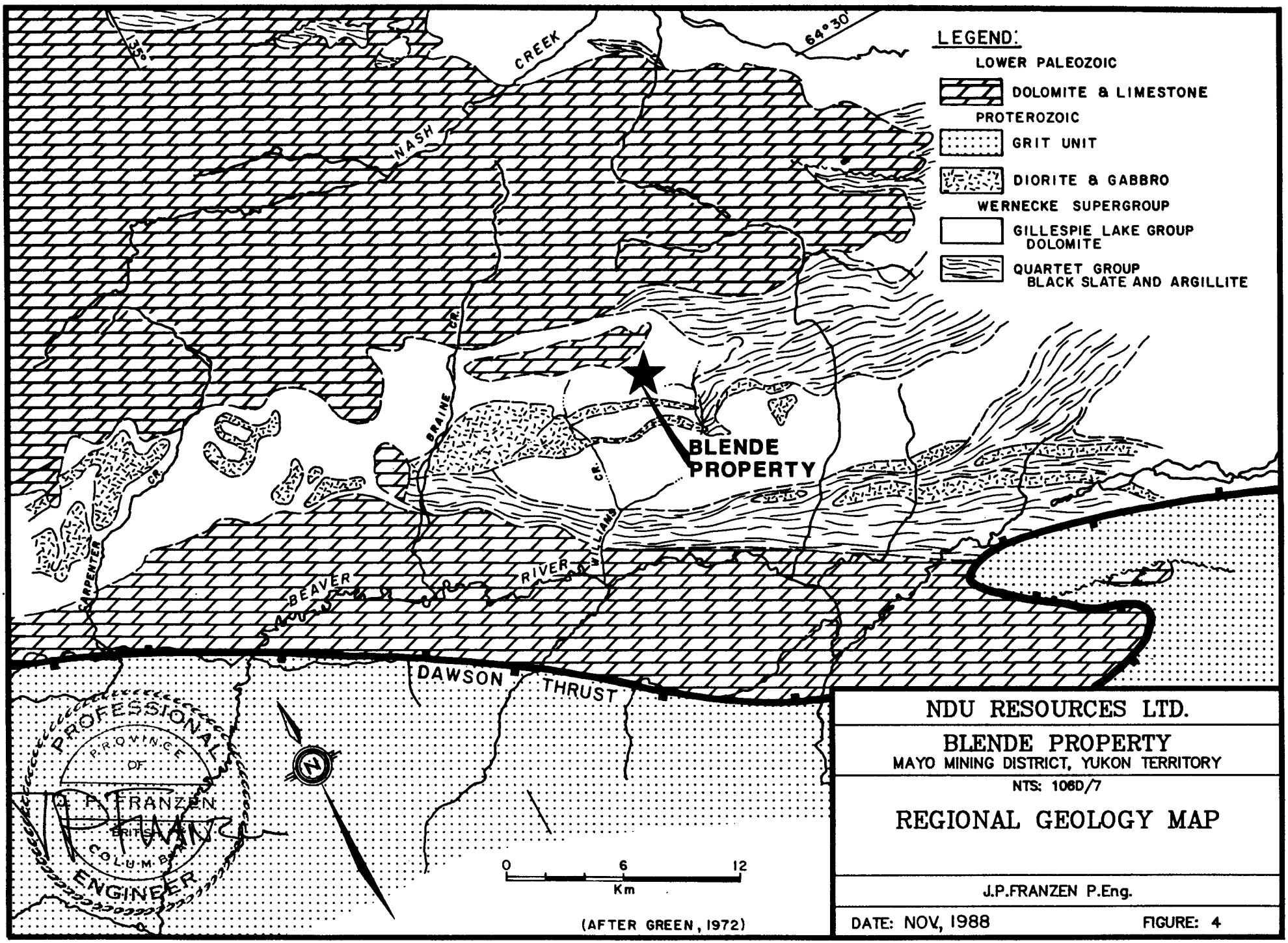
1984 Archer, Cathro & Associates (1981) Limited and Norvista Development Ltd. work program: geologic mapping, hand trenching and systematic rock chip sampling. Cost of 1984 program = $33,000.

1988 NDU Resources Ltd. work program: prospecting, staking, hand trenching and 718 metres diamond drilling in three holes. Cost of 1988 program = $200,000.

REGIONAL GEOLOGY AND MINERALIZATION

The Dawson Thrust is the major geologic structure in the region (Figure 4). It is a steeply inclined, several kilometres wide, composite fault that contains slices of volcanic and ultramafic basement rocks. It is coincident with an important facies boundary and separates Proterozoic and early Paleozoic carbonate and other platform strata on the north from Paleozoic and Mesozoic clastic rocks on the south (Tempelman-Kluit, 1980). Subsidiary fractures and faults commonly parallel this regional fault system.

The oldest rocks in the region are fine-grained terrigenous and carbonate sediments of the mid-Proterozoic Wernecke Supergroup (Delaney, 1981). In the vicinity of the claims, the Supergroup is represented by Quartet Group black slate and argillite and Gillespie Lake Group orange-weathering dolomite. The contact between Quartet and Gillespie rocks is transitional. The Wernecke Supergroup is unconformably overlain by Lower Paleozoic limestone and dolomite. Dykes and sills of diorite and gabbro intrude Wernecke strata. The intrusive outcrop pattern is parallel to the Dawson Thrust (Figure 4). Some intrusions are truncated at the unconformity separating strata of the Wernecke Supergroup from younger rocks, whereas others cross this boundary. Recent Rb-Sr age determinations indicate that dyke rocks are Hadrynian or older.



NDU RESOURCES LTD.

BLENDE PROPERTY

MAYO MINING DISTRICT, YUKON TERRITORY

NTS: 106D/7

REGIONAL GEOLOGY MAP

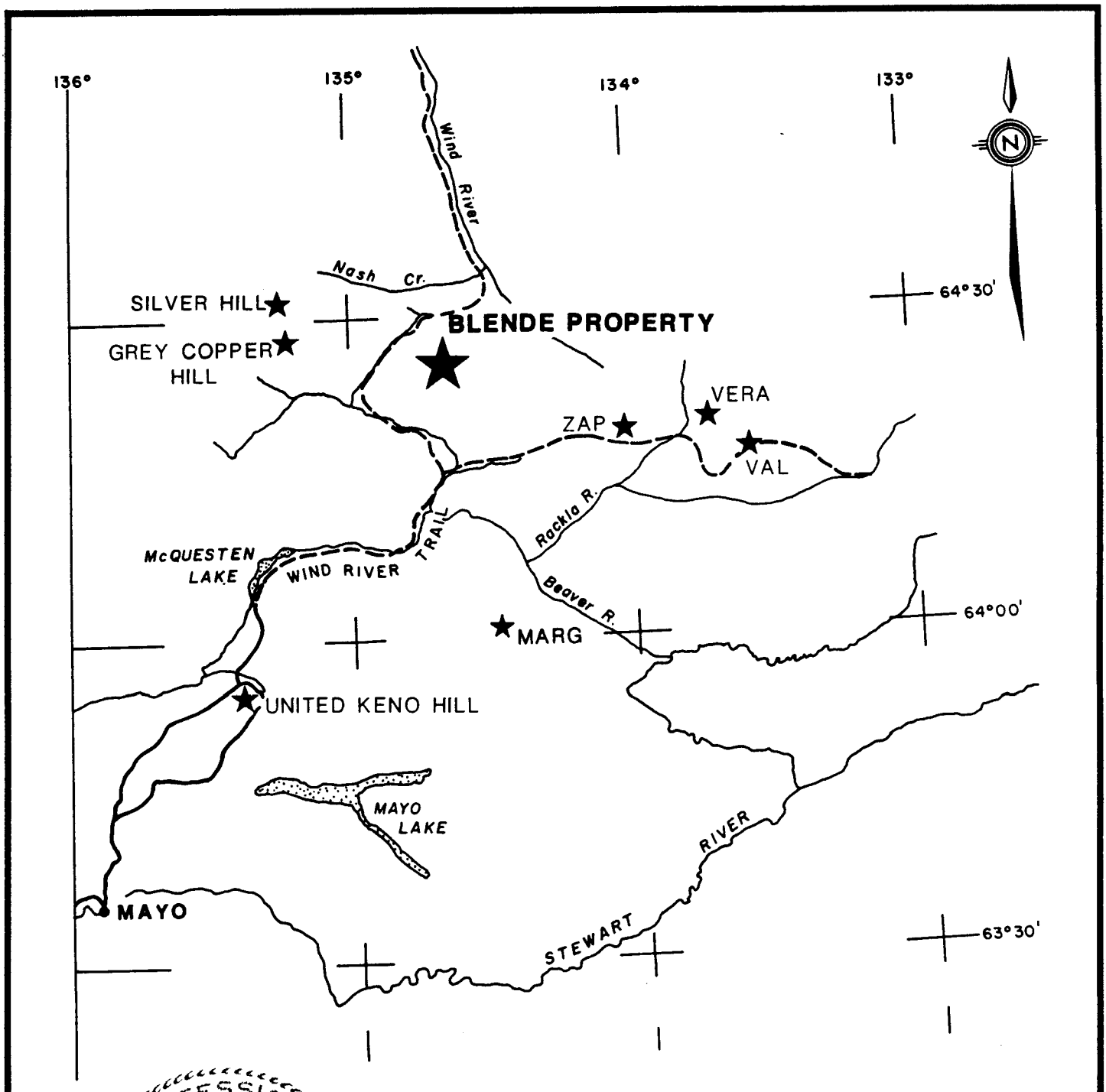
J.P.FRANZEN P.Eng.

