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GEOLOGICAL REPORTILE NO:

ON THE

CRAZE CREEK (CUNNINGHAM) PROPERTY

Cariboo Mining Division NTS 93A/14W Latitude 52°56' Longitude 121°21'

on behalf of

LOKI GOLD CORPORATION Vancouver, B.C.

by

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Keewatin Engineering Inc.

TABLE OF CONTENTS

Page No.

1.0	SUMMARY	1
2.0	INTRODUCTION	1
2.1	History	1
2.2	Ownership/Tenure	3
2.3	Location, Access and Physiography	4
2.4	Regional Geology	4 5 5
2.5	Geology of Wells Gold Deposits	5
2.6	Summary of Work Completed in 1989	6
3.0	PROPERTY GEOLOGY	6
3.1	Introduction	6
3.2		6
3.3	Structure	6 8 8
3.4	Mineralization	8
4.0	EXPLORATION ACTIVITY	9
4.1	Geological	9
4.2	Geochemistry	9
4.3	Geophysics	10
4.4	Trenching/Showings	11
4.5	Drilling	15
	Diming	10
5.0	DISCUSSION	16
6.0	CONCLUSION	17
7.0	RECOMMENDATIONS	18
8.0	REFERENCES	19
9.0	STATEMENT OF QUALIFICATIONS	21

LIST OF APPENDICES

APPENDIX A	Statement of Expenditures
APPENDIX B	Drill Logs
APPENDIX C	Analytical Data

LIST OF TABLES

<u>Table</u>		Page
1. 2. 3.	Claim Status	11

LIST OF FIGURES

<u>Figure</u>		After <u>Page</u>
2.3-1	Property Location Map	4
2.3-2	Claims Location Map	4
4.1-1	Property Geology	n pocket
4.1-2	Prospecting Traverses	9
4.2-1,1A,1B	Soil Geochemistry, Au in soils i	n pocket
4.2-2,2A,2B	Soil Geochemistry, Ag in soils i	
4.2-3,3A,3B		
4.2-4,4A,4B	Soil Geochemistry, Pb in soilsi	
4.2-5,5A,5B	Soil Geochemistry, Zn in soils	n pocket
4.2-6,6A,6B	Soil Geochemistry, Cu in soils	n pocket
4.4-1	Showing Locations	11
4.4-2	B-Zone Trench Map i	
4.4-3	Hibernian Trench Map i	
4.4-4	Jewellery Shop Trench Map	
4.4-5	Silver Mine Trench Map	
4.4-6	5100 Pit (Silver Mine) Trench Map	14
4.4-7	5200 Pit (Silver Mine) Trench Map	14
4.4-8	1400S/400E Trench Map	14
4.4-9	Penny Creek Vein	14
4.4-10	Varicose Vein	
4.4-11	Switchback Showing Trench Map i	n pocket
4.4-12	1650 Trench Map	14
4.4-13	Level 2 Trench Map	14
4.5-1	Drill Hole Locations	15
4.5-2	Jewellery Shop Drilling (89-1,2)	
4.5-3	Jewellery Shop Drilling (89-3,4)	
4.5-4	B-Zone Drilling (89-5,6)	15
4.5-5	B-Zone Drilling (89-7,7a,8)	15
4.5-6	Jewellery Shop/B-Zone Drilling (89-1,2,5,6,9,10)	15
4.5-7	Switchback Drilling (89-11,12)	15
4.5-8	Level 2 Drilling (89-13)	15
4.5-9	Hibernian Drilling (89-14,15)	15
4.5-10	Hibernian Drilling (89-16,17)	15

1.0 <u>SUMMARY</u>

The objective of Loki Gold's 1989 field project was to locate economic concentrations of gold/silver. Work included additional trenching, mapping and sampling of existing workings, establishing a property wide soil geochemical grid, undertaking further trenching on newly discovered showings, and systematically drilling the most promising showing locations. Prospecting was also carried out on selected parts of the property. The program was completed in two stages. Drilling completed 1090.5 m in 17 holes, and tested 4 target areas: Jewellery Shop, B-Zone, Hibernian and Nugget Mountain.

In all a total of 14 significant gold-mineralized areas were located with encouraging results obtained through detailed trench mapping and sampling (Table 2) and in 4 areas by drilling (Table 3).

It may be concluded that significant gold concentrations are present within (and adjacent to) property boundaries, although occurrences tested to date are sporadic in nature. Gold anomalous areas intersected during drilling proved difficult to follow down-dip or along strike. Gold showings are, however, relatively numerous on a property-scale, suggesting that potential for a low-grade open-pit operation may exist in addition to the smaller tonnage, high grade targets.

Fieldwork in 1989 showed that general stratigraphic setting, alteration and style of mineralization are similar to that encountered during production from the mines at nearby Wells. Prospecting and soil geochemistry work left a number of promising targets requiring further investigation. Follow-up on a number of these soil anomalies should be completed and trenching undertaken, including detailed mapping and sampling of bedrock geology. Further drilling should be planned to better delineate mineralized zones outlined during the 1989 season. A geophysical survey may prove useful over some suspected mineralized structures.

2.0 INTRODUCTION

2.1 <u>History</u>

The Cariboo region has been recognized as a major gold belt since 1859, when placer miners were lured to the area by discoveries of rich placer gold in the Williams Creek area, presently the site of Barkerville. A frenzied production pace continued into the next century, yielding over 2.5 million ounces before exhausting most of the easily accessible material. Placer operations exist today in the area, recovering gold from pre-worked material and in a few previously unmined deposits.

The Cariboo district was glaciated at least twice during the Pleistocene, most recently during the Fraser Glaciation from about 20,000 to 10,000 years ago (Fulton, 1971; Clague, 1989). Westwardflowing sheets eroded and redistributed much of the placer gold in the Cariboo, leaving rich deposits in outwash streams and plains. Cunningham Creek itself has produced 12,893 ounces of placer gold to 1950 (Holland, 1954), with two mines presently in operation.

The search for lode gold was conducted intermittently over the years with the first major discovery coming in 1929 at the northeast end of Jack of Clubs Lake, now the site of Wells, BC. Mining continued at this location to the present, with the Cariboo Gold-Quartz, Island Mountain, and Mosquito Creek mines producing over 1.29 million ounces of gold (Alldrick, 1983).

Lode gold was discovered in the early 1920's in the Cunningham Creek area, but significant work did not commence until 1937. Extensive underground development was carried out at the Cariboo Hudson Mine, producing 13,000 tons of 0.4 oz/ton ore from quartz veins. The mine was closed at the outbreak of World War II. Recent exploration of this property, which is located immediately south of Loki's present holdings by Imperial Metals has resulted in upgraded ore reserves of 37,000 tons of 0.36 oz/ton gold above the 200 foot level of the mine. Limited production was reported on the property now held by Loki from the Coniagas Adit, where shipments during 1937-38 totalled 3.98 tons of ore grading 7.63 oz/ton gold and 1.25 oz/ton silver.

Subsequent work on the property commenced in 1971 with Coast Interior Ventures Ltd. undertaking a program for the exploration of base metals in an area of high grade silver-gold quartz veins. In 1976-78 Riocanex optioned the property and carried out detailed soil sampling, magnetic and I.P surveys, followed by drilling in two areas for gold and stratabound lead-zinc.

A 180 foot adit was driven in 1980 to develop a primarily silver-rich quartz vein exposed along Penny Creek. Ore produced from this adit was milled in Lumby and sent to Trail for smelting. Records indicate 14,822 dry tons were shipped, yielding 0.07 oz/ton gold, 89.4 oz/ton silver, 1.05% copper, 11.4% lead and 3.8% zinc (private records, Chaput Logging). The total value of the ore in November 1980 was \$27,674. A second shipment as sent in December 1980, weighing 15,846 dry tons yielding 0.152 oz/ton gold, 114.85 oz/ton silver, 1.45% copper, 19.0% lead and 5.1% zinc. The total value of this shipment was \$39,642. It is suspected that this ore was mixed with material highgraded from the Jewellery Shop (known to have higher gold values). Activity ceased in 1980 after only one season.

In 1987, Chaput Logging Ltd. completed 11.51 km VLF and magnetometer surveys over an area of known gold-bearing veins. In 1988 Preido Mines optioned the property and completed

trenching and channel sampling of several of these veins. Loki Gold assumed the option from Preido Mines in 1989 and commenced work on the property in May 1989.

3

2.2 <u>Ownership</u>

The property consists of 190 MGS and two post claims. Fifty of these are owned by Chaput Logging and are subject to an option agreement with Preido Mines and Loki. Four units were acquired through purchase in 1989, and 136 units were staked by Loki Gold during the course of the field season. Claim status is summarized in the Table 1 below.

<u>Claim Name</u>	Record Number	<u>Total Units</u>	<u>Expiry Date</u>
<u>Park Group</u> (#2798)			
Park 1-10	71845-71854	10	27/09/94
Park 11,12	53549,53559	2	27/08/94
Tarn	456	1	20/07/94
<u>Roundtop Group</u> (#2576)			
Base Metal 1-5	54167-54171	5	25/08/94
Base Metal 6,7	53289,53290	5 2 3 1	30/08/94
Base Metal 8-10	54241-54243	3	14/10/94
Bon Fraction	54240	1	14/10/94
R.T. 41-44	54134-54137	4	15/09/94
Roundtop 1	42783	1	20/06/94
Roundtop 3	42785	1	20/06/94
Roundtop 10-26	54138-54154	17	25/08/94
Roundtop 27,28(fr)	53291-53292	2	30/08/94
Silver Mountain 2	53288	1	30/08/94
<u>Lok Group</u> ()			
Lok 1	9576	20	11/03/90
Lok 2	9577	15	11/03/90
Lok 3	9578	16	11/03/90
Lok 7	9833	6	05/07/90
Nob 1,2	9052,9053(10)	2	22/10/90
<u>Craze Group</u> ()			
Lok 4	9579	15	11/03/90
Lok 5	9580	20	11/03/90
Lok 6	9581	20	11/03/90
Lok 9	9810	20	18/06/90
<u>Ungrouped</u>			
Tom 1,2	9206,9207(6)	$\frac{2}{190}$	29/06/90

An agreement was reached on September 15, 1989 whereby Loki Gold would option eightfive MGS and two post claim units from Richfield Metals Inc. These claims adjoin the present property boundary to the northwest. No work was done on this group during the 1989 program. Status of these claims are summarized below:

Claims Under Option-Richfield Metals

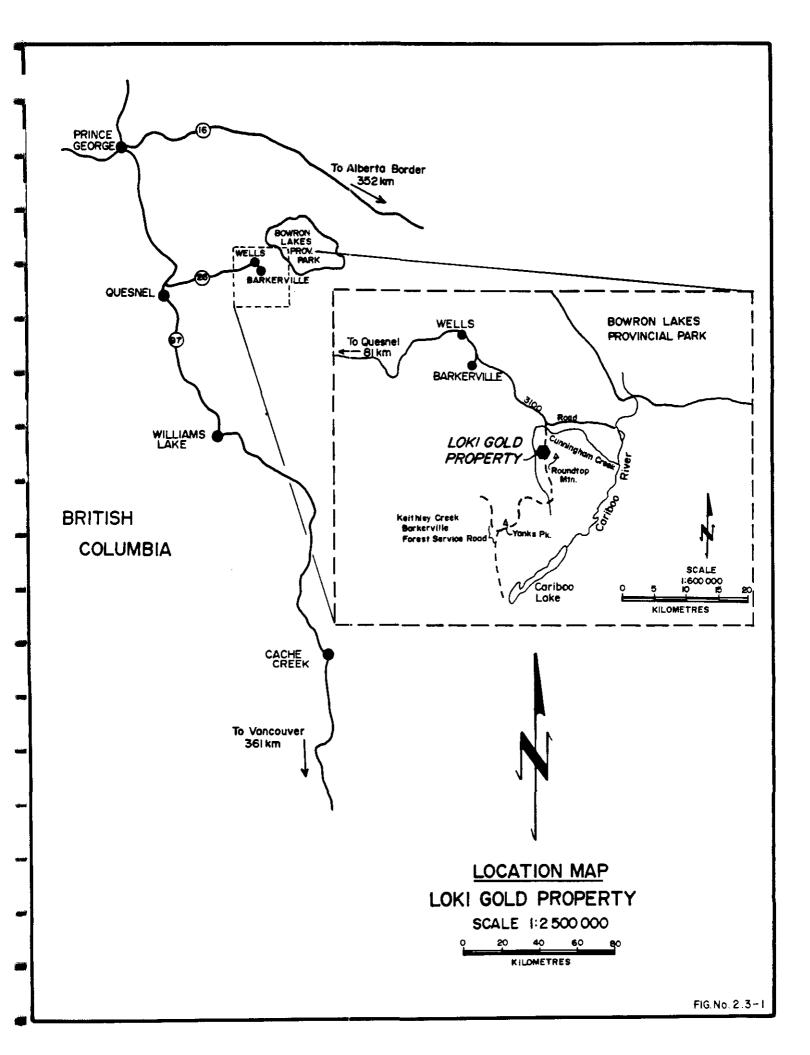
<u>Claim Name</u>	Record Number	Total Units	Expiry Date
Au 3	3169(2)	15	24/02/93
General Frank	3183(3)	20	03/03/93
Hi Run	3154(2)	18	06/02/93
Independence	3168(2)	20	20/02/93
Silver Dawn 1-4	2056(10)-2059(10)	4	21/10/94
Silver Dollar 1,2	6677(12),6678(12)	2	17/12/91
Silver Clay 1-4	2095(11)-2098(11)	4	13/11/93
Sure Shot 1,2	4085(10),4086(10)	<u>2</u> 85	01/10/93

