COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

NTS: 105 D/5

ASSESSMENT REPORT

GEOLOGICAL AND GEOCHEMICAL

ON THE PRIMROSE 1-8 MINERAL CLAIMS

SEPTEMBER 30-OCTOBER 3, 1982

WHITEHORSE, M.D. YUKON

LATITUDE: 60°21'N

LONGITUDE: 135°51'W

FEBRUARY 1983

L.J. NAGY

091440

This report [illegible] by
the [illegible]
under section 38 [illegible] Quartz
Mining Act is allowed as
representation work in the amount
of $ 3,200 —

P Watson

for Regional Manager, Territorial and
Geological Surveys for Commissioner
of Yukon Territory.

TABLE OF CONTENTS

List of Attachments:

COMINCO LTD.

EXPLORATION
NTS-105/D-5

WESTERN DISTRICT
1 February 1983

ASSESSMENT REPORT

PRIMROSE CLAIMS 1-8

SUMMARY

The Primrose Claims cover a reported gold occurrence in pyritic rhyolite, approximately 60 km southwest of Whitehorse, Yukon.

Field work on the Primrose claims included mapping, prospecting and rock chip sampling. Soil geochemical samples were collected across the "mineral occurrence" at 10 metre intervals and a number of silt geochemical samples were taken at 50 metre intervals from a small creek at the western edge of the claim group.

HISTORY

The Rose occurrence was discovered by T. Worbets in 1949 and was first staked in July, 1962 by W. Newnamishin. The property was restaked as DOT in July 1967 by D. McLennan and as Sheep in October 1973 by T. Worbets and M. Nickiporuk. In 1974 they were optioned by Welcome North Mines Ltd. and sold in 1975 to Sicintine Mines Ltd.

In September, 1979, the ground was again restaked by M. Nickiporuk and T. Worbets and then the Tipy and Bar claims lapsed in September, 1981, Cominco staked Primrose 1-8 in March, 1982.

Apparently, no assessment reports have ever been filed and little, if any, previous field work had been done on the property.

A brief description of the occurrence is quoted directly from Northern Cordillera Mineral Inventory - 1972 - Archer, Cathro and Associates Ltd., Occurrence No. 18, NTS-105/D-5.

> "Galena and pyrite occur in a slightly rusty quartz vein up to 30 ft. wide which has been traced for a 2000 ft. length. The vein cuts pyritic rhyolite and dacite porphyry of the Skukum Group (Unit 10). Three selected specimens collected by Worbets averaged 25.6 oz./ton Ag and 0.27 oz./ton Au. A sample of mineralized quartz assayed 0.25 oz./ton Au, 15.4 oz./ton Ag and 11.9% Pb. Assays of up to 0.45 oz./ton Au were obtained over 30 ft. widths".

INTRODUCTION

This report summarizes field studies and sampling done on the Primrose claims between September 30 and October 3, 1982.

The object of this work was to provide a preliminary assessment of the mineralization and to determine whether or not a more detailed investigation is warranted.

...../2

Personnel employed during the course of this examination include:

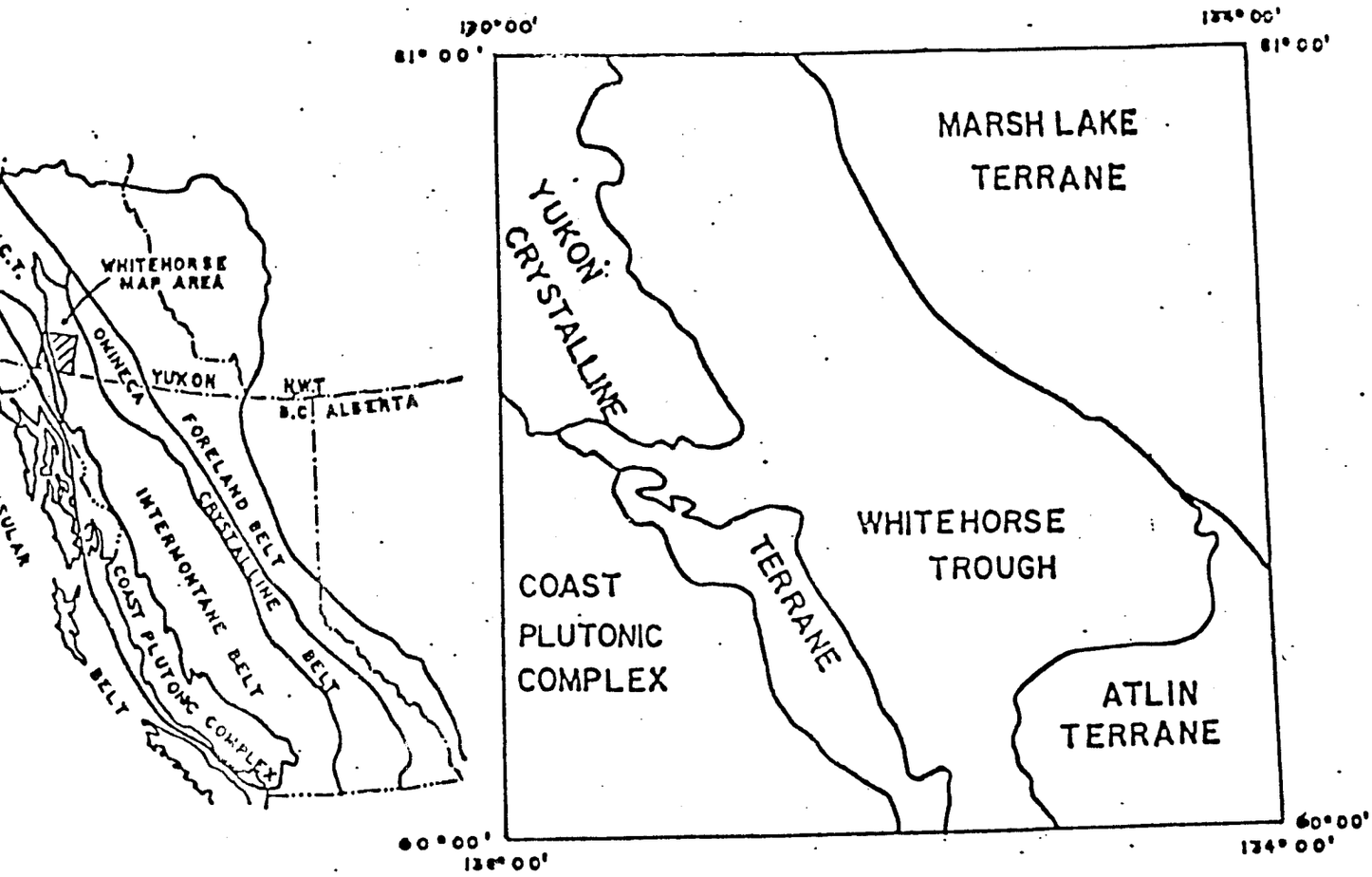
TITLE	PERIOD	ADDRESS
L.J. Nagy - Geologist	Sept.30-Oct. 3, 1982 Jan. 31-Feb. 3, 1983	5110-5th Ave. Whitehorse, Y.T.
L. Larocque - Technician	Sept.30-Oct. 3, 1982	5110-5th Ave. Whitehorse, Y.T.

