

84-1177-13272

**1984 ASSESSMENT REPORT
DIAMOND DRILLING ON THE
JD MINERAL CLAIM
(part of the Core 83 Group)**

by
N. von Fersen

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,272

situated near Moosehorn Creek
in the Omineca Mining Division

57°26'N, 127°09'W
NTS 94E/6E

owned and operated by: Kidd Creek Mines Ltd.

December 1984

Vancouver, B.C.

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INTRODUCTION

Location, Access and Terrain

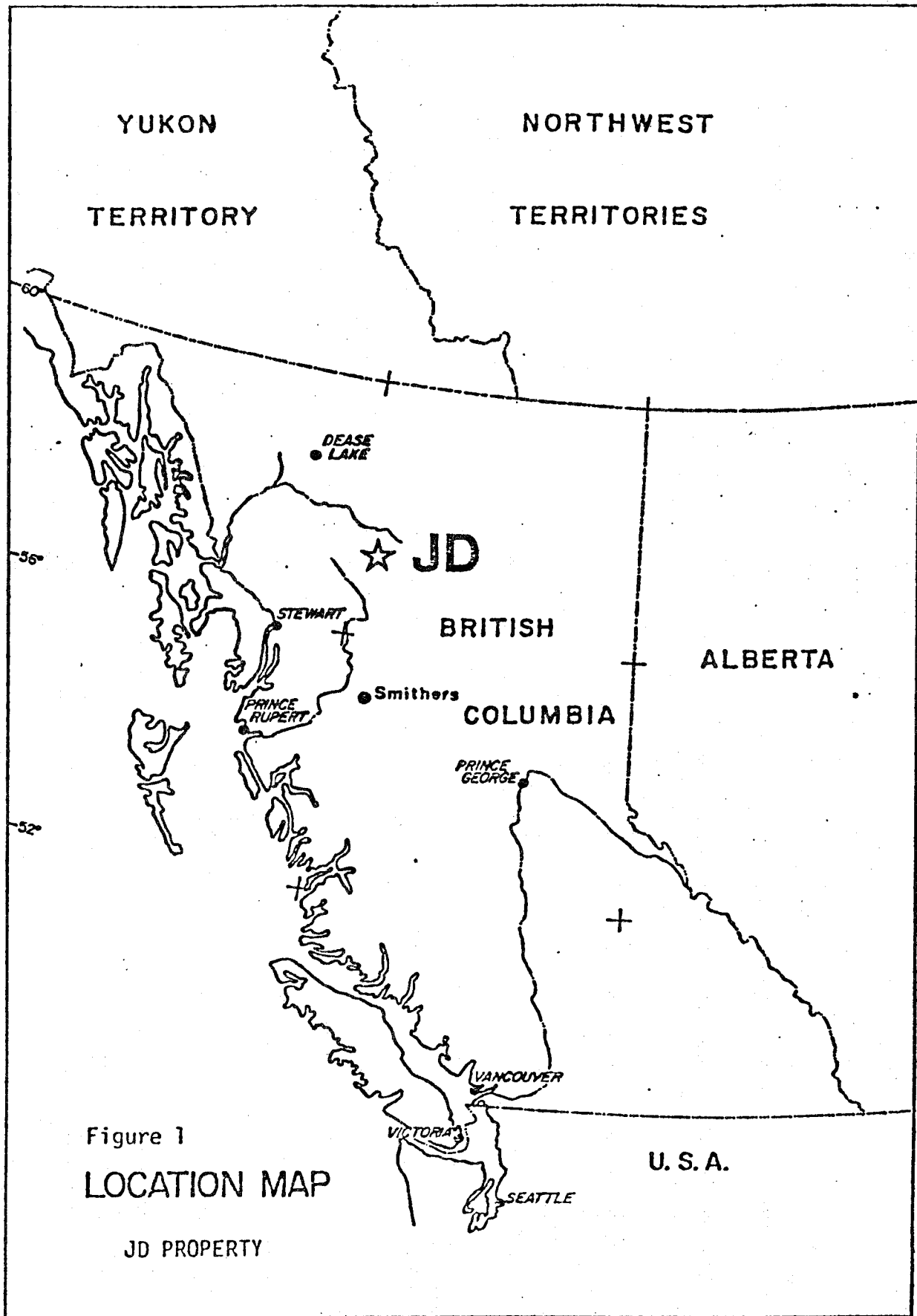
The CORE 83 claim group is located east of the Stikine River and north of the Toodoggone River in north-central British Columbia (Figure 1). The nearest supply and transportation centres are Smithers, 300 km due south, and Watson Lake in the Yukon, 300 km to the north.

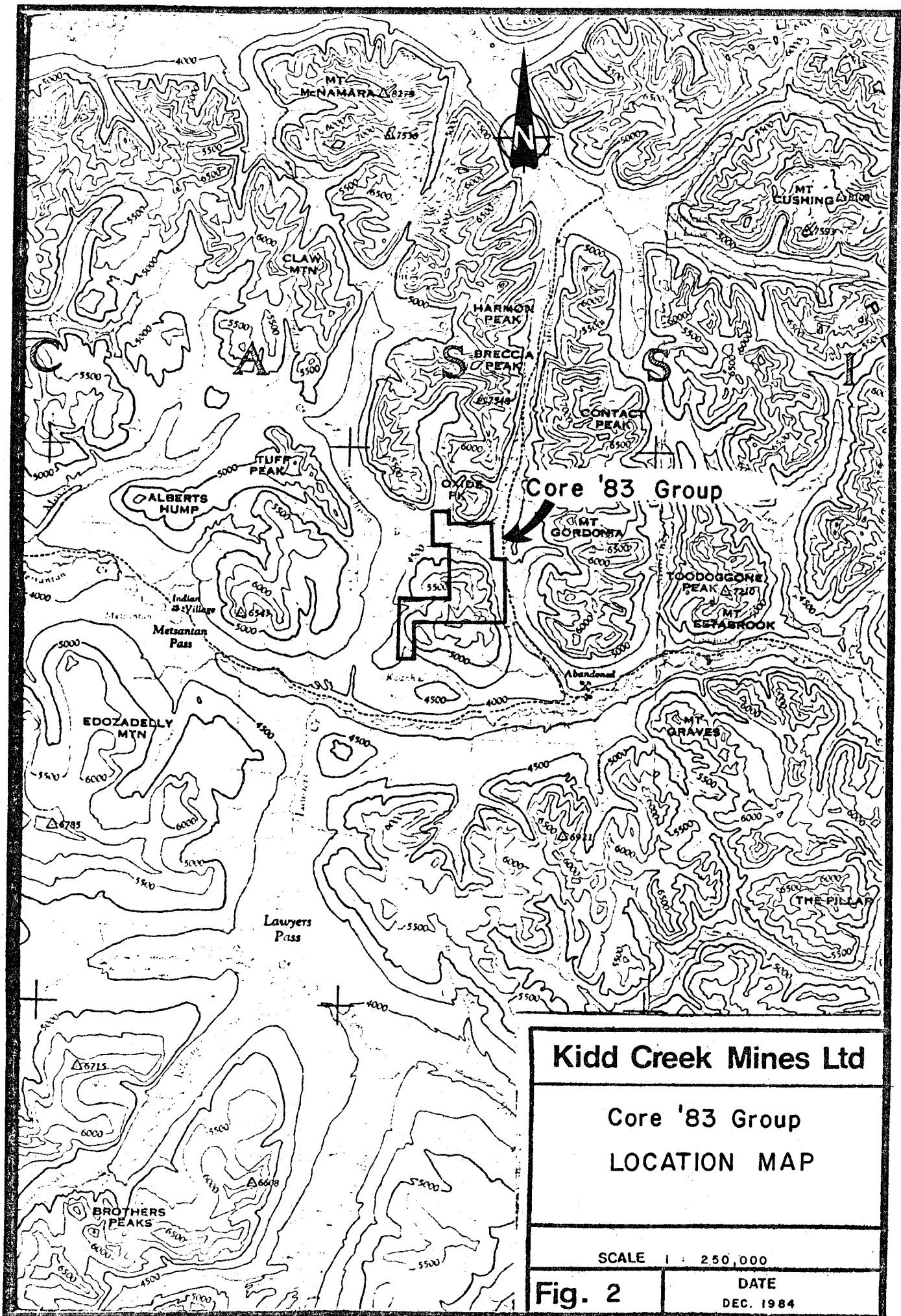
Access to the claims is by a combination of fixed-wing aircraft from Smithers or Watson Lake to the Sturdee Valley airstrip, 30 km southeast of the property, and helicopter thereafter. There is no road access although it has been suggested that the Omineca mining road to the south may be extended into the Toodoggone River area in the future.

The claim group is situated at the eastern boundary of the Spatsizi Plateau and covers moderate to steep ridges between the broad valleys of Moosehorn and McClair Creeks (Figures 2 & 3). All drilling was carried out on the JD mineral claim near the crest of a north-west trending ridge at approximately 1800 m elevation. Vegetation below 1500 metres consists of a dense growth of spruce and fir trees. Alpine areas above 1500 metres are sparsely vegetated with moss, grasses and alpine flowers.

Property History and Definition

Attention was first focussed on McClair Creek in 1931, when Chas. McClair was reported to have taken several thousand dollars worth of gold from placer workings near the confluence of this creek and the Toodoggone River. The remains of the placer workings are still to be found along the lower portion of McClair Creek.