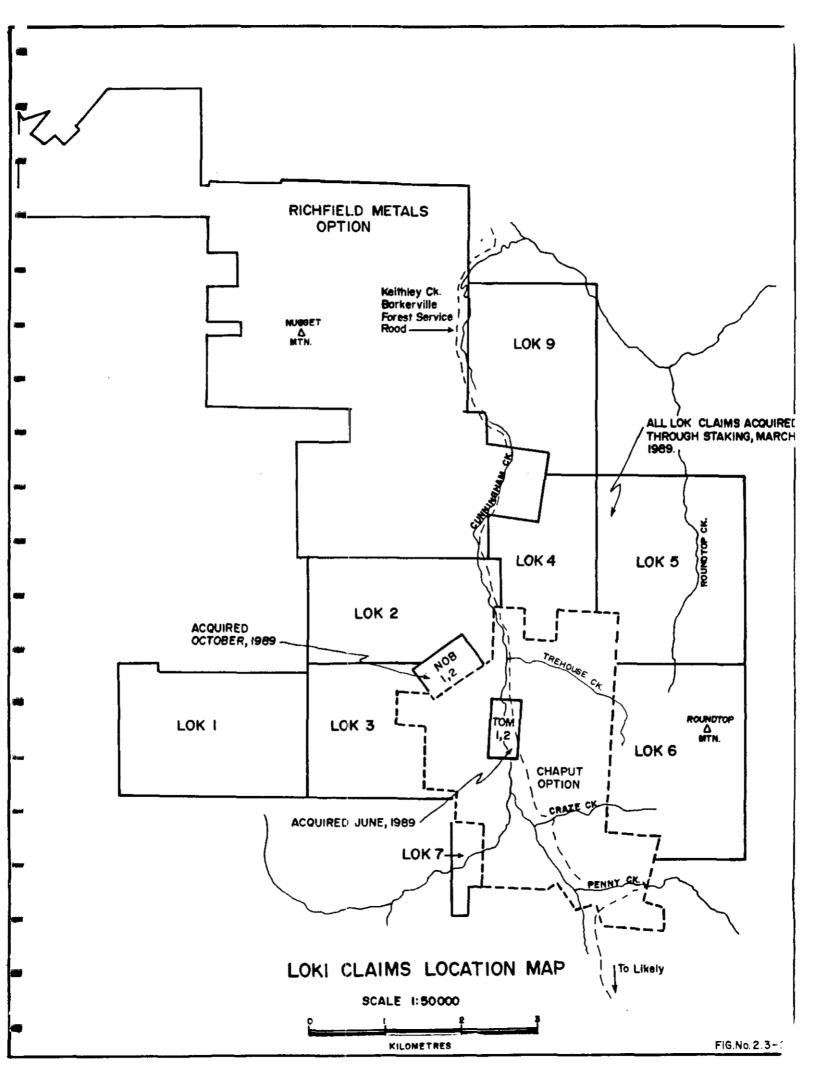
2.3 Location, Access, and Physiography

The property is located at latitude $52^{0}55^{\circ}$, longitude $121^{0}20^{\circ}$ on NTS map sheet 93 A/14. It is located 25 km southeast of Wells, BC, seventy air-km west of Quesnel, BC within the Cariboo Mining district (Figures 2.3-1, 2.3-2). The property is situated within well-forested, rounded hills at elevations 3900 to 6600 feet.

The area is within a moist climatic belt, subject to heavy snowfalls in winter and generally rainy conditions in summer. The area is workable from late May to mid-October at most elevations. Underbrush is sparse in most areas of the property, with north and east-facing slopes being more heavily covered with low brush. Numerous cabins are present throughout the property, owned by past and present placer miners. Some are habitable, while most are in disrepair.

Access to-and within and property is excellent. The forestry-maintained 3100 logging road, begins near Barkerville and is graded year round. The Kiethley Creek-Barkerville road branches off the 3100 Road at 14.6 km and runs through the centre of the property. This road is in excellent condition as far as the Cariboo-Hudson Mine 3 km south of the property, then deteriorates to 4wheel drive only conditions. It is graded annually as far as the mine. Numerous private roads constructed over the years during exploration spur off, providing access to many of the showing areas.





2.4 Regional Geology (from Humphreys, 1989)

The property covers a section of complexly deformed Upper Proterozoic to Upper Palaeozoic metasediments in the Omineca Tectonic Belt of the Canadian Cordillera. The northwest-southeast trending Pleasant Valley Thrust crosses the claims and separates two tectonically and stratigraphically unique terranes recently defined by Struik (1988) of the G.S.C. To the west, the Barkerville Terrane is dominated by varieties of grit, quartzite, and pelites with lesser amounts of limestone and volcanoclastic rocks. East of the fault, the Cariboo Terrane comprises Hadrynian to Lower Palaeozoic limestone and clastic rocks and farther to the east, Middle to Upper Palaeozoic shales, limestones and minor basalt.

The rocks of both the Cariboo and Barkerville Terranes are structurally complex. According to Struik (1988), they have been affected by at least four episodes of deformation. Generally, the rocks strike to the northwest and dip vertically or steeply to the northeast. Most fold axes plunge gently to the northwest. The cleavage is pervasive throughout Cariboo Terrane rocks. It strikes dominantly west-northwest and dips moderately to steeply northeast.

The metamorphic grade reaches lower greenschist faces in most of the Cariboo and Barkerville Terrane rocks.

2.5 Geology of Wells Gold Deposits

The Mosquito Creek, Island Mountain and Cariboo Gold Quartz deposits at Wells have recorded production of some 3 million tons of ore grading 0.4 oz/ton gold. The ore bodies occur in a large number of discrete, relatively small deposits over a strike length of 4.5 km at or near the contact of the 'Baker Member' (Struik's Downey succession) and the 'Rainbow Member' (Struik's Hardscrabble Mt. Succession). Two types of mineralization are recognized; gold-bearing quartz veins up to 5 m wide within the Rainbow Member and massive pyrite replacement bodies in or near limestone beds in the Baker Member. The replacement deposits are shallowly plunging pencil shaped bodies in folded limestone. These ore bodies have been the major source of gold and have the higher grades - about 20 g/t (0.58 opt) compared to 12 g/t (0.35 opt) for the quartz veins.

Origin of the 'replacement' bodies has always been a contested issue, and several theories have been presented. One suggests that gold-bearing hydrothermal fluids penetrated fractured and folded strata, precipitating quartz and pyrite in the fractures (quartz vein feeders) and 'replacing' chemically reactive limestone beds. This idea is supported by lead-isotope studies by Andrew et. al (1983). However, Robert and Taylor (1989) have suggested that, based on detailed structural analysis of the

deposits, the massive pyrite bodies could be contemporaneous with sedimentation. Regardless of interpretation, the proximity to the Rainbow/Baker contact is clearly an important exploration criterion.

It should be noted that this contact has been traced for over 10 km through the Loki Gold property and recently optioned ground. Although numerous vein-type concentrations were located and trenched, replacement bodies as described above were not discovered during the 1989 program.

2.6 <u>Summary of Work Completed in 1989</u>

Commencement of field work was May 23, 1989, with a final demobilization completed on November 23, 1989. A total of 130 days were spent in the field during this period. Work was composed of:

- 1) Property mapping (1:5,000 scale) over much of the property.
- 2) Establishing a 91 km grid and collecting 4789 soil samples.
- 3) Minor prospecting of fringe areas.
- 4) Detailed trenching, including collection of 403 rock samples.
- 5) Minor geophysical orientation.
- 6) Drilling of six showing areas, consisting of 17 holes totalling 1090.5 m of BGM core (access maintained by snow-plowing).

3.0 PROPERTY GEOLOGY

3.1 Introduction

The property is covered overall by 1-5 m of overburden. Underlying bedrock physiography is highly irregular where exposed in trenching. Due to intense structural deformation and weathering, the upper 0.5 m of bedrock sheds readily into overlying material. Outcrop exposure is poor, with less than 5% bedrock visible over the property area. Exposure is limited almost exclusively to stream and road cuts.

3.2 Lithology

The property is underlain primarily by fine grained pelitic rocks including sericite schist, mudstones and some limestone bands. Contacts are usually anastomosing and gradational. Struik has mapped the Hardscrabble Mtn. and Downey successions as the dominant units on the property. Both of these stratigraphic intervals consist of pelitic material, with the Hardscrabble Mtn. rocks being markedly more graphitic than the underlying Downey succession. Igneous activity is relatively minor, with the only known intrusives found in the Penny Creek area near the Silver Mine. These include a lamprophyre dyke exposed in the 5100 pit and 5200 pit trenches. Diorites are exposed in Penny Creek at elevation 4900'.

<u>Schists</u>

These include chloritic, sericitic, and graphitic variations. These rocks weather buff brown overall, often having a spotted appearance due to weathering of iron-rich ankerite prophyroblasts. The rocks are well foliated, often to the point of being 'rotten' near surface. They have generally >30% micaceous content, with local concentrations causing talcose characteristics. Grain size is generally less than 2 mm. Bedding features are indistinct, if present at all. Sericite schist is the most prominent lithology throughout the property area.

<u>Quartzites</u>

The quartzites generally weather a slightly darker brown then the schists. These rocks are fine grained, poorly sorted and locally micaceous. They occur as podiform massive bodies, often appearing to occupy fold nose areas. 1-3% fine grained disseminated pyrite is ubiquitous.

Mudstones/Argillites/Shales

These sedimentary rocks are characterized by higher graphitic content and well developed foliation/cleavage. They are very fine grained, weakly siliceous and/or locally calcareous. These packages are usually found as 2-10 m wide lenses within more broad schist and quartzite packages. They are predominantly located on the eastern portion of the property, associated with the Hardscrabble Mtn. succession.

Limestones/Marble

These lithologies seem irregular and often associated with more graphitic intervals. The limestones vary from light grey to black, locally impure with ankerite, producing a buff reddish weathering surface. These rocks are present in narrow 1-3 m bands or lenses throughout the property. Though considered an important potential host to replacement-type mineralization, no such relationship was recognized in the property area.

Intrusives and Volcanics

Lamprophyre on the property has been mapped by Struik as a km-scale linear feature crossing south of Roundtop Peak. It is a metre-wide chocolate brown unit with spheroidal weathering in outcrop. Fresh surfaces reveal darker coloured, coarse grained, felted textures. Lamprophyre is mapped within the Silver Mine workings only. This occurrence is thought to be related to that mapped by Struik.

3.3 <u>Structure</u>

Rocks in the property area have clearly been subjected to numerous episodes of strain. Orientation of units is predominantly northwesterly, striking 145⁰ with steep northeasterly dips. Bedding-parallel cleavage is pervasive throughout the property area. It is often locally folded and crosscut by spaced crenulation cleavages, evidence of strong structural deformation. Faults and/or shears are ubiquitous, generally oriented north and north-northeast. Some quartz veins seem related to faulting, possibly as pre- and syn-deformational tension gashes, evidenced by drag folds and mineral growth patterns.

3.4 Mineralization

The Craze Creek property is well mineralized. Numerous gold/silver showings have been uncovered in the past, most occurring along a 145^{0} trend, parallel to the Downy/Hardscrabble contact. As well, significant lead-zinc potential exists within the property area, and has received exploration activity in the past. The presence of a 0.5-1.5 m bedded barite unit within graphitic shales is also a very encouraging indication of a possible base metal-generating environment. This barite unit occurs in two locations spaced over 2 km apart, along a recognizable stratigraphic trend.

Gold occurs with silver, pyrite, arsenopyrite, sphalerite, galena and locally scheelite and trace metals within erratic anastomosing quartz veins. These veins are difficult to trace on surface for more than 5 m, but generally occur along recognizable north-south trending fault and shear zones up to 5 m wide. These showings will be discussed in detail individually in the trenching/showings section (4.4), following. The vein quartz is massive, milky or creamy-white in colour. Drusy and cockscomb textures indicate relatively open fracture deposition. Ankerite and muscovite are common gangue materials. Gold is invariably associated with pyrite, with better grades related to galena and arsenopyrite content. A major silver-bearing quartz vein occurs along Penny Creek at elevation 4940 feet. The 1 m wide structure strikes 170^0 , and dips vertically. This structure, though it contains no economic gold, was developed for its silver in 1980. This structure has been traced over 800 m laterally with over 200 m of vertical continuity inferred.

Scheelite, once an exploration target in the area, is present in 1-2% concentrations within veins along Penny Creek. The only other occurrence is in hole 89-6 (B-Zone), in a quartz vein which graded 41.8 g/t Au over 1.4 m.

4.0 EXPLORATION ACTIVITY

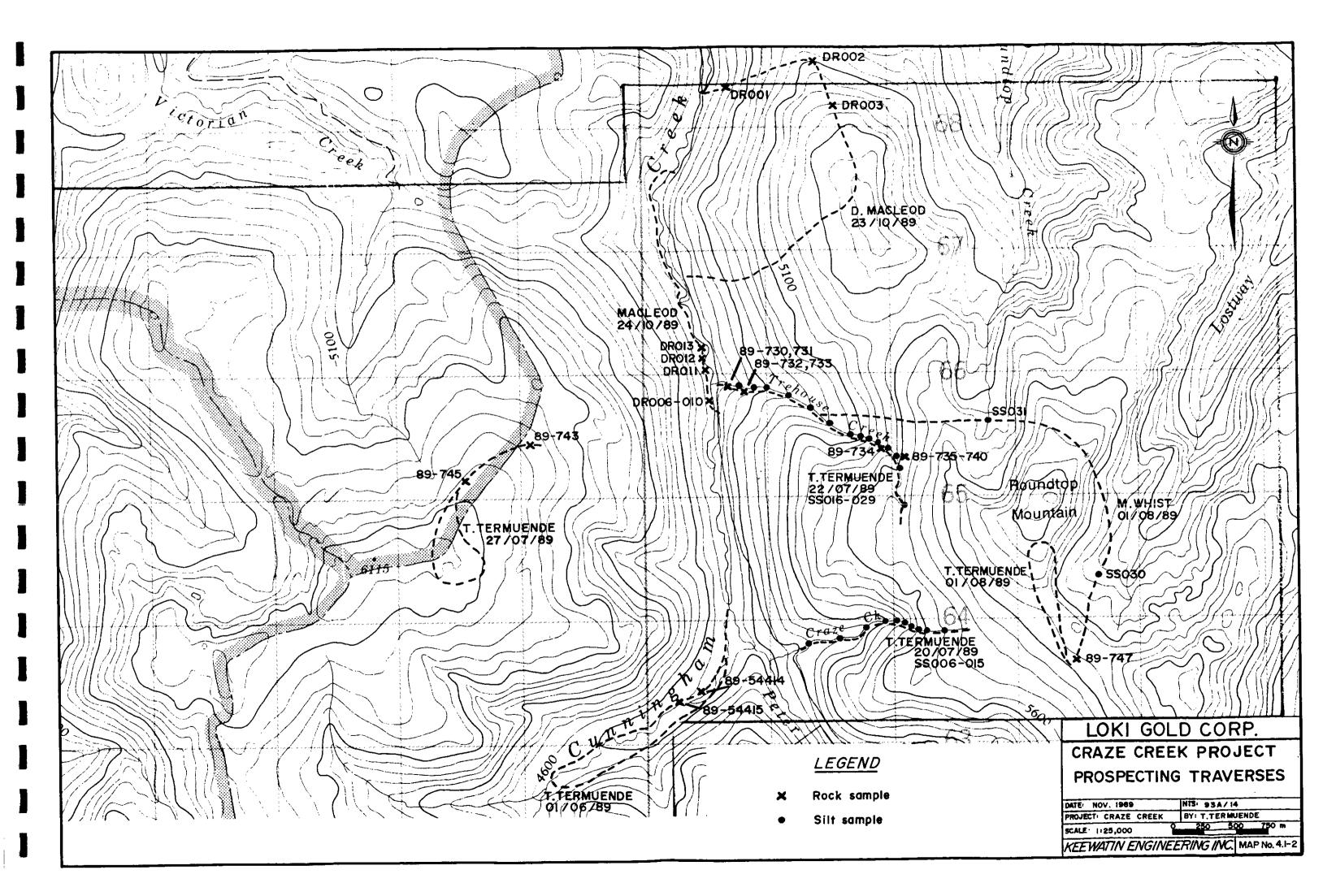
4.1 Geological Mapping and Prospecting

The property was mapped on a scale of 1:5,000 overall (see Figure 4.1-1). Creeks and roadcuts were traversed, as very few exposures exist elsewhere. The focus of coverage was the Cunningham Creek valley itself and its tributaries. Areas closer to the property boundary were not covered.