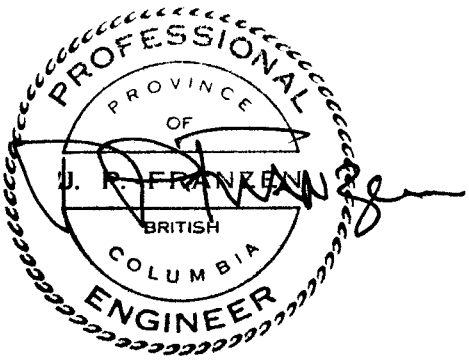
DATE: NOV, 1988 FIGURE: 4

Two styles of deformation are recognized in the Wernecke Supergroup. On a regional scale, open, northwest-trending folds control the distribution of bedrock units (Figure 4); however, an older series of tight, northeasterly-trending folds are locally important.

Fault and fracture systems mimic fold trends but differ in their apparent ages with northwest-trending faults truncated and offset by younger northeast-trending structures.

A number of silver-base metals prospects are known in the region (Figure 5). Six of the seven known prospects form a 90 kilometre long belt that is parallel to and immediately north of the Dawson Thrust (Cockfield, 1923; Tempelman-Kluit, 1980). The belt is 60 kilometres northeast of the prolific Keno Hill silver camp. Exploration work in the northern belt in the late 1970's and early 1980's focussed on the VERA prospect where Prism Resources Ltd. and partners completed 12,000 metres of diamond drilling and 700 metres of underground development. This work outlined 950,000 tons averaging 9 oz Ag/ton and 3% combined Pb + Zn. Mineralization consists of sphalerite, galena and carbonate gangue in vertical, northeast-trending fracture zones. Host rocks are Gillespie Lake Group dolomite. More recently, NDU Resources Ltd. and joint venture parnter Cameco announced polymetallic mineral reserves at the MARG property (see Figure 5) of 2,300,000 tons grading 2.0% Cu, 2.6% Pb, 5.1% Zn, 1.9 ounces Ag/ton and 0.030 ounces Au/ton.





0 10 20 30 40 50 Km

0 10 20 30 Miles

NDU RESOURCES LTD.

BLENDE PROPERTY
MAYO MINING DISTRICT, YUKON TERRITORY

NTS: 106D/7

REGIONAL MINERALIZATION MAP

J.P.FRANZEN P.Eng.

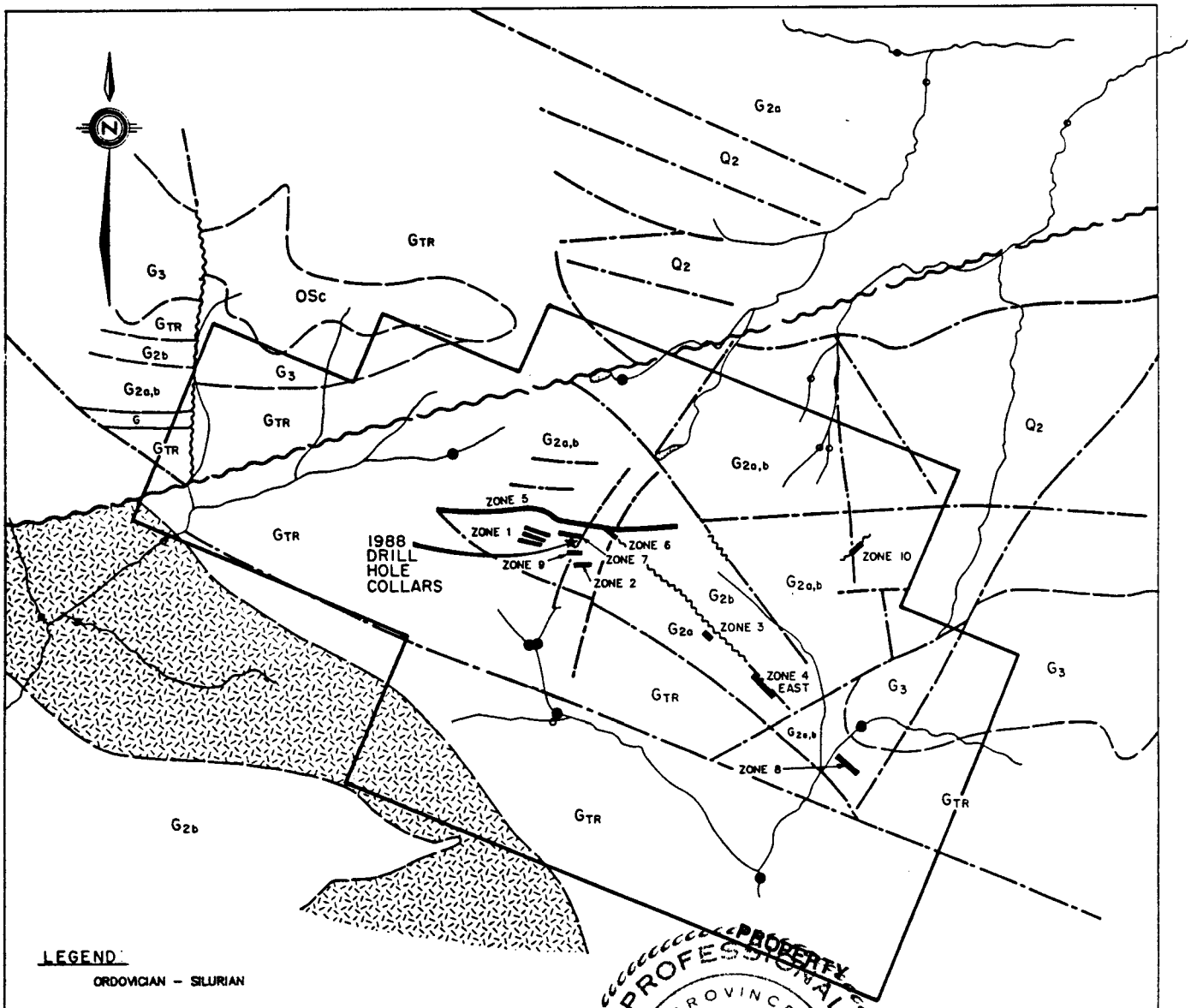
DATE: NOV., 1988 FIGURE: 5

PROPERTY GEOLOGY

The BLENDE property is underlain by layered rocks of the Gillespie Lake Group (Figure 6). A large diorite to gabbro dyke flanks the property to the south; Quartet Group and Paleozoic carbonate rocks are to the north. Upright, east-northeast trending vein faults occur in Gillespie Lake Group rocks.

Three mappable Gillespie Lake Group units underlie the property (Cathro and Carne, 1984). Unit G_{TR} forms the base of the group and is regionally transitional with Quartet Group shales and argillites. It consists of light orange to maroon-green weathering dolomite shale with white to tan dolomite interbeds. Unit G_2 conformably overlies Unit G_{TR}. The contact is marked by an abrupt stratigraphic break. Unit $G2_a$ is a shallow water sequence of massive, orange weathering, argillaceous and stromatolitic dolomite. This unit is host to known mineralization on the property. Unit G_{2b} rocks conformably overlie G_{2a} and are characterized by interbedded shale and chert. Unit G_3 is a buff weathering, massive stromatolitic dolomite. A low angle unconformity separates it from Unit G_2b.

