REPORT ON TRENCHING AND EXAMINATION OF TRENCHES

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I.G. Sutherland, B.Sc.

from the

JD M.C. (in the JD-82 Group)

situated near Moosehorn Creek

in the Omineca Mining Division

57°26 W, 127°09 W

NTS 94E/6E

owned and operated by: Kidd Creek Mines Ltd.

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GEOLOGICAL BRANCH ASSESSMENT REPORT

couver,

November 1982

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INTRODUCTION

Location, Access and Terrain

The 'JD-82' claim group is located east of the Stikine River and north of the Toodoggone River in north-central British Columbia (Figure 1). The nearest supply and transportation centres are Smithers, 300 km due south, and Watson Lake in the Yukon, 300 km to the north.

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

The claim group is situated at the eastern boundary of the Spatsizi Plateau and covers moderate to steep ridges between the broad valleys of Moosehorn and McClair Creeks (Figure 2). All trenching was carried out on the JD mineral claim on the slopes of a steep, east-west ridge and on a rounded hill immediately to the south (Figures 3 and 4).

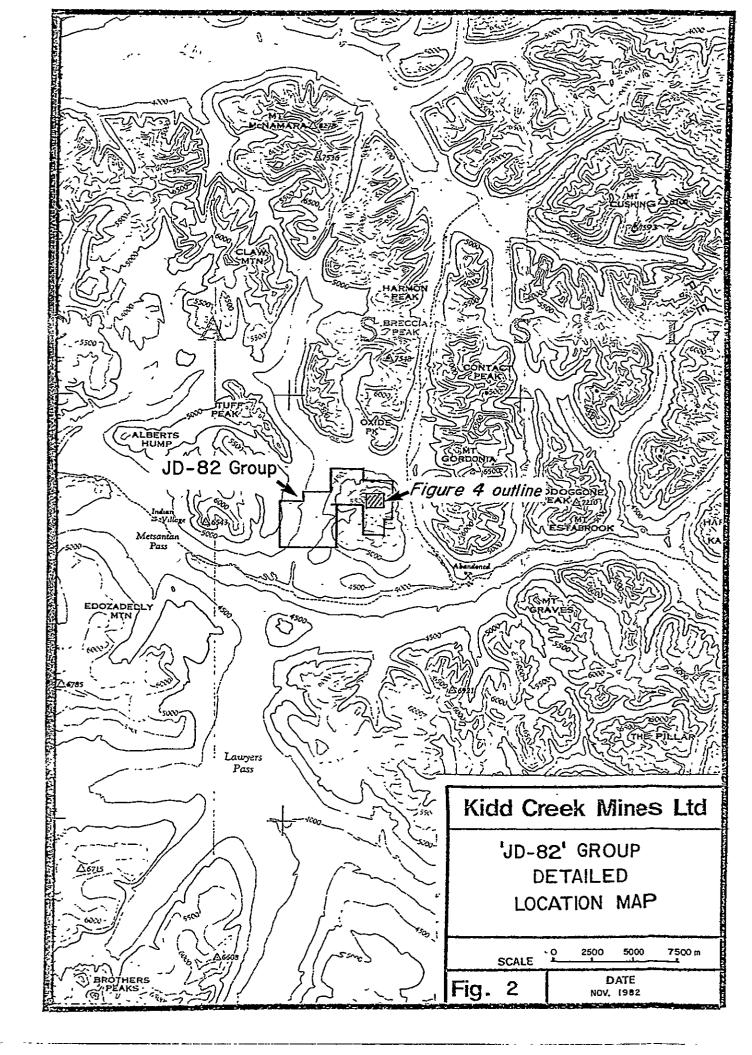
Vegetation below 1500 metres consists of a dense growth of spruce and fir trees. Alpine areas above 1500 metres are sparsely vegetated with moss, grasses and alpine flowers.

Property History and Definition

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

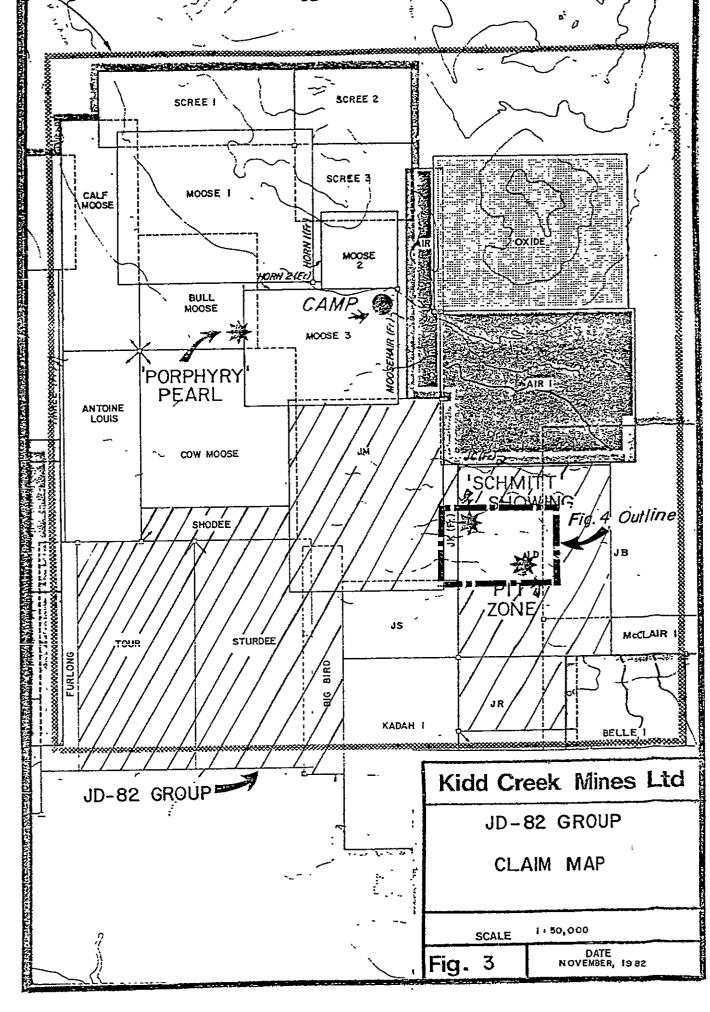
YUKON NORTHWEST TERRITORY TERRITORIES DEASE LAKE **∂**L 56 BRITISH ALBERTA Smithers COLUMBIA PRINCE GEORG 52 The second secon ANCOUN Figure 1 U. S. A. LOCATION MAP EATTLE JD PROPERTY

