

84-1447-13198

**1984 ASSESSMENT REPORT ON
TRENCHING AND DIAMOND DRILLING**

by
Ian G. Sutherland

on the
Al 3 Mineral Claims

situated north of Metsantan Lake
in the Liard Mining Division

57°28'N, 127°24'W
NTS 94E/6W

owned by
KIDD CREEK MINES LTD.

work by
KIDD CREEK MINES LTD.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

February, 1985

13,198

Vancouver, B.C.

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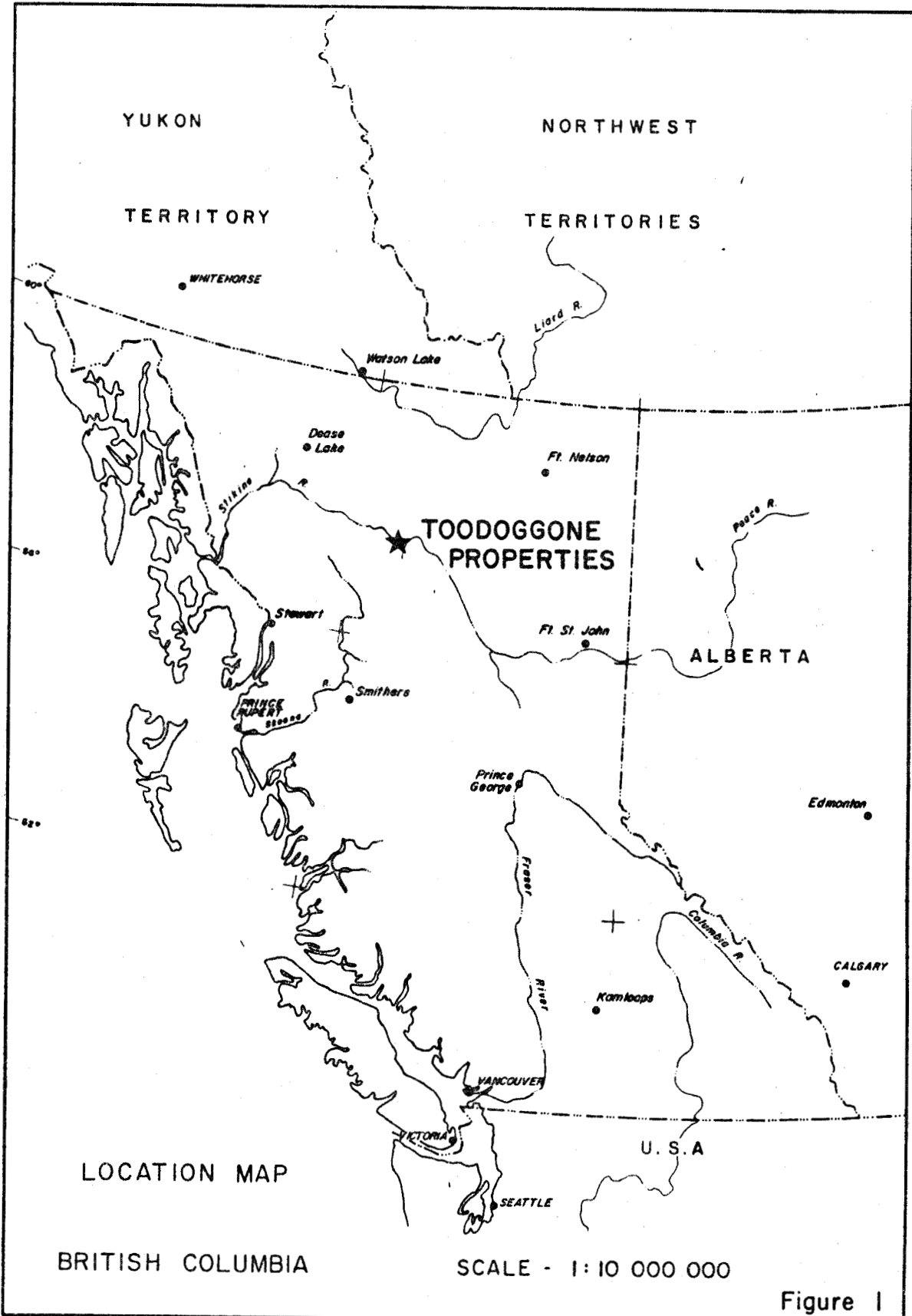
INTRODUCTION

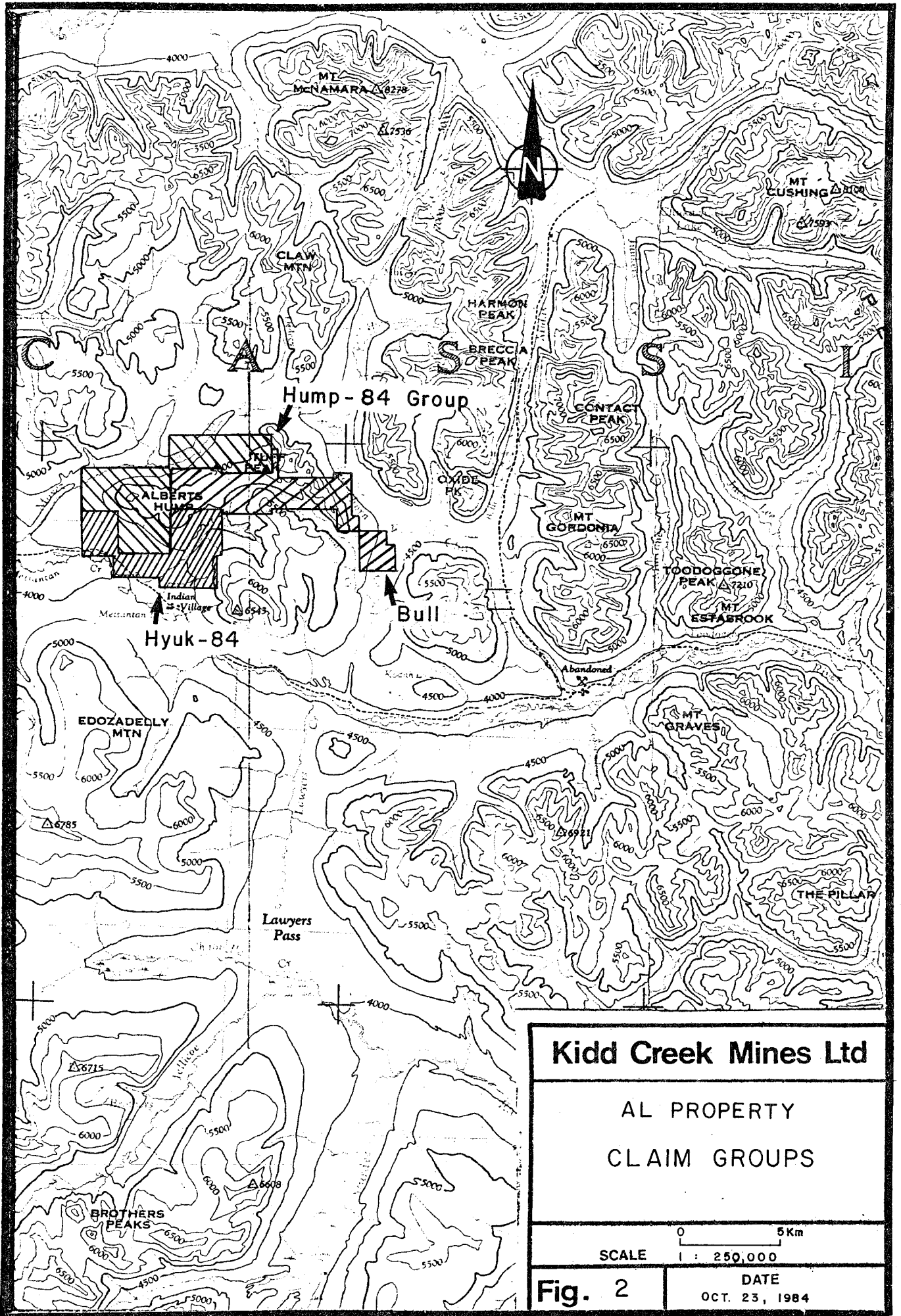
Location, Access and Terrain

The A1 property is located in north-central British Columbia at 127°24'W and 57°28'N, within the area of NTS 94E/6W (Figure 1). The claims lie east of the Stikine River and directly north of Metsantan Lake. Figure 2 indicates the position of the property and outlines claim groups. Claim boundaries are shown with respect to local features (Figure 3). The nearest supply and transportation centre is Smithers, located 300 km to the south.

The A1 claims can be reached by a combination of fixed-wing aircraft to the Sturdee Valley airstrip (30 km southeast of the property) and helicopter thereafter. Small float-equipped aircraft can also land at Metsantan Lake.

Alberts Hump is the most prominent physical feature on the property. It is located near the eastern margin of the Spatsizi Plateau, and comprises a low, rounded hill and an easterly trending broad ridge, surrounded by deeply incised stream valleys. The overall relief is gentle to moderate, with elevations ranging from 1400 m to 1690 m. The lowermost parts of the property are covered by conifers (dominantly spruce) mixed with scrub willow. Above 1600 m, the vegetation is restricted to alpine grasses and occasional clumps of "buckbrush". Drainage is fair over most of the property with the exception of isolated swampy patches, and boggy terrain on the lower slopes of A1 5 and 8 claims. Water supplies are generally adequate for drilling requirements. No permafrost has yet been recognized but may exist along the northern slopes of the property. The property is usually snow-bound from October to June.





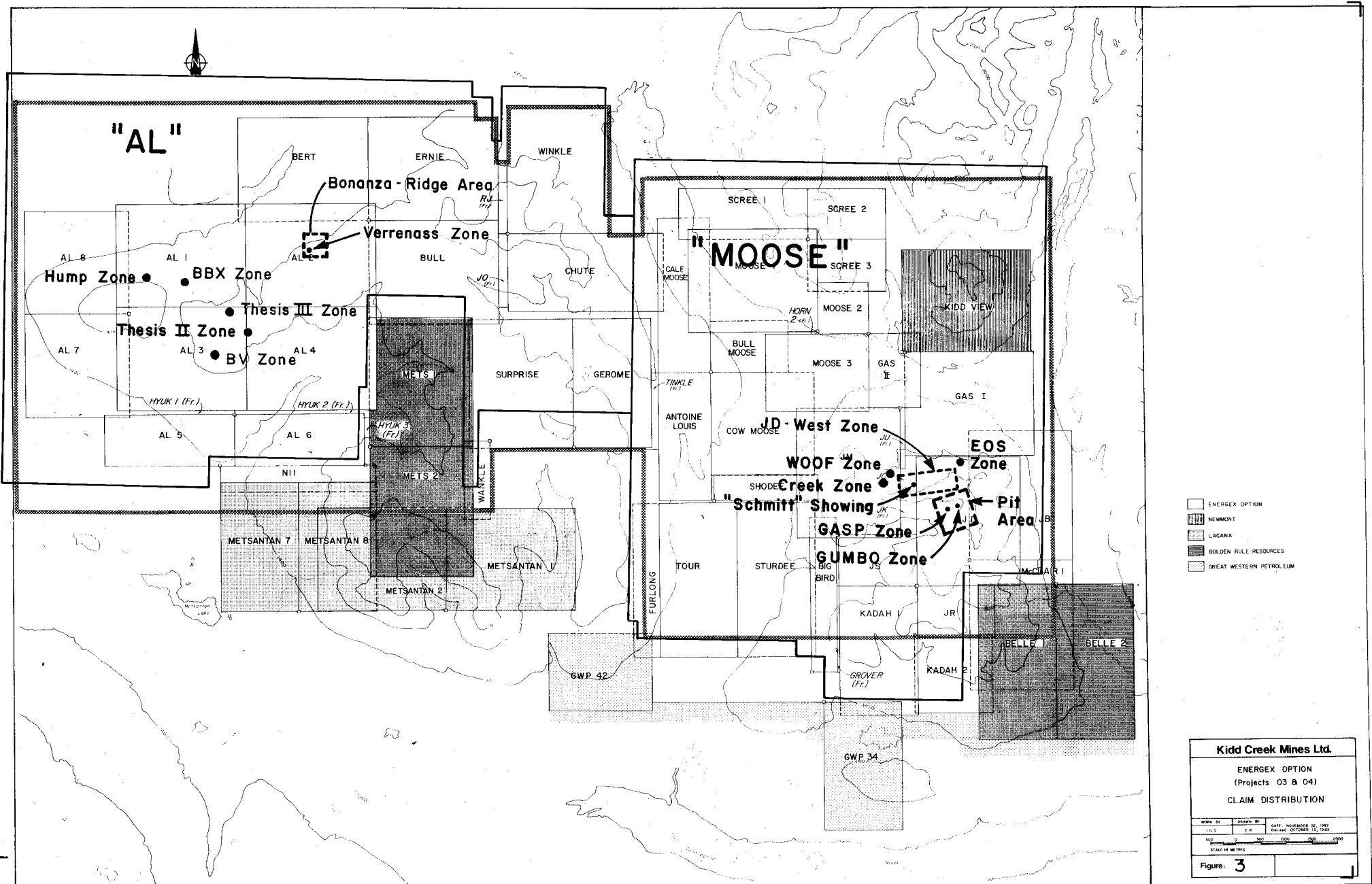
Kidd Creek Mines Ltd

AL PROPERTY
CLAIM GROUPS

SCALE 0 5 Km
1 : 250,000

Fig. 2

DATE
OCT. 23, 1984



Kidd Creek Mines Ltd.

ENERGEX OPTION
(Projects 03 & 04)

CLAIM DISTRIBUTION

WORK BY	DESIGN BY	DATE
L.S.S.	E.W.	NOVEMBER 22, 1983
		REVISED OCTOBER 15, 1985
SCALE IN METRES		
0	500	1000

Figure: 3

The Hump-84 Group consists of 4 MGS claims totalling 80 units and 1 fractional claim (1 unit). Figures 2 and 3 indicate the claim positions and group boundaries.

Summary of Work Completed

Trenching

During the period June 22 to Aug 3, 1984, 19 backhoe trenches were excavated on the Thesis III zone (926 m). An additional 13 trenches were completed on the BV zone (579 m) between July 15 and Aug 13. Following excavation, trenches were shovelled clean, mapped and sampled by Kidd Creek Mines personnel. Samples were analysed for Au and Ag. Figure 4 indicates the locations of these two zones.

Drilling

Two NQ diamond drill holes were completed on the Thesis III zone (114.91 M) between Aug 10 and Aug 13; an additional 2 holes (154.54 m) were drilled between Aug 14 and Aug 26 on this zone. Drilling on the BV zone between Aug 1 and Sept 5 totalled 575.42 m in 8 holes. All core was logged and photographed; selected sections of intense alteration were cut, sampled and analysed for Au and Ag. The core is stored in camp on the Moose 3 M.C.

Work Distribution

All work was done on the A1 3 M.C., part of the Hump-84 claim group. All trenching and drill holes A84-8 and A84-9 were completed prior to Aug 13. The remaining drill holes were completed after Aug 13. (A84-10 to -19).

Property History & Status

The area was originally staked by Sumac Mines Ltd. in 1971 for its porphyry copper potential. The

claims were allowed to lapse after several seasons fieldwork. Rising prices for both gold and silver and close proximity to the Chapelle and Lawyers deposits prompted Energex Minerals Ltd. to stake the A1 1-4 claims in 1979. In 1980, these claims were optioned to Texasgulf Canada Ltd. (now Kidd Creek Mines Ltd.). The remaining claims in the Bull group were staked in 1980 and 1981. Work described in this report was undertaken by Kidd Creek Mines Ltd., the registered owner of the claims at the time the work was done.

GEOLOGY

The property is underlain by a thick succession of primarily dacitic to andesitic crystal and crystal-lapilli tuffs, tuff-breccias, flows and associated hypabyssal phases. These rocks belong to the 'Toodoggone Volcanics' of Jurassic age. A more complete description of the geology can be found in previously submitted assessment reports (Sutherland, 1984; Sutherland and Clark, 1982) and in the accompanying report on geology and evaluation of geochemical anomalies (1985).

TRENCHING

Procedures

Detailed trenching in 1984 focussed on the Thesis III and BV zones. Work was done by a bulldozer-mounted backhoe followed by limited hand mucking. Trenches were generally about 1 m wide at the bottom and 1 m wide at the top. Overburden depths ranged from 30 cm to 2 m; only rarely was bedrock not exposed. Panel areas on the trench floors were sampled where the intensity of alteration indicated potential Au/Ag mineralization. Rocks with visible Au and/or barite mineralization were sampled in panels of 0.5 m (along the trench) by 0.25 m

(across the trench). Intense silicification, (e.g. A5, A5/A2, A7) without visible mineralization, was sampled in channels of 0.5 m (along the trench) by 0.25 m (across the trench). Panels 2.0 m long by 0.25 m wide were used for zones of intense alteration with lower, apparent mineralization potential (e.g. A2, A2/A3). Significant changes in alteration resulted in local variations in panel length. Panel samples weighing approximately 10 kg were shipped to CDN Resource Laboratories of Delta, B.C., and analysed for Au and Ag.

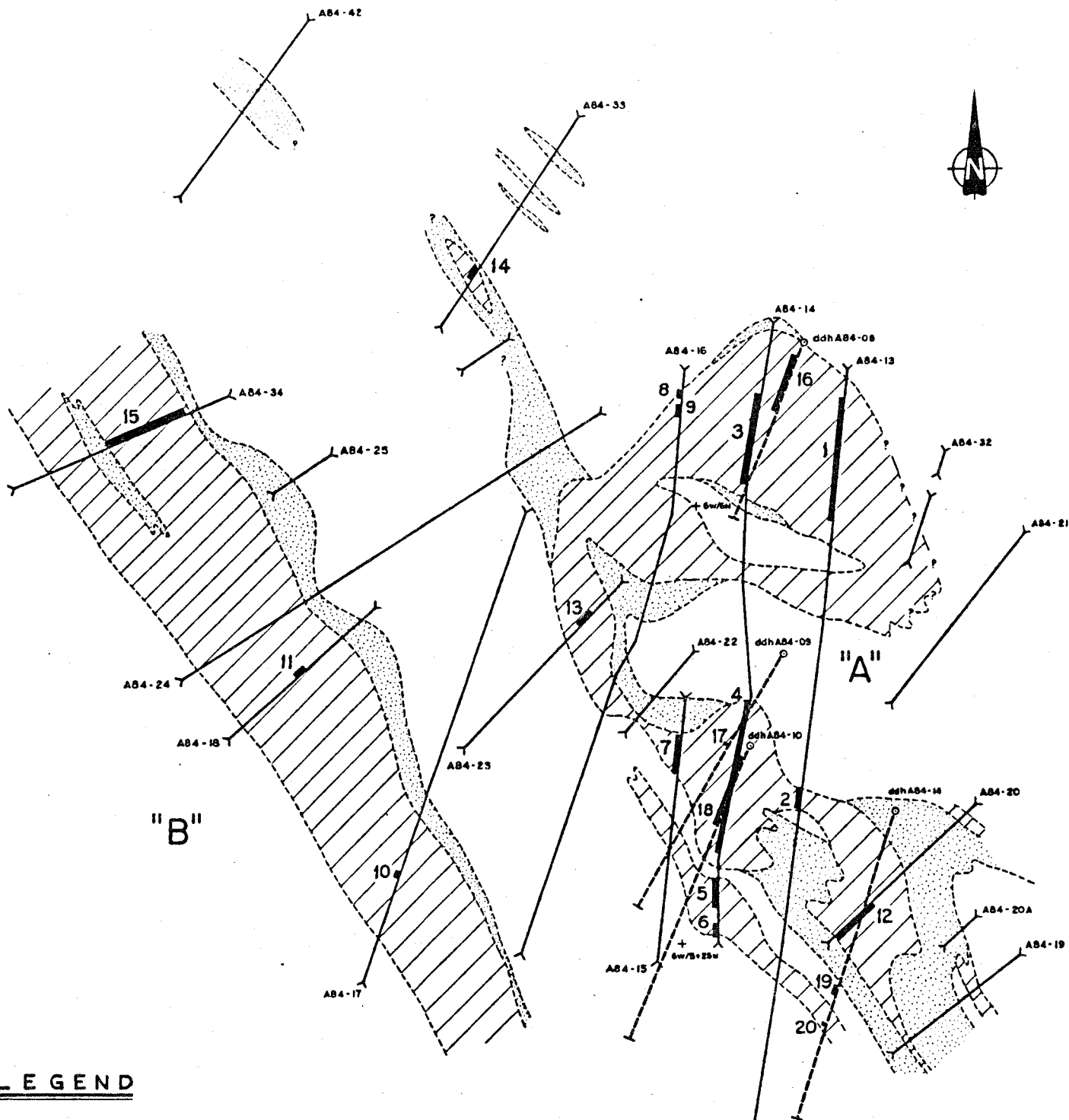
Sample preparation and analytical procedures (geochemical and assay) are outlined in Appendix B. The geological and analytical results from trenching are presented in Appendix C. Trenching results are discussed in the following sections. Additional details of drilling and the general economic potential for each zone are discussed in the appropriate sections below.

Thesis III Zone

The Thesis III zone is situated 350 m northwest of the Thesis II zone (Figures 4 and 5). It is bounded to the south by an inferred fault (stream channel) also noted south of the Thesis II zone. During 1984, 19 backhoe trenches (926 m) were excavated across this area.

In 1984, gold mineralization was discovered in outcrop during the evaluation of Au soil geochemical anomalies (detected in the 1983 detailed survey). Host rocks are dacitic to andesitic flows in which original textures are greatly obscured by widespread alteration.

Two northwesterly trending zones of intense silicification and argillization are present, enveloped by






LEGEND

LITHOLOGY

Altered Dacite Flow

ALTERATION

-  Predominantly intense argillization; may include intermixed silicification or extremely weathered "pre-phyllic" alteration
-  Predominantly intense silicification (± minor argillization); locally contains ≥ 5% barite vein; pyrite (≤ 5%) occurs sporadically
-  "Pre-phyllic" alteration; moderate replacement by clays + quartz + pyrite; generally limonitized to varying degrees; possibly argillized in part by supergene processes

TRENCH RESULTS

No.	Au (g/t)	Ag (ppm)	Metres	Trench
1	6.27	0.7	21.0	ABA-13
2	14.73	0.8	3.0	ABA-13
3	11.73	1.0	15.4	ABA-14
4	36.42	0.7	26.4	ABA-14
5	3.69	2.9	4.5	ABA-14
6	4.43	4.8	2.0	ABA-14
7	14.34	1.0	6.3	ABA-15
8	13.70	0.2	1.5	ABA-16
9	7.80	0.3	2.0	ABA-16
10	2.60	0.4	1.0	ABA-17
11	3.35	0.9	2.0	ABA-18
12	9.49	1.0	8.3	ABA-20
13	5.78	0.5	3.0	ABA-23
14	11.88	<0.1	2.0	ABA-33
15	1.88	1.9	14.0	ABA-34

DRILL RESULTS

No.	Au (g/t)	Ag (ppm)	Metres	DDH
16	2.73	1.0	13.64	ABA- 8
17	3.60	<0.1	1.0	ABA- 9
*18	32.25	1.4	16.7	ABA-10
19	2.95	2.2	2.0	ABA-14
20	5.40	1.0	1.0	ABA-14

* 30% recovery

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**AL PROPERTY
THESIS III ZONE
GEOLOGY AND
ANALYTICAL RESULTS**

NTS 94E/6W

Proj 03

WORK BY	DRAWN BY	DATE, OCT. 31, 1984
	V J G	

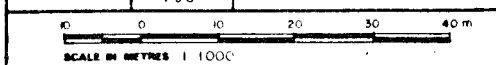


Figure: **5**

less intense "pseudo-phyllitic" alteration (clay-silica-pyrite) and weathered equivalents. Surface dimensions are 150 by 120 m. All significant Au values are associated with late-stage barite-quartz in veins and breccia-fillings.

The southwestern zone is linear and continuous with an apparently simple structural control. Silicification is mostly massive with weak to moderate fracturing and minor brecciation. The northern margin of silicification is bordered by a narrow zone of intense argillization. This zone is open to the northwest and southeast. In general, Au mineralization is poor (<3.0 ppm) due to an associated lack of barite vein material. Some of the better trench results include:

A84-17	2.60 g/t Au; 0.4 ppm Ag - over 1.0 m
A84-18	3.35 g/t Au; 0.9 ppm Au - over 2.0 m
A84-34	1.88 g/t Au; 1.98 ppm Ag - over 14.0 m
	including 3.17 g/t Au; 3.2 ppm Ag - over 4.0 m.

The most significant mineralization is present in the northeastern ("A") zone which consists of very irregular 'strips' and 'patches' of intense alteration along a northwest trend. The majority of this alteration consists of intense silicification, most of which has been intensely fractured and locally brecciated. The silicified rocks typically have minor vugs after corroded, clay-altered, plagioclase phenocrysts. Intense argillic alteration is dominantly present marginal to or variably intermixed with silicification. Limonite staining along fractures is widespread although rarely exceeds 5% limonite; this is likely a product of pyrite oxidation although original pyrite contents are unknown and relict pyrite is rare. Intense brecciation cemented with quartz-

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The more encouraging results from the trenches include:

barite is locally common. Veinlets of quartz-barite are also common along fractures. As in the Verrenass zone, mineralization is of native Au and Au values are directly related to the percentage of barite present. The most important mineralization is present at the north end of trenches A84-13, -14, and -16 and centred around the outcropping mineralization present in the southern half of trench A84-14. A temporal and genetic link is implied between these two centres of alteration and mineralization, but the geometry of each segment of this alteration zone is far from being well understood. Figure 12 illustrates well the highly erratic nature of the altered and mineralized zones that are situated along relatively linear controlling structures.

The more encouraging results from the trenches include:

A84-13	6.27 g/t Au;	0.7 ppm Ag - over 21.0 m
	14.73 g/t Au;	0.8 ppm Ag - over 3.0 m
A84-14	11.73 g/t Au;	1.0 ppm Au - over 15.4 m
	36.42 g/t Au;	0.7 ppm Au - over 26.4 m
	3.69 g/t Au;	2.9 ppm Au - over 4.5 m
	4.43 g/t Au;	4.8 ppm Au - over 2.0 m
A84-15	14.34 g/t Au;	1.0 ppm Ag - over 6.3 m
A84-16	13.70 g/t Au;	0.2 ppm Ag - over 1.5 m
	7.80 g/t Au;	0.3 ppm Ag - over 2.0 m
A84-20	9.49 g/t Au;	1.0 ppm Ag - over 8.3 m
A84-33	11.88 g/t Au;	<0.1 ppm Ag - over 2.0 m

These results (Figure 6) are based entirely on uncut Au values; included are several samples of high-grade material that assayed between 100 g/t and 420.80 g/t Au over approximately 0.5 m sample lengths.

The relatively erratic distribution of alteration and mineralization in this part of the zone reflects a very complex hydrothermal and structural environment.

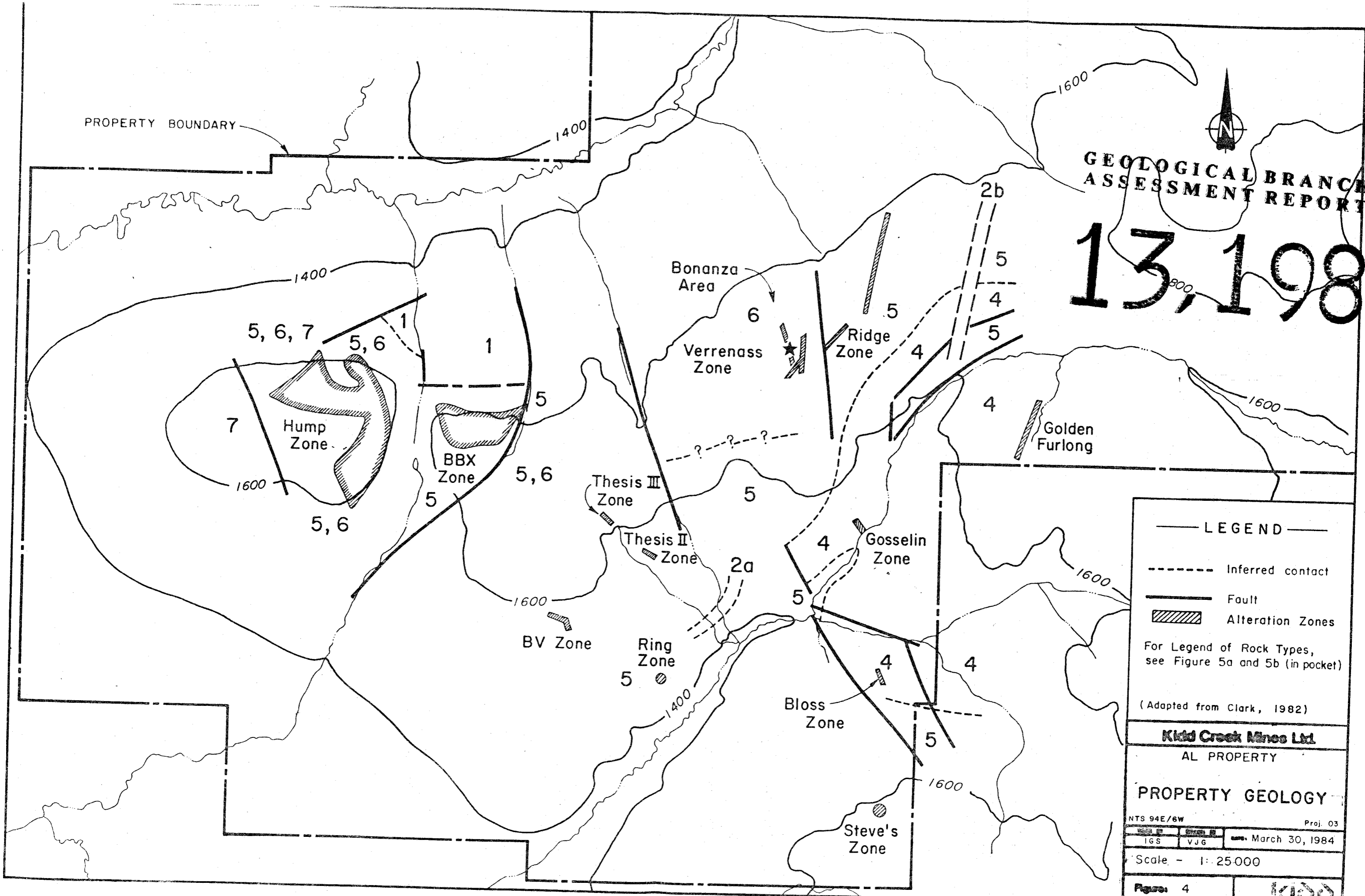
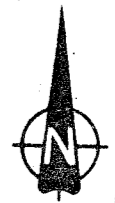
BV zone

The BV zone is located 800 m southwest of the Thesis zone on a south-facing slope near the upper limit of thin forest cover (Figures 4 and 6). The main part of the mineralized zone is marked by a swampy clearing. Barite float was discovered in 1984 by detailed prospecting of a three-station Au soil geochemical anomaly (1981 reconnaissance soil sampling). Grab samples assayed up to 20 g/t Au. A total of 13 trenches (607 m) exposed the BV zone over almost 500 m along a general northwesterly strike. The western limb of the zone trends west-northwest and is hinged to an eastern limb that trends northwest. The apparent area of flexure exhibits the greatest width of surface alteration, and is likely an important control to barite-quartz (+ Au) veining. Alteration occurs along single to multiple structures across a maximum width of approximately 40 m. The western limb exhibits increased bifurcation and correspondingly weaker alteration towards the west. The eastern zone appears to be simpler with a fairly consistent, narrow

PROPERTY BOUNDARY

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13, 1988



— LEGEND —

- - - - - Inferred contact
- Fault
- ▨ Alteration Zones

For Legend of Rock Types, see Figure 5a and 5b (in pocket)

(Adapted from Clark, 1982)

Kidd Creek Mines Ltd.
AL PROPERTY

PROPERTY GEOLOGY

NTS 94E/6W Proj. 03

165	VJG	March 30, 1984
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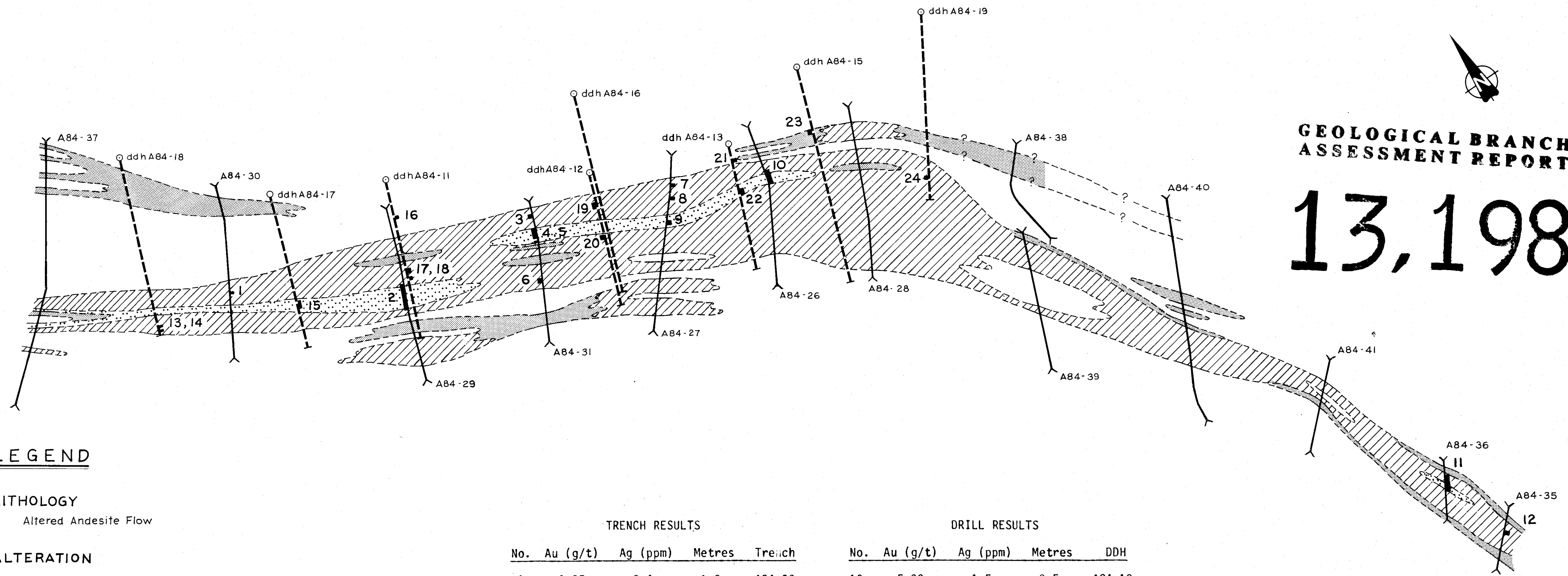
Scale - 1:25,000

Figure 4



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,198







LEGEND

LITHOLOGY

Altered Andesite Flow

ALTERATION

-  Weakly argillized (\pm hematized) country rocks
-  Intense argillization (A2); may include some intense silicification (\pm pyrite)
-  Intense silicification \pm pyrite (A7a, A5); may be cut by barite \pm chalcedony veins ($\geq 10\%$); may include minor argillization
-  Barite \pm chalcedony veins and stockwork material; $\geq 10\%$ barite; pyrite locally present

TRENCH RESULTS

No.	Au (g/t)	Ag (ppm)	Metres	Trench
1	3.85	2.4	1.0	A84-30
2	21.95	14.78	8.6	A84-29
3	10.40	5.7	1.0	A84-31
4	14.28	3.5	3.5	A84-31
5	18.82	4.0	1.0	A84-31
6	3.50	3.0	1.0	A84-31
7	12.60	5.7	0.9	A84-27
8	6.10	5.8	1.0	A84-27
9	26.86	2.5	1.1	A84-27
10	7.65	2.5	4.0	A84-26
11	5.44	3.2	5.0	A84-36
12	5.60	4.0	0.7	A84-35

DRILL RESULTS

No.	Au (g/t)	Ag (ppm)	Metres	DDH
13	5.00	1.5	0.5	A84-18
14	3.20	1.6	0.5	A84-18
15	9.07	2.4	2.91	A84-17
16	7.30	0.4	0.75	A84-11
17	27.32	3.3	1.55	A84-11
18	25.61	1.7	2.1	A84-11
19	25.79	5.4	2.27	A84-12
20	17.20	2.9	1.0	A84-12
21	10.58	2.7	0.9	A84-13
22	21.72	3.6	2.5	A84-13
23	13.64	7.7	2.2	A84-15
24	9.60	20.0	0.34	A84-19

Kidd Creek Mines Ltd.
 AL PROPERTY
 B.V. ZONE
**GEOLOGY AND
 ANALYTICAL RESULTS**

WORK BY	DRAWN BY	DATE
J.C.	V.J.G.	OCT. 30, 1984

10 0 10 20 30 40 m
 SCALE 1:1000

Figure: **6**

width to the alteration. Excessive overburden thicknesses and poor drainage prohibited adequate trenching to the east and southeast of the apparent flexure area.

