

DOG CLAIMS

Omineca M.D. N.T.S. 94F/7W
57°22'N 124°50'W

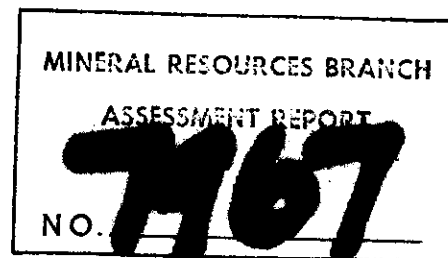
G.D. Hodgson September 1979
R.L. Faulkner

79-#580-#1967

Owner and Operator: Riocanex Limited

Work performed on following claims:

<u>Claim Name</u>	<u>Record Date</u>	<u>Expiry Date</u>
DOG 1	780725	790725
DOG 2	781003	791003
DOG 4-8	"	"



DOG CLAIMS

Omineca M.D. N.T.S. 94F/7W
57°22'N 124°50'W
G.D. Hodgson September 1979
R.L. Faulkner

SUMMARY

The property lies in the Rocky Mountains of northern British Columbia. Seven claims (56 units) cover Devonian-Mississippian shales on strike with lead-zinc-barite mineralization to the NW and the SE. Work done on the property has been limited to little more than an initial reconnaissance. Prospecting has not located any surface mineralization. One line of soil samples was run across the claims.

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1. INTRODUCTION

Devono-Mississippian Black Clastic shales in north-eastern British Columbia, southern equivalents of similar shales in the Yukon Territory and District of Mackenzie, N.W.T., host important deposits of lead and zinc. A reconnaissance exploration programme that included minor geochemical soil sampling and regional mapping and prospecting was undertaken to define the mineralized shales within the DOG claim group.

2. LOCATION AND ACCESS

The DOG claims lie on the Akie River north of Williston Lake in northern British Columbia, approximately 300 km NW of Fort St. John, 200 km SW of Fort Nelson and 30 km east of the Indian settlement of Fort Ware. After spring breakup barges run from Mackenzie at the south end of Williston Lake to Deserters Canyon at the north end. Fort Ware and Ingenika have gravel air strips.

Access to the claims is by helicopter which in 1979 was based at the Riocanex camp on Pretzel Lake, 30 km west of the property.

Latitude: 57°22'N Longitude: 124°50'W
N.T.S. 94 F/7W

3. TOPOGRAPHY AND VEGETATION

The area is mountainous. Elevations range between 1100 and 2000 m above sea level. Slopes are moderate to steep. Much of the claim block lies above tree line. Lower slopes are covered in dense scrub and forest where there is little outcrop.

4. HISTORY AND PREVIOUS WORK

In tracing Devono-Mississippian Black Clastic shales southwards from the Gatago River area, Cyprus Anvil and Hudson's Bay Oil and Gas staked the CIRQUE and the ELF claims in 1977 to cover Pb-Zn-Ba mineralization. A regional stream silt sampling programme by Riocanex in 1978 delineated a number of anomalous Pb-Zn zones in the Black Clastics. A moderately anomalous zone was staked by Riocanex as the DOG claim group.

5. WORK PERFORMED IN 1979

A limited programme of prospecting and geochemical soil sampling was undertaken on the DOG claim group as part of a regional reconnaissance. Geological mapping was on a scale of 1:50,000.

FLUKE

DOG 2
1483(10)

DOG 1
1305(7)