LOCATION AND ACCESS

The Primrose claims are situated in the Whitehorse Mining District, 60 km wouthwest of Whitehorse, at 60°21'N Latitude and 135°51'W Longitude, within NTS map area 105/D-5. The property is accessible by float equipped aircraft which can operate safely from small lake 2 km to the east of the claim group.

REGIONAL GEOLOGY

Tectonically, the Whitehorse Map-area straddles the Coast Plutonic Complex, Yukon Crystalline Terrane, and the Intermontane Belt which has been further subdivided into three terranes (Fig. 1).



(Fig. 1) (G.W. Morrison, 1979)

The Coast Plutonic Complex is represented by the Southern extension of the Ruby Range granodiorite which has been dated as Mid-Cretaceous in the Whitehorse map-area but may be as old as Triassic. It is intruded by Eocene granite, quartz monzonite and rhyolite porphyry and contains remnants of Proterozoic to Paleozoic Biotite schist and marble (Morrison, 1979).

Mineralization on the Primrose claims is believed to be associated with a Tertiary quartz diorite intrusive.

LOCAL GEOLOGY AND MINERALIZATION

The Primrose claims are situated near the southern end of elongate, northwest trending, plug of undifferentiated quartz diorite. Grain size is variable but is generally medium grained. The intrusive is well exposed in two areas. At the east end of the claim group, if forms a knoll with numerous outcrops of fresh, unaltered, sulphide barren quartz diorite.

In a well incised creek at the west end of the property, almost continuous exposures of unaltered, fine to medium grained quartz diorite can be observed.

The only structural feature noted is at the head waters of this creek where a well developed, steeply dipping, joint system strikes northwesterly and roughly parallels the creek.

A 3 metre wide, vertically dipping, north striking, diabase dyke occurs further down stream.

A small zenolith of Paleozoic (?) quartzite and thin bedded limestone was noted in the east wall of the narrow canyon which continues on beyond the south boundary of Primrose 7.

The central portion of the claim group is entirely drift covered and forms a large, flat area which drains gently to northeast and southwest. Presumably, this area is also underlain by quartz diorite.

It is important to note that pyritic rhyolite or dacite porphyry do not occur within the boundary of the Primrose claims.

The reported mineralization consists of several, 0.5 to 1.0 m diameter, angular, frost heaved boulders of weakly limonite stained, milky quartz. The boulders are scattered over an area measuring roughly 30 by 60 metres and contain blebs of galena, pyrrhotite on joint surfaces and the odd grain of chalcopyrite. Total sulphide content is less than 2%.

The boulders were chip sampled at 10 different localities and the samples were analysed for Cu, Pb, Zn, Ag and Au. Sample location sites and results appear on Plate P-82-3. The values are dissappointingly low and seriously question the validity of results reported earlier by others.

GEOCHEMISTRY

An orientation survey consisting of 21 soil samples of "C" horizon material was done along a line which crossed directly over the boulder strewn area.

The results of samples which were analysed for Cu, Pb, Zn, Ag, Au and As also appear on Plate P-82-3.

...../4

In general it can be said that no anomalous effect could be detected over the known mineralized area. One exception might be the two to three fold increase in Pb values which coincide with samples collected near the boulder area.

In addition, 14 silt samples were collected from the stream at the west end of the claim group. (See Plate P-82-2). Again, no anomalous values were detected.

Based on the limited prospecting, mapping and geochemistry done to date, it is concluded that further expenditures on the Primrose claims are not warranted at this time.

Submitted by _____
L.J. NAGY
Project Geologist

Endorsed by _____
DR. D.L. COOKE
Senior Geologist

Approved For Release by _____
DR. W.J. WOLFE
Assistant Manager

Selected Bibliography

1) Dept. of Indian Affairs and Northern Development Open File EGS 1979-6 - G.W. Morrison.

2) Northern Cordillera Mineral Inventory, Archer Cathro and Associates Ltd.

LJN/kjm

Attachments

1) Location Map Primrose 1-8	82-1
2) Claim Location Map Primrose 1-8	82-1a
3) Regional Geology Whitehorse Area	82-1b
4) Geology and Silt Geochemistry - Primrose 1-8	82-2
5) Rock and Soil Geochemistry - Primrose 1-8	82-3
6) Geochemical Lab reports	

COMINCO LTD.

EXPLORATION
NTS-105/D-5

WESTERN DISTRICT
1 February 1983

In the matter of the Yukon Quartz Mining Act and in the matter of a Geochemical Survey carried out on Mineral Claims Primrose 1 to 8 located in the Whitehorse Mining District, Yukon Territory, more particularly NTS-105-D-5.

