

File CPW

## GEOCHEMICAL AND GEOLOGICAL REPORT

on the

KANGAROO CLAIM GROUP  
CARIBOO MINING DIVISION  
BRITISH COLUMBIA

located at

Latitude  $52^{\circ}41'$  northLongitude  $121^{\circ}39'$  west

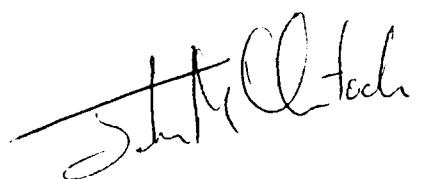
N.T.S. 93 A/12

for

MT. CALVERY RESOURCES LTD.  
1027-470 GRANVILLE STREET  
VANCOUVER, B.C. V6C 1V5

Report by: R.M.Durfeld B.Sc.

JULY 1985



*Durfeld Geological Management Ltd.* *u. Th*

180 Yorston Street

Williams Lake, B.C. V2G 3Z1

Telephone (604) 392-4691

December 9, 1985.

MOUNT CALVERY RESOURCES LTD  
1027-470 Granville Street  
Vancouver, B.C.

Dear Jack,

Enclosed please find a copy of the Kangaroo Property Report that has been at the bottom of my out basket for some time. I sent duplicate copies of this report to the Gold Commissioner in Quesnel by registered mail on September 10, 1985. (Copy of letter and registration enclosed)

If you had to leave here because it went to -23, you should have stayed on, we have since had -40's. Try that for cold and watch the firewood dwindle.

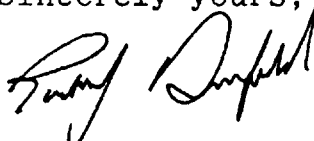
I'm getting monies from ICBC today. My brother borrowed my truck and had a friendly logging trucker run down the side of it while he was already in the ditch. At least the other party was at fault and one gets paid for all the damage.

The CAN-STRAT course was moderately interesting but very basic. When you are dealing with chips there really isn't much you can say. Getting work in it will take time but even if one were just to get one or two months in the winter it would make one less dependant on the volatile mining end of things.

Due to work and other party commitments up here I won't be in Vancouver for your company party, so you'll have to perform without me. Thank John and company on my behalf.

If I don't make it to Vancouver before Christmas I'll just have to wish you the best in this letter and catch you and your family sometime in the new year.

Sincerely yours,



R.M. Durfeld

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## INTRODUCTION

This report documents geochemical sampling and geological mapping that was conducted on the Kangaroo Group of mineral claims during the period June 23 to July 7, 1985. Most of the work was concentrated in areas that were anomalous in gold from the 1984 surveys.

## PROPERTY DESCRIPTION

### 1) Location

The Kangaroo Group of mineral claims is located in the Cariboo Mining Division, British Columbia, sixty-five kilometres southeast of the community of Quesnel (Figure 1). More precisely it is located at 52°41' north latitude and 121°39' west longitude (National Topographic System Map 93A/12).

