1991 GEOCHEMICAL REPORT

on the

ANA 2 CLAIM

Greenwood Mining Division
British Columbia

North Latitude 49°01′ West Longitude 119°03′

NTS 82E/3E

Prepared for

CROWN RESOURCES CORP.
Suite 100-200 Granville Street
Vancouver, B.C.
V6C 1S4

Prepared by

W. R. Kushner, B.Sc.
COAST MOUNTAIN GEOLOGICAL LTD.
P. O. Box 11604
1410-650 West Georgia Street
Vancouver, B.C.
V6B 4N9

July, 1991

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LIST OF ILLUSTRATIONS

1.0 INTRODUCTION

1.1 Summary

Crownex Resources (Canada) Ltd., a subsidiary of Crown Resources Corp. of Colorado, is the registered owner of the Ana 2 claim. This report describes the geochemical sampling survey conducted on the property during June, 1991.

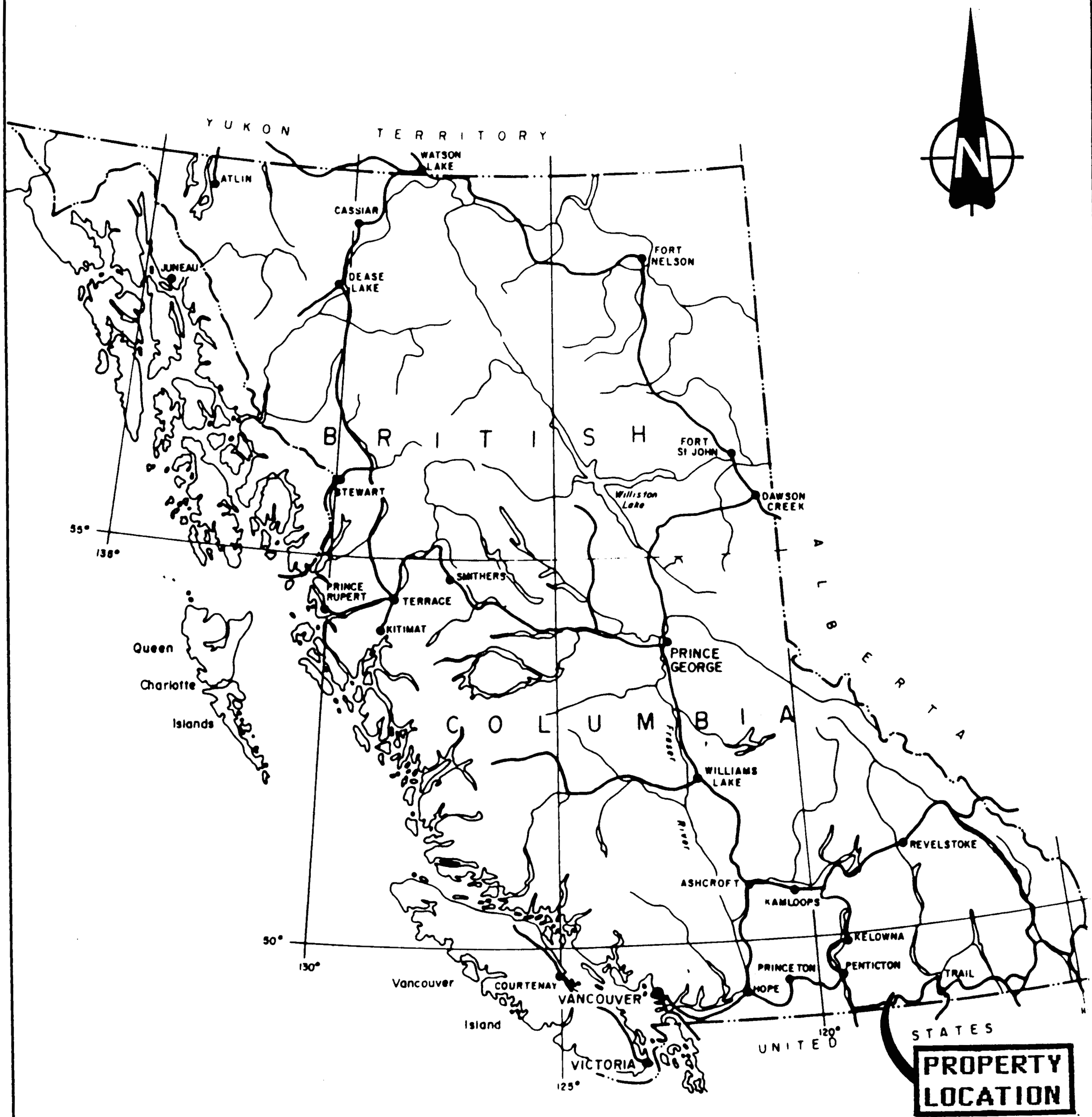
1.2 Location & Access

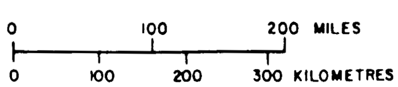
Located approximately seven kilometres southeast of Bridesville along the Canada - U.S. boundary, the Ana 2 claim is accessed by the McCoy Creek gravel road south off of Highway 3 (Figure 1). The geographical coordinates for the centre of the property are 49° 01′ north latitude and 119° 03′ west longitude. The property is located on the eastern half of the N.T.S. map sheet 82E/3.