Layered rocks trend northwest and dip gently to moderately to the northeast. Numerous small-scale folds parallel this trend and overprint older northeast-trending folds that are associated with slaty cleavage in fine-grained sedimentary rocks. Two major fault and/or lineament orientations occur on the property (Figure 6). The most prominent structures are steeply inclined and trend west-northwest. A 5 kilometre



LEGEND

ORDOVICIAN – SILURIAN

OSc — LIGHT GREY TO WHITE WEATHERING MASSIVE TO THICK BEDDED LIMESTONE AND DOLOMITE

HADRYNIAN or OLDER

ORANGE TO BROWN WEATHERING DIORITE AND GABBRO DYKE

HELIKIAN or OLDER

GILLESPIE LAKE GROUP

G3 — MASSIVE STROMATOLITIC DOLOMITE

G2b — INTERBEDDED BLACK ARGILLITE SHALE AND CHERT; MINOR ORANGE WEATHERING DOLOMITE INTERBEDS.

G2a — ORANGE WEATHERING, MASSIVE GREY TO INTERBEDDED LIGHT GREY AND BLACK ARGILLACEOUS AND STROMATOLITIC DOLOMITE WITH MINOR CHERT INTERBEDS.

GTR — LIGHT ORANGE TO MAROON – GREEN WEATHERING INTERBEDDED MAROON AND GREEN SHALE WITH WHITE TO TAN DOLOMITE INTERVALS.

QUARTET LAKE GROUP

Q2 — INTERBEDDED BLACK SHALES, PHYLLITES, ARGILLITES AND QUARTZITES.

GEOLOGICAL CONTACT

FAULT

AIR PHOTO LINEAMENT

STREAM SEDIMENT SAMPLE

STREAM SEDIMENT SAMPLE ANOMALY >200 ppm Pb

MINERALIZED VEIN FAULT

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
J. P. FRANZEN

NDU RESOURCES LTD.

BLENDE PROPERTY

MAYO MINING DISTRICT, YUKON TERRITORY NTS: 106D/7

PROPERTY GEOLOGY

0 400 800 1200 1600 2000

SCALE IN METRES

DATE: NOV., 1988

BY: J.P. FRANZEN P.Eng

FIGURE No. 6

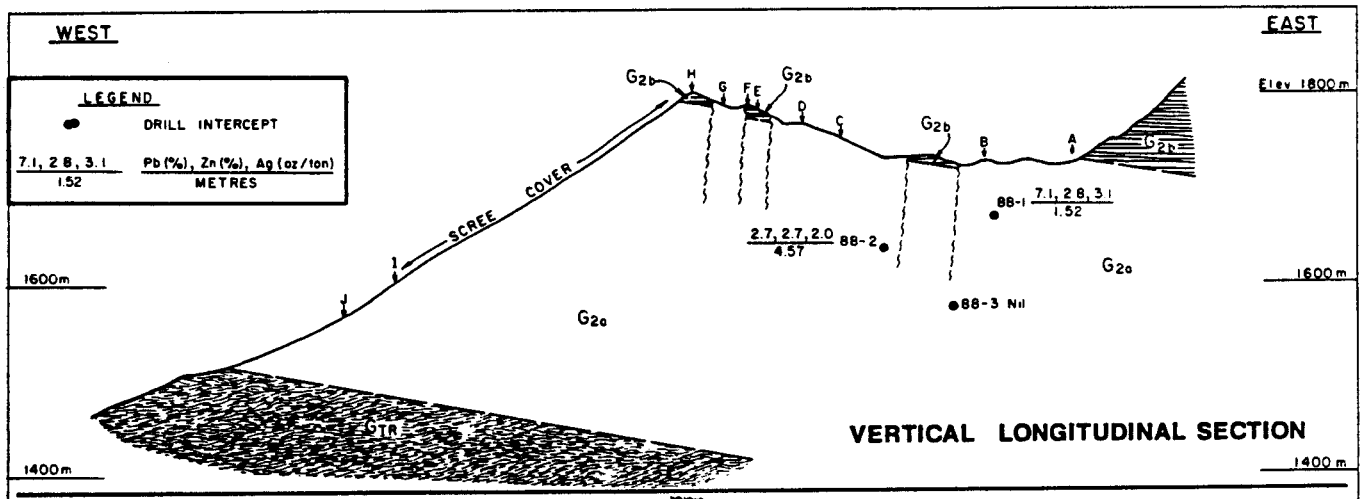
Prepared by: RWR MINERAL GRAPHICS LTD.

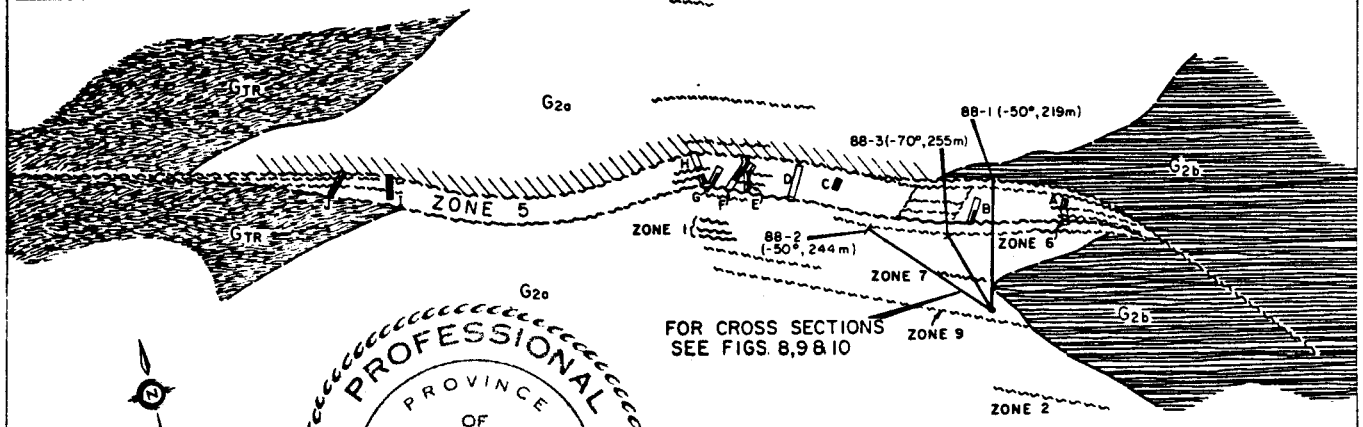
long diorite to gabbro dyke parallels this trend. The resulting west-northwest fault blocks are offset by north-northeast structures. These structures also displace Paleozoic carbonate rocks. Most known mineralization is associated with the older west-northwest structures (Figure 6).

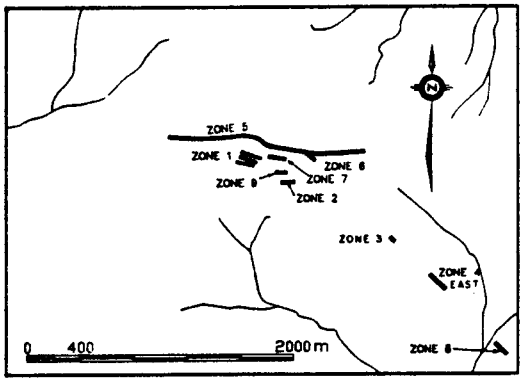
Ten mineralized vein fault zones are known on the BLENDE property (Figure 6). These zones are restricted to outcrop areas on ridge tops and/or the steep north-facing slope of Mt. Williams; elsewhere the property is scree and talus-covered. Stream sediment samples from a talus-covered south-facing slope returned strongly anomalous Pb values (Figure 6).

All of the known zones occur in massive dolomite (Unit G_{2a}) of the Gillespie Lake Group; they are steeply inclined and most trend west-northwest. Mineralization is predominantly light brown to yellow sphalerite with minor galena; gangue is secondary dolomite. Each of the mineralized zones is described below (Cathro and Carne, 1984).

Zone 5 is an upright vein fault that crosses a steep cliff face on the north side of Mt. Williams. It has been traced over a strike length of 900 metres and a vertical range of 300 metres (Figures 6 and 7). Average width of the zone is 25 metres. The zone is recessively weathered and much of it is talus covered. Zone 5 diamond drill results are described under 1988 Work Program.







PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
J. P. FRANZEN

LEGEND:

ORDOVICIAN – SILURIAN

OSc — LIGHT GREY TO WHITE WEATHERING MASSIVE TO THICK BEDDED LIMESTONE AND DOLOMITE

HADRYNIAN or OLDER

ORANGE TO BROWN WEATHERING DIORITE AND GABBRO DYKE

HELIKIAN or OLDER

GILLESPIE LAKE GROUP

G_3 — MASSIVE STROMATOLITIC DOLOMITE

G_{2b} — INTERBEDDED BLACK ARGILLITE SHALE AND CHERT; MINOR ORANGE WEATHERING DOLOMITE INTERBEDS.