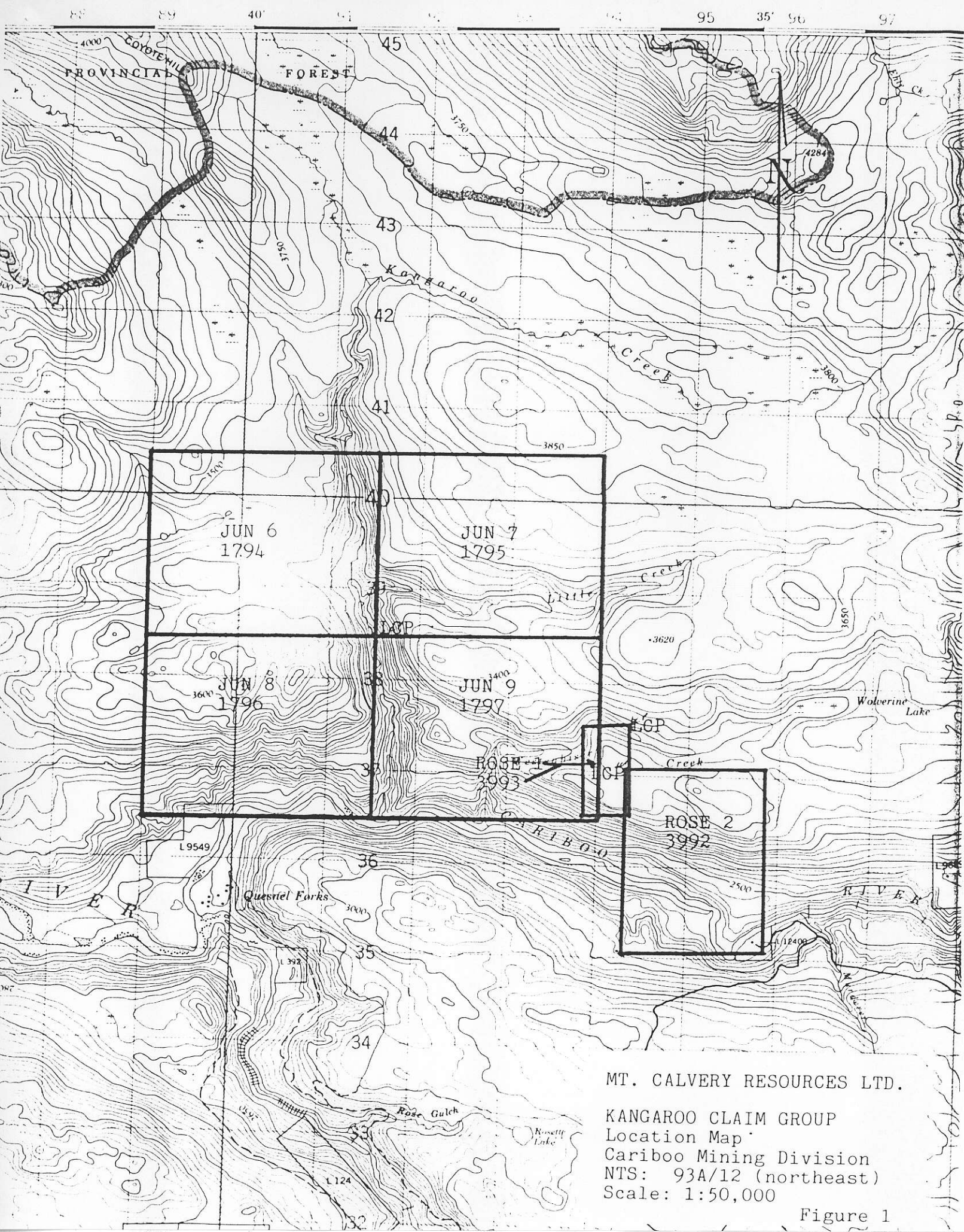
### 2) Access and Physiography

The Kangaroo Claim Group is readily accessible from Williams Lake or Quesnel via paved and gravel highway to the community of Likely and then 9 kilometres of secondary gravel road to the historic community of Quesnel Forks that is located on the western edge of the property. From here the Cariboo River bounds the property on the south and had to be crossed to access the Jun 8 and Jun 9 mineral claims on which all of the geological mapping and geochemical sampling were conducted. This crossing was achieved by a cable crossing and/or a river boat that are located at Quesnel Forks.

The claim group generally lies on a south facing slope that becomes steeper as it approaches the Cariboo River or Kangaroo and Westhiser Creeks. The elevation on the property ranges from 2200 to 3750 feet above sea level.

### 3) Climate

The climate of this area is typical of the central British Columbia Interior, with its warm often dry summers and cold winters. The area is typically frost free for 60 to 100 days per year and has a mean annual precipitation of 50 to 75 centimetres, of which approximately half would fall as snow.