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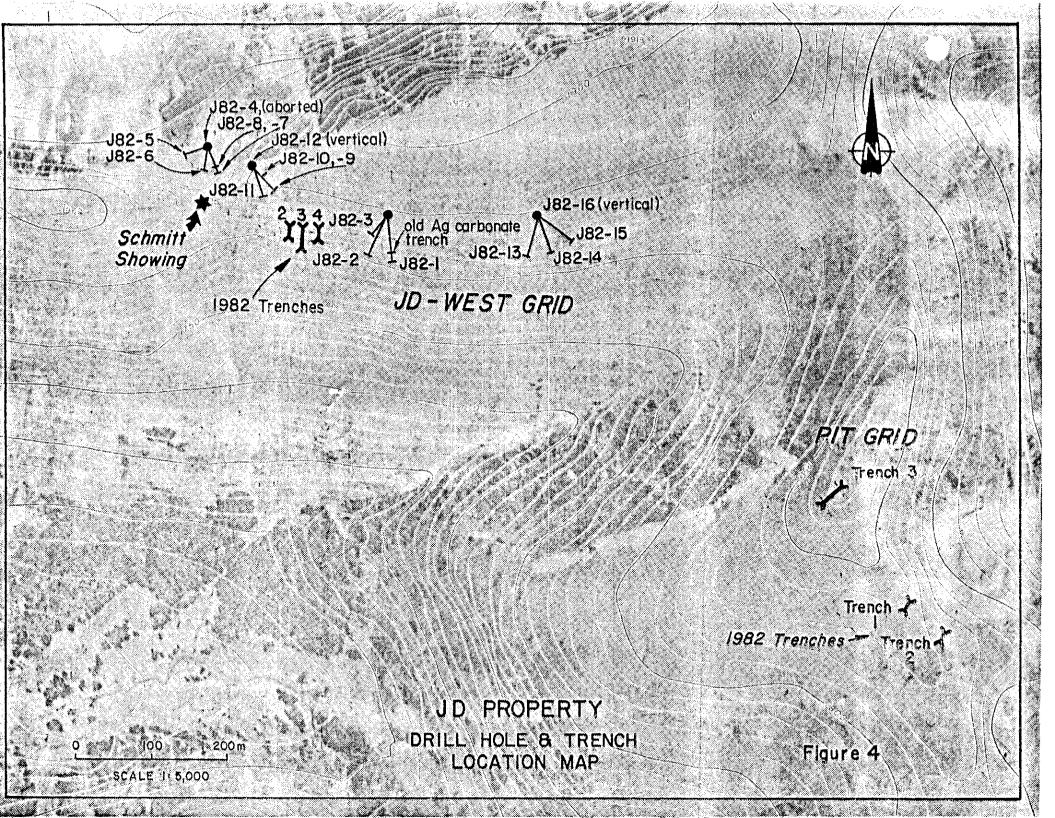


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The present property area was originally staked in 1971 to cover showings discovered by Sullivan and Rodgers, consultants who were undertaking a reconnaissance program for Sumac Mines Ltd. Geochemical surveys and trenching in the area of the showings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

#### Summary of Work Completed

Trenching and subsequent sampling on the JD-82 claim group took place between July 8 and August 20, 1982. Physical work was done by M. Cloutier with assistance given by various Kidd Creek Mines employees. 6

D.W. Piroshco supervised the mapping and sampling of the trenches which accounted for 92 linear metres of work in six trenches, all of which are roughly 1 m wide.

A total of 85 rock samples were collected from the six trenches over standard panel areas of 0.5 m long by 1.0 m wide. All samples were analysed geochemically for Au, Ag, Cu, Pb and Zn and 31 of these were assayed for the same element suite. Figures 4 through 10 show the sample locations, geology and analytical results.

#### Distribution

All work described herein was carried out on the JD M.C., part of the 'JD-82' claim group (Figure 3).

#### GEOLOGY AND TRENCHING

#### Regional Setting

The property lies near the eastern margin of a Mesozoic volcanic arc assemblage bounded on the west and south by the Sustut and Bowser basin assemblages and to the east by the Omineca Crystalline Belt. The property is underlain by a sequence known informally as "Toodoggone" volcanic rocks. Mapping was initially carried out by Gabrielse <u>et al</u>. from 1971-1975 with a summary by Carter (1972) of the geology as understood in 1971. More recent mapping by Schroeter (1982) summarizes the regional geology as follows:

The Toodoggone volcanic sequence consists of a pile of complexely intercalated and varicoloured subaerial andesitic, dacitic, and trachytic tuffs, ash flow sheets, and minor epiclastic rocks that is 1000 metres of more in thickness. They are tentatively correlated with very Early Jurassic rocks of the Hazelton Group. K-Ar and Sb-Sr dates obtained from whole rock and mineral samples, including alunite from Alberts Hump (which is believed to be contemporaneous with the major pulse of epithermal mineralization), range between 179 and 19 0 + Ma.

#### Property Geology

The geology of the JD property was originally mapped at a scale of 1"=400' by T. Rodgers in 1972. Mapping (1:5000) by H.R. Schmitt in 1980 attempted to define in greater detail some of the differences in lithology, alteration and mineralization. Mapping, in 1981, also at a scale of 1:5000, reinterpreted the lithologies and their variations in terms of a tuffaceous subaerial volcanic environment. A comprehensive interpretation of the geology is limited by scarcity of outcrop and by the rapid changes in lithologies characteristic of these subaerial volcanics.

In summary, the claims are underlain by a thick succession of Lower to Middle Jurassic feldspar-hornblende, andesitic crystal and crystallapilli tuffs, tuff breccias and flows along with lesser dyke equivalents. The general lack of exposed contacts makes differentiation of these lithologies difficult. These rocks are greyish-green to orange-grey on the fresh surface and consist of up to 35% white to pink subhedral feldspar grains with less than 5% each of euhedral biotite flakes and subhedral, prismatic hornblende crystals. The crystal fragments or phenocrysts are less than 3 mm on average and are set in a grey to locally maroon, fine-grained andesitic matrix.

Tuff breccias, where recognizable, are generally of the same composition as their tuffaceous matrix and often can only be distinguished on clean, slightly weathered exposures. The general lack of such outcrops has made definition of these and other units most difficult.

#### Structure

The sequence of volcanic rocks has a prominent northwest strike with shallow to moderate, east and northeast dips.

Various joint and fracture trends in the volcanic rocks reflect local and regional fault trends, especially those related to block faulting. The most prominent joint set corresponds with the main, regional structural orientations. It strikes northwest (125° to 140°) with moderate southwest dips of about 60°.

Two other fracture sets are recognized and reflect additional fault activity. One of the strikes at 070° to 110° dipping north at 60° to 80°. This structural trend transects much of the 'JD-West Vein' area (Figure 4) and serves to host this mineralized vein system.

The third fracture trend strikes 350° to 020° and dips west at 45° to 80°. This fracture system appears to be related to block faulting which has been important in the repeated displacements of the 'JD-West Vein' and, possibly, of the 'Pit Vein'.

#### Trenching, Observations and Results

A total of six trenches were completed, three on each of the two major veins, accounting for about 92 linear m of work (Figure 4). Drilling in rock was done with a Pionjar 'plugger', and trenches were cleared by hand, following blasting. Trenches were dug to bedrock, where possible, occasionally to a depth of 1.5 m. All trenches were located by means of tracing surface float boulders upslope to their approximate source.

The three trenches of the 'JD-West ' grid (Figure 4) exposed a complex system of structurally controlled silicification, propylitization and phyllic alteration related to repeated, hydrothermal activity along this structure. The result is a vein system typified by approximately 3 to 5 metres of variable quartz breccia vein material with divers combinations of accessory hematite, pyrite, sericite and local chalcopyrite and galena. Remobilization of this structure along the footwall of this zone has formed a clay gouge zone of 1 to 3 m in width. Lying structurally below this is a zone of propylitic alteration (i.e. chlorite + epidote + pyrite), the intensity of which increases towards the clay gouge zone. This zone of altered volcanics is typically dark green with pink, iron-stained feldspar crystals.