Twelve man-days were spent prospecting in the property area (see Figure 4.1-2). Creeks were traversed with silt samples taken every 100 foot elevation. No significant results were obtained, though a number of areas should see some follow-up work, based on field observations. These include the top of Nugget Mountain within the Lok 3 claim block, and a gossanous area located at 650N/1600E.

4.2 <u>Geochemistry</u>

A 91 km grid was established over favourable stratigraphy within the property (see Figure 4.2-1). The 5.1 km baseline was oriented 145⁰ with 0+00 located at the intersection of the Kiethley Creek-Barkerville road and Craze Creek. A second 1.5 km baseline was completed at 12+00E, running parallel to the main line. Baselines were cut by powersaw and chained with slope corrections made. Lath pickets were placed every 25 m with metal tags affixed at 100 m crossline intervals. Crosslines were oriented 55⁰ and were lightly cut with axes. The grid was designed to provide geochemical survey coverage over known showing areas and their possible extensions. The east grid was positioned to tie in Riocanex drill holes and delineate potential lead-zinc rich horizons. Two detailed grids were completed over particularly favourable areas. These grids are located on Nugget Mountain over an area which saw extensive trenching by Riocanex in 1977-78, with the other over the Jewellery Shop, B-Zone and Hibernian Trenches (see Figures 4.2-1A,1B). Crosslines were spaced every 50 m along the main baseline with 10 m sample spacings. Detailed sampling was completed 300 m east and west of the baseline.



Mike Waskett-Myers, an experienced geochemist visited the property to complete a soil geochemical orientation. A number of test pits were dug and sampled, exposing well-developed soil horizons indicating that reasonably representative survey results can be expected from the property.

4789 soil samples were collected at 25 m spacings, 10 m over detailed grids. Samples were sent to Eco-Tech Labs in Kamloops, where gold geochemistry and 30 element I.C.P. analyses were completed (see Appendix). Any samples which contained values higher than 1000 ppb Au were fire assayed. Gold, silver, arsenic, copper, lead and zinc were plotted separately on main and detailed grid maps (see Figures 4.2-1 to 4.2-6).

<u>Results</u>

Numerous spot anomalies were located, with some continuous trends suggested. Trenching of some of these targets subsequently revealed that geochemistry is a reliable exploration tool in the area. Auriferous veins were often located directly below spot highs, suggesting that dispersion is minimal. Larger, more continuous anomalies tended to be the result of numerous small scale (10-30 cm) veins in an en-echelon orientation. Lead and arsenic values generally show good correlation with gold and silver.

4.3 Geophysics

Geophysical surveys have been undertaken in the past on and around the property area with limited success. The most recent work included a survey by Brian Mullion in 1987. That survey was completed over the Silver Mine, Penny Creek, and Jewellery Shop areas. Station intervals were 10 m along lines spaced 50 m apart. Results indicated a number of weak structures, but were largely inconclusive. Both Rioconex and Interior Coast Ventures had previously completed large scale surveys in the search for lead zinc.

A one-day orientation survey was completed by John Ashenhurst over the Jewellery Shop detailed grid. His Magnetometer and VLF survey was run over existing Jewellery Shop, B-Zone and Hibernian Trenches in order to test the effectiveness of these techniques. A proton magnetometer and VLF EM-16 instrument were used, with Annapolis as the VLF transmitter. A number of weak conductors were indicated, though none coincided with the existing mineralization. A single coincident mag-VLF conductor was interpreted to lie along Petergulch Creek from its confluence with Cunningham Creek (5+75N), southward to 2+50N. At the time the survey was completed, the Seattle station was off the air. This transmitter would have been preferred to test for north-south structures, and as a result leaves some question as to the validity of results. The presence of graphitic horizons also suggests that some of the VLF conductors may not be related to sulphide mineralization.

4.4 <u>Trenching/Showings</u>

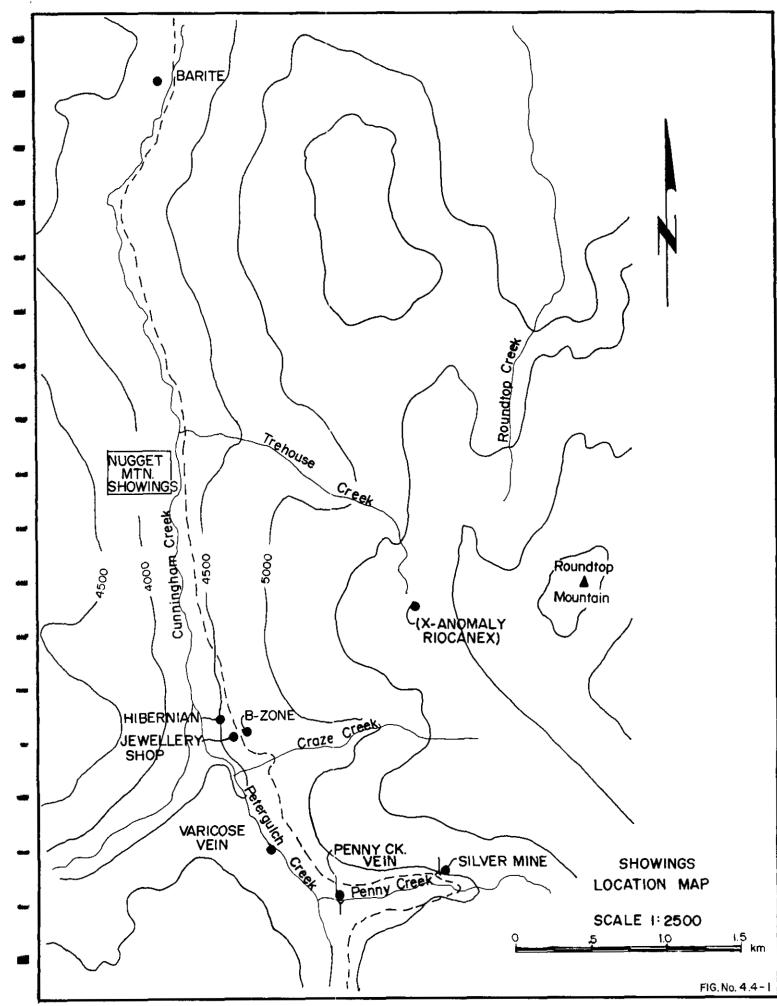
A number of trenches were completed during the program, five being very large scale (over 1000 m²each). These include the Jewellery Shop, B-Zone, Hibernian, Switchback and 1500 Trenches (see Figure 4.4-1).

These and other workings and their locations are summarized below.

TABLE 2

1989 Trenching Program

Trench/Showing Name	Location	Size	Vein <u>Mineralogy</u>	<u>Significant Assays</u>
B-Zone	Baseline 3+00N	1125m ²	Au, Pb <u>+</u> Zn	17.8g Au/2.0 m 22.5g Au/4.0 m 4.1g Au/3.0 m
Hibernian	550N/100W	1200m ²	Au, Ag, Pb, Zn	4.4g Au/3.0 m 5.8g Au/3.0 m 16.3g Au/2.0 m 19.6g Au/2.0 m 9.5g Au/2.0 m 7.8g Au/3.0 m
Jewellery Shop	300N/070W	1200m ²	Au, Ag, Pb	26.3g Au/4.0 m 11.9g Au/2.0 m 8.9g Au/3.0 m 6.8g Au/2.0 m 7.5g Au/2.0 m
Level 2	1860N/070W	50m ²	Au, Ag, Pb	15.5g Au, 157 g Ag, 1.8% Pb/2.0 m
Penny Creek Vein	1000S/225W	130m ²	Au, Ag	12.7g Au/1.1 m 10.1g Au/1.0 m
Silver Mine (Portal Area) (5100 Pit)	1170S/475E 1120S/475E	$\frac{10 \text{m}^2}{60 \text{m}^2}$	Ag Ag, Cu, Pb, Zn	10.0g Ag/1.0 m 45.8g Ag/1.0 m >10,000 ppb Cu, Pb, Zn/2.0 m
(5200 Pit)	1100S/500E	100m ²	Ag	40.8g Ag/1.0 m



Trench/Showing <u>Name</u>	Location	<u>Size</u>	Vein <u>Mineralogy</u>	Significant Assays
Switchback	1150N/80W	900m ²	Au, Ag, Pb	247.1g Ag, >10,000 ppb Pb/1.0m 78.9g Ag,>10,000ppb Pb/1.0m 5.7g Au/1.0 m 6.11g Au/1.0 m 39.73g Au, 356.1 g Ag, >10,000 ppb Pb/1.0 m
Varicose Vein	600S/350W	90m ²	Au, Ag	8.61g Au, 19.6g Ag/1.0m 11.21g Au, 19.8g Ag, >10,000 ppb Pb/1.0 m 12.57g Au/1.0 m
186 Trench	12258/420E	60m ²	w	1-5% Scheelite in quartz
378 Trench	11258/250E	60m ²	W	1% Scheelite in quartz
14S/400E Trench	1400S/400E		Ag	>30 g Ag/0.7 m >30 g Ag/0.5 m
1500 Trench	Baseline 1500N	900m ²	Au	8.15 g Au/1.0 m
1650 Trench	Baseline 1650N	$30m^2$	Au	4.5 g Au/1.0 m

B-Zone Showing (Figure 4.4-2)

The B-Zone consists of several north-south oriented near vertical faults which offset northwest trending quartz veins. Drag folding of both the veins and of the host units foliation indicates right-lateral motion, with slickensides measuring 10^0 to 003^0 . Veins tend to thicken and increase in sulphide content proximal to the faults. The most concentrated sulphide mineralization is at the north end of the trench where a quartz vein contains up to 20% pyrite and arsenopyrite in pods and as fine grained disseminations.

A single 1 m wide vein is seen to be offset three times, once by each of the major northsouth trending faults. Total offset is approximately 30 m. Visible gold was observed within the delicate pyrite boxwork present along the vein selvage. This vein swells to a maximum thickness of 2.5 m along the most easterly fault uncovered.

To the north, veins horsetail to narrow stringers with 10% pyrite, but if further trenching were done along the main fault, more quartz veins would likely be uncovered. To the south the trench was ended in quartz. Host rock is an interbedded sequence of sericite schist, sericitic quartzite and lesser 1-3 m wide bands of shale. All beds are well foliated except the more resistant quartzite. Fold axes are oriented 10⁰ toward 135^o in the south section of the trench and 10^o toward 325^o in the north, possibly indicating multi-directional, two-phase folding. Glacially striated rock was exposed in the northwest portion of the trench.

Hibernian Showing

The Hibernian Showing consists of a number of mineralized 1-2 m wide quartz veins hosted within a sericite schist/mudstone package. Foliation is well defined, oriented $140^{\circ}-160^{\circ}/60^{\circ}-80^{\circ}NE$. Quartz vein mineralogy consists of pyrite, galena, sphalerite, tetrahedrite, ankerite and minor arsenopyrite. Veins occur both as podiform masses or as 10-20 cm wide stringers, dipping near-vertically with a 110° strike.

Faulting is evident throughout the trench area. A number of faults splay off a major northsouth structure, displacing all quartz veins and imparting a right-lateral offset of 3-4 m. Gouge zones are 5-10 m wide with the exception of the major structure, which contains intensely sericitized clays over 3 m, narrowing to the north. 10% quartz rubble is contained within the gouge material. Wallrock alteration has occurred adjacent to both faults and veins. Leaching and more intense sericitization is seen 1-2 m from these structures in both footwall and hangingwall members. Within this alteration band, perfect euhedral pyrite dodecahedrons are found, some over 1 cm in size.

Gold is confined to mineralized quartz veins, with a correlation between gold and galena evident. Mineralization relating to the major north-south fault structure may occur elsewhere along strike as no offsetting east-west structure was seen.

Jewellery Shop

This showing consists of a number of sulphide-rich auriferous quartz veins up to 2 m wide, oriented northwesterly. These veins may have up to 70% sulphides locally, primarily pyrite, arsenopyrite, galena, with trace tetrahedrite and argentite. All sulphides are very coarse grained, with euhedral crystals up to 1 cm wide present. Sericitic slivers are present within the sulphide bands. Vein contacts with the wallrock are convoluted and irregular. A resistant oxidized iron cap is often found directly above larger sulphide masses. Host rocks are primarily schist, one more graphitic in composition, the other a buff coloured sericitic unit. The contact between the two is foliationparallel and is taken up by a north-south oriented vertical strike slip fault with slickensides 13°

toward 000°. The mineralized zone is offset repeatedly by 160°-180° faults, all with drag folds showing right-lateral movement. Some evidence suggests movement of approximately 2.5 m.