MT. CALVERY RESOURCES LTD.  
 KANGAROO CLAIM GROUP  
 Location Map  
 Cariboo Mining Division  
 NTS: 93A/12 (northeast)  
 Scale: 1:50,000

Figure 1

#### 4) Claim Summary

the Kangaroo Group of mineral claims consists of 94 mineral claim units that were located under the British Columbia modified grid system (Figure 1).

The current status of these mineral claims is summarized as:

CLAIM NAME	NO. OF UNITS	RECORD NO.	ANNIVERSARY DATE
JUN 6	20	1794	July 7
JUN 7	20	1795	July 7
JUN 8	20	1796	July 7
JUN 9	20	1797	July 7
ROSE 1	2	3993	August 24
ROSE 2	12	3992	August 24

#### GEOLOGY

##### 1) Regional Geology

The Kangaroo Claim Group is underlain by a sequence of volcanic-clastic and sedimentary rocks comprised of green pyroxene bearing andesitic flows, agglomerate and breccia, conglomerates, argillite and limestone. The Geological Survey of Canada maps this sequence as having been deposited in the Triassic to Jurassic Age structural feature known as the Quesnel Trough.

##### 2) Local Geology

The local geology is based on mapping of limited outcrop that was encountered during the geochemical sampling (Figure 2).

The Kangaroo Claim Group is underlain by a northwesterly trending section of sedimentary rocks (unit 1) and volcanic rocks (unit 2) that have been intruded by mafic intrusive rocks (unit 3).

Unit 1 - is subdivided into siltstone (1a), argillite (1b), and conglomerate (1c).

Unit 2 - is subdivided into greenstone (2a), andesite (2b) and rhyolite (2c).

Unit 3 - is subdivided into gabbro (3a) and diorite (3b).

The gabbro and diorite lithologies crosscut and are younger than the sedimentary and volcanic lithologies.

The alteration associated with the intrusive lithologies is recognized as fine chlorite on shears and matrix of all lithologies. Minor quartz carbonate veining is developed as metamorphic sweats and in association with the intrusive lithologies.

The sedimentary and volcanic strata generally develop a northwest strike with variable dips to the east and west. Locally considerable variation is noted in this trend, particularly near the intrusive lithologies and in sections of Westhiser and Kangaroo Creeks where there is extensive faulting.

Variable pyrite was noted disseminated and on shears in all the lithologies. Minor chalcopyrite was noted with arsenopyrite and pyrite in narrow discontinuous quartz veins in Westhiser Creek.

#### GEOCHEMICAL SURVEY

During the 1984 field season geochemical soil sampling was conducted on the Kangaroo Claim Group on a grid basis with lines 400 metres apart and a sample interval of 50 metres. This survey developed five distinct areas with anomalous gold values (greater than 20 ppb gold) that were chosen for follow-up by way of detail soil sampling with lines 50 metres apart and a 25 metre sample interval. In conjunction with this soil sampling, silt and rock samples were collected in the areas of Kangaroo and Westhiser Creeks.

##### 1) Geochemical Sample Collection and Analysis

The soils that are developed on the Kangaroo Claim Group are of the Podsollic to Lithic Podsollic type and are characterized by a well developed B-horizon that was sampled for this geochemical survey. Silt samples were collected from active streams. The individual soil and silt samples were placed in labelled Kraft sample bags. Random rock chip samples were collected from several outcrops in Westhiser Creek and placed in large plastic sample bags with the relevant assay tag.

All of the soil, silt and rock chip samples were subsequently shipped to MIN-EN Laboratories in North Vancouver where they were analyzed for silver, arsenic, copper, lead and zinc by Inductively Coupled Argon Plasma and geochemical gold by Atomic Absorption.

## 2) Geochemical Results

### Silt Sampling

The gold and associated copper, silver and arsenic values for the silt samples are plotted on the Geochemical Plan 1:5000 (Figure 3). Silt sample K-D-5 in Westhiser Creek is strongly anomalous in gold (400 ppb) without associated silver, arsenic or copper values. A source for this anomalous sample would be expected below K-D-4 and above K-D-5. The elevated gold values below K-D-5 may be due to the downstream dispersion from this same source.