1.3 Physiography & Climate

Relief within the claim boundary is moderate and varies approximately 220 meters, from 1030 metres elevation on the eastern side to 1250 metres to the west. Larch and pine are the dominant vegetation with subordinate grasses and marsh reeds, typical of the dry interior climate.

The area is characterized by dry, hot summers and moderate winters with little snowcover.





CROWN RESOURCES CORP.

ANA 2 PROPERTY

PROPERTY LOCATION MAP

GREENWOOD MINING DIVISION

COAST MOUNTAIN GEOLOGICAL LTD.

DRAWN BY:	NTS:	DATE:	FIGURE:
B.K.	82E/3E	JULY, 1991	1

1.4 Property Description

The Ana 2 claim, owned by Crownex Resources (Canada) Ltd., a subsidiary of Crown Resources Corp. of Colorado, consists of one 20 unit claim located in the Greenwood Mining Division of southern British Columbia (Figure 2). The following table summarizes pertinent claim data from records of the B.C. Ministry of Energy, Mines and Petroleum Resources:

CLAIM STATUS

Claim	Record number	Size (units)	Expiry Date*
Ana 2	215378	20	21/Jul/92

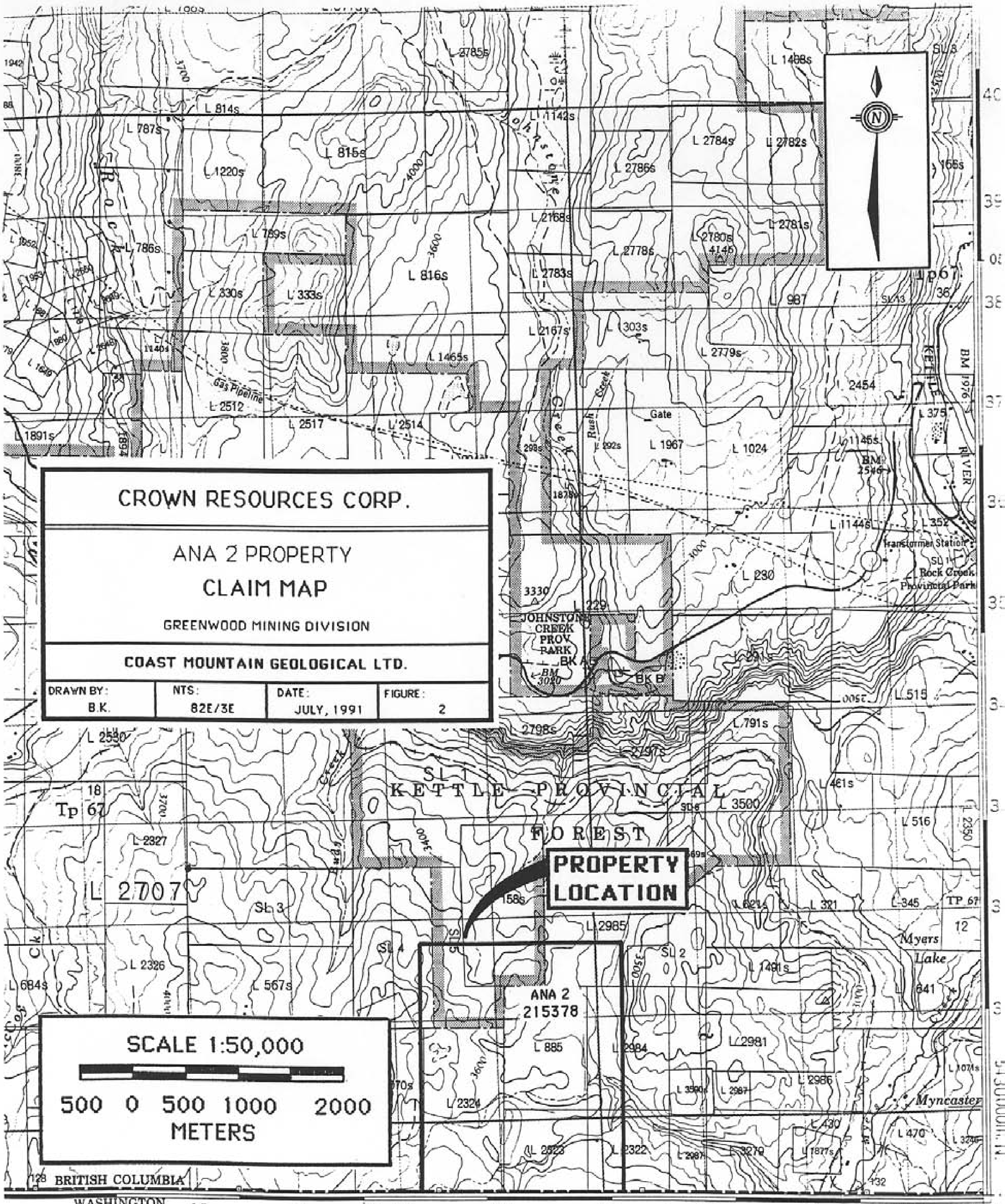
* Pending acceptance of this report

1.5 Property History

Exploration and development in this area commenced around the turn of the century with the discovery of the McKinney Creek placer deposits and the mines of Camp McKinney. The McKinney Camp was one of the early lode producing areas in British Columbia with over $1,000,000 worth of gold recovered.