Alteration consists of intense silicification and argillization of andesite flows and minor flow breccias. Host rocks are plagioclase-hornblende porphyritic with very few additional textural characteristics of note. They are typically weakly argillized and hematized (+ carbonatized). The predominant intense alteration is silicification but an argillic component is commonly intermixed with it. Pyrite occurs as fine-grained disseminated patches irregularly throughout the silicification, and less commonly through the argillization. All rocks display varying degrees of brecciation. Weakly altered host rocks exhibit crackle brecciation with generally minor carbonate stringers along the fractures. Weak to strong brecciation of silicified zones is most commonly accompanied by late-stage barite-quartz (chalcedony) + pyrite veins and stockworks. Veining is most abundant in the western limb of the zone where it can be discontinuously projected from trench A84-26 to A84-37 (Figure 6). Au mineralization is generally associated with the barite-quartz veining but not all vein material is necessarily mineralized. Some of the better values from trenches include:

A84-26	7.65 g/t Au;	2.5 ppm Ag - over 4.0 m
A84-27	12.60 g/t Au;	5.7 ppm Ag - over 0.9 m
	6.10 g/t Au;	5.8 ppm Ag - over 1.0 m
	26.86 g/t Au;	2.5 ppm Ag - over 1.1 m
A84-29	21.95 g/t Au;	14.8 ppm Ag - over 8.6 m
A84-30	3.85 g/t Au;	2.4 ppm Ag - over 1.0 m
A84-31	10.40 g/t Au;	5.7 ppm Ag - over 1.0 m
	14.28 g/t Au;	3.5 ppm Ag - over 3.5 m
	18.82 g/t Au;	4.0 ppm Ag - over 1.0 m
	3.50 g/t Au;	3.0 ppm Ag - over 1.0 m

Au values are often quite erratic and can range from <1 g/t to >20 g/t in adjacent samples. Ag values are not economically significant but threshold values are notably higher than in the Thesis III and Verrenass zones.

The BV zone appears to occupy a continuous structure that is mineralized mainly along its western limb. Bifurcation of the alteration zones and lower Au values to the west are likely due to diffusion of the structure near its west end. The development of dilatant zones to the west of the area of flexure in the zone probably resulted from shearing and permitted the formation of late-stage barite-chalcedony veining (+ Au).

DIAMOND DRILLING

The drilling completed on the A1 property in 1984 was to test the projections of surface mineralization at depth. Drilling was contracted to D.W. Coates Enterprises, who utilized a Longyear '38' drill on skids. Drilling was done by two men on a single, 12-hour shift basis. Drill site preparation and drill moves were done with the same Case 450 bulldozer used in backhoe trenching. Poorly drained ground was the only problem

encountered in drill site preparation and moves. Core recoveries were generally excellent with the most notable exception being the upper, mineralized section of hole A84-10 in which highly fractured silicified rock defied all attempts at increasing core recoveries. Drill hole summary logs are presented in Appendix E. Drill hole locations are indicated in Figures 5 and 6. The orientation and depth of holes are as follows:

D.D.H.	Azimuth	Dip	Depth
A84-8	200°	-45°	44.81 m
A84-9	210°	-45°	70.10 m
A84-10	198°	-43°	79.25 m
A84-14	200°	-45°	75.29 m
A84-11	200°	-45°	81.38 m
A84-12	200°	-45°	60.00 ,
A84-13	200°	-45°	57.00 m
A84-15	198°	-45°	69.19 m
A84-16	200°	-46°	78.33 m
A84-17	200°	-45°	63.40 m
A84-18	200°	-44°	82.30 m
A94-19	200°	-43°	82.82 m

Drill core was routinely logged, photographed, halved using a diamond saw and sampled. Visibly mineralized sections were sampled at 0.5 m intervals (or less), intensely silicified sections were sampled at 0.5 - 1.0 m intervals and weakly altered sections were sampled at 1.0-2.0 m intervals (if at all). A total of 386 core samples were shipped to CDN Resource Laboratories Ltd. of Delta, B.C. for Au and Ag geochemical and/or assay analyses. Analytical techniques are outlined in Appendix B. Preliminary Au geochemical values >1.0 ppm were automatically assayed.

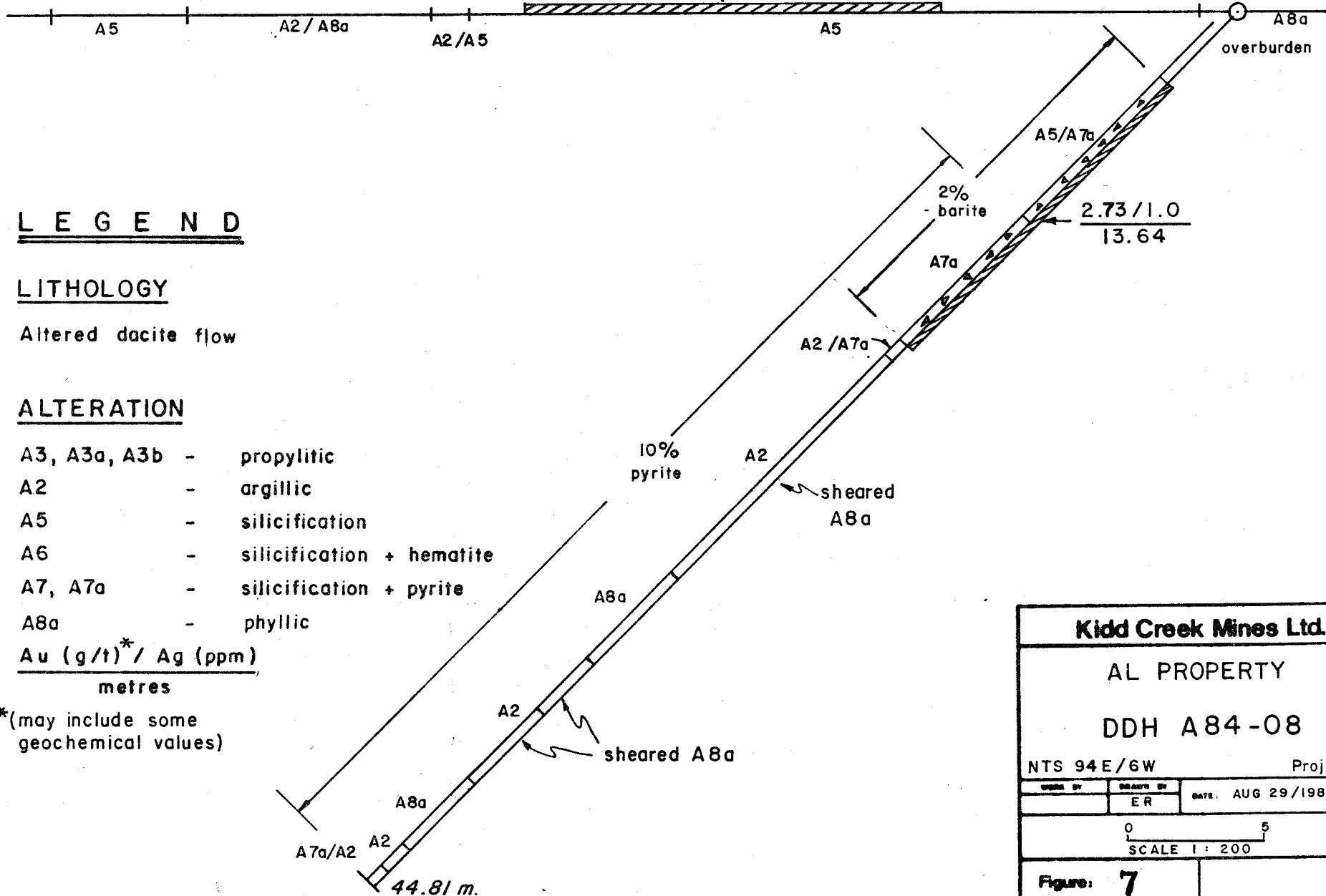
Thesis III zone

Four drill holes on the Thesis III zone were completed in 1984 (269.45 m). Drilling was restricted to Zone "A" as a means of testing the best surface mineralization at depth. Drilling indicated that the same degree of geological complexity occurs down-dip as along strike (Figures 5 and 7 to 10). Dips appear to be more or less subvertical but the erratic nature of the alteration may make the concept of dip somewhat unrealistic. Surface mineralization was followed to a depth of 20 m in hole A84-10; visible gold was noted to the end of this interval, associated with barite veining in the intensely silicified alteration zone. All of the other holes encountered alteration vastly different from that at surface, and mineralization was generally poor throughout. Intensely silicified to argillized zones occur within locally widespread "pseudo-phyllic" alteration (silicaclays-pyrite). Pyritization accompanies all alteration types and is noteworthy in the majority of the drill-intersected zones of silicification. Brecciation of silicified zones is widespread and generally moderate to intense. Barite veining and associated Au mineralization are much less abundant in the deeper, pyritic silicification than in the sulphide-poor silicification encountered in trenches. Barite veining seems to grade into predominant quartz veining with only minor barite as the pyrite content increases in the silicification. The sulphate-sulphide facies change, critical in developing bonanza-style mineralization in the Verrenass zone has also been operative in the Thesis III zone. Some of the better values (uncut) from the drill core include:

surface geology based on
projections from trench A84-14

$\frac{11.73}{2.6}$
15.4

DDH A84-08
Azim 200°/-45°



LEGEND

LITHOLOGY

Altered dacite flow

ALTERATION

- A3, A3a, A3b - propylitic
- A2 - argillic
- A5 - silicification
- A6 - silicification + hematite
- A7, A7a - silicification + pyrite
- A8a - phyllic

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

*(may include some
geochemical values)

Kidd Creek Mines Ltd.

AL PROPERTY

DDH A84-08

NTS 94E/6W

Proj. 03

WORK BY	DRAWN BY	DATE
	ER	AUG 29/1984

0 5
SCALE 1 : 200

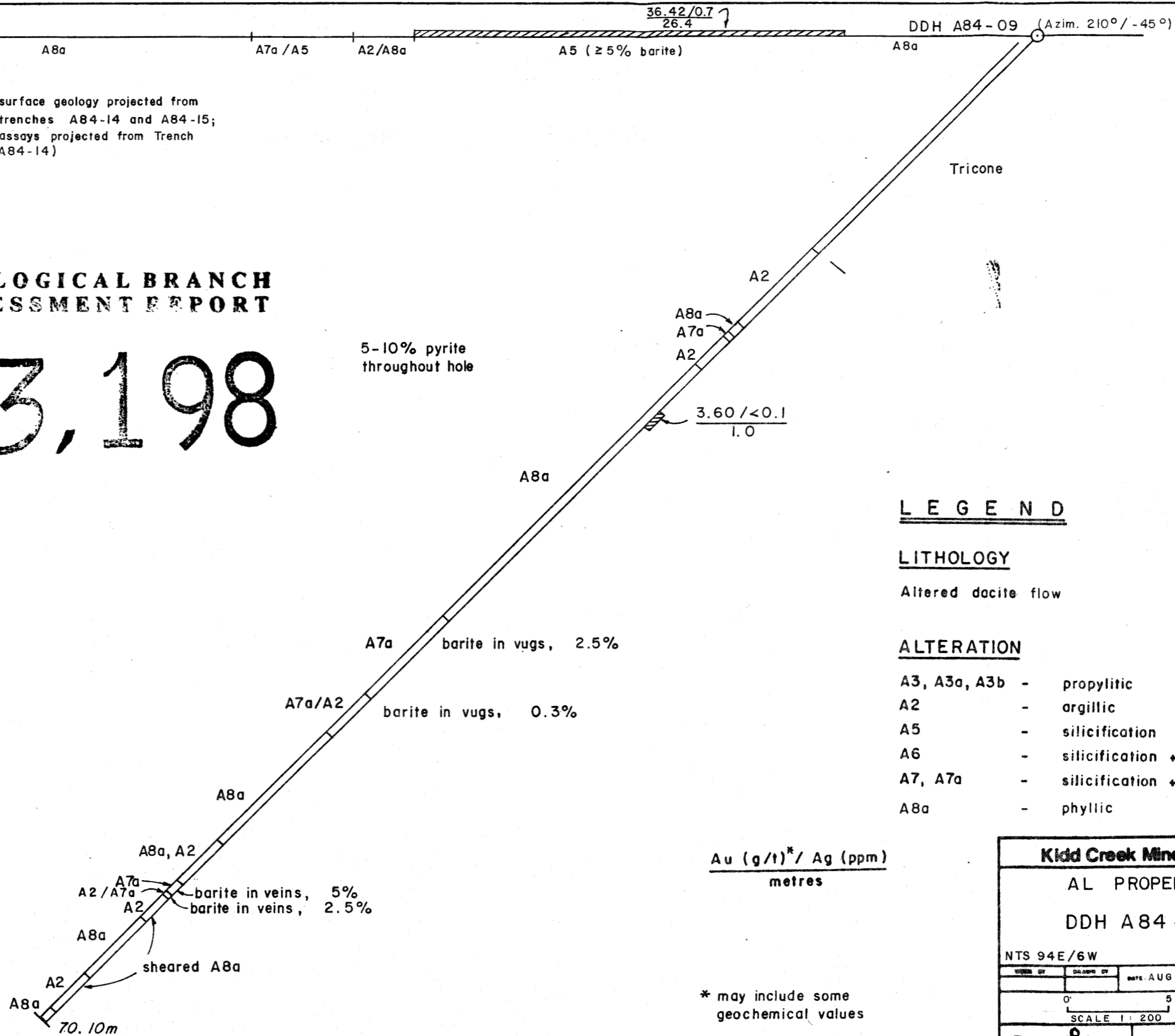
Figure: **7**

(surface geology projected from
trenches A84-14 and A84-15;
assays projected from Trench
A84-14)

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

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5-10% pyrite
throughout hole



Tricone

LEGEND

LITHOLOGY

Altered dacite flow

ALTERATION

- A3, A3a, A3b - propylitic
- A2 - argillic
- A5 - silicification
- A6 - silicification + hematite
- A7, A7a - silicification + pyrite
- A8a - phyllic

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

* may include some
geochemical values

Kidd Creek Mines Ltd.		
AL PROPERTY		
DDH A84 - 09		
NTS 94E/6W		Proj. 03
DATE	AUG 29/1984	
SCALE 1:200		
Figure: 8		

Surface geology based on extrapolations of geology from trenches A84-14 and A84-15

Mineralized zones as projected from Trench A84-14

DDH A 84 - 10

Az. 198°
Dip -43°

A2/A8

A5

A2/A8

A5

(barite \geq 5%)

(barite \geq 5%)

Triconed

poor recovery approx. 30%

(barite \geq 5% in vugs, veinlets) + breccia fill

$\frac{32.25}{1.4}$
16.7

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Trace visible gold

Triconed, no recovery

A7a (+2.5% barite)

A7a/A2

A5 + 5% barite

A7a/A2

A7a

A8a

A7a

A8a

A7a

A8a

A2/A8a

A8a

79.25m

LEGEND

LITHOLOGY

Altered dacite flow

ALTERATION

- A3, A3a, A3b - propylitic
- A2 - argillic
- A5 - silicification
- A6 - silicification + hematite
- A7, A7a - silicification + pyrite
- A8a - phyllic

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

Note: All geological projections inferred

Kidd Creek Mines Ltd.

AL PROPERTY
Thesis III Zone
DDH A 84 - 10

NTS 94E/6W

Proj. 03

WORK BY ER DATE AUG 29/1984

0 5

SCALE 1:200

Figure: 9

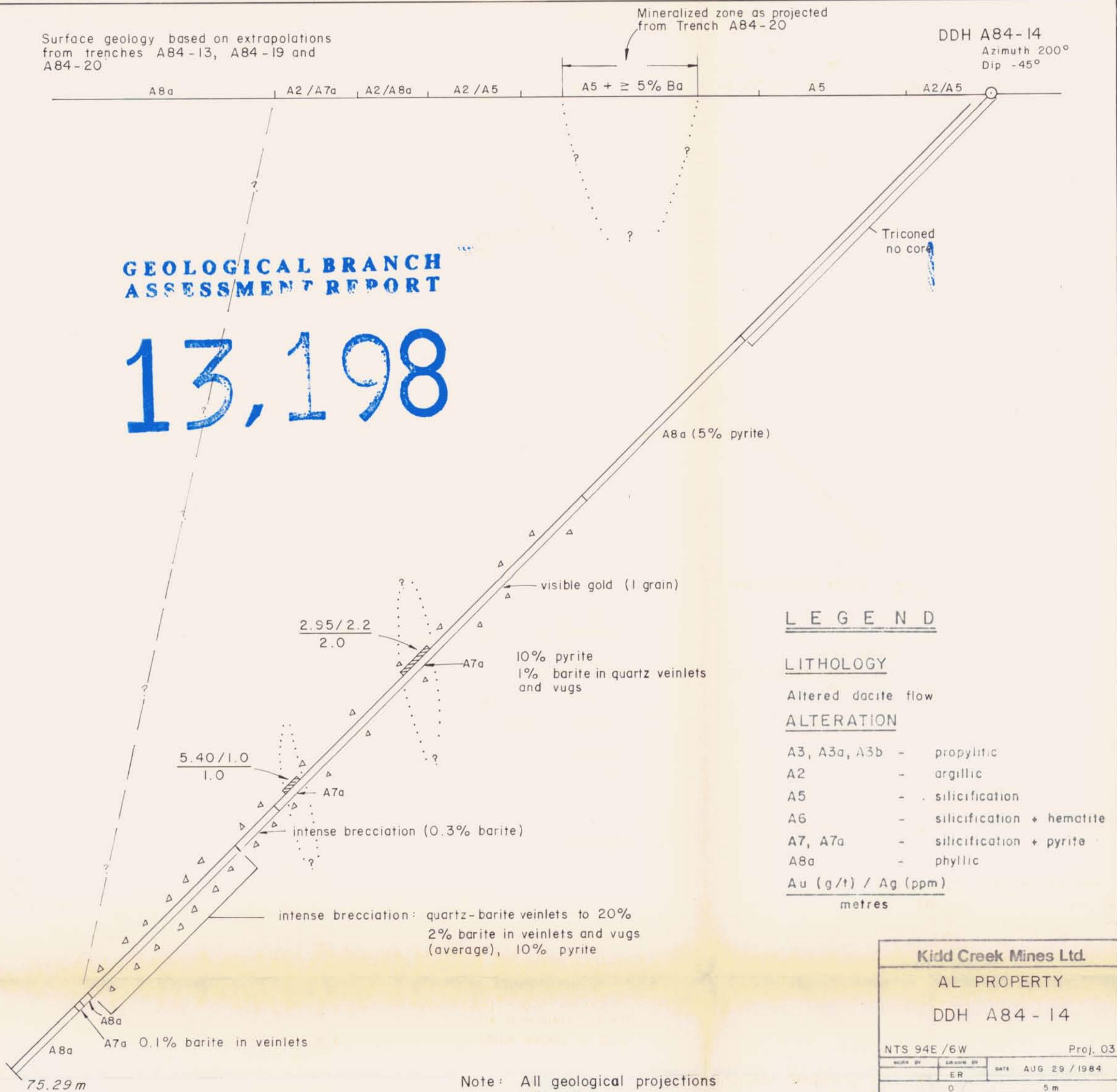
Surface geology based on extrapolations from trenches A84-13, A84-19 and A84-20

Mineralized zone as projected from Trench A84-20

DDH A84-14
Azimuth 200°
Dip -45°

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LEGEND

LITHOLOGY

Altered dacite flow

ALTERATION

- A3, A3a, A3b - propylitic
- A2 - argillic
- A5 - silicification
- A6 - silicification + hematite
- A7, A7a - silicification + pyrite
- A8a - phyllic

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

Kidd Creek Mines Ltd.

AL PROPERTY

DDH A84-14

NTS 94E/6W

Proj. 03

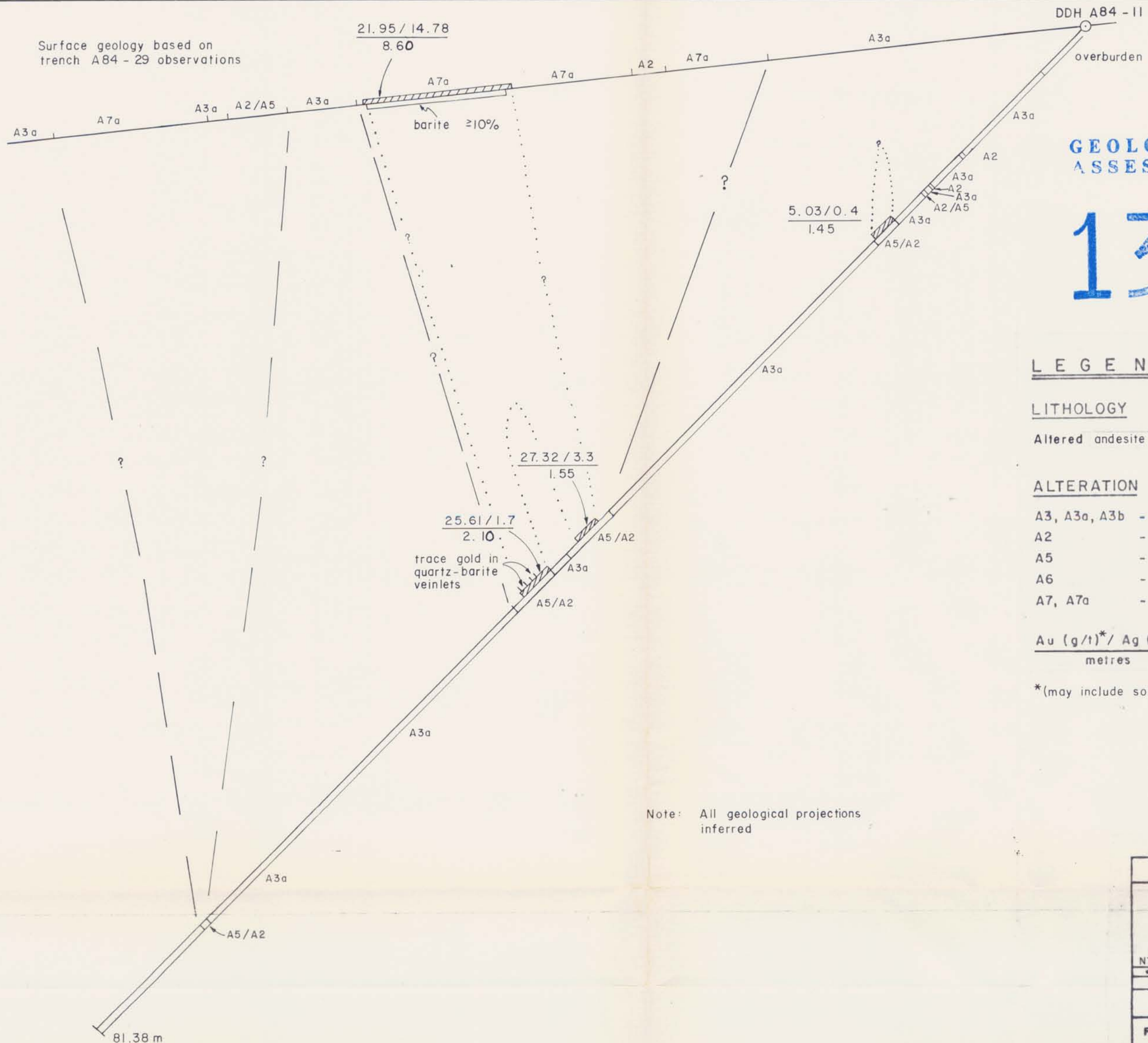
DATE AUG 29 / 1984

SCALE 1 : 200

Figure: 10

Note: All geological projections inferred

Surface geology based on trench A84 - 29 observations



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LEGEND

LITHOLOGY

Altered andesite flow

ALTERATION

- A3, A3a, A3b - propylitic
- A2 - argillic
- A5 - silicification
- A6 - silicification + hematite
- A7, A7a - silicification + pyrite

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

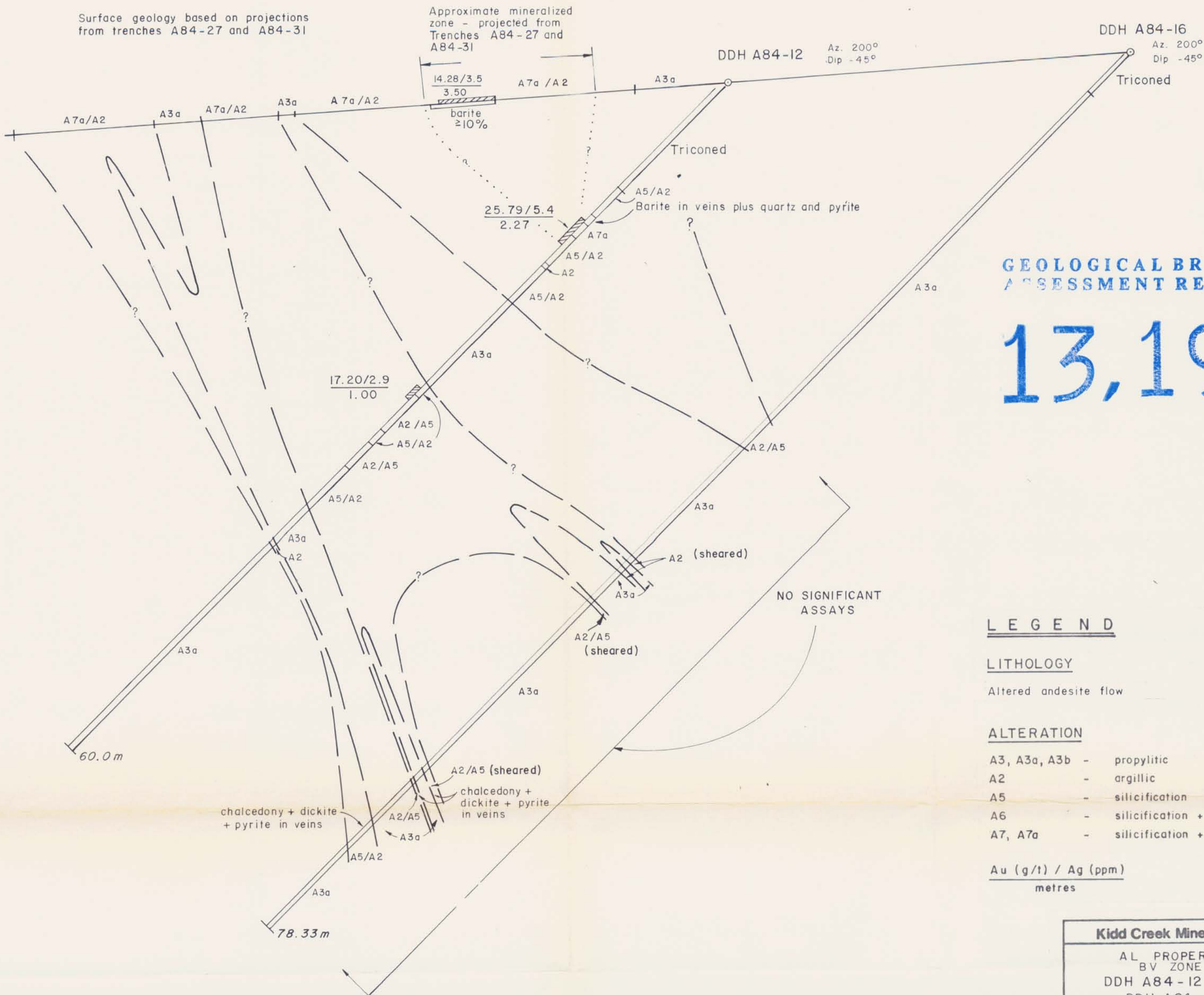
*(may include some geochemical values)

Note: All geological projections inferred

Kidd Creek Mines Ltd.			
AL PROPERTY			
BV ZONE			
DDH A84 - II			
NTS 94E/6W		Proj.03	
DRAWN BY	DESIGNED BY	DATE: AUG. 29/1984	
ER			
0		5 m	
SCALE 1: 200			
Figure: 11			

Surface geology based on projections
from trenches A84-27 and A84-31

Approximate mineralized
zone - projected from
Trenches A84-27 and
A84-31



GEOLOGICAL BRANCH
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LEGEND

LITHOLOGY

Altered andesite flow

ALTERATION

A3, A3a, A3b - propylitic
A2 - argillic
A5 - silicification
A6 - silicification + hematite
A7, A7a - silicification + pyrite

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

Kidd Creek Mines Ltd.

AL PROPERTY
BV ZONE
DDH A84-12 and
DDH A84-16

NTS 94E/6W Proj. 03

DATE: SEPT 5/1984

0 5 m

SCALE 1:200

Figure: 12

Note: All geological projections
inferred

A84-8 2.73 g/t Au; 1.0 ppm Ag - over 13.64 m
 A84-9 3.60 g/t Au; <0.1 ppm Ag - over 1.0 m
 *A84-10 32.25 g/t Au; 1.4 ppm Ag - over 16.7 m
 A84-14 2.95 g/t Au; 2.2 ppm Ag - over 2.0 m
 5.40 g/t Au; 1.0 ppm Ag - over 1.0 m

In all but one case (i.e. A84-10), projection of drill-intersected alteration and mineralization to that at the surface is so complex that it is virtually impossible to do with any degree of confidence. The widths of intersected silicification in holes A84-9 and -14 imply a possible southeasterly plunge to the silicified (+ mineralized) bodies but additional details are required to confirm this hypothesized geometry.

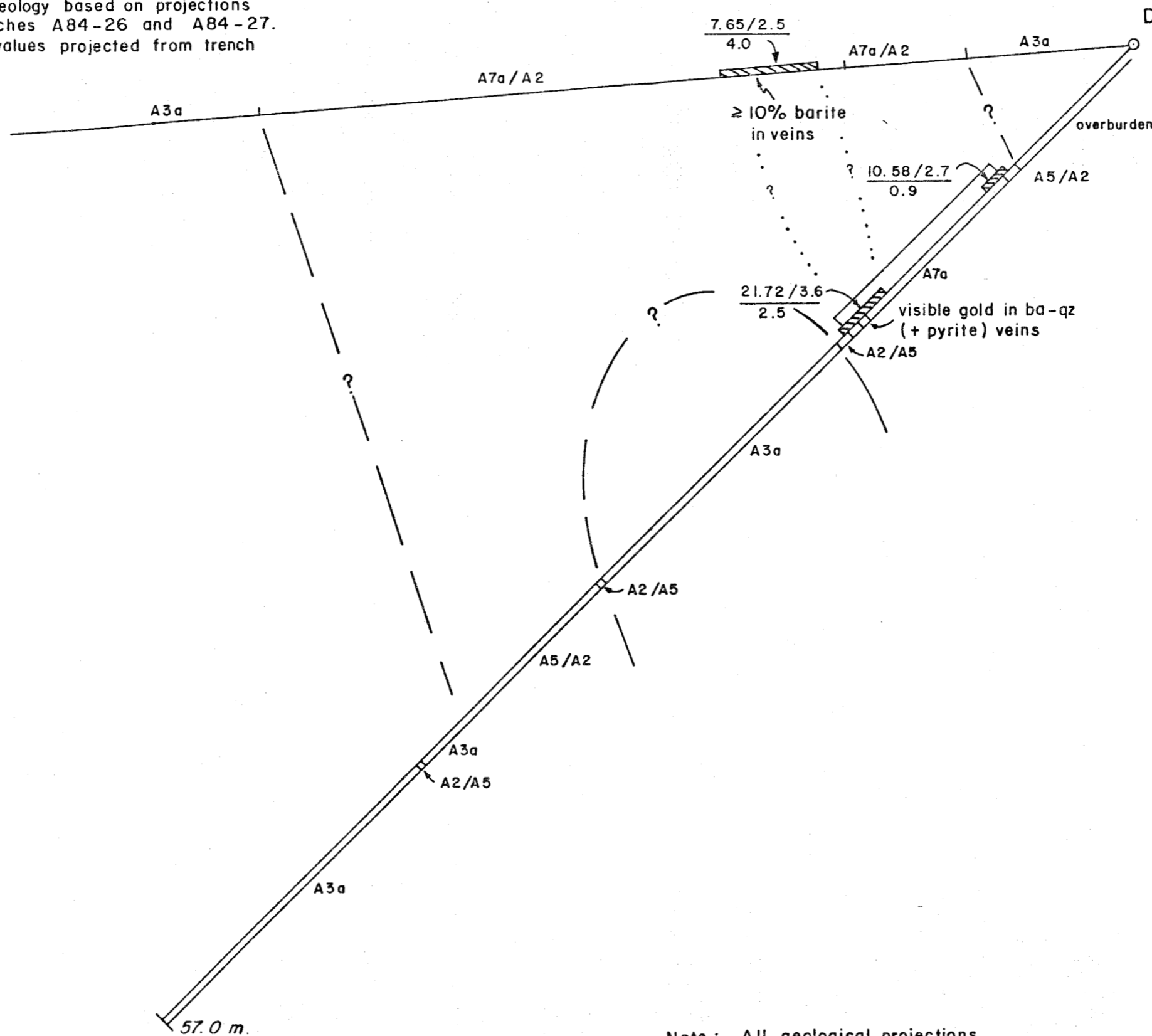
BV zone

The BV zone was tested with eight holes (575.42 m) over a strike length of 250 m, primarily along the western limb of the zone. Drill sites were situated where the best surface mineralization could be tested at a suitable depth and where adequate drainage and solid ground permitted access for the bulldozer and drill. No drilling was completed on the eastern limb of the zone because of poor surface mineralization and difficult access due to extreme drainage problems in this region. The poor drainage will restrict any future drilling on this part of zone.

All drill holes intersected andesite to dacite flows and local flow breccia units (Figures 6 and 11 to 18). Weak argillic alteration of the wallrocks is ubiquitous and commonly includes minor carbonate stringers. Alteration zones vary from predominantly silicified (+ patchy, disseminated pyrite) to argillized, and commonly consist of intermixed combinations of

*Note: Recovery was 33% in this interval and only three samples from the interval assayed >10 g/t Au.