### Rock Chip Sampling

The gold and associated copper, silver and arsenic values for the rock chip samples are plotted on the Geological Plan 1:5000 (Figure 2). Of this limited rock chip sampling only sample # 26035 returned significant gold (6000 ppb) with associated silver (13.5 ppm), arsenic (18951 ppm) and copper (2044 ppm) values. This sample was taken from narrow discontinuous quartz, arsenopyrite and chalcopyrite vein material just above silt sample K-D-5.

### Soil Sampling

Follow-up soil sampling was conducted in the five anomalous areas that were defined by the 1984 soil sampling. The gold and associated copper, silver and arsenic values for the follow-up sampling are plotted on the Geochemical Plans 1:2000 (Figures 4,5 and 6).

To better define the anomalous values the data was statistically analyzed. High values were arbitrarily cut and the mean and standard deviations calculated. the anomalous values were defined as the mean plus one standard deviation. These values are summarized below and have also been highlighted on figures 4,5 and 6.

ELEMENT	CUT TO	MEAN	STANDARD DEVIATION	ANOMALOUS
Silver	2.0 ppm	1.1 ppm	0.4 ppm	1.5 ppm
Arsenic	40 ppm	14.9 ppm	18.7 ppm	34 ppm
Copper	150 ppm	73.8 ppm	47.3 ppm	120 ppm
Gold	25 ppb	9.3 ppb	6.4 ppb	16 ppb



Anomaly 1 (Figure 4)

Soil sample 484N 62+00W of the 1984 survey developed the highest gold (450 ppb) value with an associated elevated copper value. Detail sampling in this area of shallow overburden that is underlain by rhyolitic to andesitic volcanic rocks that are cut by mafic intrusive rocks returned weakly anomalous gold (40 ppb) and associated copper values.

Anomaly 2 (Figure 4)

Anomaly 2 is developed at 476N 70+50W in deep overburden as an isolated gold (210 ppb) value that was not reproduced by the additional soil sampling.

Anomaly 3 (Figure 4)

Anomaly 3 is developed in an area of deep overburden where the soils are alluvial in character. The anomalous gold values developed here can be explained as placer concentrations.

Anomaly 4 (Figure 5)

Anomaly 4 is developed as sporadic anomalous gold and associated copper values developed in shallow overburden in an area that is underlain by felsic to andesitic volcanics.

Anomaly 5 (Figure 6)

Anomaly 5 is developed as an isolated anomalous gold (40 ppb) in an area of elevated copper values that is underlain by greenstone.

Anomaly 6 (Figure 6)

Anomaly 6 is developed as sporadic weakly anomalous gold values with no associated anomalous silver, arsenic or copper values.

## DISCUSSION

Silt sample K-D-5 in Westhiser Creek is strongly anomalous in gold (400 ppb). Rock chip sample 26035 was taken as quartz-sulphide vein material just upstream from this silt sample site and returned significant gold (6000 ppb), silver (13.5 ppm), arsenic (18951 ppm) and copper (2044 ppm) values and represents the probable source for this anomalous silt sample.

The vein structures sampled as rock chip sample 26035 are discontinuous and narrow. Additional prospecting and sampling should be conducted in this area to expand the potential of this mineralized structure.

The 1984 reconnaissance and 1985 follow-up soil sampling of the Kangaroo Claim Group develops sporadic anomalous gold values. The spurious nature of gold in soil samples is demonstrated by anomalies 2,3 and 6 where the detail sampling did not reproduce any anomalous gold values in the area of the initially anomalous site. Additional fill-in sampling in the areas of anomalies 1, 4 and 5 is necessary to better define the anomalous gold and pathfinder (silver, arsenic and copper) trends.