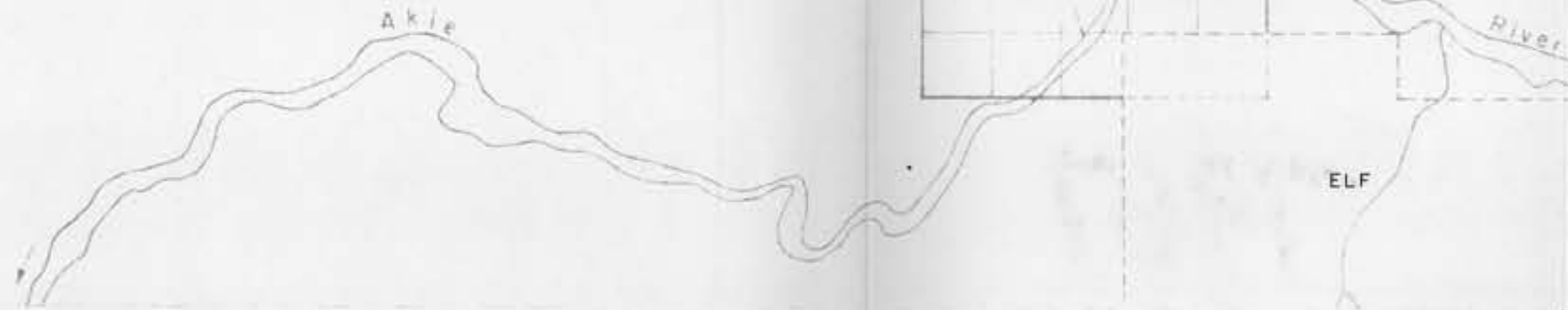
DOG 4
1484(10)

DOG 5
1485(10)

DOG 6
1486(10)

DOG 7
1487(10)

DOG 8
1488(10)



MINERAL RESOURCES BRANCH
 DEPARTMENT OF
7967
 NO.



N.T.S. 94 F 7-W

SCALE 1:50,000



RIO TINTO CANADIAN EXPLORATION LTD.

DOG CLAIMS

CLAIM MAP

s. g.

SEPT. 79

DWG.
C - 6570

6. PERSONS EMPLOYED

Field party chief G. Hodgson and geologist R. Faulkner supervised a silt sampling team of 4-6 persons, and were responsible for the geological mapping and prospecting. Viking Helicopters Ltd. and Northern Mountain Helicopters Ltd., under contract to Riocanex, supplied helicopter support.

The programme was carried out under the general supervision of R. V. Longe, Riocanex District Geologist, B.C.

7. REGIONAL GEOLOGY

Regional geological mapping has been by Gabrielse (1962, 1977), Taylor (1979) and MacIntyre (1980). In the area of the DOG claims the oldest exposed rocks are nodular calcareous phyllites and mudstones of the Cambro-Ordovician Kechika Group. This unit is probably unconformably overlain by Ordovician to Silurian rocks. The Ordovician is represented by black, carbonaceous, graptolite-bearing shales and thin, black, lime mudstones of the Road River Formation. An unnamed Silurian unit comprises distinct, tan-weathering, flaser-bedded, dolomitic bioturbated siltstones with minor grey limestone layers. The unit locally yields graptolites as well as worm tracks.

Above the Silurian are Devonian and possibly Mississippian black shales that weather a characteristic gunsteel-blue colour. The shales are generally recessive. To the east the middle Devonian is represented by a ridge-forming lime mudstone which locally has been interpreted as a reefal buildup, but which elsewhere appears to be a debris flow. It is overlain by shale and siltstone beds of the upper part of the Devonian-Mississippian shale package. These shales host the stratiform lead-zinc-silver deposits of Cirque (Roberts, 1978) and Driftpile Creek (Cathro and Caine, 1978).

The various formations have been folded into linear belts trending NW-SE and bounded by sub-parallel thrust faults.

