

## Memorandum

To: File - Nori<sup>c</sup>ga

Date: 16 Jun 1992

From: M. Cannon - Metallurgical Technician

File:

Subject: Stage #2 - Initial Testwork

1.0 Sample Preparation

The initial Nori<sup>c</sup>ga sample was delivered to the Met Lab by Geology on 04 May. As the sample was insufficient for a complete suite of tests, more sample was requested. The initial sample was stage crushed on 6 mesh and set aside pending the delivery of additional material.

The second sample was also stage crushed on 6 mesh, then mixed with the initial sample. 2000 gm samples were split out for flotation or leach tests. It was again noted that large amounts of black dust were generated during the crushing, screening and riffing stages of sample preparation. The crushed ore had a dark black/brown appearance with many glittery flecks.

2.0 Bond Work Index

The Equity Silver standard Bond Work Index test yielded a Work Index for Nori<sup>c</sup>ga of 10.01 kWh/t.

It was noted that the ground ore had a very sandy texture (much more sandier than Dome or Herne Hill). After the 26 min grind, the slurry rinsed easily from the rods; the rods did not stick to the sides of the mill which would indicate sliming. The slurry had a dark black/brown appearance with a green hue. The slurry looked much like a thin coating of sand on the rods. The product grind cake filtered in the pressure filter in approx 5 minutes; this compares with 15 min for Dome and Herne Hill and 1 hour for Equity ore. The product cake was very crumbly and clean cutting. Not much sand layer was noted. Absolutely no residue left on cutter.

When wet screening the product fraction, seemed to be green/grey portion and black streaks. These black streaks were also noticed when rinsing the rods from the grinding mill.

3.0 Head Assay

The Head Assay was:

Cu	1.90%
Ag	41 g/t
Au	8.11 g/t
As	4.90%
Sb	0.029%
Pb	0.004%
Fe	29.2%
Zn	0.039%
Co	0.294%
Cu Oxidized	0.192%
% Sulfides	19.1%

4.0 Magnetic Separation

A coarse , 2 stage magnetic separation was done on a head sample. The recovery was 37.2% as magnetics. Metals distribution in the two fractions was as follows.

Fraction	Assays			% Distribution			
	Cu	Ag	Au	Cu	Ag	Au	Fe
Magnetic	1.1	34	6.40	21.8	28.0	26.4	59.1
Non-mag	2.5	52	10.58	78.2	72.0	73.6	40.9

A second Magnetic separation was done on the plus 400 mesh portion of the product from the Bond Work Index test (the magnetics in the minus 400 mesh could not be separated out). The magnetic and non-magnetic portions were sent for assay.

Fraction	Assays			% Distribution			
	Cu	Ag	Au	Cu	Ag	Au	Fe
Magnetic	0.33	28	1.87	8.51	25.1	7.91	57.7
Non-mag	2.15	50	13.0	91.5	74.9	92.1	42.3

**EQUITY SILVER MINES LTD.**

September 14, 1992

Mr. Norm Browne  
1010 8th. Ave. East  
Prince Rupert, B.C.  
V8J 2N4

Dear Norm,

Re: Noriga Property  
Omineca Mining Division

Enclosed is the metallurgical report on a 200 pound sample taken from the main vein on the Noriga property.

Although the head grades are encouraging, the recoveries for gold and cobalt are too low to warrant any possibility of custom milling by Equity Silver Mines Limited.

Thank you for bringing this project to our attention and good luck with your continued work. If we can be of assistance in any way, please call.

Sincerely yours

Daryl J. Hanson  
Exploration Geologist  
Equity Silver Mines Ltd.

MAY 28 '92

- NORRGA / VICTORY. 93M/4.

- GOLDEN WONDER.

- REFERENCES:

1. SUTHERLAND BROWN A. The Geology of the Rocher DeBode Range. EMPR Bulletin No 43, 1960
2. GSC Memoir 223 - Roche DeBoue
3. GSC Economic Geology #16 - Roche DeBoue.
4. ASSESSMENT REPORTS # 8336, 8323, 8705, 8521 11134
5. " " 3463 - GOLDEN WONDER
6. EMPR GEOL MAP 69-1 #284  
EMPR BULL #43.