The Ana 2 claim has evidence of the many trenches, shafts and adits dug by prospectors dating back to the turn of the century; most are without any record of work however.

Recent significant results at the Buckhorn Mountain gold skarn deposits immediately to the south in Washington State led Crown Resources to examine ground to the north in Canada for similar


CROWN RESOURCES CORP.
ANA 2 PROPERTY
CLAIM MAP
GREENWOOD MINING DIVISION
COAST MOUNTAIN GEOLOGICAL LTD.
DRAWN BY: B.K.
NTS: 82E/3E
DATE: JULY, 1991
FIGURE: 2
PROPERTY LOCATION
ANA 2
215378
SCALE 1:50,000
500 0 500 1000 2000
METERS
KETTLE PROVINCIAL FOREST
JOHNSTONE CREEK PROV PARK
Rock Creek Provincial Park
Transformer Station
Myers Lake
Myncaster
BRITISH COLUMBIA
WASHINGTON
46
47
05' 48
49
50
51
52
353000m E.119°00

geology. Crown Resources Ltd. acquisitioned Terraquest Ltd. of Toronto to conduct a regional airborne magnetometer and VLF-EM survey in 1989 (Basil, 1989), and since then has conducted exploration programs in the area over favourable areas.

1.6 1991 Work Program

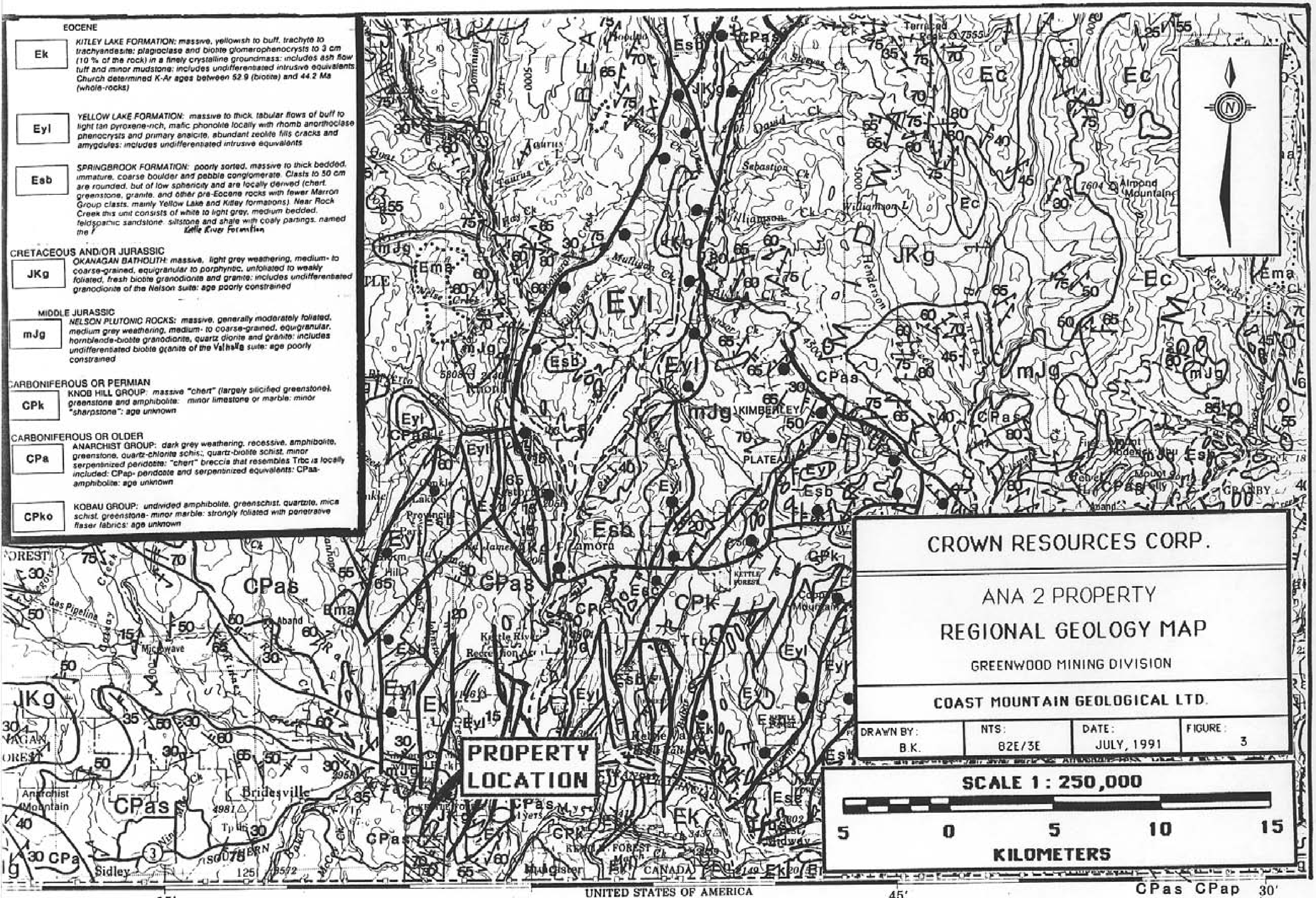
Work performed on the Ana 2 claim during June, 1991, consisted of extending the grid from the adjoining Ket 5 Group onto the Ana 2 claim, and running a soil line along the Canada - U.S. border. A total of 2 days were spent on the property, in which two prospectors collected 37 soil samples and 1 rock sample.