APPENDIX I

GEOCHEMICAL ANALYSES

COMPANY: WELLSIDE NORTH MINES

MIN. ENCLAVE TEST REPORT

SHEET: PAGE 1 OF 1

PROJECT NO: KANGAROO

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 5-3275

ATTENTION: JOHN MCCLINTOCK/R. DUFFIELD

16041980-5814 OR 16041980-4524

\* TYPE SILT GEOCHEM \*

DATE: JULY 12, 1985

(VALUES IN PPM)	AG	AS	CU	PB	ZN	AU-PPB
KD 1	2.4	99	426	68	94	5
KD 2	1.1	16	63	21	78	5
KD 3	1.2	9	51	15	63	5
KD 4	1.3	13	63	22	76	10
KD 5	1.2	20	76	19	80	400
KD 6	1.2	24	84	22	104	15
KD 7	1.2	19	71	22	84	5
KD 8	1.3	31	96	36	120	50
KD 9	1.2	25	82	30	123	10
KD 10	1.5	27	116	32	117	25
KD 11	1.3	28	93	37	121	5
KD 12	.8	8	31	19	50	5
KD 13	.8	4	29	14	48	5
KD 14	.8	8	30	18	50	10
KD 15	1.1	6	28	15	46	20
KD 16 40M	1.2	10	29	14	47	5
KD 17	1.1	6	32	20	53	5
KD 18	1.1	7	29	15	48	10
KD 19	1.0	3	24	13	40	10
KD 20	.8	4	26	14	41	5

(VALUES IN PPM)	AG	AS	CU	FE	ZN	MO-PPM
460N47+50W	.8	7	30	17	83	5
460N48+50W	.6	4	9	4	30	10
49+50W459+50N	.6	1	16	11	106	10
49+50W459+75N	.8	4	25	17	218	5
49+50W460+00N	.6	3	14	10	115	5
49+50W460+25N	.6	1	17	10	107	5
49+50W460+50N	.6	5	21	17	113	5
49+50W460+75N	.6	12	18	19	132	10
BL50W459+50N	.8	10	27	16	78	20
BL50W459+75N	.8	3	18	13	118	10
BL50W460+00N	.8	2	32	15	81	5
BL50W460+25N	.8	7	21	12	125	5
BL50W460+50N	.8	9	43	21	130	20
BL50W460+75N	.6	1	11	8	42	5
49+50W471+00N	1.3	15	201	39	372	5
49+50W471+25N	1.5	15	166	32	98	10
49+50W471+50N	1.0	8	158	19	62	5
49+50W471+75N	1.6	27	239	56	200	5
49+50W472+00N	2.2	25	535	50	121	3
49+50W472+25N	.6	7	30	17	39	5
49+50W472+50N	.6	12	77	21	161	5
BL50W471+25N	.6	19	49	27	52	10
BL50W471+50N	2.7	27	349	51	103	40
BL50W471+75N	1.0	22	192	40	84	5
BL50W472+00N	1.6	27	301	50	124	5
BL50W472+25N	1.5	51	448	56	182	10
BL50W472+50N	3.0	33	449	53	100	15
50+50W459+50N	1.3	9	74	21	91	10
50+50W459+75N	1.7	15	119	34	209	10
50+50W460+00N	1.1	15	75	29	165	5
50+50W460+25N	.6	15	51	17	95	25
50+50W460+50N	.6	1	9	6	83	5
50+50W460+75N	.6	4	10	10	73	10
BL70W476+00N	.8	12	84	20	58	10
476N70+25W	.6	11	42	19	60	5
476N70+50W	.6	7	15	13	111	5
476N70+75W	.6	7	27	15	47	3
483+50N61+50W	1.2	18	64	19	113	5
483+50N61+75W	1.1	2	27	5	57	5
483+50N62+00W	1.0	22	74	25	109	3
483+50N62+25W	.8	14	38	20	124	5
483+50N62+50W	1.0	14	38	15	91	10
483+50N62+75W	.8	8	51	13	89	5
483+50N63+00W	1.2	18	57	12	70	20
483+50N63+25W	1.3	30	127	40	146	15
483+50N63+50W	1.1	46	85	30	125	5
483+50N63+75W	1.0	6	43	14	93	5
483+50N64+00W	1.1	30	125	33	144	5
483+50N64+25W	1.2	30	109	30	106	10
483+50N64+50W	1.2	20	80	25	133	5
484N61+50W	1.0	32	77	23	189	5
484N61+75W	1.5	21	51	22	151	25
484N62+00W	1.2	12	53	15	129	15
484N62+25W	1.0	98	80	24	81	30
484N62+50W	1.1	8	56	13	65	5
484N62+75W	1.1	8	57	16	78	5
484N63+00W	1.7	27	259	26	132	40
484N63+25W	1.3	17	176	23	127	5
484N63+50W	1.2	25	214	26	121	10