NEARBY PROPERTIES:

1. O.K., O.K. SILVER

METALS: Au, Ag, Cu, Pb, Zn,

MINERALS: Gk, SP, TT

Geology: tuffaceous JURASSIC SS & ARG intruded by Cretaceous granodiorite.  
Small irregular veins.

2. SILVERTON

METALS: Au, Ag, Pb, Zn

MINERALS: Gk, ZN.

Geology: - alt ARG & SS cut by light coloured acidic dykes  
- small  $\frac{1}{3}$ -filled fissures hold some PY & Gk.

PAST PROD:	TONS	TONNES	Au (g)	Ag (g)	Pb (lbs)	Zn (lbs)
	157	143	415	250,655	9,168	13,066


South Keness

245M @ .62g/t Au  
.22% Cu.

207M @ .64 5/t Au  
.23% Cu.  
e 1:28 :1

MORICETOWN SILVER, TETRA.

		Ag (g)	Au (oz)	Pb (lbs)	Zn (lbs)
- PRODUCTION	1976	485,767	317	7,145	6,240
	1975	212,185	84	2,612	
	TOTAL	697,952	401	9,757	6,240

- Geology: Bowser Gp volc ss intercalated w/ sh & one feb congl. into  anticline/syncline pair & overturned & cut by a fault on the east limb. SP, Gh, PY, TT, AS & mnr BO, polybasite & pyrrargyrite occur in shear-like vein related to the syncline.

- Ref:
- GCNL Jul 18, 1978
  - EMPR AR 1968-124
  - EMPR GEM 1969-99, 1970-172, 1976-E154
  - EMPR MIN 1975
  - EMPR Geol Map 69-1 #232
  - GSC MAP 44-24, 971A



# POTENTIAL OF ROCHE DEBULE / VICTORIA / NORRISA VEIN SYSTEM.

## VICTORIA

- Jim Hutter conducted a sampling program on the VICTORIA mineral claim on behalf of ARBOR RES. INC. in 1980. 56 <sup>chip</sup> samples were taken across the vein with the following results:

Avg WIDTH: 52 cm  
 Au (g/ton) .737  
 Co % .584  
 Mo % .058

Hutter's sampling outlined an ore reserve of 2045 tonnes however surface cuts above & to the east of the underground workings sampled, indicate the zone remains strong, & thus there is good possibility of finding ore up to & possibly beyond 150 meters past the end of the level. This would increase inferred reserves to ~ 100,000 tonnes above an elevation of 1740 m grading about .35 oz/ton Au & .3 % Co. Over a mining width of ~1 m. In addition there may be pods of ore below the 1740 elev. The number 3 level (No. 3 adit) below the 1740 m elev showed good exposures of similar ore (.849 oz/ton Au, .348 % Co, .009 % Mo.).

### PAST PRODUCTION

YEAR	TONS	Gold g/ton	Co %	Mo %
1918	26.6	1.24	1.18	.96
26	22.0	4.65	4.6	-
28	23.0	6.25	3.76	3.4
40	7.7	2.18	2.6	-
41	7.3	2.02	1.4	-
41	3.4	3.92	-	-

TOTALS 90.0 tons 326g. 4918 lbs 2100 lbs

Geology: Veins occupy fractures <sup>in the granodiorite</sup> formed near the contact of the Roche DeBule granodiorite stock & Hazelton rocks

## Golden Wonder

Kindle (1954) reported assays taken from ore piles outside the main shaft ~~from~~ the bench above the quarry showings. Assays are as follows:

#	Au %	Ag %	Cu %
1	.20	7.25	6.50
2	.46	7.63	4.69



34  
.002  
-----  
.068

93M4

Golden Wonder

L.J. Manning & Assoc. Ltd. Report  
for Chapparral Mines.

1970-71 drilling

- AR 8521 Asarco Geology & Magnetic Survey.

July 80

conclusions:

1) mag survey - postmin faulting - mag intensity = lithology.

2) narrow mineralized shears.