Above the breccia vein zone the predominance of silicification is replaced by one of phyllic alteration (quartz + sericite  $\pm$  pyrite). Late stage stringers of quartz are common with minor amounts of 10

associated pyrite. This phyllic alteration and attendant quartz stringering grades into a dominantly propylitic alteration zone, similar to that of the footwall. Quartz stringering is still present but is less abundant with minor sulphides.

Between the three trenches, the nature and degree of alteration as well as the width of each alteration zone is highly variable. This is a reflection of the complex nature of such epithermal, precious metals deposits. Similarly, better Au values are not directly related to the degree of silicification and/or pyritization, as may be anticipated, but appear to be more closely linked to the proximity to the fault gouge zones. Values for Ag, however, do reflect a correspondence with visible alteration intensity.

The three trenches of the Pit Grid (Figure 4) exposed rocks similar in nature to those of the JD-West Grid. The two southern trenches (Trenches 1 and 2) are characterized by an abundance of clay fault gouge material in the main zone of silicification and pyritization. Trench 3, however, exposed mainly massive quartz-pyrite altered porphyry with very minor clay gouge zones. The structurally controlled system of alteration strikes approximately at 110°-120° and appears to dip moderately to the northeast with widths of 2.5 to 18.0 m. The host rock andesite porphyry flow is typically massive and dark green with 10 to 20% pink, iron-stained plagioclase phenocrysts. Propylitic alteration is most abundant adjacent to the vein, particularly in the footwall, 11

decreasing away from the vein. Local bleaching due to patchy silicification is also common in these marginal alteration zones.

Trenches 1 and 2 are clearly part of a single structurally controlled alteration system and a similar degree of variation is exhibited here that was observed between the three JD-West Grid trenches to the north. Trench 3 is a considerable distance away and does not lie on the linear strike extension of the first two trenches but it is believed to be part of the same alteration structure. Displacement is presumed to be a result of later cross faulting activity. Further evidence for this will be pursued in future work.

Geochemical and assay results (Figures 5 through 10) are clearly most significant in Trenches 1 and 2 with the better values for Au and Ag in the mixed clay fault gouge and silicified material. Again, the degree of silicification itself does not appear to greatly influence precious metal values.

#### GEOCHEMISTRY

A total of 85 rock samples were collected from the trenches and shipped to Min-En Laboratories Ltd. of North Vancouver where they were analysed geochemically for Au, Ag, Cu, Pb and Zn. A summary of analytical techniques is as follows:

| Element        | Element Extraction           |                   |
|----------------|------------------------------|-------------------|
| Ag, Pb, Zn, Cu | Nitric, perchloric digestion | Atomic Absorption |
| Au             | Hot Aqua Regia               | Atomic Absorption |

Additional assays were run on 31 of these samples also for Au, Ag, Cu, Pb and Zn, most of them coming from Trenches 1 and 2. The results of all analyses are plotted in Figures 5 through 10.

Ian G. Sutherland

APPENDIX A

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Statement of Qualifications

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APPENDIX A

#### Statement of Qualifications

#### I.G. Sutherland - Geologist

I.G. Sutherland holds a B.Sc. (Hons) Degree in Geology from the University of Western Ontario, granted in 1976. 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.

#### D.W. Piroshco - Geologist

Darwin Piroshco obtained his B.Sc. degree in Geology from the University of Calgary in 1981. He joined Kidd Creek Mines Ltd. as a temporary employee in Vancouver, in May 1981, immediately after graduation. APPENDIX B

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Statement of Expenditures

#### APPENDIX B

#### Statement of Expenditures

#### SALARIES AND FRINGE BENEFITS - KIDD CREEK MINES LTD.

# a) Trenching

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| J. Black - Assistant<br>Period: Aug 18, 1982                 | 1 day @\$50   | \$ 50.00             |             |
|--------------------------------------------------------------|---------------|----------------------|-------------|
| F. Collier - Assistant<br>Period: July 9-11, Aug 12-18       | 6 days @ \$75 | 450.00               |             |
| M. Cook - Assistant<br>Period: July 15-19                    | 2 days @ \$65 | 130.00               |             |
| V. Falmange - Assistant<br>Period: July 9-11                 | 2 days @ \$75 | 150.00               |             |
| S. Lammle - Assistant<br>Period: July 8, Aug 16              | 2 days @ \$70 | 140.00               |             |
| J. Leigh - Assistant<br>Period: Aug 12-16                    | 2 days @ \$55 | 110.00               |             |
| A. Losch - Assistant<br>Period: July 8                       | 1 day @ \$65  | 65.00                |             |
| L. Louie - Assistant<br>Period: Aug 16                       | 1 day @ \$65  | 65.00                |             |
| P. Mouldey - Assistant<br>Period: Aug 15                     | 1 day @ \$70  | 70.00                |             |
| G. Murray - Assistant<br>Period: Aug 15                      | 1 day @ \$70  | 70.00                |             |
| C. Nicholls - Assistant<br>Period: Aug 12-19                 | 2 days @ \$60 | 120.00               |             |
| K. Norris - Assistant<br>Period: July 10, Aug 16-19          | 3 days @ \$55 | 165.00               |             |
| R. Van den Brink – Assistant<br>Period: July 9-10, Aug 14-18 | 4 days @ \$70 | 280.00<br>\$1,865.00 | \$ 1,865.00 |