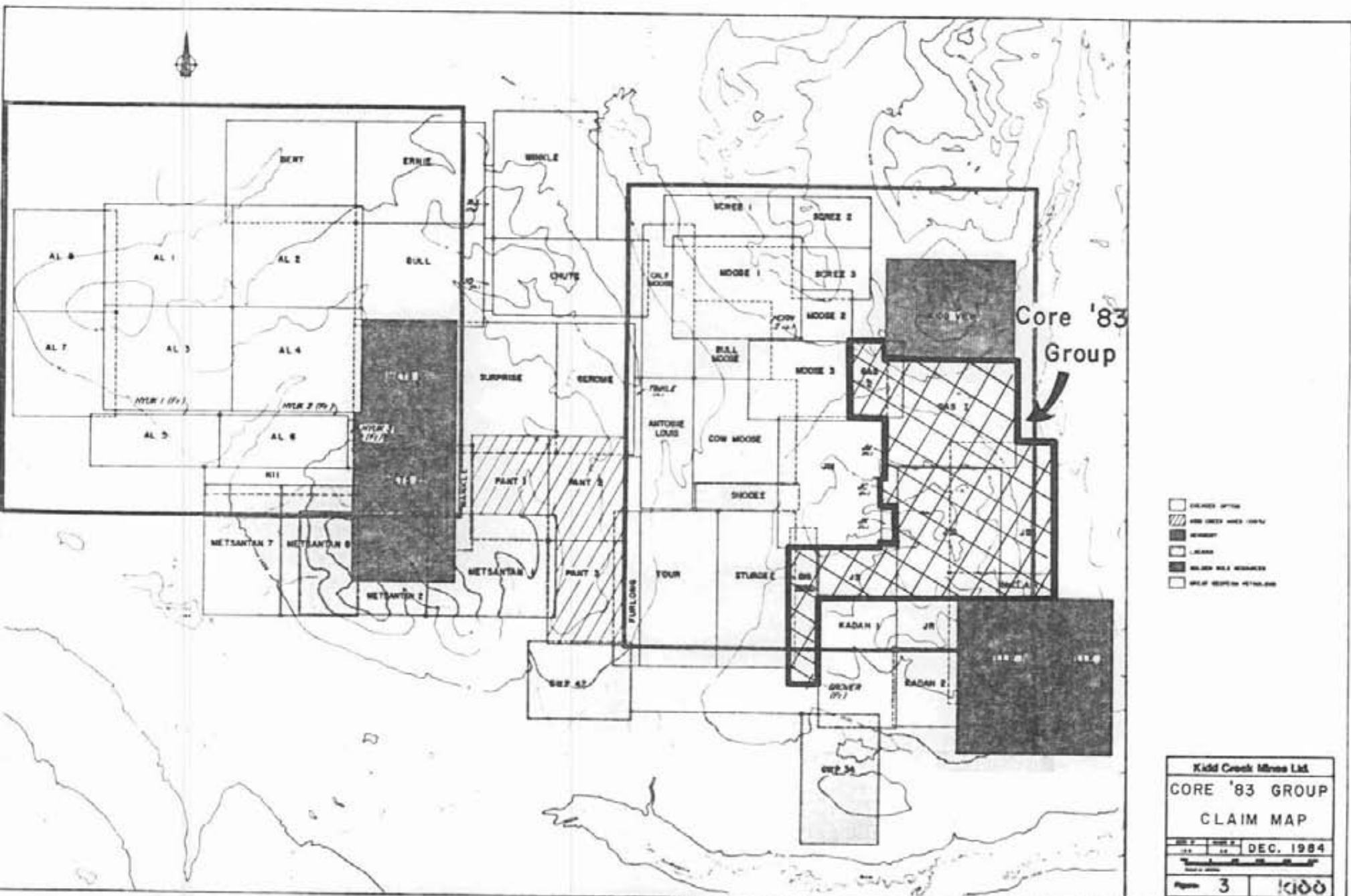
Kidd Creek Mines Ltd

**Core '83 Group
LOCATION MAP**

SCALE 1 : 250,000

Fig. 2

DATE
DEC. 1984



The present property area was originally staked in 1971 to cover showings discovered by Sullivan and Rodgers, consultants who were undertaking a reconnaissance program for Sumac Mines Ltd. Geochemical surveys and trenching in the area of the showings outlined two Zn, Ag and Au anomalous zones separated by a steep-sided valley. In 1974, the anomalies were tested by one 122 m BQ diamond drill hole; additional work was effectively pre-empted by the diversion of Sumac's exploration funds to the newly-found Kutcho Creek massive sulphide deposit. The claims were allowed to lapse in 1977, but were restaked the following year by Petra Gem and Energex interests, who completed some additional geochemistry and trenching, which served to enlarge the area of interest. In 1980, work by Texasgulf Inc. outlined a zone of mineralized, silicified breccia float with significant Au and Ag values and carried out further soil sampling. In 1981, work was done by Texasgulf Inc. on behalf of its wholly owned subsidiary, Texasgulf Canada Ltd., the registered owner of the claims at the time the work was done. A recent name change has resulted in a transfer of ownership to Kidd Creek Mines Ltd. Recent work has included trenching in addition to a limited soil geochemical survey, additional geological mapping and diamond drilling (as described here).

Summary of Work Completed

Diamond Drilling

During the period June 27 to July 28, 1984, a total of 7 NQ diamond drill holes, totalling 336 m, were completed on the JD property. Drilling was concentrated on the Gasp and Gumbo zones. A total of 416 core samples were geochemically analysed for Au, and Ag; 179 samples were analysed for Cu, Pb, Zn and 125 samples were assayed for Au by fire assay.

Work Distribution

The work described herein was carried out entirely on the JD M.C., part of the CORE 83 group.

GEOLOGY

Regional Setting

The JD property occurs near the eastern margin of a Mesozoic volcanic arc assemblage. This assemblage is bounded by sedimentary rocks of the Sustut and Bowser Basin assemblages and to the east by the Omineca Crystalline Belt (Gabrielse and Dodds, 1974, Gabrielse et al, 1975, 1976). The property is underlain by the "Toodoggone" volcanic sequence. The Toodoggone series unconformably overlies submarine basalts and andesites of the Takla Group (Carter, 1971).

The Toodoggone volcanic sequence comprises a complexly intercalated assemblage of andesite, dacite and trachyte flows, tuffs, ash flow tuffs and epiclastic rocks which has a minimum thickness of 1000 m (Schroeter, 1982). These rocks were deposited in subaerial and shallow water environments. K-Ar and Rb-Sr radiometric dates from whole rock and mineral separate samples range from 179 to 190 \pm 7 Ma (Gabrielse et al, 1980). The Toodoggone volcanic rocks have a general northwest trend with variable, shallow to moderate westerly dips.

Property Geology

Introduction

The JD property is underlain by at least 800 m of shallow-dipping andesitic flows and flow breccias with lesser coarse and fine volcanoclastic rocks and

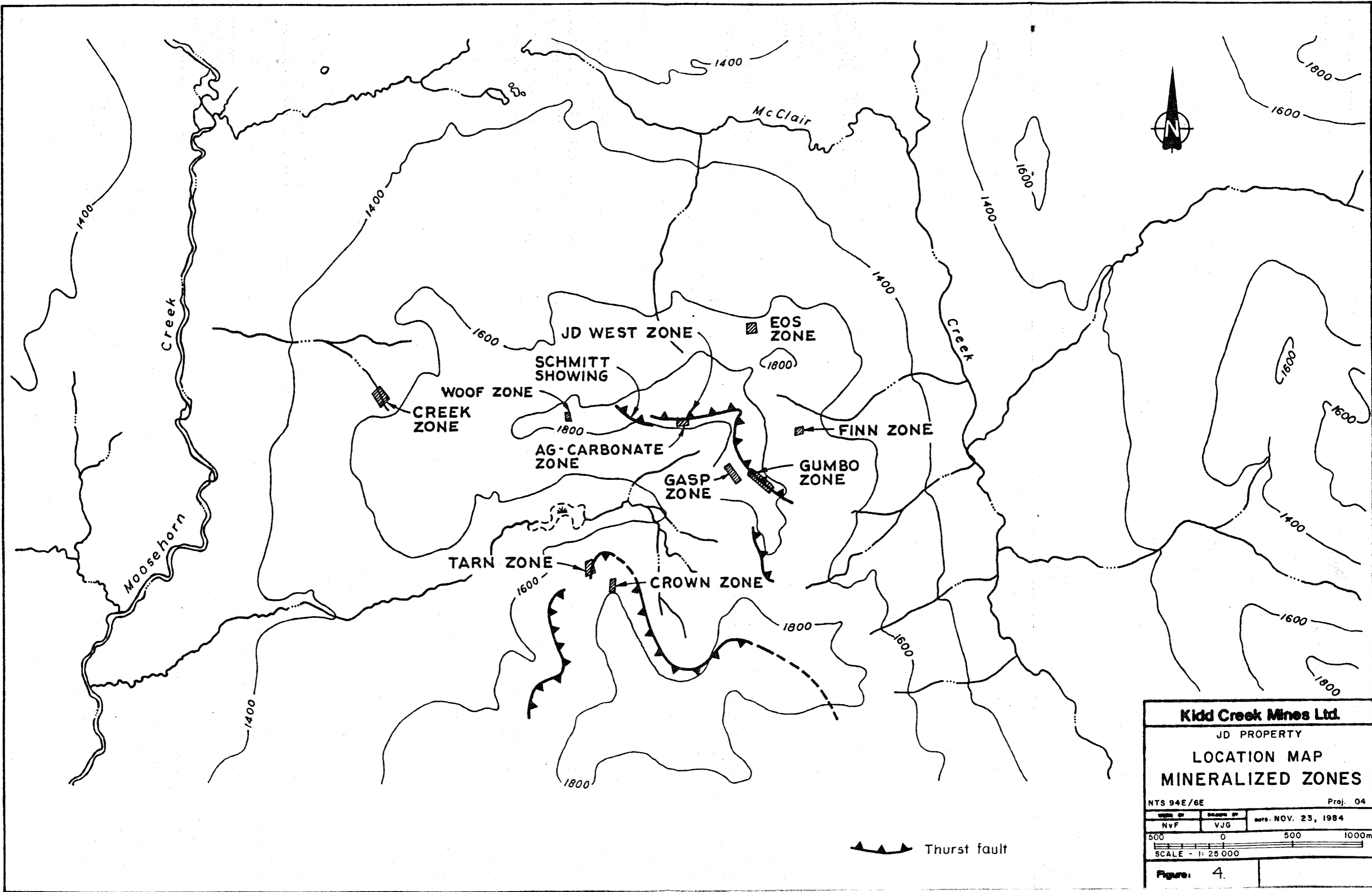
subvolcanic intrusions. This sequence is cut by steeply dipping mafic and felsic dykes. Layering attitudes, as measured from bedding planes of tuffaceous units and flaggy jointing of flows average $305^{\circ}/35^{\circ}\text{SW}$. Deviations from this trend are due to either topographic irregularities during deposition or post-depositional disruptions.

Petrology

Extrusive rocks

The volcanic sequence has been subdivided on the basis of texture and phenocryst mineralogy into two formations. The lower, herein termed Formation B (map Unit 2), is composed of hornblende + plagioclase + magnetite + apatite - phyrlic andesites and dacites. Formation A (map Unit 1), the upper formation, comprises plagioclase + biotite + hornblende + clinopyroxene + magnetite + apatite - phyrlic andesites and dacites. These two formations are in contact along a low-angle (thrust? gravity?) fault (Figure 4).

Both formations are dominated by flows and flow breccias. Flaggy jointing is commonly developed parallel to original layering. This jointing is a result of shear during flow and imparts a fissility to the rock. Individual flows are <20 m thick, and commonly are auto-brecciated. Volcaniclastic rocks occur infrequently (<5%). Auto-brecciated flows often grade vertically into lahars and tuffs. Tuffaceous units are <2 m thick. One tuffaceous bed, encountered in Formation B, contains fossil charcoal reeds indicating shallow water deposition.



Kidd Creek Mines Ltd.
 JD PROPERTY
LOCATION MAP
MINERALIZED ZONES

NTS 94E/6E Proj. 04

DATE OF NvF	DRAWN BY VJG	DATE NOV. 23, 1984
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500 0 500 1000m
 SCALE - 1: 25 000

Figure: 4.

Thrust fault

Formation B is at least 600 m thick. Phenocryst phases include hornblende (5-8%) + plagioclase (10-20%) + magnetite (1-2%) + apatite (trace). The groundmass is aphanitic and varies in colour from light grey-purple-green, depending on degree and type of alteration. Phenocrysts, <5 mm in longest dimension, are often aligned due to flow.

Formation A is at least 200 m thick. Phenocryst phases include plagioclase (10-25%) + biotite (2-7%) + hornblende (5-10%) + clinopyroxene (5-7%) + magnetite (1-2%) + apatite (trace). Large sanidine megacrysts (1-2 cm) occur infrequently. The groundmass is aphanitic. Major phenocryst phases are larger than their counterparts in Formation B.

Intrusive rocks

Subvolcanic intrusions, compositionally similar to the extrusive rocks, have not been recognized on the JD property. However, this may be a manifestation of poor exposure. Nevertheless, two types of intrusions are recognized; both are compositionally distinct from their host volcanic rocks.

Diabase dykes, each less than 2 m thick, are confined to a 50 m wide swarm which crops out for 900 m along strike on the Pit Grid. At least 8 individual dykes are recognized. These diabase dykes intrude andesites of both Formations A and B. Individual dykes trend at $290^{\circ}/86^{\circ}\text{E}$ in Formation B, and at $316^{\circ}/76^{\circ}\text{E}$ in Formation A. This difference in dyke attitudes is the result of either different preferred fracture orientations into which the dykes were emplaced or post-emplacement faulting. In either case, the relatively restricted spatial distribution of diabase dykes on the JD property

and the presence of dykes in Formations A and B suggests that dyke emplacement post-dates the major period of movement along the low-angle fault (LAF) which defines the contact between Formations A and B.