- not v. impressive assays for main rd. showing.

strike to 20m.  
.053% Au  
1.01% Cu + Pb Zn Ag  
.09% Co  
.08% W

AR - 8323 Huckleberry MC. - prospecting

- diamond drilling by Chapparral Mines.

1) 13% Cu over 8 feet (holes drilled nearly parallel to the dip.  
is width not true)

@ NE end of drumlin ridge.

AR - 8705

airborne EM & mag.

- long EW EM anomaly w/ coincident mag low.  
over old Huckleberry claim & cap vein.  
coincident w/

\* (also zone of diss. PY from AR 8323) \*  
+Kaol, +ser ~600m.

- diss. PY & fract PY + Kaol + ser alt'n. 600m dia.  
w/ coincident mag low and EM linear anomaly.  
~1800m. long EW. x 400m wide.

check EM anomaly on ground.  
I.P. survey.

hosted by, andesite flow & tufts

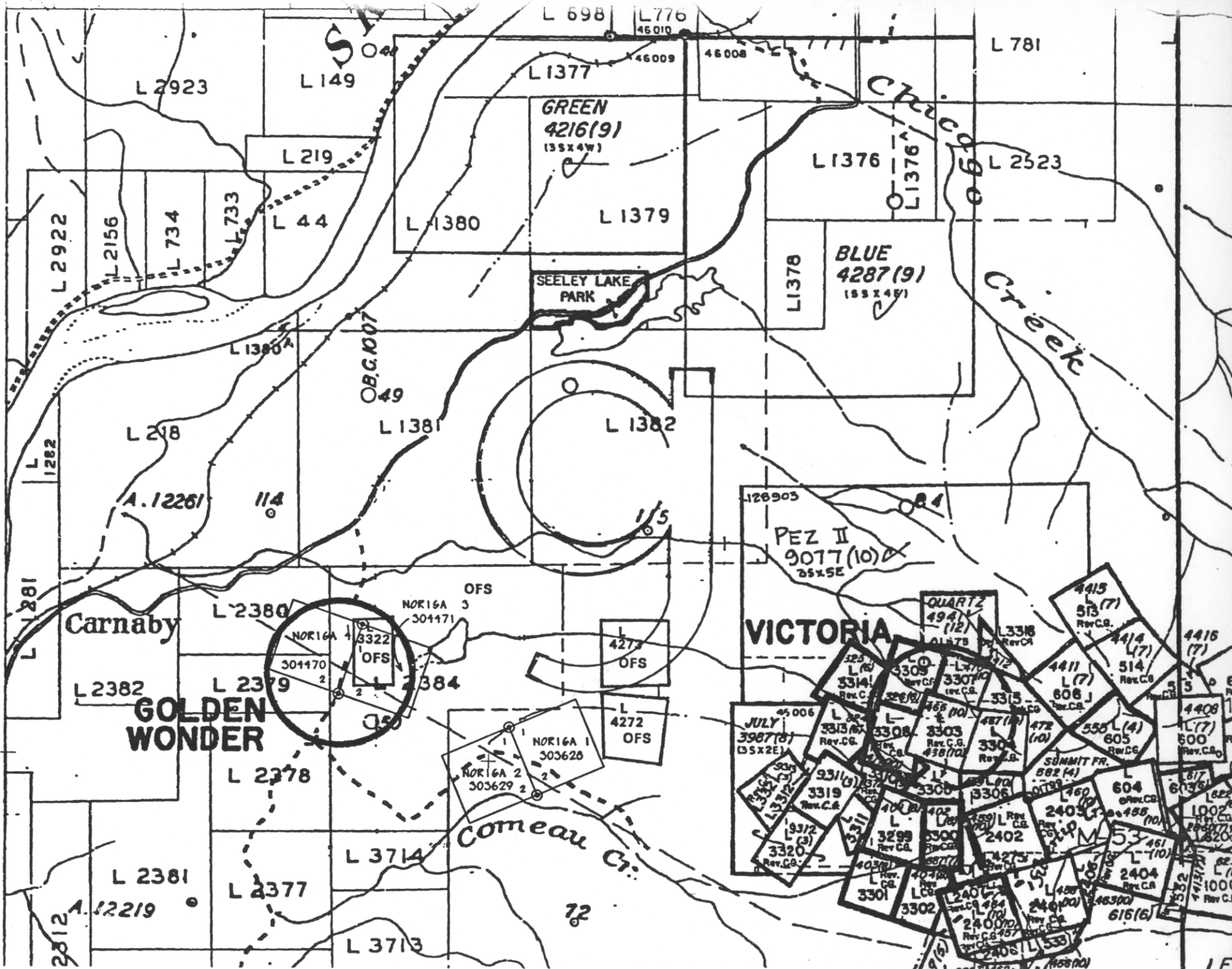
# MAIN VEIN

02 TON

GRAINS	COPPER	GOLD	SILVER
	24070	9900	32.5
8.4	2.656%	8200	0.245
	23520	8320	38.0

PERCENT SAMPLE

WAS FROM LOWEST SAMPLE  
TAKEN



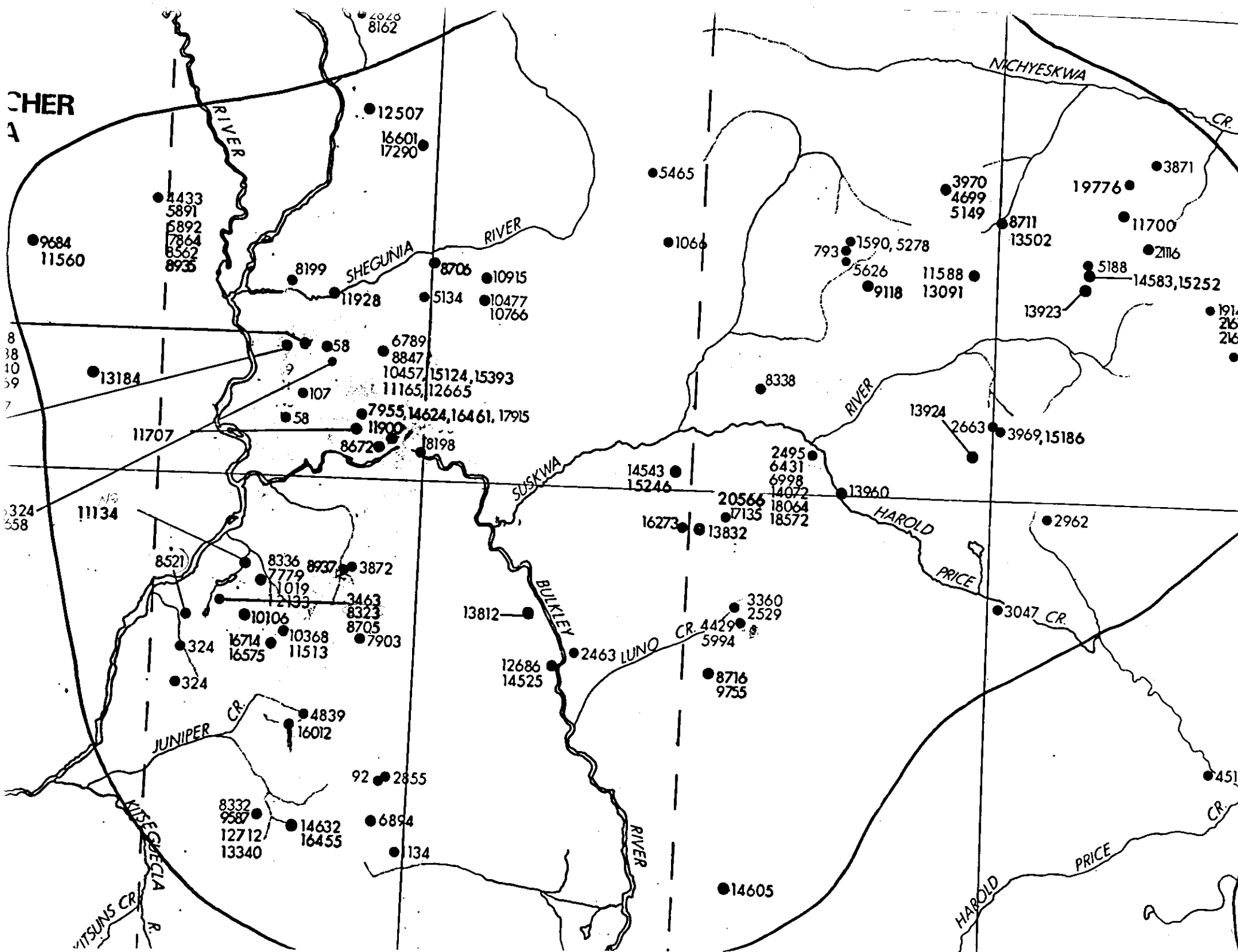
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4433  
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6892  
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8562  
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12507  
16601  
17290