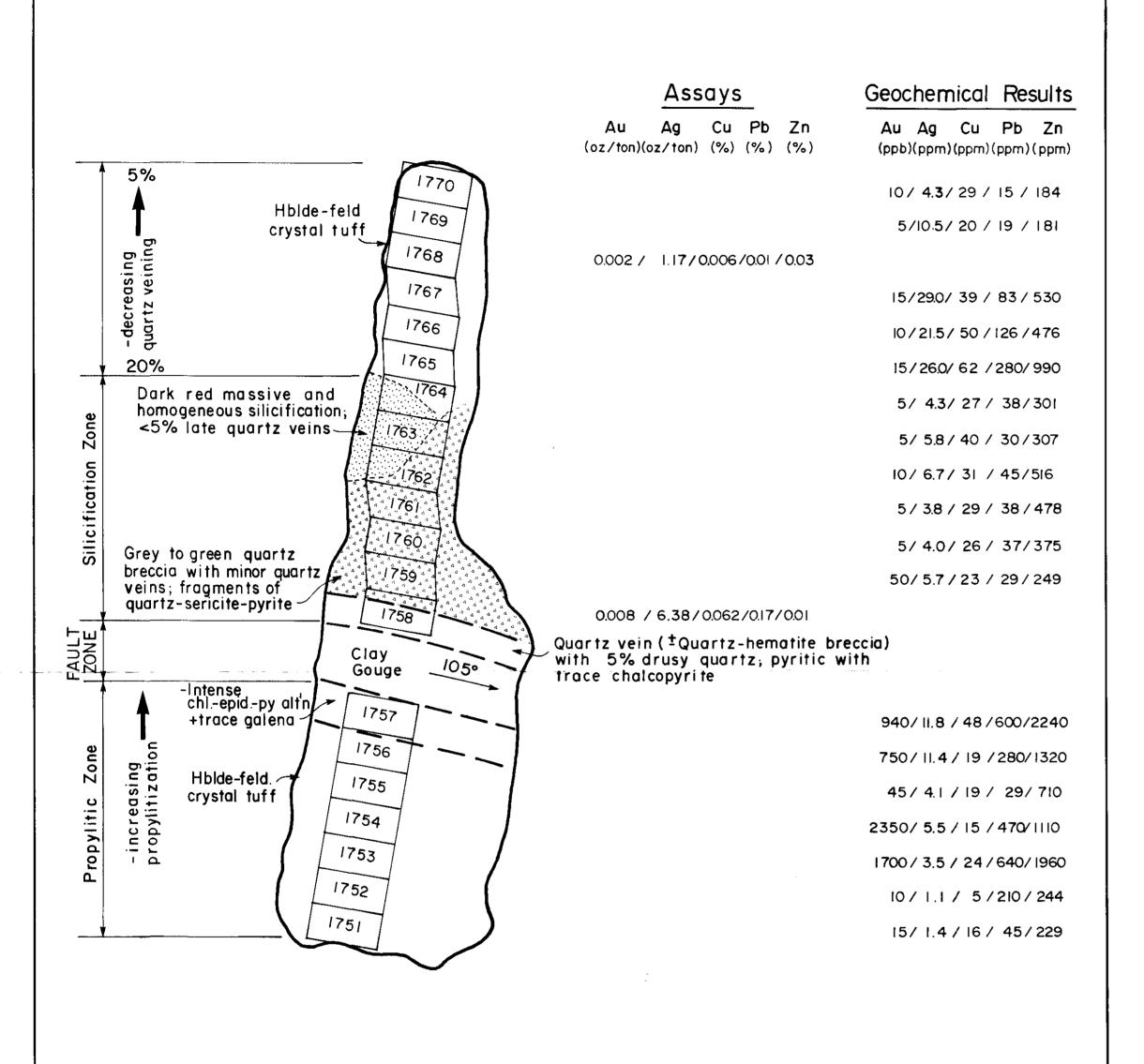
#### APPENDIX B

#### Statement of Expenditures - Cont<sup>\*</sup>d

| SALARIES AND FRINGE BENEFITS -                                                                                                                                                                                  | KIDD CREEK MINE                   |                                | A 0.005.00                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------------------|---------------------------------|
| b) Sampling and Mapping                                                                                                                                                                                         |                                   | C/FWQ                          | \$ 8,865.00                     |
| V. Falmagne - Assistant<br>Period: Aug 14-10                                                                                                                                                                    | 4 days @ \$75                     | \$300.00                       |                                 |
| P. Mouldey - Assistant<br>Period: July 11-15                                                                                                                                                                    | 5 days @ \$70                     | 350.00                         |                                 |
| D.W. Piroshco - Geologist<br>Period: Aug 14-20                                                                                                                                                                  | 4 days @ \$85                     | 340.00<br>990.00               | <b>9</b> 90.00                  |
| CONTRACT TRENCHING                                                                                                                                                                                              |                                   |                                |                                 |
| M. Cloutier - Blaster and Tren<br>July 8-11, Aug 12-19 10 da                                                                                                                                                    |                                   |                                | 3,000.00                        |
| ROOM AND BOARD                                                                                                                                                                                                  |                                   |                                |                                 |
| Kidd Creek Mines Ltd. personne<br>41 man-days @ \$80                                                                                                                                                            | 1                                 | 3,280.00                       |                                 |
| M. Cloutier - 10 man-days @ \$                                                                                                                                                                                  | 800.00<br>4,080.00                | 4,080.00                       |                                 |
| HELICOPTER AND FUEL                                                                                                                                                                                             |                                   |                                |                                 |
| ALC Hughes 500D 8.2 hours @\$<br>Fuel 8.2 hours @\$                                                                                                                                                             |                                   | 3,280.00<br>738.00<br>4,018.00 | 4,018.00                        |
| ANALYTICAL COSTS                                                                                                                                                                                                |                                   |                                |                                 |
| 85 rock samples; geochemical a<br>Au, Ag, Cu, Pb and Zn                                                                                                                                                         | nalyses @ \$12.20                 | 1,037.00                       |                                 |
| 31 rock samples; assays @ \$37.<br>Au, Ag, Cu, Pb and Zn<br>TOTAL                                                                                                                                               | 50                                | 1,162.50<br>2,199.50           | 2,199.50<br>\$ <u>16,152.50</u> |
| Total physical work<br>Total geological + geochemical                                                                                                                                                           | work \$ 3,556.65                  | 5 + \$2,199.50                 | \$10,396.35<br>\$ 5,756.15      |
| Note: Costs for time and support have been split on a pro-rate basis<br>between physical work and geological work as determined by the<br>ratio of 'man-days worked' - i.e. 74.5% physical: 25.5%<br>geological |                                   |                                |                                 |
| The total amount claimed<br>for geological and geoc                                                                                                                                                             | d for physical w<br>hemical work. | ork was \$9,00                 | 00 and \$1,200                  |

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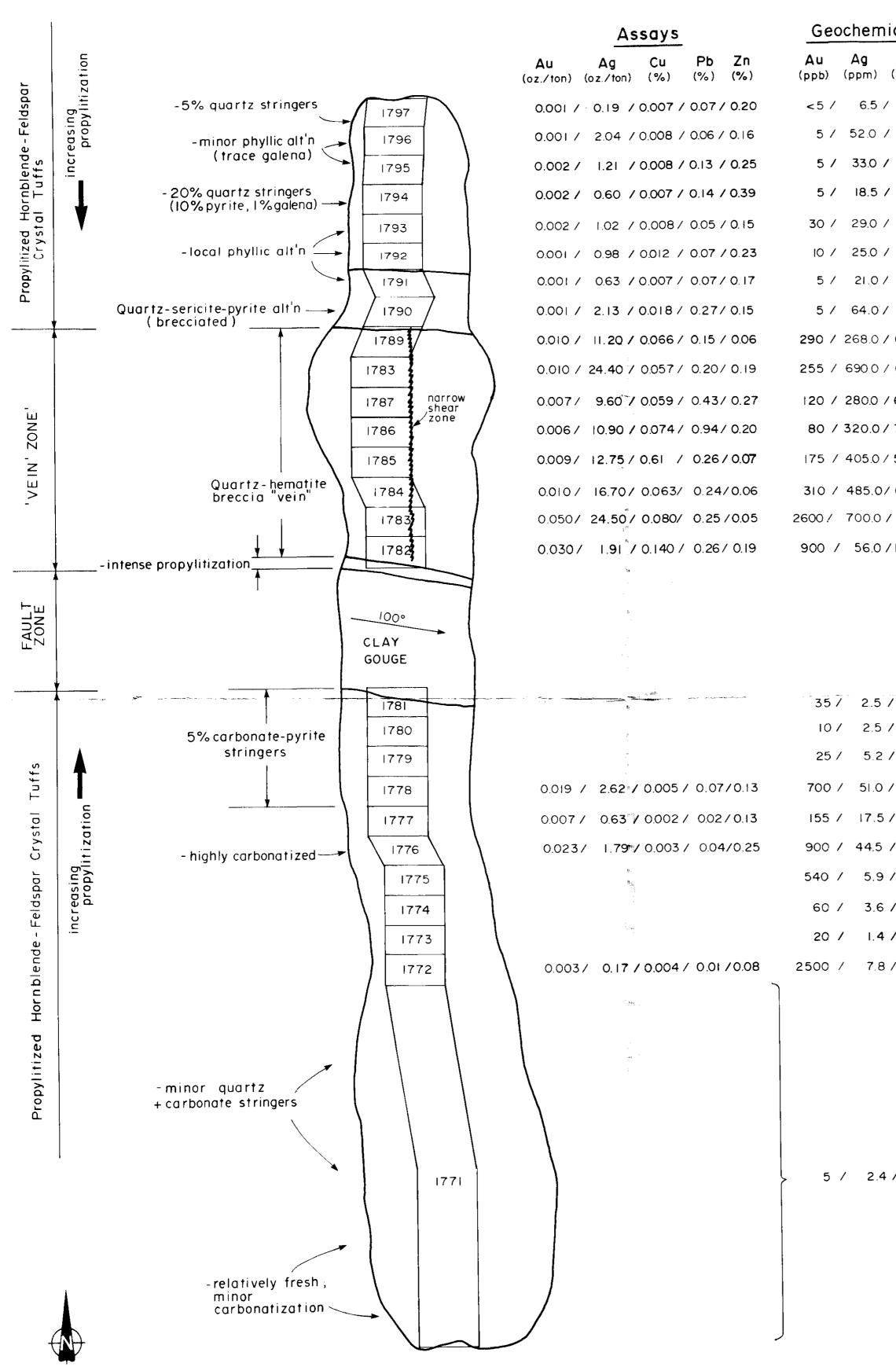
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# GEOLOGICAL BRANCH ASSESSMENT REPORT