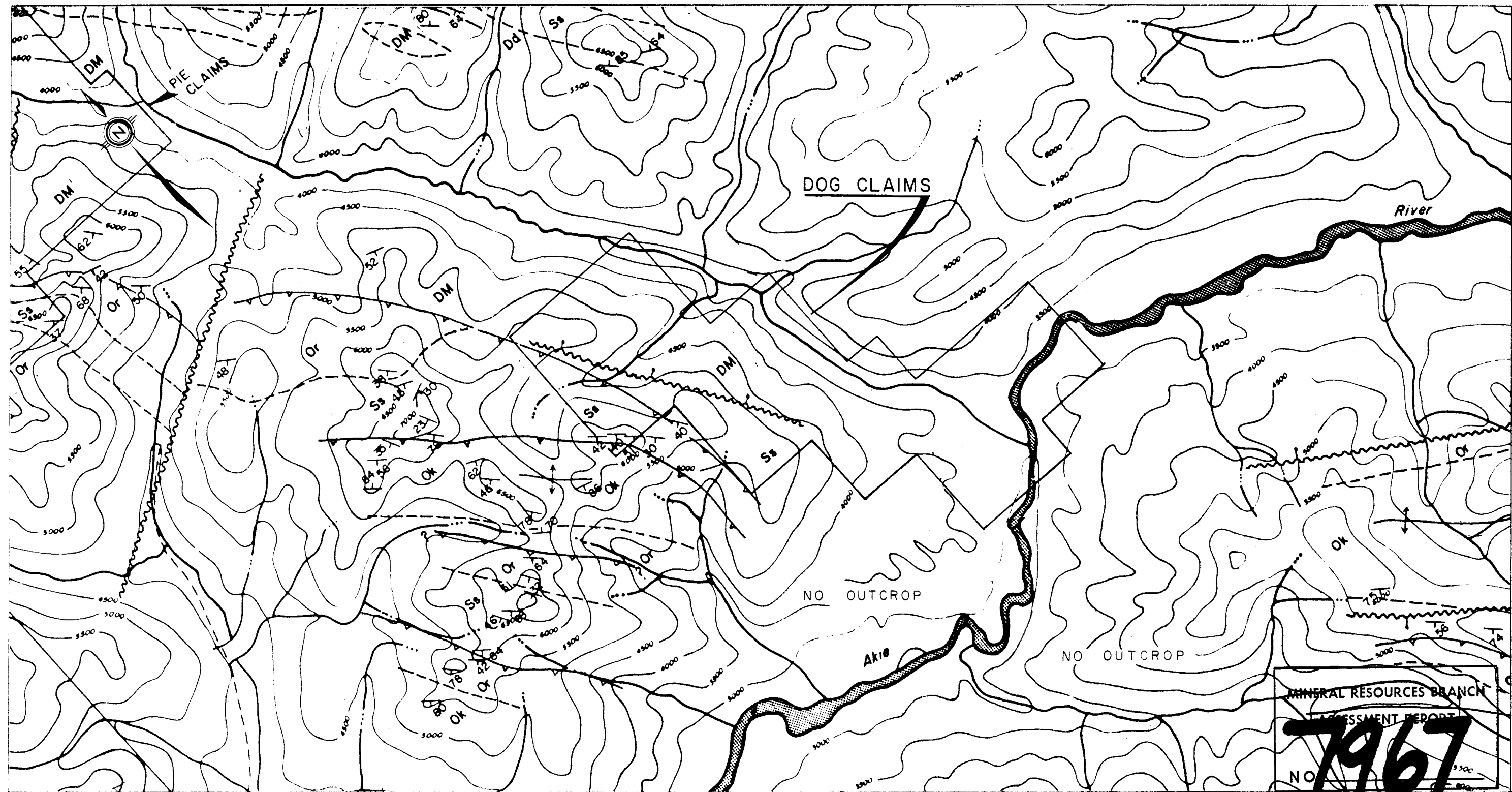
8. LOCAL GEOLOGY

No detailed geological mapping has been done on the DOG claims. The ground covered by the claims was however mapped by Riocanex in 1979 on a scale of 1:50,000 as part of a regional reconnaissance mapping programme. Dwg. G-6644 shows that part pertaining to the DOG claims.

Outcrop is poor or non-existent in the southeastern parts of the claim group, but exposure is better along the ridges in the northwest. Units generally dip towards the southwest.

Silurian siltstones outcrop along the NW-SE trending ridge that forms the central spine of the claims. The rocks dip to the southwest, but are locally folded. They comprise tan-weathering dolomitic siltstones with rare thin grey lime mudstone layers. In part they are fissile and platy with a well-developed bedding-plane cleavage, but elsewhere they have a rubbly bedding, are bioturbated and locally display worm tracks. Thin, apparently discontinuous mafic dykes are exposed from place along the central ridge. One locality contains thrust slice of black graphitic graptolite bearing Ordovician shales.