2.0 GEOLOGY & GEOCHEMISTRY

2.1 Regional Geology

The oldest rocks in the survey area are Carboniferous in age or older, belonging to the Anarchist Group (Figure 3). They are comprised of amphibolite, greenstone, quartz-chlorite schist, quartz-biotite schist and minor serpentinized peridotite. Anarchist Group rocks occur throughout the Ana 2 claim, and are host to the historic Camp McKinney deposits. Similarly aged Kobau Group rocks consisting of amphibolite, greenschist, quartzite mica schist, greenstone and minor marble occur to the east of the claim.

The majority of the intrusive rocks in the area are Middle Jurassic age Nelson Plutonic rocks. These rocks are comprised of massive hornblende-biotite granodiorite, quartz diorite, diorite and


EOCENE
Ek
KITLEY LAKE FORMATION: massive, yellowish to buff, trachyte to trachyandesite; plagioclase and biotite glomerophenocrysts to 3 cm (10 % of the rock) in a finely crystalline groundmass: includes ash flow tuff and minor mudstone: includes undifferentiated intrusive equivalents Church determined K-Ar ages between 52.9 (biotite) and 44.2 Ma (whole-rocks)
Eyl
YELLOW LAKE FORMATION: massive to thick, tabular flows of buff to light tan pyroxene-rich, mafic phonolite locally with rhomb anorthoclase phenocrysts and primary analcite, abundant zeolite fills cracks and amygdules: includes undifferentiated intrusive equivalents
Esb
SPRINGBROOK FORMATION: poorly sorted, massive to thick bedded, immature, coarse boulder and pebble conglomerate. Clasts to 50 cm are rounded, but of low sphericity and are locally derived (chert, greenstone, granite, and other pre-Eocene rocks with fewer Marron Group clasts, mainly Yellow Lake and Kitley formations). Near Rock Creek this unit consists of white to light grey, medium bedded, feldspathic sandstone, siltstone and shale with coaly partings, named the Kettle River Formation
CRETACEOUS AND/OR JURASSIC
JKg
OKANAGAN BATHOLITH: massive, light grey weathering, medium- to coarse-grained, equigranular to porphyritic, unfoliated to weakly foliated, fresh biotite granodiorite and granite: includes undifferentiated granodiorite of the Nelson suite: age poorly constrained
MIDDLE JURASSIC
mJg
NELSON PLUTONIC ROCKS: massive, generally moderately foliated, medium grey weathering, medium- to coarse-grained, equigranular, hornblende-biotite granodiorite, quartz diorite and granite: includes undifferentiated biotite granite of the Valhalla suite: age poorly constrained
CARBONIFEROUS OR PERMIAN
CPk
KNOB HILL GROUP: massive "chert" (largely silicified greenstone), greenstone and amphibolite: minor limestone or marble: minor "sharpstone": age unknown
CARBONIFEROUS OR OLDER
CPa
ANARCHIST GROUP: dark grey weathering, recessive, amphibolite, greenstone, quartz-chlorite schist, quartz-biotite schist, minor serpentinized peridotite: "chert" breccia that resembles Trbc is locally included: CPap- peridotite and serpentinized equivalents: CPas- amphibolite: age unknown
CPko
KOBAU GROUP: undivided amphibolite, greenschist, quartzite, mica schist, greenstone- minor marble: strongly foliated with penetrative flaser fabrics: age unknown
PROPERTY LOCATION
CROWN RESOURCES CORP.
ANA 2 PROPERTY
REGIONAL GEOLOGY MAP
GREENWOOD MINING DIVISION
COAST MOUNTAIN GEOLOGICAL LTD.
DRAWN BY: B.K.
NTS: 82E/3E
DATE: JULY, 1991
FIGURE: 3
SCALE 1 : 250,000
5 0 5 10 15
KILOMETERS
UNITED STATES OF AMERICA
CANADA
15'
119°00'
45'
30'
CPas CPap