8199

11928

8706

10915

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793

1590, 5278

5626

11588  
13091

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4699  
5149

8711  
13502

19776

3871

11700

2116

5188

14583, 15252

13923

1914  
2169  
2169

6789

8847

10457, 15124, 15393

11165, 12665

58

107

58

7955, 14624, 16461, 17915

11900

8672

18198

8338

13924

2663

3969, 15186

2495

6431

6998

14072

18064

18572

13960

14543

15246

16273

13832

3360

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3047 CR.

8521

8336

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JUNIPER CR.

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WIEGEGEIA R.

HAROLD PRICE

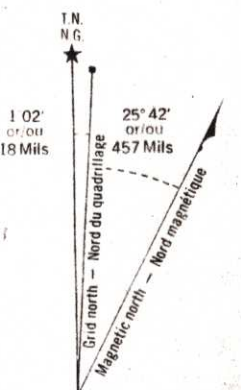
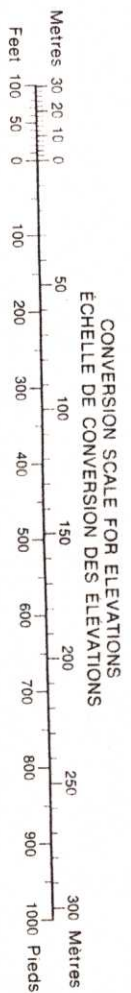
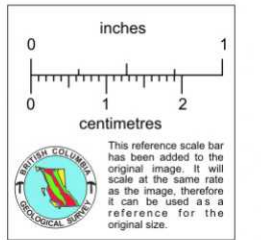
HAROLD PRICE

CR.



Military users,  
refer to this map as:  
Référéncé de cette carte  
pour usage militaire:

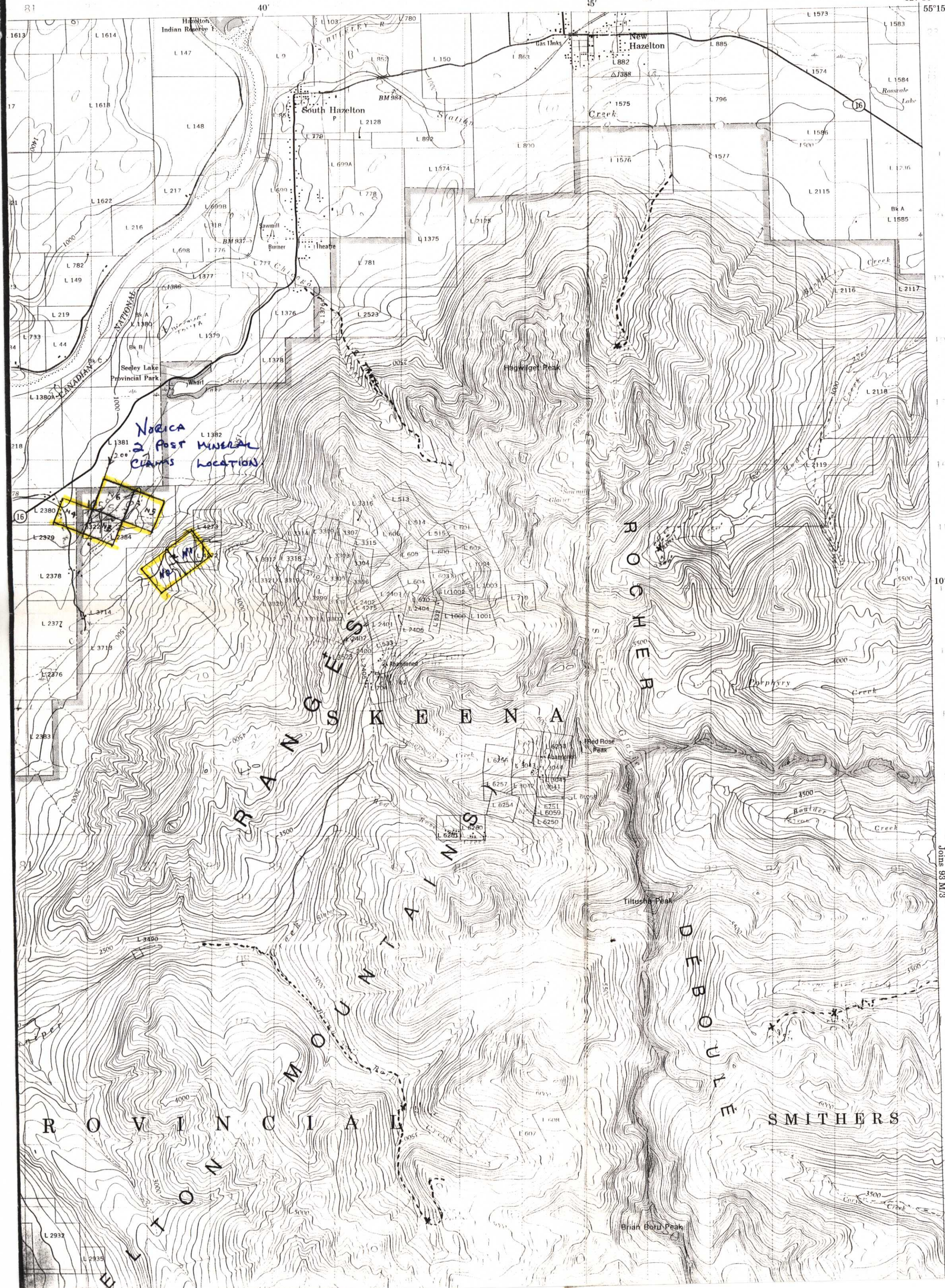
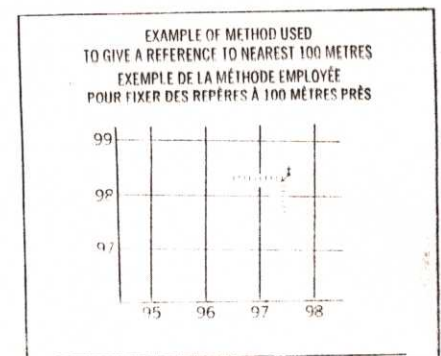
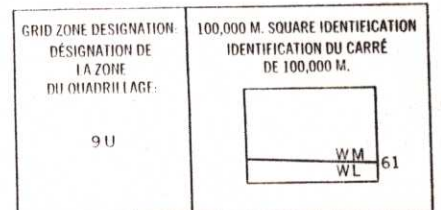
SERIES A721 SÉRIE  
MAP 93 M/4 CARTE  
EDITION 2 MCE ÉDITION



Use diagram only to obtain numerical values  
APPROXIMATE MEAN DECLINATION 1972  
FOR CENTRE OF MAP  
Annual change decreasing 3.8"

N'utiliser le diagramme que pour obtenir les valeurs numériques  
DÉCLINAISON MOYENNE APPROXIMATIVE  
AU CENTRE DE LA CARTE EN 1972  
Variation annuelle décroissante 3.8"

ONE THOUSAND METRE  
UNIVERSAL TRANSVERSE MERCATOR GRID  
ZONE 9  
QUADRILLAGE DE MILLE MÈTRES  
TRANSVERSE UNIVERSEL DE MERCATOR



**NORICA  
2 POST MINERAL  
CLAIMS  
LOCATION**



ROCKY MOUNTAINS  
FRANKS  
ROCKY MOUNTAINS  
DEBOULE  
SMITHERS