

MAP NO.: ASSESSMENT REPORT X
105 I 12 PROSPECTUS
CONFIDENTIAL X
OPEN FILE

DOCUMENT NO: 092948
MINING DISTRICT: WATSON LAKE
TYPE OF WORK: PROSPECTING &
SAMPLING

REPORT FILED UNDER: NDU RESOURCES LIMITED

DATE PERFORMED: SEPTEMBER 2, 1990

DATE FILED: MARCH 21, 1991

LOCATION: LAT.: 62°35'N

AREA: HOWARDS PASS

LONG.: 129°45'W

VALUE \$: 3,300

CLAIM NAME & NO.: FALCON 1-148

WORK DONE BY: ARCHER CATIRO & ASSOCIATES (1981) LTD; R.C. CARNES

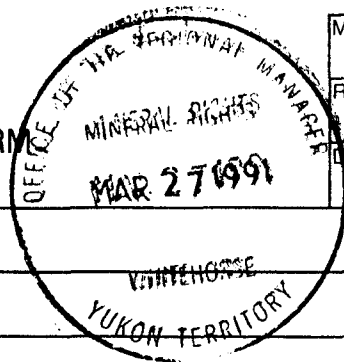
WORK DONE FOR: NDU RESOURCES LIMITED

DATE TO GOOD STANDING:

REMARKS: GEOCHEMICAL SAMPLES FROM DEVONIAN SHALES RETURNED ANOMALOUS ZINC AND NICKEL VALUES. PROSPECTING RESULTED IN THE DISCOVERY OF A CALC TUPA MOUND CONTAINING SMITHSONITE, ZINCIAN CALCITE AND HERMIMORPHITE WHICH RETURNED UP TO 18.5% ZN AND 0.9% NI. "THE SOURCE WAS ATTRIBUTED TO HYDROMORPHIC DISPERSION FROM A NEARBY BASE METAL DEPOSIT LOCATED (ON THE) FALCON CLAIMS". GSC MAPPING REASSIGNED THE UNDERLYING SHALES AS LOWER EARN GROUP, THE HOST FOR POLYMETALLIC SEDEX MINERALIZATION ON THE NICK PROPERTY.



TRANSMITTAL FORM



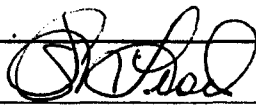
M.R. file no.
R.M.M.R. file no.
Date forwarded 22 March 1991

From Mining Recorder at: WATSON LAKE

To Regional Manager, Mineral Rights at Whitehorse, Y.T.

For action are:

<input type="checkbox"/> NEW APPLICATION FOR PLACER LEASE TO PROSPECT	Name	
<input type="checkbox"/> RENEWAL APPLICATION PLACER LEASE TO PROSPECT	Name	Lease no.
<input type="checkbox"/> AFFIDAVIT OF EXPENDITURE ON PLACER LEASE	Name	Lease no.
<input type="checkbox"/> SECURITY DEPOSIT		
<input type="checkbox"/> FINANCIAL ABILITY		
<input type="checkbox"/> ASSIGNMENT OF PLACER LEASE NO.	From	To
<input type="checkbox"/> GROUPING APPLICATION UNDER SEC. 52(2) PLACER MINING ACT.	Owner	
<input type="checkbox"/> DIAMOND DRILL LOGS	Claims	Claim sheet no.
<input checked="" type="checkbox"/> QUARTZ ASSESSMENT REPORT	Claims <u>FALCON</u>	Claim sheet no. <u>105-1-12.</u>
	Type of report <u>PROSP. + Geochemical</u>	Submitted by <u>Archer, Cathro + Assoc. (1981) Ltd.</u>
	Cls. work performed on <u>FALCON 60,62.</u>	\$ req. for ren. application <u>3300.00</u>


 Signature

REPLY ACTION

092948

Date returned

Signature

ARCHER, CATHRO

& ASSOCIATES (1981) LIMITED

CONSULTING GEOLOGICAL ENGINEERS

1016-510 WEST HASTINGS STREET
VANCOUVER, B. C. V6B 1L8

(604) 688-2568

REPORT ON
PROSPECTING AND GEOCHEMICAL SAMPLING
on the
FALCON PROPERTY, YUKON TERRITORY
Falcon 1-148 Claims (YB16746 to YB16893)
Latitude 62°35'N; Longitude 129°45'W
NTS 105I/12
Watson Lake Mining District



092948

for

CONFIDENTIAL

NDU RESOURCES LTD.

and Associates (1981) Limited
1016-510 West Hastings Street
Vancouver, B.C. V6B 1L8
Telephone (604) 688-2568
Telex 253451

R.C. Carne, M.Sc.