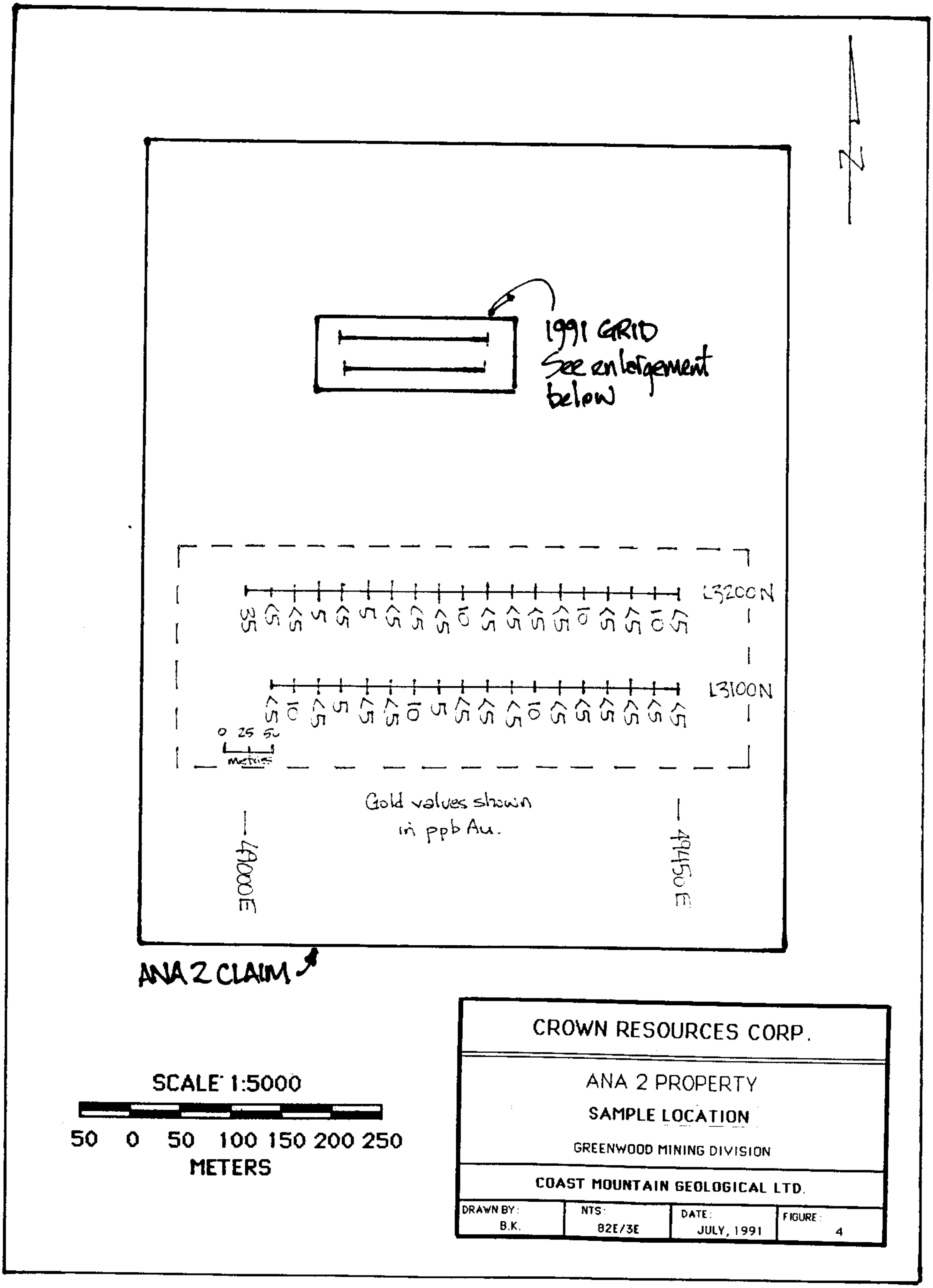
granite. Smaller Jurassic to Cretaceous age plugs of biotite granodiorite and granite belonging to the Okanagan Batholith occur to the northwest and northeast of the property.

Overlying rocks of Eocene age occur regionally and consist of flows and coarse unconsolidated sediments. Pleistocene period glacial deposits occur at higher elevations, and fluvio-glacial deposits are the most extensive feature in the valleys.

Camp McKinney gold bearing zones consist mainly of quartz veins in the Anarchist schists, generally paralleling the trend of the schistosity. Gold mineralization to the south of Camp McKinney is associated with shear zones within volcanics, and contain considerable amounts of ankeritic carbonates and abundant pyrite. Significant gold mineralization to the south of the Ana 2 property is related to skarn mineralization. The Buckhorn Mountain skarn system resulted from the Buckhorn Pluton (related to the Nelson Pluton) intruding a sequence of Anarchist Group equivalent rocks.

2.2 Property Geology

Easterly dipping greenstones, argillites, limestones and conglomerates of the Kobau (Anarchist?) Group are found outcropping on the property. Overlying rocks of the Eocene age Yellow Lake and Kitly Lake formations occur in the northwestern corner of the claim, and consist of mafic phonolite and trachyte to


N
1991 GRID
See enlargement below
L3200N
35 <5 <5 5 <5 5 <5 <5 <5 10 <5 <5 <5 <5 10 <5 <5 10 <5
L3100N
<5 10 <5 5 <5 <5 10 5 <5 <5 <5 10 <5 <5 <5 <5 <5 <5
0 25 50
meters
Gold values shown in ppb Au.
49000E
49450E
ANA 2 CLAIM
SCALE 1:5000
50 0 50 100 150 200 250
METERS
CROWN RESOURCES CORP.
ANA 2 PROPERTY
SAMPLE LOCATION
GREENWOOD MINING DIVISION
COAST MOUNTAIN GEOLOGICAL LTD.
DRAWN BY: B.K.
NTS: 82E/3E
DATE: JULY, 1991
FIGURE: 4

trachyandesite flows.

2.3 Geochemistry

Soil samples were taken from the 'B' soil horizon, collected in kraft gusseted paper bags and sent to Chemex Labs Ltd. of North Vancouver, B.C., for analysis. At Chemex, the samples were oven dried at approximately 60 degrees Celsius, sieved to minus 80 mesh and analyzed geochemically for gold by the atomic absorption (AA) technique.

Of the 37 soil samples collected, one contained 35 ppb gold and six more contained levels of 10 ppb Au; the remaining 30 samples contained less than 5 ppb Au.