Surface geology based on projections from trenches A84-26 and A84-27. Surface values projected from trench A84-26



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LEGEND

LITHOLOGY

Altered porphyritic andesite flow

ALTERATION

- A3, A3a, A3b - propylitic
- A2 - argillic
- A5 - silicification
- A6 - silicification + hematite
- A7, A7a - silicification + pyrite

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

* (may include some geochemical values)

Note: All geological projections inferred

Kidd Creek Mines Ltd.		
AL PROPERTY BV ZONE DDH A84-13		
NTS 94E/6W		Proj. 03
WORK BY ER	CHARGE BY ER	DATE: NOV. 27/1984
 SCALE 1:200		
Figure: 13		

Surface geology interpolated from
trenches A84-26 and A84-28

(from A84TR-26) (from A84TR-28)
Mineralized zone with $\geq 10\%$ barite

DDH A84-15
Az. 200°
Dip -45°

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LEGEND

LITHOLOGY

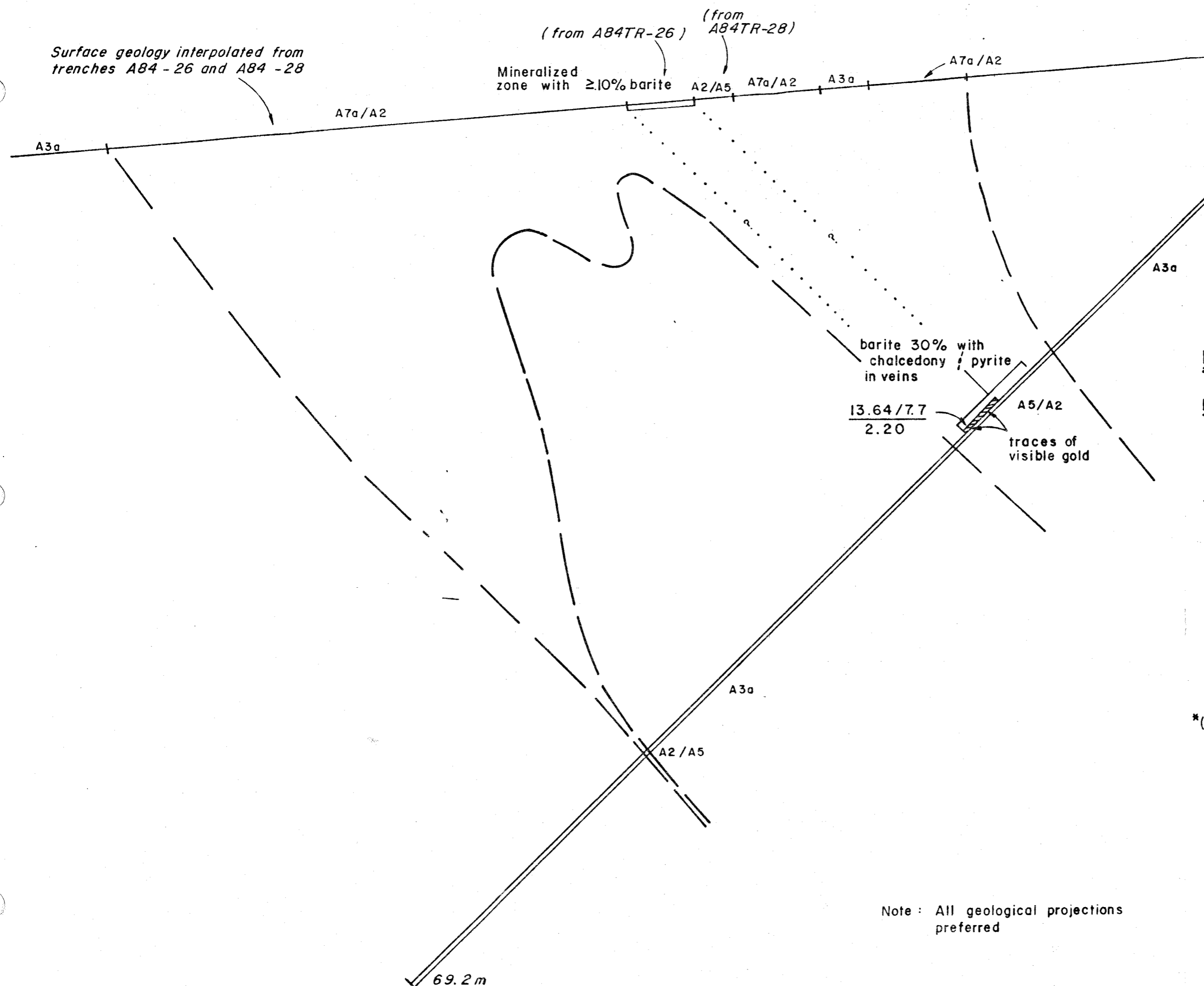
Altered andesite flow

ALTERATION

- A3, A3a, A3b - propylitic
- A2 - argillic
- A5 - silicification
- A6 - silicification + hematite
- A7, A7a - silicification + pyrite

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

*(may include some geochemical values)



Note: All geological projections preferred

Kidd Creek Mines Ltd.		
AL PROPERTY BV ZONE		
DDH A84-15		
NTS 94E/6W		Proj. 03
DRAWN BY ER	DATE	SEPT 5/1984
 SCALE 1:200		
Figure: 14		

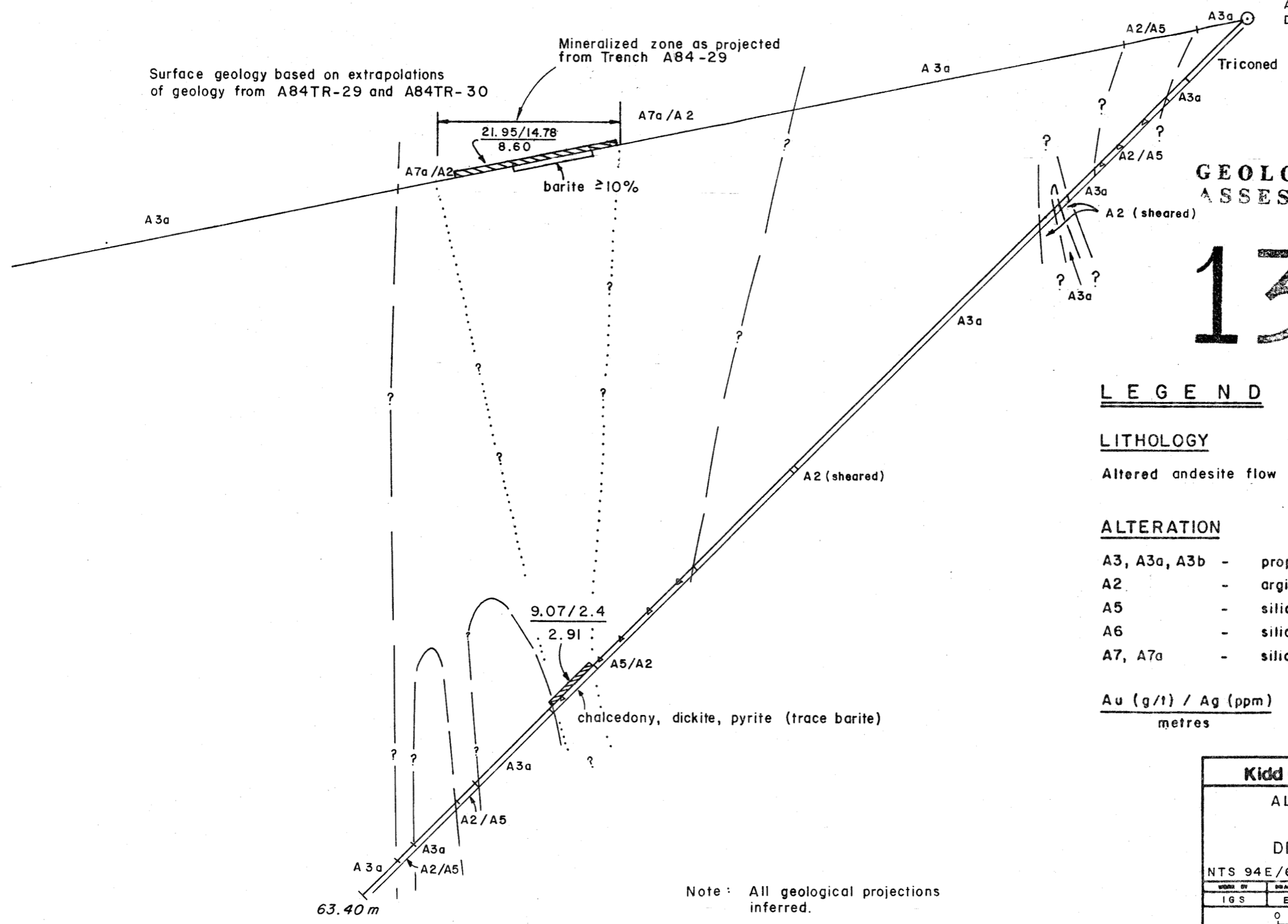
DDH A84-17
Azim. 200°
Dip -43°

Surface geology based on extrapolations
of geology from A84TR-29 and A84TR-30

Mineralized zone as projected
from Trench A84-29

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LEGEND

LITHOLOGY

Altered andesite flow

ALTERATION

- A3, A3a, A3b - propylitic
- A2 - argillic
- A5 - silicification
- A6 - silicification + hematite
- A7, A7a - silicification + pyrite

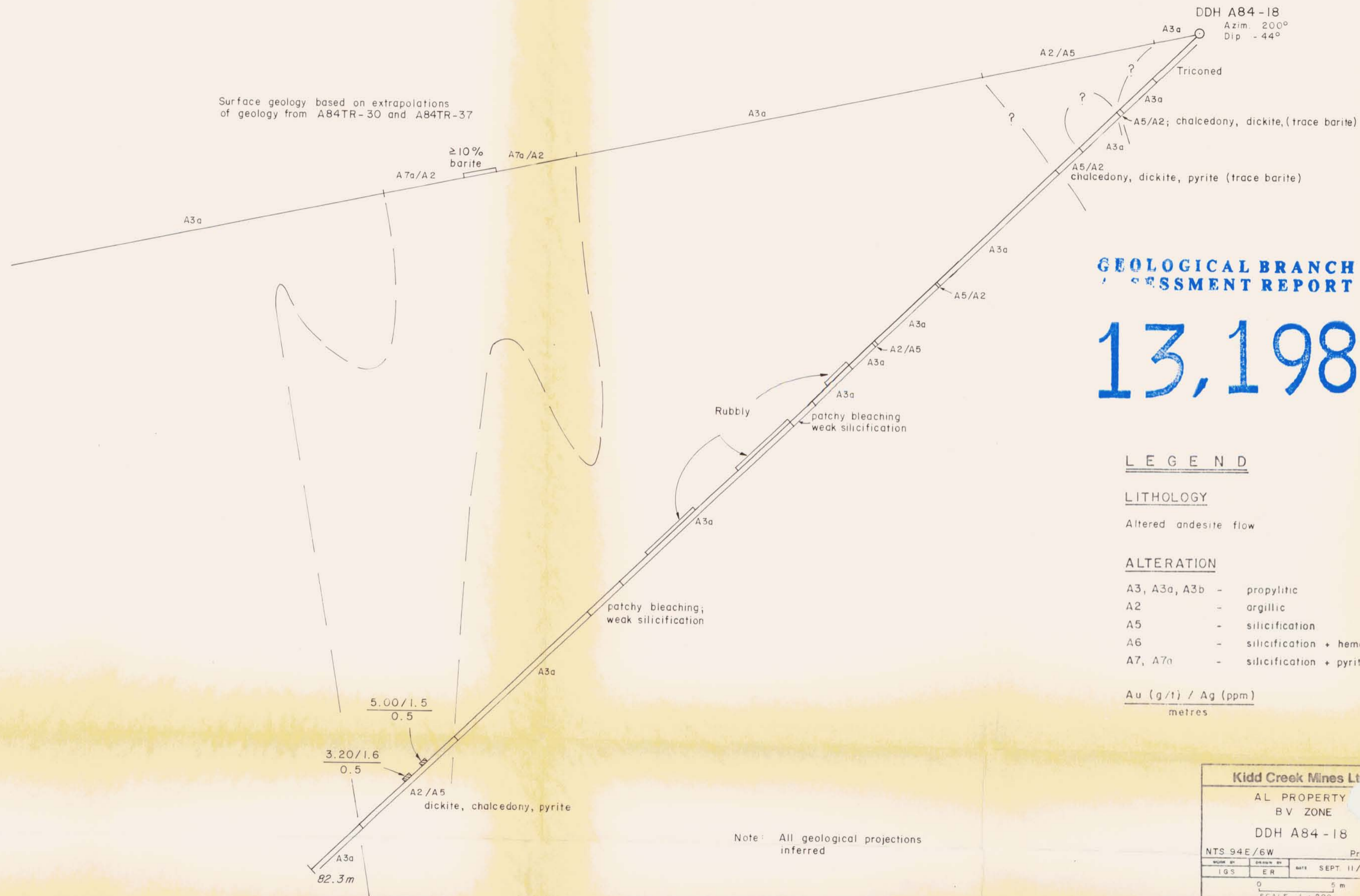
Au (g/t) / Ag (ppm)
metres

Kidd Creek Mines Ltd.		
AL PROPERTY BV ZONE		
DDH A84-17		
NTS 94E/6W		Proj. 03
IGS	ER	DATE: SEPT. 11/1984
0 5 m		
SCALE 1 : 200		
Figure: 15		

Note: All geological projections
inferred.

Surface geology based on extrapolations of geology from A84TR-30 and A84TR-37

DDH A84-18
Azim. 200°
Dip - 44°



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LEGEND

LITHOLOGY

Altered andesite flow

ALTERATION

- A3, A3a, A3b - propylitic
- A2 - argillic
- A5 - silicification
- A6 - silicification + hematite
- A7, A7a - silicification + pyrite

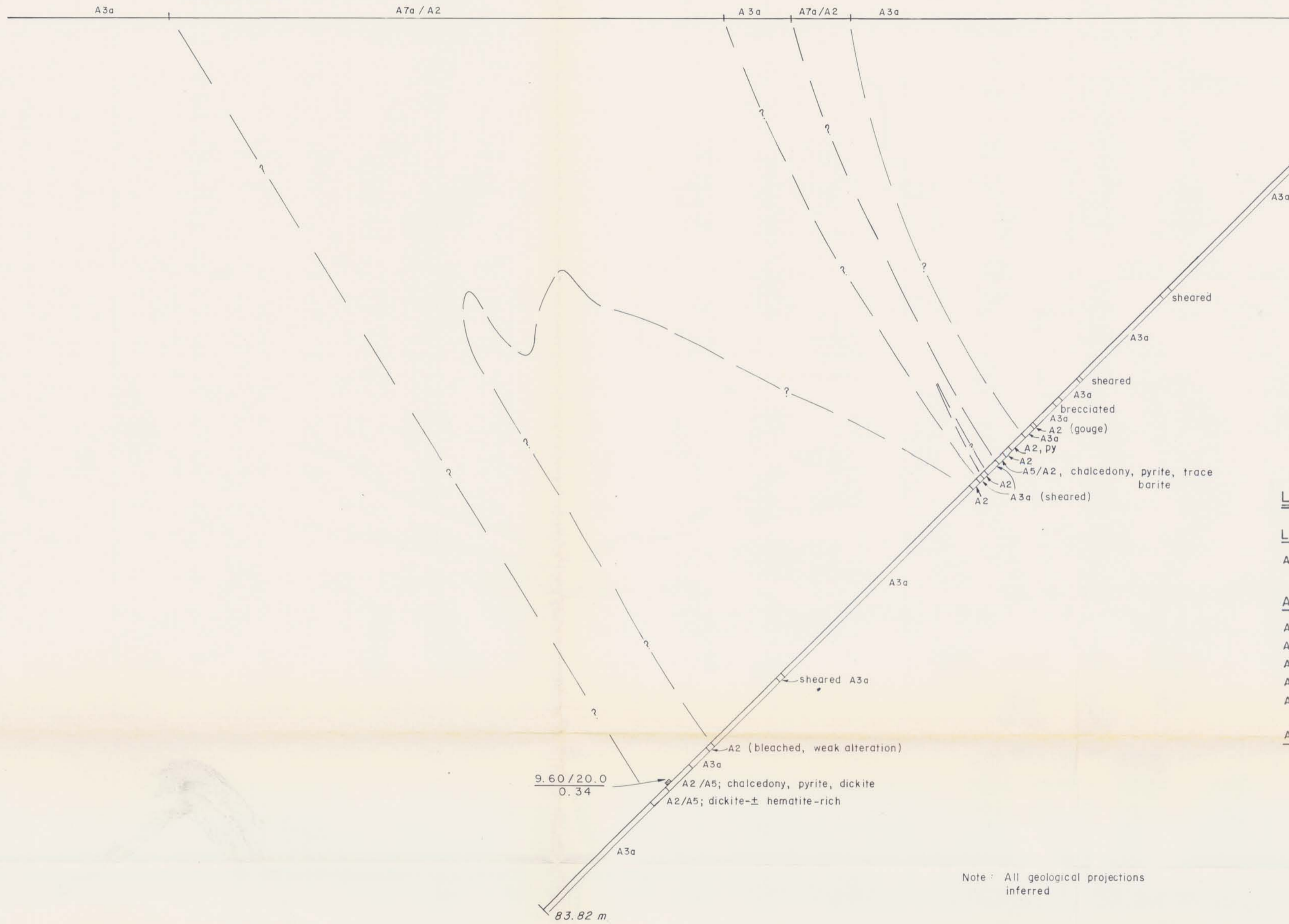
Au (g/t) / Ag (ppm)
metres

Note: All geological projections inferred

Kidd Creek Mines Ltd			
AL PROPERTY BV ZONE			
DDH A84 - 18			
NTS 94E/6W		Proj. 0	
WORK BY	DRAWN BY	DATE	
IGS	ER	SEPT. 11/1984	
0		5 m	
SCALE 1:200			
Figure: 16			

Surface geology based on extrapolations
of geology from A84TR-28, A84TR-38
and A84TR-39

DDH A84-19
Azim. 210°
Dip. -43°



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

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LEGEND

LITHOLOGY

Altered andesite flow

ALTERATION

- A3, A3a, A3b - propylitic
- A2 - argillic
- A5 - silicification
- A6 - silicification + hematite
- A7, A7a - silicification + pyrite

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

Note: All geological projections
inferred

Kidd Creek Mines Ltd.			
AL PROPERTY BV ZONE DDH A84-19			
NTS 94E/6W		Proj. 03	
16 S	ER	DATE SEPT. 11/1984	
0 5 m			
SCALE 1 : 200			
Figure: 17			

alteration facies. Subsurface alteration is typically interrupted by intervals of weakly altered rock in contrast with the relatively continuous widths of intense, surface alteration. Drill-intersected alteration can be subdivided into a northern and southern zone, each of which consists of one or more components of intense alteration that attains a maximum width in the order of 10 m. A generalized correlation of these zones with surface alteration indicates pinching and bifurcation of alteration with depth. Alteration dips steeply to moderately in a northerly direction; it is shallowest towards the east and may actually swing through to a vertical dip in hole A84-17. Brecciation affects all rocks and ranges from crackle brecciation of weakly altered country rocks or altered zones to intensely brecciated and/or sheared zones primarily within the alteration. Mineralization is associated with late-stage veins of quartz-barite + dickite + pyrite and the highest Au values correlate with the most significant barite mineralization. Some of the vein quartz is massive chalcedony. Native gold was noted in a few holes within quartz-barite veining; in hole A84-13 gold mineralization was interstitial to barite and an alteration front of fine-grained, disseminated pyrite. Local traces of galena, chalcopyrite and possible tennantite-tetrahedrite also occur in the veined sections. The best intersections (uncut) include:

A84-11	7.30 g/t Au;	0.4 ppm Ag	- over 0.75 m
	27.32 g/t Au;	3.3 ppm Ag	- over 1.55 m
	25.61 g/t Au;	1.7 ppm Ag	- over 2.1 m
A84-12	25.79 g/t Au;	5.4 ppm Ag	- over 2.27 m
	17.20 g/t Au;	2.9 ppm Ag	- over 1.0 m

A84-13	10.58 g/t Au; 2.7 ppm Ag - over 0.9 m
	21.72 g/t Au; 3.6 ppm Ag - over 2.5 m
A84-15	13.64 g/t Au; 7.7 ppm Ag - over 2.2 m
A84-17	9.07 g/t Au; 2.4 ppm Ag - over 2.91 m
A84-18	5.00 g/t Au; 1.5 ppm Ag - over 0.5 m
	3.20 g/t Au; 1.6 ppm Ag - over 0.5 m
A84-19	9.60 g/t Au; 20.0 ppm Ag - over 0.34 m

Within the higher grade intervals, values are very erratic. It is possible in some holes to spatially correlate mineralization from surface with intersections at depth but from hole to hole, mineralization is as irregular as it seems to be along strike on surface.

CONCLUSIONS

The epithermal mineral deposits and associated alteration zones were formed on the A1 property in the latter stages of volcanism as a result of hydrothermal activity. Alteration mineral assemblages across the property indicate that hydrothermal fluids were strongly acidic (pH <4) and sulphur-rich (alunite, dickite, pyrite). Such alteration assemblages and the associated Au mineralization are fairly typical of the 'enargite-gold' subtype of volcanic-hosted Au-Ag deposits such as Goldfield, Nevada and El Indio, Chile (Bonham and Giles; 1983). The geometry of mineralized zones (BV zone excepted) is typically laterally restricted, implying a possible hot springs-like nature to the hydrothermal system. Nowhere is this better illustrated than in the highly complex alteration/mineralization of zone 'A' of the Thesis III zone. It is probable that the main silicified bodies here have a plunging, pipe-like form.

Gold mineralization on the Al property (Verrenass, Thesis III and BV zones) consists of native Au associated with late-stage, open-space barite mineralization (\pm quartz), hosted in silicified volcanic or volcanoclastic rocks. Tectonic fracturing of these rocks is the dominant style of permeability development; dissolution of clay-altered fiamme and plagioclase have added substantially to the permeability in rocks of the Verrenass zone. The spatial association between localized rhyodacite intrusive bodies and several zones of intense alteration implies a possible heat source for the hydrothermal fluids. Mineralization on the property is richest and most widespread in trenched exposures. Drilling of the main zones revealed a distinct decrease in barite and Au contents and a corresponding increase in pyrite and dickite with depth over generally short vertical distances. This indicates rapid vertical changes in the degree of oxidation and pH across an hypothesized reaction front. Such rapid chemical changes are best explained by the mixing of a reduced (and auriferous), hydrothermal fluid with an oxidized, groundwater reservoir.

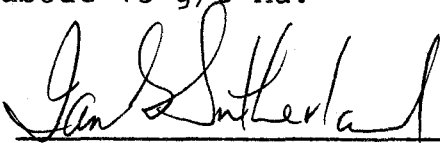
This type of mixing model has been presented by many researchers to explain various types of mineral deposition. Sawkins (1966) explained the barite mineralization in the North Pennine ore-field of England through a process of mixing hydrothermal fluids with Ba-enriched, connate waters. Blount (1977), in his study of barite stabilities below 300°C, concludes that generally, "the most probable cause of BaSO₄ deposition is the oxidation of reduced sulphur species to sulphate in

solutions carrying barium". Henley (1983) relates Au deposition in hot spring and sub-hot spring environments to a loss of H₂S due to mixing of hydrothermal fluids with near-surface waters or as a result of boiling. A similar fluid mixing process has been recently recognized at the McDermitt Hg deposit in southern Oregon. Even in porphyry ore deposits, mixing of hydrothermal and meteoric fluids has been advanced as an important mechanism in the mineralizing process (Henley and McNabb, 1978). Mixing of reduced, metalliferous hydrothermal fluids into an oxidized seawater environment is also used to explain sulphide precipitation in the active, ocean ridge systems (i.e. "Smokers").

This is obviously a simplisitic overview, based on a single mineral deposit. At the **Thesis III zone**, a hot springs or sub-hot springs environment is implied by the highly irregular shapes and possible pipe-like nature of the alteration zones. The absence of pyrite and the presence of barite to a depth of at least 32 m in drill hole A84-10, illustrate a greater vertical range of barite + Au mineralization than in the other three holes in this area. It is hypothesized that the rising, hydrothermal plume is focussed along specific 'pipes' of fluid conduction into a relatively static groundwater reservoir. The redox boundary is effectively elevated as a result, with a cone-shaped zone of mixing (and mineralization) positioned above the boundary. Dickite dissolution implies a final pH similar to that of the Verrenass zone. Substantiation of this hypothesis for the Thesis III zone requires more drilling and fluid chemistry research.

At the **BV zone**, barite-quartz-Au mineralization is restricted to a linear fault structure over a 500 m strike length. Drilling suggests general decreases both in alteration widths and in barite and Au concentrations with depth. A much greater vertical continuity exists, however, than in the other two zones. The zone of mixing is envisaged to extend over considerable vertical extent in a system of V-shaped, alteration wedges. The reduced, hydrothermal fluid plume has likely resulted in an even more extreme bulge in the redox reaction front that was likely hypothesized for the Thesis III zone. This may have been due in part to a relatively lower input rate of oxidized groundwater into the zone of mixing.

Further work is not recommended at this time because of insufficient tonnages on these two zones. Aggregate tonnage is estimated at approximately 88,000 tonnes at an average grade of about 15 g/t Au.


I. G. Sutherland

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APPENDIX A

Statement of Qualifications

APPENDIX A

Statement of Qualifications

I.G. Sutherland - Geologist

I. G. Sutherland holds a B.Sc. (Hons) Degree in Geology, granted in 1976 by the University of Western Ontario. Since that time he has held several positions in Industry and Government, and has been employed by Kidd Creek Mines Ltd. in Vancouver since March 1981.

J. R. Clark- Geologist

J.R. Clark holds a B.Sc. (Hons) Degree in Geology, granted in 1979 by McGill University. He has wide exploration experience and was employed by Kidd Creek Mines Ltd. for the 1981 through 1984 field seasons. He is presently enrolled in a M.Sc. program at McGill, where his research concerns aspects of the geology of properties in this region.

N.O. von Fersen - Geologist

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

APPENDIX B

Statement of Expenditures

APPENDIX B
STATEMENTS OF EXPENDITURES

I Hump-84 Group (June 22-Aug 13, 1984)

A. Physical Work

i) THESIS III Zone

S. Jaycox - Backhoe/Bulldozer Operator

June 22-Aug 13	31.5 hrs @ \$56/hr	\$1,764.00
excavation of 19 trenches and preparation of 2 drill pads		

ii) BV Zone

S. Jaycox - Backhoe/Bulldozer Operator

July 15-Aug 8	32.5 hrs @ \$56/hr	1,820.00
excavation of 13 trenches		

Room and Board

S. Jaycox	6 days @ \$80/day	<u>480.00</u>
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A. Total Physical Work	4,064.00	4,064.00
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B. Diamond Drilling and Support

a) Diamond Drilling (A 84-8and -9)

D.W. Coates invoice charges for drilling, survey, core boxes, supplies and equipment, moving time, etc.	13,415.82
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b) Room and Board

D.W. Coates personnel	8 man-days @ \$80/day	640.00
-----------------------	-----------------------	--------

c) Helicopter Support

ALC, Hughes 500D	5.9 hrs @ \$525/hr (incl. fuel)	<u>3,097.50</u>
------------------	---------------------------------	-----------------

B. Total Drilling & Support	17,153.32	17,153.32
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C. Geological and Geochemical Work

a) Trench Mapping and Sampling

i) THESIS III Zone

J.R. Clark - Geologist		
July 23-30	6 days @ \$88/day	528.00
P.J. Maheaux - Geologist		
June 22-July 16	9 days @ \$88/day	792.00
L.J. Haering - Geological Assistant		
June 24-July 15	9 days @ \$78/day	702.00
B. Anderson - Assistant		
June 22-Aug 3	8 days @ \$60/day	480.00
J. Black - Assistant		
June 22-July 15	8 days @ \$66/day	528.00
J. Leigh - Assistant		
June 24-July 15	9.5 days @ \$66/day	627.00
B. von Schulmann - Assistant		
June 22-July 16	10.5 days @ \$54/day	567.00
M. Trotzuk - Assistant -(sample preparation)		
June 30 - Aug 1	19 days @ \$62/day	<u>1,178.00</u>
	Sub Total	5,402.00

ii) BV Zone (July 15-Aug 13)

J.R. Clark - Geologist		
July 15-22	5 days @ \$88/ day	440.00
P.J. Maheaux - Geologist		
July 18-Aug 9	3 days @ \$88/day	264.00
L.J. Haering - Geological Assistant		
July 16-Aug 8	6 days @ \$78/day	468.00
B. Anderson - Assistant		
July 17-Aug 12	6 days @ \$60/day	360.00
J. Black - Assistant		
July 16 - Aug 13	8 days @ \$66/day	528.00
J. Leigh - Assistant		
July 16-18	3 days @ \$66/day	198.00
B. von Schulmann - Assistant		
July 13-Aug 13	7 days @ \$54/day	378.00
M. Trotzuk - Assistant (sample preparation)		
July 18-Aug 13	11 days @ \$62/day	<u>682.00</u>
	Sub total	3,318.00

b) Room and Board

Kidd Creek Personnel, 128 man-days @ \$80/day 10,240.00

c) Helicopter Support

ALC, Hughes 500 D 15.3 hrs @ \$525/hr (incl fuel) 8,032.50

d) Analytical Costs

572 (Thesis III) + 327 (BV) = 899 trench samples

97 (Thesis III) drill core samples

669 rock sample preparations @ \$1.50 1,003.50

669 Ag geochemical analyses @ \$1.50 1,003.50

483 Au geochemical analyses @ \$5.00 2,415.00

451 Au assays @ \$6.00 2,706.00

7,128.00

C. Total Geological/Geochemical

34,120.50

TOTAL PART I (Bump-84 Group)

\$55,337.82

APPENDIX C

Analytical Procedures

APPENDIX C
ANALYTICAL TECHNIQUES

CDN Resource Laboratories Ltd.

Delta, B.C.

- (a) Sample preparation - 1/4" crush (done in field)
 - pulverized to -100 mesh (CDN)

- (b) Au Geochemistry
 - 15 g sample
 - fire assay preparation
 - aqua regia digestion; diluted to 5 ml volume.
 - AA analysis (to 6 pbb)

- (c) Ag Geochemistry
 - 0.5 gm sample
 - digestion in 15 ml nitric acid (20%)
 - diluted to 20 ml
 - AA analysis (to 0.1 ppm)

- (d) Fire Assay (Au and Ag)
 - 20 g sample
 - standard fire assay techniques

APPENDIX D

Trench Maps

II Hump-84 Group (Aug 14-Sept 5, 1985)

A. Physical Work

i) THESIS III Zone

S. Jaycox - Backhoe/Bulldozer Operator
Aug 14-22 8 hrs @ \$56/hr \$ 448.00
preparation of 2 drill pads

ii) BV Zone

S. Jaycox - Backhoe/Bulldozer Operator
Aug 16-Sept 3 30 hrs @ \$56/hr 1,680.00
preparation of 8 drill sites and access roads

Room and Board

S. Jaycox 5 days @ \$80/day 400.00

A. Total Physical Work 2,528.00 2,528.00

B. Diamond Drilling and Support

a) Diamond Drilling (A 84-10 to -19)

D.W. Coates invoice charges for drilling,
survey, core boxes, supplies and equipment,
moving time, etc. 67,229.25

b) Room and Board

D.W. Coates personnel 46 man-days @ \$80/day 3,680.00

c) Helicopter Support

AIC, Hughes 500D 23.7 hrs @ \$525/hr (incl fuel) 12,442.50

B. Total Drilling & Support 83,351.75 83,351.75

C. Geological and Geochemical Work

a) Analytical Costs

289 core sample preparations @ \$1.50 433.50
289 Ag geochemical analyses @ \$1.75 505.75
245 Au geochemical analyses @ \$5.00 1,225.00
117 Au assays @ \$6.00 702.00

2,866.25 2,866.25

b) Report Preparation

V. Goodfellow - contract drafting
1.75 months @ \$2,050/mo 3,587.50

D. Leigh - typing
1 day @ \$110/day 100.00

C. Total Geological/Geochemical 3,697.50 3,697.50

Total Part II (Hump-84 Group) \$ 92,443.50

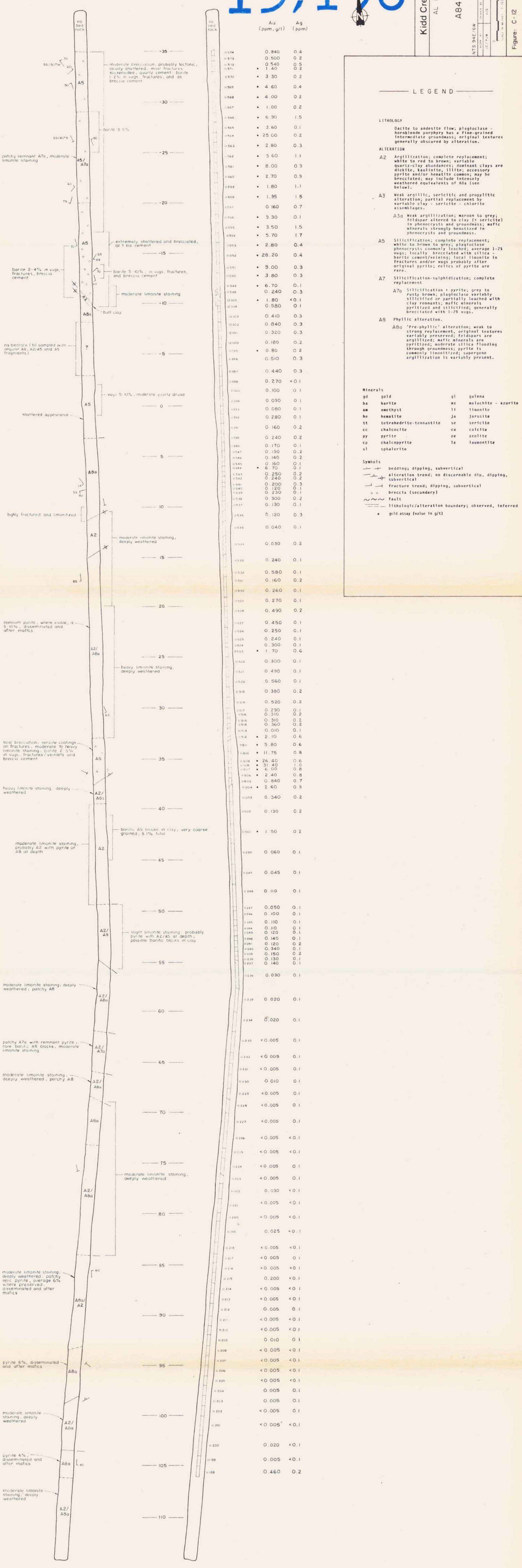
Total Part I (Hump-84 Group) \$ 55,337.82

TOTAL \$147,781.32

A84 - TR - 013

13,198

Kidd Creek Mines Ltd.
AL PROPERTY
A84 - TR - 013
NTS 847/GW
DATE: OCT 10, 1984
SCALE: 1:200 (SEE REVERSE)
Figure: C-12



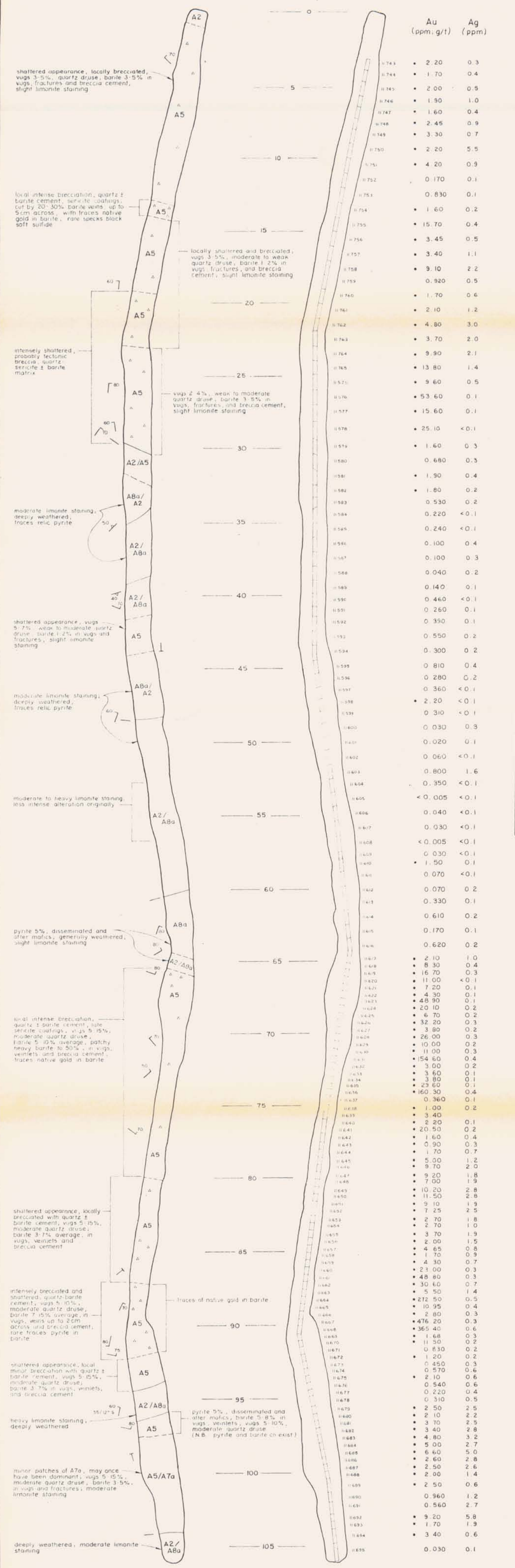
Sample series: AB 1198 - AB 1250
AB 11501 - AB 11574
AB 11989 - AB 12005

Kidd Creek Mines Ltd.
 AL PROPERTY
A84 - TR - 014

NTS 94E/W
 DRAWN BY: [blank]
 CHECKED BY: [blank]
 DATE: OCT 25, 1984
 PROJECT: 03

Scale: 1:200 WHEN REDUCED

Figure: C-13



Sample ID	Au (ppm; g/t)	Ag (ppm)
H 743	2.20	0.3
H 744	1.70	0.4
H 745	2.00	0.5
H 746	1.90	1.0
H 747	1.60	0.4
H 748	2.45	0.9
H 749	3.30	0.7
H 750	2.20	5.5
H 751	4.20	0.9
H 752	0.170	0.1
H 753	0.830	0.1
H 754	1.60	0.2
H 755	15.70	0.4
H 756	3.45	0.5
H 757	3.40	1.1
H 758	9.10	2.2
H 759	0.920	0.5
H 760	1.70	0.6
H 761	2.10	1.2
H 762	4.80	3.0
H 763	3.70	2.0
H 764	9.90	2.1
H 765	13.80	1.4
H 766	9.60	0.5
H 767	53.60	0.1
H 768	15.60	0.1
H 769	25.10	<0.1
H 770	1.60	0.3
H 771	0.680	0.3
H 772	1.90	0.4
H 773	1.80	0.2
H 774	0.530	0.2
H 775	0.220	<0.1
H 776	0.240	<0.1
H 777	0.100	0.4
H 778	0.100	0.3
H 779	0.040	0.2
H 780	0.140	0.1
H 781	0.460	<0.1
H 782	0.260	0.1
H 783	0.350	0.1
H 784	0.550	0.2
H 785	0.300	0.2
H 786	0.810	0.4
H 787	0.280	0.2
H 788	0.360	<0.1
H 789	2.20	<0.1
H 790	0.310	<0.1
H 791	0.030	0.3
H 792	0.020	0.1
H 793	0.060	<0.1
H 794	0.800	1.6
H 795	0.350	<0.1
H 796	<0.005	<0.1
H 797	0.040	<0.1
H 798	0.030	<0.1
H 799	1.50	0.1
H 800	0.070	<0.1
H 801	0.070	0.2
H 802	0.330	0.1
H 803	0.610	0.2
H 804	0.170	0.1
H 805	0.620	0.2
H 806	2.10	1.0
H 807	8.30	0.4
H 808	16.70	0.3
H 809	11.00	<0.1
H 810	7.20	0.1
H 811	4.30	0.1
H 812	48.90	0.1
H 813	20.10	0.2
H 814	6.70	0.2
H 815	32.20	0.3
H 816	3.80	0.2
H 817	26.00	0.3
H 818	10.00	0.2
H 819	11.00	0.3
H 820	154.60	0.4
H 821	3.00	0.2
H 822	3.60	0.1
H 823	3.80	0.1
H 824	29.60	0.1
H 825	160.30	0.4
H 826	0.360	0.1
H 827	1.00	0.2
H 828	3.40	0.2
H 829	2.20	0.1
H 830	20.50	0.2
H 831	1.60	0.4
H 832	0.90	0.3
H 833	1.70	0.7
H 834	5.00	1.2
H 835	9.70	2.0
H 836	9.20	1.8
H 837	7.00	1.9
H 838	10.20	2.8
H 839	11.50	2.9
H 840	9.10	1.9
H 841	7.25	2.5
H 842	2.70	1.8
H 843	2.70	1.0
H 844	3.70	1.9
H 845	2.00	1.5
H 846	4.65	0.8
H 847	1.70	0.9
H 848	4.30	0.7
H 849	23.00	0.3
H 850	48.80	0.3
H 851	30.60	0.7
H 852	5.50	1.4
H 853	272.50	0.5
H 854	10.95	0.4
H 855	2.80	0.3
H 856	476.20	0.3
H 857	365.40	0.6
H 858	1.68	0.3
H 859	11.50	0.2
H 860	0.830	0.2
H 861	1.20	0.2
H 862	0.450	0.3
H 863	0.570	0.6
H 864	2.10	0.6
H 865	0.540	0.6
H 866	0.220	0.4
H 867	0.310	0.5
H 868	2.50	2.5
H 869	2.10	2.2
H 870	3.70	2.5
H 871	3.40	2.8
H 872	4.80	3.2
H 873	5.00	2.7
H 874	6.60	5.0
H 875	2.60	2.8
H 876	2.50	2.6
H 877	2.00	1.4
H 878	2.50	0.6
H 879	0.960	1.2
H 880	0.560	2.7
H 881	9.20	5.8
H 882	1.70	1.9
H 883	3.40	0.6
H 884	0.030	0.1

LEGEND

- LITHOLOGY**
 Dacite to andesite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; original textures generally obscured by alteration.
- ALTERATION**
- A2 Argillization; complete replacement; white to red to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; accessory pyrite and/or hematite common; may be brecciated; may include intensely weathered equivalents of A8a (see below).
 - A3 Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - chlorite assemblages.
 - A3a Weak argillization; maroon to grey; feldspar altered to clay (+ sericite) in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
 - A5 Silicification; complete replacement; white to brown to grey; plagioclase phenocrysts commonly leached; average 1-2% vugs; locally brecciated with silica - barite cement/veining; local limonite in fractures and/or vugs probably after original pyrite; relics of pyrite are rare.
 - A7 Silicification-sulphidization; complete replacement
 - A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals pyritized and silicified; generally brecciated with 1-2% vugs.
 - A8 Phyllic alteration.
 - A8a 'Pre-phyllic' alteration; weak to strong replacement, original textures variably preserved; feldspars are argillized; mafic minerals are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.