February, 1991

Field Work Performed on September 2, 1990



TABLE OF CONTENTS

	<u>PAGE</u>
INTRODUCTION	1
HISTORY	2
LOCATION AND ACCESS	3
CLAIM STATUS	3
GEOLOGY	4
GEOCHEMISTRY AND MINERALIZATION	5
SUMMARY AND RECOMMENDATIONS	6

APPENDICES

- I Author's Statement of Qualifications
- II Geochemical Certificates

FIGURES

<u>NO.</u>		<u>LOCATION</u>
1	Location, 1:5,000,000	Following Page 3
2	Geology, 1:50,000	Following Page 4
3	Reconnaissance Geochemistry, 1:20,000	In Pocket

INTRODUCTION

The Falcon property was staked in March, 1990 on behalf of NDU Resources Ltd. to cover coincident zinc-nickel geochemical anomalies resulting from multi-element reanalyses of old geochemical pulps collected by Archer, Cathro & Associates Limited in 1976 and 1977 during the course of regional exploration. The potential for sedimentary exhalative (sedex) nickel-zinc mineralization is defined by intense geochemical response from an area drained by Devonian shales.

The 1990 program consisted of a one day visit on September 2 by the writer and consultant E. Dodson. Five tufa samples were collected for geochemical analysis.

HISTORY

The area was previously staked and explored by Dynasty Exploration Ltd. (later Cyprus Anvil Mining Corp.) in 1972-74 and by Cominco Limited in 1977-79. Highly anomalous zinc values in silts and soils were explored with geophysical surveys and limited diamond drilling but no mineralization was found and the geochemical response was attributed to high backgrounds in metalliferous Ordovician to Silurian Road River Group shales. A GSC reconnaissance-scale multi-element stream sediment survey released in 1982 confirmed the anomalies but no further exploration was carried out due to the effects of economic downturn on the mining industry.

The GSC later carried out follow-up sampling and prospecting in one of the anomalous drainages and discovered a large area of mound-forming tufa carrying secondary zinc mineralization (smithsonite, zincian calcite and hemimorphite). Analyses of this material range up to 18.5% Zn and 0.9% Ni. The source was attributed to hydromorphic dispersion from a nearby base metal deposit located in the approximate centre of the current Falcon claims.

Recent mapping by the GSC has reassigned the shales underlying the Falcon claims to the Lower Earn Group, the same sequence that hosts potentially economic polymetallic sedex mineralization on the Nick property in central Yukon.

LOCATION AND ACCESS

The Falcon property is located in eastern Yukon, approximately 150 km northeast of the community of Ross River (Figure 1). The claims lie 75 km northwest of the Cantung Highway and 8 km west of the large Anniv sedex deposit at Howards Pass. A system of winter roads built from Cantung to Howards Pass to support drilling and underground exploration in the 1970's and early 1980's extends to within 4 km of the Falcon claims. The property trends roughly northwest-southeast and is centred at coordinates 62°35'N and 129°45'W on NTS map sheet 105I/12. The claim block covers a number of west-southwesterly-trending ridges and valley bottoms in the headwaters region of the Pelly River. Elevations on the property range from 1100 to 1700 m.

CLAIM STATUS

The property consists of 148 Falcon claims that are registered on behalf of NDU Resources Ltd. in the name of Archer, Cathro & Associates (1981) Limited with the Watson Lake mining recorder as follows.

<u>Claim Name</u>	<u>Grant Numbers</u>	<u>Expiry Date</u>
Falcon 1-148	YB16746-YB16893	March 20, 1991

Figure 1

NDU RESOURCES LTD.