G_{2a} — ORANGE WEATHERING, MASSIVE GREY TO INTERBEDDED LIGHT GREY AND BLACK ARGILLACEOUS AND STROMATOLITIC DOLOMITE WITH MINOR CHERT INTERBEDS.

G_{TR} — LIGHT ORANGE TO MAROON – GREEN WEATHERING INTERBEDDED MAROON AND GREEN SHALE WITH WHITE TO TAN DOLOMITE INTERVALS.

QUARTET LAKE GROUP

Q_2 — INTERBEDDED BLACK SHALES, PHYLLITES, ARGILLITES AND QUARTZITES.

GEOLOGICAL CONTACT

MINERALIZED VEIN FAULT

D — CONTINUOUS CHIP SAMPLE LOCATION

D — <5 % Pb+Zn

G — 5-8 % Pb+Zn

C — >9 % Pb+Zn

IRON CARBONATE AND SILICA ALTERATION

DIAMOND DRILL HOLE COLLAR

(AFTER CATHRO AND CARNE, 1984)

NDU RESOURCES LTD.

BLENDE PROPERTY

MAYO MINING DISTRICT, YUKON TERRITORY NTS: 106D/7

ZONE 5 GEOLOGY

0 100 200 300 400 m

SCALE IN METRES

DATE: NOV., 1988

BY: J.P. FRANZEN P.Eng

FIGURE No. 7

Prepared by: RWR MINERAL GRAPHICS LTD.

Mineralization in Zone 5 is stratabound in Gillespie Lake Group Unit G_{2a} dolomite. The mineralized fault panel is 350 metres high (Figure 7 - Vertical Longitudinal Section) and dips 65° to 80° to the south. Incompetent pelitic G_{TR} and G_{2b} units sandwich the competent dolomite unit and as a result the vein fault pinches at the upper and lower dolomite contacts (Figure 7 - Plan). The fault is not mineralized in pelitic wall rocks. A 3 to 8 metre wide iron carbonate and silica alteration zone flanks the footwall of Zone 5. This alteration is a complete replacement of bedded dolomite by structureless, fine-grained siderite and quartz.

Ten hand trenches have been excavated to bedrock on the mineralized zone (Cathro and Carne, 1984). Trench locations are shown in Figure 7; trench assay results for the total width of the vein fault and for those intervals of +5% Pb + Zn are summarized in Table I.

Zone 1 is of minor economic importance at surface. It consists of several narrow (0.5 - 1.0 metre) and discontinuous vein faults (Figure 7). Mineralized material is brecciated wall rock cemented by secondary dolomite with limonite, galena and minor sphalerite (Roberts and Dean, 1975). Sphalerite and galena occur in hydrozincite - stained wallrocks peripheral to the breccia zones. Samples from this area in 1984 returned values of less than 1% Pb + Zn and 1.0 oz Ag/ton (Cathro and Carne, 1984).

Zone 2 is sub-parallel to Zone 9 (Figure 7). It is a highly brecciated fracture zone approximately 1.5 metres wide and contains limonite, galena and minor sphalerite.

TABLE I

BLENDE PROPERTY

Zone 5 Chip Sample Assays

Sample Location	Total Vein Fault Zone				Vein Interval + 5% Pb + Zn			
	True Width (m)	Pb %	Zn %	Ag oz/ton	True Width (m)	Pb %	Zn %	Ag oz/ton
A	23.0	2.7	1.6	0.8	9.2	4.4	2.4	1.6
B	31.3	2.6	1.2	1.3	12.1	5.4	2.2	2.6
C	11.9	7.8	2.1	3.5	11.9	7.8	2.1	3.5
D	35.1	0.5	1.7	0.3	-	-	-	-
E	30.6	0.8	4.1	0.8	20.4	0.9	5.1	0.8
F	47.3	1.6	4.3	0.9	19.6	2.8	6.1	1.7
G	21.4	1.9	2.2	0.8	13.1	3.0	3.4	1.2
H	21.5	1.2	3.6	0.6	8.2	1.8	3.6	0.7
I	25.0	3.4	6.1	1.8	25.0	3.4	6.1	1.8
J	28.0	3.7	3.0	3.8	13.0	6.1	3.8	7.2

* See Figure 7 for sample locations.

Zone 3 consists of fracturing and brecciation over a strike length of 100 metres (Figure 6). Individual fractures are less than 5 cm wide and are filled with reddish-brown to yellow sphalerite, galena and secondary dolomite. The mineralized fractures parallel sub-vertical, east-trending joints in massive G_{2a} dolomite. The two main zones are 0.3 metre to 1.0 metre wide.

Zone 4 (East) is parallel to Zone 3 and consists of two - 1 metre wide fault zones with galena, sphalerite and secondary dolomite (Roberts and Dean, 1975). The writer examined Zone 4 and was unable to locate the reported fault zones. The area is covered with scree and talus. Inspection of this material identified a well-defined 100 metre long float train of mineralized and brecciated dolomite. Two composite samples of mineralized float returned the following results:

Sample Number	Pb %	Zn %	Ag ounces/ton
22451	7.60	3.81	1.64
22452	3.52	9.40	2.15

Mineralization consisted of disseminations and fracture fillings of light to dark brown sphalerite and galena in brecciated dolomite. This style of mineralization is similar to that seen in drill holes 88-1 to 88-3.

Zone 6 consists of two parallel faults in the hanging-wall of Zone 5 (Figure 7). The faults are up to 1 metre wide and are approximately 10 metres apart. They contain limonite, secondary dolomite, galena and minor sphalerite. Wallrock between the faults is mineralized with minor galena and sphalerite in fracture fillings.

Zone 7 is in the scree-covered hanging wall of Zone 5 (Figure 7). Prior to the 1988 work program it had not been systematically mapped or sampled and was thought to be of limited size. A composite sample of mineralized float downslope from the approximate position of the mineralized trend assayed 12.8% Pb, 23% Zn and 10.2 oz Ag/ton (Cathro and Carne, 1984). Zone 7 diamond drill results are described under 1988 Work Program.

Zone 8 consists of a 6 cm to 1 metre wide fracture zone that has been traced over a strike length of 15 metres in an area of poor bedrock exposure (Figure 6). Mineralization consists of yellow brown sphalerite, galena and minor pyrite in narrow trenches and breccia zones.