The diabase dykes are dark green to black, magnetic, aphanitic and contain up to 5% spherical to ovoid calcite-filled amygdules (2-5 mm diameter). Chilled margins are <2 cm thick. 3-5 cm thick rusty, pyritic zones are often developed in the immediate host rock.

Felsic intrusions occur in two areas on the property. A 1-2 m wide plagioclase-phyric felsic dyke crops out on the Pit Grid and strikes north-south to the ridge above the east end of the JD-West zone (Figure 4). This dyke is continuous and cuts both Formation A and B, having been emplaced after movement along LAF. The dyke contains 7-10% plagioclase phenocrysts (2-5 mm) in an aphanitic orange-pink groundmass. This dyke has a conspicuous 5 cm wide flow-banded chill margin. A similar dyke crops out near the "EOS" zone to the east. Two plagioclase-phyric felsic intrusions crop out in the "WOOF" area (Figure 4).

Structural geology

Low-angle faults (LAF) define the contact between Formations A and B. It is not known whether these are thrust or gravity faults.

No attitudes were measured on LAF in the southeastern part of the property. However, from geometric inspection, this portion of LAF trends at $300^{\circ}/2-20^{\circ}\text{SW}$. It is not known whether this change of dip direction of LAF is a primary feature or is related to later faulting. There are no lineaments or obvious structural zones of appropriate orientation to account for the change of dip of LAF across the intervening valley (Figure 4).

DIAMOND DRILLING

This report details the results of the 1984 diamond drilling program on the JD property. Seven NQ holes are considered as follows:

DDH	Azimuth	Dip	Length
J84-1	210°	-65°	61.87 m
J84-2	210°	-42.5°	41.76 m
J84-3	210°	-66.5°	41.75 m
J84-4	032°	-65°	47.24 m
J84-5	141°	-44°	66.83 m
J84-6	212°	-65°	38.10 m
J84-7	212°	-65°	38.71 m

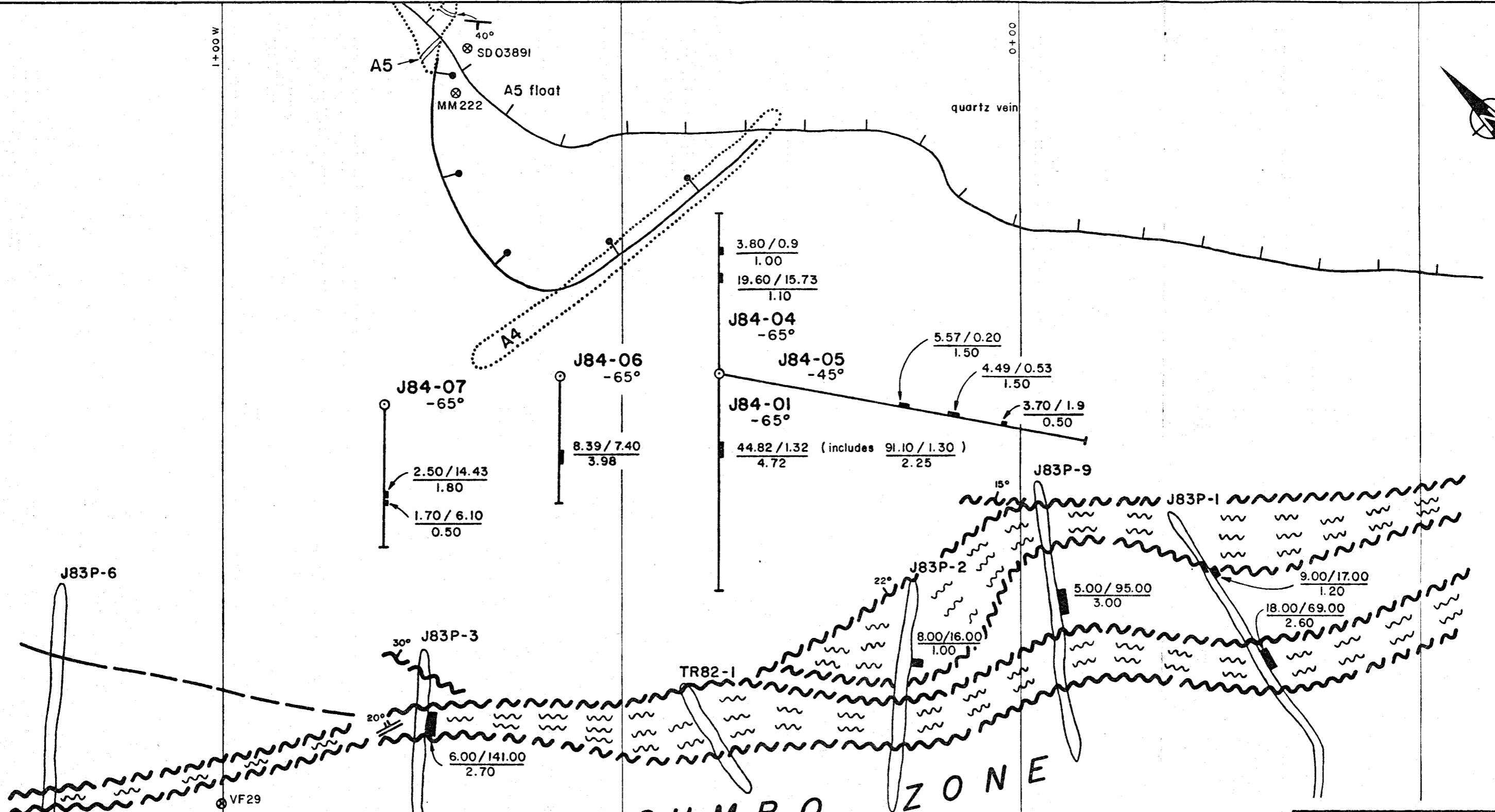
All holes were drilled on the JD M.C. The drill hole locations are indicated on Figures 5 and 6. Summary logs and geochemical analyses are tabulated in Appendix C. The core is stored at the main camp on the Moose 3 M.C., a short distance north of the JD property.

All holes were drilled to test the down-dip extension of structurally controlled surface mineralization in the Gasp and Gumbo zones. The Gumbo zone mineralization is hosted by extensive silicification and argillization, associated with a low-angle fault structure. The Gasp mineralization is hosted by calcite quartz veins and minor breccia which cut propylitically altered andesites.



The holes were drilled from four separate drill pads which were constructed for this purpose.

GEOCHEMISTRY

Drill core was routinely cut and sampled, the standard sample interval being approximately 0.5 m. Changes in alteration and/or lithology influenced this sample interval considerably. A total of 416 were shipped to CDN laboratories Ltd. in Delta, B.C., where they were



LEGEND

-  Scarp
-  Slump block
- balls on downslope side
- Au (g/t) / Ag (ppm)
metres

Kidd Creek Mines Ltd
 JD PROPERTY
 GUMBO ZONE
**DRILLHOLE LOCATION
 AND ASSAY RESULTS**

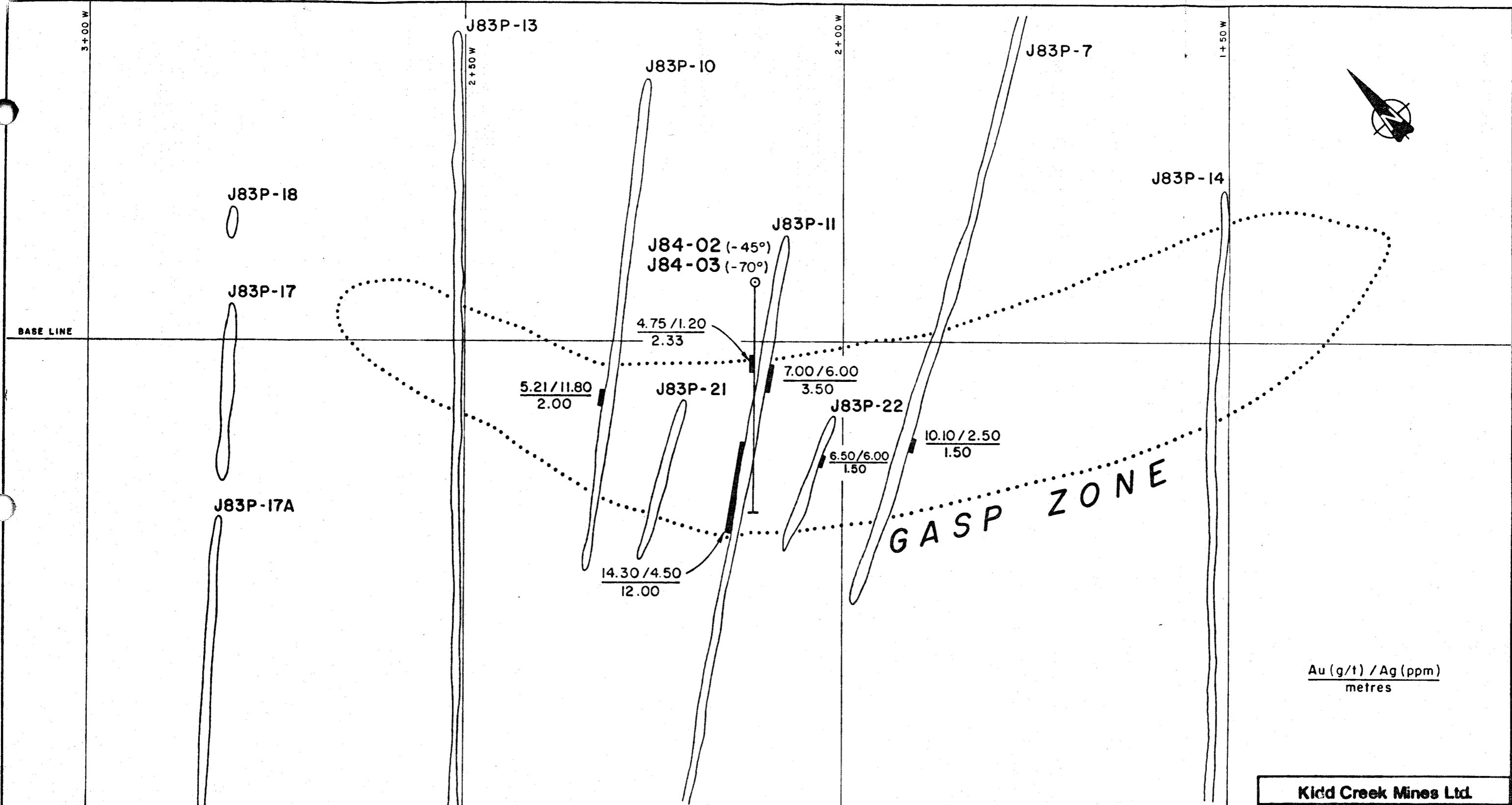
NTS 94E/6E Proj. 04

Drawn by NvF	Checked by VJG	Date Nov. 19, 1984
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10 0 10 20m

SCALE - 1:500

Figure: 5.



Au (g/t) / Ag (ppm)
metres

Kidd Creek Mines Ltd.		
JD PROPERTY GASP ZONE		
DRILLHOLE LOCATION AND ASSAY RESULTS		
NTS 94E/6E		Proj. 04
DATE OF Nov 19, 1984	DRAWN BY VJG	CHECKED BY NvF
SCALE - 1:500		
Figure: 6.		

analysed geochemically for Au and Ag. Cu, Pb, Zn were determined on a portion of the samples. Samples containing greater than 1000 ppb Au were re-analysed by fire assay.