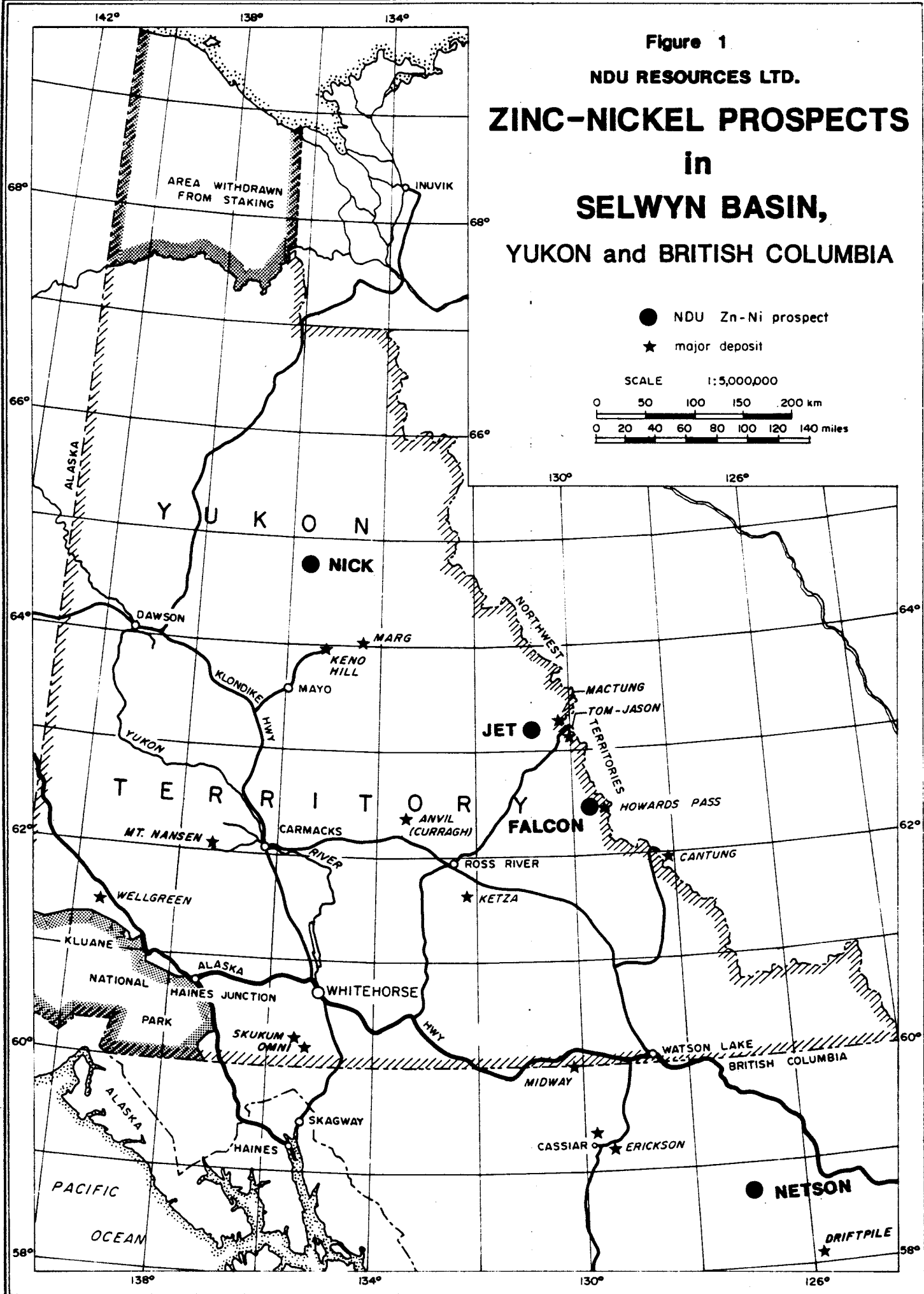
ZINC-NICKEL PROSPECTS in SELWYN BASIN, YUKON and BRITISH COLUMBIA