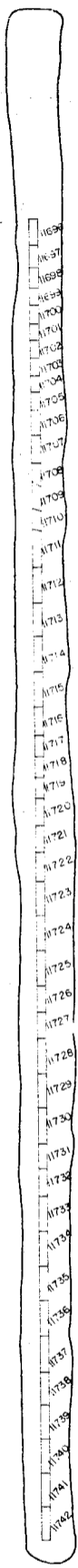
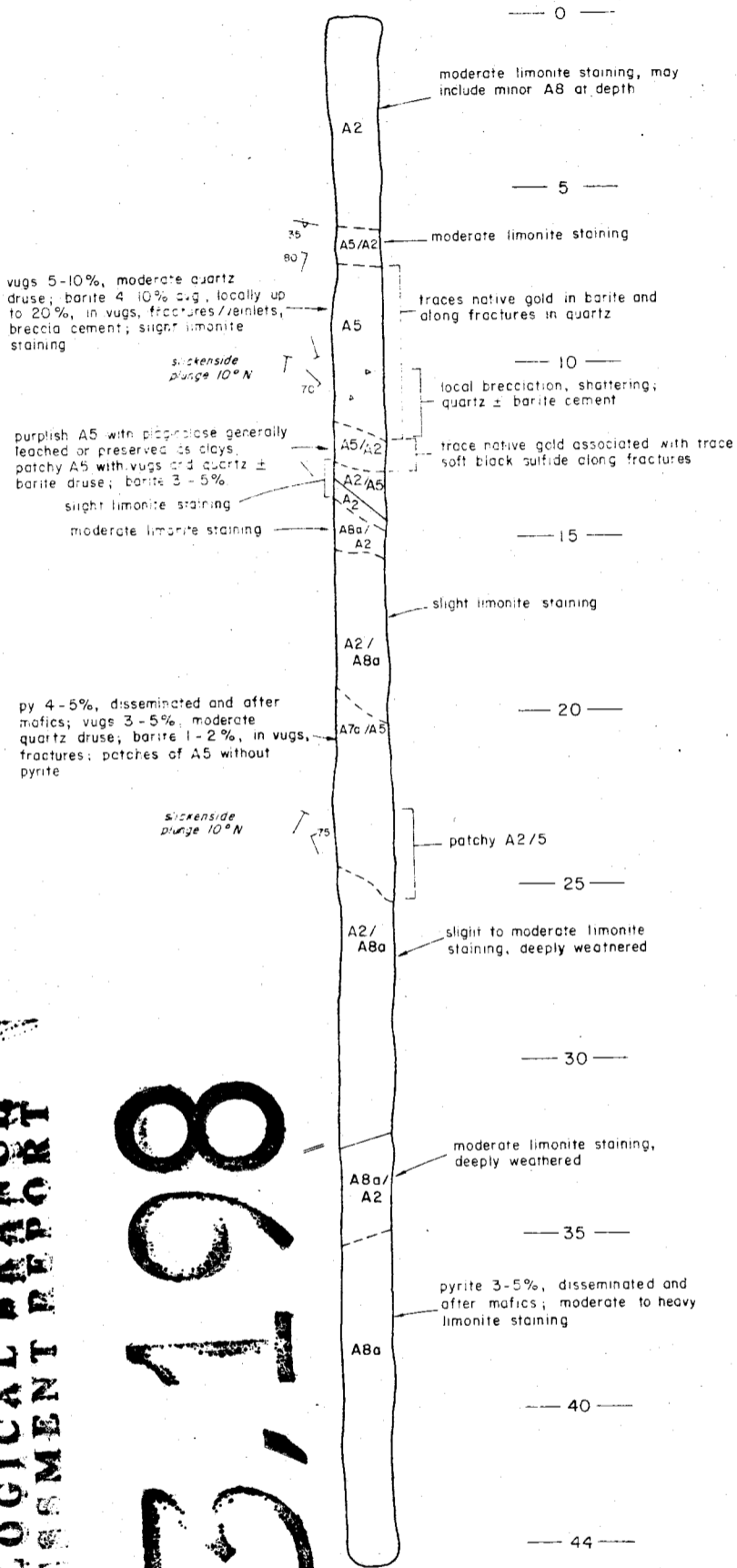
- Minerals**
- | | | | |
|----|-------------------------|----|---------------------|
| gd | gold | gl | galena |
| ba | barite | mz | malachite - azurite |
| am | amethyst | li | limonite |
| he | hematite | ja | jarosite |
| tt | tetrahedrite-tennantite | se | sericite |
| cc | chalcocite | ca | calcite |
| py | pyrite | ze | zeolite |
| cp | chalcopyrite | la | laumontite |
| sl | sphalerite | | |

- Symbols**
- bedding; dipping, subvertical
 - alteration trend; no discernable dip, dipping, subvertical
 - fracture trend; dipping, subvertical
 - △△△ breccia (secondary)
 - ~ fault
 - lithologic/alteration boundary; observed, inferred
 - SS/12'S slickensides; plunge angle and direction
 - gold assay (value in g/t)

**GEOLOGICAL BRANCH
 ASSESSMENT REPORT**

15,198

A84 - TR - 015



	Au (ppm; g/t)	Ag (ppm)
N703	0.710	0.3
N704	1.50	1.0
N705	4.05	0.8
N706	3.60	1.0
N707	2.40	0.8
N708	2.40	0.5
N709	28.20	1.1
N710	13.40	1.5
N711	36.60	1.4
N712	79.70	1.2
N713	2.30	1.0
N714	3.90	0.8
N715	0.330	0.3
N716	0.170	0.1
N717	0.090	0.1
N718	0.110	0.1
N719	0.150	<0.1
N720	0.11	<0.1
N721	5.30	0.2
N722	0.310	<0.1
N723	3.00	0.2
N724	1.50	0.4
N725	No result - sample missing	
N726	0.830	0.3
N727	1.10	0.3
N728	3.70	0.4
N729	1.60	0.4
N730	0.460	0.3
N731	0.320	0.3
N732	0.310	0.3
N733	0.240	0.3
N734	0.470	0.4
N735	0.090	<0.1
N736	0.060	0.1
N737	0.060	0.1
N738	<0.005	<0.1
N739	0.030	<0.1
N740	0.02	<0.1
N741	0.16	0.3
N742	<0.005	0.4
N743	0.02	<0.1
N744	0.02	<0.1
N745	0.03	<0.1
N746	0.02	<0.1
N747	0.03	<0.1
N748	0.03	<0.1
N749	0.015	<0.1
N750	<0.005	0.2

channel samples 25 cm wide, area as indicated, 10 Kg each

Kidd Creek Mines Ltd.

AL PROPERTY

A84 - TR - 015

NTS 94E/6W
 WORK IN PROGRESS
 LJM/JC
 DATE: SEPT 17/1984
 PROJECT: 03
 SCALE IN METRES: 1:100 (1:200 WHEN REDUCED)

Figure: C-14

LEGEND

LITHOLOGY
 Dacite to andesite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; original textures generally obscured by alteration.

ALTERATION
A2 Argillization; complete replacement; white to red to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; accessory pyrite and/or hematite common; may be brecciated; may include intensely weathered equivalents of A8a (see below).

A3 Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - chlorite assemblages.

A3a Weak argillization; maroon to grey; feldspar altered to clay (+ sericite) in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.

A5 Silicification; complete replacement; white to brown to grey; plagioclase phenocrysts commonly leached; average 1-2% vugs; locally brecciated with silica - barite cement/veining; local limonite in fractures and/or vugs probably after original pyrite; relics of pyrite are rare.

A7 Silicification-sulphidization; complete replacement

A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals pyritized and silicified; generally brecciated with 1-2% vugs.

A8 Phyllic alteration.

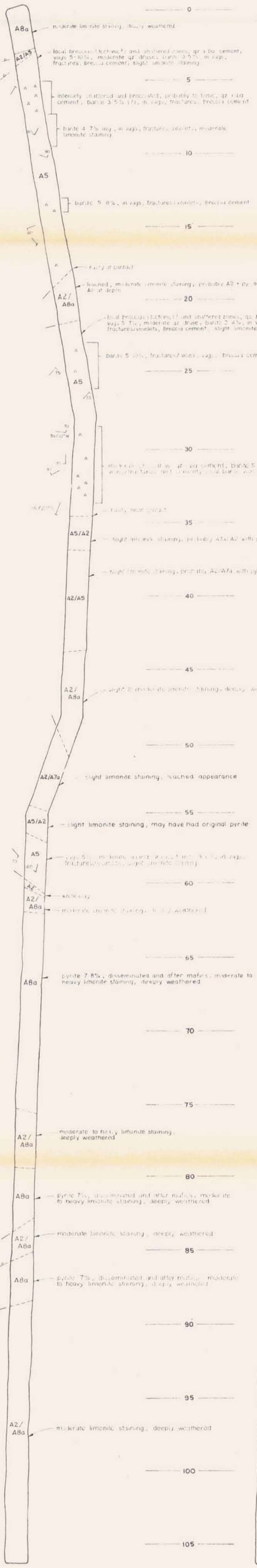
A8a 'Pre-phyllic' alteration; weak to strong replacement, original textures variably preserved; feldspars are argillized; mafic minerals are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite		

- Symbols**
- +— bedding; dipping, subvertical
 - A— alteration trend; no discernable dip, dipping, subvertical
 - |— fracture trend; dipping, subvertical
 - △△ breccia (secondary)
 - ~~~~ fault
 - — — lithologic/alteration boundary; observed, inferred
 - gold assay (value in g/t)

GEOLOGICAL BRANCH
ASSESSMENT REPORT
15,198



Sample ID	Au (ppm)	Ag (ppm)
11871	0.210	0.2
11875	0.040	0.2
11876	0.070	0.2
11877	0.110	2.0
11878	6.60	0.3
11879	33.80	0.2
11880	0.70	0.2
11881	0.560	0.1
11882	9.60	0.2
11883	6.00	0.4
11884	1.95	2.4
11885	1.70	0.2
11886	5.40	0.2
11887	1.40	0.1
11888	1.60	0.3
11889	1.00	0.1
11890	1.20	0.2
11891	1.85	0.6
11892	1.20	0.5
11893	1.15	0.9
11894	2.00	0.2
11895	0.780	0.6
11896	0.720	0.5
11897	0.920	0.2
11898	1.20	0.2
11899	1.85	0.2
11900	1.40	0.4
11901	2.90	0.1
11902	1.70	0.2
11903	2.25	0.2
11904	1.70	0.2
11905	2.60	0.9
11906	1.70	0.3
11907	1.30	0.6
11908	1.70	0.3
11909	1.240	0.3
11910	1.10	0.4
11911	1.70	0.9
11912	1.60	0.7
11913	0.740	0.1
11914	0.630	0.1
11915	0.880	0.4
11916	0.550	0.4
11917	0.910	0.2
11918	0.620	0.1
11919	0.440	0.2
11920	0.720	0.1
11921	0.90	0.2
11922	0.370	0.1
11923	0.480	0.1
11924	0.470	0.1
11925	0.240	0.3
11926	0.070	0.3
11927	0.060	0.1
11928	0.070	0.2
11929	0.300	0.3
11930	0.110	0.2
11931	0.030	0.1
11932	0.040	0.1
11933	0.070	0.1
11934	0.060	0.1
11935	0.030	0.1
11936	0.420	0.1
11937	0.140	0.1
11938	0.010	0.2
11939	0.260	0.1
11940	0.590	0.1
11941	0.410	0.1
11942	0.900	0.1
11943	1.50	0.8
11944	0.660	0.2
11945	1.20	1.0
11946	0.820	0.2
11947	0.580	0.3
11948	0.990	1.4
11949	0.860	0.2
11950	0.590	0.2
11951	0.400	0.3
11952	0.030	0.1
11953	0.030	0.1
11954	0.020	0.1
11955	0.020	0.1
11956	<0.005	<0.1
11957	<0.005	<0.1
11958	0.020	<0.1
11959	<0.005	<0.1
11960	<0.005	<0.1
11961	0.035	<0.1
11962	0.020	<0.1
11963	<0.005	<0.1
11964	<0.005	<0.1
11965	0.035	<0.1
11966	0.020	<0.1
11967	0.020	0.1
11968	0.035	<0.1
11969	0.020	0.1
11970	0.020	0.1
11971	0.035	<0.1
11972	0.020	<0.1
11973	0.025	0.1
11974	0.020	0.1
11975	0.020	<0.1
11976	0.015	<0.1
11977	0.005	<0.1
11978	0.030	0.1
11979	0.240	0.1
11980	0.030	0.1
11981	0.180	<0.1
11982	0.350	0.3
11983	0.125	0.1
11984	0.010	<0.1
11985	0.015	0.3
11986	0.030	0.1
11987	0.030	<0.1
11988	0.030	0.1

LEGEND

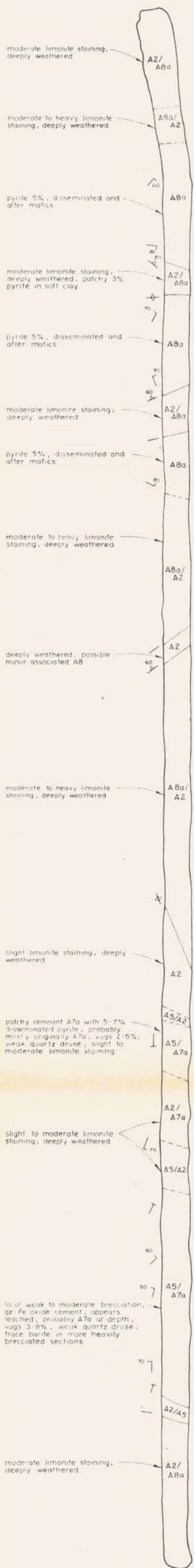
LITHOLOGY
Dacite to andesite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; original textures generally obscured by alteration.

ALTERATION
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A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals pyritized and silicified; generally brecciated with 1-2% vugs.
A8 Phyllic alteration.
A8a 'Pre-phyllic' alteration; weak to strong replacement; original textures variably preserved; feldspars are argillized; mafic minerals are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.

- Minerals**
- | | | | |
|----|-------------------------|----|---------------------|
| gd | gold | gl | galena |
| ba | barite | mz | malachite - azurite |
| am | amethyst | li | limonite |
| he | hematite | ja | jarosite |
| tt | tetrahedrite-tennantite | se | sericite |
| cc | chalcocite | ca | calcite |
| py | pyrite | ze | zeolite |
| cp | chalcopyrite | la | lauontite |
| sl | sphalerite | | |
- Symbols**
- bedding; dipping, subvertical
 - alteration trend; no discernable dip, dipping, subvertical
 - fracture trend; dipping, subvertical
 - △ breccia (secondary)
 - ~ fault
 - lithologic/alteration boundary; observed, inferred
 - 30°/20°↘ slickensides; plunge angle and direction
 - gold assay (value in g/t)

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**
15,198

A84 - TR-017



Sample ID	Au (ppm, g/t)	Ag (ppm)
11766	0.010	0.1
11767	0.005	0.6
11768	0.005	0.1
11769	0.035	<0.1
11770	0.040	0.2
11771	0.020	<0.1
11772	No result - sample missing	
11773	No result - sample missing	
11774	0.050	0.1
11775	<0.005	<0.1
11776	<0.005	2.2
11777	0.060	<0.1
11778	0.035	<0.1
11779	0.020	<0.1
11780	0.035	0.1
11781	No result - sample missing	
11782	<0.005	<0.1
11783	0.005	0.1
11784	0.080	0.1
11785	<0.005	0.2
11786	0.040	0.1
11787	0.040	0.1
11788	0.015	<0.1
11789	0.020	0.1
11790	0.250	0.1
11791	0.015	<0.1
11792	0.110	0.1
11793	0.020	<0.1
11794	0.010	<0.1
11795	<0.005	<0.1
11796	<0.010	<0.1
11797	0.050	0.1
11798	0.005	<0.1
11799	<0.005	<0.1
11800	0.030	<0.1
11801	0.010	<0.1
11802	0.005	<0.1
11803	0.005	<0.1
11804	<0.005	0.2
11805	0.070	<0.1
11806	0.080	<0.1
11807	0.950	0.7
11808	0.240	0.2
11809	0.350	0.4
11810	0.510	0.1
11811	0.560	<0.1
11812	0.680	0.3
11813	0.830	0.1
11814	• 1.40	0.1
11815	• 1.00	0.1
11816	0.810	1.2
11817	0.740	0.7
11818	• 2.60	0.4
11819	0.630	0.3
11820	• 1.10	1.3
11821	0.320	0.2
11822	0.100	0.2
11823	0.110	0.2
11824	• 1.00	0.6
11825	0.830	1.5
11826	0.870	0.9
11827	0.580	0.9
11828	0.520	0.2
11829	0.260	0.2
11830	0.520	0.2
11831	0.030	<0.1
11832	0.010	<0.1
11833	0.030	<0.1
11834	0.090	<0.1
11835	0.005	<0.1
11836	0.040	0.2
11837	0.040	0.4



Kidd Creek Mines Ltd.
AL PROPERTY
A84 - TR-017

NTS 94E/BW Proj. 03
WORK BY: J. J. J. DATE: OCT. 24, 1984
DRAWN BY: J. J. J. V.L.S.
SCALE: METERS: 1:1000 (1:200 WHEN REPRODUCED)
Figure: C-16

LEGEND

LITHOLOGY
Dacite to andesite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; original textures generally obscured by alteration.

ALTERATION

A2 Argillization; complete replacement; white to red to brown; variable quartz-clay abundance; dominant clays are dickite, kaolinite, illite; accessory pyrite and/or hematite common; may be brecciated; may include intensely weathered equivalents of A8a (see below).

A3 Weak argillitic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - chlorite assemblages.

A3a Weak argillization; maroon to grey; feldspar altered to clay (± sericite) in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.

A5 Silicification; complete replacement; white to brown to grey; plagioclase phenocrysts commonly leached; average 1-2% vugs; locally brecciated with silica - barite cement/veining; local limonite in fractures and/or vugs probably after original pyrite; relics of pyrite are rare.

A7 Silicification-sulphidization; complete replacement

A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals pyritized and silicified; generally brecciated with 1-2% vugs.

A8 Phyllic alteration.

A8a 'Pre-phyllic' alteration; weak to strong replacement, original textures variably preserved; feldspars are argillized; mafic minerals are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite		

Symbols

- bedding; dipping, subvertical
- alteration trend; no discernable dip, dipping, subvertical
- fracture trend; dipping, subvertical
- △ breccia (secondary)
- ~ fault
- lithologic/alteration boundary; observed, inferred
- gold assay (value in g/t)

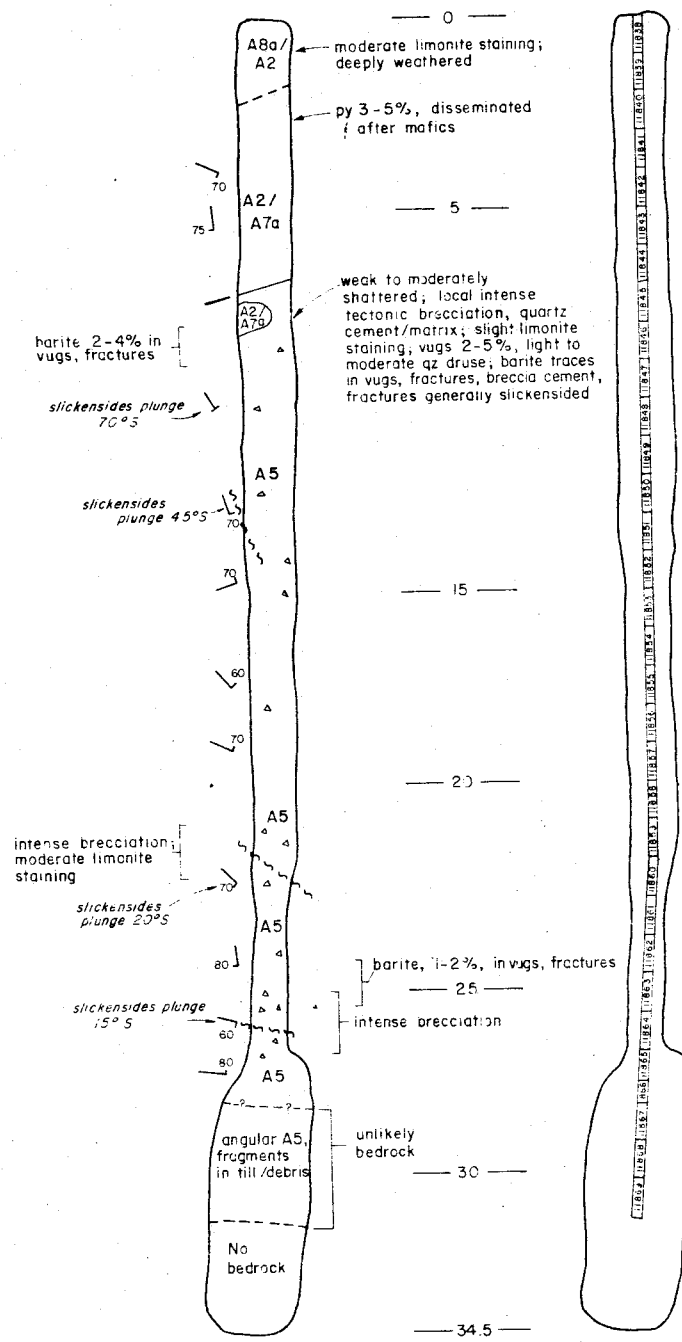
**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,198

A84 - TR - 018



Kidd Creek Mines Ltd.		Proj: 03
AL PROPERTY		
A84 - TR - 018		
NTS 94E/6W	Drawn By: ER	DATE: SEPTEMBER 10, 1984
WORK BY: LJM/JC	ER	
SCALE IN METRES 1:100 (1:200 WHEN REDUCED)		
Figure: C-17		



Au (ppm, g/t)	Ag (ppm)
0.005	<0.1
0.150	0.6
0.120	<0.1
0.300	0.4
0.280	0.3
0.320	0.3
0.690	0.3
• 1.90	0.3
• 1.70	0.2
• 1.30	1.9
0.350	0.1
0.860	0.1
0.700	0.1
0.690	0.2
• 1.00	0.3
0.850	0.4
• 3.20	1.0
• 3.50	0.6
0.310	0.2
0.700	0.2
0.380	0.3
0.880	0.3
0.610	1.0
0.660	1.0
0.350	0.3
0.070	0.2
0.390	0.5
0.230	0.4
0.830	0.6
• 1.40	1.3
• 1.30	0.9
0.480	0.4

channel samples 25cm wide, areas as indicated, ~10 Kg each
Sample series AB 11838 - 11869

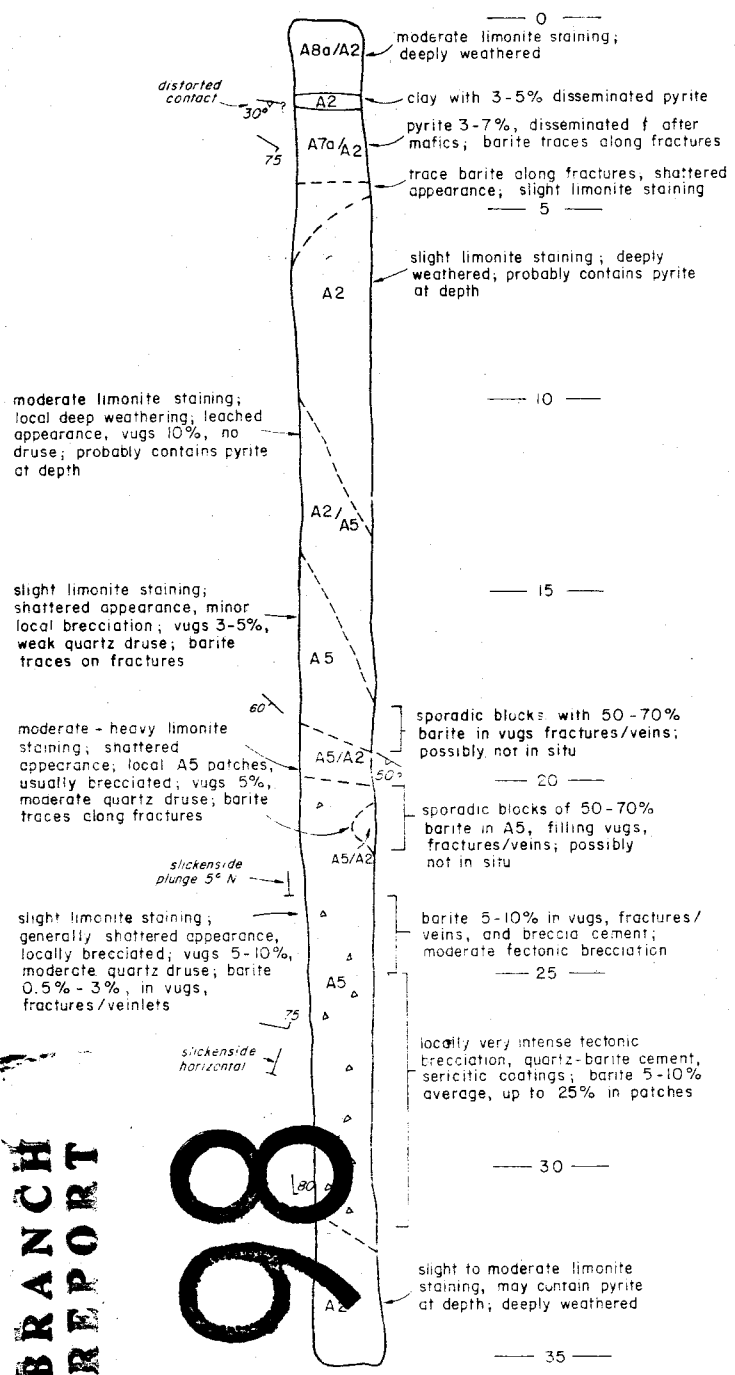
**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,198

LEGEND

- LITHOLOGY**
Dacite to andesite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; original textures generally obscured by alteration.
- ALTERATION**
- A2** Argillization; complete replacement; white to red to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; accessory pyrite and/or hematite common; may be brecciated; may include intensely weathered equivalents of A8a (see below).
- A3** Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - chlorite assemblages.
- A3a** Weak argillization; maroon to grey; feldspar altered to clay (+ sericite) in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
- A5** Silicification; complete replacement; white to brown to grey; plagioclase phenocrysts commonly leached; average 1-2% vugs; locally brecciated with silica - barite cement/veining; local limonite in fractures and/or vugs probably after original pyrite; relics of pyrite are rare.
- A7** Silicification-sulphidization; complete replacement
- A7a** Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals pyritized and silicified; generally brecciated with 1-2% vugs.
- A8** Phyllic alteration.
- A8a** 'Pre-phyllic' alteration; weak to strong replacement, original textures variably preserved; feldspars are argillized; mafic minerals are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.
- Minerals**
- | | | | |
|----|-------------------------|----|---------------------|
| gd | gold | gl | galena |
| ba | barite | mz | malachite - azurite |
| am | amethyst | li | limonite |
| he | hematite | ja | jarosite |
| tt | tetrahedrite-tennantite | se | sericite |
| cc | chalcocite | ca | calcite |
| py | pyrite | ze | zeolite |
| cp | chalcopyrite | la | laumontite |
| sl | sphalerite | | |
- Symbols**
- +— bedding; dipping, subvertical
 - △— alteration trend; no discernable dip, dipping, subvertical
 - |— fracture trend; dipping, subvertical
 - △△ breccia (secondary)
 - ~ fault
 - lithologic/alteration boundary; observed, inferred
 - gold assay (value in g/t)

A84 - TR - 020



	Au (ppm, g/t)	Ag (ppm)
	0.080	<0.1
	0.100	1.9
	0.080	0.5
	0.220	0.4
	0.350	0.7
	2.00	1.0
	1.00	1.1
	0.390	3.8
	0.360	1.7
	0.970	1.6
	0.840	0.7
	2.60	1.2
	0.980	0.6
	1.00	0.9
	0.550	0.6
	4.70	0.4
	4.70	0.7
	4.10	1.2
	7.80	1.4
	22.80	1.6
	9.50	0.9
	5.20	1.4
	15.35	0.8

channel samples 25 cm wide, areas as indicated, ~10 Kg each
 Sample series: AB12136 - AB12159

Kidd Creek Mines Ltd.
 AL PROPERTY
 A84 - TR - 020

Proj. 03
 NTS 94E/GW
 DRAWN BY: []
 CHECKED BY: []
 DATE: SEPTEMBER 10, 1984
 L.H./J.C. ER
 SCALE IN METERS 1:100 (1" = 200 WHEN REDUCED)

Figure: C-18

LEGEND

LITHOLOGY
 Dacite to andesite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; original textures generally obscured by alteration.

ALTERATION

A2 Argillization; complete replacement; white to red to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; accessory pyrite and/or hematite common; may be brecciated; may include intensely weathered equivalents of A8a (see below).

A3 Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - chlorite assemblages.

A3a Weak argillization; maroon to grey; feldspar altered to clay (+ sericite) in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.

A5 Silicification; complete replacement; white to brown to grey; plagioclase phenocrysts commonly leached; average 1-2% vugs; locally brecciated with silica - barite cement/veining; local limonite in fractures and/or vugs probably after original pyrite; relics of pyrite are rare.

A7 Silicification-sulphidization; complete replacement

A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals pyritized and silicified; generally brecciated with 1-2% vugs.

A8 Phyllic alteration.

A8a 'Pre-phyllic' alteration; weak to strong replacement, original textures variably preserved; feldspars are argillized; mafic minerals are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	aeathyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite		

Symbols

— + — bedding; dipping, subvertical

— A — alteration trend; no discernable dip, dipping, subvertical

— | — fracture trend; dipping, subvertical

△ △ breccia (secondary)

~ ~ ~ fault

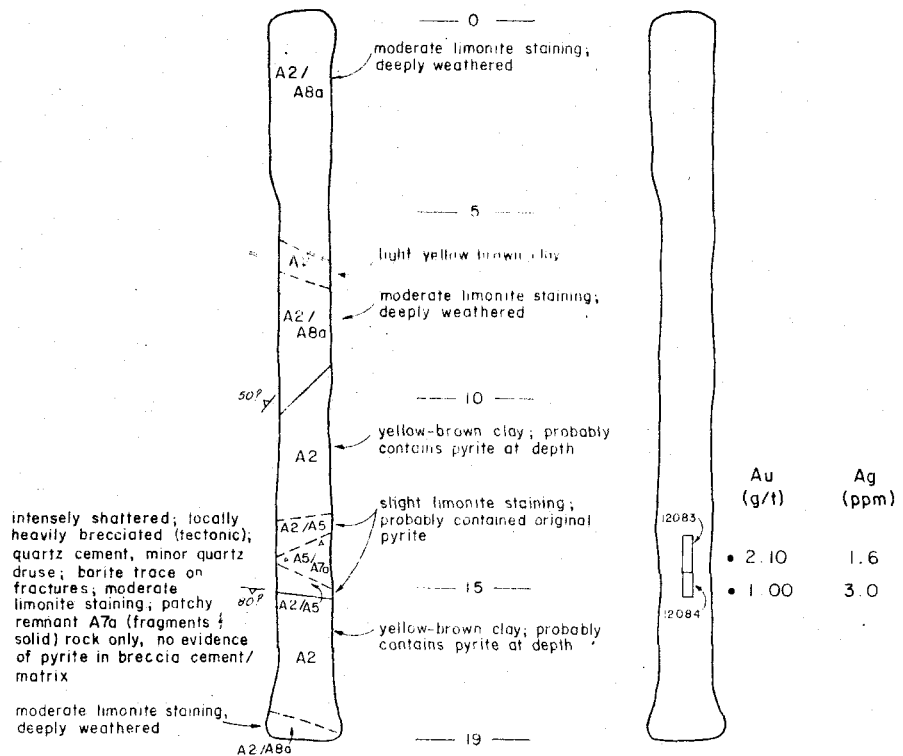
— — — lithologic/alteration boundary; observed, inferred

• gold assay (value in g/t)

GEOLOGICAL BRANCH
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A84 - TR - 022



LEGEND

LITHOLOGY

Dacite to andesite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; original textures generally obscured by alteration.

ALTERATION

- A2 Argillization; complete replacement; white to red to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; accessory pyrite and/or hematite common; may be brecciated; may include intensely weathered equivalents of A8a (see below).
- A3 Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - chlorite assemblages.
- A3a Weak argillization; maroon to grey; feldspar altered to clay (+ sericite) in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
- A5 Silicification; complete replacement; white to brown to grey; plagioclase phenocrysts commonly leached; average 1-2% vugs; locally brecciated with silica - barite cement/veining; local limonite in fractures and/or vugs probably after original pyrite; relics of pyrite are rare.
- A7 Silicification-sulphidization; complete replacement
- A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals pyritized and silicified; generally brecciated with 1-2% vugs.
- A8 Phyllic alteration.
- A8a 'Pre-phyllic' alteration; weak to strong replacement, original textures variably preserved; feldspars are argillized; mafic minerals are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite		

Symbols

- + — bedding; dipping, subvertical
- Δ — alteration trend; no discernable dip, dipping, subvertical
- | — fracture trend; dipping, subvertical
- △ △ breccia (secondary)
- ~~~~~ fault
- — — lithologic/alteration boundary; observed, inferred
- gold assay (value in g/t)

Kidd Creek Mines Ltd.