Along the western edge of the claim group thrusting from the southwest has brought older rocks up and over the Silurian units. Older units include Ordovician black shales (Road River Formation) and light grey weathering nodular, calcareous, talcy phyllites (part of the Kechika Group).



DM Devono - Mississippian "Black Clastics" - Largely Shales
 Dd Middle Devonian Limestone
 Ss Silurian Siltstone
 Or Ordovician Road River Shales ; Or1 = Limestone
 Ok Ordovician Kechika Shaly Limestone
 V Volcanic Rock
 (Detailed Descriptions Given in Text)

~ Fault
 ▽ Thrust Fault
 ⊥ + + Bedding: Inclined, Vertical, Horizontal
 --- Contact
 ⤴ Anticline
 ⤵ Syncline

SCALE 1:50,000



RIO TINTO CANADIAN EXPLORATION LTD.

DOG CLAIMS

GEOLOGY

DATE JUNE 80	DRAWN BY G.D.H. / dag.	DWG. G-6644
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The Silurian rocks in turn have been thrust over the Devonian shales. These shales underlie the easterly facing slopes down to the creek that follows the eastern boundary of the property. Except in the north these shales are poorly exposed. They comprise blue-grey weathering, generally fissile black shales that are locally pyritic, cherty and elsewhere graphitic. Although mineralization has been found on strike to the southeast and to the northwest, lead and zinc have not yet been discovered on the DOG claims. Barite is not known from the property either.

9. GEOCHEMISTRY

One Line of soil samples was taken across the DOG claims. Samples of the 'B' horizon were taken at a depth of 15-20 cm at 40 m intervals. A grub hoe was used to penetrate the surface. Samples were collected in paper bags.

The analysis for Cu, Pb and Zn was done in the Riocanex lab in North Vancouver. 0.6 gm of each sample was placed in a test tube to which was added 2 ml. concentrated nitric acid. The solution was heated in a hot water bath at 95°C for ½ hour and then allowed to cool. 1 ml. concentrated hydrochloric acid was then added, and the solution heated in a hot water bath at 95°C for 1½ hours. After being cooled each sample solution was diluted with deionized water to a final volume of 12 ml. The sample solutions were then analyzed by atomic absorption.

Sample sites and results are plotted on DWG. GC-8686. The lead and zinc values reflect the metalliferous nature of the underlying shales and it is hoped the higher values indicate the presence of mineralization. Little significance is attached to the rather low copper values.

10. RESULTS

- 10.1 The Devono-Mississippian black shales are generally rich in lead.
- 10.2 Features such as the presence of graphite and chert are characteristic of shales elsewhere that host important Ba-Pb-Zn deposits.

11. CONCLUSION

The DOG claims overlie metalliferous shales that have potential for hosting Ba-Pb-Zn mineralization.

12. REFERENCES

- GABRIELSE, H., 1962: Geol. Surv. Can. Map 42-1962.
- GABRIELSE, H., 1977: Geol. Surv. Can. O.F. 483
- GRAF, C., 1979: Riocanex Rept.
- TAYLOR, G.C., 1979: Geol. Surv. Can. O.F. 606
- TAYLOR, G.C., and STOTT, D.F., 1973: Tuchodi Lakes
Map-Area, British Columbia, Geol. Surv. Can. Mem. 373

G.D. Hodgson

Vancouver Office
September 1979

R.L. Faulkner

APPENDIX I
GEOCHEMICAL SAMPLE RESULTS

Rio Tinto Canadian Exploration Limited

LABORATORY REPORT

SAMPLE TYPE (✓)

Soil &/or Stream Sediments

Rock

Water

Results Sent To G. Hodgson

At Office.

Date Reported 16 OCT '79

Acct. No. 8655

Project Name SIKANNI

Size Fraction -80 Mesh

Extraction HNO₃-HCl.

Sample Wt. 0.6 g , Volume 12 ml

Analytical Method A.A.

Analyst(s) E.F.P.