Rock chip samples were collected in plastic bags and also sent to Chemex. Samples were crushed to 3/16 of an inch, and then about .25 kg was pulverized to minus 100 mesh. A 0.5 gram sample of the minus 80 fraction of the samples was digested in hot, dilute aqua regia in a boiling water bath and then diluted to 10 millilitres with distilled water. Samples were analyzed for a group of 30 elements by ICP technique. In addition, gold was analyzed from a 10 gram fraction by AA.

The rock sample, a limonitic siliceous breccia, contained 15 ppb Au and 44 ppm Cu. Nickel and chromium levels were elevated; the sample contained 141 ppm Ni and 106 ppm Cu. Table 2 is a description of the rock sample, and sample locations are plotted on Figure 4. Complete sample descriptions are located in Appendix E.

TABLE 2 ROCK CHIP DESCRIPTION

Sample number	Rock type
A2/90 D5R	altered breccia

3.0 DISCUSSION and RECOMMENDATIONS

The results of the 1990 exploration program were inconclusive due to the cursory look at the property a small program such as this provides. Considering the inherent potential in the geology and the location of the property, further work to evaluate the gold potential of all of the property is recommended by a program of:

(a) extensive grid soil sampling

(b) grid magnetometry, and

(c) reconnaissance prospecting

Respectfully submitted,

Wm. R. Kushner, B.Sc.

APPENDIX A

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, WILLIAM R. KUSHNER, of P.O. Box 1, Station 'A', Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Geologist in the employment of Coast Mountain Geological Ltd. with offices at 1410-650 West Georgia Street, Vancouver, British Columbia.
2. THAT I am a graduate from the University of Alberta with a bachelor of Science degree in Geology (1987).
3. THAT my primary employment since graduation has been in the field of mineral exploration.
4. THAT this report is based on field work conducted by Coast Mountain Geological Ltd. on the Ana 2 Property during June, 1991, and on information from government publications and reports filed with the Government of British Columbia.
5. THAT I did not visit the subject property.
6. THAT I do not own or expect to receive any interest in the property described herein, nor in any securities of any company rendered in the preparation of this report.

DATED at Vancouver, British Columbia, this 19th day of July, 1991.

Wm K

William R. Kushner, B.Sc.
Geologist

APPENDIX B

STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES

PERSONNEL		
Prospectors (D. Ridley, C. Ridley)		
4 mandays @ $225/day		900.00
ASSAYS		
1 Rock Chip @ $14/sample		14.00
37 soils @ $9/sample		333.00
MOB/DE-MOB		100.00
MISCELLANEOUS		
Supplies and Consumables		41.00
Vehicle		134.55
Accommodation		101.20
Food		94.91
	SUBTOTAL	1718.66
REPORT AND DRAFTING		450.00
	TOTAL	**$2168.66**

APPENDIX C

REFERENCES

REFERENCES

Basil, Chris, 1990. Airborne Magnetic and VLF-EM Survey Report on the Ket 1-22 and Ket 24-32 Mineral Claims, Assessment Report for Crown Resources Corp.

Geological Survey of Canada, Map 15-1961, Kettle River, British Columbia, Sheet 82E West Half Scale 1:253,440.

Miller, B. and G. Schellenberg, 1990. 1990 Summary report on the Ana 2 Claim, Assessment Report for Crown Resources Corp.

Templeman, Kluit, D.S., 1989. Geology, Penticton, British Columbia, Geological Survey of Canada, Map 1736A, 1:250,000 Scale.

APPENDIX D

CERTIFICATE OF ANALYSIS

Chemex Labs Ltd.

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

To: CROWN RESOURCE CORPORATION
SEVENTEENTH STREET PLAZA
1225 17TH ST., STE. 1500
DENVER, COLORADO
80202

Project : MIDWAY
Comments: CC: R. MILLER CC: CHRIS BASIL

Certificate Date: 27-JUN-91
Invoice No. : I9116570
P.O. Number :

CERTIFICATE OF ANALYSIS A9116570

SAMPLE DESCRIPTION	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
A2/90 D5R	205	294	18	< 0.01	141	330	8	< 5	3	155	< 0.01	< 10	< 10	10	< 10	20
A3/90 D1R	205	294	2	0.02	25	430	2	< 5	2	21	0.17	< 10	< 10	52	< 10	22
B/90 D2R	205	294	< 1	0.03	5	530	8	5	2	18	< 0.01	< 10	< 10	22	< 10	30
B/90 D3R	205	294	< 1	0.03	37	1350	< 2	< 5	8	125	0.01	< 10	< 10	14	< 10	364
D/90 D4R	205	294	< 1	0.03	6	420	14	< 5	3	46	< 0.01	< 10	< 10	6	< 10	22

CERTIFICATION: B. Cargli

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

To: CROWN RESOURCE CORPORATION
SEVENTEENTH STREET PLAZA
1225 17TH ST., STE. 1500
DENVER, COLORADO
80202

Project : MIDWAY
Comments: CC: R. MILLER CC: CHRIS BASIL

Certificate Date: 24-JUN-91
Invoice No. : I9116572
P.O. Number :