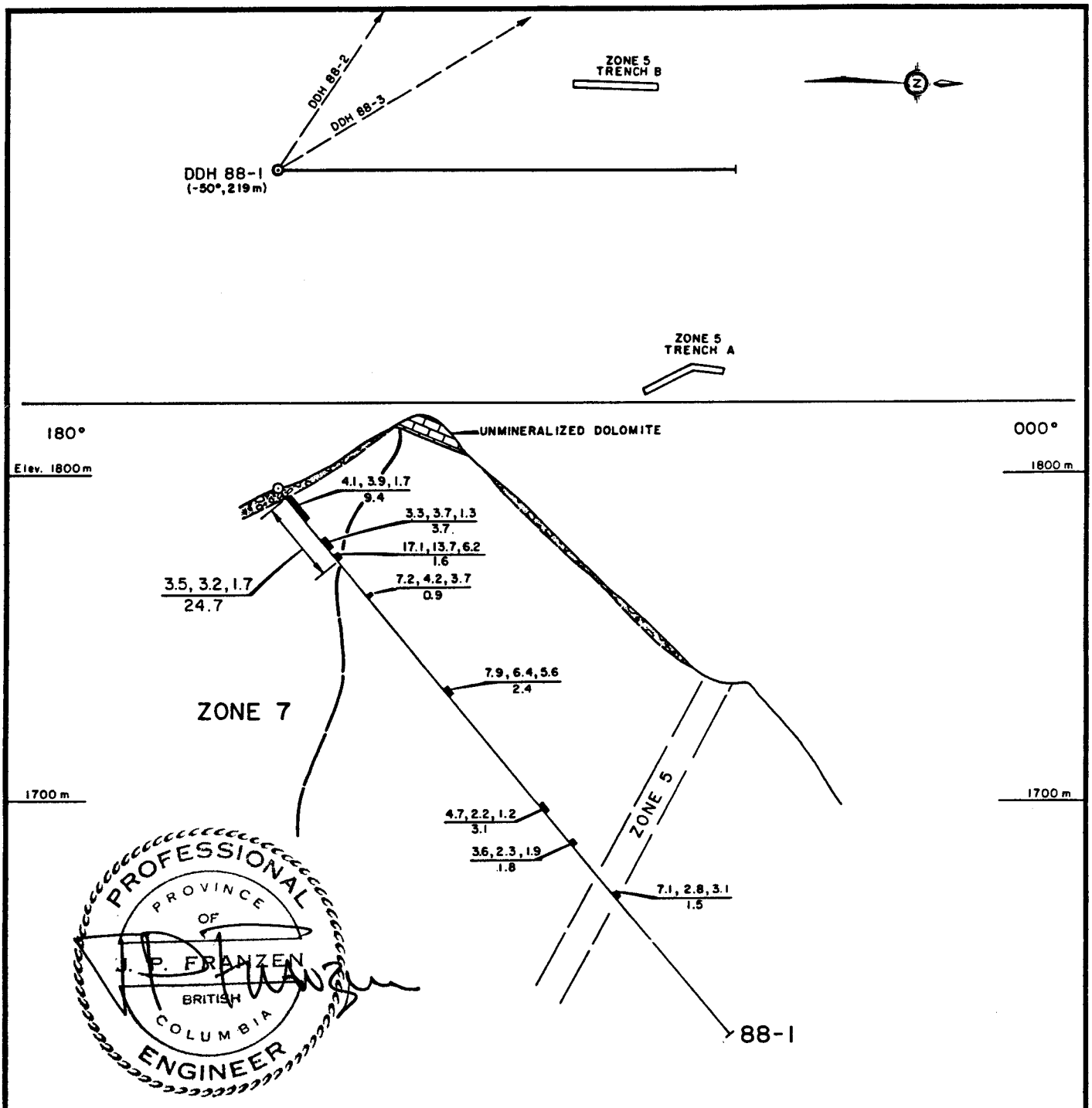
Zone 9 is the hanging-wall of Zone 7 (Figure 7). It is heavily weathered and forms a prominent recessive lineament. The zone is 2 to 3 metres wide and approximately 300 metres long. Two composite samples of limonitic breccia material averaged 14.1% Pb, 9.3% Zn, and 5.2 oz Ag/ton (Cathro and Carne, 1984). The 1988 drill holes were collared in Zone 9.

1988 WORK PROGRAM

The 1988 work program was designed to test Zone 5 mineralization at depth and to evaluate parallel zones in the hanging-wall of Zone 5 (Franzen, 1987). Three BQ-size diamond drill holes totalling 718 metres were completed from a single set-up. Two of the holes intersected Zone 5 and returned +5% Pb + Zn values over narrow widths. All drill holes returned +5% Pb + Zn values over large widths from a zone in the hanging-wall of Zone 5.

Figures 8, 9 and 10 and Tables II, III and IV summarize the layout and results, respectively, of the 1988 drill program. All samples were analyzed by Chemex Labs Ltd., North Vancouver, B.C. Appendix A describes the Chemex sample preparation and analytical procedures.

Three holes were fanned from a drill site on the scree-covered, south-facing slope of Mt. Williams. Figure 7 shows the position of the 1988 drill holes relative to the known mineralized zones on the property. Bedrock at the ridge crest consists of a flat-lying panel of unmineralized dolomite (Figures 8, 9 and 10), which forms scree that partially covers the steep cliff face on the north side of the ridge (Figure 8). The cliff face has been neither mapped nor sampled and will require specialized mountaineering skills to do so.



PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
J. P. FRANZEN

ASSAY LEGEND

3.5, 3.2, 1.7 / 10.7 — Pb (%), Zn (%), Ag (oz/ton) / METRES

+5% Pb+Zn

NDU RESOURCES LTD.

BLENDE PROPERTY

MAYO MINING DISTRICT, Y.T. NTS: 106 D/7

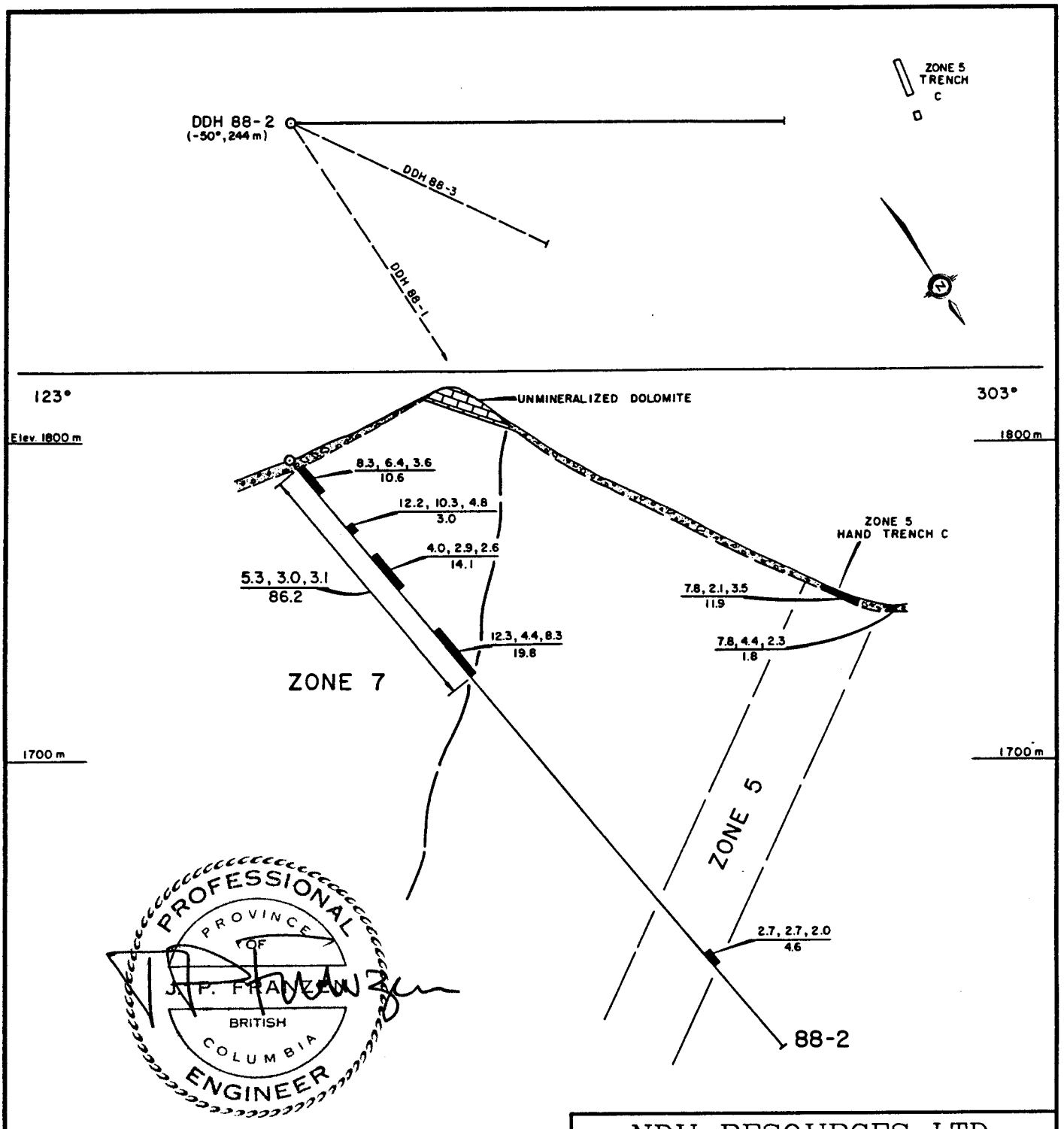
VERTICAL CROSS SECTION
DRILL HOLE 88-1

0 10 20 40 60 80 100
SCALE IN METRES

DATE: NOVEMBER, 1988
BY: J.P.FRANZEN, P.Eng.

FIGURE No. 8

Prepared by: RWR MINERAL GRAPHICS LTD.



PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
J.P. FRANZEN

ASSAY LEGEND

8.3, 6.4, 3.6 / 10.6 — Pb (%), Zn (%), Ag (oz/ton) / METRES

+ 5% Pb + Zn

NDU RESOURCES LTD.