Fig. 5

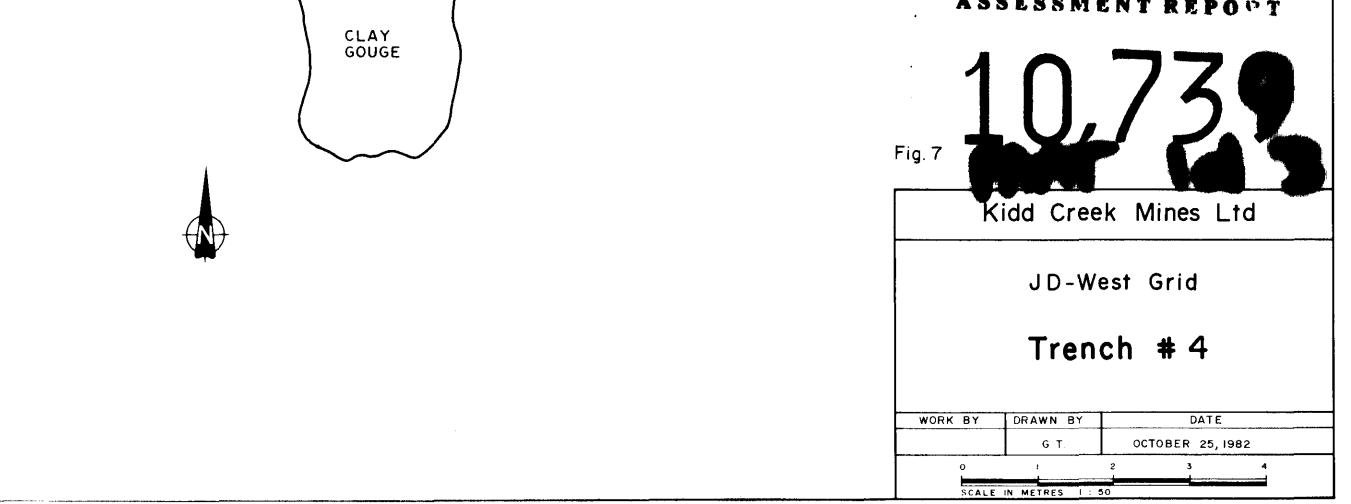
| К          | idd Cree       | k Mines Ltd      |   |
|------------|----------------|------------------|---|
|            | JD-V           | Vest Grid        |   |
| Trench #2  |                |                  |   |
| WORK BY    | DRAWN BY       | DATE             |   |
|            | GΤ             | OCTOBER 25, 1982 |   |
| 0<br>SCALE | I<br>IN METRES | 2 <b>3</b><br>50 | 4 |