- NDU Zn-Ni prospect
- ★ major deposit

SCALE 1:5,000,000

0 50 100 150 200 km

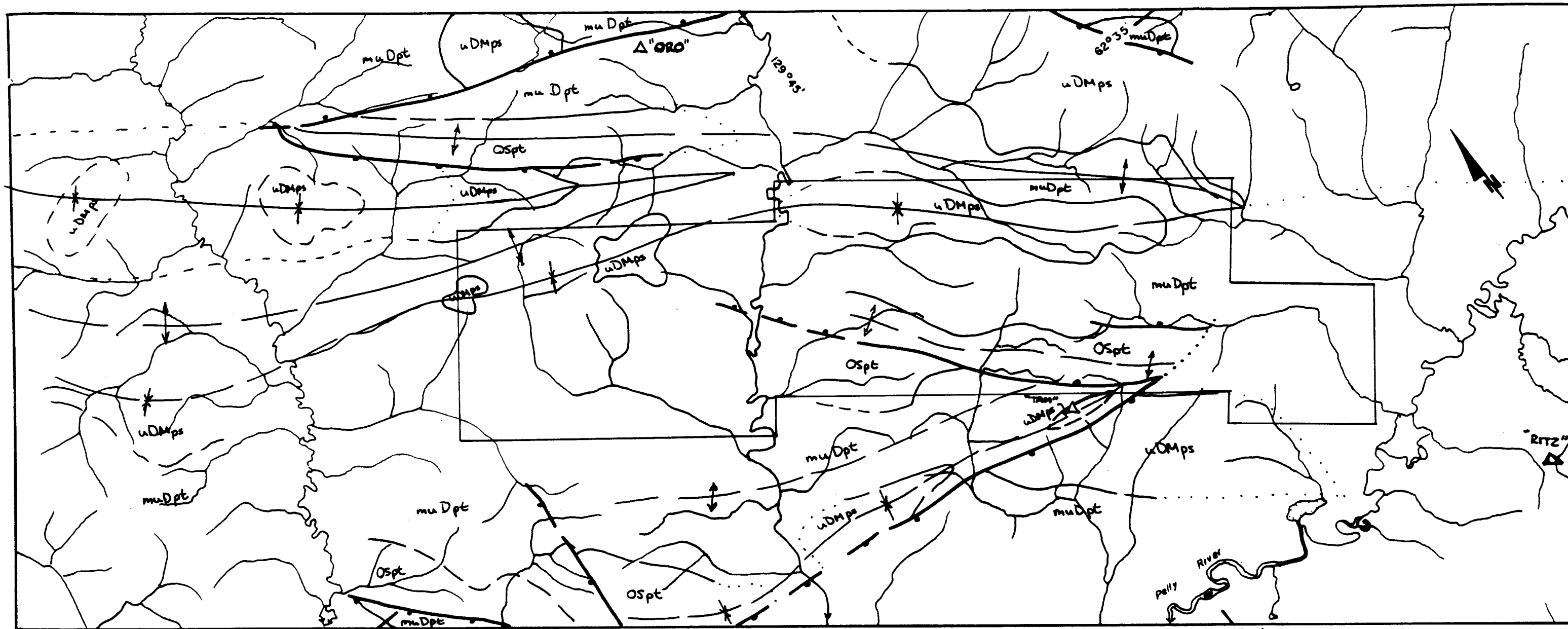
0 20 40 60 80 100 120 140 miles



GEOLOGY

The Falcon property is located along the eastern margin of Selwyn Basin on the periphery of the Howards Pass zinc-lead camp. The claim group is approximately 8 km west of the Anniv showing, one of three occurrences which collectively form the Silurian-age Howards Pass sedex deposit (>500,000,000 tonnes grading about 5% Zn and 2% Pb).

Property geology (Figure 2) is compiled from recent mapping by the GSC (Open File 780). The central part of the claims is underlain by a fault-bounded succession of clastic sedimentary rocks ranging in age from Ordovician to Mississippian. The Lower Earn Group sequence correlates best with distribution of anomalous geochemical values. It comprises Middle to Upper Devonian black siliceous shale, black chert and chert pebble conglomerate. This succession appears to be somewhat thicker within the bounds of the normal faults that bound the southwest and northeast sides of the claim block.