AL PROPERTY

A84 - TR - 022

NTS 94E / 6W

Project 03

DATE: SEPTEMBER 11, 1984

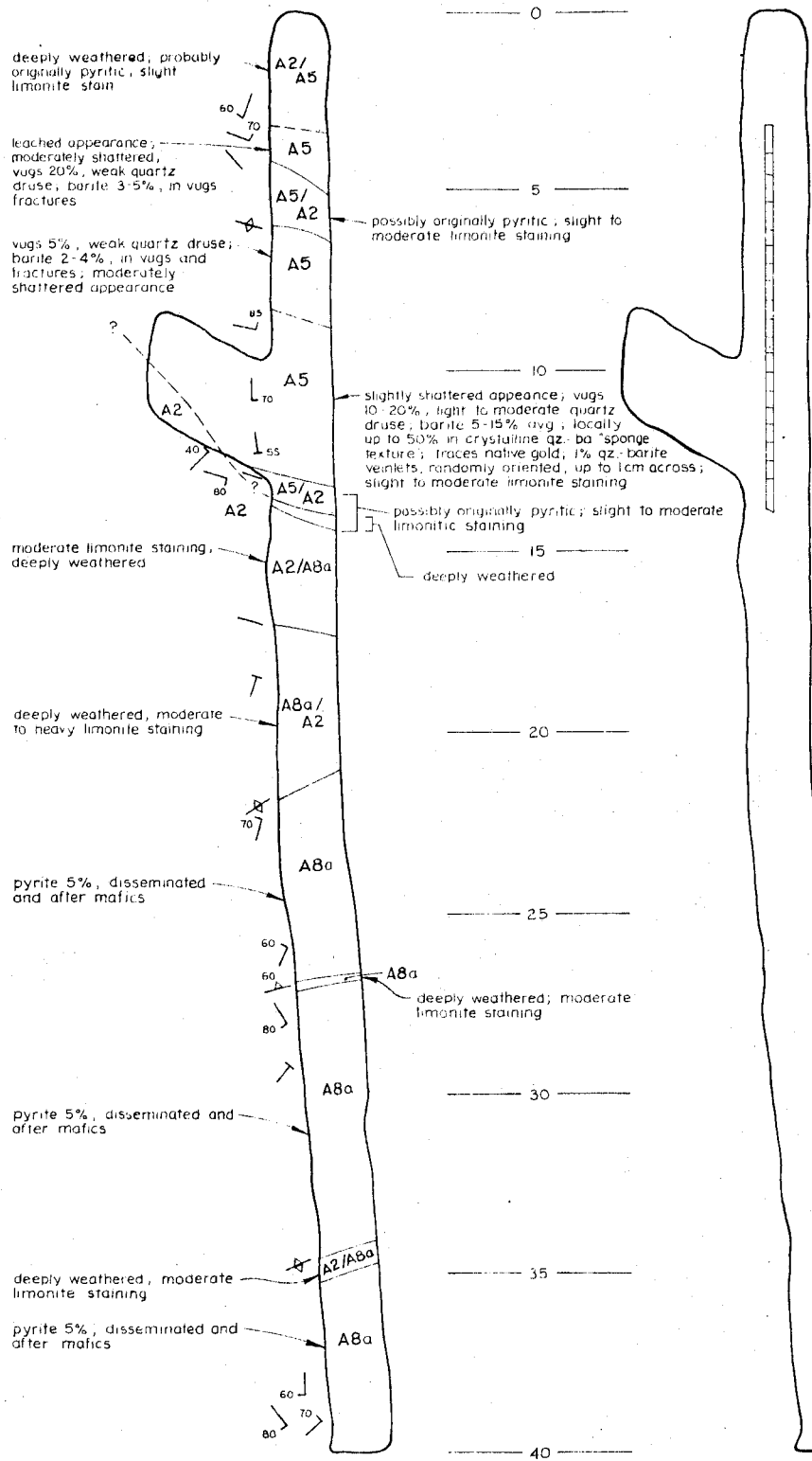
SCALE IN METERS 1:100 (1:1000 WHEN REDUCED)

Figure: C-19

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,198

A84 - TR - 023



GEOLOGICAL BRANCH
ASSESSMENT REPORT

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AB12085 - AB12103

LEGEND

LITHOLOGY

Dacite to andesite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; original textures generally obscured by alteration.

ALTERATION

- A2 Argillization; complete replacement; white to red to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; accessory pyrite and/or hematite common; may be brecciated; may include intensely weathered equivalents of A8a (see below).
- A3 Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - chlorite assemblages.
- A3a Weak argillization; maroon to grey; feldspar altered to clay (+ sericite) in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
- A5 Silicification; complete replacement; white to brown to grey; plagioclase phenocrysts commonly leached; average 1-2% vugs; locally brecciated with silica - barite cement/veining; local limonite in fractures and/or vugs probably after original pyrite; relics of pyrite are rare.
- A7 Silicification-sulphidization; complete replacement
- A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals pyritized and silicified; generally brecciated with 1-2% vugs.
- A8 Phyllic alteration.
- A8a 'Pre-phyllic' alteration; weak to strong replacement; original textures variably preserved; feldspars are argillized; mafic minerals are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
hc	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite		

Symbols

- + — bedding; dipping, subvertical
- / — alteration trend; no discernable dip, dipping, subvertical
- | — fracture trend; dipping, subvertical
- △ △ breccia (secondary)
- fault
- — lithologic/alteration boundary; observed, inferred
- gold assay (value in g/t)

Kidd Creek Mines Ltd.

AL PROPERTY

A84 - TR - 023

NTS 94E/6W

Proj. 03

WORK BY	DRAWN BY	DATE
LJH / JC	VJG	OCT 31, 1984

2 0 2 4 6 8 m
SCALE IN METRES 1:100 (1:200 WHEN REDUCED)

Figure: C - 20



Kidd Creek Mines Ltd.
AL PROPERTY
A84-TR-024

Proj 03

NTS 94E/6W

WORK BY	DRAWN BY	DATE
LHR/LS	VIG	OCT 9, 1984

0 50 100
SCALE: 1:200 WHEN REDUCED

Figure: C-21



Sample No.	Au (ppm, g/t)	Ag (ppm)
12130	0.290	<0.1
12131	0.080	0.2
12132	0.085	0.3
12133		
12134	0.630	2.4
12135	0.820	2.0
12136	0.440	0.9
12137	0.980	0.9
12138	0.940	2.0
12139	0.860	1.8
12140	0.420	1.5
12141	0.290	0.9
12142	0.160	0.2
12143	0.130	0.4
12144	0.320	0.9
12145	0.640	<0.1
12146	4.60	0.7
12147	0.290	0.4
12148	2.50	0.2
12149	0.450	<0.1
12150	0.250	0.2
12151	0.660	0.2
12152	0.710	0.4
12153	1.30	1.1
12154	1.20	0.6
12155	0.570	0.5
12156	0.870	0.4
12157	0.390	0.2
12158	0.470	0.4
12159	0.520	0.3

Sample series: AB12104 - AB12132

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

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MINERALIZATION

A1 Ductile to andesite flow; plagioclase - hornblende porphyry has a fine-grained interbedded groundmass; original textures generally obscured by alteration.

A2 Argillization: complete replacement; white to red to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; accessory pyrite and/or hematite common; may be associated with small veins of Au (see below).

A3 Weak argillitic, sericitic and propylitic alteration; partial replacement; variable clay - sericite - chlorite assemblages.

A3a Weak argillization; maroon to grey; feldspar altered to clay (+ sericite) in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.

A5 Silicification: complete replacement; white to brown to grey; plagioclase phenocrysts commonly replaced, average 1-2% barite cement/veinings; local limonite in fractures and/or vugs probably after original pyrite; relics of pyrite are rare.

A7 Silicification-sulphidation; complete replacement

A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals hematized with 1-2% vugs.

AB Phyllic alteration.

ABa 'Pre-phyllic' alteration; weak to strong replacement; original textures variably preserved; feldspars are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.

ALTERATION

A2 Argillization: complete replacement; white to red to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; accessory pyrite and/or hematite common; may be associated with small veins of Au (see below).

A3 Weak argillitic, sericitic and propylitic alteration; partial replacement; variable clay - sericite - chlorite assemblages.

A3a Weak argillization; maroon to grey; feldspar altered to clay (+ sericite) in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.

A5 Silicification: complete replacement; white to brown to grey; plagioclase phenocrysts commonly replaced, average 1-2% barite cement/veinings; local limonite in fractures and/or vugs probably after original pyrite; relics of pyrite are rare.

A7 Silicification-sulphidation; complete replacement

A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals hematized with 1-2% vugs.

AB Phyllic alteration.

ABa 'Pre-phyllic' alteration; weak to strong replacement; original textures variably preserved; feldspars are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.

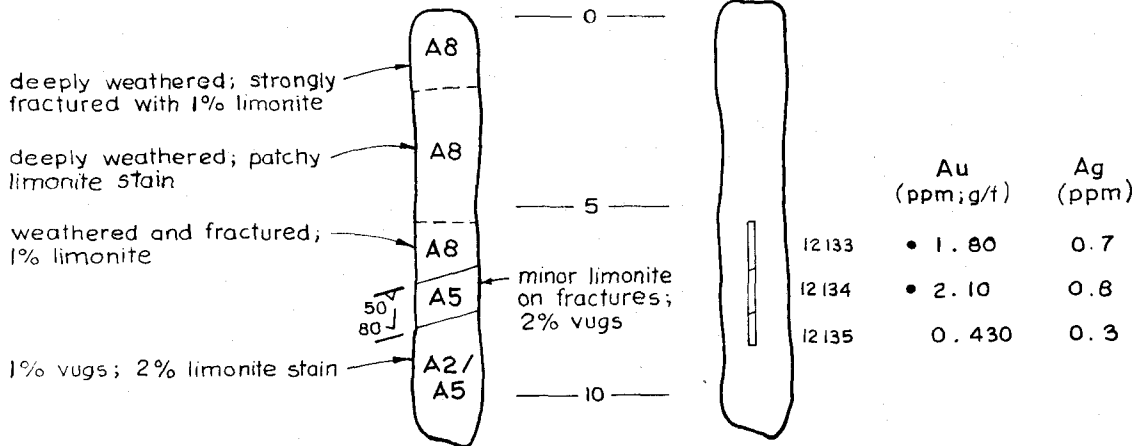
SYMBOLS

bedding: dipping, subvertical
alteration trend: no discernable dip, dipping, subvertical
fracture trend: dipping, subvertical
breccia (secondary)
fault
lithologic/alteration boundary: observed, inferred
plunge angle and direction
gold assay (value in g/t)

MINERALS

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcoctite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sp	sphalerite		

A84-TR-025



Sample series : AB12133 - AB12135

LEGEND

LITHOLOGY

Dacite to andesite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; original textures generally obscured by alteration.

ALTERATION

A2 Argillization; complete replacement; white to red to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; accessory pyrite and/or hematite common; may be brecciated; may include intensely weathered equivalents of A8a (see below).

A3 Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - chlorite assemblages.

A3a Weak argillization; maroon to grey; feldspar altered to clay (+ sericite) in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.

A5 Silicification; complete replacement; white to brown to grey; plagioclase phenocrysts commonly leached; average 1-2% vugs; locally brecciated with silica - barite cement/veining; local limonite in fractures and/or vugs probably after original pyrite; relics of pyrite are rare.

A7 Silicification-sulphidization; complete replacement

A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals pyritized and silicified; generally brecciated with 1-2% vugs.

A8 Phyllic alteration.

A8a 'Pre-phyllic' alteration; weak to strong replacement, original textures variably preserved; feldspars are argillized; mafic minerals are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite-azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite		

Symbols

- + bedding; dipping, subvertical
- Δ alteration trend; no discernable dip, dipping, subvertical
- Δ fracture trend; dipping, subvertical
- Δ Δ breccia (secondary)
- ~ ~ ~ fault
- — — lithologic/alteration boundary; observed, inferred
- gold assay (value in g/t)

13,198

Kidd Creek Mines Ltd.

AL PROPERTY

A84-TR-025

NTS 94/6W

Proj. 03

WORK BY

L J H

DRAWN BY

V J G

DATE: OCT 17, 1984

2 0 2 4 6 8 m

SCALE - 1:200

Figure: C - 22

A84 - TR - 026



Kidd Creek Mines Ltd.

AL PROPERTY

A84 - TR - 026

Proj. 03

NTS 94E/6W

WORK BY

L/JH / JC

DRAWN BY

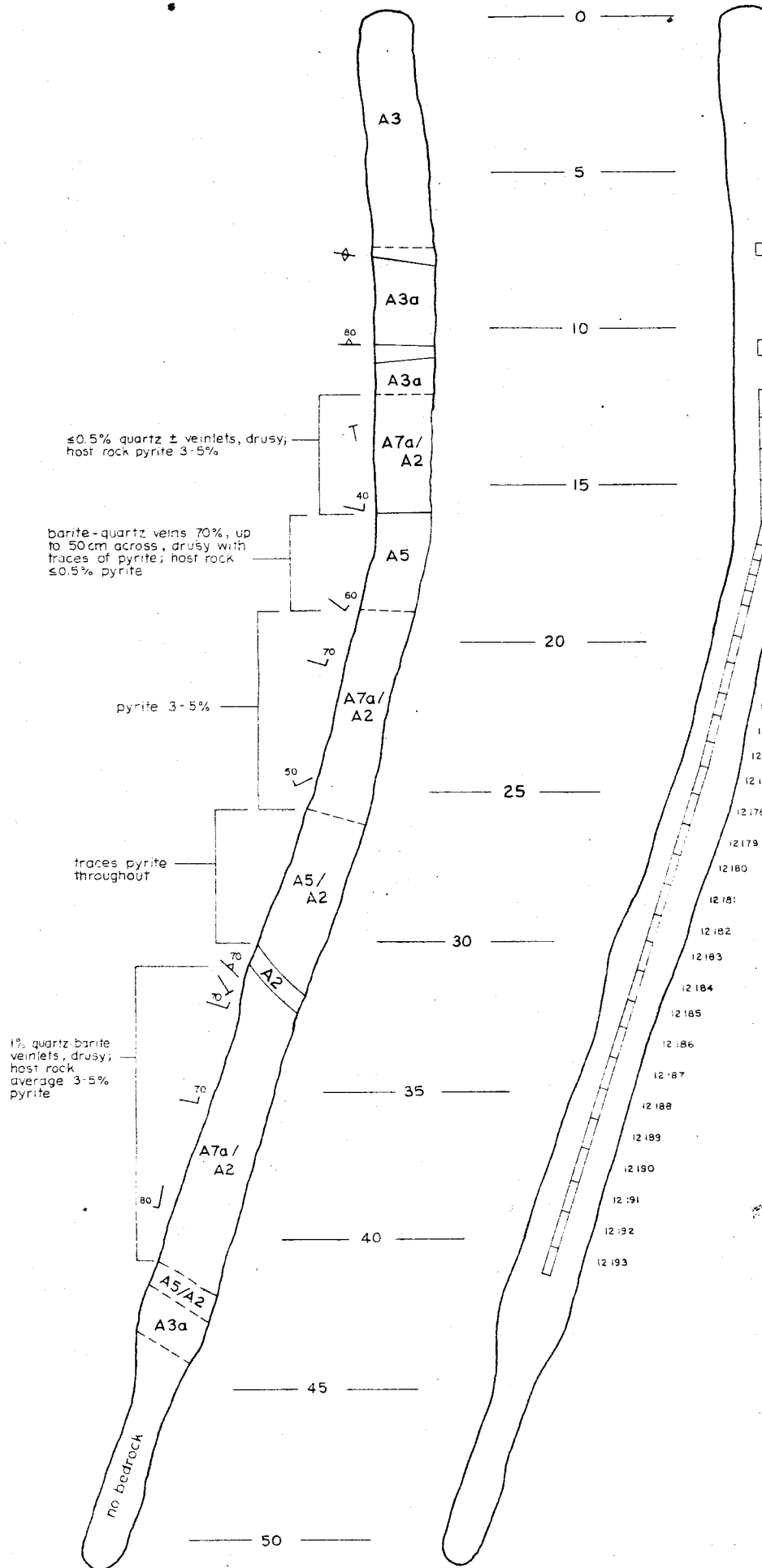
VJG

DATE

OCT 29, 1984

SCALE IN METERS 1:100 (1:200 WHEN REDUCED)

Figure: C - 23



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

Sample ID	Au (ppm, g/t)	Ag (ppm)
12159	0.040	2.6
12160	0.700	1.1
12161	0.060	0.9
12162	0.160	2.6
12163	0.400	4.3
12164	7.60	2.8
12165	13.30	1.7
12166	0.700	1.6
12167	2.30	1.8
12168	2.00	2.6
12169	21.60	2.4
12170	8.00	4.6
12171	0.920	4.3
12172	0.390	3.0
12173	0.90	7.3
12174	0.710	2.2
12175	0.410	5.0
12176	0.530	2.2
12177	2.90	6.1
12178	1.10	3.8
12179	0.530	2.8
12180	1.00	7.1
12181	1.00	7.7
12182	0.090	1.3
12183	0.280	2.4
12184	1.60	8.9
12185	2.10	5.1
12186	1.70	13.1
12187	1.05	10.0
12188	0.500	8.2
12189	0.250	5.1
12190	0.280	2.6
12191	0.580	5.6
12192	0.420	4.6
12193	0.150	3.2

LEGEND

LITHOLOGY

Andesite to dacite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; massive.

ALTERATION

- A2** Argillization; complete replacement; white to grey to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; may be brecciated.
- A3** Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - carbonate assemblages.
- A3a** Weak argillization; maroon to grey; plagioclase altered to clay in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
- A3b** Propylitic to weak sericitic alteration; greenish to brownish grey; feldspars altered to clay + carbonate (+ sericite); mafic minerals hematized (+ epidotized) in phenocrysts and groundmass; local Fe-Mn stains on fractures.
- A5** Silicification; complete replacement; white to brown to grey; generally massive and often cut by chalcadonic quartz-barite veins/stockworks; minor patchy disseminations of pyrite common (S1); generally intermixed with patchy argillic alteration.
- A7** Silicification - sulphidization; complete replacement
- A7a** Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals are pyritized and silicified; locally brecciated; commonly with chalcadonic quartz-barite veins/stockworks; often intermixed with patchy argillic alteration.

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite		

Symbols

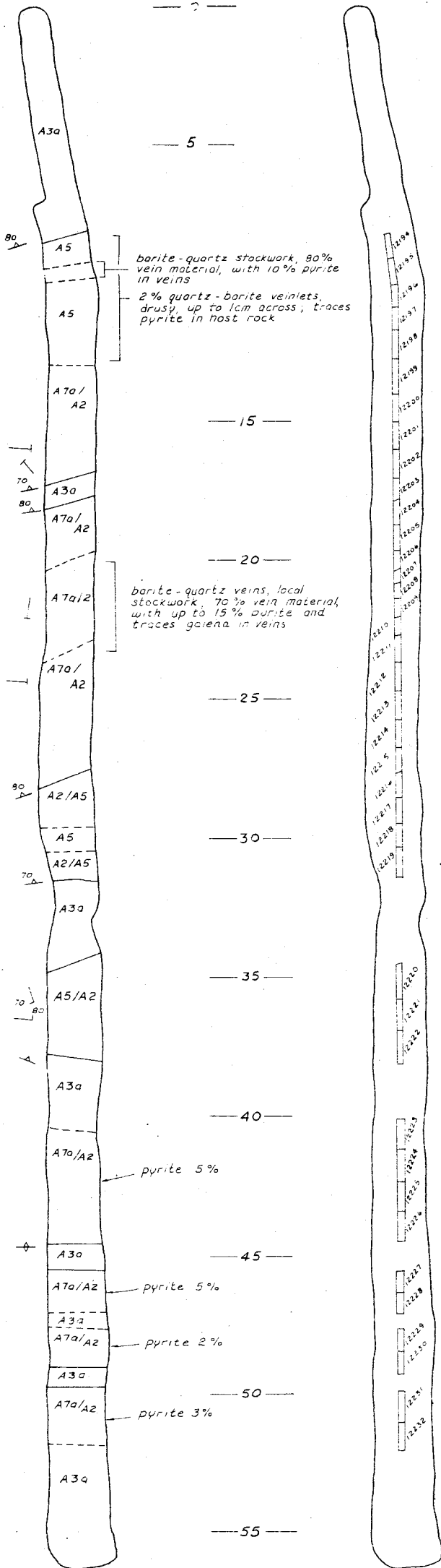
- bedding; dipping, subvertical
- alteration trend; no discernable dip, dipping, subvertical
- fracture trend; dipping, subvertical
- breccia (secondary)
- fault
- lithologic/alteration boundary; observed, inferred
- gold assay (value in g/t)

Sample series: AB 12159 - AB 12193

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,198

A84 - TR - 027



Au (ppm, g/t)	Ag (ppm)
0.70	2.4
12.60	5.7
2.20	2.5
0.190	0.5
0.990	2.7
1.35	3.0
6.10	5.8
0.910	3.7
0.170	0.9
0.070	0.3
1.50	5.1
0.690	6.9
2.80	2.80
32.10	1.5
22.50	3.4
2.90	2.4
2.50	1.9
1.50	4.4
0.750	4.3
0.520	3.8
1.340	7.7
0.240	2.0
0.940	3.4
0.190	3.1
0.090	1.5
0.320	2.4
0.450	1.0
0.280	1.0
0.310	4.2
0.140	2.4
0.020	1.5
0.210	6.4
0.280	3.6
0.780	4.1
0.280	4.9
0.360	2.4
0.050	2.5
0.430	5.2
0.210	4.8

Channel samples 25 cm wide,
Area as indicated, ~10 Kg each
AB 12.94 - 12232

Kidd Creek Mines Ltd.
AL PROPERTY
A84 - TR - 027

NTS 94E/6W Proj. 03
WORK BY: CHAMN. M. Date: SEPT 19/1984
LJH/JC ER
0 5 10 m
SCALE IN METERS: 1:100 (1:200 WHEN REDUCED)

Figure: C-24

LEGEND

LITHOLOGY

Andesite to dacite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; massive.

ALTERATION

- A2 Argillization; complete replacement; white to grey to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; may be brecciated.
- A3 Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - carbonate assemblages.
- A3a Weak argillization; maroon to grey; plagioclase altered to clay in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
- A3b Propylitic to weak sericitic alteration; greenish to brownish grey; feldspars altered to clay + carbonate (+ sericite); mafic minerals hematized (+ epidotized) in phenocrysts and groundmass; local Fe-ill stains on fractures.
- A5 Silicification; complete replacement; white to brown to grey; generally massive and often cut by chaledonic quartz-barite veins/stockworks; minor patchy disseminations of pyrite common (5%); generally intermixed with patchy argillic alteration.
- A7 Silicification - sulphidization; complete replacement
- A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals are pyritized and silicified; locally brecciated; commonly with chaledonic quartz-barite veins/stockworks; often intermixed with patchy argillic alteration.

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite		

Symbols

- +— bedding; dipping, subvertical
- A— alteration trend; no discernable dip, dipping, subvertical
- |— fracture trend; dipping, subvertical
- △△ breccia (secondary)
- ~~~~ fault
- — — lithologic/alteration boundary; observed, inferred
- gold assay (value in g/t)

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,198

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,198

A 84 - TR - 028



Kidd Creek Mines Ltd.

AL PROPERTY

A84 - TR - 028

NTS 94E/6W
 WORK BY: L.JH/JC
 ER
 DATE: SEPT 21/1984
 PROJECT: 03
 SCALE: 1:100 (1:200 WHEN REDUCED)
 10 m

Figure: C-25

LEGEND

LITHOLOGY

Andesite to dacite flow; plagioclase - hornblende porphy; has a fine-grained intermediate groundmass; massive.

ALTERATION

- A2** Argillization; complete replacement; white to grey to brown; variable quartz-clay abundances; dominant clays are diaspore, kaolinite, illite; may be brecciated.
- A3** Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - carbonate assemblages.
- A3a** Weak argillization; maroon to grey; plagioclase altered to clay in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
- A3b** Propylitic to weak sericitic alteration; greenish to brownish grey; feldspars altered to clay + carbonate (+ sericite); mafic minerals hematized (+ epidotized) in phenocrysts and groundmass; local Fe-Mn stains on fractures.
- A5** Silicification; complete replacement; white to brown to grey; generally massive and often cut by chalcidonic quartz-barite veins/stockworks; minor patchy disseminations of pyrite common (5%); generally intermixed with patchy argillic alteration.
- A7** Silicification - sulphidization; complete replacement
- A7a** Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals are pyritized and silicified; locally brecciated; commonly with chalcidonic quartz-barite veins/stockworks; some intermixed with patchy argillic alteration.

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite		

Symbols

- bedding; dipping, subvertical
- alteration trend; no discernable dip, dipping, subvertical
- fracture trend; dipping, subvertical
- breccia (secondary)
- fault
- lithologic/alteration boundary; observed, inferred
- gold assay (value in g/t)

Channel samples 25 cm wide,
 area as indicated, ~10 Kg each
 Sample series AB 12233 - 12254
 12317 - 12326

A84 - TR - 029

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

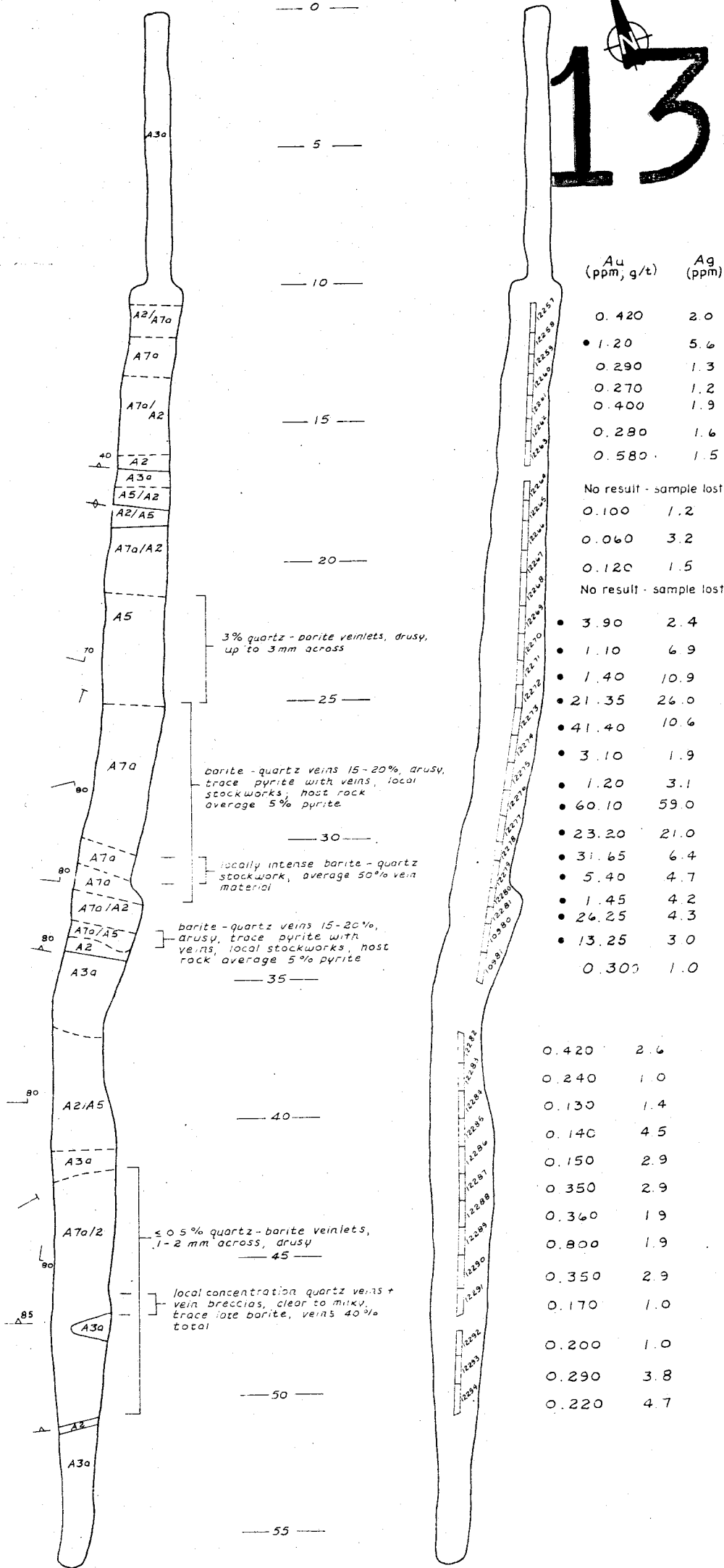
13, 1988

Kidd Creek Minerals Ltd.
ALL PROPERTY

A84 - TR - 029

NTS 94E/6W
WORK BY: EHAM, JR
LN/JC ER
DATE: SEPT. 20/1984
Proj. 03
SCALE IN METERS: 1:100 (1:200 WHEN REDUCED)

Figure: C-26



LEGEND

LITHOLOGY

Siderite to dolomite zone; plagioclase - hornblende porphyry has a silicification intermediate groundmass, massive.

ALTERATION

- A2** Argillization; complete replacement; white to grey to brown; variable quartz-clay abundance; dominant clays are dickite, kaolinite, illite; may be brecciated.
- A3** Weak argillitic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - carbonate assemblages.
- A3a** Weak argillization; carbon to grey; plagioclase altered to clay in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
- A3b** Propylitic to weak argillitic alteration; greenish to brownish grey; feldspars altered to clay + carbonate (+ sericite); mafic minerals hematized (+ epidotized) in phenocrysts and groundmass; local Fe-Mn stains on fractures.
- A5** Silicification; complete replacement; white to brown to grey; generally massive and often cut by chaledonic quartz-barite veins/stockworks; minor patchy disseminations of pyrite common (A5); generally intermixed with patchy argillitic alteration.
- A7** Silicification + sulphurization; complete replacement.
- A7a** Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially replaced with clay remnants; mafic minerals are pyritized and silicified; locally brecciated commonly with chaledonic quartz-barite veins/stockworks; locally intermixed with patchy argillitic alteration.

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite		

Symbols

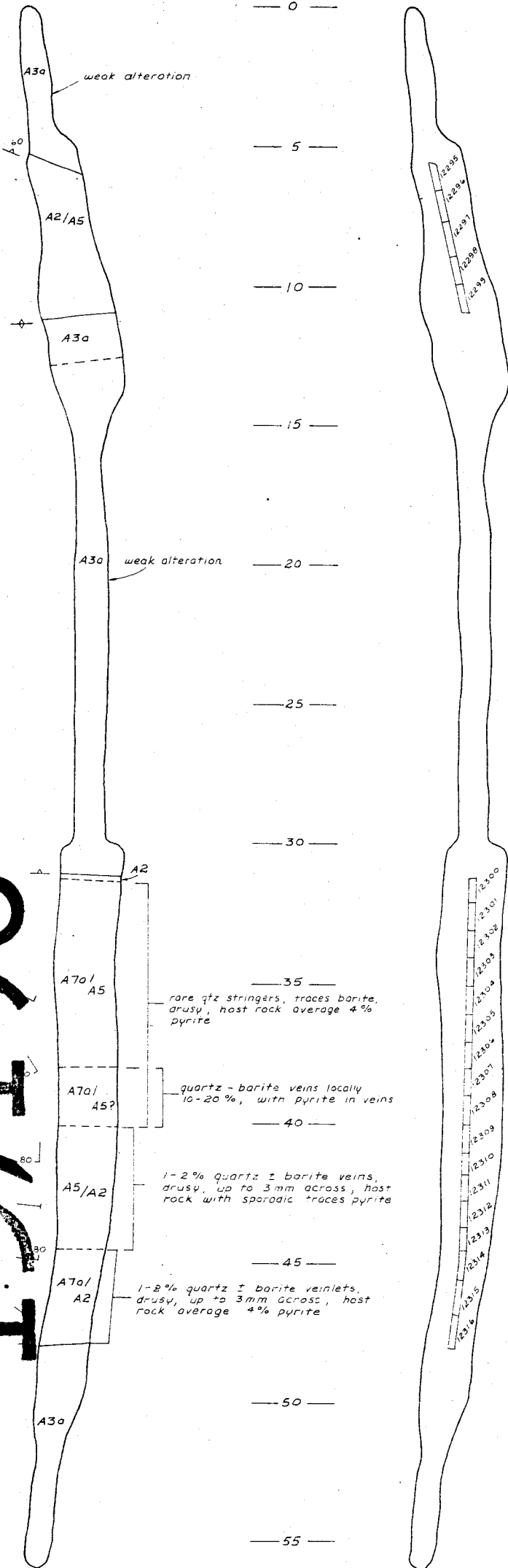
- +— bedding; dipping, subvertical
- △— alteration trend; no discernable dip, dipping, subvertical
- |— fracture trend; dipping, subvertical
- △△ breccia (secondary)
- ~ fault
- lithologic/alteration boundary; observed, inferred
- gold assay (value in g/t)

Channel samples 25 cm wide;
area as indicated, ~10 Kg each
Sample series AB 12257 - 12294
10980 - 10981

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,198

A84 - TR - 030



Au ppm; g/t	Ag ppm
0.330	3.5
0.410	3.1
0.330	1.5
0.230	2.0
0.150	1.2

1.90	0.6
0.900	4.5
3.85	2.4
0.460	1.8
0.90	2.5
2.60	4.7
6.20	5.3
1.00	2.3
0.490	5.9
0.870	9.0
0.390	3.3
0.170	1.1
0.025	0.2
0.060	0.9
0.430	2.2
1.30	3.7
0.90	1.4

Channel samples 25 cm wide,
Areas as indicated, ~10 kg each
Sample series AB 12295 - 12316

Kidd Creek Mines Ltd.

AL PROPERTY

A84 - TR - 030

Proj. 03

NTS 94E/6W
WORK BY: L.H./J.C.
DRAWN BY: ER
DATE: SEPT 21/1984

SCALE IN METRES 1 : 100 (1 : 200 WHEN REDUCED)

Figure: C-27

LEGEND

COMPOSITION

Andesite to dacite flow; plagioclase - hornblende porphyry, has a fine-grained intermediate groundmass, massive.

ALTERATION

- A2** Argillization; complete replacement; white to grey to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; may be brocclated.
- A3** Weak argillitic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - carbonate assemblages.
- A3a** Weak argillization; carbon to grey; plagioclase altered to clay in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
- A3b** Propylitic to weak sericitic alteration; greenish to brownish grey; feldspars altered to clay + carbonate (+ sericite); mafic minerals hematized (+ epidotized) in phenocrysts and groundmass; local Fe-Mn stains on fractures.
- A5** Silicification; complete replacement; white to brown to grey; generally massive and often cut by chalcedonic quartz-barite veins/stockworks; minor patchy disseminations of pyrite common (5%); generally intermixed with patchy argillitic alteration.
- A7** Silicification + sulphidizing; complete replacement
- A7a** Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals are pyritized and silicified; locally brecciated, commonly with chalcedonic quartz-barite veins/stockworks; often intermixed with patchy argillitic alteration

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	calcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcocopyrite	ta	taumontite
sl	sphalerite		

Symbols

- bedding; dipping, subvertical
- alteration trend; no discernable dip, dipping, subvertical
- fracture trend; dipping, subvertical
- breccia (secondary)
- fault
- lithologic/alteration boundary; observed, inferred
- gold assay (value in g/t)

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

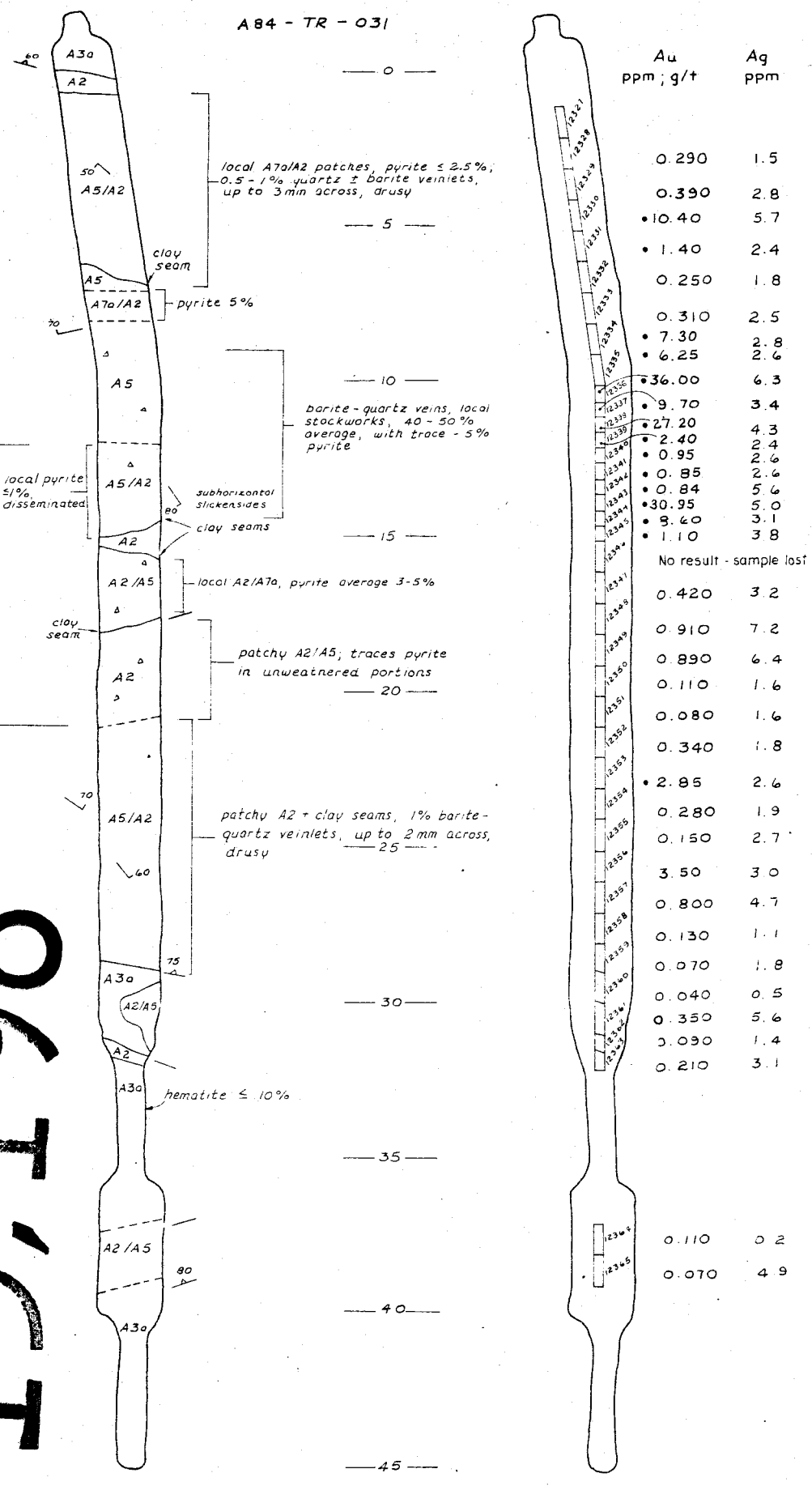
13,198

Kidd Creek Mines Ltd.
AL PROPERTY
A84 - TR - 031

NTS 94E/6W
WORK BY: JHANN, DE
PM/JC
DATE: SEPT 19/1984
Proj. 03

SCALE IN METRES 1:100 (1:200 WHEN REDUCED)

Figure: C-28



Channel samples 25 cm wide, area as indicated, ~10 Kg each
AB 12327 - 12365

LEGEND

- LITHOLOGY**
Andesite to dacitic flows; plagioclase - hornblende porphyry; fine grained intermediate groundmass; massive.
- ALTERATION**
- A2** Argillization; complete replacement; white to grey to brown; vermicular quartz-clay abundance; dominant clays are dickite, kaolinite, illite; may be brecciated.
 - A3** Weak argillitic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - carbonate assemblages.
 - A3a** Weak argillization; maroon to grey; plagioclase altered to clay in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
 - A3b** Propylitic to weak sericitic alteration; greenish to brownish grey; feldspars altered to clay + carbonate (+ sericite); mafic minerals hematized (sericitized) in phenocrysts and groundmass; local brown stains on fractures.
 - A5** Silicification; complete replacement; white to brown to grey; generally massive, and often cut by chalcogenic quartz-barite veins/stockworks; minor patchy disseminations of pyrite common (A5); generally interstitial with patchy argillitic alteration.
 - A7** Silicification - sulphidization; complete replacement.
 - A7a** Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially replaced with clay; mafic minerals are pyritized and silicified; locally brecciated; commonly with chalcogenic quartz-barite veins/stockworks; often interstitial with patchy argillitic alteration.

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	ta	taumontite
sl	sphalerite		

- Symbols**
- +— bedding; dipping, subvertical
 - ▲— alteration trend; no discernable dip, dipping, subvertical
 - |— fracture trend; dipping, subvertical
 - △△ breccia (secondary)
 - ~~~~ fault
 - |— lithologic/alteration boundary; observed, inferred
 - gold assay (value in g/t)

A84 - TR - 033



Kidd Creek Mines Ltd.