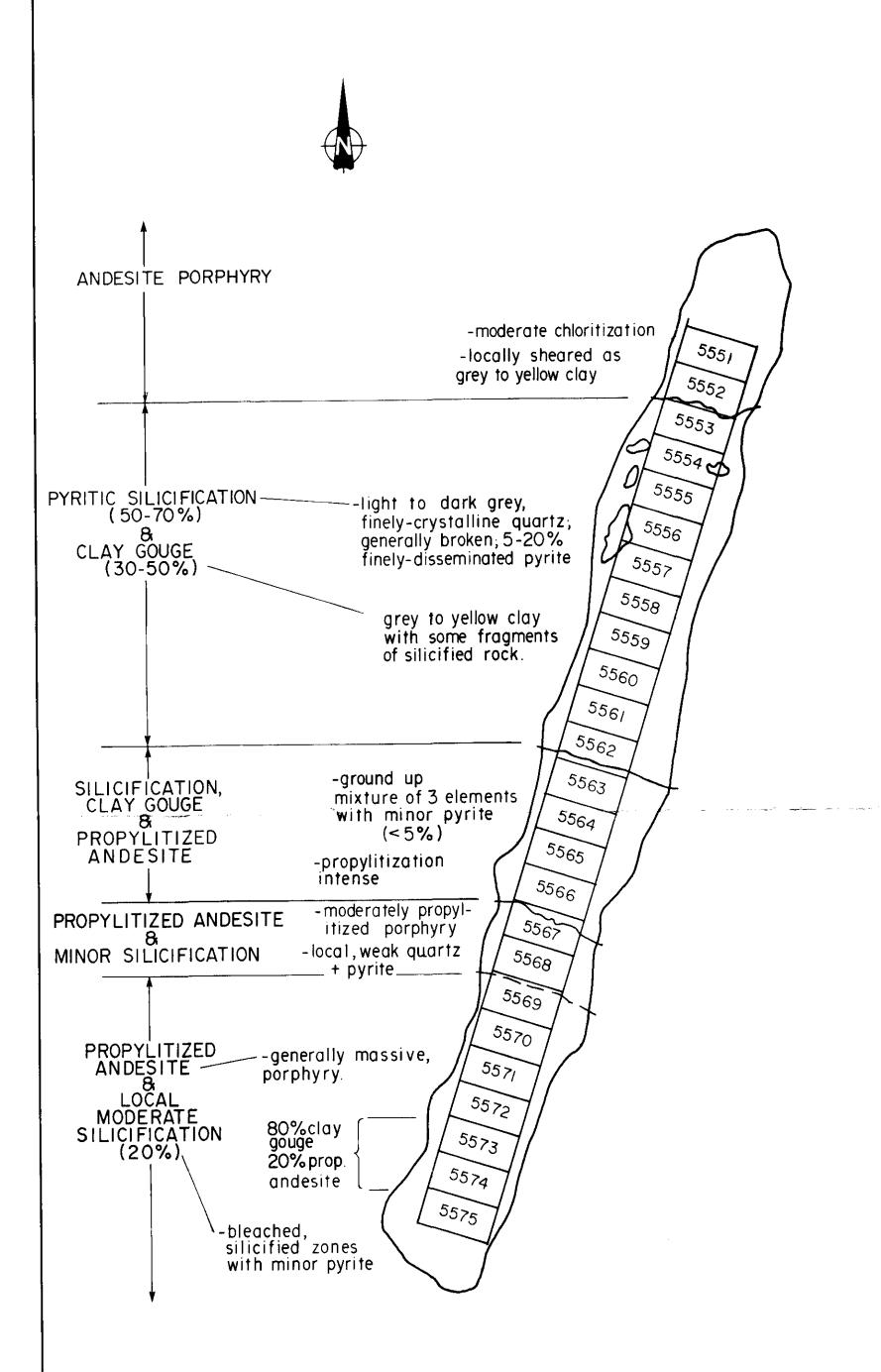


| mical Results                              |                                                                                      |
|--------------------------------------------|--------------------------------------------------------------------------------------|
| Cu Pb Zn                                   |                                                                                      |
| n) (ppm) (ppm) (ppm)                       |                                                                                      |
| 5 / 55 / 660 / 1690<br>0 / 70 / 550 / 1380 |                                                                                      |
| 0 / 78 / 1080 / 2340                       |                                                                                      |
| 5 / 57 / 1140 / 3840                       |                                                                                      |
| 0 / 70 / 380 / 1340                        |                                                                                      |
| 0 / 97 / 520 / 1920                        |                                                                                      |
| 0 / 76 / 560 / 1560                        |                                                                                      |
| 0 / 164 / 2600 / 1240                      |                                                                                      |
| 0 / 680 / 1320 / 560                       |                                                                                      |
| 0 / 640 / 1890 / 1880                      |                                                                                      |
| 0 / 630 / 5000 / 2890                      |                                                                                      |
| .0 / 730 / 8200 / 1890                     |                                                                                      |
| .0 / 579 / 2950 / 538                      |                                                                                      |
| .0/640/2600/ 486                           |                                                                                      |
| 0 / 710 / 2500 / 461                       |                                                                                      |
| .0 / 1370/ 2650/ 1740                      |                                                                                      |
|                                            |                                                                                      |
|                                            |                                                                                      |
|                                            |                                                                                      |
| 5 / 17 / 77 / 11                           | an a suite ann airean Bailtean a sa an san an ann an ann ann an Ann an ann an ann an |
| .5 / 13 / 37 / 441<br>.5 / 17 / 39 / 471   |                                                                                      |
| 2/ 34/ 43/ 710                             |                                                                                      |
| .0 / 33 / 480 / 960                        |                                                                                      |
| .5 / 18 / 160 / 1090                       |                                                                                      |
| 1.5 / 23/ 390 / 2040                       |                                                                                      |
| .9 / 19 / 50 / 590                         | - · · · · · · · · · · · · · · · · · · ·                                              |
| 3.6 / 13 / 50 / 448                        | -                                                                                    |
| .4 / 11 / 25 / 500                         | GEDIOGICAL BRANCH<br>Assessment report                                               |
| 7.8 / 40/ 89 / 620                         |                                                                                      |
|                                            | 10770                                                                                |
|                                            |                                                                                      |
|                                            |                                                                                      |
|                                            |                                                                                      |
|                                            |                                                                                      |
|                                            |                                                                                      |
| 2.4 / 13 / 38 / 452                        | Fig. 6                                                                               |
|                                            | Kidd Creek Mines Ltd                                                                 |
|                                            |                                                                                      |
|                                            | JD-West Grid                                                                         |
|                                            |                                                                                      |
|                                            | Trench # 3                                                                           |
|                                            |                                                                                      |
|                                            | WORK BY         DRAWN BY         DATE           G.T.         OCTOBER 25, 1982        |
|                                            | O I 2 3 4<br>SCALE IN METRES I : 50                                                  |
|                                            | SCALE IN MEIRES I : DU                                                               |

|                                                                                                      |                                                            |        | Assays                                                                                                           | Geochemical Results                             |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------|--------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
|                                                                                                      |                                                            |        | Au Ag Cu Pb Zn<br>(oz/ton) (oz/ton) (%) (%) (%)                                                                  | Au Ag Cu Pb Zn<br>(ppb) (ppm) (ppm) (ppm) (ppm) |
|                                                                                                      | Quartz-sericite-pyrite breccia, 10-15% quartz stringers,2% | 1822   |                                                                                                                  | 5 / 3.5 / 29 / 27 / 1050                        |
|                                                                                                      | galena, 5% pyrite                                          | 1821   |                                                                                                                  | 5 / 5.8 / 25 / 60 / 429                         |
|                                                                                                      | chloritized crystal tuffs<br>2% late barite                | 1820   |                                                                                                                  | 5 / 20.0 / 84 / 280 / 790                       |
|                                                                                                      |                                                            | 1819   |                                                                                                                  | 5 / 5.7 / 36 / 290 /1480                        |
|                                                                                                      |                                                            | 1818   |                                                                                                                  | 5 / 5.1 / 32 / 460 / 920                        |
| uff                                                                                                  | IO - 15%<br>hematitic quartz<br>stringers; 1%              | 1817   |                                                                                                                  | 50 / 50.5 / 70 / 1280 / 3120                    |
| erate                                                                                                | galena                                                     | 1816   |                                                                                                                  | 5 / 10.0 / 51 / 270 / 1180                      |
| Quartz + Sericite + Pyrite Alterated<br>Hornblende - Feidspar Crystal Tuff<br>( minor breccia zones) |                                                            | 1815   |                                                                                                                  | 45 / 19.0 / 52 / 710 / 1260                     |
| ia z                                                                                                 |                                                            | 1814   |                                                                                                                  | 20/ 11.1/ 40/ 540/ 1330                         |
| + Py<br>Ispa                                                                                         |                                                            | 1813   |                                                                                                                  | 5/ 13.9/ 62/1590/6280                           |
| - Feice<br>or b                                                                                      | $\int$                                                     | 1812   |                                                                                                                  | 5/ 16.4/ 86/1280/5560                           |
| + Sei<br>min                                                                                         |                                                            | 1811   |                                                                                                                  | 5/ 10.4/ 37/ 760/4440                           |
| )<br>)<br>)                                                                                          | IO-15%<br>ate, hematitic                                   | 1810   |                                                                                                                  | 5/ 10.5/ 83/1230/2030                           |
| Hor                                                                                                  | quartz stringers                                           | 1809   |                                                                                                                  | 5/ 5.3/ 47/ 330/ 2130                           |
|                                                                                                      |                                                            | 1808   |                                                                                                                  | 5/ 7.6/ 64/910/ 800                             |
|                                                                                                      |                                                            | 1807   |                                                                                                                  | 55/ 11.6/ 38/1350/ 720                          |
| Ţ.                                                                                                   | ĺ ĺ ĺ ĺ ĺ ĺ ĺ ĺ ĺ ĺ ĺ ĺ ĺ ĺ ĺ ĺ ĺ ĺ ĺ                      | 1806   |                                                                                                                  | 10/ 13.0 / 46/730 / 860                         |
| ( )                                                                                                  |                                                            | 1805   | and the second | 110/ 10.8 / 44/ 420 / 1020                      |
| sericite                                                                                             |                                                            | 1804   |                                                                                                                  | 185/33.0/37/146/1220                            |
|                                                                                                      | Trace galena                                               | 1803   |                                                                                                                  | 280/ 29.5 / 101/ 350 / 1160                     |
| loca                                                                                                 | IO-15% pyrite<br>(average)                                 | 1802   |                                                                                                                  | 130/ 15.4 / 72/630/ 910                         |
| Quartz (± local<br>Breccia                                                                           |                                                            | 1801   | 0.021 / 1.03 / 0.014 / 0.10/0.04                                                                                 | 800 / 32.5 / 158 / 1270 / 371                   |
| uart                                                                                                 | -strong MnO+limonite<br>along fractures                    | 1800   | 0.013/ 2.53/0.020/ 0.21/0.08                                                                                     | 3 450 / 72.0 / 214 / / 690                      |
| Ō                                                                                                    | -local hematitic quartz                                    | 1799   | 0.030/ 4.42/0.031/0.26/0.10                                                                                      | 1700 / 118.0 / 254/2200 / 660                   |
|                                                                                                      | l % pyrite                                                 | - 1798 | 0.201 / 9.00 / 0.096 / 0.38 / 0.10                                                                               | 8250/260.0/920/3650/830                         |
| <b></b>                                                                                              |                                                            |        |                                                                                                                  | GEOLOGICAL BRANCH<br>ASSESSMENT REPORT          |