DEVONIAN-MISSISSIPPIAN:

UPPER DEVONIAN TO MISSISSIPPIAN:

uDMps Upper Earn Group and upper portion of Lower Earn Group
massive chert pebble conglomerate; chert-quartz arenite; black shale

MIDDLE-UPPER DEVONIAN:

mdDpt Lower Earn Group
massive chert and shale clast, granular to pebble conglomerate with mud matrix; black siliceous shale; black chert

ORDOVICIAN-SILURIAN:

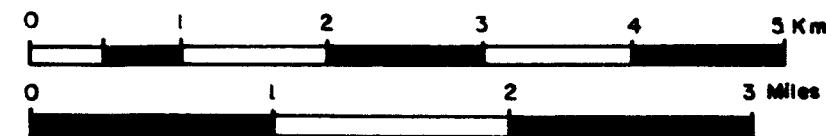
OSpt Road River Group
dolomite; silty mudstone; black slate; black limestone and chert; black siliceous shale

- contact (defined, probable, possible)
- normal fault
- ↑
↓ anticline
- ✱
✱ syncline
- △ known deposit

Figure 2
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

GEOLOGY
FALCON PROPERTY

SCALE 1:50,000



GEOCHEMISTRY AND MINERALIZATION

Geochemistry of the Falcon claims and the immediately surrounding area is shown on Figure 3. Data is compiled from GSC silt sampling (1981 and 1984) and 1990 reanalyses of silt and soil samples collected by Archer, Cathro for Itsi Joint Venture in 1976 and 1977. Values of zinc and nickel in silt and soil samples range from 2 and 18 ppm to 25,000 and 3380 ppm, respectively. Of economic interest is a 2 m high metalliferous tufa deposit which occurs in the centre of the claim block (Figure 3). A similar metal-rich secondary deposit occurs immediately downslope of the largest of the Howards Pass sedex occurrences, the XY deposit. Samples taken from the Falcon tufa deposit by the GSC in 1984 returned analyses which range up to 18.5% Zn and 0.9% Ni. Zinc-bearing minerals include smithsonite, zincian calcite and hemimorphite. Results of analyses of five tufa samples taken in September, 1990 are summarized below and given in detail in Appendix II.

<u>Sample No.</u>	<u>Zinc (ppm)</u>	<u>Nickel (ppm)</u>
R5253	>10,000	389
R5254	>10,000	1890
R5255	>10,000	3860
R5256	>10,000	717
R5257	>10,000	1340

SUMMARY AND RECOMMENDATIONS

Results of silt, soil and tufa sampling within and in the immediate vicinity of the Falcon claims suggest the presence of zinc (nickel) sedex mineralization in Devonian shales similar to those which host the potentially economic Nick polymetallic sedex deposit in central Yukon Territory.

Further exploration should consist of wide-spaced grid and contour soil sampling in conjunction with detailed geological mapping to delineate a focussed area of interest for follow-up exploration by hand trenching and diamond drilling. A proposed budget for this work follows.

PROPOSED FALCON PROPERTY 1991 EXPLORATION BUDGET

<u>Salaries</u>	
Geologist for 30 days; 2 assistants for 10 days; 10 days senior supervision; expediting, accounting and secretarial	\$15,000
<u>Base Map Preparation; Drafting and Printing</u>	8,000
<u>Geochemical</u>	7,000
<u>Fixed Wing and Helicopter Support</u>	5,000
<u>Assessment Filing</u>	3,000
<u>Travel and Freight</u>	2,500
<u>Field Room and Board</u> - 30 mandays @ \$70/day	2,100
<u>Management</u>	2,500
<u>Contingency</u>	<u>4,900</u>
	TOTAL - <u>\$50,000</u>

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED



R.C. Carne, B.Sc., M.Sc.

APPENDIX I
AUTHOR'S STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Robert C. Carne, geologist, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia and residential address in Burnaby, British Columbia, hereby certify that:

1. I graduated from the University of British Columbia in 1974 with a B.Sc. and in 1979 with an M.Sc. majoring in Geological Sciences.
2. I am a member of the Geological Association of Canada.
3. From 1974 to present, I have been actively engaged as a geologist in mineral exploration in British Columbia and Yukon Territory and on June 1, 1981 became a partner of Archer, Cathro & Associates (1981) Limited.
3. I have personally participated in or supervised the field work reported herein and have interpreted all data resulting from this work.



Robert C. Carne, B.Sc., M.Sc.

APPENDIX II
GEOCHEMICAL CERTIFICATES



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
 212 Brooksbank Ave., North Vancouver
 British Columbia, Canada V7J 2C1
 PHONE: 604-984-0221

ARCHER CATHRO & ASSOC. (1981) LTD.