A summary of the extraction and analytical techniques for these metals follows:

Element	Extraction	Analysis
Au	Hot Aqua Regia	Atomic Absorption
Ag, Cu, Pb, Zn	Nitric Acid	Atomic Absorption

CONCLUSIONS

Results obtained from the drill program confirm the existence of the low-angle fault structure in the Gumbo zone. Visible gold is erratically distributed in trace amounts in holes J84-1 and J84-6. Gold values occur in the silicified footwall of the fault. The economic potential of the zone is very limited, based on the narrow intersections obtained.

The Gasp zone did not return encouraging results, and appears to have little economic potential.



 N. von Fersen

APPENDIX A
STATEMENT OF QUALIFICATIONS

APPENDIX A

N. O. von Fersen - Geologist

N. O. von Fersen holds a B.Sc. Degree in Geology from the University of British Columbia, granted in 1967. Since that time he has been continuously employed in the Industry. He has been employed by Kidd Creek Mines Ltd. in Vancouver since April 1983.

APPENDIX B
STATEMENT OF EXPENDITURES

APPENDIX B
STATEMENT OF EXPENDITURES

A. DRILL SITE PREPARATION AND SUPPORT

Case 450 bulldozer with winch

Period: June 27-20, July 2, 24-28 79.5 hrs @ \$56 \$ 4,452.00

B. DIAMOND DRILLING

standard statement i.e. type of costs included

Period: June 27-July 5, July 2-28 27,295.00

Room and Board

D.W. Coates Personnel 30 man-days @ \$80.00 2,400.00

Helicopter

ALC Hughes 500D 24.4 hrs @ \$525/hr (incl fuel) 12,810.00

C. DRILL SUPERVISION, DRILL CORE EXAMINATION, SAMPLE PREPARATION

Salaries and Fringe benefits, Kidd Creek Mines Ltd.

I.G. Sutherland - geologist

Period: July 3-6 3.5 days @ 145.98 510.47

N. von Fersen - geologist

Period: July 25-28 4 days @ 192.82 771.28

P.J. Maheux - geologist

Period: July 3,5,6,25-28 7 days @ 88.00 616.00

L. Haering, geological assistant

Period: July 5-6 2 days @ 78.00 156.00

J. Black - assistant

Period: July 3, 7 2 days @ 66.00 132.00

J. Leigh - assistant

Period: July 4-7 4 days @ 66.00 264.00

B. Anderson - assistant

Period: July 3,6,26,27(.5)28(.5)
4 days @ 60.00 240.00

B. von Schulmann - assistant
Period: July 4,6(.5),25-27,28(.5)
5 days @ 54.00 270.00

M. Trotzuk - assistant
Period: July 5(.5),8,25-28
5.5 days @ 62.00 341.00
3,300.75 3,300.75

Room and Board

Kidd Creek Mines personnel 37 man-days @ 80.00 2,960.00

Analytical Costs

416 sample preparations @ 1.50 624.00
125 Au fire assays @ 6.00 750.00
332 Au geochemical analyses @ 5.00 1,660.00
416 Ag geochemical analyses @ 1.75 728.00
179 Cu,Pb,Zn geochemical analyses @.75/element 402.75
4,164.75 4,164.75
\$57,382.50

Note: Of this total, 53,458.00 was claimed for assessment credit.

APPENDIX C
ANALYTICAL RESULTS AND SUMMARY LOGS

ASSAY REPORT J84-1

Sample Description	Au (ppb)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	GEOCHEMICAL DETERMINATIONS
10451	15	.1				
10452	75	L.1				
10453	130	.1				
10454	210	.1				
10455	15	L.1				
10456	440	.6				
10457	20	L.1				
10458	20	L.1				
10459	25	L.1				
10460	40	L.1				
10461	40	L.1				
10462	20	L.1				
10463	100	.8				
10464	430	2.2				
10464A	270	.4				
10465	150	1.5				
10466	170	2.3				
10467	30	L.1				
10468	30	L.1				
10469	150	.4				
10470	510	1.7				
10471	1,020	22.5				
10472	40	L.1				
10473	30	L.1				
10474	40	L.1				
10475	1,140	.7				
10476	560	.4				
10477	350	1.5				
10477A	1,080	1.9				
10478	420	1.0				
10479	5	.1				
10480	15	L.1				
10481	1,600	.7				
10482	50	.1				
10483	20	L.1				
10484	20	L.1				
10485	95	L.1				
10486	470	L.1				
10487	5	L.1				
10488	710	.3				
10489	820	8.2				
10490	1,240	2.0				
10491	G10,000	.5				
10492	G10,000	2.3				
10493	G10,000	1.3				
10494	1,300	.1				
10495	4,500	1.1				
10496	2,150	3.2				
10497	4,000	1.7				
10498	1,090	6.1				
10499	10	.4				

ASSAY REPORT

J84-1

Sample Description	Au (ppb)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	GEOCHEMICAL DETERMINATIONS
10500	10	.2				
10501	140	.2				
10502	40	.3				
10503	380	11.2				
10504	30	.3				
10505	80	.7				
10506	45	.3				
10507	L5	.1				
10508	60	.2				
10509	70	.3				
10510	L5	L.1				
10511	5	L.1				
10512	35	.3				
10513	L5	L.1				
10514	L5	L.1				
10515	L5	.2				
10516	L5	L.1				
10517	L5	.3				
10518	110	.2				

ASSAY REPORT

Sample Description	Au (g/t)
10471	1.20
10475	1.00
10481	1.45
10490	1.30
10491	26.20
10492	197.30
10493	61.60
10494	1.40
10495	3.40
10496	2.10
10497	3.40
10498	1.40

[Signature]
 Certified Assayer of British Columbia

ASSAY REPORT

J84-2

Sample Description	Au (ppb)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	GEOCHEMICAL DETERMINATIONS
10519	120	.7				
10520	130	1.2				
10521	1,050	.4				
10522	240	.4				
10523	430	.3				
10524	380	.1				
10524A	290	.6				
10525	160	.4				
10526	30	.1				
10527	140	.5				
10528		.3	108	20	260	
10529		.2	26	14	170	
10530		.2	164	4	290	
10531		.4	86	22	410	
10532		.8	142	200	690	
10533		1.1	220	330	2,000	
10534		.9	210	520	4,400	
10535		1.6	260	620	4,500	
10536		1.3	520	2,700	G5,000	
10537		1.5	550	950	G5,000	
10538A		.7	4,000	48	200	
10538		.4	48	72	680	
10539		.7	146	1,020	1,000	
10540		1.8	330	3,500	1,320	
10541		.9	186	80	740	
10542		1.5	570	230	1,800	
10543		5.2	650	3,600	G5,000	
10544		3.5	640	3,300	G5,000	
10545		2.3	340	1,500	G5,000	
10546		2.0	540	220	1,240	
10547	60	.7				
10548	130	.7				
10549	50	.8				
10549A	1,210	2.0				
10550	160	.6				
10551	750	.6				
10552	120	.4				
10553	200	.6				
10554	100	.5				
10555	25	.1				
10556	40	.1				
10557	L5	L.1				
10558	110	L.1				
10559	L5	L.1				
10560	5	L.1				
10561	160	L.1				
10562	45	.2				
10563	L5	L.1				
10564	L5	L.1				
10565	80	L.1				
10566	L5	L.1				
10567	L5	L.1				

ASSAY REPORT

J84-2

Sample Description	Au (g/t)
10528	L.05
10529	.40
10530	.10
10531	L.05
10532	.30
10533	1.30
10534	15.10
10535	3.60
10536	7.20
10537	.65
10538	.40
10538A	.10
10539	.60
10540	.50
10541	.20
10542	.40
10543	.40
10544	4.00
10545	.70
10546	.50
10521-2	1.00

CDN RESOURCE LABORATORIES LTD.
 #R 7550 RIVER ROAD DELTA, B.C. V4G 1C8 / TEL (604) 946-4448

ASSAY REPORT

TO: Kidd Creek Mines Ltd.
 701 - 1281 West Georgia St.
 Vancouver, B.C.
 V6E 3J7

FILE NO.: 84-155

DATE: July 13, 1984

J84-3

ATTENTION: Peter Delancey cc. Ian Sutherland

PROJECT: 03 and 04

Sample Description	Au (ppb)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	GEOCHEMICAL DETERMINATIONS
10568	560	26.5				
10569	210	16.9				
10570	240	4.5				
10571	70	1.3				
10572 ³	130	1.7				
10573	2,800	.9				
10574	300	.9				
10575	4,400	15.9				
10576	980	9.0				
10576A	1,240	2.1				
10577	190	.3				
10578	590	1.0				
10579	160	.5				
10580	210	.6				
10581	440	.9				
10583		2.0	290	3,900	1,560	
10584		3.2	500	G5,000	G5,000	
10585		.5	90	94	220	
10585A		2.3	G5,000	32	140	
10586		.1	16	8	210	
10587		.5	132	280	590	
10588		2.2	350	3,100	2,500	
10589		1.1	260	1,900	2,400	
10590		3.1	750	2,600	3,400	
10591		5.8	770	G5,000	4,300	
10592		3.0	860	1,100	460	
10593		1.4	620	130	520	
10594		.9	360	240	880	
10595		.2	66	40	420	
10596		1.7	54	1,700	390	
10597	1,420	2.2				
10598	330	1.6				

GEOCHEMICAL REPORT

J84-3

Sample Description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
10599	120	1.4			
10600	65	.4			
10601	120	.3			
10602	120	.4			
10603	200	.8			
10604	2,050	.8			
10605	170	.6			
10606	860	3.5			
10607	130	.4			
10608	510	2.7			
10609	220	1.3			
10610	20	.2			
10611	20	.2			
10612	50	.1			
10613	50	.1			
10614	100	.5			
10615	50	.2			
10616	50	.1			

ASSAY REPORT

Sample Description	Au (g/t)
10573	3.00
10575	4.70
10597	2.00
10583	.60
10584	2.40
10585	.30
10585A	1.20
10586	.05
10587	.10
10588	.10
10589	.20
10590	.10
10591	1.00
10592	.30
10593	.30
10594	.40
10595	.25
10596	3.00

GEOCHEMICAL REPORT

TO: Kidd Creek Mines Ltd.
 701 - 1281 West Georgia
 Vancouver, B.C.
 V6E 3J7

FILE NO.: 84-193

DATE: August 5, 1984

J84-4

ATTENTION: Peter Delancey

cc. Ian Sutherland

PROJECT: 03 and 04

Sample Description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
10617	L5	.3			
10618	10	.5			
10619	10	.4			
10620	L5	L.1			
10621	L5	L.1			
10622	20	L.1			
10623	60	.1			
10624	20	.3			
10625	70	.7			
10626	90	.8			
10627	70	.7			
10628	40	.6			
10629	15	.4			
10630	5	L.1			
10631	10	L.1			
10632	20	L.1			
10633	10	.3			
10634	10	L.1			
10635	20	L.1			
10636	30	.2			
10637	40	.1			
10638	30	.9			
10639	25	1.1			
10640	20	.4			
10641		.5	28	17	78
10642		.5	116	82	135
10643		15.5	1,900	G5,000	G5,000
10644		16.0	2,400	G5,000	G5,000
10645		.5	340	350	680
10646		.7	520	320	910
10647		1.2	1,300	720	1,700
10648		.9	610	500	1,400
10649		2.1	1,900	4,200	G5,000
10650	100	.3	230	220	580
10701	40	.1	40	170	540
10703	60	L.1	50	40	310
10704	45	L.1	80	50	400
10706	110	L.1			
10707	30	.1			
10708	60	.1			
10709	50	.1			
10711	250	1.8			
10712	10	.1	1	50	190
10713	5	L.1	1	13	130
10714	20	.1	1	15	140
10715	L5	L.1			
10716	L5	L.1			