AFFIDAVIT

I, L.J. Nagy, of the city of Whitehorse, in the Yukon Territory, Project Geologist, make oath and say:

1) That I am employed as a geologist by Cominco Ltd. and as such have a personal knowledge of the facts to which I hereinafter depose;

2) That annexed hereto and marked as "Exhibit A" to this my Affidavit is a true copy of expenditures on a preliminary geochemical and geological survey carried out on mineral claims Primrose 1 to 8;

3) That the said expenditures were incurred between September 30, 1982 and February 3, 1983, for the purpose of mineral exploration on the above noted claim group.

Sworn before me at the
City of Whitehorse in
the Territory of Yukon
the 28 day of February, 1983

L.J. NAGY

A Notary Public in and
for the Territory of
Yukon.

COMINCO LTD.

EXPLORATION
NTS-105/D-5

WESTERN DISTRICT
3 February 1983

"EXHIBIT A"

Year End Report on the Primrose Claims 1 to 8 situated at 60°21'N Latitude, 135°51'W Longitude, NTS-105/D-5, Whitehorse Mining District, Yukon Territory.

1) Salaries:			
L.J. Nagy -	8 days @ $169.07/day	1352.56	
L. Larocque -	4 days @ $80.00/day	320.00	
		1672.56	$1672.56
2) Geochemical Analyses			
Invoice No. F05233			
37 Analyses for Cu,Pb,Zn,Ag	$4.60(ea)	170.20	
10 Analyses for Pb,Ag	$2.80(ea)	28.00	
47 Analyses for gold	$6.50(ea)	305.50	
12 Rock sample preps.	$2.75(ea)	33.00	
35 Soil sample preps.	$0.70(ea)	24.50	
		561.20	
Invoice No. F05243			
21 Analyses for Arsenic	$3.75(ea)	68.25	
Invoice No. F05273			
9 Assay Analyses for gold	$9.00(ea)	81.00	
		149.25	$710.45
3) Camp Costs			
8 man days @ $25.00/day		400.00	$400.00
4) Transportation			
Air North Ticket No. 608		217.92	
Air North Ticket No. 448		228.52	
		446.44	$446.44
TOTAL EXPENDITURES			$3229.45

Signed _____
L.J. NAGY
PROJECT GEOLOGIST

This is Exhibit "A" to the Affidavit relating to the geochemical survey declared before me on this_____day of _____,1983.

Signed _____

BONDAR-CLEGG & COMPANY LTD.

136B INDUSTRIAL RD, WHITEHORSE, YUKON Y1A 4X1

PHONE: (403) 667-6523
TELEX: 036-8-460

Certificate of Analysis

TO Cominco

REPORT NO. A42-192

DATE November 18, 1982

I hereby certify that the following are the results of analyses made by us upon the herein described ...rock..pulp..... samples

MARKED	oz/ton Au
LN-1-2	0.015
LN-2-1	0.010
LN-2-2	0.015
LN-2-4	0.015
LN-2-5	0.050
LN-2-6	0.080
LN-2-8	0.010
LN-2-9	0.060
LN-2-10	0.010

Note: Samples from geochem report no. 42-398.

BONDAR-CLEGG & COMPANY LTD.

John Reeve

NOTE:
Rejects retained two weeks
Pulps retained three months
unless otherwise arranged

BONDAR-CLEGG & COMPANY LTD.

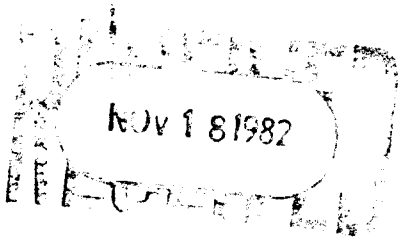
764 BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 PHONE: 237-3110 TELEX: 053-4455

INVOICE: F 05273

DATE: Nov. 18, 1982

REPORT NO: A42-192

PROJECT:



Cominco
5110 - 5th Ave.
Whitehorse, Yukon
Y1A 1L2

Copy

9	Assay Analyses of Gold	@ $9.00	$81.00
		TOTAL	$81.00

Primrose Samples

W665

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Bondar-Clegg & Company Ltd.

136 Industrial Road
Whitehorse, Yukon Territory Y1A 2V1
Phone (403) 667-6523
Telex 036-8-460

BONDAR-CLEGG

Geochemical Lab Report

CLIENT: COMINCO

REPORT NUMBER: G42-398A

GEOLOGIST: HAGY L

ASSOLOGIST:

PROJECT:

NUMBER OF SAMPLES: 21

PRIORITY: P

DATE: NOVEMBER 01, 1982

SEE APPENDIX FOR EXPLANATION OF DIGESTION, ANALYSIS, SAMPLE TYPE, AND SIEVE SIZE CODES.

REC#	/	SAMPLE NUMBER	/ T/ S	AS/D2 PPM
0001	10	00N 650E	S 1	L 2
0002	10	10N 650E	S 1	2
0003	10	20N 650E	S 1	L 2
0004	10	30N 650E	S 1	L 2
0005	10	40N 650E	S 1	L 2
0006	10	50N 650E	S 1	3
0007	10	60N 650E	S 1	2
0008	10	70N 650E	S 1	7
0009	10	80N 650E	S 1	3
0010	10	90N 650E	S 1	3
0011	11	00N 650E	S 1	L 2
0012	9	90N 650E	S 1	2
0013	9	80N 650E	S 1	5
0014	9	70N 650E	S 1	L 2
0015	9	60N 650E	S 1	L 2
0016	9	50N 650E	S 1	3
0017	9	40N 650E	S 1	6
0018	9	30N 650E	S 1	5
0019	9	20N 650E	S 1	L 2
0020	9	10N 650E	S 1	2
0021	8	00N 650E	S 1	L 2

---END---

Bondar-Clegg & Company Ltd.
136 Industrial Road
Whitehorse, Yukon Territory Y1A 2V1
Phone (403) 667-6523
Telex 036-8-460

BONDAR-CLEGG

Geochemical Lab Report

CLIENT: COMINCO
REPORT NUMBER: G41-395A
GEOLOGIST: NAGY, L ASSOLOGIST: Y PROJECT:
NUMBER OF SAMPLES: 21 PRIORITY: P DATE: NOVEMBER 21, 1982
SEE APPENDIX FOR EXPLANATION OF DIGESTION, ANALYSIS, SAMPLE TYPE, AND SIEVE SIZE CODES.