Assays Au Ag Cu Pb Zn (oz/ton)(oz/ton)(%) (%) (%)

0.058 / 0.02 / 0.005 / 0.02 / 0.05 0.190/0.78/0.010/0.06/0.04 0.252/1.15/0.001/0.03/0.01 0.108/0.25/0.001/0.06/0.01 0.028/0.12/0.001/0.05/0.01 0.020/0.11 / 0.002/ 0.05/0.02 0.019 / 0.10 / 0.001 / 0.03 / 0.01 0.017/0.77/0.001/0.05/0.01 0.010 / 0.07 / 0.01 / 0.03 / 0.01 0.011 / 0.13 / 0.001 / 0.02 / 0.02 0.058/0.16 / 0.002 / 0.10 / 0.02 0.052/0.12 / 0.004/ 0.14/0.05 0.060/0.21/0.003/0.13/0.04 0.073/0.21 / 0.003/ 0.09/0.02 0.220/0.69 / 0.003 / 0.20/0.02 0.358/0.81 / 0.023 / 0.17/0.07 0.011/0.09/0.009/0.12/0.04 0.028/0.04 / 0.007 / 0.05/0.03 0.038/0.08 / 0.011 / 0.12/0.03 0.172/0.19 / 0.017 / 0.19/0.06 0.160 / 1.33 / 0.010 / 0.13 / 0.03 0.187/0.24/0.010/0.13/0.04 1.810/2.60 / 0.009 / 0.18 / 0.03 0.189/0.61 / 0.008 / 0.16 / 0.03 0.386/0.75 / 0.027 / 0.44 / 0.03

# Geochemical Results

Au Ag Cu Pb Zn (ppb) (ppm) (ppm) (ppm) (ppm)

1190 / 1.7 / 34 / 28 / 339 6050/28.5/98/465/235 5700/36.5/10/280/ 70 2700 / 9.1 / 10 / 545 / 48 875 / 4.2 / 8 / 415 / 28 640 / 4.3 / 14 / 510 / 103 390 / 4.0 / 10 / 310 / 59 225/2.8/12/390/50 370/ 2.4 / 8/240/ 26 345 / 2.0 / 8 / 190 / 32 2100 / 5.6 / 13 / 790 / 59 950 / 4.8 / 32/1300 / 263 2100 / 7.0 / 16 / 1150 / 215 2300 / 7.6 / 22 / 765 / 104 20,000 / 16.4 / 20/1900 / 82 6900 / 26.5/185/1500/470 3400 / 3.6 / 76 / 1100 / 220 670 / 3.2 / 55 / 460 / 202 1150 / 4.6 / 110 / 1100 / 272 2700/ 8.0/150/1700/444 3500/430/80/1050/271 3450 / 9.7 / 85 / 1250 / 244 28,000/66.5 / 76/1600/232 4400/18.8/56/1200/178 8520/21.0/210/3600/193

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# GEOLOGICAL BRANCH ASSESSMENT REPORT

10,739

# Fig. 8

Kidd Creek Mines Ltd

JD Pit Grid

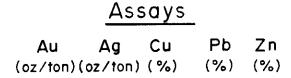
Trench # I

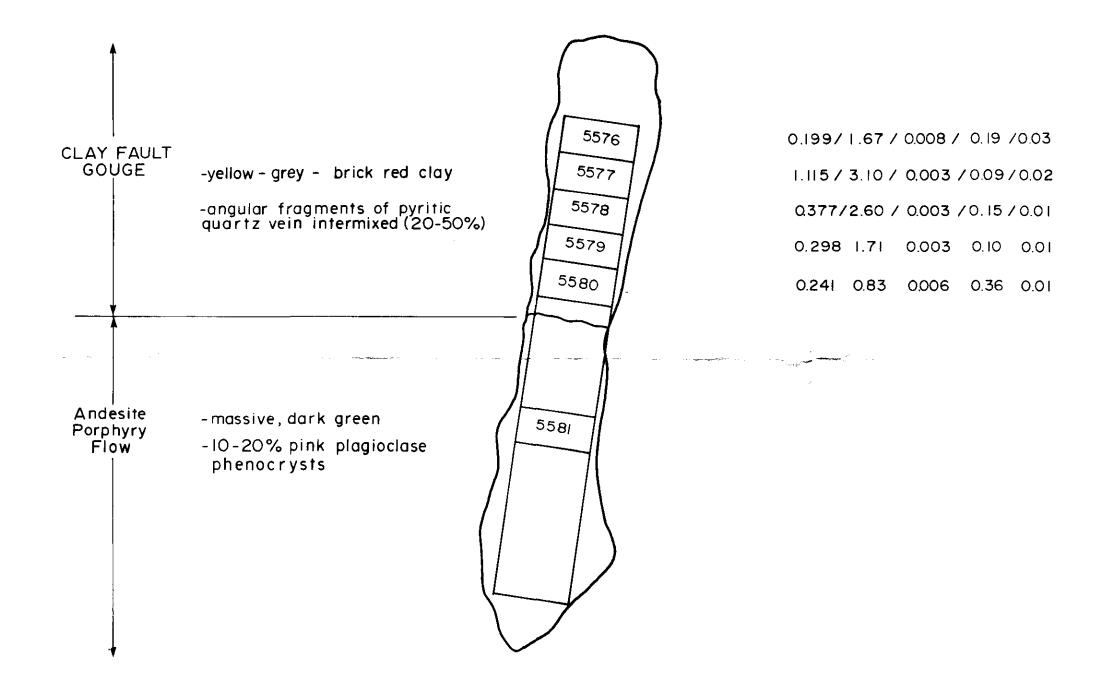
 WORK BY
 DRAWN BY
 DATE

 G. T.
 OCTOBER 25, 1982

 O
 1
 2
 3
 4

 SCALE IN METRES
 1: 50
 50
 50





.