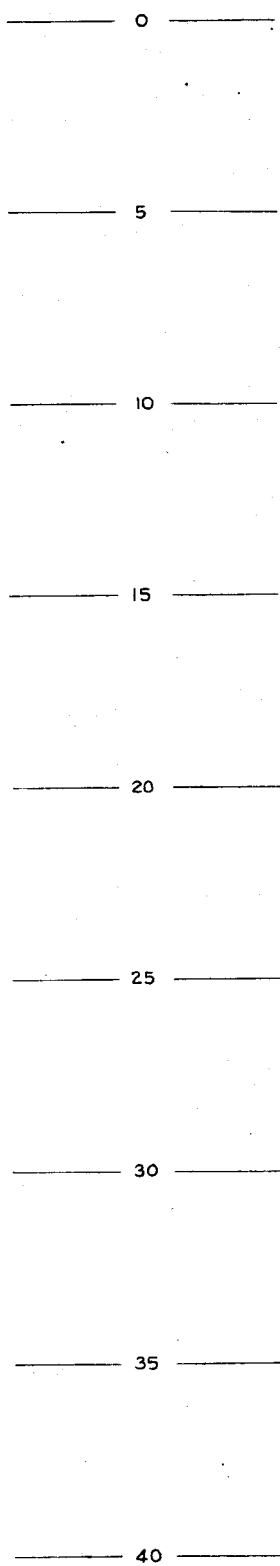
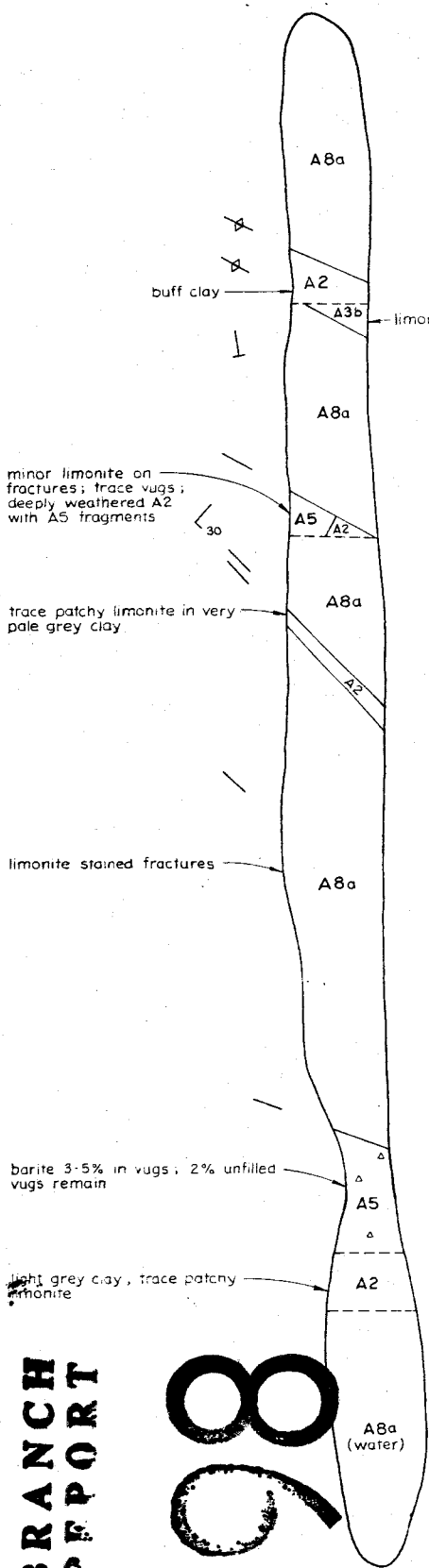
AL PROPERTY

A84 - TR - 033

NTS 94E/6W
WORK BY: DRAWN BY: VJG
DATE: OCT. 11, 1984
Proj. 03

SCALE IN METERS 1:100 (1:200 WHEN REDUCED)

Figure: C - 29



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

Grab	• 83.10	< 0.1
Grab	• 3.10	< 0.1
10965	• 24.10	< 0.1
10966	• 1.70	< 0.1
10967	0.260	< 0.1

Sample series: AB 10965 - AB 10967

LEGEND

LITHOLOGY

Dacite to andesite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; original textures generally obscured by alteration.

ALTERATION

- A2 Argillization; complete replacement; white to red to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; accessory pyrite and/or hematite common; may be brecciated; may include intensely weathered equivalents of A8a (see below).
- A3 Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - chlorite assemblages.
- A3a Weak argillization; maroon to grey; feldspar altered to clay (+ sericite) in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
- A5 Silicification; complete replacement; white to brown to grey; plagioclase phenocrysts commonly leached; average 1-2% vugs; locally brecciated with silica - barite cement/veining; local limonite in fractures and/or vugs probably after original pyrite; relics of pyrite are rare.
- A7 Silicification-sulphidization; complete replacement
- A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals pyritized and silicified; generally brecciated with 1-2% vugs.
- A8 Phyllic alteration.
- A8a 'Pre-phyllic' alteration; weak to strong replacement, original textures variably preserved; feldspars are argillized; mafic minerals are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
aw	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite		