BLENDE PROPERTY

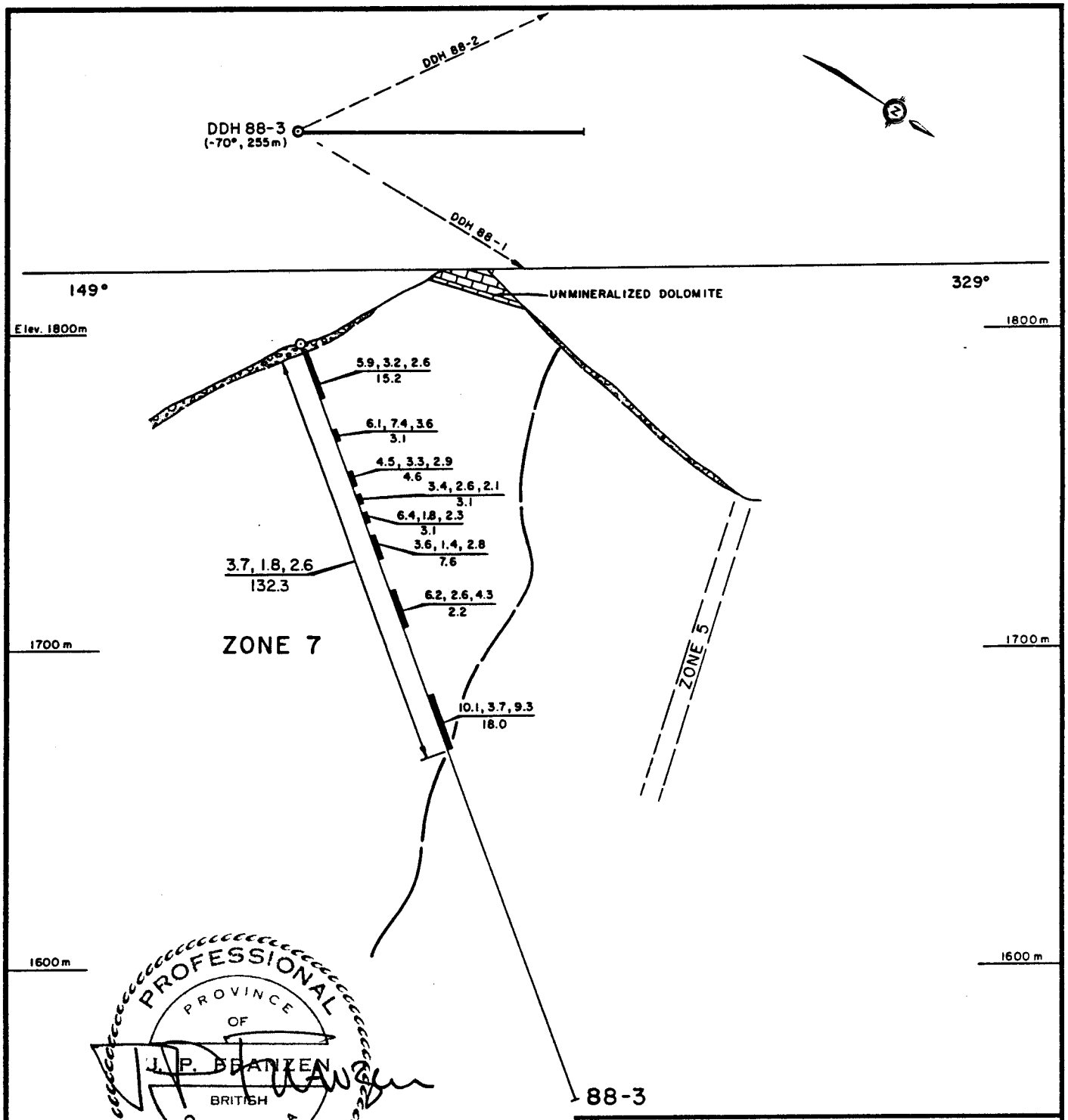
MAYO MINING DISTRICT, Y.T. NTS: 106 D/7

VERTICAL CROSS SECTION
DRILL HOLE 88-2

0 10 20 40 60 80 100
SCALE IN METRES

DATE: NOVEMBER, 1988
BY: J.P.FRANZEN, P.Eng. FIGURE No. 9

Prepared by: RWR MINERAL GRAPHICS LTD.



PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
J. P. FRANZEN

ASSAY LEGEND

5.9, 3.2, 2.6 / 15.2 — Pb (%), Zn (%), Ag (oz/ton) / METRES

+ 5% Pb + Zn

NDU RESOURCES LTD.

BLENDE PROPERTY

MAYO MINING DISTRICT, Y.T. NTS: 106 D/7

VERTICAL CROSS SECTION

DRILL HOLE 88-3

0 10 20 40 60 80 100

SCALE IN METRES

DATE: NOVEMBER, 1988
BY: J.P.FRANZEN, P.Eng.

FIGURE No. 10

Prepared by: RWR MINERAL GRAPHICS LTD.

TABLE II

BLENDE PROPERTY

Drill Hole 88-1

Zone 7 Assay Summary

Interval (m) From	To	Width (m)	Pb %	Zn %	Ag oz/ton	Pb + Zn %
0	4.3	4.3	-----	NO CORE	RECOVERY	-----
4.3	5.8	1.5	11.20	5.96	4.49	17.16
5.8	7.3	1.5	4.89	3.04	2.57	7.93
7.3	8.8	1.5	4.53	4.34	1.78	8.87
8.8	10.4	1.6	1.21	4.13	0.34	5.34
10.4	12.2	1.8	0.54	1.67	0.20	2.21
12.2	13.7	1.5	3.11	4.69	1.12	7.80
13.7	15.2	1.5	1.17	0.85	0.42	2.02
15.2	17.1	1.9	1.19	2.29	0.43	3.48
17.1	18.6	1.5	0.20	0.19	0.09	0.39
18.6	20.1	1.5	1.08	0.51	0.47	1.59
20.1	21.3	1.2	0.58	0.52	0.22	1.10
21.3	23.2	1.9	3.48	4.25	1.33	7.73
23.2	25.0	1.8	3.18	3.14	1.23	6.32
25.0	26.5	1.5	0.40	0.67	0.15	1.07
26.5	27.4	0.9	0.91	1.70	0.36	2.61
27.4	29.0	1.6	17.10	13.70	6.17	30.80
4.3	**13.7**	**9.4**	**4.1**	**3.9**	**1.7**	**8.0**
4.3	**29.0**	**24.7**	**3.5**	**3.2**	**1.7**	**6.7**

TABLE III

BLENDE PROPERTY

Drill Hole 88-2

Zone 7 Assay Summary

Interval (m) From	To	Width (m)	Pb %	Zn %	Ag oz/ton	Pb + Zn %
0	4.3	4.3	-----	NO CORE	RECOVERY	-----
4.3	8.8	4.5	6.87	4.45	2.95	11.32
8.8	10.4	1.6	21.20	6.41	10.80	27.61
10.4	11.9	1.5	0.84	0.91	0.31	1.75
11.9	13.4	1.5	5.42	7.74	1.43	13.16
13.4	14.9	1.5	9.82	16.30	3.85	26.12
14.9	16.5	1.6	1.51	1.86	0.47	3.37
16.5	18.0	1.5	1.63	0.81	0.52	2.44
18.0	28.7	10.7	0.50	0.58	0.19	1.08
28.7	30.2	1.5	15.30	7.29	6.27	22.50
30.2	31.7	1.5	9.00	13.20	3.24	22.20
31.7	37.8	6.1	0.81	1.22	0.35	2.03
37.8	40.8	3.0	1.63	1.59	0.73	3.22
40.8	42.4	1.6	1.17	4.92	0.74	6.09
42.4	43.9	1.5	3.13	1.83	1.95	4.96
43.9	45.4	1.5	5.72	2.92	3.53	8.64
45.4	46.9	1.5	10.20	4.69	6.56	14.89
46.9	48.5	1.6	6.30	4.42	4.05	10.72
48.5	50.0	1.5	2.17	2.96	1.46	5.13
50.0	51.8	1.8	0.90	0.46	0.60	1.36
51.8	53.3	1.5	3.29	1.76	2.51	5.05
53.3	54.9	1.5	3.36	2.53	1.90	5.89
54.9	70.7	15.8	0.98	0.61	0.51	1.59
70.7	72.2	1.5	5.56	1.35	4.00	6.91
72.2	73.8	1.6	17.40	3.99	13.60	21.39
73.8	75.3	1.5	12.10	3.15	9.62	15.25
75.3	76.8	1.5	18.30	6.12	15.30	24.42
76.8	78.3	1.5	23.40	7.55	19.80	30.95
78.3	79.9	1.6	0.72	0.88	0.57	1.60
79.9	81.4	1.5	5.44	3.56	3.88	9.00
81.4	82.9	1.5	4.06	4.99	2.30	9.05
82.9	84.4	1.5	13.80	7.67	8.46	21.47
84.4	86.0	1.6	20.30	7.17	12.10	27.47
86.0	87.5	1.5	13.90	2.55	7.15	16.45
87.5	89.0	1.5	8.37	2.25	3.91	10.62
89.0	90.5	1.5	16.60	6.20	7.44	22.80
4.3	**14.9**	**10.6**	**8.3**	**6.4**	**3.6**	**14.7**
28.7	**31.2**	**3.0**	**12.2**	**10.3**	**4.8**	**22.5**
40.8	**54.9**	**14.1**	**4.0**	**2.9**	**2.6**	**6.9**
70.7	**90.5**	**19.8**	**12.3**	**4.4**	**8.3**	**16.7**
4.3	**90.5**	**86.2**	**5.3**	**3.0**	**3.1**	**8.3**