The pre-faulted width of the zone is estimated to be 5 m. The frequency of faulting within the trench area creates a noticeable mineralized zone subparallel to faulting.

The Silver Mine (see Figures 4.4-5 to 4.4-8)

The Silver Mine is located at the intersection of the Kiethley Creek-Barkerville Road and Penny Creek at elevation 5000 feet. Four parallel silver-lead bearing veins have been recognized, the most easterly seeing development in 1980 for one year. A 180 foot adit was driven along the structure, with some 30,000 tonnes of ore crushed on site and shipped to Trail. Grades of the order of 350 g/t Ag and 15% Pb were recovered.

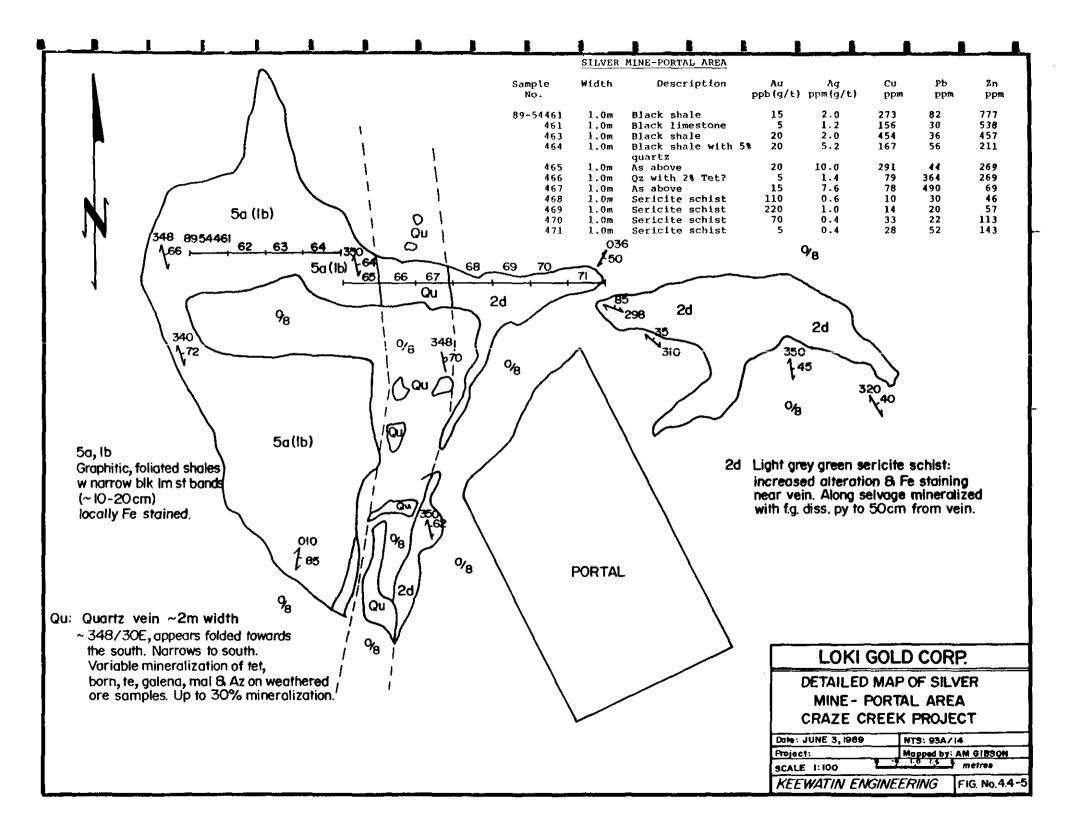
Detailed mapping was completed on the most easterly vein, revealing a continuous .5 to 1.5 m structure striking 170^{0} with a vertical dip. Four trenches, the 5200 Pit, 5100 Pit, Silver Mine, and 145/400E Trench all exposed what is thought to be the same vein. Soil geochem Ag and Pb highs on L7+00S and L8+00S suggest continuity to the north. Air photo lineations indicate this or a similar structure may continue to the south, onto Imperial Metals ground. With these indications, a total strike length of over 2 km and 300 m vertical continuity can be inferred. The vein itself appears to occupy the axial plane of an isoclinal fold, evidenced by minor folds in the 5200 Pit (see Figure 4.4-7), and geologic mapping of host stratigraphy. Post-depositional faulting has occurred within the vein, with numerous striated planes seen in the 5100 Pit indicating strike-slip movement (see Figure 4.4-6). Vein mineralogy includes galena, tetrahedrite, malachite, azurite and trace scheelite, argentite? and bornite.

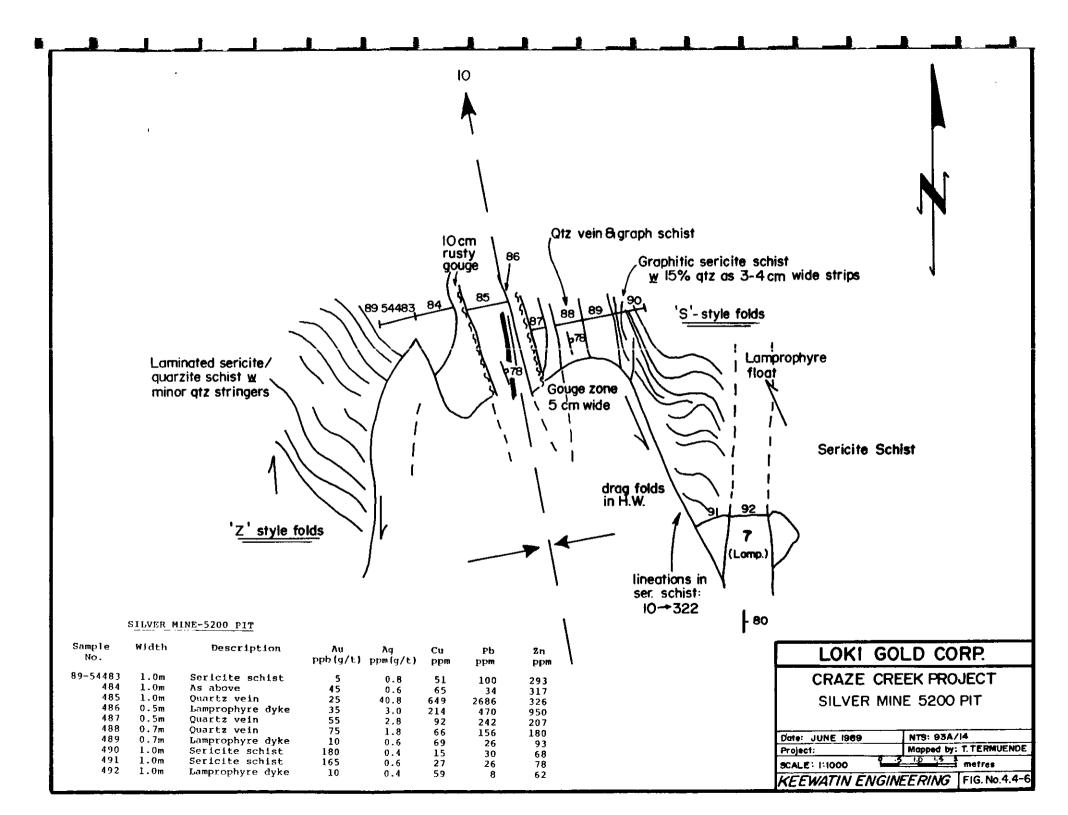
Penny Creek and Varicose Veins (see Figures 4.4-9,10)

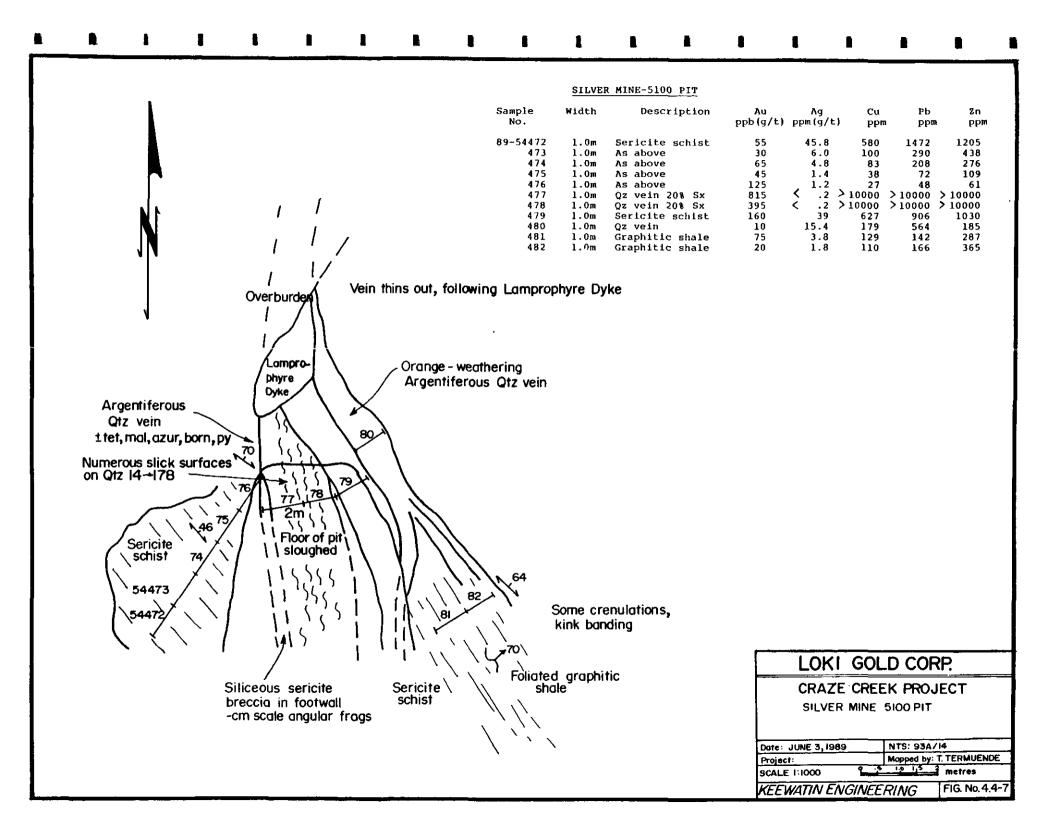
These two trenches were worked previously and reveal seemingly similar quartz vein systems. Both contain high gold values, are erratic and cut off abruptly by northerly trending faults. Extensions of each system are expected to exist, but terrain would make such trenching difficult and expensive.

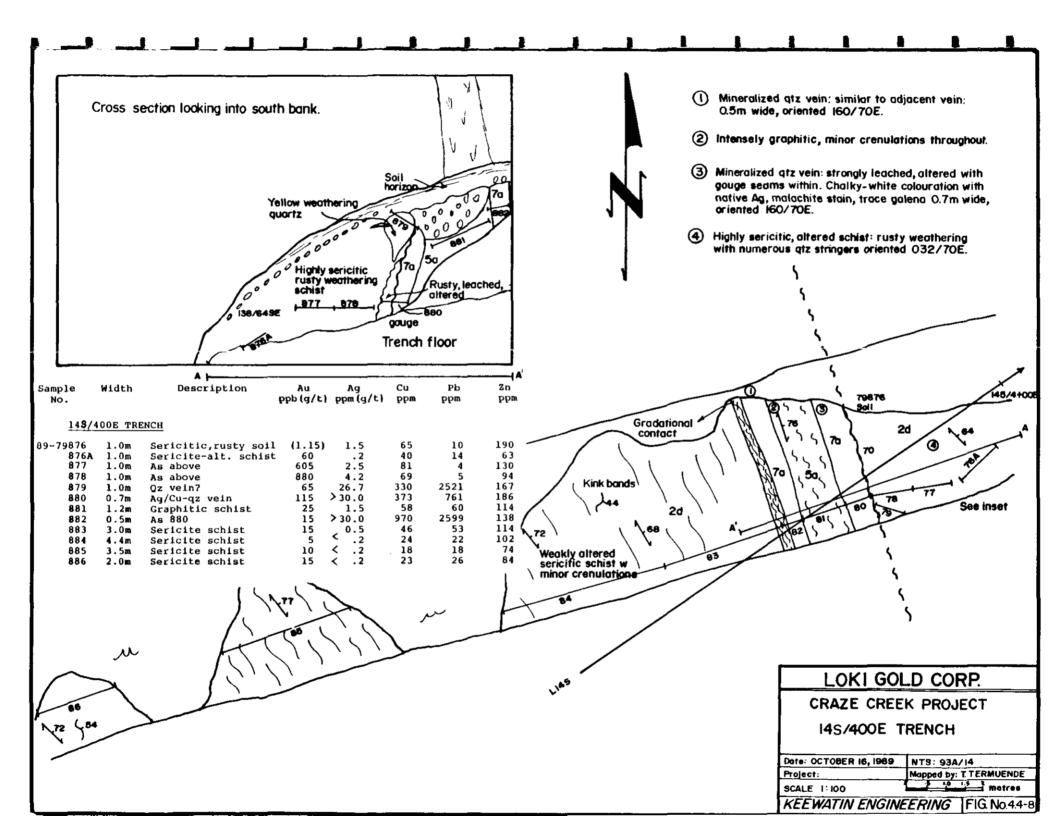
Nugget Mountain Trenches (see Figures 4.4-11 to 4.4-13)