ew

(VALUES IN PPM)	AS	CS	CU	PB	ZN	AD-PPB
484N64+00W	.8	9	26	19	72	5
484N64+25W	1.1	8	119	18	84	10
484N64+50W	1.2	1	55	9	92	5
484+50N61+50W	1.5	10	98	21	148	5
484+50N61+75W	1.2	1	57	8	144	3
484+50N62+00W	1.3	29	156	21	95	20
484+50N62+25W	1.2	1	32	1	68	5
484+50N62+50W	1.2	6	45	18	113	10
484+50N62+75W	1.0	13	74	20	69	5
484+50N63+00W	1.2	6	73	16	90	5
484+50N63+25W	1.2	6	83	17	111	10
484+50N63+50W	1.2	10	49	17	143	5
484+50N63+75W	1.1	7	93	29	90	5
484+50N64+00W	1.6	6	52	19	186	5
484+50N64+25W	1.2	1	22	10	70	20
484+50N64+50W	1.7	46	194	101	178	10
468N60+50W	.8	7	28	20	48	5
468N60+75W	.8	11	30	21	57	2
468N61+00W	.6	17	32	22	60	10
468N61+25W	.8	9	17	14	52	45
468N61+50W	1.6	9	16	15	48	15
471+50N54+00W	1.8	7	125	36	152	10
471+50N54+25W	1.0	10	90	27	115	5
471+50N54+50W	1.5	17	136	29	106	5
471+50N54+75W	1.2	7	46	19	87	5
471+50N55+00W	1.2	7	71	26	103	10
471+75N57+00W	1.2	12	474	34	63	35
472N54+00W	1.0	6	31	18	171	5
472N54+25W	.8	11	37	21	150	25
472N54+50W	.6	13	28	23	95	5
472N54+75W	.8	17	76	25	60	15
472N55+00W	1.2	17	137	30	169	10
472N56+50W	.6	22	99	26	68	5
472N56+75W	1.0	21	187	28	78	5
472N57+00W	1.0	17	172	25	62	20
472N57+25W	1.1	3	127	22	86	25
472N57+50W	1.1	17	158	25	74	10
472+25N56+00W	1.2	13	68	27	110	5
472+50N54+00W	1.2	5	55	18	180	5
472+50N54+25W	1.1	11	45	21	167	15
472+50N54+50W	1.2	17	115	37	182	5
472+50N54+75W	1.7	11	67	27	310	5
472+50N55+00W	1.8	14	137	33	150	5

COMPANY: WELCOME NORTH MINES

MIN-ER LABS LTD. REPORT

(ACT: ) PAGE 1 OF 1

PROJECT NO: YANGAROC

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: S-327F

ATTENTION: JOHN MCCLINTOCK/R. BURFELD

(604)980-5814 OR (604)988-4524

\* TYPE ROCK GEOCHEM \*


DATE: JULY 12, 1985

(VALUES IN PPM)	AG	AS	CU	PB	ZN	AU-PFB
26028	1.0	90	60	34	221	20
26029	1.8	42	131	11	77	5
26030	2.2	44	126	17	53	5
26031	2.5	3	195	7	63	5
26032	2.4	1	159	8	57	25
26033	.8	490	92	30	81	5
26034	.8	44	57	23	59	5
26035	13.5	18951	2044	186	938	6000