REC#	/	SAMPLE NUMBER / T/ S	AS/D2 PPM
0001	10	00N 650E S 1	L 2
0002	10	10N 650E S 1	2
0003	10	20N 650E S 1	L 2
0004	10	30N 650E S 1	L 2
0005	10	40N 650E S 1	L 2
0006	10	50N 650E S 1	3
0007	10	60N 650E S 1	2
0008	10	70N 650E S 1	7
0009	10	80N 650E S 1	3
0010	10	90N 650E S 1	3
0011	11	00N 650E S 1	L 2
0012	9	90N 650E S 1	2
0013	9	80N 650E S 1	5
0014	9	70N 650E S 1	L 2
0015	9	60N 650E S 1	L 2
0016	9	50N 650E S 1	3
0017	9	40N 650E S 1	6
0018	9	30N 650E S 1	5
0019	9	20N 650E S 1	L 2
0020	9	10N 650E S 1	2
0021	8	00N 650E S 1	L 2

---END---

BONDAR-CLEGG & COMPANY L.

764 BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 PHONE: 237-3110 TELEX: 053-4455

Cominco Ltd.,
5110-5th Ave.,
Whitehorse, Y.T.

INVOICE: F 25243
DATE: November 1, 1982
REPORT NO: 42-398A
PROJECT:

21	Analyses for Arsenic	@ $3.25	$68.25
		TOTAL	$68.25

BC Yukon Assay
WB/b
4 Nov/82

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136 Industrial Road
Whitehorse, Yukon Territory Y1A 2V1
Phone: (403) 667-6523
Telex: 036-8-460

BONDAR-CLEGG

Geochemical Lab Report

CLIENT: CHINOO
REPORT NUMBER: G42-398
GEOLOGIST: NAGY, L AGEOLOGIST: Y PROJECT: NONE GIVEN
NUMBER OF SAMPLES: 47 PRIORITY: P DATE: OCTOBER 21, 1982

SEE APPENDIX FOR EXPLANATION OF DIGESTION, ANALYSIS, SAMPLE TYPE, AND SIEVE SIZE CODES.

REC# /	SAMPLE NUMBER / T/ S	CU/A1 PPM	PB/A1 PPM	ZN/A1 PPM	AG/A1 PPM	AU/E4 PPM
0001	LN-1-2 R A	8	680	250	33.0	165
0002	LN-1-3 R A	92	395	30	14.0	46
0003	LN-2-1 R A		1000		22.0	205
0004	LN-2-2 R A		500		14.0	170
0005	LN-2-3 R A		250		7.0	14
0006	LN-2-4 R A		1360		16.0	500
0007	LN-2-5 R A		9300		G 50.0	2200
0008	LN-2-6 R A		9000		G 50.0	3300
0009	LN-2-7 R A		1240		7.0	70
0010	LN-2-8 R A		1780		7.5	230
0011	LN-2-9 R A		9000		G 50.0	2150
0012	LN-2-10 R A		920		6.5	165
0013	ROSE 1 ST S 1	14	8	60	0.4	6
0014	ROSE 2 ST S 1	16	8	55	0.5	3
0015	ROSE 3 ST S 1	16	6	65	0.4	2
0016	ROSE 4 ST S 1	14	6	50	0.3	4
0017	ROSE 5 ST S 1	16	8	50	0.3	3
0018	ROSE 6 ST S 1	30	18	140	0.4	5
0019	ROSE 7 ST S 1	12	10	50	0.2	4
0020	ROSE 8 ST S 1	10	6	40	0.2	13
0021	ROSE 9 ST S 1	12	4	45	0.3	3
0022	ROSE 10 ST S 1	10	6	45	0.3	3
0023	ROSE 11 ST S 1	12	6	50	0.5	8
0024	ROSE 12 ST S 1	12	8	45	0.2	9
0025	ROSE 13 ST S 1	12	10	60	0.4	3
0026	ROSE 14 ST S 1	14	8	65	0.3	4
0027	.....N10000650E S 1	14	84	70	0.2	3
0028	.....N10100650E S 1	10	6	50	0.4	2
0029	.....N10200650E S 1	8	8	40	0.3	7
0030	.....N10300650E S 1	8	8	35	0.3	14
0031	.....N10400650E S 1	12	10	90	0.2	4
0032	.....N10500650E S 1	10	14	45	0.2	10
0033	.....N10600650E S 1	8	6	45	0.2	10
0034	.....N10700650E S 1	6	10	35	0.2	3
0035	.....N10800650E S 1	10	8	50	0.3	10

---CONTINUED NEXT PAGE---

Bondar-Clegg & Company Ltd.

136 Industrial Road
Whitehorse, Yukon Territory Y1A 2V1
Phone: (403) 667-6523
Telex: 036-8-460

BONDAR-CLEGG

Geochemical Lab Report

PAGE NO: 2

CLIENT: COMINCO

REPORT NUMBER: 842-SPS

GEOLOGIST: MARY L [illegible] GEOLOGIST: ,

PROJECT: NONE GIVEN

NUMBER OF SAMPLES: 47 PRIORITY: P

DATE: OCTOBER 21, 1991

SEE APPENDIX FOR EXPLANATION OF DIGESTION, ANALYSIS, SAMPLE TYPE, AND SIEVE SIZE CODES.

REC# /	SAMPLE NUMBER	/ T/ S	CU/A1 PPM	PB/A1 PPM	ZN/A1 PPM	AG/A1 PPM	AU/E4 PPM
0036	.....N10900650E	S 1	12	12	45	0.2	11
0037	.....N11000650E	S 1	16	14	55	0.4	6
0038	.....N09900650E	S 1	10	18	40	0.2	8
0039	.....N09800650E	S 1	12	38	55	0.2	10
0040	.....N09700650E	S 1	6	58	30	0.3	12
0041	.....N09600650E	S 1	6	10	25	0.3	8
0042	.....N09500650E	S 1	6	8	30	0.2	5
0043	.....N09400650E	S 1	8	8	50	0.3	6
0044	.....N09300650E	S 1	8	12	50	0.2	4
0045	.....N09200650E	S 1	6	18	50	0.3	4
0046	.....N09100650E	S 1	8	18	50	0.4	14
0047	.....N09000650E	S 1	10	16	50	L 0.1	5

AU IN PPB

---END---

BONDAR-CLEGG & COMPANY LTD.