Symbols

- +—+ bedding; dipping, subvertical
- A— alteration trend; no discernable dip, dipping, subvertical
- |— fracture trend; dipping, subvertical
- △△ breccia (secondary)
- ~~~~ fault
- — — lithologic/alteration boundary; observed, inferred
- gold assay (value in g/t)

GEOLOGICAL BRANCH
REPORT

13,198

A84 - TR - 034

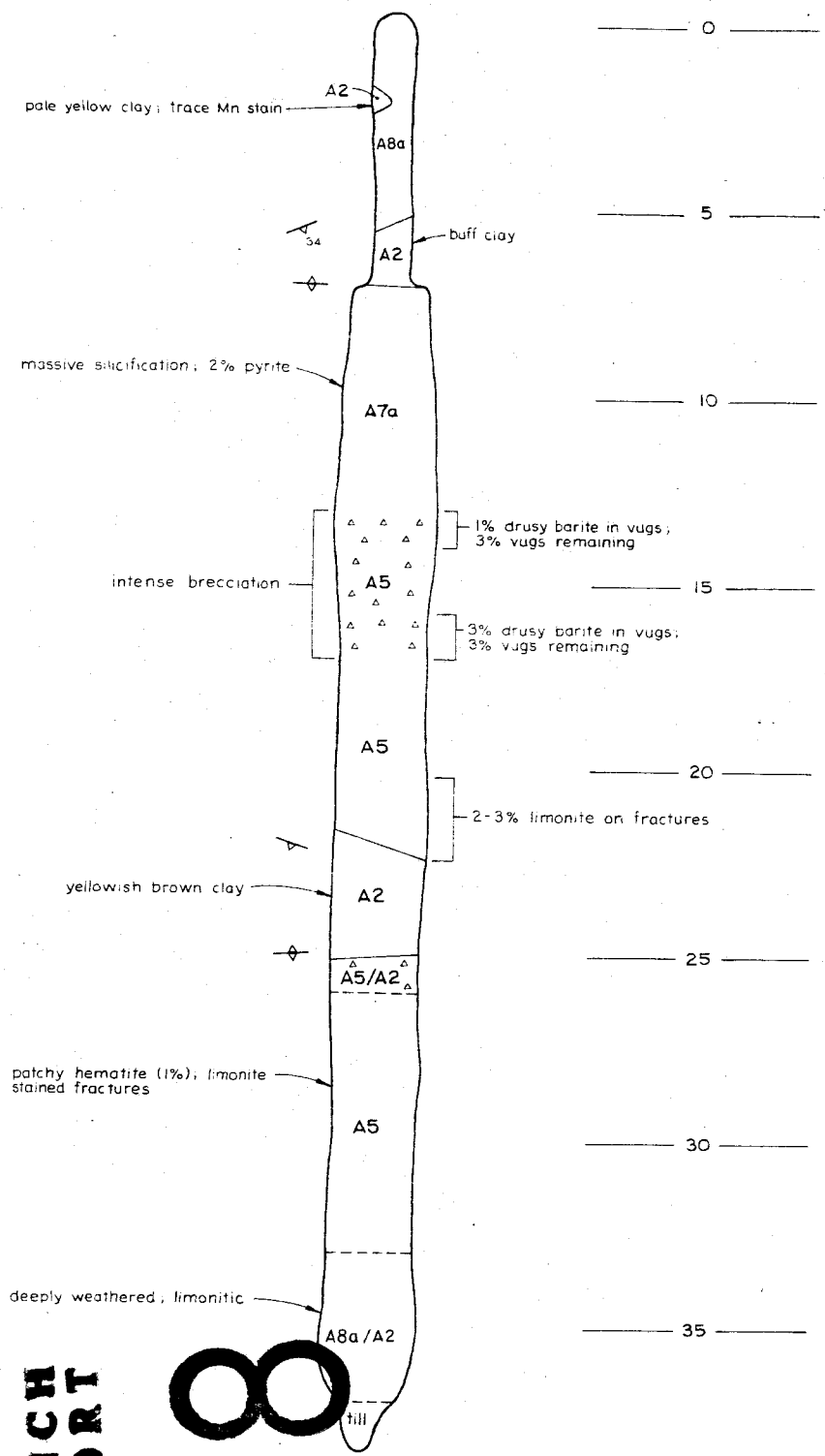


Kidd Creek Mines Ltd.
 ALL PROPERTY
A84 - TR - 034

NTS 94E/6W
 DRAWN BY: VJG
 CHECKED BY: JB
 DATE: OCT 11, 1984
 PROJ. 03

SCALE IN METERS 1:100 (1:200 WHEN REDUCED)

Figure: C-30



Depth (m)	Au (ppm; g/t)	Ag (ppm)
12370	0.210	1.1
12371	0.130	0.9
12372	0.530	0.2
12373	0.940	0.7
12374	0.940	1.6
12375	• 2.40	2.4
12376	• 2.90	4.1
12377	• 3.60	2.3
12378	• 3.80	4.1
12379	• 1.90	1.6
12380	• 1.60	1.8
12381	• 1.20	1.7
12382	• 0.630	0.6
12383	• 0.80	0.7
12384	• 1.50	1.5
12385	• 2.10	1.4
12386	• 2.50	3.4
12387	• 1.40	1.1
12388	0.270	0.3
12389	0.810	0.7
12390	0.200	0.3
12391	0.720	0.3
12392	0.460	0.4
12393	0.470	0.3
12394	0.630	0.6
12395	0.850	1.3
12396	0.330	0.4
12397	0.580	0.4
12398	0.280	0.1
12399	0.070	<0.1
12400	<0.005	<0.1
10968	0.420	0.2

Sample series: AB 10968
 AB 12370 - AB 12400

LEGEND

- LITHOLOGY**
 Dacite to andesite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; original textures generally obscured by alteration.
- ALTERATION**
- A2 Argillization; complete replacement; white to red to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; accessory pyrite and/or hematite common; may be brecciated; may include intensely weathered equivalents of A8a (see below).
 - A3 Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - chlorite assemblages.
 - A3a Weak argillization; maroon to grey; feldspar altered to clay (+ sericite) in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
 - A5 Silicification; complete replacement; white to brown to grey; plagioclase phenocrysts commonly leached; average 1-2% vugs; locally brecciated with silica - barite cement/veining; local limonite in fractures and/or vugs probably after original pyrite; relics of pyrite are rare.
 - A7 Silicification-sulphidization; complete replacement
 - A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals pyritized and silicified; generally brecciated with 1-2% vugs.
 - AB Phyllic alteration.
 - A8a 'Pre-phyllic' alteration; weak to strong replacement, original textures variably preserved; feldspars are argillized; mafic minerals are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite		

- Symbols**
- / — bedding; dipping, subvertical
 - / — alteration trend; no discernable dip, dipping, subvertical
 - / — fracture trend; dipping, subvertical
 - △ △ △ breccia (secondary)
 - ~ ~ ~ fault
 - — — lithologic/alteration boundary; observed, inferred
 - gold assay (value in g/t)

**GEOLOGICAL BRANCH
 ASSESSMENT REPORT**

13,198

LITHOLOGY

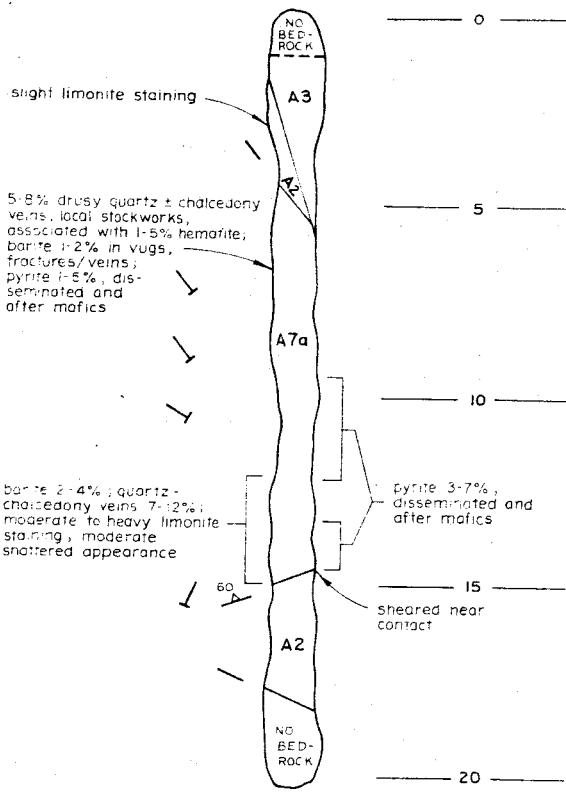
Andesite to dacite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; massive.

ALTERATION

- A2 Argillization; complete replacement; white to grey to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; may be brecciated.
- A3 Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - carbonate assemblages.
 - A3a Weak argillization; margin to grey; plagioclase altered to clay in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
 - A3b Propylitic to weak sericitic alteration; greenish to brownish grey; feldspars altered to clay + carbonate (+ sericite); mafic minerals hematized (+ epidotized) in phenocrysts and groundmass; local Fe-Mn stains on fractures.
- A5 Silicification; complete replacement; white to brown to grey; generally massive and often cut by chalcadonic quartz-barite veins/stockworks; minor patchy disseminations of pyrite common (5%); generally intermixed with patchy argillic alteration.
- A7 Silicification - sulphidization; complete replacement
 - A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals are pyritized and silicified; locally brecciated; commonly with chalcadonic quartz-barite veins/stockworks; often intermixed with patchy argillic alteration.

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

0			
12458	0.040	<0.1	
12459	0.050	<0.1	
12460	0.010	0.8	
12461	0.010	0.4	
12462	0.040	3.0	
12463	0.370	1.3	
12464	0.090	2.1	
12465	• 2.60	2.4	
12466	• 5.60	4.0	
12467	• 1.70	2.0	
12468	• 1.30	2.4	
12469	• 1.40	2.7	
12470	0.400	2.6	
12471	0.570	2.6	
12472	• 2.10	2.6	
12473	• 3.90	2.6	
12474	• 3.70	2.7	
12475	0.070	2.5	
12476	0.060	1.9	
12477	0.050	2.8	
20			



Sample Series: AB12458-1812477

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite		

Symbols

- bedding; dipping, subvertical
- alteration trend; no discernable dip, dipping, subvertical
- fracture trend; dipping, subvertical
- breccia (secondary)
- fault
- lithologic/alteration boundary; observed, inferred
- gold assay (value in g/t)

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,198



Kidd Creek Mines Ltd.

AL PROPERTY

A84 - TR-035

NTS 94E/6W

Proj 03

WORK BY	DRAWN BY	DATE
JB/VG	VJG	OCT 9, 1984

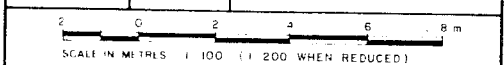
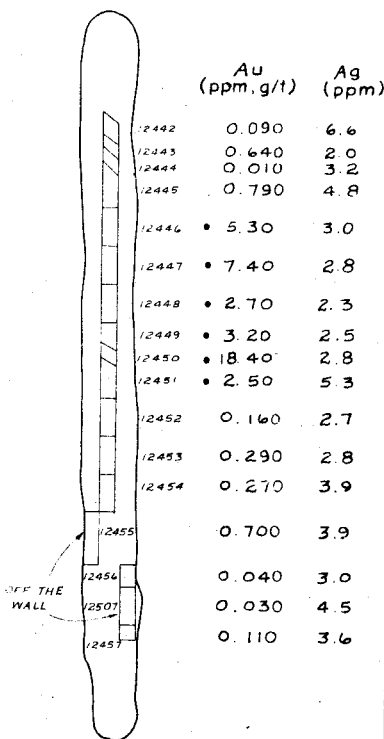
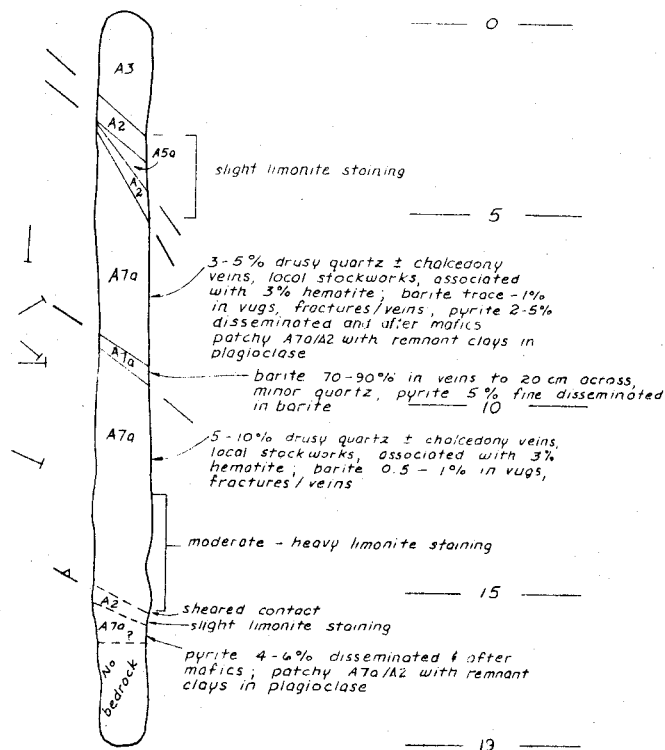


Figure: C - 31

GEOLOGICAL BRANCH ASSESSMENT REPORT

A84 - TR - 036



Channel samples 25 cm wide,
area as indicated, ~10 kg each
Sample series AB 12442 - 12457,
12507

13, 198



Kidd Creek Mines Ltd.

AL PROPERTY

A84-TR-036

Proj. 03

NTS 94E/GW

APR. 84 / J.B./J.C. / DRAWN: B.P. / ER / SEPT. 21/1984

0 5 10 m
SCALE IN METERS 1:100 (1:200 WHEN REDUCED)

Figure: C-32

- ### LEGEND
- LITHOLOGY**
- Andesite to dacite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; massive.
- ALTERATION**
- A2 Argillization; complete replacement; white to grey to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; may be brecciated.
 - A3 Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - carbonate assemblages.
 - A5 Silicification; complete replacement; white to brown to grey; generally massive and often cut by chalcedonic quartz-barite veins/stockworks; minor patchy disseminations of pyrite common (S1); generally intermixed with patchy argillic alteration.
 - A7 Silicification - sulphidization; complete replacement
 - A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals are pyritized and silicified; locally brecciated; commonly with chalcedonic quartz-barite veins/stockworks; often intermixed with patchy argillic alteration.

- Symbols**
- bedding; dipping, subvertical
 - alteration trend; no discernable dip, dipping, subvertical
 - fracture trend; dipping, subvertical
 - breccia (secondary)
 - fault
 - lithologic/alteration boundary; observed, inferred
 - gold assay (value in g/t)

A84 - TR - 037

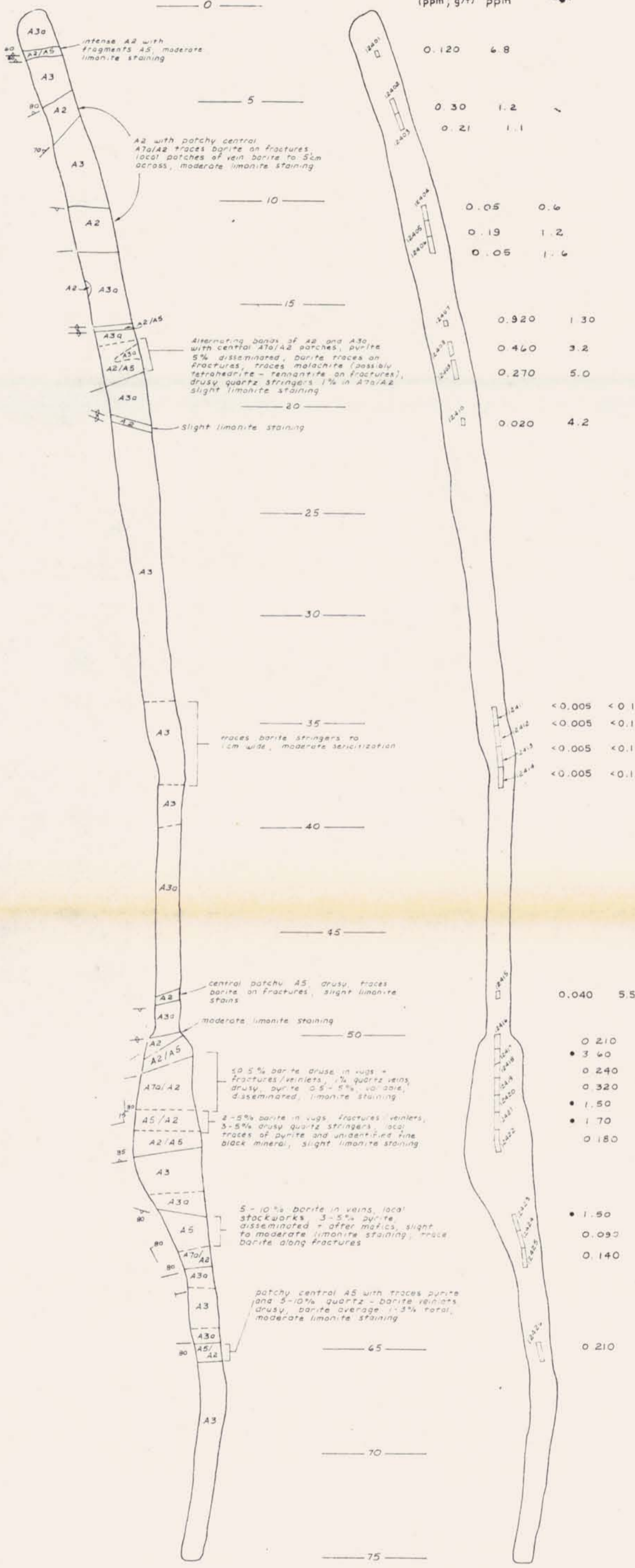
Au (ppm, g/t) Ag ppm



Kidd Creek Mines Ltd.
AL PROPERTY
A84 - TR - 037

NTS 94E/BW Proj. 03
 DATE: SEPT 24/1994
 BY: LJM/JC
 Scale: 1:100 (1" = 200' WHEN REDUCED)

Figure: C-33



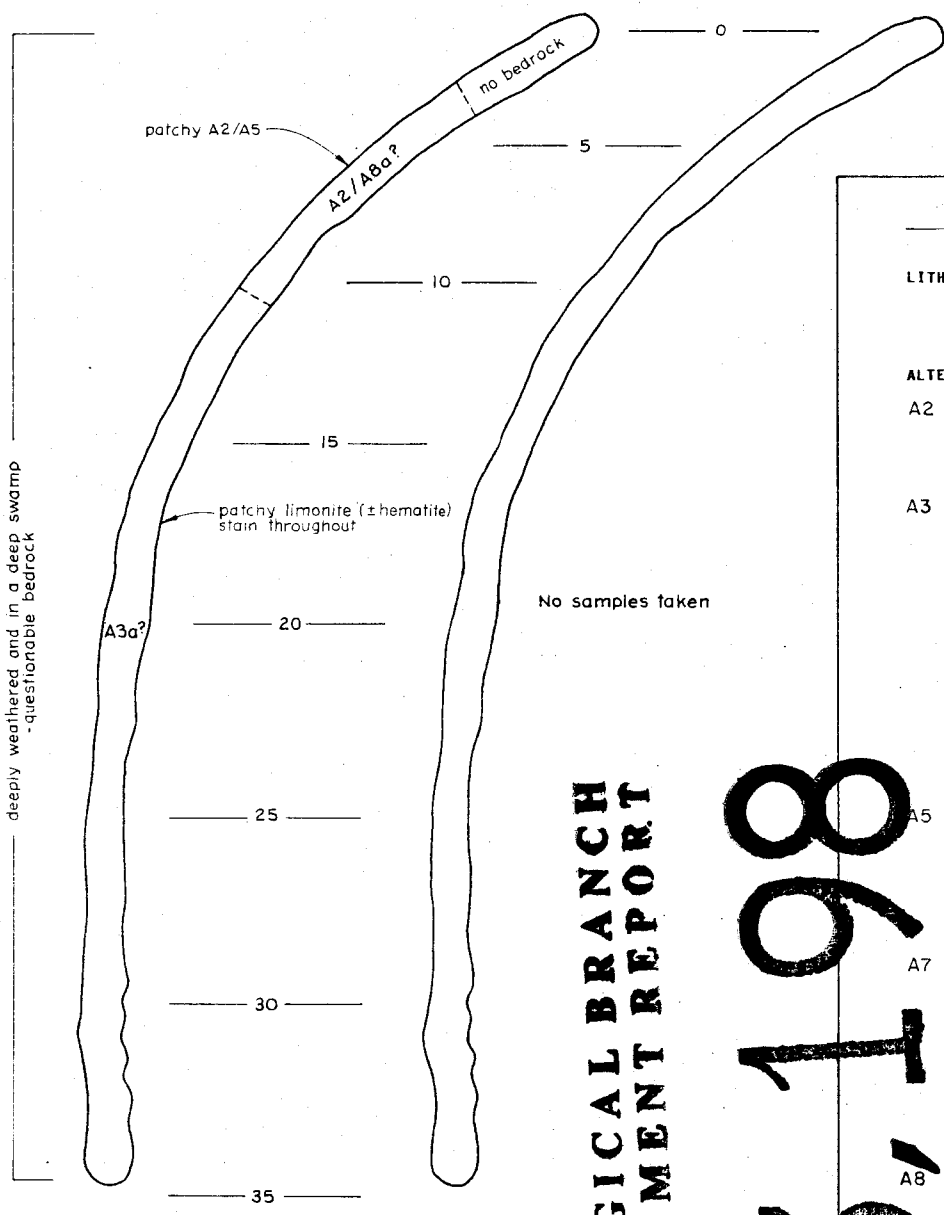
LEGEND

- LITHOLOGY**
 Andesite to dacite flow; diagenetic hornblende porphyry; and intermediate groundmass, massive.
- ALTERATION**
- A2** Argillization; complete replacement; white to grey to brown; variable quartz-clay abundance; dominant clays are dickite, kaolinite, illite; may be brecciated.
 - A3** Weak argillitic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - carbonate assemblages.
 - A3a** Weak argillization; margin to grey; plagioclase altered to clay in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
 - A3b** Propylitic to weak sericitic alteration; greenish to brownish grey; feldspars altered to clay + carbonate (± sericite); mafic minerals hematized (± epidotized) in phenocrysts and groundmass; local Fe-Mn stains on fractures.
 - A5** Silicification; complete replacement; white to brown to grey; generally massive and often cut by chalcidonic quartz-barite vein/stockworks; minor patchy disseminations of pyrite common (-1); generally intermixed with patchy argillitic alteration.
 - A7** Silicification - sulphidation; complete replacement.
 - A7a** Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals are pyritized and silicified; locally brecciated; commonly with chalcidonic quartz-barite veins/stockworks; often not related with patches of A2 or A3 alteration.
- Minerals**
- | | | | |
|----|-------------------------|----|---------------------|
| gd | gold | gl | galena |
| ba | barite | mz | malachite - azurite |
| am | actynite | li | limonite |
| he | hematite | ja | jarosite |
| tt | tetrahedrite-tennantite | se | sericite |
| cc | chalcocite | ca | calcite |
| py | pyrite | ze | zeolite |
| cp | chalcopyrite | la | laumontite |
| sl | sphalerite | | |
- Symbols**
- bedding; dipping, subvertical
 - alteration trend; no discernable dip, dipping, subvertical
 - fracture trend; dipping, subvertical
 - breccia (secondary)
 - fault
 - lithologic/alteration boundary; observed, inferred
 - gold assay (value in g/t)

**GEOLOGICAL BRANCH
 ASSESSMENT REPORT**

13,198

Channel samples 25 cm wide, area as indicated, ~ 10 kg each. Sample series 12401 - 12426.



LEGEND

LITHOLOGY

Andesite to dacite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; massive.

ALTERATION

- A2 Argillization; complete replacement; white to grey to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; may be brecciated.
- A3 Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - carbonate assemblages.
- A3a Weak argillization; maroon to grey; plagioclase altered to clay in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
- A3b Propylitic to weak sericitic alteration; greenish to brownish grey; feldspars altered to clay + carbonate (+ sericite); mafic minerals hematized (+ epidotized) in phenocrysts and groundmass; local Fe-Mn stains on fractures.
- A5 Silicification; complete replacement; white to brown to grey; generally massive and often cut by chalcedonic quartz-barite veins/stockworks; minor patchy disseminations of pyrite common (S1); generally intermixed with patchy argillic alteration.
- A7 Silicification - sulphidization; complete replacement
- A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals are pyritized and silicified; locally brecciated; commonly with chalcedonic quartz-barite veins/stockworks; often intermixed with patchy argillic alteration.
- A8 Phyllic alteration.
- A8a 'Pre-phyllic' alteration; weak to strong replacement, original textures variably preserved; feldspars are argillized; mafic minerals are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,198

Minerals			
gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite		

Symbols	
	bedding; dipping, subvertical
	alteration trend; no discernable dip, dipping, subvertical
	fracture trend; dipping, subvertical
	breccia (secondary)
	fault
	lithologic/alteration boundary; observed, inferred
	gold assay (value in g/t)

Kidd Creek Mines Ltd.
AL PROPERTY

A84-TR-038

NTS94E/6W		Proj. 03
WORK BY	DRAWN BY	DATE
	VJG	OCT. 19, 1984
SCALE IN METRES 1:100 (1:200 WHEN REDUCED)		

Figure: C-34

13198

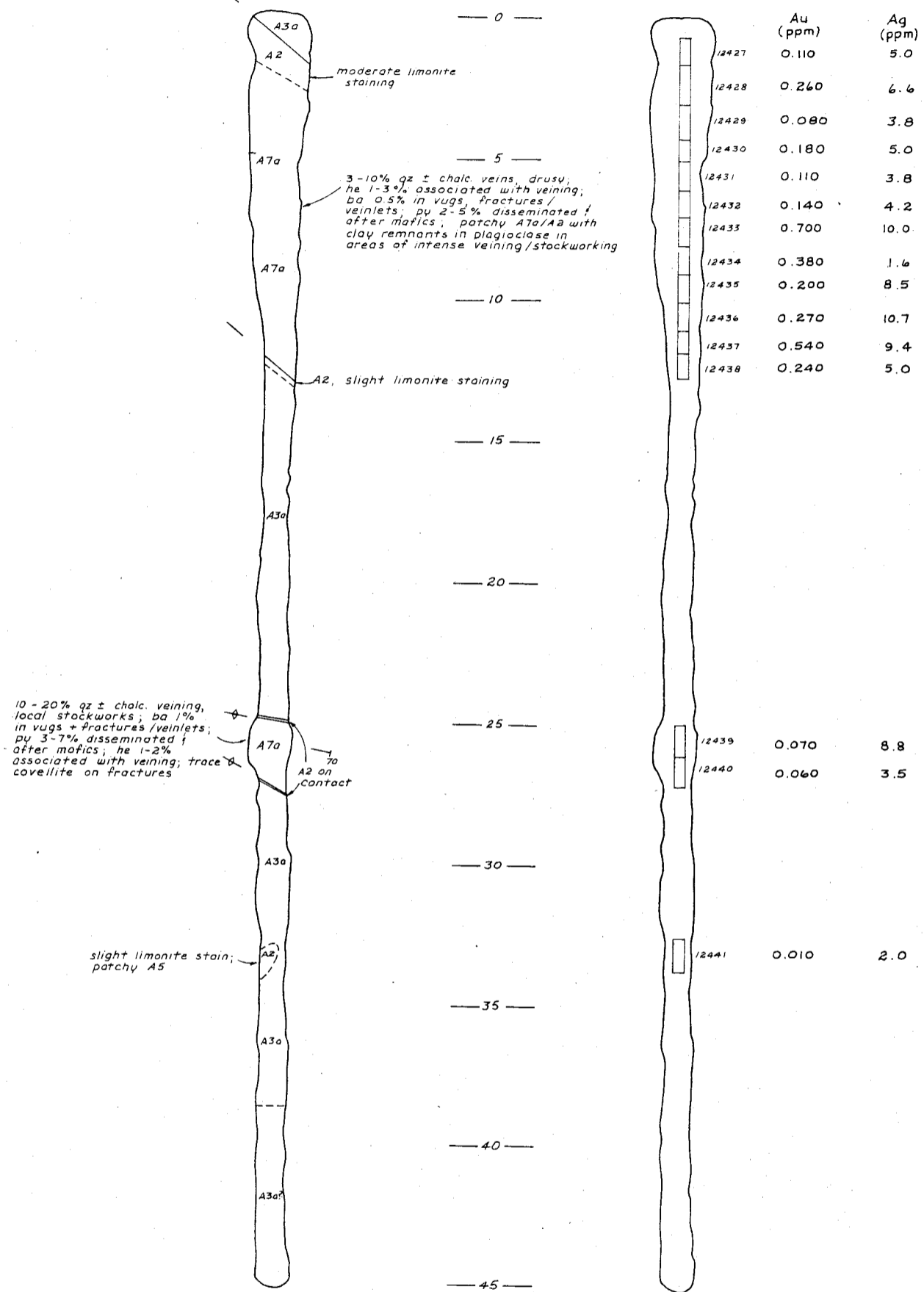
A84 - TR - 039



Kidd Creek Mines Ltd.
 ALL PROPERTY
 A84-TR-039

NTS 94E/6W
 WORK BY: DRAWN BY: ER
 DATE: OCTOBER 5/1984
 SCALE IN METRES: 1:100 (1:200 WHEN REDUCED)

Proj. 03



LEGEND

- LITHOLOGY**
 Andesite to dacite flow; plagioclase - hornblende porphyry has a fine-grained intermediate groundmass; massive.
- ALTERATION**
- A2 Argillization; complete replacement; white to grey to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; may be brecciated.
 - A3 Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - carbonate assemblages.
 - A3a Weak argillization; maroon to grey; plagioclase altered to clay in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
 - A3b Propylitic to weak sericitic alteration; greenish to brownish grey; feldspars altered to clay + carbonate (+ sericite); mafic minerals hematized (+ epidotized) in phenocrysts and groundmass; local Fe-Mn stains on fractures.
 - A5 Silicification; complete replacement; white to brown to grey; generally massive and often cut by chalcidonic quartz-barite veins/stockworks; minor patchy disseminations of pyrite common (5%); generally intermixed with patchy argillic alteration.
 - A7 Silicification - sulphidization; complete replacement
 - A7a Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals are pyritized and silicified; locally brecciated; commonly with chalcidonic quartz-barite veins/stockworks; often intermixed with patchy argillic alteration.

Minerals

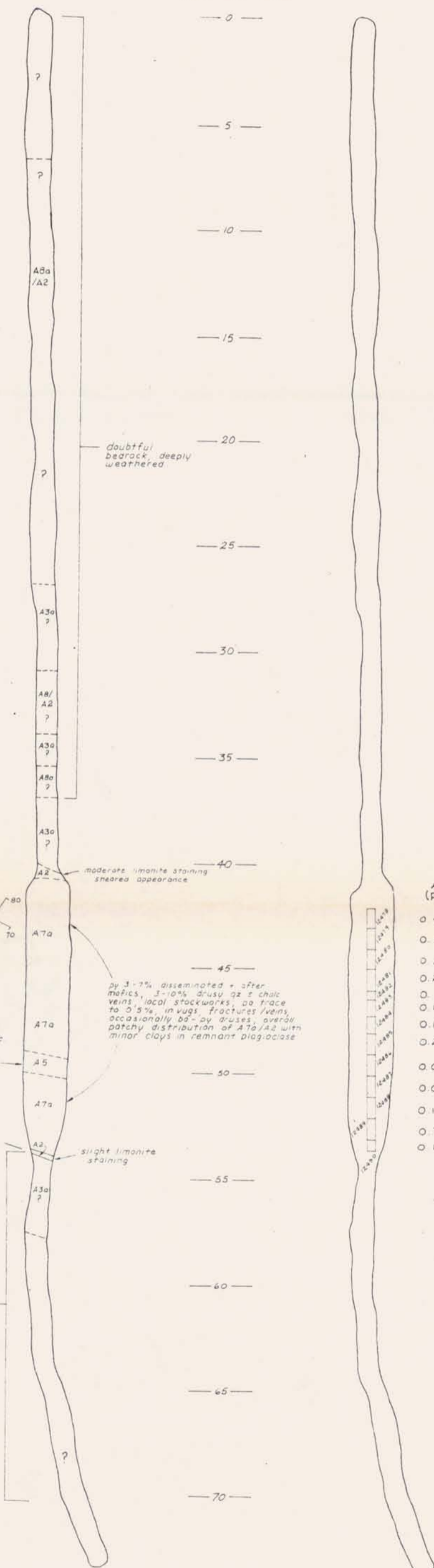
gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite	chalc	chalcidony

- Symbols**
- + — bedding; dipping, subvertical
 - Δ — alteration trend; no discernable dip; dipping, subvertical
 - | — fracture trend; dipping, subvertical
 - Δ Δ breccia (secondary)
 - ~ ~ ~ fault
 - — — lithologic/alteration boundary; observed, inferred

Sample series AB 12427 - 12441

Figure: C-35

A84 - TR - 040



Sample series AB12476 - AB12490

Kidd Creek Mines Ltd.
AL PROPERTY
A84 - TR - 040

NTS 94E/6W
 SHEET NO. 100 (1:200 WHEN REDUCED)
 PROJECT NO. 100
 DATE: OCTOBER 4, 1984
 SCALE: 1:200 (WHEN REDUCED)

Figure: C - 36

LEGEND

- LITHOLOGY**
 Andesite to diorite flow, plagioclase hornblende, porphyry with fine grained intermediate groundmass; massive.
- ALTERATION**
- A2** Argillization; complete replacement; white to grey to brown; variable quartz-clay abundances; dominant clays are diagenetic, kaolinite, illite; may be brecciated.
 - A3** Weak argillic, sericitic and propylitic alteration; partial replacement by variable clay - sericite - carbonate assemblages.
 - A3a** Weak argillization; margin to grey; plagioclase altered to clay in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
 - A3b** Propylitic to weak sericitic alteration; greenish to brownish grey; feldspars altered to clay + carbonate (+ sericite); mafic minerals hematized (+ epidotized) in phenocrysts and groundmass; local Fe-Mn stains on fractures.
 - A5** Silicification; complete replacement; white to brown to grey; generally massive and often cut by chalcidonic quartz barite veins/stockworks; minor patchy disseminations of pyrite common (A5); generally intermixed with patchy argillic alteration.
 - A7** Silicification - sulphidization; complete replacement.
 - A7a** Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals are pyritized and silicified; locally brecciated; commonly with chalcidonic quartz-barite veins/stockworks; partial alteration with patchy argillic alteration.
 - A8** Phyllic alteration.
 - A8a** 'Pre-phyllic' alteration; weak to strong replacement; original textures variably preserved; feldspars are argillized; mafic minerals are pyritized; moderate silica flooding through groundmass; pyrite is commonly limonitized; supergene argillization is variably present.

Minerals

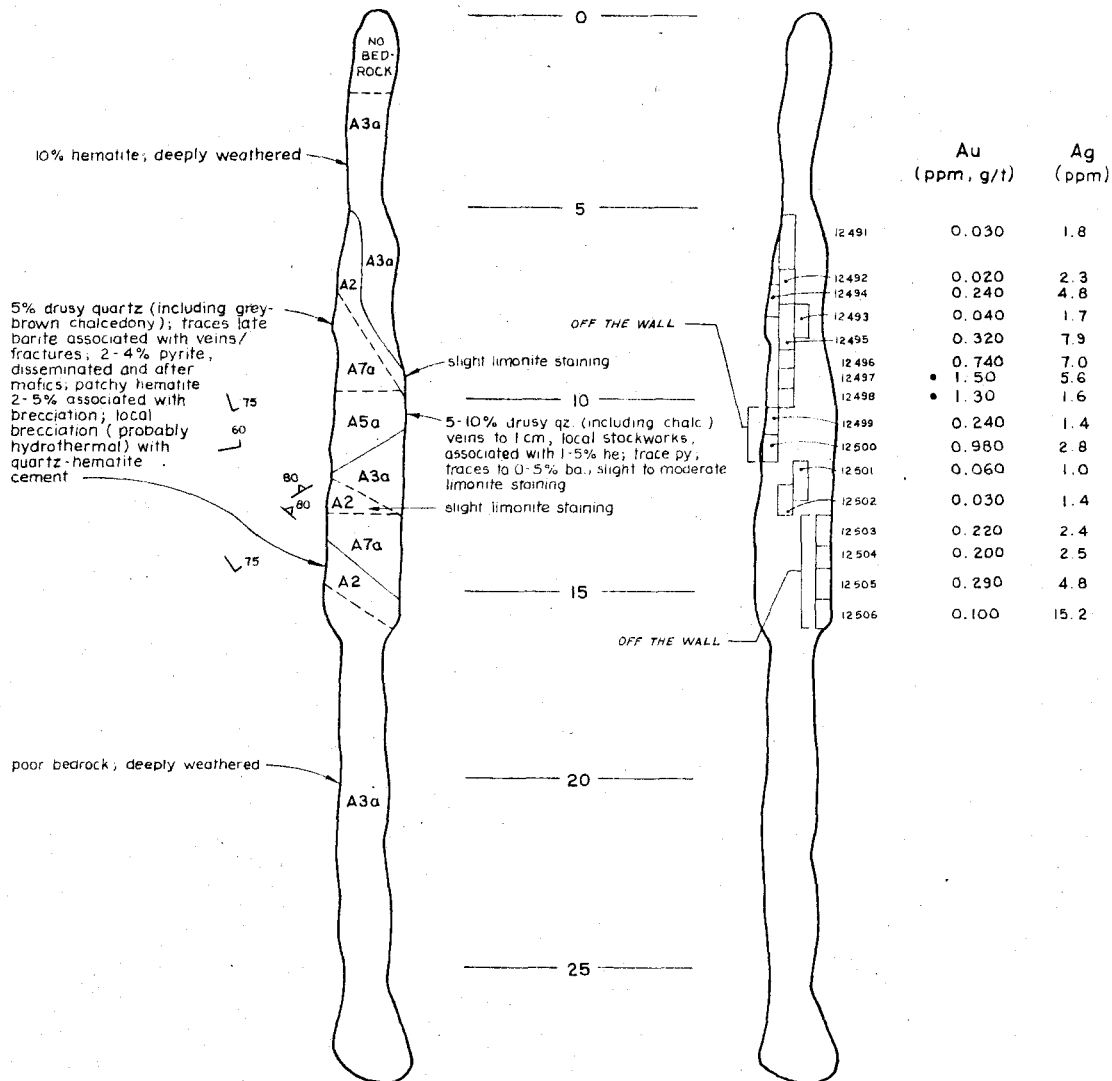
gd	gold	gl	galena
ba	barite	az	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite	chalc	chalcidony

- Symbols**
- bedding; dipping, subvertical
 - alteration trend; no discernable dip, dipping, subvertical
 - fracture trend; dipping, subvertical
 - breccia (secondary)
 - fault
 - lithologic/alteration boundary; observed, inferred

GEOLOGICAL BRANCH
ASSESSMENT REPORT
15,198

13198

A84-TR-041



Sample series: AB12491 - AB12506

LEGEND

LITHOLOGY

Andesite to dacite flow; plagioclase-hornblende porphyry has a fine-grained intermediate groundmass; massive.

ALTERATION

- A2** Argillization; complete replacement; white to grey to brown; variable quartz-clay abundances; dominant clays are dickite, kaolinite, illite; may be brecciated.
- A3** Weak argillitic, sericitic and propylitic alteration; partial replacement by variable clay-sericite-carbonate assemblages.
- A3a** Weak argillization; maroon to grey; plagioclase altered to clay in phenocrysts and groundmass; mafic minerals strongly hematized in phenocrysts and groundmass.
- A3b** Propylitic to weak sericitic alteration; greenish to brownish grey; feldspars altered to clay + carbonate (+ sericite); mafic minerals hematized (+ epidotized) in phenocrysts and groundmass; local Fe-lin stains on fractures.
- A5** Silicification; complete replacement; white to brown to grey; generally massive and often cut by chaledonic quartz-barite veins/stockworks; minor patchy disseminations of pyrite common (5%); generally intermixed with patchy argillitic alteration.
- A7** Silicification - sulphidization; complete replacement
- A7a** Silicification + pyrite; grey to rusty brown; plagioclase variably silicified or partially leached with clay remnants; mafic minerals are pyritized and silicified; locally brecciated; commonly with chaledonic quartz-barite veins/stockworks, often intermixed with patchy argillitic alteration.

Minerals

gd	gold	gl	galena
ba	barite	mz	malachite - azurite
am	amethyst	li	limonite
he	hematite	ja	jarosite
tt	tetrahedrite-tennantite	se	sericite
cc	chalcocite	ca	calcite
py	pyrite	ze	zeolite
cp	chalcopyrite	la	laumontite
sl	sphalerite	chal	chaledony

Symbols

- bedding; dipping, subvertical
- alteration trend; no discernable dip, dipping, subvertical
- fracture trend; dipping, subvertical
- breccia (secondary)
- fault
- lithologic/alteration boundary; observed, inferred

Kidd Creek Mines Ltd.

AL PROPERTY

A84-TR-041

NTS 94E/6W
WORK BY
JE/JC

DRAWN BY
VJG

DATE
OCT 19, 1984

Proj. 03

SCALE IN METRES (1:100 (1:200 WHEN REDUCED))

Figure: C-37

APPENDIX E

Drill Logs

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. A84-08 PAGE No. 1

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: 44.81 m
 SIZE: _____

PROPERTY: AL (03) - THESIS III

DATE: AUG. 10, 1984

DEPTH	AZIM	DIP
44.81m	200°	-45°

CORE RECOVERY: 76%

LOGGED BY: PJM

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
0	3.86	TRICONED - NO CORE					
3.86	10.85	ALTERED DACITE FLOW (PLAGIOCLASE - HORNBLENDE PORPHYRITIC ; OTHER ORIGINAL TEXTURES GENERALLY OBSCURED BY ALTERATION THROUGHOUT THE HOLE). INTENSE SILICIFICATION IS STRONGLY BRECCIATED WITH 1% VUGS. RELICS OF PATCHY PYRITE DISSEMINATIONS OCCUR RARELY. LIMONITE STAIN IS COMMON (2%). QUARTZ-BARITE VEINLETS CUT THE SILICIFICATION (2% BARITE). RECOVERY IS ONLY 53%.	3.66m	4.10m	1.20	3.9	
			4.10m	4.60m	6.10	1.2	
			4.60m	5.10m	1.70	0.6	
			5.10m	6.25m	1.25	0.2	
			6.25m	6.75m	3.90	0.5	
			6.75m	7.10m	5.70	3.0	
			7.10m	7.60m	7.40	0.5	
			7.60m	8.00m	0.60	<0.1	
			8.00m	10.85m	2.20	0.1	
10.85	17.37	INTENSE PYRITIC SILICIFICATION (10% PYRITE) IS STRONGLY BRECCIATED WITH 1% VUGS. QUARTZ-BARITE VEINS PRESENT AS ABOVE. LIMONITE STAIN IS MINOR. RECOVERY IS ONLY 42%.	10.85m	12.19m	3.70	1.7	
				12.19m	1.70	0.9	
			12.19m	12.70m	7.00	1.7	
			12.70m	13.20m	3.40	2.3	
			13.20m	13.70m	4.30	2.5	
			13.70m	14.13m	2.40	1.4	
			14.13m	17.30m	1.20	0.7	
			17.30m	17.80m	0.75	1.0	
17.37	29.25	ALTERED DACITE FLOW. INTENSE ARGILLIZATION CONTAINS 10% DISSEMINATED PYRITE. THE UPPER 0.78m IS GRADATIONAL WITH THE PYRITIC SILICIFICATION ABOVE (ie. MIXED ARGILLIZATION AND SILICIFICATION).	17.80m	18.29m	0.390	1.6	
			18.29m	19.70m	0.320	0.6	
			20.20m	20.20m	0.040	0.8	
			20.20m	20.70m	0.020	1.2	
			20.70m	21.70m	0.040	0.4	

SUMMARY DRILL HOLE LOG

A84-08

SHEET NO 2 of 2

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
17.37	29.25	(CONTINUED)	21.70m	22.70m		0.160	1.4
			22.70m	23.70m		trace	1.4
			23.70m	24.70m		trace	0.3
			24.70m	25.70m		0.010	0.2
			25.70m	26.70m		0.080	1.0
			26.70m	27.70m		trace	0.9
			27.70m	28.70m		trace	1.3
			28.70m	29.25m		trace	0.9
29.25	33.60	ALTERED DACITE FLOW. MODERATE, MIXED ARGILLIZATION AND SILICIFICATION CONTAINS 10% DISSEMINATED PYRITE ("PRE-PHYLLIC" ALTERATION). PLAGIOCLASE IS PREDOMINANTLY ARGILLIZED; SILICIFICATION OCCURS AS FLOODING THROUGH GROUND- MASS.	29.25m	30.25m		trace	0.6
			30.25m	31.25m		trace	0.1
			31.25m	32.25m		trace	0.1
			32.25m	33.60m		trace	0.1
			33.60m	34.60m		trace	0.5
33.60	39.75	SIMILAR TO 17.37m - 29.25m	34.60m	35.40m		trace	0.1
			35.40m	36.15m		trace	3.3
			36.15m	37.15m		0.010	<0.1
			37.15m	38.15m		trace	<0.1
			38.15m	39.15m		trace	<0.1
			39.15m	39.75m		trace	<0.1
39.75	43.13	SIMILAR TO 29.25m - 33.60m	39.75m	40.58m		trace	0.1
			40.58m	41.58m		trace	<0.1
			41.58m	42.35m		trace	<0.1
			42.35m	43.13m		trace	0.1
43.13	44.81	SIMILAR TO 17.37m - 29.25m. THE LOWER 0.61m CONSISTS OF PYRITIC SILICIFICATION WITH MIXED ARGILLIZATION (AFTER FELDSPARS)	43.13m	44.20m		trace	0.3
			44.20m	44.81m		0.040	0.4
44.81		END OF HOLE					

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. A84-09 PAGE No. 1

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: 70.10 m
 SIZE: NQ

PROPERTY: AL (03) - THESIS III ZONE

DATE: AUG. 12, 1984

DEPTH	AZIM	DIP
70.10 m	210°	-45°

CORE RECOVERY: 75%
 LOGGED BY: PJM/IGS

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
0	15.54	TRICONED - NO CORE. DRILL RETURN IMPLIES CLAYS AND/OR WEATHERED "PRE-PHYLLIC" ALTERATION.							
15.54	20.70	ALTERED DACITE FLOW (PLAGIOCLASE-HORNBLENDE PORPHYRITIC - OTHER ORIGINAL TEXTURES GENERALLY OBSCURED BY ALTERATION THROUGHOUT THE HOLE). ALTERATION IS INTENSE ARGILLIZATION PLUS 5% DISSEMINATED PYRITE. LOCAL PATCHES OF PYRITIC SILICIFICATION ALSO OCCUR THROUGH THE INTERVAL.	15.54m	16.00m		0.060	0.8		
			16.00m	17.00m		0.150	0.2		
			17.00m	18.00m		trace	<0.1		
			18.00m	19.00m		trace	<0.1		
			19.00m	20.00m		trace	<0.1		
			20.00m	20.70m		0.040	<0.1		
20.70	21.43	ALTERED DACITE FLOW. MODERATE, MIXED ARGILLIZATION, SILICIFICATION AND PYRITIZATION ("PRE-PHYLLIC ALTERATION"). PLAGIOCLASE IS ARGILLIZED; MODERATE SILICA FLOODING OCCURS THROUGH THE GROUNDMASS. PYRITE VARIES FROM 3-10% AS DISSEMINATIONS.	20.70m	21.78m		0.010	0.4		
			21.78m	23.00m		trace	0.2		
			23.00m	23.65m		trace	0.1		
			23.65m	24.65m		0.010	<0.1		
			24.65m	25.65m		0.110	<0.1		
			25.65m	26.65m		0.040	0.1		
21.43	21.78	ALTERED DACITE FLOW. MINOR CLAY RELICS ARE PRESENT WITH 1% VUGS IN INTENSE PYRITIC SILICIFICATION (10% DISSEMINATED PYRITE).	26.65m	27.65m	3.60	3.500	<0.1		
			27.65m	28.65m		0.060	<0.1		
			28.65m	29.65m		0.030	<0.1		
			29.65m	30.65m		0.070	<0.1		
21.78	23.65	SAME AS 15.54m - 20.70m	30.65m	31.09m		0.140	<0.1		
			31.09m	32.61m		0.280	<0.1		
23.65	41.45	SIMILAR TO 20.70m - 21.43m. AVERAGE PYRITE CONTENT IS 5% AS DISSEMINATIONS.	32.61m	35.66m		0.270	1.6		
			35.66m	37.49m		0.130	<0.1		
			37.49m	38.86m		0.890	0.4		

SUMMARY DRILL HOLE LOG

A84-09

SHEET No 2 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
23.65	41.45	(CONTINUED)	38.86m	41.45m		1.500	0.5
41.45	46.93	SIMILAR TO 21.43m - 21.78m. ALTERED ROCK IS INTENSELY BRECCIATED WITH 5% VUGS, 5% DISSEMINATED PYRITE, AND QUARTZ-BARITE VEINLETS IN FRACTURES AND OPEN SPACES. RECOVERY IS ONLY 60%.	41.45m	43.13m		1.200	0.2
			43.13m	44.81m		1.900	0.2
			44.81m	45.72m		1.050	0.9
			45.72m	46.93m		0.600	1.4
46.93	49.68	SIMILAR TO 41.45m - 46.93m. PYRITIC SILICIFICATION IS GRADATIONAL WITH ABOVE ALTERATION. CLAY ALTERED PLAGIOCLASE RELICS AND 2% VUGS ARE PRESENT ALONG WITH ONLY MINOR QUARTZ-BARITE VEINLETS.	46.93m	48.01m		0.240	0.2
			48.01m	49.68m		0.130	0.5
49.68	58.55	SIMILAR TO 20.70m - 21.43m. 5% DISSEMINATED PYRITE OCCURS THROUGHOUT. A CLAY-RICH GOUGE ZONE IS PRESENT FROM 57.80m - 57.92m.	49.68m	50.00m		0.050	0.5
			50.00m	51.00m		0.090	0.8
			51.00m	52.00m		0.030	0.3
			52.00m	53.00m		0.010	0.2
			53.00m	54.00m		trace	0.1
			54.00m	55.00m		trace	<0.1
			55.00m	56.00m		0.080	0.2
			56.00m	57.28m		0.010	0.4
			57.28m	57.80m		trace	<0.1
			57.80m	57.92m		trace	0.1
58.55	60.05	SIMILAR TO 15.54m - 20.70m. 5% DISSEMINATED PYRITE IS PRESENT THROUGHOUT. THE LOWER ALTERATION CONTACT IS AT 50° TO CORE AXIS.	57.92m	58.55m		trace	<0.1
			58.55m	59.00m		0.040	0.4
			59.00m	60.05m		0.110	1.2
60.05	61.11	SIMILAR TO 21.43m - 21.78m. THE PYRITIC SILICIFICATION IS STRONGLY BRECCIATED (5% PYRITE) AND IS CUT BY QUARTZ-BARITE VEINLETS (2-5% BARITE). THE LOWER CONTACT (0.31m) IS OF MIXED	60.05m	60.80m		0.250	1.8
			60.80m	61.11m		0.130	1.4

SUMMARY DRILL HOLE LOG

A84-09

SHEET NO 3 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
60.05	61.11	SILICIFICATION (+PYRITE) AND ARGILLIZATION.					
61.11	62.67	SIMILAR TO 15.54m - 20.70m. 10% DISSEMINATED PYRITE OCCURS THROUGHOUT. THE LOWER ALTERATION CONTACT IS AT 35° TO CORE AXIS.	61.11m	62.67m		trace	0.1
62.67	66.70m	SIMILAR TO 20.70m - 21.43m. AVERAGE 2% DISSEMINATED PYRITE.	62.67m	63.70m		trace	<0.1
			63.70m	64.70m		trace	<0.1
			64.70m	65.70m		trace	<0.1
			65.70m	66.70m		trace	<0.1
66.70	69.00	SIMILAR TO 15.54m - 20.70m. LOCAL PATCHES OF PYRITIC SILICIFICATION OCCUR THROUGH THE INTERVAL. PYRITE CONTENT AVERAGES 5%.	66.70m	69.00m		0.010	0.4
69.00	70.10	SIMILAR TO 20.70m - 21.43m. AVERAGE 5% PYRITE.	69.00m	69.50m		0.010	0.2
	70.10	END OF HOLE					

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. A84-10 PAGE No. 1

HOLE START: _____

HOLE FINISH: _____

DEPTH: 79.25m

SIZE: NQ

PROPERTY: AL (03) - THESIS III

DATE: Aug. 14-15

DEPTH	AZIM.	DIP
79.25m	198°	-43°

CORE RECOVERY: 50%

LOGGED BY: NVF/JC

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
0	3.70	TRICONED - NO CORE	3.70m	4.35m	12.80		0.2		
			4.35m	5.00m	3.90		0.2		
3.70	16.30	ALTERED DACITE FLOW (PLAGIOCLASE - HORNBLENDE	5.00m	5.30m	3.20		0.3		
		PORPHYRITIC - OTHER ORIGINAL TEXTURES ARE	5.30m	6.00m	12.10		0.4		
		OBSCURED BY PERVASIVE ALTERATION). ROCK IS	6.00m	6.70m	1.10		0.2		
		INTENSELY SILICIFIED WITH 10% VUGS. MINOR	6.70m	7.50m	4.90		0.4		
		DISSEMINATIONS OF PYRITE OCCUR IN THE UPPER AND	7.50m	8.20m	1.90		0.8		
		LOWER EDGES OF THE INTERVAL. LATE STAGE	8.20m	8.70m	1.40		0.7		
		BARITE ± QUARTZ VEINLETS CUT THE SILICIFICATION	8.70m	10.20m	154.90		0.4		
		AND AVERAGE ABOUT 5%. TRACES OF POSSIBLE	10.20m	10.57m	0.50		0.6		
		TENNANTITE - TETRAHEDRITE DISSEMINATIONS ARE	10.57m	11.30m	0.50		0.4		
		ASSOCIATED WITH THE VEINS (DARK GREY, METALLIC	11.30m	11.90m	0.70		0.3		
		SULPHIDE). VISIBLE GOLD ASSOCIATED WITH	11.90m	12.50m	0.40		0.4		
		VEINING NOTED FROM 3.7-5.0m, 8.7-10.2m, and	12.50m	14.30m	79.00		0.5		
		12.5-14.3m. THE UPPER 2/3 OF THE INTERVAL	14.30m	16.30m	1.20		2.2		
		IS MODERATELY BRECCIATED. RECOVERY IS							
		VERY POOR DUE TO HIGHLY FRACTURED							
		NATURE OF ROCK (AVERAGE 33% RECOVERY).							
16.30	31.83	ALTERED DACITE FLOW. INTENSE PYRITIC	16.30m	20.40m	4.20		3.2		
		SILICIFICATION (5-10% PYRITE) IS WEAKLY BRECCIATED	20.40m	21.00m	0.40		0.6		
		WITH 5% VUGS. MINOR RELICT CLAYS REMAIN	21.00m	22.30m	0.20		0.5		
		AFTER PLAGIOCLASE. BARITE (2%) OCCURS IN VUGS							
		AND VEINS. ASSOCIATED TRACES OF TENNANTITE-							
		TETRAHEDRITE (?) ARE ALSO PRESENT. NATIVE GOLD							
		OCCURS IN TRACES FROM 31.40 - 31.85m.							

SUMMARY DRILL HOLE LOG

A84-10

SHEET NO 2 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
16.83	31.85	(CONTINUED) THE SECTION FROM 22.3m - 31.4m WAS TRICONED (NO CORE). RECOVERY AVERAGED 59% THROUGH THE ENTIRE INTERVAL.	31.40m	31.85m	2.80		11.6
31.85	33.40	SIMILAR TO 16.83m - 31.83m. DISSEMINATED PYRITE AVERAGES 10%. CLAY-ALTERED PLAGIOCLASE RELICS ALSO ACCOUNT FOR 10% OF ROCK. VUGS AVERAGE 2%.	31.85m	32.30m	0.50		1.5
			32.30m	32.85m	0.20		0.5
			32.85m	33.40m	1.20		1.5
		NARROW INTERVAL FROM 32.30 - 32.85m IS NON-PYRITIC	33.40m	34.15m	0.50		0.5
		AND INTENSELY BRECCIATED. STOCKWORK BARITE VEINLETS (5%) AND VUGS (2%) ARE PRESENT IN THE SILICIFICATION.	34.15m	34.90m	0.40		0.3
33.40	34.90	SAME AS 16.30 - 31.85m EXCEPT NATIVE GOLD NOT NOTED.					
34.90	79.25	ALTERED DACITE FLOW. MODERATE TO STRONG ALTERATION CONSISTS OF SILICIFIED GROUNDMASS AND MAFIC MINERALS, ARGILLIZED PLAGIOCLASE AND 5-10% DISSEMINATED PYRITE (MAINLY AFTER MAFIC MINERALS AND LOCALLY AS FRACTURE-FILLINGS)	34.90m	35.60m	0.140		0.5
			35.60m	36.40m	0.100		0.3
			36.40m	36.90m	0.300		0.4
			36.90m	38.60m	0.080		0.4
			38.60m	39.05m	0.360		0.9
			39.05m	40.00m	0.060		0.2
			40.00m	40.85m	0.370		0.2
			40.85m	41.90m	0.210		0.3
			41.90m	43.58m	trace		0.1
			43.58m	44.58m	trace		0.2
			44.58m	45.78m	0.005		<0.1
			45.78m	46.78m	0.020		<0.1
			46.78m	48.35m	0.010		0.4
			48.35m	49.20m	0.130		1.0
			49.20m	50.05m	0.020		0.1
			50.05m	50.95m	0.005		0.1
			50.95m	51.95m	0.010		0.1

SUMMARY DRILL HOLE LOG

A84-10

SHEET No 3 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
34.90	79.25	(CONTINUED)	51.95m	52.95m	0.015	1.0	
			52.95m	53.20m	trace	0.2	