STATISTICAL SUMMARY

(Value for \bar{x} and σ in ppm)

DISTRIBUTION

Log Normal

Normal

Element		Cu	Pb	Zn				
No. of Samples		51	51	51				
Mean. \bar{x}								
Std. Dev. σ								
$\bar{x} + 2\sigma$								

Comments : _____

Report No. 79-177

Page 1 of 3

RIO TINTO CANADIAN EXPLORATION LIMITED

LABORATORY REPORT

PARTS PER MILLION

LAB NO.	SAMPLE NO. (NMBR)		Cu	Pb	Zn				COMMENTS
1	7903001		23	12	148				
2	002		22	17	140				
3	003		13	6	72				
4	004		32	26	222				
5	005		15	7	65				
6	006		7	6	44				
7	007		23	16	158				
8	008		14	12	74				
9	009		20	48	142				
10	010		12	108	38				
1	011		14	22	75				
2	STD 1		16	29	980				
3	012		16	53	105				
4	013		7	33	52				
5	014		20	56	355				
6	015		6	23	100				
7	016		18	12	295				
8	017		19	85	1400				
9	018		16	19	335				
20	019		10	7	188				
1	020		24	30	400				
2	BLANK		ND	ND	ND				
3	021		14	14	220				
4	022		14	14	180				
5	023		14	7	108				
6	024		8	2	30				
7	025		11	3	81				
8	026		8	2	49				
9	027		6	2	30				
30	028		14	12	135				
1	029		19	19	150				
2	030		25	12	225				
3	031		15	4	75				
4	032		27	14	204				
5	033		17	14	162				
6	034		19	17	250				
7	035		20	18	150				
8	036		6	14	155				
9	037		18	14	175				
40	038		24	20	210				

RIO TINTO CANADIAN EXPLORATION LIMITED

LABORATORY REPORT

PARTS PER MILLION

LAB NR.	SAMPLE NO. (NMBR)		Cu	Pb	Zn				COMMENTS
41	7903039		61	15	325				
2	040		31	18	70				
3	STD 3		37	5	60				
4	041		20	18	305				
5	042		12	10	188				
6	043		11	5	108				
7	044		6	6	65				
8	045		13	22	290				
9	046		2	2	22				
50	047		21	19	270				
1	048		22	14	250				
2	049		21	17	320				
3	BLANK		ND	ND	ND				
4	050		23	15	280				
5	051		20	14	290				
6	7903006		7	5	42				
7	017		17	84	1450				
8	028		12	13	138				
9	040		32	19	70				
60	049		21	17	315				
1									
2									
3									
4									
5									
6									
7									
8									
9									
70									
1									
2									
3									
4									
5									
6									
7									
8									
9									
80									

APPENDIX II
COST STATEMENT

COST STATEMENT
B.C. SIKANNI CLAIMS
28 May - 23 September 1979

GENERAL COSTS

(Includes Camp Construction, Mob, Demob, Fuel Moves,
Cooks, Free Days, Illnesses, Etc.)

SALARIES & WAGES

8 persons, 28 May-23 Sep, 422 Man Days @\$37 \$ 15,614.00

BENEFITS @ 20% of Salaries & Wages 3,122.80

RIOCANEX EQUIPMENT 422 Man Days @\$3 1,266.00

RENTAL EQUIPMENT

Traeger SSB50C radio, 28 May-15 Oct
@\$185.43/mo. \$ 945.69
Bowmac 22 Ft 3T Box Van, 28 May-31 May
@\$290 455.35 1,401.04

HELICOPTERS

Alpine (on Viking contract below)
9.1 hrs @ \$285 \$ 2,593.50
Northern Mountain, 206B, 7-19 Sep,
36.6 hrs @ \$281 9,454.00
Viking Helicopters, Hughes 500,
1 Jun-21 Aug, 267 hrs @\$285 75,541.00 87,588.50

FIXED WING

N.T.Air, DHC 3, 28 Jun-29 Aug, Supply Trips \$21,908.00
Universal Travel, 29 May-6 Sep, 22 trips 1,488.80 23,396.80