P.O. BOX 4127
 WHITEHORSE, YT
 Y1A 3S9

Page No. : 1-A
 Total Pages : 1
 Invoice Date : 17-SEP-90
 Invoice No. : I-9022372
 P.O. Number :

Project : NR
 Comments :

CERTIFICATE OF ANALYSIS A9022372

SAMPLE DESCRIPTION	PREP CODE		Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo
			ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm
R5251	205	294	< 0.2	< 0.01	< 5	140	< 0.5	< 2	>15.00	< 0.5	2	< 1	< 1	0.23	< 10	< 1	< 0.01	< 10	0.54	20	< 1
R5252	205	294	< 0.2	0.01	< 5	100	< 0.5	< 2	>15.00	< 0.5	1	< 1	2	0.07	< 10	< 1	< 0.01	< 10	0.50	5	< 1
R5253	205	294	< 0.2	0.15	< 5	590	< 0.5	< 2	>15.00	>100.0	5	4	18	0.39	< 10	< 1	0.05	< 10	0.19	255	2
R5254	205	294	< 0.2	0.53	25	1140	< 0.5	< 2	>15.00	>100.0	172	13	55	3.81	< 10	< 1	0.16	< 10	0.23	4710	22
R5255	205	294	0.8	0.91	20	2830	1.0	6	2.48	>100.0	36	47	110	1.92	< 10	< 1	0.34	< 10	0.28	1220	17
R5256	205	294	< 0.2	0.15	5	400	< 0.5	< 2	>15.00	>100.0	10	4	20	0.79	< 10	< 1	0.04	< 10	0.13	370	2
R5257	205	294	0.2	0.18	< 5	350	< 0.5	< 2	>15.00	>100.0	6	6	24	0.38	< 10	< 1	0.06	< 10	0.14	180	2

Falcon

CERTIFICATION: *B. Coughlin*



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

ARCHER CATHRO & ASSOC. (1981) LTD.

P.O. BOX 4127
WHITEHORSE, YT
Y1A 3S9

Page No. 1-B
Total Pages 1
Invoice Date: 17-SEP-90
Invoice No.: I-9022372
P.O. Number:

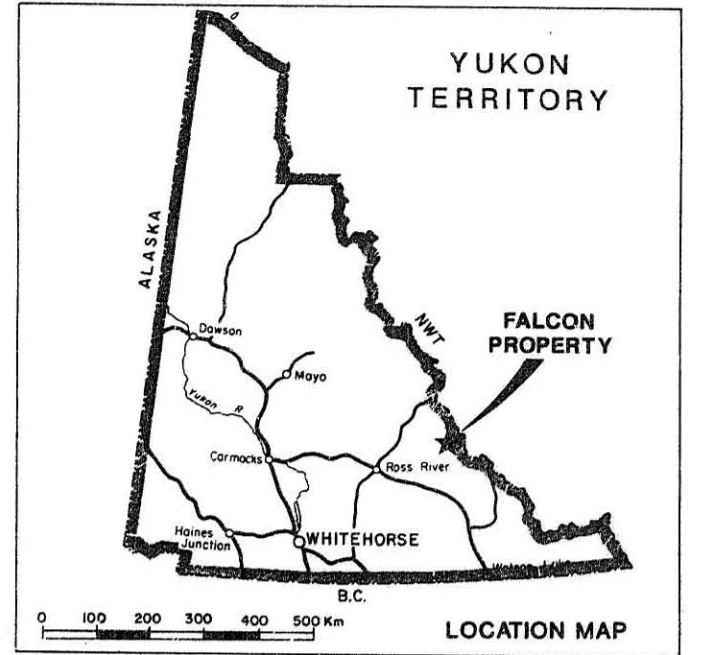
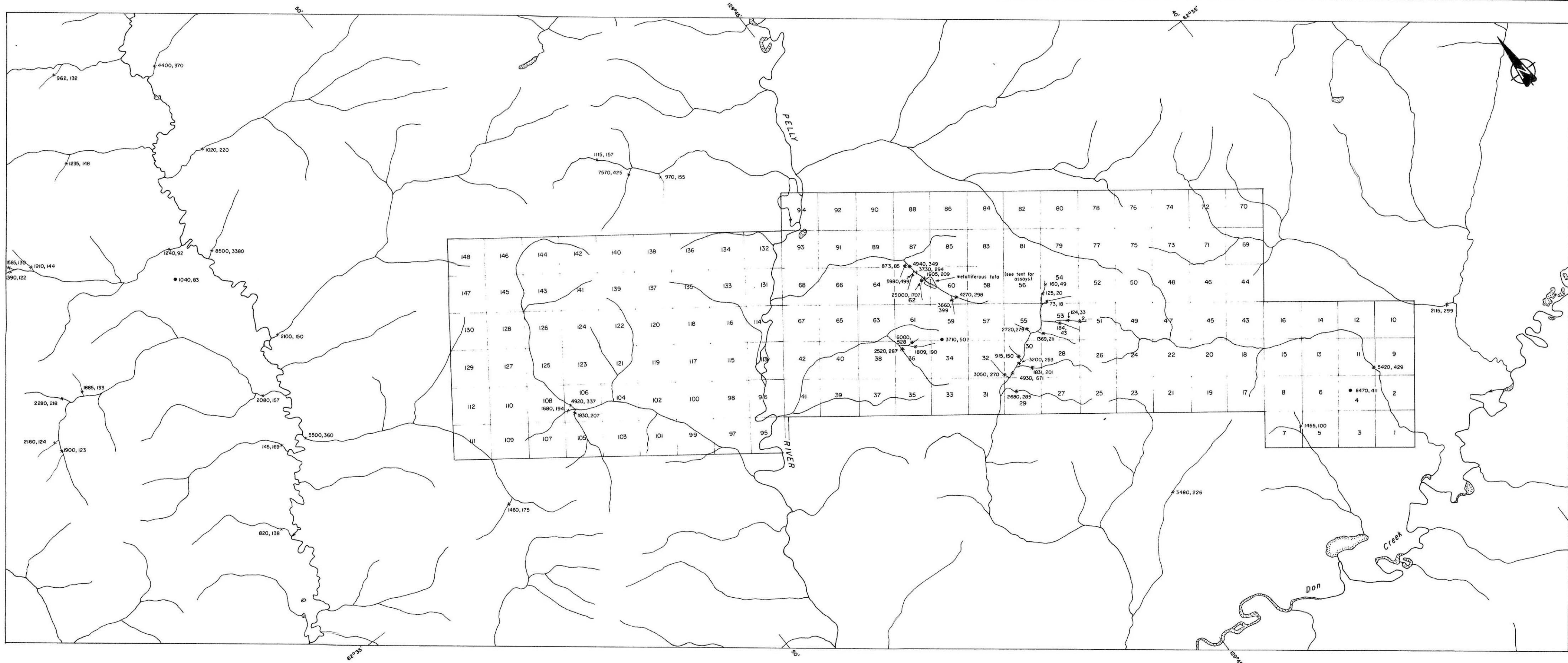
Project: NR
Comments:

CERTIFICATE OF ANALYSIS

A9022372

SAMPLE DESCRIPTION	PREP CODE		Na	Ni	P	Pb	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn
			%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
R5251	205	294	0.02	7	10	2	< 5	< 1	660	0.01	< 10	< 10	< 1	< 10	110
R5252	205	294	0.02	7	< 10	4	< 5	< 1	630	< 0.01	< 10	< 10	< 1	< 10	100
R5253	205	294	0.01	389	500	14	< 5	1	218	< 0.01	10	40	28	20	>10000
R5254	205	294	0.01	1890	2320	4	< 5	2	163	< 0.01	30	10	139	70	>10000
R5255	205	294	0.01	3860	3720	24	< 5	5	147	< 0.01	70	< 10	240	90	>10000
R5256	205	294	0.01	717	970	4	< 5	1	158	< 0.01	20	40	34	40	>10000
R5257	205	294	0.01	1340	660	6	< 5	1	144	< 0.01	40	70	42	50	>10000

CERTIFICATION: *B. Coughlin*



- x GSC silt sample (1981, 1984)
- x IJV silt sample (1976, 1977)
- IJV soil sample (1976, 1977)
- 1369, 211 * zinc, nickel (ppm)

MAP# 105 I/2
 Doc# 092948
 ②

Figure 3
 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
RECONNAISSANCE GEOCHEMISTRY
 FALCON CLAIMS
 NDU RESOURCES LTD.
 SCALE 1:20,000
 0 500 1000 1500 Metres
 0 1/4 1/2 1 Mile