764 BELFAST ROAD, OTTAWA, ONTARIO, K1G 0Z5 PHONE: 237-3110 TELEX: 053-4455

INVOICE: F 15233

DATE: Oct. 21,1982

REPORT NO: 42-398

PROJECT:

Cominco Ltd.,
5110-5th. Ave.,
Whitehorse

37 Analysis for Cu, Pb, Zn, Ag	$4.60@	$ 170.20
10 Analysis for Pb, Ag	2.80	28.00
47 Analysis for gold	6,50	305.50
12 Rock sample preparations	2.75	33.00
35 Soil sample preparations	0.70	24.50
	TOTAL	$ 561.20

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Air North Charter and Training Ltd.

24 Hour Telephone Service 668-2228
Box 4998, Whitehorse, Yukon, Y1A 4S2

CHARTER TICKET

No 000448

AC C-GJZQ DATE Oct 30/81

NAME Comasco Ltd

ADDRESS

From	To	Miles	Hours	Cargo	Passenger-Remarks
xy	Upper Rose Cr	45			2 Pass + gear
	xy	45			

Primrose Claims

Charged to BC Yukon Acc. Mr. Bayliff

Special Instructions

90 at $1.95 Per Mile	175	50
Waiting Time at Per Hour		
Extra Landings at Per Landing		
Other Fuel 22 gal @ $2.41	53	02
TOTAL CHARGES	$228	52

Pilot's Signature: [illegible]

Base: xy

Charterer's Authorization: L. Nagy

Willow Printers

Air North Charter and Training Ltd.

File

24 Hour Telephone Service 668-2228
Box 4998, Whitehorse, Yukon, Y1A 4S2

CHARTER TICKET

No 000608

AC C-GJZQ Beaver DATE 30 Oct 82

NAME Comasco Ltd

ADDRESS 5110 - 1[illegible], Whitehorse

From	To	Miles	Hours	Cargo	Passenger-Remarks
Whitehorse	Upper Rose	45		—	—
	Whitehorse	45		40 lbs	2 Pass

BC Yukon Acc.

Special Instructions

90 at $1.95 Per Mile	175	50
Waiting Time at Per Hour		/
Extra Landings at Per Landing		/
Other Fuel 17.6 gals @ $2.41	42	42
TOTAL CHARGES	217	92

Pilot's Signature: [illegible]

Base: Whitehorse

Charterer's Authorization: [illegible]

Willow Printers

NTS 105-D/5 WHITEHORSE M.D.