GEOCHEMICAL REPORT

J84-4

Sample Description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
10702	1,100	.5	350	310	730
10705 ⁴	4,000	.9	94	2,200	65,000
10710	1,020	1.4			

ASSAY REPORT

Sample Description	Au (g/t)
10641	L.05
10642	.60
10643	25.6
10644	12.4
10645	.70
10646	L.05
10647	.50
10648	.15
10649 ⁴	6.00
10702	.60
10705	3.80
10710 ⁴	.70

ASSAY REPORT

J84-5

Sample Description	Au (ppb)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	GEOCHEMICAL DETERMINATIONS
10717	L5	L.1				
10718	L5	L.1				
10719	L5	.1				
10720	L5	L.1				
10721	L5	L.1				
10722	L5	L.1				
10723	5	L.1				
10724	10	.1				
10725	L5	L.1				
10726	5	.1				
10727	10	.4				
10728		.3				
10729		.7				
10730		.7				
10731		.2	20	27	310	
10732		.4	46	92	290	
10733		.4	64	70	290	
10734		.5	70	148	650	
10735		1.2	310	1,100	3,200	
10736		.9				
10737		3.0	890	3,800	65,000	
10738		1.3	350	820	2,200	
10739		.3	20	28	110	
10740		.3	14	5	90	
10741		.7	98	410	1,350	
10742		.7	20	48	150	
10743		7.0	200	1,200	1,500	
10744		24.	260	1,080	2,200	
10745		1.7	16	980	1,750	
10746		.3	6	220	470	
10747		3.8	22	670	2,300	
10748		5.2	270	930	1,750	
10749		4.6	70	610	1,700	
10750		11.3	16	750	1,200	
10751		1.2	10	62	270	
10752		.5	28	650	1,400	
10753		2.9	10	310	480	
10754		1.1	34	270	410	
10755		.2	28	56	440	
10756		3.2	10	100	680	
10757		1.9	16	680	1,500	
10758		8.0	22	680	1,450	



GEOCHEMICAL REPORT

J84-5

Sample Description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
10759		3.5	18	660	1,300
10760		.1	40	16	270
10761		.1	30	1	230
10762		.3	48	13	260
10763		.2	84	102	360
10764		.2	10	28	220
10765		.1	6	6	290
10766		.3	8	58	280
10767		.2	12	12	310
10768	170	.6	26	164	590
10769	140	.8	6	360	1,000
10771	450	.6	10	186	450
10775	510	4.2	200	G5,000	G5,000
10777	280	1.5	86	3,700	G5,000
10778	320	4.1	1,100	G5,000	G5,000
10779	220	1.0	18	1,150	1,650
10780	600	5.2	56	G5,000	G5,000
10781	90	1.5	36	1,500	2,000
10783	830	.5	22	970	1,500
10785	460	.7	14	710	1,350
10786	120	.4	80	1,000	2,200
10787	20	.1	68	38	380
10788	240	.4	12	490	930
10789	60	.1	8	52	350
10790	50	.1	4	62	300
10791	40	.1	10	2	310
10792	100	.4	10	76	290
10793	70	.3	14	106	340
10794	L5	.3	4	10	320
10797	80	.1	4	5	200
10798	460	.3	12	58	180
10799	90	.1	34	38	240
10800	810	L.1	32	38	330
10801	480	.2	160	360	360
10802	600	.3	28	200	270
10804	420	1.0	52	740	840
10805	200	.2	40	50	240
10807	350	.7	10	270	460
10808	260	1.2	10	92	340
10809	110	L.1	12	80	350
10810	740	L.1	12	14	640
10811	130	.3	40	1,040	1,250
10812	80	.2	8	290	260
10813	L5	L.1	10	5	210
10814	L5	L.1	16	1	220
10815	290	.1	4	20	200
10816	730	.2	14	240	190
10817	140	L.1	56	84	210
10818	5	L.1	18	4	180
10819	L5	L.1	4	1	140

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GEOCHEMICAL REPORT

J84-5

Sample Description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
10820	L5	L.1	20	1	140
10821	L5	L.1	24	1	150
10822	40	L.1	98	8	160
10823	430	1.2	50	700	470
10824	170	L.1	8	88	170
10825	230	.1	6	23	190
10826	560	.7	10	66	200
10770	1,820	1.1	16	650	1,340
10772	1,760	3.4	75	2,700	G5,000
10773	4,100	1.2	20	2,600	G5,000
10774	1,300	2.7	43	2,500	G5,000
10776	1,220	4.0	560	G5,000	G5,000
10782	2,200	.3	50	840	1,600
10784	8,500	.8	16	720	1,200
10803	3,400	1.9	225	2,900	G5,000
10806	1,060	.2	30	150	370
10845	8,400	2.4			

ASSAY REPORT

J84-5

Sample Description	Au (g/t)
10772	2.30
10773	4.00
10774	1.40
10776	1.20
10782	3.20
10784	10.45
10803	3.70
10806	1.00
10728	L.05
10729	L.05
10730	L.05
10731	L.05
10732	L.05
10733	.15
10734	L.05
10735	.15
10736	.15
10737	.40
10738	.25
10739	L.05
10740	L.05
10741	L.05
10742	.15
10743	2.40
10744	2.15
10745	.25
10746	.10
10747	.60
10748	.60
10749	1.00
10750	2.65
10751	.60
10752	1.45
10753	1.05
10754	1.05
10755	2.00
10756	1.60
10757	2.53
10758	1.20
10759	.53
10760	.15
10761	1.73
10762	.40
10763	.95
10764	9.07
10765	.25
10766	7.35
10767	.40
10770	1.90

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ASSAY REPORT

J84-6

Sample Description	Au (ppb)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	GEOCHEMICAL DETERMINATIONS
10827	L5	L.1				
10828	L5	L.1				
10829	L5	.1				
10830	L5	.1				
10831	L5	.2				
10832	40	.2				
10833	5	.1				
10834	L5	.2				
10835	10	.1				
10836	20	.1				
10837	35	.1				
10838	80	.2				
10839	50	.4	36	290	110	
10840	50	.4	18	7	90	
10841	80	.5				
10842	70	.5				
10843	30	1.3				
10844	50	.3	22	18	130	
10849	430	3.6	70	510	760	
10850	820	2.6				
10857	360	.8	130	450	920	
10858	50	L.1				
10859	110	1.0				
10860	60	.1				
10861	160	.3				
10862	L5	.2				
10863	20	.2				
10864	L5	.1				
10865	80	1.0				
10867	240	.2				
10868	L5	.2				
10869	40	.1				
10870	70	.5				
10871	30	.4				
10846	G10,000	20.4	3,100	4,300	G5,000	
10847	2,750	14.3				
10848	2,000	10.2				
10851	G10,000	14.0	430	3,000	G5000	
10852	3,600	3.0	9	680	2,100	
10853	4,200	2.3	8	350	840	
10854	G10,000	1.9	190	460	1,000	
10855	1,160	1.9	50	530	1,100	
10856	1,260	4.9	130	1,500	2,000	
10866	2,900	1.8				

ASSAY REPORT

J84-6

Sample Description	Au (g/t)
10845	8.40
10846	11.30
10847	2.90
10848	1.85
10851	12.10
10852	3.60
10853	4.60
10854	48.10
10855	1.20
10856	1.40
10866	3.10

GEOCHEMICAL REPORT

J84-7

Sample Description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
10873	1,040	.3			
10874	10	.9			
10875	25	1.3			
10876	10	.9			
10877	10	1.8			
10878	10	.7			
10879	L5	.5			
10880	10	1.7			
10881	10	1.2			
10882	L5	.8			
10883	L5	.5			
10884	50	4.7	20	16	96
10885	40	6.1	18	18	66
10886	70	8.2	14	32	100
10887	30	3.0	8	10	112
10888	40	2.4	10	8	102
10889	30	2.4	18	12	86
10890	20	1.3	10	8	130
10891	5	.5	16	5	102
10892	5	.5	16	6	98
10893	160	2.9	14	13	88
10894	20	1.0	16	7	80
10895	10	.6	22	4	86
10896	30	.5	18	134	450
10897	40	.8	16	9	114
10898	410	1.6	26	38	106
10899	310	.7	30	64	112
10900	480	.9	104	44	132
10901	80	1.0	100	50	176
10902	3,200	1.5	94	186	360
10903	1,450	33	110	630	440
10904	1,900	17.8	44	220	530
10905	390	6.2	66	360	450
10906	480	7.4	66	480	790
10907	1,500	6.1	48	1,060	2,200
10908	40	1.1	14	1,350	2,600
10909	60	2.2	10	400	690
10910	190	7.7			
10911	80	2.6			
10912	380	1.6			
10913	90	2.9			
10914	30	2.0			
10915	20	.6			
10916	10	.4			
10917	630	2.1			

Au (g/t)

10873	L.05
10902	3.40
10903	1.80
10904	1.70
10907	1.70

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. J84-1 PAGE No. 1

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: _____
 SIZE: NQ

PROPERTY: JD(04) - GUNDBO ZONE

DATE JUNE 29 - July 1, 1984

DEPTH	AZIM.	DIP
61.87m	210°	-65°

CORE RECOVERY: 98%

LOGGED BY: NJF/PJM

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
0	1.83	OVERBURDEN	2.53m	3.20m		0.110	0.2		
1.83	20.73	TUFF PEAK FORMATION - ALTERED ANDESITE FLOW BRECCIA (Plagioclase-Hornblende-Biotite porphyritic) Rock is moderately brecciated, breccia fragments to 10%. Pervasive propylitic alteration groundmass and mafics turned to chlorite, plagioclase orange or pink due to hematite. Carbonate in groundmass, mafics and as carbonate-quartz veinlets. Traces of disseminated hematite and magnetite. Disseminated pyrite to .1%. Trace galena in quartz-carbonate veinlets. (max 1cm)	3.30m	4.57m		0.005	0.3		
			4.57m	5.30m		0.005	0.1		
			5.30m	6.30m		"	0.2		
			6.30m	7.30m		"	0.1		
			7.30m	8.30m		"	0.1		
			8.30m	9.30m		0.035	0.3		
			9.30m	10.30m		0.005	0.1		
			10.30m	11.30m		"	0.1		
			11.30m	12.30m		0.070	0.3		
			12.30m	13.30m		0.060	0.2		
		Gouge 18.44-18.64m, 18.88-18.92m, 19.40-19.54m	13.30m	14.30m		0.005	0.1		
		20.50-20.73m	14.30m	15.30m		0.045	0.3		
			15.30m	16.30m		0.080	0.7		
			16.30m	17.30m		0.030	0.3		
			17.30m	18.10m		0.380	11.2		
			18.10m	18.72m		0.040	0.3		
			18.72m	19.22m		0.140	0.2		
			19.22m	19.72m		0.010	0.2		
			19.72m	20.25m		"	0.4		
			20.25m	20.73m		1.40	6.1		
20.73	61.87	McLair CREEK FORMATION - altered andesite flow (plagioclase-Hornblende-Biotite porphyritic) Rock is pervasively propylitically altered. Moderate brecciation and silicification 21.80-22.45m, 25.25-26.45m.	20.73m	21.40m		3.40	1.7		
			21.40m	21.80m		2.10	3.2		
			21.80m	22.55m		3.40	1.1		
			22.55m	23.20m		1.40	0.1		