APPENDIX II

ITEMIZED COST STATEMENT

PERSONNEL	
Contract Geologist - R.M.Durfeld 9 days @ \$250/day	\$ 2,250.00
Contract Assistant - D.Dunlop and A.Niquidet 9 days @ \$100/day	900.00
TRANSPORTATION	
Truck Rental - 10 days @ \$30/day	300.00
Truck Fuel -	150.00
ROOM AND BOARD - 18 man days @ \$35/day	630.00
RIVER BOAT CHARTER - 8 days	360.00
GEOCHEMICAL ANALYSES -	1,386.35
REPORT PREPARATION AND DRAFTING -	600.00
	<hr/>
Total	\$ 6,576.35

  
R.M. Durfeld B.Sc.  
Geologist



# *Durfeld Geological Management Ltd.*

180 Yorston Street

Williams Lake, B.C. V2G 3Z1


Telephone (604) 392-4691

## APPENDIX III

### STATEMENT OF QUALIFICATIONS

I Rudolf M. Durfeld of 2029 South Lakeside Drive, Williams Lake, British Columbia, hereby certify that:

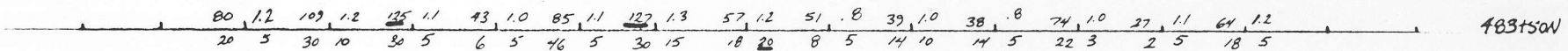
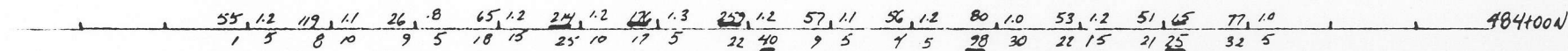
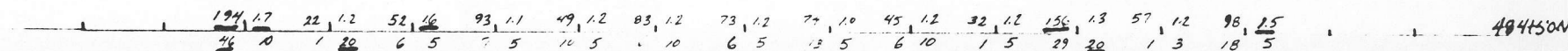
- 1) I am a graduate of the University of British Columbia, Bachelor of Science (Geology Major) in 1972 and have practiced my profession as geologist since that time.
- 2) I am a Fellow of the Geological Association of Canada ( Member No: F3025).
- 3) I am the author of this report which is based on work that was conducted on the JUN 8 and JUN 9 mineral claims during the period June 23rd to July 7, 1985.