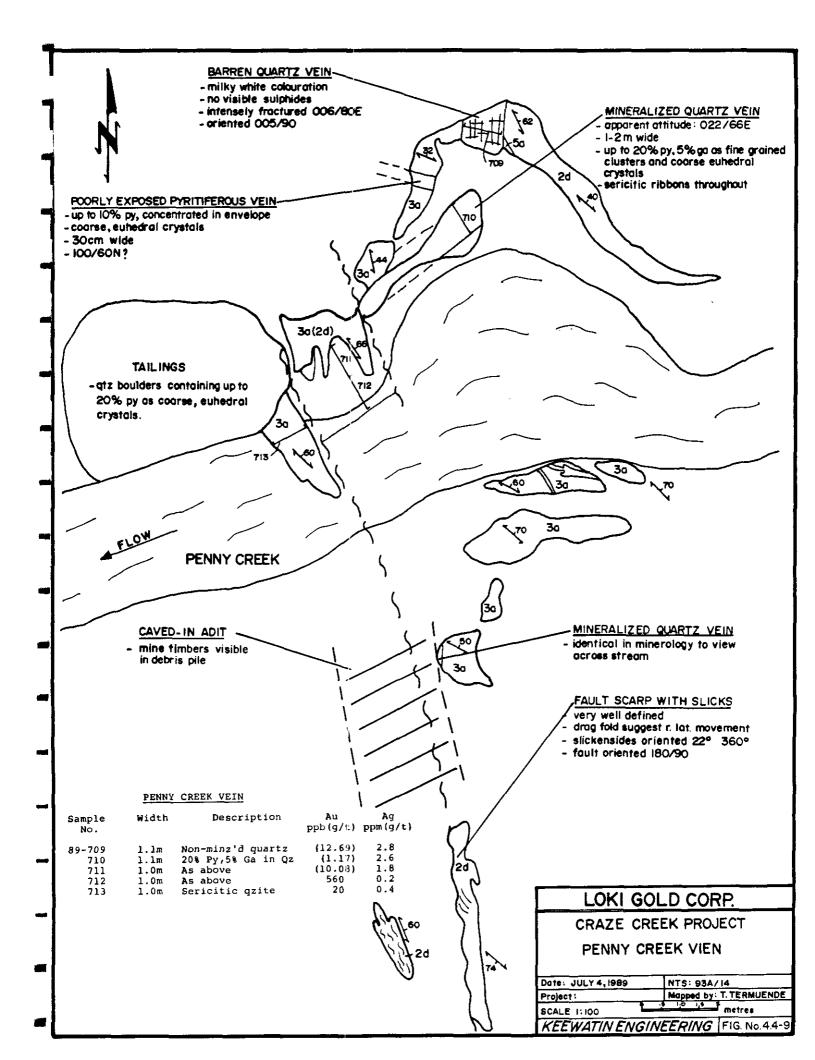
Numerous trenches exist in this area, many made by Riocanex during their 1977 and 1978 field programs. Four trenches were dug by Loki Gold in the 1989 season, namely the Switchback,

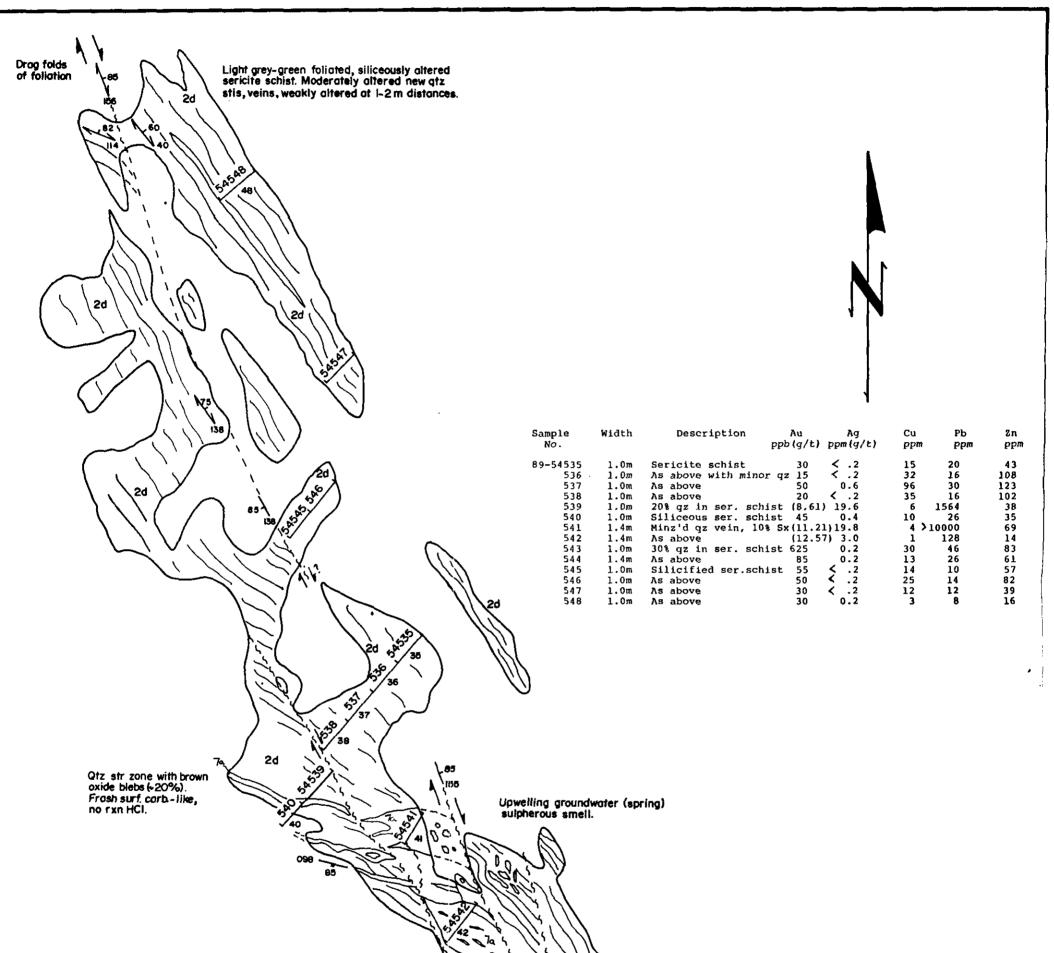




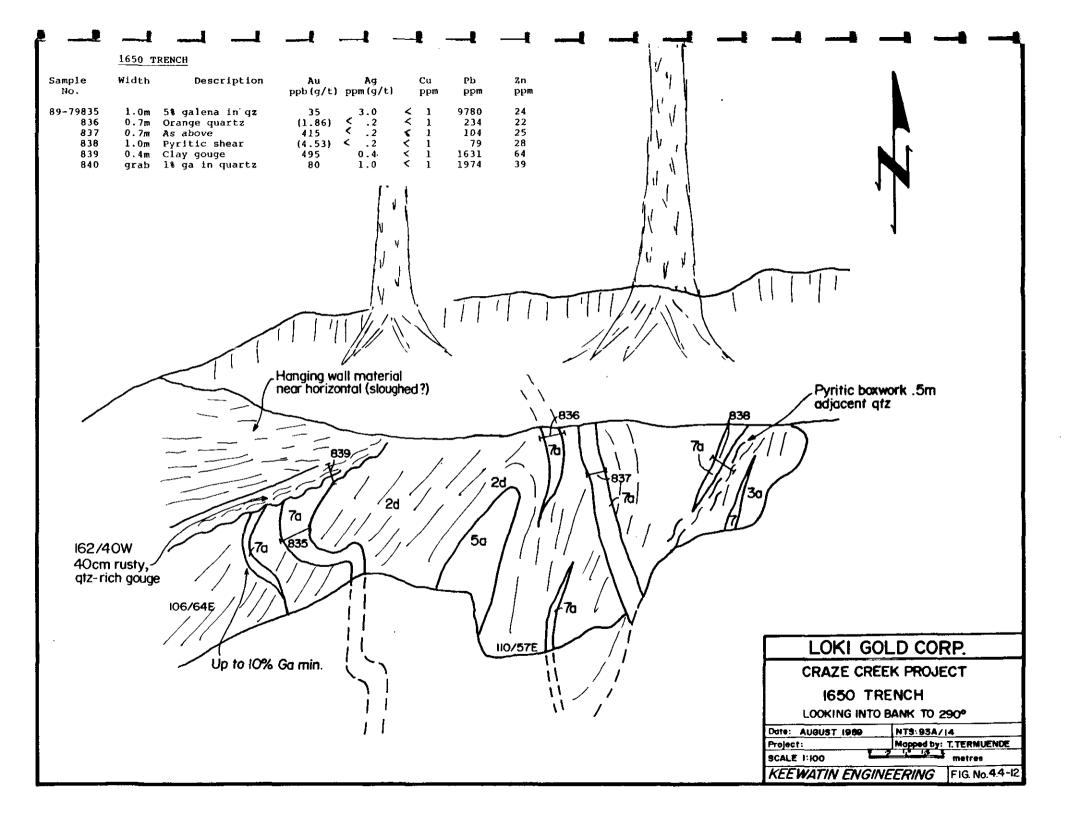


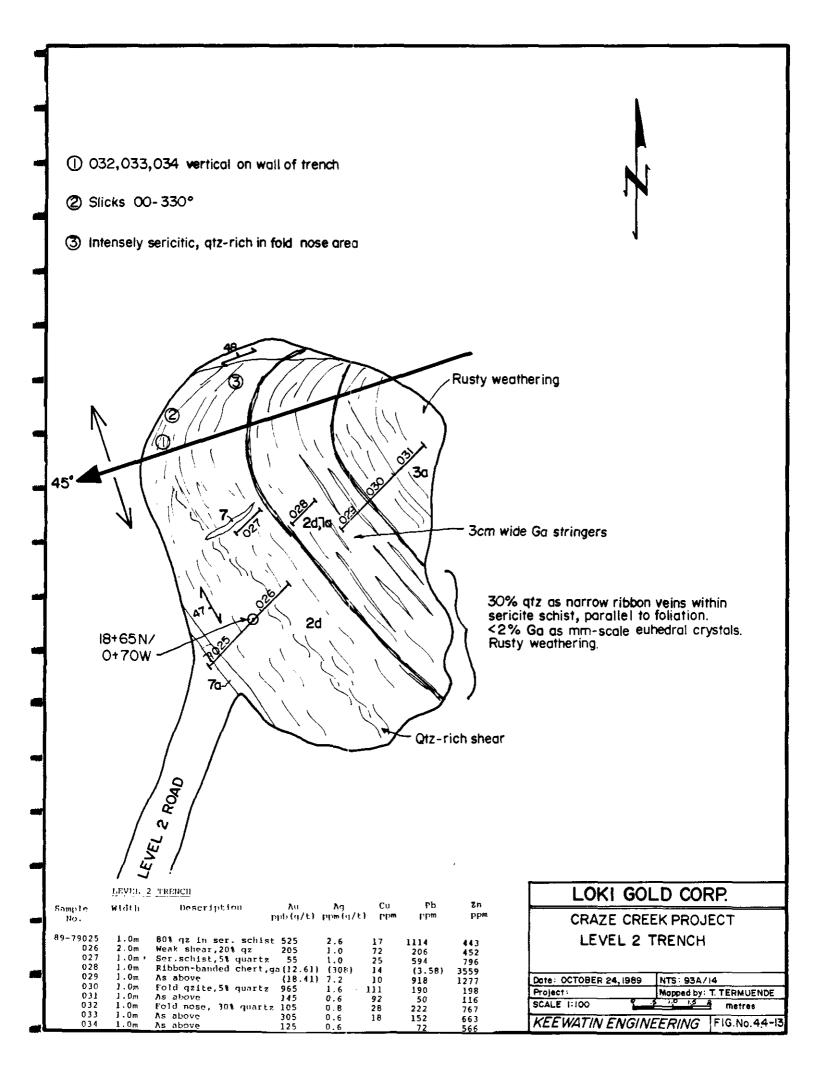






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	A THOMAS		
· ·		LOKI G	OLD CORP.
	~	CRAZE CR	EEK PROJECT DSE VEIN RENCH MAP
		Date: JUNE 14, 1989	NTS: 93A/14
		Project: SCALE 1:100	Napped by: AM GIBSON
		KEEWATIN ENGI	EERING FIG. No. 4.4-K





1500, 1650, and Level 2. All workings revealed similar mineralization: narrow, erratic gold-bearing pyritiferous quartz veins. These veins differ from those elsewhere on the property in that they seem to have been subjected to greater deformation. Veins often occur as crumbly pebble trains within shear zones up to 1 m wide. Drilling confirmed highly deformed ground conditions, as recovery was less than 50% overall in the three holes completed in this area, compared to 95% elsewhere on the property. Trenching was hampered by frequent underground springs and extremely muddy overburden.

4.5 Diamond Drilling (see Figures 4.5-1 to 4.5-10, Appendix B)

A \$100,000, 1090 m drill program commenced in November, to test continuity at depth under the more favourable mineralized areas trenched earlier, was contracted to Falcon Drilling of Prince George, B.C. Seventeen holes were completed on ten sites (see Figure 4.5-1). Moves were facilitated by D-6 Cat, with a Hughes 500E helicopter required for two moves due to mud and snow conditions.