			53.20m	53.70m	trace	0.3	
			53.70m	54.50m	trace	0.2	
			54.50m	55.40m	trace	0.1	
			55.40m	56.40m	0.015	0.1	
			56.40m	57.30m	0.010	0.1	
			57.30m	58.30m	trace	0.1	
			58.30m	59.20m	trace	0.1	
			59.20m	60.30m	0.030	<0.1	
			60.30m	60.60m	0.020	<0.1	
79.25		END OF HOLE	60.60m	61.40m	trace	0.2	
			61.40m	62.20m	trace	0.2	
			62.20m	63.09m	trace	0.1	
			63.09m	64.10m	trace	<0.1	
			64.10m	65.10m	0.010	<0.1	
			65.10m	65.80m	trace	<0.1	
			65.80m	66.80m	trace	<0.1	
			66.80m	67.80m	trace	<0.1	
			67.80m	68.80m	trace	<0.1	
			68.80m	69.80m	trace	<0.1	
			69.80m	70.80m	trace	<0.1	
			70.80m	71.80m	0.010	<0.1	
			71.80m	72.24m	0.010	<0.1	
			72.24m	73.20m	0.010	<0.1	
			73.20m	74.20m	0.005	<0.1	
			74.20m	75.20m	trace	0.1	
			75.20m	76.20m	0.010	<0.1	
			76.20m	77.20m	0.010	<0.1	
			77.20m	78.20m	0.010	<0.1	
			78.20m	79.25m	trace	<0.1	

NOTE :

SEVERAL SLUDGE SAMPLES WERE COLLECTED FROM THE DRILL RETURN.

22.25m - 23.77m → 2.80 g/t Au ; 1.1 ppm Ag
 23.77m - 29.87m → 3.10 g/t Au ; 0.7 ppm Ag
 29.87m - 31.08m → 0.160 ppm Au ; 0.5 ppm Ag

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. A84-11 PAGE No. 1

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: 81.38 m
 SIZE: NQ

PROPERTY: AL (03) - BV ZONE
 DATE: AUG. 17, 1984.

DEPTH	AZIM	DIP
81.38m	200°	-45°

CORE RECOVERY: 95%

LOGGED BY: NvF/PJM

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
0	3.66	TRICONED - NO CORE							
3.66	10.20	ALTERED ANDESITE FLOW (PLAGIOCLASE-HORNBLENDE PORPHYRITIC). ROCK IS WEAKLY ARGILLIZED WITH CLAY-ALTERED PLAGIOCLASE AND HEMATIZED GROUNDMASS. CARBONATE VEINLETS ARE MINOR.							
10.20	12.90	ALTERED ANDESITE FLOW. ALTERATION IS OF INTENSE ARGILLIZATION PLUS TRACE, DISSEMINATED PYRITE.	12.80m	13.40m		0.050	4.7		
12.90	15.85	SAME AS 3.66 m - 10.20 m. FROM 13.25m - 13.48m IS A NARROW BAND OF INTERMIXED, INTENSE ARGILLIZATION AND SILICIFICATION (SUBEQUAL PROPORTIONS).	14.30m	15.85m		0.250	0.3		
15.85	17.30	ALTERED ANDESITE FLOW. INTENSE SILICIFICATION IS MIXED WITH LESSER ARGILLIZATION WITH TRACES OF PYRITE DISSEMINATIONS. BRECCIATION IS INTENSE.	15.85m	16.60m		7.350	0.4		
			16.60m	17.30m		2.60	710.0	0.4	
			17.30m	19.00m		Trace	0.1		
17.30	39.40	SAME AS 3.66 m - 10.20 m.							
39.40	42.67	ALTERED ANDESITE FLOW, INTERMIXED INTENSE ARGILLIZATION AND SILICIFICATION OF SUB-EQUAL PROPORTIONS IS INTENSELY BRECCIATED. THE UPPER CONTACT OF CLAY-RICH GOUGE WITH DISSEMINATED HEMATITE DOMINATES FROM 39.40 - 39.70m. QUARTZ-BARITE VEINING OCCURS THROUGH THE INTERVAL. TRACES OF	38.00m	39.40m		Trace	0.3		

SUMMARY DRILL HOLE LOG

A84-11

SHEET No 2 of 2

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
39.40	42.67	(CONTINUED) NATIVE GOLD ARE PRESENT IN QUARTZ ± BARITE	39.40m	40.20m	1.00		1.4
		VEINING ASSOCIATED WITH TRACES OF TENNANTITE -	40.20m	40.70m	67.80		2.8
		TETRAHEDRITE (?) FROM 42.10m - 42.67m. MINOR	40.70m	41.20m	11.60		4.9
		DISSEMINATED PYRITE OCCURS MOSTLY ALONG VEIN	41.20m	41.75m	4.80		2.4
		SERVAGES.	41.75m	42.25m	0.90		1.0
			42.25m	42.67m	3.90		3.0
42.67	44.00	SAME AS 3.60m - 10.20m.	44.00m	44.80m	6.10		1.6
			44.80m	45.10m	12.70		1.2
44.00	47.00	SIMILAR TO 15.85m - 17.30m. QUARTZ ± BARITE	45.10m	45.60m	0.20		0.2
		VEINING AVERAGES 10% AND CONTAINS AVERAGE 1%	45.60m	46.10m	90.00		4.8
		DISSEMINATED TENNANTITE - TETRAHEDRITE (?). NATIVE	46.10m	46.60m	0.40		0.6
		GOLD TRACES PRESENT IN VEINING FROM	46.60m	47.00m	1.40		0.9
		44.80m - 45.10m AND 45.60m - 46.10m.					
47.00	72.40	SIMILAR TO 3.60m - 10.20m. MODERATE CARBONATE	47.00m	47.85m		0.010	0.4
		VEINING NETWORK IS PRESENT THROUGHOUT. LOWER	47.85m	48.85m		trace	2.4
		CONTACT IS GRADATIONAL OVER 0.8m WITH ADJACENT	48.85m	49.85m		trace	0.1
		ARGILLIZATION.					
			71.35m	72.20m		0.050	3.4
72.40	72.90	SIMILAR TO 15.85m - 17.30m. MINOR CARBONATE	72.20m	73.20m		0.055	3.2
		STOCKWORK CUTS THE SILICIFICATION/ARGILLIZATION.					
72.90	81.38	SAME AS 47.00m - 72.40m. UPPER CONTACT					
		IS MARKED BY MODERATE ARGILLIZATION OVER					
		0.3m.					
	81.38	END OF HOLE					

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. A84-12 PAGE No. 1

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: 60.00m
 SIZE: NQ

PROPERTY: AL(03) - BV ZONE

DATE: AUG. 18, 1984

DEPTH	AZIM	DIP
60.0 m	200°	-45°

CORE RECOVERY: 97%

LOGGED BY: PJM

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
0	9.75	TRICONED - NO CORE							
9.75	13.15	ALTERED ANDESITE FLOW (PLAGIOCLASE-HORNBLENDE PORPHYRITIC) IS MASSIVE. PATCHY ARGILLIZATION OCCURS WITHIN DOMINANT, INTENSE SILICIFICATION. MINOR PYRITE IS PRESENT AS DISSEMINATIONS. ALTERATION IS INTENSELY BRECCIATED WITH 1% VUGS. CLAYS (ESPECIALLY DICKITE) OCCUR AFTER PLAGIOCLASE AND AS BRECCIA-FILLING AND VEIN MATERIAL (GENERALLY WITH QUARTZ). QUARTZ-PYRITE-BARITE VEINS ARE MINOR (2% PYRITE; 0.3% BARITE)	9.75m	10.25m	1.80		1.2		
			10.25m	10.75m	0.40		4.1		
			10.75m	11.27m	1.10		8.8		
			11.27m	11.77m	1.30		4.0		
			12.27m	12.27m	0.49		4.9		
			12.95m	12.95m	1.70		2.6		
			13.60m	13.60m	25.60		4.1		
13.15	14.00	ALTERED ANDESITE FLOW. STRONGLY BRECCIATED, INTENSE SILICIFICATION HAS 2% VUGS AND IS CUT BY CHALCEDONIC QUARTZ-BARITE (30%) - PYRITE VEINS (+ TRACE GALENA). VEIN MATERIAL ACCOUNTS FOR 50% OF THE INTERVAL. MINOR DISSEMINATED HEMATITE OCCURS AS ENVELOPES AROUND COARSE-GRAINED BARITE CRYSTALS.	13.60m	14.00m	42.20		8.8		
14.00	16.80	SIMILAR TO 9.75m - 13.15m. THE QUARTZ-DICKITE VEINS CONTAIN MINOR PYRITE AND TRACES OF BARITE AND GALENA. THE LOWER 0.2m OF THE INTERVAL IS PREDOMINANTLY OF INTENSE ARGILLIZATION.	14.00m	14.32m	6.50		4.7		
			14.32m	15.22m	25.50		5.2		
			15.22m	15.72m	0.10		0.6		
			15.72m	16.22m	<0.05		1.0		
			16.22m	16.80m	<0.05		0.2		

SUMMARY DRILL HOLE LOG

A84-12

SHEET No 2 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
16.80	19.80	SIMILAR TO 9.75m - 13.15m. BRECCIATION IS MODERATE WITH 1% VUGS. VEINS CONSIST OF CHALCEDONIC QUARTZ + CLAY + BARITE (1%) + PYRITE (1%)	16.80m	17.37m	0.05		0.2
			17.37m	17.87m	0.10		0.6
			17.87m	18.37m	0.50		4.3
			18.37m	19.80m	3.30		9.9
19.80	27.45	ALTERED ANDESITE FLOW. WEAK ARGILLIC ALTERATION CONSISTS OF CLAY (= MINOR CARBONATE) ALTERED PLAGIOCLASE PHENOCRYSTS AND HEMATIZED MAFIC MINERALS (PHENOCRYSTS AND GROUNDMASS). MINOR CARBONATE VEINLETS ALSO CUT THE ROCK.	19.80m	21.00m		trace	<0.1
27.45	28.50	SIMILAR TO 9.75m - 13.15m. THE ALTERATION IS CUT BY CHALCEDONIC QUARTZ - DICKITE VEINS WITH 2% BARITE AND 2% PYRITE. VUGS AVERAGE ONLY 1%.	27.45m	27.95m		0.020	0.7
			27.95m	28.45m	25.90	710.0	4.0
			28.45m	28.95m	8.50	7.600	1.8
28.50	31.40	ALTERED ANDESITE FLOW. INTENSE ARGILLIZATION (+ MINOR PYRITE) CONTAINS PATCHY, INTERMIXED SILICIFICATION. BRECCIATION IS INTENSE. VEINS OF CHALCEDONIC QUARTZ + DICKITE CUT THE ALTERATION AND CONTAIN 0.1% EACH OF BARITE AND DISSEMINATED PYRITE.	28.95m	29.45m		0.220	0.7
			29.45m	29.95m		0.200	1.0
			29.95m	30.45m		0.480	1.8
			30.45m	30.95m		0.250	1.1
			30.95m	31.45m		0.130	0.4
31.40	32.65	SAME AS 27.45m - 28.50m	31.45m	31.85m		0.070	0.5
			31.85m	32.20m		0.040	0.3
			32.20m	32.70m		0.040	0.5
32.65	34.90	SAME AS 28.50m - 31.40m. SILICIFICATION IS MOST INTENSE IN BRECCIA FRAGMENTS.	32.70m	33.20m		0.120	0.4
			33.20m	33.70m		0.180	0.6
			33.70m	34.20m		0.150	0.7
			34.20m	34.70m		0.070	1.1
34.90	38.25	SAME AS 27.45m - 28.50m	34.70m	35.36m		0.250	0.8
			35.36m	35.86m		0.090	1.5
			35.86m	36.36m		0.010	2.0
			36.36m	36.86m		0.280	3.8
			36.86m	37.36m		0.130	1.1

SUMMARY DRILL HOLE LOG

A84-12

SHEET NO 3 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
34.90	38.25	(CONTINUED)	37.36m	37.85m		0.040	0.9
			37.85m	38.25m		0.070	0.8
38.25	60.00	SAME AS 19.80 - 27.45m. A NARROW ZONE OF ARGILLIC GOUGE MATERIAL IS PRESENT FROM 41.50m - 41.70m					
60.00		END OF HOLE					

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. A84-13 PAGE No. 1

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: 57.00m
 SIZE: NQ

PROPERTY: AL (03) - BV ZONE
 DATE: AUG. 18-20, 1984.

DEPTH	AZIM.	DIP
57.00m	200°	-45°

CORE RECOVERY: 93%

LOGGED BY: NVF

INTERVAL (Metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
0	6.70	TRICONED - NO CORE							
6.70	7.60	ALTERED ANDESITE FLOW (PLAGIOCLASE - HORNBLENDE PORPHYRITIC). ALTERATION OF INTENSE SILICIFICATION IS INTERMIXED WITH MINOR ARGILLIZATION. MINOR LIMONITE STAIN IS PRESENT ON FRACTURES.	6.70m	7.30m	1.4	0.100	1.4		
			7.30m	7.80m	6.00	4.900	1.8		
7.60	16.80	ALTERED ANDESITE FLOW. ALTERATION IS SIMILAR TO 6.7m - 7.6m BUT ALSO HAS MINOR, IRREGULARLY DISTRIBUTED PATCHES OF FINE, DISSEMINATED PYRITE. ALTERATION IS WEAKLY BRECCIATED WITH 1% AND CUT BY QUARTZ - BARITE (5%) VEINS. MINOR PYRITE ALSO OCCURS WITHIN VEINS. TRACE NATIVE GOLD OCCURS WITH BARITE AND, IN ONE CASE, APPEARS ON THE INTERFACE BETWEEN BARITE AND PYRITE MINERALIZATION. (ie. 15.80m - 16.30m). RECOVERY IS 64%.	7.80m	8.20m	16.30	710.0	3.9		
			8.20m	11.28m		0.230	3.1		
			11.28m	11.78m		0.170	0.8		
			11.78m	12.38m		0.090	0.5		
			12.38m	12.88m		0.250	0.5		
			12.88m	13.38m	4.40	3.200	2.7		
			13.38m	13.88m		1.700	1.8		
			13.88m	14.30m		1.270	2.8		
			14.30m	15.30m	4.20	3.400	3.3		
			15.30m	15.80m	3.20	2.900	4.2		
16.80	17.37	ALTERED ANDESITE FLOW. INTENSE ARGILLIZATION AND SUBEQUAL, INTERMIXED SILICIFICATION CONSISTS MAINLY OF SILICEOUS FRAGMENTS IN A CLAY-RICH MATRIX. BRECCIATION IS INTENSE. THE LOWER ALTERATION CONTACT IS AT 60° TO CORE AXIS.	15.80m	16.30m	48.30	710.0	3.0		
			16.30m	16.80m	48.70	>10.0	4.2		
			16.80m	17.37m		0.980	1.4		
17.37	31.20	ALTERED ANDESITE FLOW. WEAK ARGILLIC ALTERATION CONSISTS OF CLAY-ALTERED PLAGIOCLASE AND HEMATIZED GROUNDMASS AND MAFIC MINERALS. CARBONATE VEINLETS ARE MINOR.							

SUMMARY DRILL HOLE LOG

A84-13

SHEET NO 2 of 2

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
31.20	39.20	SIMILAR TO 6.7m - 7.6m. ALTERATION IS CUT BY MINOR DRUSY QUARTZ-BARITE VEINLETS (+ TRACE GALENA) WHICH ARE ENVELOPED BY FINE-GRAINED PYRITE DISSEMINATIONS. THE UPPER 0.2m ARE INTENSELY SHEARED AND PREDOMINANTLY ARGILLIZED. THE LOWER CONTACT IS AT 70° TO CORE AXIS.	31.00m	31.40m		0.300	8.6
			31.40m	31.90m	1.55	1.080	23.4
			31.90m	32.40m	1.20	1.000	15.6
			32.40m	33.10m	1.10	1.100	19.0
			33.10m	33.60m		0.060	3.7
			33.60m	34.10m		0.040	1.8
			34.10m	34.60m		0.110	1.5
			34.60m	35.10m		0.780	13.4
			35.10m	35.66m		0.900	14.8
			35.66m	36.16m		0.060	1.0
			36.16m	36.66m		0.050	3.8
			36.66m	37.16m		0.050	2.1
			37.16m	37.66m		0.090	2.1
			37.66m	38.16m		0.070	0.2
		38.16m	38.70m		0.050	0.1	
		38.70m	39.20m		0.040	0.3	
39.20	41.76	SAME AS 17.37m - 31.20m					
41.76	41.90	SAME AS 16.80m - 17.37m					
41.90	57.00	SAME AS 17.37m - 31.20m. MINOR, PATCHY INTENSE ARGILLIZATION IS PRESENT FROM 49.80m - 50.10m.					
	57.00m	END OF HOLE					

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. A84-14 PAGE No. 1

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: 75.29 m
 SIZE: NQ

PROPERTY: AL (03) - THESIS III ZONE
 DATE: AUG. 21-23, 1984

DEPTH	AZIM	DIP
75.29m	200.00	-45°

CORE RECOVERY: 94%
 LOGGED BY: PJM

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
0	19.00	TRICONED - NO CORE	19.00m	20.00m		trace	0.2
			20.00m	21.00m		trace	0.3
19.00	31.35	ALTERED DACITE FLOW (PLAGIOCLASE - HORNBLENDE PORPHYRITIC ; MOST ORIGINAL TEXTURES OBSCURED BY ALTERATION THROUGHOUT HOLE). MODERATE, "PRE-PHYLLIC" ALTERATION CONSISTS OF SILICIFIED GROUNDMASS, ARGILLIZED PLAGIOCLASE, AND 5% DISSEMINATED PYRITE (MAINLY AFTER MAFIC MINERALS). ARGILLIZATION DOMINATES OVER SILICIFICATION FROM 24.85m - 27.89m. MINOR PYRITIC VEINLETS CORRESPOND WITH SLIGHT INCREASE IN PYRITE CONTENT OVER LOWER 3.46m.	21.00m	22.00m		0.005	0.5
			22.00m	23.00m		trace	0.3
			23.00m	24.00m		0.020	0.3
			24.00m	24.35m		trace	0.3
			24.35m	26.06m		0.020	0.6
			26.06m	27.89m		0.030	0.4
			27.89m	28.89m		0.210	0.2
			28.89m	29.89m		0.250	0.2
			29.89m	30.89m		0.270	0.3
			30.89m	31.35m		0.310	0.3
			31.35m	31.85m		0.540	0.6
31.35	55.20	ALTERED DACITE FLOW. INTENSE PYRITIC SILICIFICATION IS STRONGLY BRECCIATED WITH 2% VUGS. DISSEMINATIONS OF PYRITE (10%) OCCUR IN SILICIFICATION AND IN QUARTZ-BARITE VEINS (AVERAGE 1% DRUSY BARITE). VEINING REPRESENTS ABOUT 8% OF INTERVAL. TRACE NATIVE GOLD OCCUPIES A QUARTZ VEIN MARGIN AT 38.15m. PYRITE ALTERATION FRONTS ARE MEASURABLE AT 20° AND 45° TO CORE AXIS.	31.85m	32.35m	1.60	1.400	1.6
			32.35m	32.85m		0.910	1.0
			32.85m	33.35m		0.670	0.6
			33.35m	33.85m		0.540	0.6
			33.85m	34.35m		0.360	0.4
			34.35m	34.85m	1.10	1.000	0.6
			34.85m	35.35m		0.660	0.5
			35.35m	35.85m		0.790	0.7
			35.85m	36.68m	1.40	1.600	1.0
			36.68m	37.18m		0.460	0.6
55.20	58.10	SIMILAR TO 31.35m - 55.20m EXCEPT VUGS ARE RARE AND ONLY TRACE BARITE OCCURS IN QUARTZ VEINS. VERY RARE, RELICT CLAYS REMAIN AFTER PLAGIOCLASE.	37.18m	37.70m		0.680	0.7
			37.70m	38.20m	0.90	1.250	0.7
			38.20m	38.70m		0.600	0.6

SUMMARY DRILL HOLE LOG A84-14

SHEET NO 2 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
55.20	58.10	(CONTINUED)	38.70m	39.70m	2.30	1.850	1.4
			39.70m	40.70m	2.20	1.900	1.1
			40.70m	41.70m		0.770	0.8
			41.70m	42.20m		0.680	0.7
			42.20m	43.20m	1.60	1.150	1.6
			43.20m	44.20m	2.90	2.000	2.9
			44.20m	45.20m	3.00	2.450	1.4
			45.20m	46.20m		0.720	0.4
			46.20m	47.20m		0.310	0.2
			47.20m	47.90m		0.470	0.4
			47.90m	48.90m		0.270	0.2
			48.90m	49.90m		0.310	0.3
			49.90m	50.90m		0.150	0.3
			50.90m	51.90m		0.960	0.6
			51.90m	52.90m		0.350	0.3
			52.90m	53.90m		0.630	0.2
			53.90m	54.90m	1.90	2.200	0.3
			54.90m	55.75m		0.350	0.2
			55.75m	56.25m		0.080	0.2
			56.25m	56.75m		0.050	0.1
			56.75m	57.25m		0.080	0.1
			57.25m	58.25m		0.170	0.2
			58.25m	59.25m	5.40	5.100	1.4
58.10	69.55	SAME AS 31.35 m - 55.20 m. QUARTZ-BARITE	59.25m	60.25m		0.570	0.8
		VEINING IS PRESENT IN A ZONE OF INTENSE	60.25m	61.25m	1.50	1.800	0.7
		BRECCIATION FROM 65.05 m - 65.25 m (VEINING IS	61.25m	62.25m		0.290	0.3
		15% - 20% OF INTERVAL).	62.25m	62.75m		0.480	0.4
			62.75m	63.25m		0.700	0.7
			63.25m	63.75m		0.870	0.6
			63.75m	64.25m		0.640	1.1
			64.25m	65.25m		0.640	0.8
			65.25m	66.25m	1.40	1.500	0.9

SUMMARY DRILL HOLE LOG A84-14

SHEET No 3 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
69.55	70.20	SIMILAR TO 19.00 m - 31.35 m . SILICIFICATION PREDOMINATES OVER ARGILLIZATION .	66.25m	67.25m		0.580	0.7
			67.25m	68.25m		0.480	0.6
			68.25m	69.25m		0.650	1.0
			69.25m	70.20m		0.120	0.5
70.20	70.60	SIMILAR TO 31.35 m - 55.20 m . MINOR QUARTZ ± BARITE IN VEINS. BRECCIATION IS MODERATE .	70.20m	70.60m		0.660	0.6
70.60	71.80		70.60m	71.80m		0.280	0.5
		SAME AS 69.55 m - 70.20 m	71.80m	72.80m		0.040	0.4
			72.80m	73.80m		0.020	4.0
			73.80m	75.29m		0.010	1.9
71.80	75.29	SIMILAR TO 19.00 m - 31.35 m . ARGILLIZATION PREDOMINATES OVER SILICIFICATION . INTERVAL IS WEAKLY BRECCIATED .					
DRILL RETURN SLUDGES WERE SAMPLED AT :							
		7.6 m	-	1.20 g/t Au ; 0.6 ppm Ag			
		10.7 m	-	1.20 g/t Au ; 0.6 ppm Ag			
		17.7 m	-	1.30 g/t Au ; 1.2 ppm Ag			
75.29		END OF HOLE					

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. A84-15 PAGE No. 1

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: 69.19m
 SIZE: NQ

PROPERTY: AL(03) - BV ZONE
 DATE: AUG. 27, 1984

DEPTH	AZIM	DIP
69.19m	198°	-45°

CORE RECOVERY: 99%

LOGGED BY: IGS

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
0	7.32	TRICONED - No CORE							
7.32	22.70	ALTERED ANDESITE FLOWS (80%) AND FLOW-TOP BRECCIAS (20%) ARE PLAGIOCLASE - HORNBLLENDE ± BIOTITE PORPHYRITIC WITH FINE-GRAINED GROUNDMASS. BEDDING ORIENTATION AVERAGES 60° TO CORE AXIS (BASED ON FLOW AND FLOW-TOP BRECCIA CONTACTS). ROCKS ARE WEAKLY ARGILLIZED WITH CLAY (± MINOR CARBONATE) ALTERED PLAGIOCLASE AND HEMATIZED MAFIC MINERALS. MINOR CARBONATE STRINGERS (<1%) ARE PRESENT THROUGHOUT. FOUR, NARROW ARGILLIZED SHEARS OCCUR BETWEEN 18.34m AND 21.63m.	18.34m	19.34m		trace	0.5		
			19.34m	20.00m		trace	4.5		
22.70	24.10	ALTERED ANDESITE FLOWS AND FLOW BRECCIAS. INTENSE SILICIFICATION CONTAINS MINOR, INTERMIXED ARGILLIZATION. HEMATITE (2%) OCCURS IN GROUNDMASS MATERIAL AND RARE, PATCHY PYRITE DISSEMINATIONS ARE PRESENT LOCALLY. ALTERATION IS CUT BY MINOR CHALCEDONY ± BARITE VEINLETS.	22.70m	23.50m	0.60		1.5		
			23.50m	24.10m	0.70		0.8		
			24.10m	24.60m	4.30		3.6		
			24.60m	25.10m	7.70		7.5		
			25.10m	25.60m	4.70		6.7		
			25.60m	26.10m	0.40		1.7		
24.10	28.88	SIMILAR TO 22.70m - 24.10m. INTENSE BRECCIATION IS INFILLED WITH BARITE - CHALCEDONY ± DICKITE VEINS (35% OF INTERVAL). TRACE CHALCOPYRITE AND GALENA OCCUR WITH BARITE AT 26.9m. TRACES OF NATIVE GOLD NOTED AT 27.1m AND 28.35m. POSSIBLE TRACES OF TENNANTITE - TETRAHEDRITE (?) IN VEINS.	26.10m	26.60m	2.10		2.5		
			26.60m	27.00m	11.80		19.8		
			27.00m	27.30m	13.20		9.7		
			27.30m	27.80m	0.60		1.8		
			27.80m	28.30m	4.95		3.0		
			28.30m	28.80m	37.10		7.6		

SUMMARY DRILL HOLE LOG

A84-15

SHEET No 2 of 2

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
28.88	29.75	SAME AS 22.70m - 24.10m	28.80m	29.75m	2.60		1.2
29.75	41.90	SAME AS 7.32m - 22.70m. 5-10% CARBONATE VEINLETS OCCUR FROM 36.80m - 40.10m.	29.75m	31.00m		trace	<0.1
41.90	42.20	ALTERED ANDESITE FLOW. BRECCIA FRAGMENTS OF INTENSELY ARGILLIZED AND SILICIFIED ANDESITE OCCUR IN A SHEARED MATRIX OF CLAY. PYRITE DISSEMINATIONS AVERAGE 2%.					
42.20	69.19	SAME AS 7.32m - 22.70m.					
	69.19	END OF HOLE					

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. A84-16 PAGE No. 1

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: 78.33m
 SIZE: NQ

PROPERTY: AL(03)-BV ZONE
 DATE: Aug. 29, 1984.

DEPTH	AZIM	DIP
78.33m	200°	-46°

CORE RECOVERY: 97%
 LOGGED BY: PJM

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
0	4.37	TRICONED - NO CORE							
4.37	32.88	ALTERED ANDESITE FLOW (PLAGIOCLASE-HORNBLENDE-BIOTITE PORPHYRITIC). WEAK ARGILLIC ALTERATION CONSISTS OF CLAY ALTERED PLAGIOCLASE (± MINOR CARBONATE) AND HEMATIZED MAFIC MINERALS. MINOR CARBONATE STRINGERS ARE PRESENT LOCALLY. SHEARED, ARGILLIC ALTERATION OCCURS FROM 7.77m - 7.92m ; 10.78 - 10.97m ; 24.34 - 24.89m ; 26.84m - 27.12m ; 27.46 - 28.00m.							
32.88	35.30	ALTERED ANDESITE FLOW. INTERMIXED, INTENSE ARGILLIZATION AND SILICIFICATION ARE PRESENT IN SUB-EQUAL PROPORTIONS. PYRITE (2%) OCCURS AS PATCHY DISSEMINATIONS. THE UPPER ALTERATION CONTACT IS AT 85° TO CORE AXIS. THE UPPER 0.38m AND LOWER 0.13m ARE INTENSELY SHEARED.	32.88m	33.26m	0.050	1.3			
			33.26m	35.17m	0.040	2.5			
			35.17m	35.30m	0.080	0.9			
35.30	35.90	SAME AS 4.37m - 32.88m.							
35.90	36.50	ALTERED ANDESITE FLOW. MINOR SILICIFIED FRAGMENTS ARE PRESENT IN CLAY-RICH, HEMATITIC FAULT GOUGE MATERIAL.							
36.50	46.10	SAME AS 4.37m - 32.88m. MINOR CLAY-RICH GOUGE OCCURS FROM 44.40 - 44.60m AND 45.37 - 45.57m	45.37m	45.57m	0.020	46.0			
			45.57m	46.51m	0.070	25.0			

SUMMARY DRILL HOLE LOG

A84-16

SHEET NO 2 of 3

INTERVAL (metres)		GEOLOGY		ASSAYS			
FROM	TO			Au	Ag		
		FROM	TO	g/t	ppm	ppm	
46.10	46.51	ALTERED ANDESITE flow. ALTERATION CONSISTS OF INTENSE ARGILLIZATION WITH MINOR HEMATITE AND TRACES OF DISSEMINATED PYRITE. UPPER CONTACT IS PERPENDICULAR TO CORE AXIS.					
46.51	49.00	SAME AS 4.37m - 32.88m.					
49.00	49.16	SIMILAR TO 46.10m - 46.51m. PYRITE IS ABSENT. LOWER ALTERATION CONTACT IS AT 70° TO CORE AXIS.		49.00m	49.16m		0.020 17.6
49.16	63.95	SAME AS 4.37m - 32.88m. NARROW, CLAY-RICH SHEARS OCCUR AT 62.60m AND 63.77m.					
63.95	64.33	ALTERED ANDESITE flow. INTENSELY SILICIFIED BRECCIA FRAGMENTS (30%) OCCUR IN SHEAR, ARGILLIZED MATERIAL. PATCHY DISSEMINATIONS OF HEMATITE (1%) AND PYRITE (1%) ARE PRESENT.		63.95m	64.33m		0.180 6.8
64.33	65.14	SAME AS 4.37m - 32.88m.					
65.14	65.35	ALTERED ANDESITE flow. INTENSE SILICIFICATION AND INTERMIXED ARGILLIZATION ARE STRONGLY BRECCIATED. DISSEMINATED PYRITE AVERAGES 5%. ALTERATION IS CUT BY MINOR HEMATITIC DUKITE VEINETS. UPPER AND LOWER CONTACTS ARE SHEARED AND CLAY-RICH.		65.14m	66.14m		0.470 9.6
65.35	69.09	SAME AS 4.37m - 32.88m.					

SUMMARY DRILL HOLE LOG

A84-16

SHEET No 3 of 3

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
69.09	71.44	SIMILAR TO 65.14m - 65.35m. PATCHY DISSEMINATIONS OF PYRITE (5%) AND HEMATITE (2%) ARE IRREGULARLY DISTRIBUTED THROUGHOUT INTERVAL. MINOR, LATE-STAGE QUARTZ-CARBONATE VEINLETS OCCUR AT 60° - 90° TO CORE AXIS.	69.09m	70.10m		0.210	3.9
			70.10m	70.60m		0.350	3.6
			70.60m	71.44m		0.080	2.0
71.44	78.33	SAME AS 4.37m - 32.88m.					
	78.33	END OF HOLE					

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: 63.40m
 SIZE: NQ

PROPERTY: AL (03) - BV ZONE

DATE: AUG. 30, 1984.

HOLE No. A84-17 PAGE No. 1

DEPTH	AZIM.	DIP
63.40m	200°	-45°

CORE RECOVERY: 95%
 LOGGED BY: PJM

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
0	4.27	TRICONED - NO CORE							
4.27	5.08	ALTERED ANDESITE FLOWS (PLAGIOCLASE-HORNBLENDE-BIOTITE PORPHYRITIC). WEAK ARGILLIC ALTERATION CONSISTS OF CLAY (± CARBONATE) ALTERED PLAGIOCLASE AND HEMATIZED MAFIC MINERALS. SPORADIC QUARTZ AND/OR CARBONATE VEINLETS AND MINOR HEMATITE STRINGERS CUT THE ROCK.							
5.08	11.08	ALTERED ANDESITE FLOWS. INTENSE, INTERMIXED ARGILLIZATION AND SILICIFICATION ARE PRESENT IN SUBEQUAL PROPORTIONS. THE INTERVAL IS INTENSELY BRECCIATED WITH APPROX. 10% CHALCEDONIC QUARTZ - DICKITE VEINS (± PYRITE).	5.08m	5.40m	2.70	2.200	10.5		
			5.04m	7.92m	5.30	5.100	6.3		
			7.92m	9.00m		0.260	1.4		
			9.00m	10.00m		0.580	2.6		
			10.00m	11.08m		0.370	2.0		
11.08	39.65	SAME AS 4.27m - 5.08m. PATCHES OF MODERATE ARGILLIZATION AND BLEACHING ARE LOCALLY PRESENT THROUGHOUT THE INTERVAL.							
39.65	49.70	ALTERED ANDESITE FLOWS. INTENSE SILICIFICATION IS INTERMIXED WITH IRREGULAR ARGILLIZATION. BRECCIATION IS INTENSE WITH 25% VEINS AND BRECCIA FILLINGS OF CHALCEDONIC QUARTZ + DICKITE + PYRITE (2% DISSEMINATIONS). TRACE BARITE OCCURS LOCALLY ALONG VEIN MARGINS. UPPER, CLAY-RICH CONTACT IS AT 60° TO CORE AXIS.	39.72m	40.27m		0.560	3.6		
			40.27m	41.27m		0.550	1.2		
			41.27m	41.95m		0.160	1.2		
			41.95m	42.60m	2.90	2.200	7.9		
			42.60m	43.10m		0.200	1.9		
			43.10m	44.10m		0.880	2.7		
			44.10m	45.05m		0.860	2.1		

SUMMARY DRILL HOLE LOG

A84-17

SHEET No 2 of 2

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
39.65	49.70	(CONTINUED)	45.05m	45.40m	2.80	2.550	1.7
			45.40m	45.90m	3.80	3.000	6.9
			45.90m	46.40m	2.50	2.850	4.3
			46.40m	46.79m	1.30	1.200	2.5
			46.79m	47.40m	6.20	6.600	1.9
			47.40m	48.00m	13.50	710.0	2.2
			48.00m	49.00m	1.50	1.550	0.3
49.70	55.30	SAME AS 4.27m - 5.08m	49.00m	49.70m	18.60	710.0	6.2
			49.70m	51.00m		trace	0.1
55.30	56.60	SIMILAR TO 39.65m - 49.70m. DICKITE-CHALCEDONY	55.30m	56.00m		0.170	5.4
		VEINS ARE ALSO LOCALLY BRECCIATED. BARITE	56.00m	56.60m		0.540	4.6
		WAS NOT NOTED. THE UPPER ALTERATION CONTACT					
		IS AT 60° TO CORE AXIS. THE LOWER ALTERATION					
		CONTACT SHEARED AND AT 65° TO CORE AXIS.					
56.60	59.72	SIMILAR TO 4.27m - 5.08m. CARBONATE					
		ALTERATION IS ABSENT.					
59.72	61.00	SAME AS 55.30m - 56.60m	59.72m	60.36m		0.300	4.7
			60.36m	61.00m		0.340	4.7
61.00	63.40	SAME AS 4.37m - 5.08m.					

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. A84-18 PAGE No. 1

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: 82.30m
 SIZE: NQ

PROPERTY: AL (03) - BV ZONE

DATE: SEPT. 1, 1984

DEPTH	AZIM.	DIP
82.30m	200°	-44

CORE RECOVERY: 98%

LOGGED BY: IGS

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
0	4.27	TRICONED - NO CORE							
4.27	7.33	ALTERED ANDESITE FLOWS (PLAGIOCLASE - HORNBLende-BIOTITE PORPHYRITIC). WEAK ARGILLIC ALTERATION CONSISTS OF CLAY ALTERED PLAGIOCLASE AND HEMATIZED MAFIC MINERALS.							
7.33	7.62	ALTERED ANDESITE FLOW IS INTENSELY SILICIFIED WITH LESS DOMINANT, INTERMIXED ARGILLIZATION. CENTRAL REGION OF THE ZONE IS DOMINATED BY MASSIVE CHALCEDONIC QUARTZ + DICKITE VEINING (+ MINOR BARITE).	7.33m	7.62m		0.140	4.8		
7.62	11.17	SAME AS 4.27m - 7.33m.							
11.17	13.31	SIMILAR TO 7.33m - 7.62m. BRECCIATION IS INTENSE WITH PREDOMINANT DICKITE BRECCIA FILLING. CHALCEDONY - BARITE - DICKITE - PYRITE VEIN IS PRESENT FROM 11.28m - 11.31m AT APPROXIMATELY 90° TO CORE AXIS.	11.17m	12.25m		0.160	1.0		
			12.25m	13.31m		0.170	2.8		
13.31	13.83	SAME AS 4.27m - 7.33m	13.60m	13.90m		0.010	0.3		
13.83	69.10	SIMILAR TO 4.27m - 7.33m. MINOR CARBONATE IS PRESENT AFTER PLAGIOCLASE AND AS VEINLETS. MODERATE ARGILLIZATION ± SILICIFICATION	24.23m	24.43m		0.015	1.9		
			24.43m	24.84m		0.040	32.0		

SUMMARY DRILL HOLE LOG

A84-18

SHEET NO 2 of 2

INTERVAL		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
13.83	69.10	(CONTINUED) ACCOMPANY BLEACHING FROM 24.33 - 24.35 m ; 35.85 - 37.90 m ; 30.12 - 30.30 m ; 53.70 - 56.70 m. WEAK SHEARING OCCURS LOCALLY.					
69.10	79.84	ALTERED ANDESITE FLOW. INTENSE ARGILLIZATION AND INTERMIXED SILICIFICATION OCCUR IN SUBEQUAL PROPORTIONS. TRACE PYRITE IS PRESENT AS DISSEMINATIONS. MODERATE BRECCIATION AND SHEARING ARE WIDESPREAD. MEASURABLE SHEARS OCCUR AT 15° AND AT 50° TO CORE AXIS. FROM 69.10 m - 77.84 m PYRITIC CLAY IS PREDOMINANT IN SHEARED MATRIX MATERIAL AND QUARTZ PREDOMINATES AS CHALCEDONY VEINING AND STOCKWORKS.	69.10m	69.60m		0.270	9.0
			69.60m	70.10m		0.260	2.4
			70.10m	70.60m		0.610	2.3
			70.60m	71.10m	1.60	1.250	5.2
			71.10m	71.60m	1.60	1.150	3.0
			71.60m	72.10m		0.670	1.4
			72.10m	72.60m	5.00	3.600	1.5
			72.60m	73.10m		0.830	1.0
			73.10m	73.60m		0.470	1.1
			73.60m	74.10m	3.20	2.800	1.6
			74.10m	74.60m		0.530	0.9
			74.60m	75.10m		0.290	1.3
			75.10m	76.20m		0.130	0.8
			76.20m	77.84m		0.190	2.0
79.84	82.30	SAME AS 4.27m - 7.33m					
	82.30	END OF HOLE					

KIDD CREEK MINES LTD

SUMMARY DRILL HOLE LOG

HOLE No. A84-19 PAGE No. 1

HOLE START: _____
 HOLE FINISH: _____
 DEPTH: 83.82m
 SIZE: NQ

PROPERTY: AL (03) - BV ZONE

DATE: SEPT. 3, 1984

DEPTH	AZIM.	DIP
83.82m	200°	-43°

CORE RECOVERY: 99%

LOGGED BY: IGS

INTERVAL (metres)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm		
FROM	TO		FROM	TO					
0	7.32	TRICONED - NO CORE							
7.32	38.83	ALTERED ANDESITE FLOWS (PLAGIOCLASE-HORNBLENDE - BIOTITE PORPHYRITIC). WEAK ARGILLIC ALTERATION CONSISTS OF CLAY-ALTERED PLAGIOCLASE AND HEMATIZED MAFIC MINERALS. NARROW SHEARS ARE PRESENT LOCALLY BELOW 25m. MODERATE BRECCIATION AND WEAK BLEACHING OF FRAGMENTS OCCURS FROM 35.40m TO 35.95m. ARGILLIZED SHEAR OCCURS FROM 37.77-37.79m.							
38.83	40.18	ALTERED ANDESITE FLOW. INTENSE ARGILLIZATION IS INTERMIXED WITH LESSER SILICIFICATION AND 2% DISSEMINATED PYRITE. ALTERATION IS STRONGLY SHEARED AND CUT BY MINOR QUARTZ-DICKITE VEINS.	38.83m	39.09m		0.005	0.3		
			39.09m	39.67m	1.20		7.7		
			39.67m	40.18m	0.20		2.0		
40.18	40.60	SAME AS 7.32m - 38.83m. INTERVAL IS MODERATELY SHEARED.	40.18m	40.60m		trace	0.3		
40.60	41.69	SIMILAR TO 38.83m - 40.18m. UPPER HALF OF INTERVAL IS PREDOMINANTLY SILICIFIED WITH 2% PYRITE AND 30% QUARTZ-DICKITE - BARITE (1%) VEINING. THE LOWER SECTION OF THE INTERVAL IS MODERATELY SHEARED AND PREDOMINANTLY ARGILLIZED. PYRITE IS RARE. BARITE IS ABSENT IN THE QUARTZ-DICKITE VEINS.	40.60m	41.24m	0.4		2.8		
			41.24m	41.69m		trace	0.4		

SUMMARY DRILL HOLE LOG A84-19

SHEET NO 2 of 2

INTERVAL (meters)		GEOLOGY	ASSAYS		Au g/t	Au ppm	Ag ppm
FROM	TO		FROM	TO			
41.69	42.39	SAME AS 7.32m - 40.18m					
42.39	42.72	ALTERED ANDESITE FLOW. SHEARED ROCK IS INTENSELY ARGILLIZED WITH 2% DISSEMINATED PYRITE.	42.39m	42.72m		0.020	3.7
42.72	43.12m	SAME AS 40.18m - 40.60m.	42.72m	43.12m		0.340	0.1
43.12	43.74m	SIMILAR TO 42.39m - 42.72m. PYRITE IS ABSENT BUT ALTERATION CONTAINS 2% HEMATITE. ONLY UPPER 0.25m IS INTENSELY SHEARED. UPPER ALTERATION CONTACT IS AT 15° TO CORE AXIS; LOWER CONTACT IS AT 40° TO CORE AXIS.	43.12m	43.74m		trace	1.8
43.74	70.15	SAME AS 7.32m - 40.18m. THREE BLEACHED PATCHES OF MODERATE TO WEAK SILICIFICATION PRESENT BETWEEN 48.0m AND 50.0m. SIMILAR SILICIFICATION FROM 68.47 - 70.15m. MODERATE ARGILLIC ALTERATION AND BLEACHING OCCURS FROM 68.07m - 68.47m.					
70.15	72.84	ALTERED ANDESITE FLOW. INTENSE SILICIFICATION IS INTERMIXED WITH ARGILLIZATION AND CUT BY CHALCEDONIC QUARTZ - DICKITE - PYRITE VEINS (10-20% OF INTERVAL). PYRITE ALSO OCCURS WITHIN THE SILICIFICATION IN LOCALIZED CONCENTRATIONS OF ≤15% PYRITE. LOWER 0.6m IS PREDOMINANTLY ARGILLIZED.	70.15m	70.70m		trace	1.3
			70.70m	71.24m		6.200	4.4
			71.24m	71.76m		0.200	3.2
			71.76m	72.10m	9.60		20.0
			72.10m	72.58m		0.070	3.3
			72.58m	73.40m		0.010	1.3
72.84	73.40	ALTERED ANDESITE FLOW. MODERATE SILICIFICATION + ARGILLIZATION IS BLEACHED.					
73.40	83.82	SAME AS 7.32 - 40.18m - END OF HOLE.					