  
R.M. Durfeld B.Sc.  
Geologist

6500W

ANOMALY 1

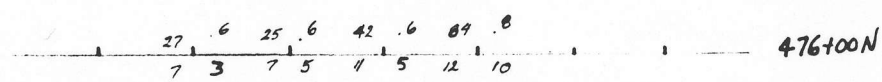
6400W



ANOMALY 2

7100W

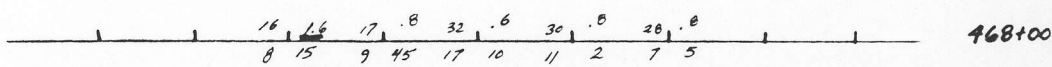
6.L. 70W



6200W

ANOMALY 3

6000W



474	1.2
12	35

COPPER PPM	SILVER PPM
ARSENIC PPM	GOLD PPB

MT CALVERY RESOURCES LTD.  
 KANGAROO CLAIM GROUP  
 GEOCHEMICAL SURVEY

July 1985  
 Scale: 1:2000 Figure 4

ANOMALY 4

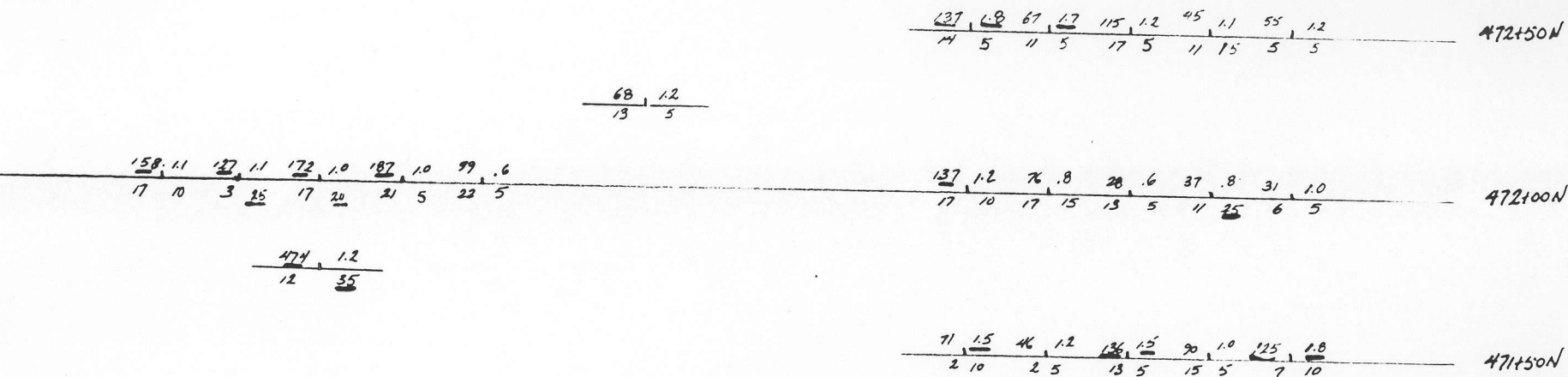


57400W

56400W

55400W

54400W



MT CALVERY RESOURCES LTD.

KANGAROO CLAIM GROUP

GEOCHEMICAL SURVEY

July 1985

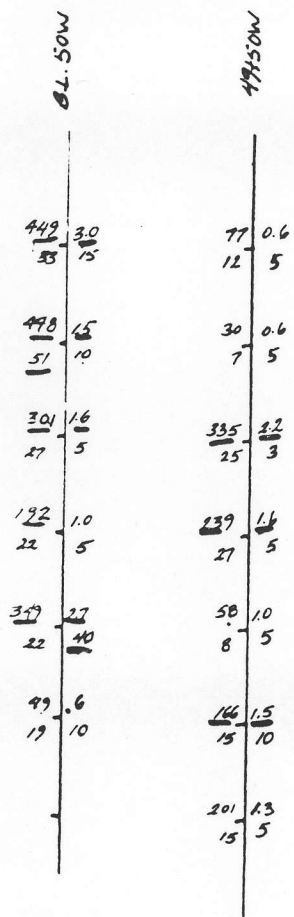
Scale: 1:2000 Figure 5

474, 1.2  
12 35  
~~120, 1.5~~

COPPER PPM    SILVER PPM  
 ARSENIC PPM    GOLD PPB  
 ANOMALOUS VALUE

ANOMALY 5

ANOMALY 6



47250W

47150W

45950W

46050W

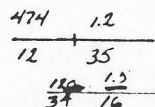
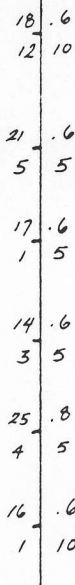
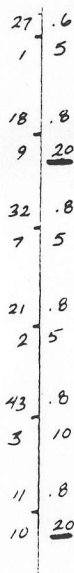
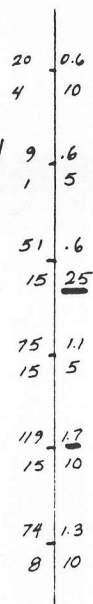
50550W

B.L. 50W

47550W

48550W

47450W



COPPER PPM    SILVER PPM  
 ARSENIC PPM    GOLD PPB  
 ANOMALOUS VALUE

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 GEOCHEMICAL SURVEY

July 1985  
 Scale: 1:2000    Figure 6