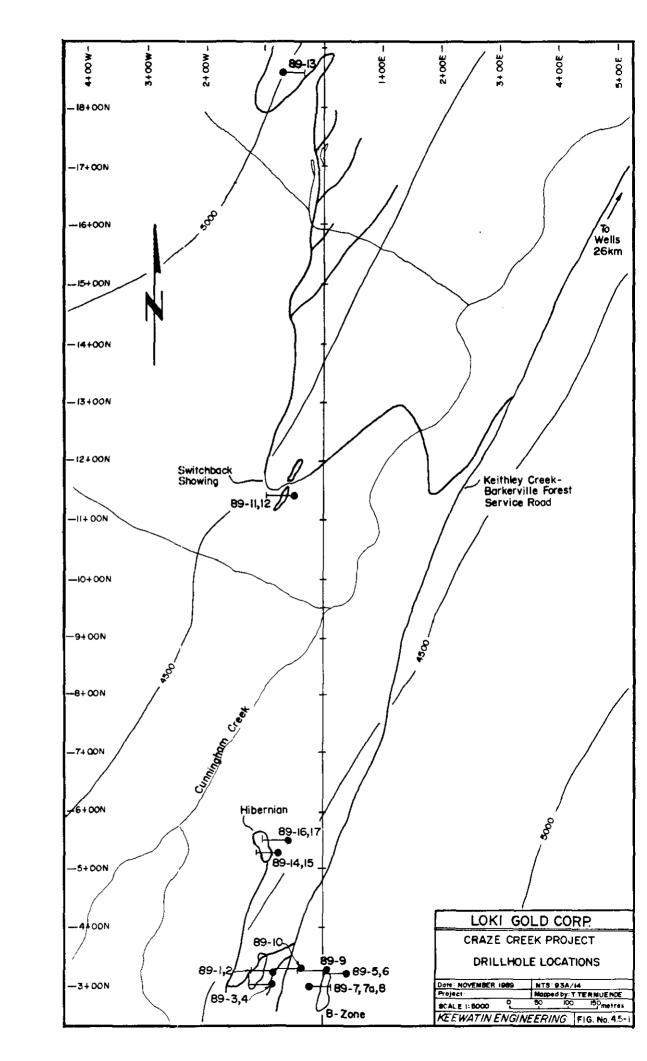
CORE STORED ON SITE AT OLD TRAPPERS CABIN

Drilling information is summarized below:

TABLE 3

Drilling Summary

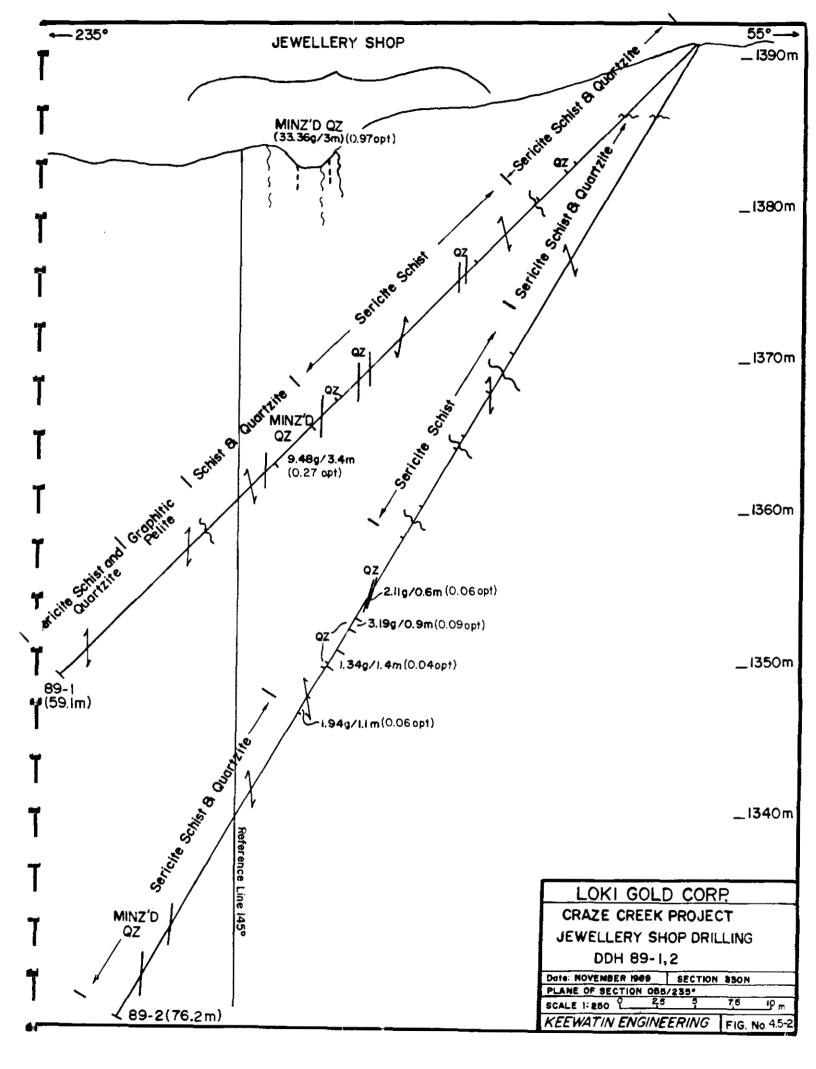
<u>Hole</u>	<u>Orientation</u>	<u>Length</u>	<u>Location</u>	<u>Elev.</u>	Surface Showing	Significant Results
89-1	-45°to235 °	59.1m	330N/050W	1395m	JewelleryShop	21.4-22.0m(0.6m)17.23g/t 35.7-39.1m(3.4m)9.48g/t
89-2	-60°to235 °	76.7m	330N/050W	1395m	JewelleryShop	41.7-42.3m(0.6m)2.11g/t 43.9-44.8m(0.9m)3.19g/t 46.3-47.7m(1.4m)1.34g/t 50.3-51.4m(1.1m)1.94g/t
89-3	-45°to 235 °	51.5m	305N/050W	1392m	JewelleryShop	16.8-17.8m(1.0m)0.47g/t
89-4	-60°to235 °	60.7m	305N/050W	1392m	JewelleryShop	21.9-22.6m(0.7m)3.83g/t
89-5	-45°to235 °	47.2m	325N/038W	1430m	B-Zone	26.7-27.7m(1.0m)2.90g/t 27.6-27.7m(0.1m)17.93g/t 29.3-30.6m(1.3m)2.18g/t 33.6-40.1m(4.2m)2.74g/t 35.9-40.1m(4.2m)1.33g/t 46.4-46.6m(0.2m)1.75g/t

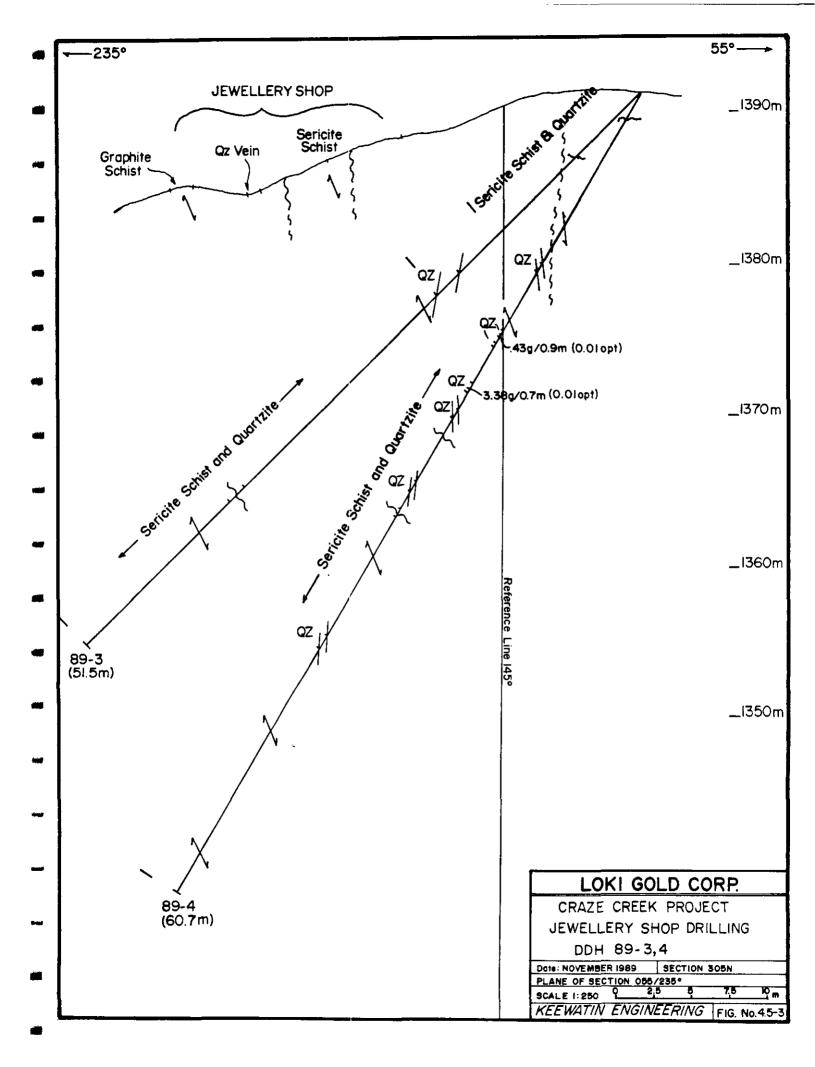


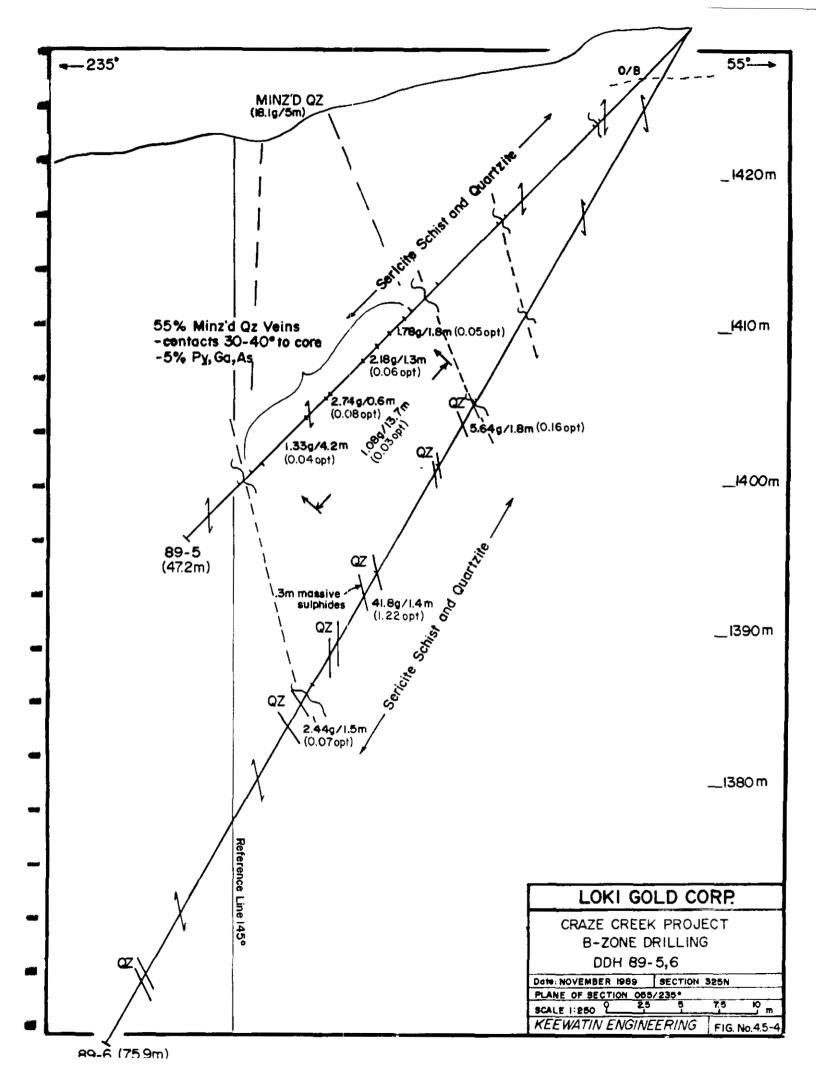
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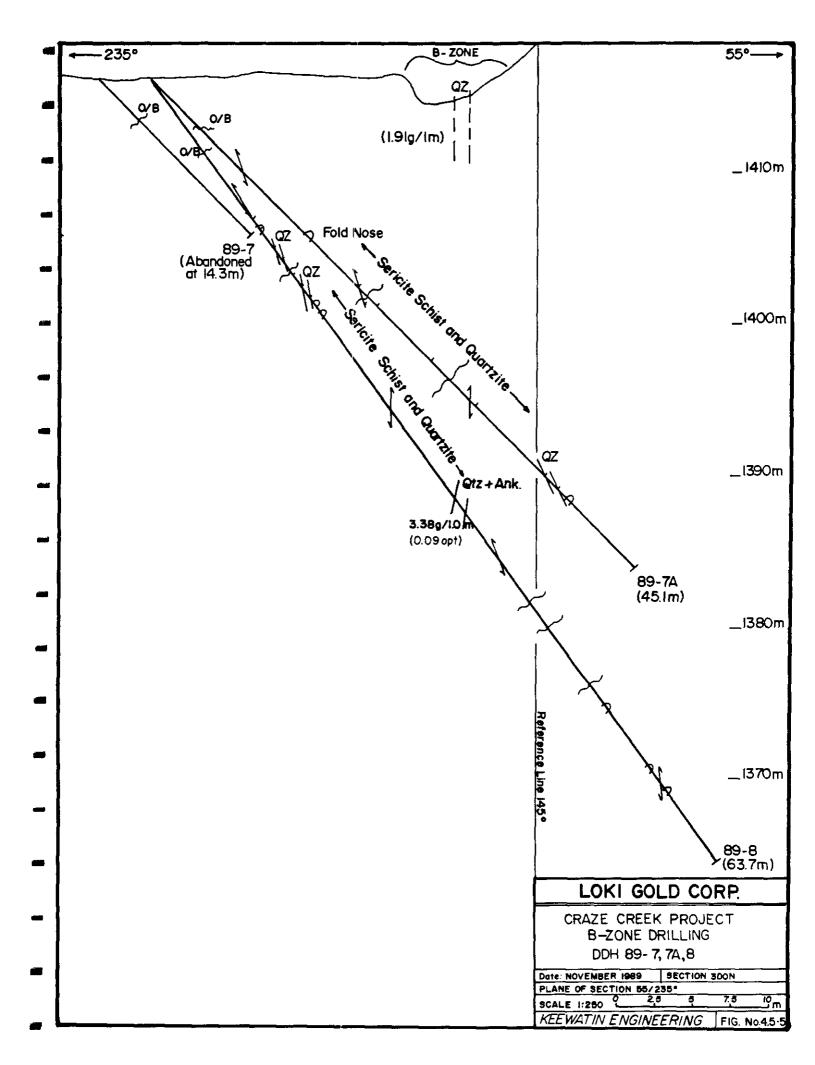
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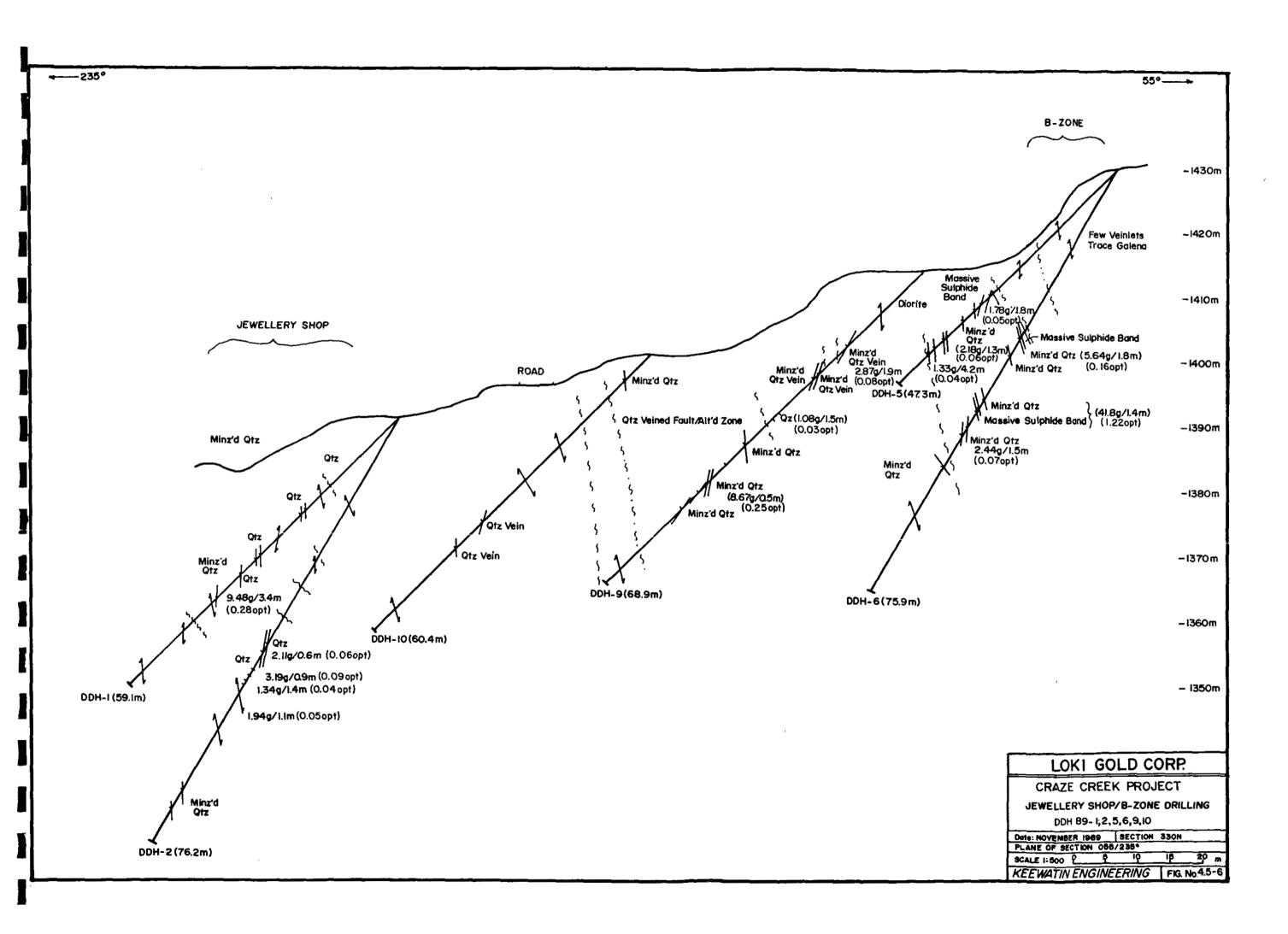
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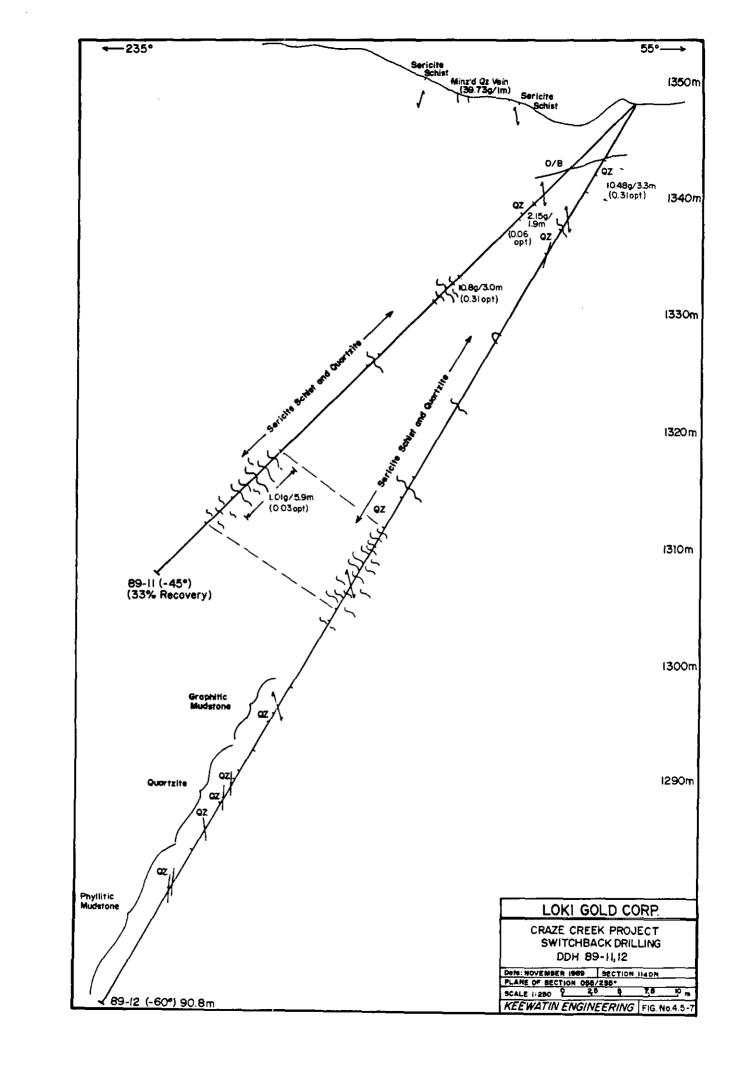