FOOD & ACCOMMODATION

764 Man Days @\$15.58 11,902.68

SUPPLIES 28 May-23 Sep, 764 Man Days @\$13.29 10,151.00

EXPEDITING SERVICES

D. Macks, Mackenzie, 16 May-24 Sep,
4 mo. @\$491.08 1,964.32

FUEL

C.E. Bodin, Mackenzie, 30 May-4 Jun (Helicopters) \$ 12,468.92

REPORT PREPARATION

4,000.00

GENERAL COSTS TOTAL

\$172,876.06

GEOLOGY

SALARIES & WAGES

124 Man Days @\$37 \$ 4,588.00

BENEFITS @20% of Salaries & Wages 917.60

RIOCANEX EQUIPMENT 124 Man Days @\$3 372.00

GENERAL COSTS

124/342 X \$172,876.06 62,680.21

GEOLOGY TOTAL

\$ 68,557.81

LINE CUTTING

SALARIES & WAGES

29 Man Days @\$37 \$ 1,073.00

BENEFITS @20% of Salaries & Wages 214.60

RIOCANEX EQUIPMENT 29 Man Days @\$3 87.00

GENERAL COSTS

29/342 X \$172,876.06 14,659.08

LINE CUTTING TOTAL

\$16,033.68

GEOCHEMISTRY

SALARIES & WAGES

104 Man Days @\$37 \$ 3,848.00

BENEFITS @20% of Salaries & Wages 769.60

RIOCANEX EQUIPMENT 104 Man Days @\$3 312.00

GEOCHEMICAL ANALYSIS

Bondar-Clegg Lab			
2 Cu/Pb/Zn/Ag @\$3.75	\$	7.50	
2 Preps @\$1.75		3.50	
Shipping Charges			
Assays 5 Ag/Pb/Zn @\$17		85.00	
1 Ag/Cu/Pb/Zn @\$22		22.00	
3 Cu/Pb/Zn @\$16		48.00	\$ 171.20
Riocanex Lab			
2148 Soils for Cu/Pb/Zn @\$3.60		\$7,732.80	
Geochem supplies		249.58	7,982.38

GENERAL COSTS

104/342 X \$172,876.06			<u>52,570.50</u>
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GEOCHEMISTRY TOTAL

\$ 65,653.68

TRENCHING (PHYSICAL)

SALARIES & WAGES

16 Man Days @\$37	\$	592.00	
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<u>BENEFITS</u> @20% of Salaries & Wages		118.40	
--	--	--------	--

<u>RIOCANEX EQUIPMENT</u> 16 Man Days @\$3		48.00	
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GENERAL COSTS

16/342 X \$172,876.06			<u>8,087.77</u>
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TRENCHING TOTAL