Drawn by:		Traced by: ALM	
Revised by	Date	Revised by	Date

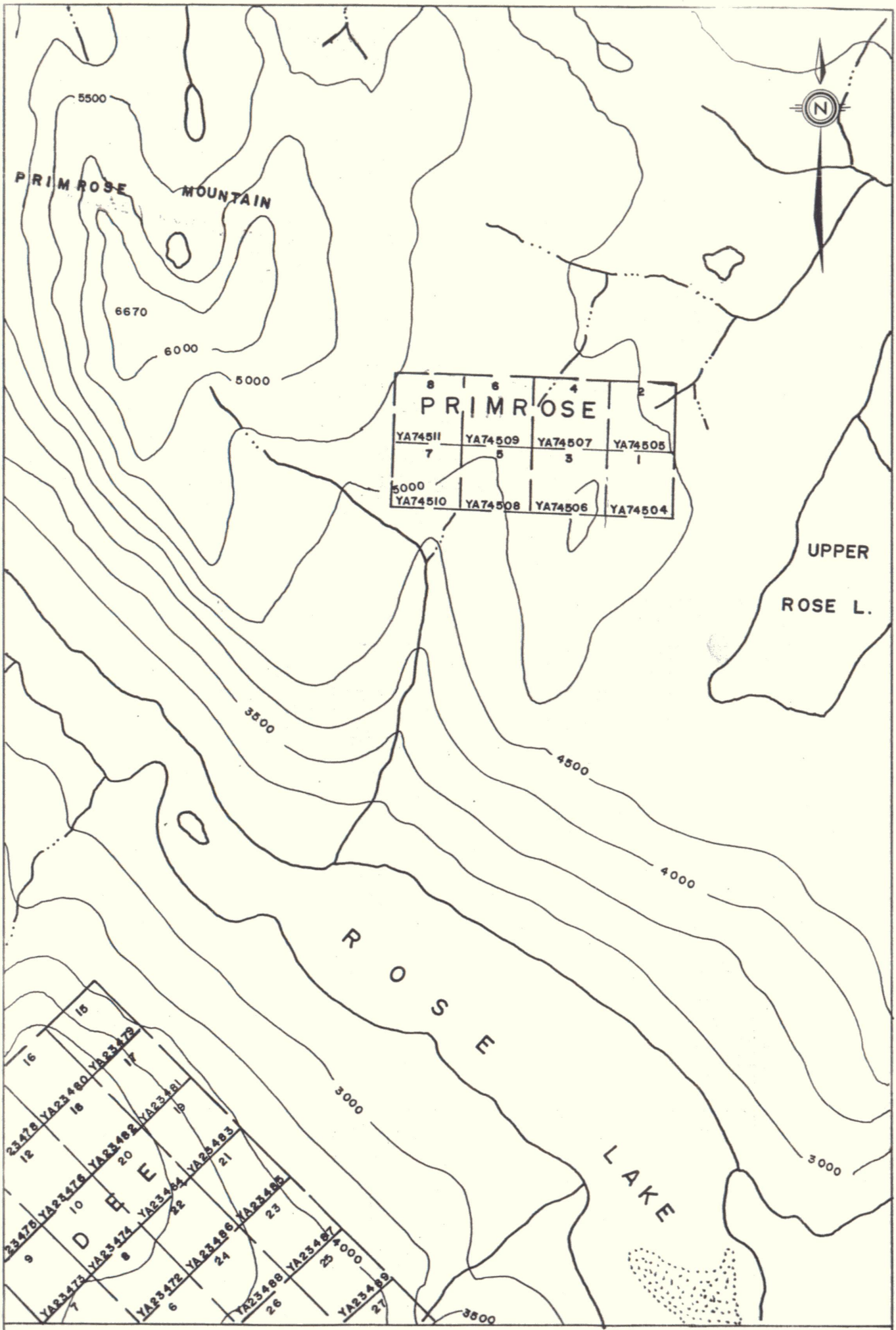
PRIMROSE 1-8
LOCATION MAP

091440

Scale: 1" = 50 MILES

Date: APRIL 1982

Plate: 82-1



NTS - 105 - D - 5 WHITEHORSE M. D.

Cominco

Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

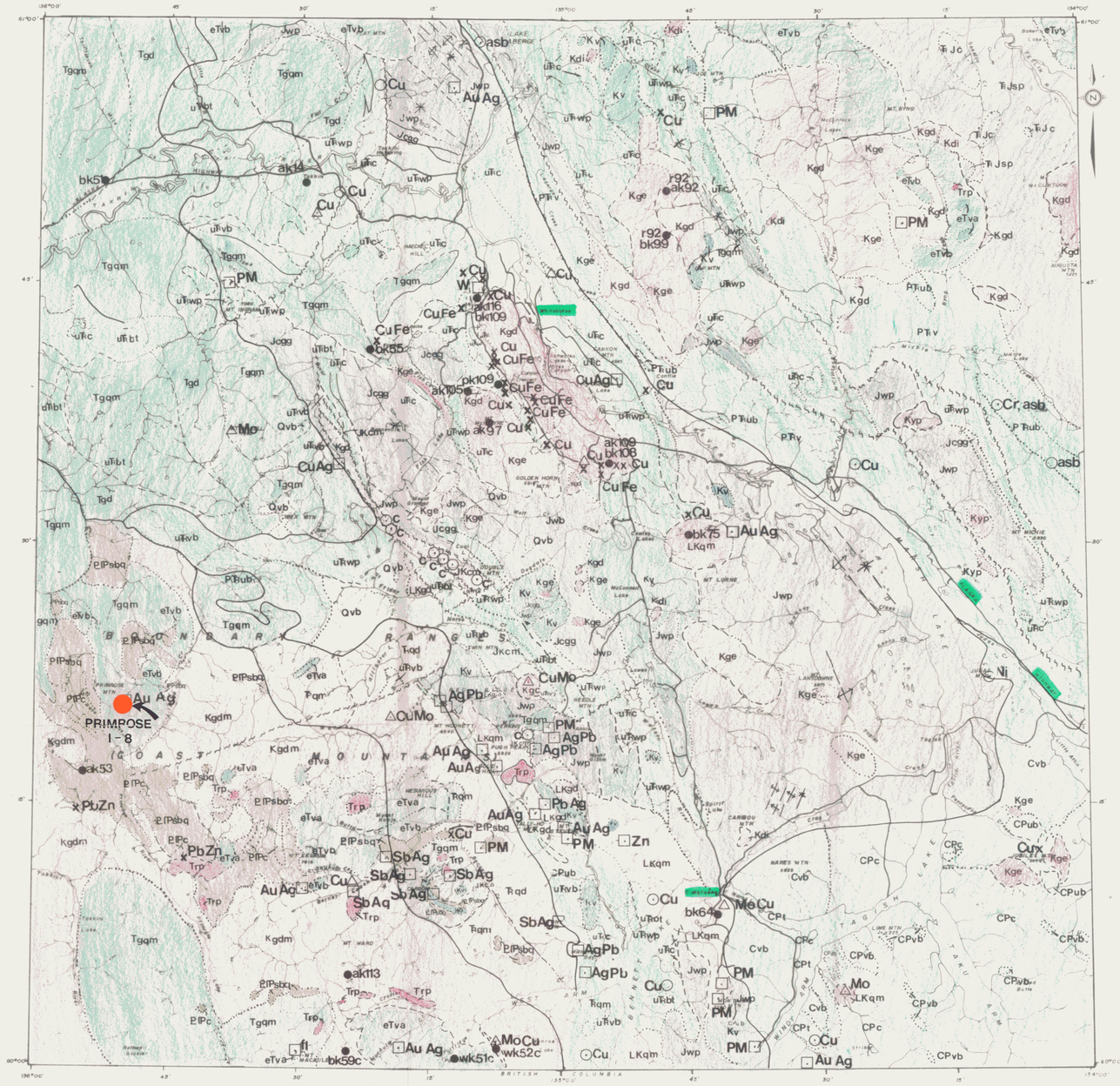
LOCATION MAP PRIMROSE 1-8

091440

Scale: 1/2 MILE to 1 INCH

Date: 14 DEC. /82

Plan: P-82-1a



LEGEND : METALLOGENIC MAP-WHITEHORSE, YUKON

COAST PLUTONIC COMPLEX | YUKON CRYSTALLINE TERRANE | INTERMONTANE BELT: WHITEHORSE TROUGH | INTERMONTANE BELT: MARSH LAKE TERRANE | INTERMONTANE BELT: ATLIN TERRANE

QUATERNARY

MILES CANYON BASALT

Qvb — Basalt flows, minor pyroclastic rocks

TERTIARY

EOCENE(50±5 my)

Trp — Stocks, plugs and dikes of quartz and feldspar porphyry with aphanitic rhyolitic matrix. Some granitic porphyry; some intermediate plugs and dikes

SKUKUM GROUP

eTvs — Rhyolite and trachyte breccias tuffs and flows some resin plugs and dikes (Trp)

eTvb — Andesite and basalt tuffs, flows and breccias minor greywacke at base.