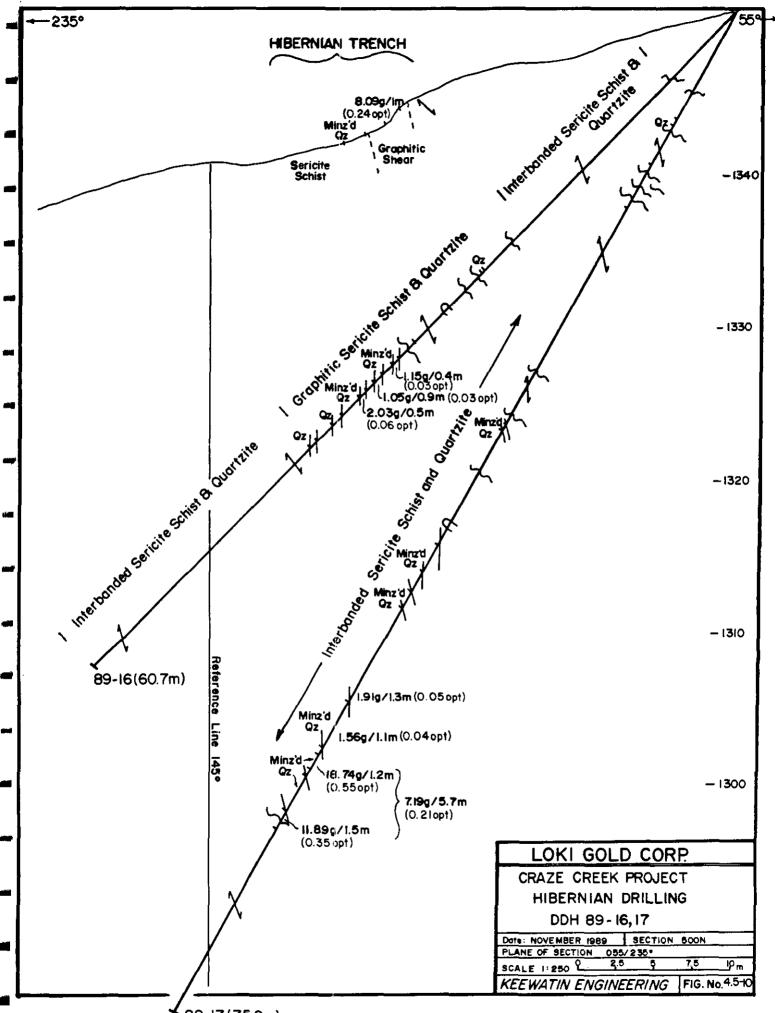


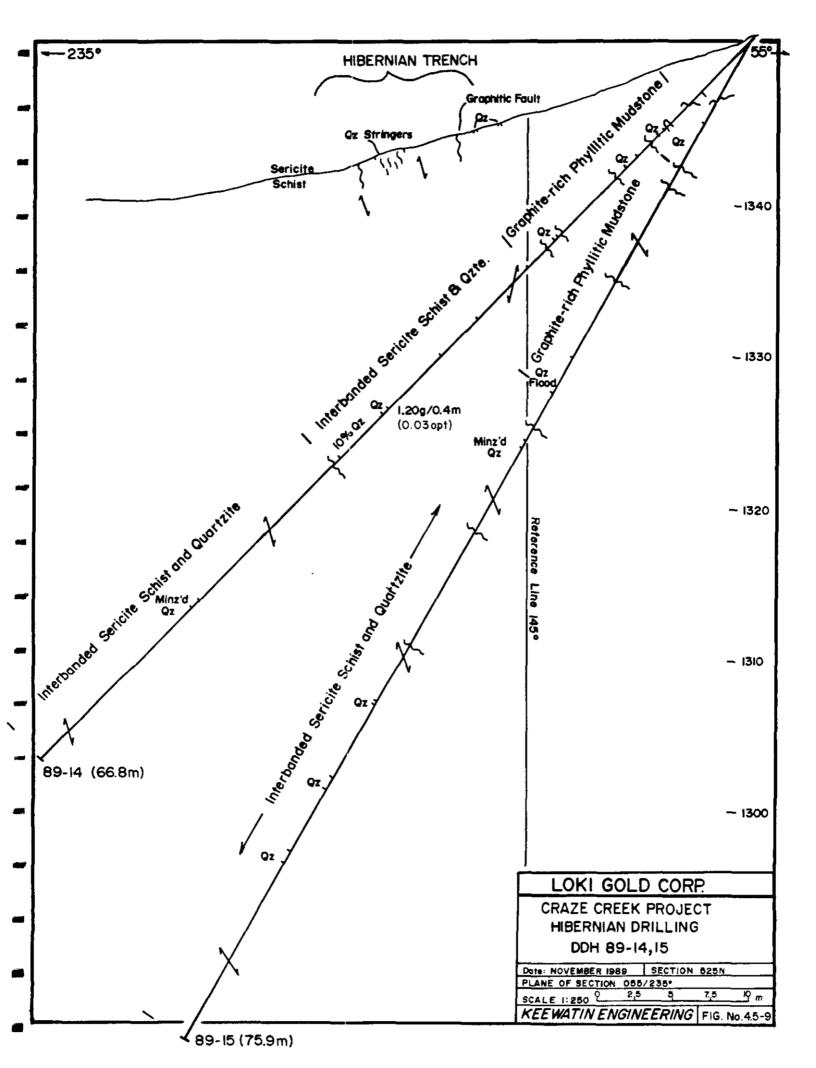


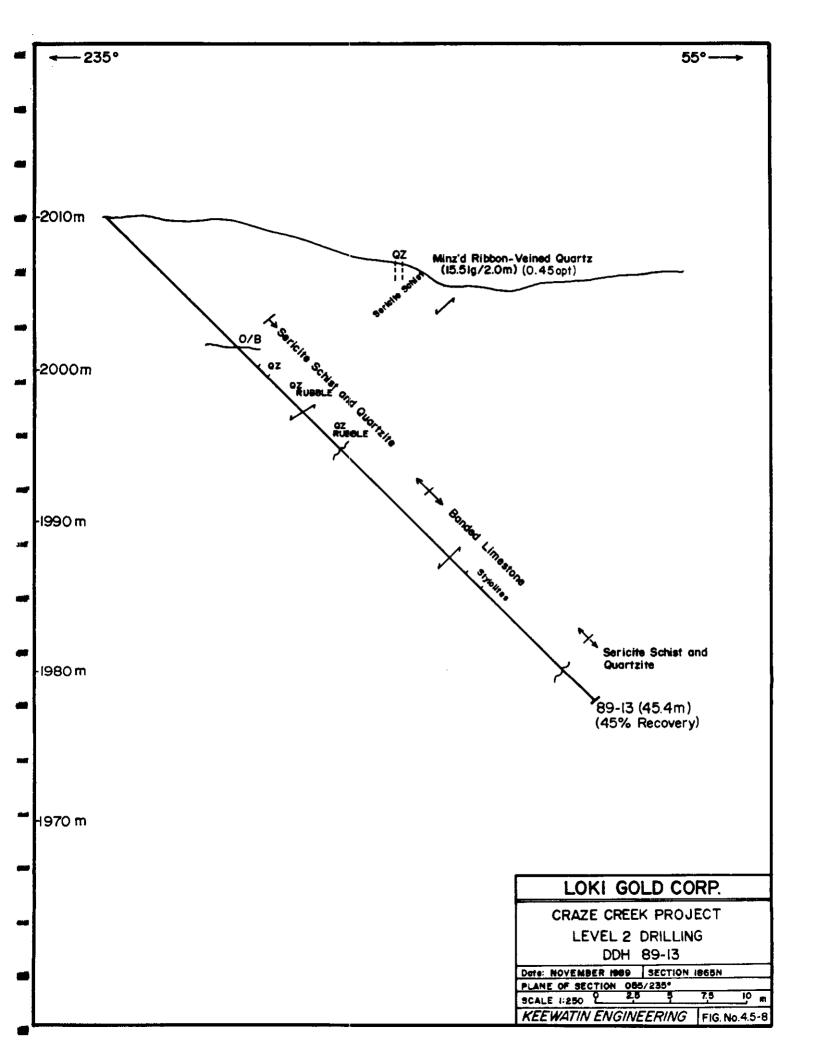












<u>Hole</u>	<u>Orientation</u>	<u>Length</u>	Location	<u>Elev.</u>	Surface Showing	Significant Results
89-6	-60°to235 °	75.9m	325N/038W	1430m	B-Zone	28.1-29.4m(1.3m)7.14g/t 41.2-42.6m(1.4m)41.77g/t 51.4-52.9m(1.5m)2.44g/t
89-7	-45° to055°	14.3m	300N/022E	1413m	B-Zone	abandoned
89-7A	-45°to055 °	45.1m	300N/020E	1413m	B-Zone	no significant intersections
89-8	-60°to055 °	63.7m	300N/020E	1413m	B-Zone	34.0-35.0m(1.0m)3.38g/t
89-9	-45°to235 °	68.9m	BL325N	1413m	B-Zone/ JewelleryShop	19.6-23.1m(3.5m)1.90g/t 46.5-47.0m(0.5m)8.67g/t
89-10	-45°to235 °	60.4m	325N/040W	1401m		no significant intersections
89-11	-45°to235 °	51.5m	1140N/055W	' 1348m	Switchback	12.0-13.9m(1.9m)2.15g/t 21.0-24.0m(3.0m)10.8g/t* 42.4-48.3m(5.9m)1.01g/t
89-12	-60°to235 °	90.8m	1140N/055W	1348m	Switchback	5.2-8.5m(3.3m)10.48g/t*
89-13	-45° to 055°	45.4m	1855/070W	2010m	Level 2	no significant intersections [#]
89-14	-45°to235 °	66.8m	550N/072W	1351m	Hibernian	34.3-34.7m(0.4m)1.20g/t
89-15	-60°to235 °	75.9m	550N/072W	1351m	Hibernian	no significant intersections
89-16	-45°to235 °	60.7m	525N/090W	1351m	Hibernian	31.7-32.1m(0.4m)1.15g/t 33.3-34.2m(0.9m)1.05g/t 35.0-35.5m(0.5m)2.03g/t
89-17	-60°to235 °	75.9m	525N/090W	1351m	Hibernian	50.7-53.1m(2.4m)1.75g/t 55.8-61.5m(5.7m)7.19g/t incl. 55.8-57.0m(1.2m) 18.74g/t60.0-61.5m(1.5m) 11.89g/t