# Geochemical Results

Au Ag Cu Pb Zn (ppb) (ppm) (ppm) (ppm)

5650/15.4/48/1240/130 24000/26.5/20/720/47 6000/29.0/13/1050/35 7100/28.0/28/1040/28 6500/20.4/45/3500/45

.....

530 / 3.5 / 28 / 175 / 28

# GEOLOGICAL BRANCH ASSESSMENT RFPORT

10,/59

WORK BY DRAWN BY

0

G. T.

1

SCALE IN METRES 1 : 50

Kidd Creek Mines Ltd

JD-Pit Grid

Trench #2

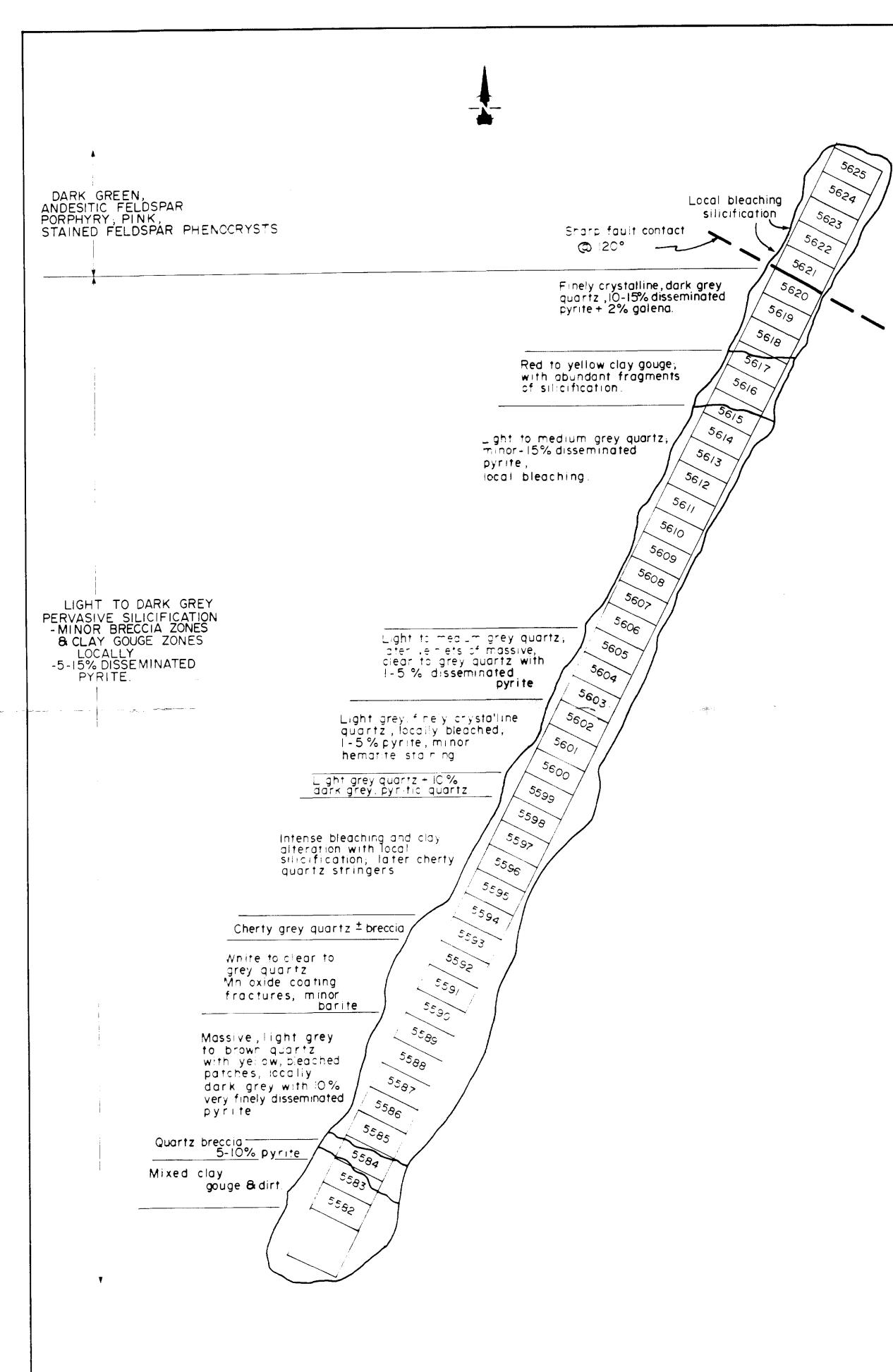
2

DATE

OCTOBER 25, 1982

3

Fig. 9



| <u>Assays</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Geochemical Results                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Au Ag Cu Pb Zn<br>(oz/ton)(oz/ton)(%) (%) (%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Au Ag Cu Pb Zn<br>(ppb) (ppm) (ppm) (ppm)                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 5/ 2.3 / 20 / <b>21 /85</b><br>5/ 1.6/18 / 1 <b>8 /122</b>             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20/ 2.8/ 17 / 17 / 46                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 15/ 3.4/ 16/ 18/51                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20/ 2.1/18/16/65                                                       |
| 0.050/2.50/0.004/0.03/0.01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1350/ 390/ 37/ 210 / 80                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 530/25.0/20/230/164                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 90/ 8.4/ 22/ 360/136                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 65/ 11.3/ 10/ 65/26                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 75/ 11.7/ 13/ 200/ 37                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 60/ 6.9/ 16/ 390/47                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 115/ 8.7/ 16/ 100/38                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 110/ 11.0 / 22 / 113 / 36                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 95/ 8.2/ 15/205/37                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 180/ 6.5/ 17/ 102/63                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 50/ 5.3/ 21/ 20/34                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 45/ 3.0 / 21 / 19 /56                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 55/4.7/26/34/37                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 670/ 4.1 / 16 / 27/48                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 25/2.8/16/39/44                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 65 / 4.9 / 14 / 78 / 50                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 400/12.6 / 17 /1050/216                                                |
| and the second sec | 1500/18.0 / 33/3150/423                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 125/6.2/15/300/85                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 120/ 3.6 / 10/ 87/79                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 200/ 4.6 / 8 / 118 / 80                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 135/6.4 / 15 / 75/62                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 110 / 6.0 / 10 / 22 / 49                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 185/9.0/13/52/60                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 460/6.7 / 16 / 76 / 83                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 125/ 7.2 / 18 / 95 / 92                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 35/7.5 / 16/70/76                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 140/10.2 / 21 / <b>510 / 178</b><br>315/ 21.0 / <b>37 / 1400/ 42</b> 0 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 155/ 7.6/ 41/ 740/250                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 630/10.1 / 63/1600/628                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 265 / 9.8 / 73 / 1300 / 1130                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 390/12.6/ 78/1100/514                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 55/14.5/ 46 / 510 / 412                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 200/21.5/ 23 / 107 / 79                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 540/44.0/30/190/52                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 520/49.0/40/240/70                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 85 / 15.5 / 75 / 122 / 395                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 60 / 11.5 / 40 / <b>76 /23</b> 4                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                        |

GEOLOGICAL B ASSESSMENT R

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Fig. 10

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WORK BY DRAWN G. O I SCALE IN METRE

| BRANCH<br>REPORT  |  |
|-------------------|--|
| Creek Mines Ltd   |  |
| <b>Trench # 3</b> |  |
| 2 3 4<br>RES 1:50 |  |