SUMMARY DRILL HOLE LOG

J84-1

SHEET NO 2 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
20.73	61.87	(Continued) Quartz-carbonate veinlets average 300 to core perpendicular. Chloritization of groundmass + mafics carbonate development within groundmass, mafics, plagioclase, and veinlets. Flow breccia, 50.70-51.30m, 56.50-57.10m					
	23.20-25.45m	visible gold, small blebs in diffuse quartz veinlets + minor carbonate. Interval has a higher degree of groundmass silicification + preferential silicification of fragments. Carbonate veinlets contain minor galena-sphalerite + chalcopyrite disseminations no gold was noted.	23.20	23.70	61.60		1.3
			23.70	24.45	197.30		2.3
			24.45	25.45	26.20		0.5
			25.45	25.90	1.30		2.0
			25.90	26.45		0.820	8.2
			26.45	27.45		0.710	0.3
			27.45	28.45		0.005	1.0
	37.75-37.90m	Brecciated core, quartz-carbonate veinlets	28.45	29.45		0.470	1.0
			29.45	30.45		0.095	1.0
	39.50-39.70m	" " "	30.45	31.45		0.020	1.0
			31.45	32.45		0.020	1.0
	45.30-57.00m	disseminated pyrite in matrix and in qtz-carbonate veinlets to 2.5%, Chalcopyrite, galena-sphalerite in qtz-carbonate veinlets 0.1-0.3%	32.45	33.45		0.050	1.0
			33.45	34.45	1.45		0.7
			34.45	35.45		0.015	0.1
			35.45	36.45		0.005	-
	48.20-49.00m	pervasive silicification 70% SiO2 disseminated pyrite 2.5%	36.45	37.45		0.420	1.9
			37.45	38.45		0.350	1.5
			38.45	39.45		0.560	0.4
			39.45	40.45	1.00		0.7
			40.45	41.45		0.040	0.1
			41.45	42.45		0.030	0.1
			42.45	43.45		0.040	0.1
			43.45	44.45	1.20		2.5
			44.45	45.45		0.510	1.7
			45.45	46.45		0.150	0.4
			46.45	47.45		0.030	0.1
			47.45	47.95		0.020	0.1

SUMMARY DRILL HOLE LOG

J84-1

SHEET No 3 of 3

INTERVAL		GEOLOGY	ASSAYS <small>(metres)</small>		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
47.95	61.87	Continued	47.95	48.45		0.170	2.3		
			48.45	48.95		0.150	1.5		
			48.95	49.46		0.430	0.4		
			49.40	49.87		0.001	0.8		
			49.87	50.87		0.200	0.1		
			50.87	51.87		0.40	0.1		
			51.87	52.87		0.040	0.1		
			52.87	53.87		0.025	0.1		
			53.87	54.87		0.020	0.1		
			54.87	55.87		0.020	0.1		
			55.87	56.87		0.440	0.6		
			56.87	57.87		0.015	0.1		
			57.87	58.87		0.210	0.1		
			58.87	59.87		0.130	0.1		
			59.87	60.87		0.075	0.1		
		- END -	60.87	61.87		0.015	0.1		

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. J84-2 PAGE No. 1

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: _____
 SIZE: N.G.

PROPERTY: JD(04)-GASP ZONE
 DATE: July 3-4, 1984

DEPTH	AZIM	DIP
41.76m	210°	-42.5°

CORE RECOVERY: 98%
 LOGGED BY: PJM

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
00	6.40	OVERBURDEN							
6.40	41.76	McCLAIR CREEK ANDESITE FLOW - porphyritic 40% phenos. (Plagioclase, Hornblende, trace biotite) Rock is moderately propylitized and weakly brecciated Quartz-carbonate veinlets randomly distributed at or near 35° and 90° to core perpendicular. Bedding defined by small ash lenses near 40° to core perpendicular. Sulphides in qtz-carbonate veinlets 12.50-21.90 m.							
7.00	10.10	Argillic zone - 60% clay pervasive, weak brecciation 10% pervasive silicification, manganese stain + trace disseminated pyrite	7.00	7.60	0.120	0.7			
			7.60	8.10	0.130	1.2			
			8.10	8.60	1.050	0.4			
			8.60	9.10	0.210	0.4			
			9.10	9.60	0.470	0.3			
			9.60	10.10	0.380	0.1			
			10.10	10.65	0.160	0.4			
			10.65	11.10	0.080	0.1			
			11.10	12.10	0.140	0.5			
12.50	21.90	Quartz-carbonate veining - 1% pyrite, disseminated in veinlets, 0.1% galena, trace sphalerite 1 speck of native gold - Stockwork zone - to 40% qtz-carbonate veining	12.10	13.00	0.050	0.3			
			13.00	13.10	0.400	0.2			
			13.10	13.68	0.100	0.2			
			13.68	14.20	0.050	0.4			
			14.20	14.40	0.000	0.0			

SUMMARY DRILL HOLE LOG

J84-2

SHEET NO 2 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
12.50	21.90	Continued.	14.90	16.15	1.30		1.1
			16.15	16.55	15.10		0.9
			16.55	16.90	3.60		1.6
			16.90	17.13	7.20		1.3
			17.13	17.52		0.650	1.5
			17.52	18.02		0.400	0.4
			18.02	18.52		0.600	0.7
			18.52	19.02		0.500	1.8
			19.02	19.52		0.200	0.9
			19.52	20.02		0.400	1.5
			20.02	20.52		0.400	5.2
			20.52	21.02	4.00		3.5
			21.02	21.52		0.700	2.3
			21.52	21.90		0.500	2.0
			21.90	22.90		0.060	0.7
			22.90	23.90		0.130	0.7
			23.90	24.90		0.050	0.8
			24.90	25.90		0.160	0.6
			25.90	26.90		0.750	0.6
			26.90	28.10		0.120	0.4
28.10	29.65	Basalt Dykes- amygdaloidal basalt, carbonate fills amygdalules upper contact 30° to core perpendicular cut by barren	28.10	29.65		0.200	0.6
		Qtz-carbonate veinlets - contact of dyke is gradational.	29.65	30.27		0.100	0.5
30.27	30.43		30.27	30.43		0.025	0.1
			30.43	31.43		0.040	0.1
			31.43	32.43		0.005	0.1
			32.43	33.43		0.110	0.1
			33.43	34.43		0.005	0.1
			34.43	35.28		0.005	0.1
35.28	35.38	Basalt dyke - upper contact 30°, lower 40° to core perpend.	35.28	35.79		0.160	0.1
35.79	36.83	Basalt dyke - upper contact 20°, lower 50° to core perpend.	35.79	36.83		0.045	0.2
37.2	37.3	-fine grained ash layer bedding, 40° to core perpendicular	36.83	37.15		0.005	0.1
38.15	38.97	Basalt dyke - upper contact 20°, lower 15° to core perpend.	38.15	38.97		0.005	0.1

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. J84-3 PAGE No. 1

HOLE START: _____

HOLE FINISH: _____

DEPTH: _____

SIZE: NQ

PROPERTY: JD(CA) GASP ZONE

DATE: July 4-5, 1984

DEPTH	AZIM.	DIP
41.75m	210°	-66.5

CORE RECOVERY: 98%

LOGGED BY: IGS/PJM

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm		
ROM	TO		FROM	TO					
0.00	3.05	OVERBURDEN							
3.05	10.22	McCLAIR CREEK FORMATION - altered andesite flow porphyritic, 50% phenocrysts. (Plagioclase, hornblende xenoliths - 0.1% Rock is moderately propylitized chlorite to 5% in groundmass and mafics, mafic phenocrysts and plagioclase hematized. Quartz-carbonate veinlets 0.1% oriented 30° and 70° to core perpendicular. pyrite disseminated in groundmass and Qtz-carbonate veinlets average 1.0% Chalcopyrite galena & sphalerite average 0.1% disseminated in Qtz-carbonate veinlets	3.05	4.05		0.560	26.5		
			4.05	5.05		0.210	0.1		
			5.05	6.05		0.240	0.1		
			6.05	7.00		0.070	0.1		
			7.00	8.00		0.130	0.1		
			8.00	9.00	3.00		0.9		
			9.00	10.25		0.300	0.9		
10.22	10.52	Breccia - moderate intensity - mottled color due to patchy hematite (± quartz) replacement, plagioclase hematized.	10.25	10.52	4.70		15.9		
10.52	13.45	Andesite flow as above	10.52	11.52		0.980	9.0		
			11.52	12.52		0.190	0.3		
			12.52	13.52		0.590	1.0		
13.45	13.80	Breccia - weak intensity - hematite patches in Qtz-calcite veinlets to 0.1% - carbonate in veinlets and plagioclase replacement chlorite - 2.5% in groundmass and mafic phenocrysts	13.52	13.81		0.160	0.5		
13.80	16.63	Andesite flow as above	13.81	14.81		0.210	0.6		
			14.81	15.81		0.130	0.9		
			15.81	17.10		0.600	2.0		

SUMMARY DRILL HOLE LOG

J84-3

SHEET No 2 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
16.63	17.65	CRACKLE-BRECCIA - moderate intensity - quartz calcite infilling to 20%. Quartz-calcite veinlets 70° to core perpendicular. disseminated pyrite, 0.3% chalcopryite, galena, sphalerite disseminated in veinlets to 1%	17.10	17.63	2.40		2.2
17.65	19.97	Andesite Flow as above	17.63	18.63		0.300	0.5
			18.63	19.63		0.050	0.1
			19.63	19.97		0.100	0.5
19.97	23.32	Crackle breccia - quartz, calcite, chlorite breccia filling pyrite 2.5% disseminated, in groundmass, replacing mafic phenocrysts, and in veinlets. Chalcopryite galena and sphalerite average 0.3%, in veinlets with Qtz-calcite	19.97	20.20		0.100	2.2
			20.20	20.70		0.200	1.1
			20.70	21.20		0.100	3.1
			21.20	21.70		1.00	5.8
			21.70	22.70		0.300	3.0
			22.70	22.70		0.300	1.4
			22.70	23.32		0.400	0.9
			23.32	23.80		0.250	0.2
23.79	24.56	Silicification to 50% clays - 40% in groundmass, mafic phenocrysts and veinlets Hematite dissem in groundmass, pyrite chlorite veinlets to 0.3%. galena, sphalerite in veinlets to 0.1%	23.80	24.57	3.00		1.7
24.56	26.15	Andesite Flow - as above	24.57	25.57	2.00		2.2
			25.57	26.15		0.300	1.6
26.15	41.75	Andesite Flow - as above - plagioclase is saussuritized Qtz-calcite veinlets 25° + 40° to core perpendicular chlorite to 2.5% in groundmass and mafic phenos. Hematite in plagioclase and veinlets. Disseminated pyrite average 1.9% traces of chalcopryite and galena in quartz-carbonate veinlets.	26.15	27.15		0.120	1.4
			27.15	28.15		0.065	0.4
			28.15	29.15		0.120	0.3
			29.15	30.15		0.120	0.4
			30.15	31.30		0.200	0.8

SUMMARY DRILL HOLE LOG

J84-3

SHEET No 3 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
31.30	31.68	Breccia - moderate intensity, upper margin of basalt dyke, assimilation 5% breccia matrix quartz-carbonate. upper contact 40° to core perpendic. 1% pervasive carbonate, Py disseminated and in veinlets average 0.3% Galena average 0.3% in veinlets	31.30	31.68	2.10		0.8
31.68	31.94	Basalt dyke - amygdaloidal (0.3%) pervasive Carbonate average 2.5%	31.68	31.94		0.170	0.6
31.94	32.50	Breccia - moderate intensity - lower contact of basalt dyke - 50° to core perpendicular. 1% clay in gouge, Py dissem and in veinlets. galena (0.3%) in qtz-carbonate veinlets.	31.94	32.50		0.260	0.5
32.50	33.63	Andesite flow - as above	32.50	33.44		0.130	0.4
			33.44	34.44		0.510	2.7
			34.44	35.40		0.270	1.3
			35.40	36.34		0.070	0.2
36.44	36.58	Qtz-carbonate barite vein	36.34	36.71		0.020	0.2
			36.71	37.71		0.050	0.1
			37.71	38.71		0.050	0.1
38.63	38.74	Basalt dyke - upper contact 40° lower contact 30° to core perpendicular	38.71	39.71		0.100	0.5
38.93	39.05	Basalt dyke - upper contact 60°, lower 50° to core perpendic.	39.71	40.71		0.050	0.2
			40.71	41.76		0.060	0.1
39.30	39.37	Basalt dyke - upper contact 40°, lower 30° to core perp.					
		- END -					