\$ 8,846.17

STAKING

SALARIES & WAGES

32 Man Days @\$37	\$	1,184.00	
-------------------	----	----------	--

<u>BENEFITS</u> @20% of Salaries & Wages		236.80	
--	--	--------	--

<u>RIOCANEX EQUIPMENT</u> 32 Man Days @\$3		96.00	
--	--	-------	--

GENERAL COSTS

32/342 X \$172,876.06

\$16,175.54

STAKING TOTAL

\$ 17,692.34

DRILL SITE PREPARATION

SALARIES & WAGES

9 Man Days @\$37

\$ 333.00

BENEFITS @20% of Salaries & Wages

66.60

RIOCANEX EQUIPMENT 9 Man Days @\$3

27.00

GENERAL COSTS

9/342 X \$172,876.06

4,549.37

DRILL SITE PREPARATION TOTAL

\$ 4,975.97

SIKANNI TOTAL

\$181,759.65

B.C. ROUGH OPTION

SALARIES & WAGES

28 Man Days @\$37

\$ 1,036.00

BENEFITS @20% of Salaries & Wages

207.20

RIOCANEX EQUIPMENT 28 Man Days @\$3

84.00

GENERAL COSTS

28/342 X \$172,876.06

14,153.60

B.C. ROUGH OPTION TOTAL

\$ 15,480.80

GRAND TOTAL

\$197,240.45

COSTS APPORTIONED TO CLAIMS

CLAIM	GEOCHEM	TRENCHING	GEOLOGY	LINE CUTTING	DRILL PREP.	TOTALS
PIE 1	\$ 8,892.32	\$8,846.17	\$ 2,227.51	\$ 1,781.52	\$3,731.98	\$ 25,479.50
2	8,892.32		2,227.51	1,781.52		12,901.35
3	2,964.11		742.50	593.84	1,243.99	5,544.44
4	3,952.14		990.00	791.79		5,733.93
5	9,880.35		2,475.01	1,979.47		14,334.83
6	5,928.21		1,485.01	1,187.68		8,600.90
7			1,485.01			1,485.01
8	3,952.14		990.00	791.79		5,733.93
9			1,856.26			1,856.26
10	2,964.11		742.50	593.84		4,300.45
11	2,964.11		742.50	593.84		4,300.45
12	2,964.11		742.50	593.84		4,300.45
13	2,964.11		742.50	593.84		4,300.45
14			2,475.01			2,475.01
15			2,475.01			2,475.01
16			2,475.01			2,475.01
17			495.00			495.00
18			2,475.01			2,475.01
DOG 1	563.95		990.01	791.79		2,345.75
2	563.95		990.01	791.79		2,345.75
4	422.97		742.51	593.84		1,759.32
5			742.51			742.51
6			742.51	593.84		1,336.35
7			247.51			247.51
8			2,475.02	1,979.47		4,454.49
WIL 1			990.00			990.00
2			990.00			990.00
3			2,475.01			2,475.01
4			2,475.01			2,475.01
5			1,485.01			1,485.01
6			1,485.01			1,485.01
7			2,475.01			2,475.01
8			1,856.26			1,856.26
9			1,856.26			1,856.26
10			742.50			742.50
YULE 1	1,668.17		1,113.75			2,781.92
2	2,780.28		1,856.26			4,636.54
3			247.50			247.50
4			2,227.51			2,227.51
5			495.00			495.00
6	2,224.22		1,485.01			3,709.23
7			1,856.26			1,856.26
8	1,112.11		742.50			1,854.61
9			2,227.51			2,227.51
10			2,475.01			2,475.01
OT...	\$65,653.68	\$8,846.17	\$68,557.81	\$16,033.68	\$4,975.97	\$164,067.31

Not applicable (staking, & B.C. Rough)

33,173.14

GRAND TOTAL (Applicable & Non-applicable)

\$197,240.45

APPENDIX III
STATEMENT OF QUALIFICATIONS

CERTIFICATE

I, Geoffrey David Hodgson, with business address in Vancouver, British Columbia, and residential address in North Vancouver, British Columbia, do hereby declare

1. I am a geologist employed by Rio Tinto Canadian Exploration Limited.
2. I graduated from Exeter University, U.K. in 1972 with a BSc (Hons.) degree in geology.
3. I graduated from the University of Alberta in 1976 with an MSc degree in geology.
4. I am a Professional Geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
5. From 1970 to 1979 I have been employed on both a temporary and full-time basis by the Geological Survey of Greenland, Research Council of Alberta, University of Alberta, Cominco Ltd., and Riocanex Ltd.