TABLE IV

BLENDE PROPERTY

Drill Hole 88-3

Zone 7 Assay Summary

Interval (m) From	To	Width (m)	Pb %	Zn %	Ag oz/ton	Pb + Zn %
0	3.7	3.7	-----	NO CORE	RECOVERY	-----
3.7	5.2	1.5	1.71	2.37	0.80	4.08
5.2	9.8	4.6	8.88	4.13	4.50	13.01
9.8	17.4	7.6	1.15	1.02	0.33	2.17
17.4	18.9	1.5	24.60	11.80	10.22	36.40
18.9	29.6	10.7	1.29	0.82	0.48	2.11
29.6	32.6	3.0	6.07	7.44	3.56	13.51
32.6	43.3	10.7	0.84	0.68	0.38	1.52
43.3	47.9	4.6	4.49	3.27	2.56	7.76
47.9	50.9	3.0	0.94	0.58	0.67	1.52
50.9	54.0	3.1	3.42	2.61	2.09	6.03
54.0	57.0	3.0	1.74	0.64	0.95	2.38
57.0	60.0	3.0	6.36	1.78	2.26	8.14
60.0	64.6	4.6	0.83	0.48	0.29	1.31
64.6	72.2	7.6	3.62	1.44	2.82	5.06
72.2	82.9	10.7	0.69	0.33	0.49	1.02
82.9	95.1	12.2	6.20	2.62	4.32	8.82
95.1	118.0	22.9	0.23	0.06	0.16	0.29
118.0	135.9	17.9	10.13	3.70	9.33	13.83
3.7	**95.1**	**91.4**	**3.3**	**1.8**	**1.9**	**5.1**
3.7	**135.9**	**132.2**	**3.7**	**1.8**	**2.6**	**5.5**

All drill holes collared in Zone 7-9 mineralization at bedrock and returned significant lead-zinc-silver values over variable core widths. The writer examined all drill core from Holes 88-1 and 88-2. Summary observations and comments follow.

The dark-grey dolomite host rock shows variable degrees of weathering for up to 30 vertical metres below drill collar elevation. This is manifested as beige skins on fracture surfaces; to semi-pervasive beige rinds that extend from fracture surfaces into the interior of the dolomite; to pervasive ocherous orange-weathered dolomite with limonite. The orange ocher is particularly well developed in fault and gouge zones. Drill core recovery in the weathered zone generally exceeded 85%.

Dark grey, finely laminated dolomite underlies the weathered zone; however a number of well defined ocherous zones were observed in unaltered dolomite wall rocks. These brecciated and weathered zones are commonly well mineralized and indicate structural contiunity to the surface.

Two basic styles of lead-zinc-silver mineralization were observed in drill core. Clast-supported brecciation and fracture filling typify Zone 7; while crackle brecciation and tight fracturing characterize Zone 5. Bleaching and alteration accompany both styles of mineralization.

Zone 7 mineralization consists of quartz and dolomite with galena, sphalerite and minor pyrite. The writer noted occasional grains of tetrahedrite in association with galena. Sulphide microscopy work by

Harris (1988) identified an intimately intergrown sulphosalt in galena - probably boulangerite. These sulphosalts probably contribute to the unusually consistent and high silver values in BLENDE carbonate-hosted mineralization (see Tables II, III and IV). Galena has several habits: fine (steel) to crystalline to coarsely crystalline and occurs as knots, stringers and matrix and fracture fillings. Galena fragments often rim solution-corroded and partially dissolved, cuspate dolomite clasts. Where galena-filled fractures cut an entire dolomite clast, the clast generally shows little or no sense of movement. Where mineralization is only found as fracture fillings, galena occurs as rectangular clots and blebs in association with carbonate, light brown sphalerite and pyrite. Sphalerite is typically light brown or light grey and most commonly occurs as fine to heavy disseminations within the carbonate matrix or in fracture fillings. Carbonate hosted sphalerite mineralization collected by the writer from Zone E (see Figure 6) shows similar characteristics. Zones of bleached dolomite breccia fragments and bleaching near and along fracture surfaces often occur in the better mineralized intervals.

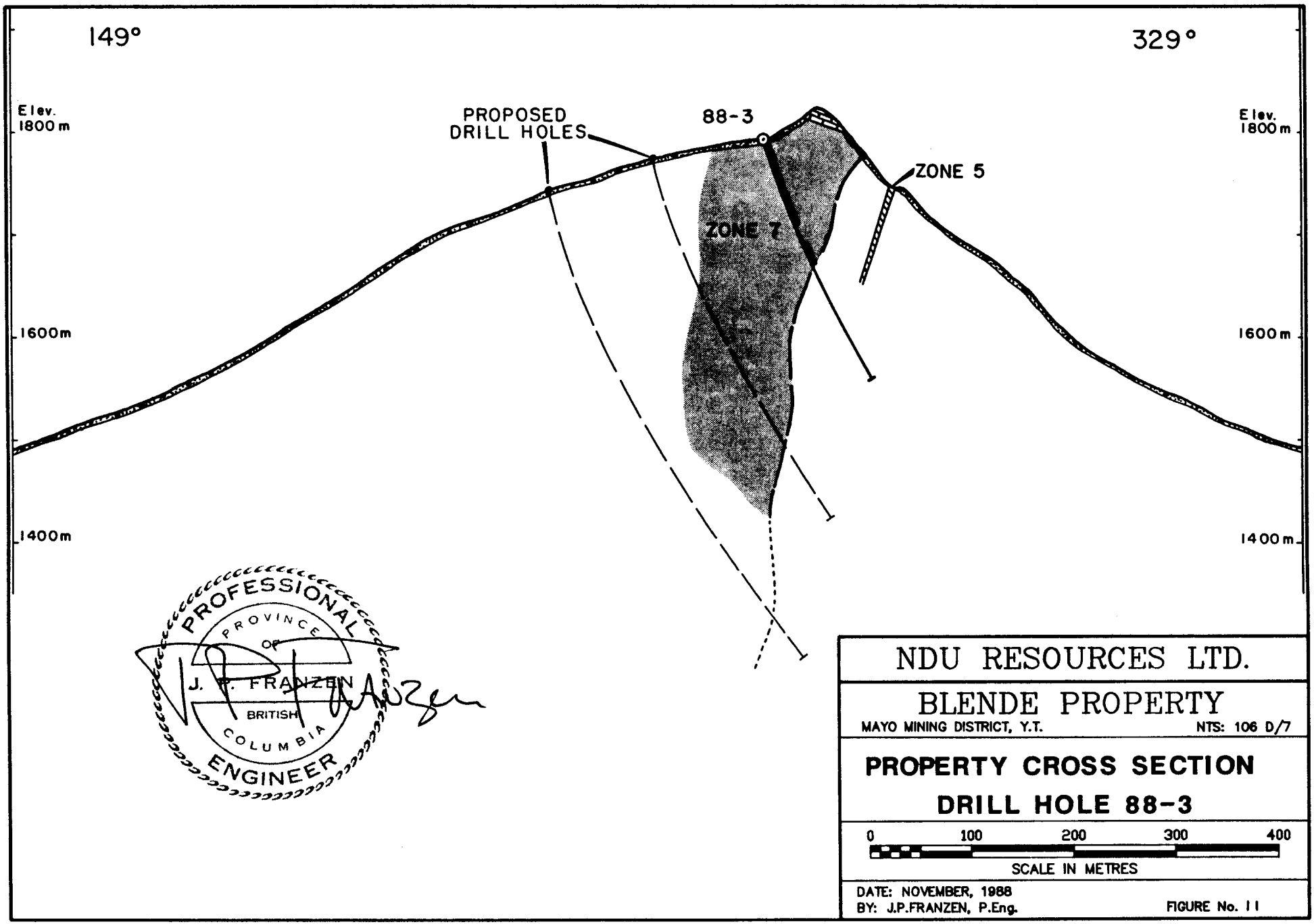
Solution corrosion and bleaching of dolomite fragments and significant intervals of +15% Pb + Zn indicate abundant open space and strong fluid flow within the Zone 7 breccia zones. Attitude and along-strike continuity of the breccia and fracture controlled mineralization have not been established. However, the geometry of Zone 7 mineralization, as seen in the 1988 drill holes, suggests that the mineralization may be contained in a large breccia pipe. This potential for a large volume of mineralized rock with simple mineralogy and good ground conditions would have a major and

positive impact on project feasibility. Further work is required to outline the limits and continuity of +5% Pb + Zn mineralization within Zone 7.