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. PAGE No.
 J84-4 1

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: _____
 SIZE: NØ

PROPERTY: JD(OA) GUMBO ZONE
 DATE: July 24-25, 1984

DEPTH	AZIM	DIP
47.24m	032°	-65°

CORE RECOVERY: 98%
 LOGGED BY: PJK

INTERVAL (Meters)		GEOLOGY	ASSAYS (Meters)		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
0.00	3.05	OVERBURDEN							
3.05	27.05	TUFT PEAK FORMATION - Andesitic flow breccia - porphyritic (Plagioclase, Hornblende, trace biotite) 30% breccia fragments Rock is propylitically altered. Silica content 30% in groundmass, 0.1% chlorite in groundmass and mafics. 2.5% carbonate pervasively developed + in veinlets, trace disseminated magnetite, Hematite (0.3%) in groundmass, mafics and plagioclase replacement. disseminated Pyrite (0.1%). Veinlet Composition 2 types Carbonate > Qtz, Qtz > Carbonate. Rubby and broken core - limonite, manganese staining, 22.46 m to 27.05 m - intermittently sheared, and slickensides.	3.05	4.00	0.005	0.3			
			4.00	5.00	0.010	0.5			
			5.00	6.00	0.010	0.4			
			6.00	7.00	0.005	0.1			
			7.00	8.00	0.005	0.1			
			8.00	9.00	0.020	0.1			
			9.00	10.00	0.060	0.1			
			10.00	11.00	0.030	0.3			
			11.00	12.00	0.070	0.7			
			12.00	13.00	0.090	0.8			
			13.00	14.00	0.070	0.7			
			14.00	15.00	0.040	0.6			
			15.00	16.00	0.015	0.4			
			16.00	17.00	0.005	0.1			
			17.00	18.00	0.010	0.1			
			18.00	19.00	0.000	0.1			
			19.00	20.00	0.010	0.3			
			20.00	21.00	0.010	0.1			
			21.00	22.00	0.000	0.1			
			22.00	23.00	0.000	0.2			
			23.00	24.00	0.040	0.1			
			24.00	25.00	0.030	0.9			
			25.00	26.00	0.025	1.1			
			26.00	27.00	0.020	0.1			

SUMMARY DRILL HOLE LOG

J84-4

SHEET NO 2 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
27.05	28.40	Sheared section - gouge and clay seams lower .3m of section strongly sheared pervasive silicification and clay developed in lower section.	27.00	28.00		8.050	0.5
			28.00	28.40		0.600	0.5
28.40	47.24	McCLAIR CREEK FORMATION - Porphyritic andesite flow - (plagioclase hornblende) Rocks propylitized 10% chlorite in groundmass and mafic, pervasive carbonate (1.9%) Hematite replaces plagioclase and occurs in veinlets Silica content average 30% in groundmass and veinlets. Pyrite disseminated (0.3%) Quartz-carbonate veinlets 45° to core perpendicular.					
28.40	29.85	Silicified section - silica pervasive (80%), clay in small gouge seams (5%) chlorite (5%), carbonate (25%) Pyrite disseminated (5%) Chalkopyrite, galena Sphalerite disseminated and veinlets. Two veining types Calcite > Qtz, Qtz > Calcite numerous clay-gouge seams 20-40° to core perpendicular	28.40	29.00	25.60		15.5
			29.00	29.50	12.40		16.0
			29.50	29.85	0.700		0.5
29.85	31.20	Porphyritic andesite flow - as above Silica - 40% in groundmass + veinlets trace galena sphalerite in veinlets	29.85	30.35		6.050	0.7
			30.35	30.55		0.050	1.2
			30.55	30.90		0.150	0.9
31.20	34.20	Porphyritic andesite flow - as above	30.90	31.23	6.00		2.1
			31.23	32.00		0.100	0.3
			32.00	33.00		0.040	0.1
			33.00	34.00	0.600		0.5
34.20	35.80	Breccia - numerous clay filled fractures,	34.00	35.00		0.060	0.1
			35.00	36.00		0.045	0.1

SUMMARY DRILL HOLE LOG

J84-4

SHEET NO 3 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
35.80	40.95	Porphyritic Andesite flow - as above	36.00	37.00	3.80		0.9
		disseminated pyrite (0.3%) trace galena	37.00	38.00		0.110	<0.1
		sphalerite in veinlets	38.00	39.00		0.030	0.1
			39.00	40.00		0.060	0.1
			40.00	40.95		0.050	0.1
40.95	41.90	Weak Breccia - silicification (70%), clay gouge	40.95	41.50	0.700		1.4
		(5cm) at 41.30m Qtz-carbonate breccia filling	41.50	41.90		0.250	1.8
		upper contact 10°, lower 20° to core perpendicular.					
		pyrite flooding (5%) trace galena + sphalerite					
41.90	47.20	Porphyritic andesite flow - as above	41.90	43.00		0.010	0.1
			43.00	44.00		0.005	<0.1
			44.00	45.00		0.020	0.1
			45.00	46.00		<0.005	<0.1
			46.00	47.24		<0.005	<0.1
		- END -					

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. J84-5 PAGE No. 1

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: _____
 SIZE: N.G.

PROPERTY: JD(04) GUMBO ZONE
 DATE: July 26-27, 1984

DEPTH	AZIM.	DIP
66.83m	141°	-44°

CORE RECOVERY: 97%
 LOGGED BY: PJM, IGS

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
0.00	3.66	OVERBURDEN							
3.66	22.96	TUFF PEAK FORMATION - Andesite flow breccia porphyritic (plagioclase, hornblende trace biotite) Weakly brecciated. Rock is propylitically altered 10% chlorite in groundmass, mafics and veinlets 0.3% carbonate plagioclase replacement and veinlets Hematite (0.1%) - plagioclase replacement 0.1% disseminated pyrite, Qtz-carbonate veinlets out interval. average orientation 60° to core perpend.	4.5	5.5	<0.005	<0.1			
			5.5	6.5	<0.005	<0.1			
			6.5	7.5	<0.005	0.1			
			7.5	8.5	<0.005	<0.1			
			8.5	9.5	<0.005	<0.1			
			9.5	10.5	<0.005	<0.1			
			10.5	11.5	0.005	<0.1			
			11.5	12.5	0.010	0.1			
			12.5	13.5	<0.005	<0.1			
			13.5	14.5	0.005	0.1			
			14.5	15.5	0.010	0.4			
			15.5	16.5	<0.050	0.3			
			16.5	17.5	<0.050	0.7			
			17.5	18.0	<0.050	0.7			
18.50	22.96	Andesite flow breccia - as above - silicified - 70% Silica in groundmass and veinlets chlorite 1% trace limonite on fractures Disseminated Pyrite 5% Chalcopyrite disseminated up to 1% Galena, Sphalerite disseminated and in veinlets. Quartz-calcite veinlets Quartz flooding + veinlets Pyrite replaces mafics base metals concentrated 20.75-20.70m, 22.96-23.95 Clay gouge 22.55-22.96m.	18.0	18.5	<0.050	0.4			
			18.5	19.0	0.150	0.4			
			19.0	19.5	0.050	0.5			
			19.5	20.0	0.150	1.2			
			20.0	20.25	0.150	0.9			
			20.25	20.75	0.400	3.0			
			20.75	21.25	0.250	1.3			
			21.25	21.75	0.050	0.3			
			21.75	22.25	0.050	0.3			
			22.25	22.55	0.050	0.3			
			22.55	22.96	0.150	0.3			

SUMMARY DRILL HOLE LOG

J84-5

SHEET NO 2 of 4

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
22.96	66.83	McCLAIR CREEK FORMATION - Porphyritic Andesite flow (plagioclase, hornblende) 20% phenocrysts. Silica 30%, Chlorite 5% in groundmass, mafics 0.3% Carbonate in plagioclase as replacement and veinlets. Hematite to 1% replacing plagioclase and in veinlets, 1% Pyrite disseminated + replacing mafics. Quartz-carbonate veinlets cut interval 50° and 00° to core perpendicular.							
22.96	26.56	Silicified weakly brecciated porphyritic andesite 80% SiO ₂ in groundmass + veinlets clay seams 1% 10% dissem. Pyrite in groundmass and mafics Chalcopyrite, galena, sphalerite disseminated + veinlets 0.1 - 0.3%	22.96	23.46	2.40		7.0		
			23.46	23.85	2.15		24.0		
			23.85	24.35	0.250		1.7		
			24.35	24.85	0.100		0.3		
			24.85	25.35	0.600		3.8		
			25.35	25.85	0.600		5.2		
			25.85	26.35	1.00		4.6		
		26.35	26.56	2.65		11.7			
26.56	37.10	Silicified porphyritic andesite - 50% SiO ₂ , 5% chlorite in groundmass + mafics trace limonite in fractures. Quartz flocding with pyrite to 2.5% occasional stringers of hematite, pink calcite due to Hem, trace visible base metals, disseminated + veinlets	26.56	27.35	0.600		1.2		
			27.35	27.85	1.45		0.5		
			27.85	28.35	1.05		2.9		
			28.35	28.85	1.05		1.1		
			28.85	29.35	2.00		0.2		
			29.35	29.85	1.60		3.2		
			29.85	30.35	2.53		1.9		
			30.35	30.85	1.70		8.0		
			30.85	31.35	0.530		3.5		
			31.35	31.85	0.150		0.1		
		31.85	32.35	1.23		0.1			
		32.35	32.85	0.900		0.3			
		32.85	33.35	0.950		0.2			
		33.35	33.85	2.07		0.2			
		33.85	34.35	0.250		0.1			

SUMMARY DRILL HOLE LOG

J84-5

SHEET No 3 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm	
FROM	TO		FROM	TO				
37.10	46.28	Silicified porphyritic andesite as above 50% SiO ₂ locally weak brecciation (Crackle) with qtz-calcite infilling. 2.5% Pyrite disseminated. Chalkopyrite galena, sphalerite 0.1-0.3% in qtz-calcite veinlets.	34.35	34.85	7.35		0.3	
			34.85	35.35	0.400		0.2	
			35.35	35.85		0.170	0.6	
			35.85	36.35		0.140	0.8	
			36.35	36.85	1.90		1.1	
			36.85	37.35		0.450	0.6	
			37.35	37.85	2.30		3.4	
			37.85	38.35	4.00		1.2	
			38.35	38.85	1.40		2.7	
			38.85	39.35		0.510	4.2	
			39.35	39.85	1.20		4.0	
			39.85	40.35		0.280	1.5	
			40.35	40.85		0.320	4.1	
			40.85	41.35		0.220	1.0	
			41.35	41.85		0.600	5.2	
			41.85	42.35		0.090	1.5	
			42.35	42.85	3.20		0.3	
		42.85	43.35		0.830	0.5		
		43.35	43.85	0.45		0.8		
		43.85	44.35		0.460	0.7		
		44.35	44.85		0.120	0.4		
		44.85	45.35		0.020	0.1		
		45.35	45.85		0.240	0.4		
		45.85	46.35		0.060	0.1		
46.28	47.75	Porphyritic andesite - as above	46.35	46.85	6.650	0.1		
			46.85	47.35	0.040	0.1		
47.75	47.95	Silicified porphyritic andesite - 10% disseminated Pyrite	47.35	47.85	0.100	0.4		
			47.85	48.35	0.070	0.3		
47.95	55.56	Silicified porphyritic andesite, moderately brecciated (Crackle) breccia filling of quartz-calcite clay selvages on fractures, trace sericite vein selvages. Chalkopyrite 5% groundmass, mafic and veinlets 2.5% pyrite disseminated	48.35	48.85	0.005	0.3		
			48.85	49.30		0.080	0.1	
			49.30	50.00		0.460	0.3	
			50.00	50.50		0.090	0.1	