Tgqm — Leucocratic granite-quartz monzonite with miarolitic cavities; minor biotite granite. May include some felsic stocks, plugs and dikes (Trp)

Tgd — Inhomogeneous, locally gneissic and porphyritic granodiorite and quartz monzonite with abundant dioritic and metasedimentary inclusions; marginal phase of Tgqm; includes Trqd, Trqm locally in Aishihik Batholith.

CRETACEOUS (?)

RUBY RANGE BATHOLITH

Kgdm — Coarse grained equigranular biotite hornblende granodiorite-quartz monzonite, includes undifferentiated Trp and Tgqm.

TRIASSIC (?)

AISHIHIK BATHOLITH

Trqm — Altered, gneissic, porphyritic (K-feldspar) quartz monzonite-granodiorite.

Trqd — Altered, gneissic, porphyritic (plagioclase) quartz diorite-granodiorite.

PROTEROZOIC AND PALEOZOIC

PzPc — Marble; crystalline limestone; minor graphitic limestone, skarn.

PzPsbq — Quartz-mica, quartz-chlorite schist and quartzite; minor amphibolite, feldspathic gneiss.

Geological Boundary (defined, approximate, assumed)

Fault (defined, approximate, assumed)

Major Folds (synecline, anticline)

Tectono-stratigraphic Boundary

Isotopic Age Determinations — sample, analysis(whole rock, mineral), material analysed(amphibole, biotite, phlogopite, whole rock) a,b,p,w; isotopes determined(pot-lium-argon, rubidium-strontium, ages in millions of years); laboratory(university of British Columbia(no designation), Carlton University)

Mineral Occurrences

Deposit type: vein, skarn, porphyry, other

Minerals: Antimony (Sb), Asbestos (asb), Coal (c), Copper (Cu), Chromite (cr), Fluorite (fl), Gold (Au), Lead (Pb), Molybdenum (Mo), Nickel (Ni), Polymetallic (AuAgPbZnCu) (PM), Zinc (Zn)

LATE CRETACEOUS (70±10 my)

Lkgd — Stocks, plugs and dikes of mafic-rich, biotite and hornblende granodiorite and syenodiorite; plagioclase porphyry locally.

Lkqm — Biotic rich, locally feldspar porphyritic quartz monzonite, or is odiorite marginal phase.

CRETACEOUS (100±10 my)

Kyp — Plugs of feldspar porphyritic, locally pegmatitic syenite;

Kdi — Stocks, plugs and dikes of plagioclase porphyritic granodiorite.

Kge — Hornblende-biotite, feldspar porphyritic, pink quartz monzonite granophyric matrix common.

Kgd — Homogeneous biotite hornblende granodiorite-quartz diorite.

CRETACEOUS HUTSHI GROUP (in part):

Kv — Mostly intermediate flow, crystal breccia and pyroclastic rocks; basalt and rhyolite flows and pyroclastic rocks; local minor greywacke, argillite and conglomerate.

UPPER JURASSIC AND LOWER CRETACEOUS

TANTALUS FORMATION

JKcm — Coal measures; conglomerate-bearing and chert bearing conglomerate, sandstone, shale &coal.

LOWER AND MIDDLE JURASSIC

LABERGE GROUP

Jwp — Greywacke, arkose, marmorite, siltstone and argillite; minor conglomerate; lithologically indistinguishable from Pwp but stratigraphically lower than uTrc.

Jcgg — Granitoid-bearing conglomerate, greywacke matrix.

UPPER TRIASSIC

LAKES RIVER GROUP

uTrc — Reefoid and clastic limestone; dolomite.

uTrwp — Greywacke, siltstone, argillite, minor conglomerate; lithologically indistinguishable from Pwp but stratigraphically lower than uTrc.

uTrbt — Volcanic breccia, conglomerate, lapilli tuff and tuff; minor greywacke

uTrvb — Basalt and basaltic andesite flows and/or pyroclastic rocks and/or feldspar porphyritic locally.

TRIASSIC AND JURASSIC(?)

TrJc — Reefoid and clastic limestone.

TrJsp — Siltstone and argillite; minor greywacke.

PERMIAN (?) AND TRIASSIC (?)

PTrv — Andesite and basalt flows; local chert and tuff.

PTrub — Variably serpentinized peridotite, pericotite and pyroxenite; minor gabbro.

CARBONIFEROUS AND PERMAIN

CACHE CREEK GROUP

CPt — Kedahda Formation: bedded chert, cherty pelite and pelite, minor carbonate breccia.

CPc — Horsefeed formation: limestone and minor chert; locally interbedded basalt, tuff and diabase (CPvb).

CPub — Variably serpentinized peridotite and dunite; locally associated gabbro, pyroxenite, pyroxene diorite.

CARBONIFEROUS

Cvb — Nakina Formation: altered basic volcanic rocks; minor chert, carbonate, serpentinite.

Department of Indian Affairs and Northern Development
Whitehorse, Yukon Territory

OPEN FILE EGS-1979-6
by G.W. MORRISON

Approximately 4 mi. to 1 inch

091440

Whitehorse M.D. NTS 105/D

Cominco

WHITEHORSE

REGIONAL GEOLOGY

Drawn by:		Traced by: KJM	
Revised by	Date	Revised by	Date

Scale: 1:250,000 | Date: | Plate: 82-16

1600m

PRIMROSE 8

PRIMROSE 6

No OUTCROP

PRIMROSE 4

PRIMROSE 2

1600m

1525m

SUB OUTCROPS OF
MED. GRAINED QUARTZ DIORITE

N

ORIENTATION SOIL GEOCHEM LINE

SEE PLATE 3

MUSKEG AND OVERBURDEN

FLAGGED BASELINE

FROST HEAVED(?) QUARTZ BOULDERS WITH DISSEMINATED GALENA

0100E

5100E

10100E

QUARTZ DIORITE

STRONG, VERTICAL JOINT SET

PHOTO TAKEN FROM HERE

10,000 N

3-16,6,65,0.4,2

2-16,8,55,0.5,3

1-14,8,60,0.4,6

QUARTZ DIORITE

4-14,6,50,0.3,4

FINE GRAINED QUARTZ DIORITE

5-16,8,,50,0.3,3

PRIMROSE 7

6-30,18,190,0.4,5

7-12,10,50,0.2,4

DIABASE DYKE 3m WIDE

8-10,6,40,0.2,13

9-12,4,45,0.3,3

MED. GRAINED QUARTZ DIORITE

QUARTZITE/LIMESTONE XENOLITH

STEEP WALLED CANYON

10-10,6,45,0.3,3

11-12,6,50,0.5,8

12-12,8,45,0.2,9

13-12,10,60,0.4,3

QUARTZ DIORITE

14-14,8,65,0.3,14

1525m

DRY CREEK BED

PRIMROSE 5

PRIMROSE 3

PRIMROSE 1

LEGEND

Sample No.