Drill holes 88-1 and 88-2 intersected narrow +5% Pb + Zn mineralized intervals in Zone 5 (Figures 7, 8 and 9). Quartz and dolomite with galena, sphalerite and pyrite occur as fracture fillings in a zone of tight fracturing and crackle brecciation. There are no well defined contacts to the mineralized zone. In drill hole 88-2, the +5% Pb + Zn intercept is on the foot-wall of a 20 metre wide zone of low grade mineralization. In addition, is centered on a 25 metre long zone of pyrite-filled fractures with minor bleaching. Tight fracture control in drill core and the surface expression of the mineralization indicate that Zone 5 is fault controlled. Further work is required to test the fault panel along-strike and down-dip.

CONCLUSIONS AND RECOMMENDATIONS

A three hole reconnaissance diamond drilling program at the BLENDE property has identified a zone of significant lead-zinc-silver mineralization in carbonate rocks. Geometry of the scree-covered zone has not yet been established; however, interpretation of drill intercepts of 25 metres, 86 metres and 132 metres of +5% Pb + Zn suggest that the mineralization is contained within a large breccia pipe (Figure 11). Further work is required to assess the property. Accordingly, the writer recommends a two-stage work program for the BLENDE property. The first stage would include bulldozer trenching and an exploratory diamond drill program to define the limits of Zone 7 mineralization.



PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
J. P. FRANZEN

NDU RESOURCES LTD.

BLENDE PROPERTY

MAYO MINING DISTRICT, Y.T. NTS: 106 D/7

PROPERTY CROSS SECTION
DRILL HOLE 88-3

0 100 200 300 400

SCALE IN METRES

DATE: NOVEMBER, 1988
BY: J.P.FRANZEN, P.Eng.

FIGURE No. 11

Prepared by: RWR MINERAL GRAPHICS LTD.

Contingent on positive results, Stage 2 should include fill-in diamond drilling to further define deposit tonnage and grade and the completion of preliminary engineering and environmental studies.

COST ESTIMATE

STAGE 1

DIAMOND DRILLING 6,100 metres	$ 700,000
BULLDOZER 1,000 hours	130,000
HELICOPTER 400 hours	240,000
GEOLOGY (4) Core logging, trench mapping	140,000
FIELD CREW (3) Camp, prospecting, drill sites, surveying	70,000
CAMP SUPPORT (2) Cook and Bullcook	36,000
EXPEDITING AND SECRETARIAL	9,000
ROOM AND BOARD 2,000 man days	130,000
CAMP AND DRILL TRANSPORTATION Mobilization and Demobilization	100,000
DRILL SITE PREPARATION	30,000
ASSAYS - GEOCHEMICAL 1,000 soil samples	9,000
ASSAYS - DRILL CORE 2,000 rock samples	50,000
ORTHOPHOTO PREPARATION	20,000
TECHNICAL REPORT	17,000
ASSESSMENT REPORT	5,000
PROJECT SUPERVISION AND MANAGEMENT	63,000
METALLURGICAL TEST WORK	15,000
CONTINGENCY (10%)	176,000
STAGE 1 TOTAL	**$1,940,000**

STAGE 2 (Contingent on Results of Stage 1)

DIAMOND DRILLING 10,000 metres	$1,100,000
SUPERVISION, SUPPORT, TRANSPORTATION, CAMP, REPORT, PRELIMINARY ENVIRONMENTAL AND ENGINEERING STUDIES, METALLURGICAL TEST WORK	2,050,000
STAGE 2 TOTAL	**$3,150,000**
GRAND TOTAL STAGES 1 AND 2	**$5,090,000**

REFERENCES

Cathro, R.J. and Carne, R.C. (1984)
Geological Report - BLENDE 1-15 Claims, 32 p.

Cockfield, W.E. (1923)
Geol. Surv., Canada, Sum. Rept., pt. A, pp 22-30.

Delaney, G.D. (1981)
The Mid-Proterozoic Wernecke Supergroup, Wernecke Mountains, Yukon Territory. In F.H.A. Campbell, ed; Geol. Surv. Can. Paper 81-10, pp. 1-23.

Franzen, J.P. (1987)
Geological Report on the BLENDE Mineral Property. Report for NDU Resources Ltd., p. 24.

Green, L.H. (1972)
Geology of Nash Creek, Larsen Creek and Dawson Map-Areas, Yukon Territory, Geol. Surv. Can. Memoir 364, p. 157.

Harris, J.F. (1988)
Petrographic and Ore Microscopy Report, BLENDE Mineral Property. Report For NDU Resources Ltd., p. 11.

Roberts, W. and Dean, P. (1975)
Geological and Geochemical Report on the WILL Claims. Cyprus Anvil Mining Corporation Assessment Report, p. 8.

Templeman-Kluit, D.J. (1980)
Yukon Geology and Exploration, 1979-80, pp. 231-235.

CERTIFICATE

I, Jeffrey Paul Franzen, P.Eng., of 4990 Cedarcrest Avenue, North Vancouver, B.C. do hereby certify that:

1. I am a Consulting Mining Geologist registered with the Association of Professional Engineers of British Columbia since 1982.

2. I am a graduate of the University of British Columbia with B.Sc. (1972) and Carleton University with M.Sc. (1974).

3. I have practiced my profession continuously since 1974. In Yukon: as Mine Geologist, Research Geologist and Chief Geologist, United Keno Hill Mines Limited, and Exploration Geologist, Cyprus Anvil Mining Corp. In British Columbia: Regional Geologist - Western Canada, Billiton Canada Ltd., Consultant - Franzen Mineral Engineering Ltd.

4. This report is based upon research of published reports and maps and data supplied by Archer, Cathro & Associates (1981) Limited and NDU Resources Ltd. and a report by the writer dated June 17, 1987. The writer visited the property on August 16, 1986 and August 22-23, 1988.

5. I have no interest, direct or indirect, in the BLENDE property or NDU Resources Ltd.

6. Permission is hereby granted to NDU Resources Ltd. to use this report in support of any Prospectus, Statement of Material Facts or Filing Statement to be submitted to the Superintendent of Brokers and the Vancouver Stock Exchange.

FRANZEN MINERAL ENGINEERING LTD.
J. P. FRANZEN
J.P. Franzen, P. Eng.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA

North Vancouver, B.C.
November 29, 1988

APPENDIX A

SAMPLE PREPARATION

AND

ANALYTICAL PROCEDURES

SAMPLE PREPARATION

The entire sample is crushed in a jaw crusher to 3/4" size. This is followed by secondary crushing to approximately 1/8" size. The sample is then split in Jones Riffler to a 200 gram split which is then pulverized in a ring mill grinder to approximately -140 mesh. The pulverized sample is then homogenized by rolling.

Silver analyses are done by standard fire assay techniques. In the sample preparation stage the screens are checked for metallics which, if present, are assayed separately and calculated into the results obtained from the pulp assay.

ANALYTICAL PROCEDURES

Zn %

A 2 gram sub-sample is digested in hot perchloric-nitric acid mixture for two hours, cooled, then transferred into a 250 ml volumetric flask. Nitric acid is added to the final sample and standard solutions. The solutions are then analyzed on an atomic absorption instrument.

Pb %

A 2 gram sub-sample is digested in hot perchloric-nitric acid mixture for two hours, cooled, then transferred into a 250 ml volumetric flask. Nitric acid is added to the final sample and standard solutions. The solutions are then analyzed on an atomic absorption instrument.

Ag ounces/ton

A 2.0 gram sub-sample is weighed, digested in nitric acid followed by aqua-regia. The solution is evaported to dryness. The residue is leached with concentrated hydrochloric acid and diluted to volume. Silver is analyzed by Atomic Absorption Spectroscopy.