CERTIFICATE OF ANALYSIS A9116572

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA
L31100N 49025E	201	--	< 5
L31100N 49050E	201	--	10
L31100N 49075E	201	--	< 5
L31100N 49100E	201	--	5
L31100N 49125E	201	--	< 5
L31100N 49150E	201	--	< 5
L31100N 49175E	201	--	10
L31100N 49200E	201	--	5
L31100N 49225E	201	--	< 5
L31100N 49250E	201	--	< 5
L31100N 49275E	201	--	< 5
L31100N 49300E	201	--	10
L31100N 49325E	201	--	< 5
L31100N 49350E	201	--	< 5
L31100N 49375E	201	--	< 5
L31100N 49400E	201	--	< 5
L31100N 49425E	201	--	< 5
L31100N 49450E	201	--	< 5
L31200N 49000E	201	--	35
L31200N 49025E	201	--	< 5
L31200N 49050E	201	--	< 5
L31200N 49075E	201	--	5
L31200N 49100E	201	--	< 5
L31200N 49125E	201	--	5
L31200N 49150E	201	--	< 5
L31200N 49175E	201	--	< 5
L31200N 49200E	201	--	< 5
L31200N 49225E	201	--	10
L31200N 49250E	201	--	< 5
L31200N 49275E	201	--	< 5
L31200N 49300E	201	--	< 5
L31200N 49325E	201	--	< 5
L31200N 49350E	201	--	10
L31200N 49375E	201	--	< 5
L31200N 49400E	201	--	< 5
L31200N 49425E	201	--	10
L31200N 49450E	201	--	< 5
A3 00+00N	201	--	< 5
A3 00+25N	201	--	5
A3 00+50N	201	--	90

CERTIFICATION: Hank Vonk

APPENDIX E

PROSPECTORS FIELD NOTES

C. RIDLEY

ROCK CREEK SOILS

JUNE/1991

NOTES ON SAMPLES:

S - @ end of # - SOIL

SS - " - SILT

R - " - ROCK

(SOILS)

- IN ORDER FOLLOWING #

- TEXTURE, DEPTH, HORIZON, COLOR, % COARSE FRAGS, SHAPE OF FRAGS

(SILTS)

- TEXTURE, DEPTH, WIDTH, COLOR, ORG. FRAC., MINERAL FRAC.,

(ROCKS)

- SELF-EXPLANATORY)

BAGS + RIBBON MARKED

CLAIM NAME : STN # : TYPE OF SAMPLE

EXAMPLE:

A4/10+00E : S

7

66+00E S: s, s+c): 40cm: Bt hor: med brown
- met Dave @ 66+25E: end sampling.

1

FWA #2 / 13/06/91 / Overcast & COOL
- found Rock Mtn. Forest Rd. turned S
@ Logging rd. followed into Elk's meadow.
- found L 31100N: Begin @ 49025E
on fence line: (TIED INTO BOB'S GRID)
L31100N:

STN. 49025E S: s, s+c): 35 cm. Bf hor.
red brown. (some Ae hor inc)

49050E: S: s, s+c): 40 cm: Bf hor: med. red
brwn: 20-25% sub ang & ang frag (≟ origin)

49075E: S: s, s+c) 15 cm. Bt hor. med brwn.
40-50% ang & sub ang. frags (breccia)

49100E S: s, s+c): 35 cm. Bt hor. med brwn.
crossed N/S trending fence line into
pasture

49125E: S: s, s+c): 40cm Bt hor: med. brwn

2

49150E: S: s, s+c): 10 cm. Bt hor: med brwn
sub crop below scant soil surface

49175E S: s, s+c): 40 cm. Bt hor. dk brwn.

49200E: S: s, s+c): 40 cm: Bt hor: med. brwn.
10-15% sub ang. frag (≟ origin)