Silt Sample Location — □ 11-12,8,45,0.2,9

ppm Cu, Pb, Zn, Ag, ppb Au

N.T.S. 105-D/5 WHITEHORSE MINING DIVISION

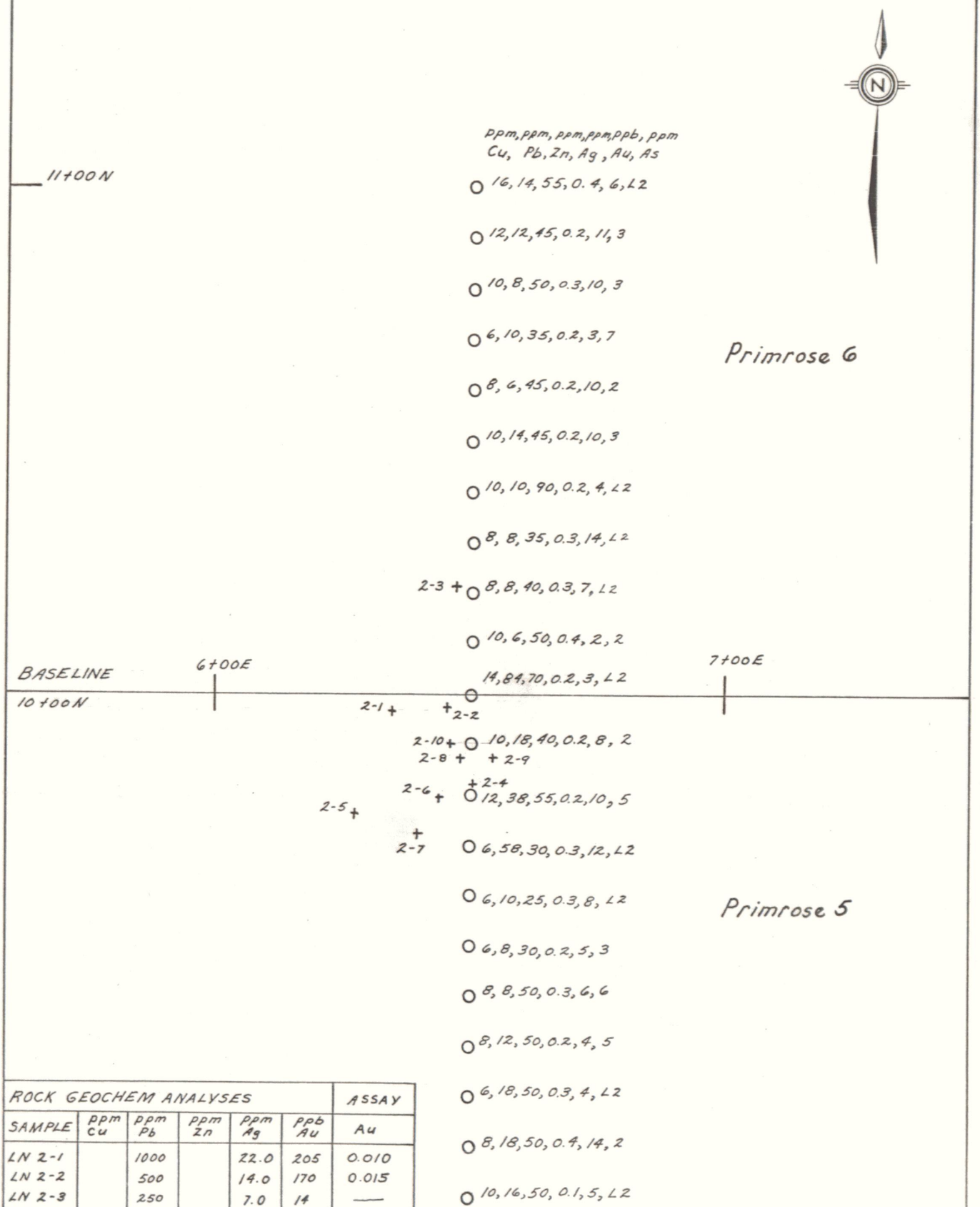
PRIMROSE 1-8

Drawn by: LJN		Traced by: ALM	
Revised by	Date	Revised by	Date

GEOLOGY AND SILT GEOCHEMISTRY

091440

Scale: 1:3000 | Date: November 9/82 | Plate: P82-2



ROCK GEOCHEM ANALYSES						ASSAY
SAMPLE	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppb Au	Au
LN 2-1		1000		22.0	205	0.010
LN 2-2		500		14.0	170	0.015
LN 2-3		250		7.0	14	—
LN 2-4		1360		16.0	500	0.015
LN 2-5		9300		1.9oz/T	2200	0.050
LN 2-6		9000		2.9oz/T	3300	0.080
LN 2-7		1240		7.0	70	—
LN 2-8		1780		7.5	230	0.010
LN 2-9		9000		1.8oz/T	2150	0.060
LN 2-10		920		6.5	165	0.010

N.T.S. 105-D/5 WHITEHORSE M.D.

Commco

Drawn by: LJN		Traced by: ALM	
Revised by	Date	Revised by	Date

PRIMROSE 1-8
ROCK AND SOIL GEOCHEMISTRY

Scale: 1:1000 | Date: November 9/82 | Plate: P82-3

112A - CL