Respectfully submitted,

G.D. Hodgson

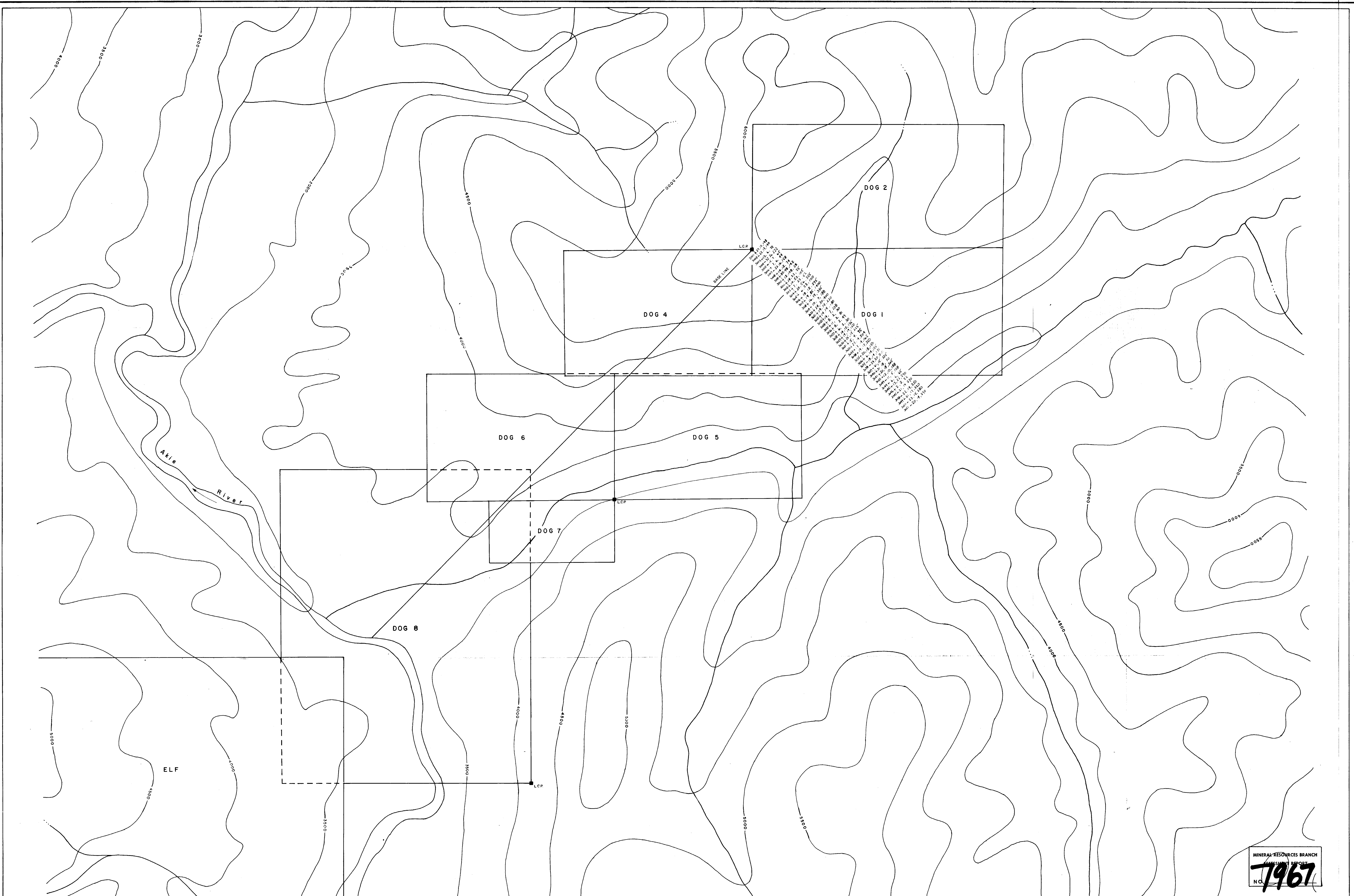
CERTIFICATE

I, Reginald L. Faulkner, with business address in Vancouver, British Columbia, and residential address in White Rock, British Columbia, do hereby declare

1. I am a geologist employed by Rio Tinto Canadian Exploration Limited.
2. I graduated from the University of British Columbia in 1974 with a B.Sc. in Physical Geography.
3. I continued my education with courses in geology from the University of British Columbia 1977-1979.
4. From 1971 to 1979 I have been employed on both a temporary and full-time basis by Placer-Canex Aerial Exploration Limited, Geological Survey of Canada, British Columbia Land Commission, Department of Indian and Northern Affairs, Chevron Standard Minerals Staff and Riocanex. Ltd.

Respectfully submitted,

R.L. Faulkner



MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
7967
NO.

LEGEND

7903001 12 108 38
Soil Sample Location Number ppm Cu, ppm Pb, ppm Zn

N.T.S.
94 F/W

SCALE 1:10,000
200 0 200 400 600 800 1000
METRES

R.D. TITCO CANADIAN EXPLORATION LTD.		
DOG CLAIMS		
SOIL SAMPLE LOCATIONS PPM Cu, Pb, Zn		
Oct. 79	R.F./r.f.	DWG GC-8686