49225E: S: s, s+c): 10 cm. Bt hor. med brwn.
50-60% ang. breccia frags

49250E: S: s, s+c): 30 cm: Bt hor: med. brwn.
30-40% ang. breccia frags

49275E: S: s, s+c): 30 cm: Bt hor: lt. brwn:
30-40% ang breccia frags

49300E: S: s, s+c): 30 cm. Bt hor: med brwn.
25-30% ang. breccia frags

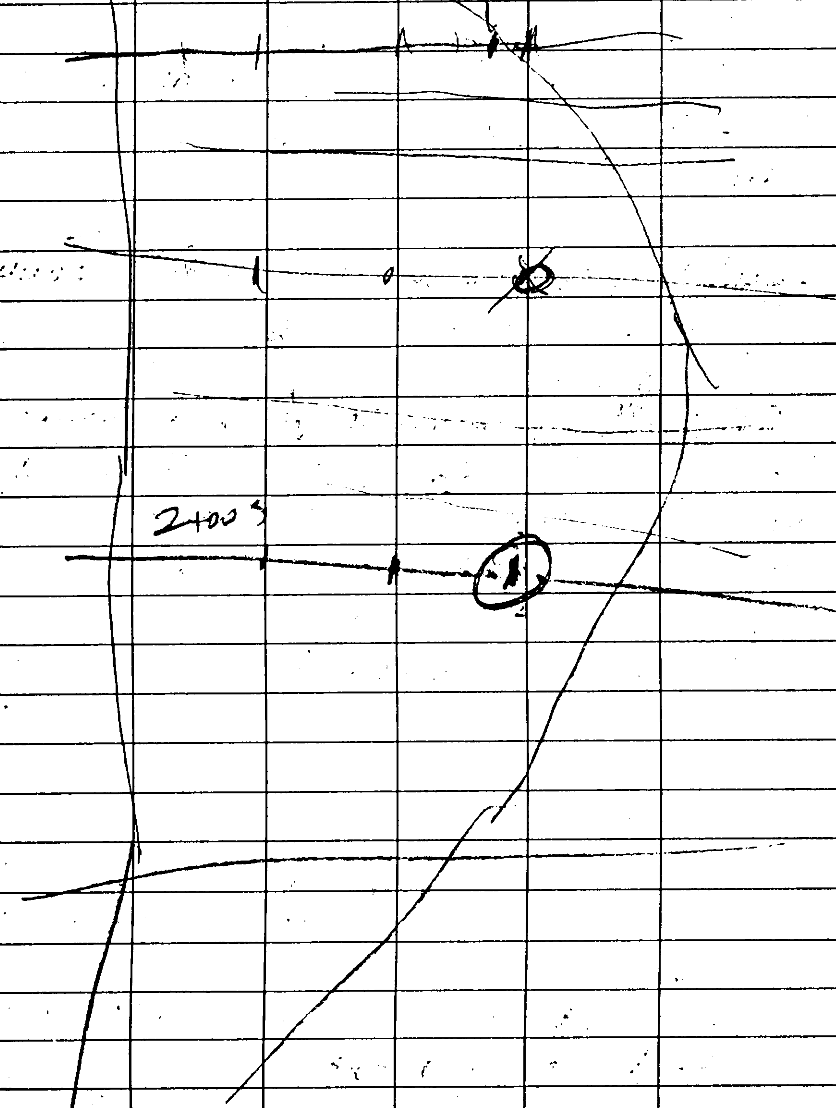
49325E: S: s, s+c): 30 cm. Bt hor: med brwn
50-60% lge. ang breccia frags

49350E: S: s, s+c). 30 cm. Bt hor: med brwn
25-30% ang breccia frags

LEVEL

1? not my notes!

C.J. Ridley



49375E. S: A, A+C): 10cm: B1 hor: med brwn: 60-75% ang. breccia frags (breccia subcrop.

49400E. S: A, A+C): 10 cm: B1 hor: dk. brwn. 60-75% ang. breccia frags (breccia sub crop)

49425E: S: A, A+C): 25 cm: B1 hor: med brwn. 20-30% ang. breccia frags

49450E: S: A, A+C): 30 cm. B1 hor: med brwn. line ends @ NE/SW TRENDING FENCE LINE. CHAIN 100m., DUE N. est. L31200N STN 49450E: TRAVERSE W. UP LINE L31200N.

STN: 49450E. S: A, A+C): 36 cm: B1 hor. med brwn: rusty breccia frags - 15%

49425E: S: A, A+C): 35 cm: B1 hor: dk brwn.

49400E: S: A, A+C): 40 cm. B1 hor: dk brwn. 25-30% breccia frags

49375E: S: A, A+C): 35cm: B1 hor. dk brwn. 10-20% breccia frags

LEVEL

49350E: S: (N, N+C): 35 cm: Bt hor: dk brwn:
20-30% breccia frags

49325E: S: (N, N+C): 40 cm: Bt hor: med red
brwn: 10-15% breccia frags

49300E: S: (N, N+C): 35 cm: Bt hor: dk brwn:

49275E: S: (N, N+C): 15 cm: Bt hor: med brwn:
breccia subcrop

49250E: S: (N, N+C): 20 cm: Bt hor: med red
brwn: breccia subcrop

49225E: S: (N, N+C): 40 cm: Bt hor: dk brwn:

49200E: S: (N, N+C): 40 cm: Bt hor: dk brwn:

49175E: S: (N, N+C): 35 cm: Bt hor: med brwn

49150E: S: (N, N+C): 16 cm: Bt hor: med
brwn: LST subcrop

49125E: S: (N, N+C): 35 cm: Bt hor: med
brwn: 20-30% ang + sub ang frag
across R/W trend fence

49100E: S: (N, N+C): 25 cm: Bt hor: med
brwn: 20-30% ang breccia frag:

49075E: S: (N, N+C): 30 cm: Bt hor: med red
brwn: 5-10% ang frag (? breccia)

49050E: S: (N, N+C): 30 cm: Bt hor: med red
brwn:

49025E: S: (N, N+C): 30 cm: Bt hor: med
red brwn: 10-15% ang + sub ang frag
(? origin)

49000E: S: (N, N+C): 30 cm: Bt hor: lt
red brwn: 20-30% ang + sub ang frag
(? origin): line ends @ edge of road

2.5 Km from end of line to Rock Mtn
Forest Rd.

LEVEL

June 13/91 Ana #2

extending L 31·100N to east

begin @ L31100N; 49+000E

11+050 → 49+125E breccia; possible thin limestone beds as there's occassional angular limest float.

49200E limestone subcrop

49450E fence end line

on north bearing for 100m

L 31200N : 49+455E; A2/90D5R;

subcrop (outcrop but poor exposure) of limonitic stained siliceous breccia; minor sericite alteration with green micas (mariposite or fuchsite?) rare disem pyrite; subcrop found in road cut along N-S trending fenceline; exposure = 10m long x 1 meter wide

49275E; breccia seen to contain limestone clasts; this may explain the previously mentioned limestone cobbles found near L31100N; 49200E?

49170E limestone outcrop.

49000E road

chain south to tie in line

@ 95m hit L 31100N: 49+000E

sight right on from L31200N: 49E → L31100N: 49E