SUMMARY DRILL HOLE LOG

J84-5

SHEET NO 4 of 4

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
47.95	55.56	(continued) - in groundmass and and veinlets	50.50	51.00		0.810	<0.1
		qtz-calcite veinlets 40° & 30° to core perpendicular	51.00	51.50		0.480	0.2
		galena, sphalerite disseminated in qtz-calcite veinlets	51.50	52.00		0.600	0.3
		0.1%	52.00	52.50	3.70		1.9
			52.50	53.00		0.420	0.3
			53.00	53.50		0.200	1.0
			53.50	54.00	1.00		0.2
			54.00	54.50		0.350	0.7
			54.50	55.00		0.260	1.2
			55.00	55.50		0.110	<0.1
55.56	56.05	Fault - core intensely fractured 10% clay, limonite on fractures	55.50	56.00		0.740	<0.1
			56.00	56.50		0.130	0.3
			56.50	57.00		0.080	0.2
56.20	56.43	Fault - .6cm clay gouge at bottom of interval	57.00	57.50		<0.005	<0.1
			57.50	58.00		<0.005	<0.1
56.43	66.83	Porphyritic andesite - as above 10% qtz-calcite veinlets, 0.1% pyrite in mafics and disseminated trace galena, sphalerite disseminated in qtz-calcite veinlets	58.00	58.45		0.290	0.1
			58.45	59.00		0.730	0.2
			59.00	59.50		0.140	<0.1
			59.50	60.00		0.005	<0.1
			60.00	60.50		<0.005	<0.1
			60.50	61.00		<0.005	<0.1
			61.00	62.00		<0.005	<0.1
			62.00	63.00		0.040	<0.1
			63.00	64.00		0.430	1.2
			64.00	65.00		0.170	<0.1
			65.00	66.00		0.230	0.1
		- END -	66.00	66.83		0.530	0.7

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. J84-6 PAGE No. 1

HOLE START: _____

HOLE FINISH: _____

DEPTH: _____

SIZE: N. &

PROPERTY: JD(04) GUMBO ZONE

DATE: July 26-27, 1984

DEPTH	AZIM.	DIP
38.1m	212°	-65°

CORE RECOVERY: 96%

LOGGED BY: PJM

INTERVAL (metres)	GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm		
		FROM	TO					
0.00	6.10	OVERBURDEN	6.52	7.50	<0.005	<0.1		
6.10	22.56	TUFF PEAK FORMATION - Andesite flow breccia - porphyritic (plagioclase, hornblende, trace biotite) breccia fragments 40% interval is cut by qtz-carbonate or carbonate-qtz veinlets. Rock is propylitically altered and exhibits erratic preferential groundmass silicification hematite to 2.5% in groundmass replacing plagioclase phenocrysts and in qtz-calcite veinlets. Pyrite is disseminated + replaces mafics 0.3-5% Galena-sphalerite disseminated 0.1-0.3% in qtz-calcite, calcite-qtz veinlets & SiO ₂ flooded zones. Chalcopyrite trace, dissem. base metals in veinlets, 17.5, 18.3m Fault - 16.22 - 17.10m Fault - 20.84 - 21.04m gouge 10% 60° to core perp. chloritic shears Gouge - 21.68 - 22.13 m. trace chalcopyrite	7.50	8.50	<0.005	<0.1		
			8.50	9.50	<0.005	0.1		
			9.50	10.50	<0.005	0.1		
			10.50	11.50	<0.005	0.2		
			11.50	12.00	0.040	0.2		
			12.00	13.00	0.005	0.1		
			13.00	14.00	<0.005	0.2		
			14.00	15.00	0.010	0.1		
			15.00	16.00	0.020	0.1		
			16.00	17.10	0.035	0.1		
			17.10	18.10	0.080	0.2		
			18.10	18.60	0.050	0.4		
			18.60	19.10	0.050	0.4		
			19.10	20.10	0.080	0.5		
			20.10	21.10	0.070	0.5		
			21.10	21.66	0.030	1.3		
2.56	38.10	MCCLAIR CREEK FORMATION - Porphyritic andesite flow. (plagioclase) Rock is propylitically altered 10% chlorite in groundmass + mafics, calcite - pervasively developed (0.3%), Patchy hematite development, Dissem. Pyrite - 0.3% trace disseminated chalcopyrite, galena sphalerite, qtz-calcite & calcite-qtz veinlets ~ 10% of interval. qtz-calcite veinlets - 00° to core perpend. calcite-qtz veinlets - 50° to core perpend.	21.66	22.13	0.050	0.3		
			22.13	22.46	8.40	2.4		

SUMMARY DRILL HOLE LOG

J84-6

SHEET NO 2 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
22.56	23.80	Silicified andesite flow - moderate brecciation (crackle) SiO ₂ 70-80% irregular open space filling by quartz, and calcite. Very fine grained pyrite (5%) accompanies groundmass silicification, calcite 2.5-10% in veinlets chalcopyrite (to 5%) galena, sphalerite 2.5% in veinlets and as disseminations. 22.86-23.22m interval is sheared clay gouge 10% near bottom of interval.	22.46	22.90	11.30		20.4
			22.90	23.50	2.90		14.3
			23.50	23.80	1.85		10.2
23.80	23.95	Fault - trace galena, sphalerite disseminated in Qtz- calcite veinlets.	23.80	24.10		0.430	3.6
23.95	26.05	Silicified andesite flow - SiO ₂ 60-70% weak to moderate crackle brecciation, Qtz-calcite, calcite-Qtz veining Pyrite 2.5% galena, chalcopyrite, sphalerite 0.1-0.3% in veinlets Trace Gold in Qtz-calcite veinlets 24.90-25.10 m Fault 24.50-24.80 m	24.10	24.60		0.820	2.6
			24.60	25.10	12.10		14.0
			25.10	25.60	3.60		3.0
			25.60	25.90	4.60		2.3
			25.90	26.11	48.10		1.9
26.05	28.90	Porphyritic andesite flow - as above	26.11	26.61	1.20		1.9
			26.61	27.11	1.40		4.9
			27.11	27.61		0.360	0.8
			27.61	28.11		0.050	<0.1
			28.11	29.10		0.110	1.0
28.90	29.60	Silicified porphyritic andesite flow - weakly silicified weak crackle breccia Hematite + Qtz flooding locally upper contact 30°, lower 40° to core perpendicular.	29.10	29.60		0.060	0.1
29.60	38.10	Porphyritic andesite flow - as above gradual decrease in propylitic alteration intensity	29.60	30.10		0.160	0.3
			30.10	30.60		<0.005	0.2
			30.60	31.10		0.020	0.2
			31.10	31.85		<0.005	0.1
			31.85	32.35		0.080	1.0
			32.35	32.85	3.10		1.8
		32.85	33.85		0.240	0.2	

SUMMARY DRILL HOLE LOG

J84-6

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
29.60	38.10	(continued)	33.85	34.85	< 0.005	0.2	
			34.85	35.85	0.040	0.1	
			35.85	36.85	0.070	0.5	
		- END -	36.85	38.10	0.030	0.4	

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. J84-7 PAGE No. 1

HOLE START: _____

HOLE FINISH: _____

DEPTH: _____

SIZE: N.Q.

PROPERTY: JD(04)GUMBO ZONE

DATE: July 27, 1984

DEPTH	AZIM.	DIP
38.71m	212°	-65°

CORE RECOVERY: 98%

LOGGED BY: N.v.F.

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm		
DM	TO		FROM	TO					
00	3.66	OVERBURDEN	4.85	5.85	60.05		0.3		
36	27.12	TUFF PEAK FORMATION - Andesite flow breccia porphyritic (plagioclase, hornblende, trace biotite) moderate brecciation. ~ 30% SiO ₂ , 10% Chlorite groundmass + mafics, 2.5% carbonate in plagioclase as replacement in groundmass + as veinlets. Trace dissemin. Magnetite hematite in plagioclase, mafics + disseminations Disseminated pyrite 0.3% - 2.5% propylitic alteration is moderate, with random patches of groundmass Silicification. Carbonate-qtz & qtz-carbonate veinlets 30-50° to core perpendicular. minor 0.1-1.0% galena, sphalerite disseminated in qtz-carbonate, carbonate-qtz veinlets, confined to intervals 15.90-16.97m, 17.37-18.37m, 18.67-20.42m. Towards bottom of interval silicification and brecciation increase	5.85	6.85		0.010	0.9		
			6.85	7.85		0.025	1.3		
			7.85	8.85		0.010	0.9		
			8.85	9.45		0.010	1.8		
			9.45	10.45		0.010	0.7		
			10.45	11.45		<0.005	0.5		
			11.45	12.45		0.010	1.7		
			12.45	13.45		0.010	1.2		
			13.45	14.45		<0.005	0.8		
			14.45	15.45		<0.005	0.5		
			15.45	15.95		0.050	4.7		
			15.95	16.45		0.090	6.1		
			16.45	17.47		0.070	8.2		
			17.47	17.95		0.030	3.0		
			17.95	18.45		0.040	2.4		
			18.45	18.95		0.030	2.4		
			18.95	19.45		0.020	1.3		
			19.45	19.95		0.005	6.5		
			19.95	20.45		0.005	0.5		
			20.45	20.75		0.160	2.9		
			20.75	21.75		0.020	1.0		
			21.75	22.75		0.010	0.6		
			22.75	23.75		0.030	0.5		
			23.75	24.40		0.040	0.8		
			24.40	24.59		0.410	1.6		
			24.59	25.36		0.310	0.7		

SUMMARY DRILL HOLE LOG 384-7

SHEET No 2 of 2

INTERVAL (metres)		GEOLOGY	ASSAYS (metres)		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
3.66	27.12	(continued)	25.30	25.80		0.480	0.9
			25.80	26.30		0.080	1.0
			26.30	27.12	3.40		1.5
27.12	38.71	Mc CLAIR CREEK FORMATION - Porphyritic andesite flow phenocrysts to 50% (plagioclase, hornblende The rock is propylitically altered $SiO_2 \approx 30\%$ chlorite 10% in groundmass and mafics, carbonate 0.1% in veinlets and replacing plagioclase, mafics hematite trace replacing plagioclase Pyrite disseminated 2.5% average. Top of interval (27.52-28.40m) strongly silicified and brecciated. qtz-carbonate, carbonate-qtz veinlets cut core + infill crackle breccia Carbonate-qtz - 50°, qtz-carbonate 20° to C.P. gouge - 27.12-27.52 m, $\approx 10^\circ$ to core perpendicular trace galena, sphalerite, chalcopyrite in qtz-carbonate veinlets Fracturing in interval 10-45° to core perpendicular	27.12	27.60	1.80		33.0
			27.60	28.10	1.70		17.8
			28.10	28.50		0.390	6.2
			28.50	28.90		0.480	7.4
			28.90	29.40	1.70		6.1
			29.40	29.90		0.040	1.1
			29.90	30.90		0.060	2.2
			30.90	31.90		0.190	7.7
			31.90	32.90		0.080	2.6
			32.90	33.90		0.380	1.6
			33.90	34.90		0.90	2.9
			34.90	35.90		0.030	2.0
			35.90	36.90		0.020	0.6
			36.90	37.90		0.010	0.1
			37.90	38.71		0.630	2.1
		- END -					