• less than 10% core recovery

poor core recovery at target depth

5.0 DISCUSSION

Drilling of the showing areas described above confirmed two main points:

- (1) That gold is confined to quartz vein material with no flooding into wallrock lithologies, and
- (2) That these veins are highly erratic and discontinuous.

Sporadic intersections along strike or down dip of mineralized zones suggest the presence of broad mineralized bands located within fault swarms as seen in surface showings. Low grade open pit production may be possible under these conditions.

Poor recovery in the Nugget Mountain area rendered drill results inconclusive. Recoveries from holes 89-11,12 and 13 were 33%, 68% and 45% respectively. However, the frequency of vein occurrences and soil geochemical anomalies suggests a strong potential for mineralization in the area.

Replacement deposits seen at Wells are a more attractive target than vein deposits according to historical records. The Craze Creek property contains stratigraphy and lithologic setting including carbonates, similar to those present at Wells. The presence of typical 'halo' signatures such as galena and sphalerite mineralization, silicification and ankeritization gives reason to believe that other deposits remain to be found in this area.

Bedded barite exposed on the Faye claim adjoining Loki ground, and in the Riocanex Xanomaly in the eastern part of the property suggests a good potential for strataband lead zinc mineralization.

6.0 <u>CONCLUSION</u>

The Craze Creek property is located within the same belt of rocks that host the gold deposits at Wells. The immediate geological setting and mineralization is strikingly similar. The overall potential of the B-Zone, Jewellery Shop and Hibernian vein systems is encouraging. Though structurally complex, intricacies regarding gold distribution may be resolved, as they were during production of 13 million ounces over 60 years of mining in Wells.

The optioning of 85 units and staking of further ground within this important geologic setting provides further potential for discovery in the future.

7.0 RECOMMENDATIONS

Further work is warranted on the property. Work should include trenching of untested soil anomalies, further prospecting undertaken in areas recently staked or optioned, compilation work completed for the Richfield Metals option, and further trenching and drilling in the Nugget Mountain Area.

Respectfully submitted,

KEEWATIN ENGINEERING INC.

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Tim J. Termuende, B.Sc. January 16, 1990

8.0 <u>REFERENCES</u>

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Keewatin Engineering Inc.

9.0 STATEMENT OF QUALIFICATIONS

I, TIM J. TERMUENDE, residing at 1701 Mt. Nelson Crescent, in the City of Cranbrook, in the Province of British Columbia do hereby certify that:

- 1) I am a graduate of the University of British Columbia having acquired a B.Sc. (Geology) in 1987.
- 2) I have practised my profession continually since graduation.
- 3) I am employed as a contract geologist by Keewatin Engineering Inc. with offices at Suite 800 - 900 West Hastings Street, Vancouver, B.C. V6C 1E5.
- 4) I am the author of the report entitled "Geological Report on the Craze Creek (Cunningham) Property, Cariboo Mining Division, British Columbia" dated January 16, 1990.
- 6) I personally carried out or supervised all work presented in this report from May 23, 1989 to November 23, 1989 and am familiar with the regional geology of the area.
- 7) I do not expect to receive any interest (direct, indirect or contingent) in the property described herein, in respect of services rendered in the preparation of this report. I do however, own 20,000 shares of Loki Gold Corporation's stock.

Dated at Vancouver, British Columbia this 16th day of January, 1990.

Respectfully submitted,

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Tim J. Termuende, B.Sc.

APPENDIX A

Statement of Expenditures

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Keewatin Engineering Inc.

STATEMENT OF EXPENDITURES

Phase I (Mapping, Prospecting, Trenching)

<u>Labour</u>

Project Supervisors	R. Nichols L. Nagy		\$425.00/day \$425.00/day	\$ 8,075.00 7,225.00	
Project Geologist Geologist	T. Termuende S. Gibson A. Travis N. Humphreys	110.5 days @ 36.0 days @ 9.5 days @	\$425.00/day \$350.00/day \$275.00/day \$275.00/day \$275.00/day	38,675.00 9,900.00 2,613.00 11,275.00	
Field Assistants	T. Paquin B. Richardson G. Batycki M. Whist G. Nagy S. Thompson D. MacLeod B. MacIntyre	42.25days @ 38.0 days @ 37.0 days @ 64.0 days @ 77.0 days @ 8.0 days @ 8.0 days @ 8.0 days @	\$225.00/day \$225.00/day \$250.00/day \$225.00/day \$250.00/day \$225.00/day \$250.00/day \$250.00/day	9,506.00 8,550.00 9,250.00 14,400.00 19,250.00 1,800.00 1,500.00 2,000.00	
Drafting	B. Whelan		\$240.00/day	3,984.00	
Surveyor Office and Accounti	F. Ferguson	16.5 days @	\$300.00/day	4,950.00 <u>6,907.50</u>	
				<u></u>	\$158,160.00
<u>Accommodation</u>					7,413.39
Food					8,876.23
<u>Transportation</u>					
Truck Rental Fuel Airfare	l			\$10,221.70 5,300.00 3,082.14	
Helicopter				2,808.77	
					21,412.61
Analytical Costs					65,806.97
<u>Heavy Equipment</u>					61,510.89
<u>Geophysics</u>					2,313.00
<u>Freight</u>					1,646.90
<u>Communications</u>					3,576.74
Drafting and Reproc	duction				1,872.10
Miscellaneous Suppl	ies				5,250.00
			TOTAL F	PHASE 1:	<u>\$337.838.86</u>

Phase 2 (Drilling)

<u>Labour</u>

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Project Supervisor Project Geologist Geologist Field Assistant Drafting Office and Accountin <u>Accommodation</u>	R. Nichols L. Nagy T. Termuende A. Travis G. Nagy J. Termuende B. Whelan	8.0 d 37.5 d 23.0 d 25.0 d 25.0 d	lays @ lays @ lays @ lays @ lays @	\$425.00/day \$425.00/day \$350.00/day \$275.00/day \$250.00/day \$200.00/day \$240.00/day	\$ 5,100.00 3,400.00 13,125.00 6,325.00 6,250.00 5,000.00 960.00 <u>3,200.00</u>	\$ 43,360.00 1,640.72
Food						2,220.09
<u>Transportation</u>						
Truck Rental Fuel Airfare Helicopter					\$ 2,251.80 1,200.00 673.17 <u>4,077.06</u>	8,202.03
<u>Heavy Equipment</u>						16,452.52
Drilling						118,562.76
Analytical Costs						6,615.14
<u>Freight</u>						953.59
Communications						187.30
Drafting and Reprod	uction					1,103.67
<u>Miscellaneous Suppli</u>	<u>es</u>					2,379.40
				TOTAL I	PHASE 2:	<u>\$201.677.22</u>
					Phase 1: Phase 2:	\$337,838.86 <u>\$201,677.22</u>

GRAND TOTAL: \$539.516.08

APPENDIX B

Drill Logs

Keewatin Engineering Inc.

ABBREVIATION KEY TO DIAMOND DRILL LOGS

Ру	=	pyrite
Ga	=	galena
Sp	=	sphalerite
As	=	arsenopyrite
Ank	=	ankerite
Sid	=	siderite
qtz/qz	=	quartz
Ba	Ξ	barite
Ро	=	pyrrhotite

Note: all core angle measurements taken relative to core axis.

Keewatin Engineering Inc.

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LOCATIO	N: Jewe	Hery shop						HOLE !	NO.: DDH-	89-1	PAGE	NO.: 1 of 5.
	235°	ELEV.: 1395 m						PROPE	RTY: Craz	e Creek		
INCLINA STARTED COMPLE PURPOSE CORE RE): 02/11/8 FED: 03/ S: Define j	CORE SIZE: BGM METERAGE AZI 19 (11/89 ewellery shop mineralization	SURV IMUTH IN(CORR.II	NCLIN.		LOGGE DATE L DRILLI	NO.: DBY: 330N DBY: T. 1 OGGED: (NG CO.: F EDBY: Eco	03/11/89 Faicon		
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	РЪ	Zn
0.0	6.1	Casing/Overburden										
6.1	15.4	 Interbanded Sericite Schist & Quartzite light grey colouration overall moderately hard brittle (6) mm-scale white rounded blebs throughout approximately 30% ankerite porphyroblasts (hardness approximately 5) foliation weakly defined, oriented 60° core 1 - 2 cm qtz ± ank. stringers cut foliation spaced approximately 30 cm, oriented 40 - 50° to core, some drusy textures slickensides on foliations/fracture surfaces 10.6 to 11.8 - weakly min'zd. ankerite qtz vein rusty weathering, vuggy 30% ankerite/siderite trace Ga. Py. 14.8 to 15.0 - Fault alternation zone weathered garnets in zone as rusty red spots intense crenulated foliation 	79051 79052 79053 79054 79055 79056 79057	6.1 7.6 9.1 10.6 11.8 13.3 14.8	7.6 9.1 10.6 11.8 13.3 14.8 15.4	1.5 m 1.5 m 1.5 m 1.2 m 1.5 m 0.6 m	10 15 5 40 10 5 5	.4 .4 .6 .4 .4 .6	35 50 60 55 50 55 80	15 21 23 31 21 66 70	16 14 4 14 2 10 2	36 66 39 36 20 79 80

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HOLE NO.: DDH-89-1 P.

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PAGE NO.: 2 of 5.

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From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Za
15.4	34.7	Sericite Schist	79058	15.4	16.9	1.5 m	10	.2	60	31	2	23
	0	- waxy green bands throughout interval	79059	16.9	18.4	1.5 m	5	.2	30	45	2	30
		- alternation appears to weaken downhole	79060	18.4	19.9	1.5 m	5	<.2	20	15	2	15
		- foliation well defined, oriented 35° to core	79061	19. 9	21.4	1.5 m	10	.4	95	32	18	44
		- 20-30% qtz. throughout as 5 - 10 cm discordant bands	79062	21.4	22.0	0.6 m	(17.23)	4.6	(2.13)	8	204	15
		oriented 20 - 40° to core	79063	22.0	23.5	1.5 m	30	.2	330	21	8	58
		- gradational contacts	79064	23.5	25.1	1.6 m	60	.4	105	22	104	46
		- 1 - 2% py as mm-scale euhedral crystals along foliation	79065	25.1	26.7	1.6 m	150	.4	160	11	32	19
		planes	79066	26.7	28.1	1.4 m	(.19)	.8	165	15	138	122
		- slickes on foliation planes	79067	28.1	29.9	1.8 m	(.80)	1.2	610	12	186	177
		- 5 - 10% ankerite porphyroblasts oriented parallel to foliation	79068	29.9	30.3	0.4 m	(<.03)	.4	200	15	62	55
		- minor patchy grey-white qtz-rich intervals over 10 cm	79069	30.3	31.3	1.0 m	(.90)	7.6	3130	10	682	25
		- micaceous growths on some fracture surfaces	79070	31.3	32.9	1.6 m	(.09)	.6	370	18	64	49
		- qtz veins cut sericite-altered bands	79071	32.9	33.2	0.3 m	(.97)	.4	830	10	54	25
		21.4 to 22.0 - mineralized qtz. vein	79072	33.2	34.7	1.5 m	(.03)	.4	115	20	40	54
		 - 5% As, 5% Py as cm-scale euhedral crystals, occasionally displaying later fracturing, infilled by qtz. - ankerite stringers throughout - vein contacts 45° to core 										
		- some rusty weathering										
		26.7 to 29.9 - weakly mineralized, qtz rich interval										
		- 60% quartz overall, with 1% Ga., Py as 1 - 2 mm euhedral crystals										
		- 5-10% siderite/ankerite as mm-wide stringers within quartz										
		- vein contacts 40 - 60°										
		- some limonitic infilling of cavities										
		30.3 to 31.3 - mineralized quartz vein										
		- 80% qtz. over interval with 1 - 5 cm										
		- 2-5 cm bands of wallrock material within vein										
		- vein contacts at 45° to core										
		- mineralogy consists of 5% As., 5% Ga., 10% Py., as euhedral crystals or fine grained stringers										
		- sulphides weakly appear to be shattered in place										
		32.9 - 33.2 - mineralized qtz. vein										
		- 10% Py.										

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RILL	HOLE	LOG						HOLE	NO.: DDH-8	9-1	PAGE	NO.: 3 of
From	То	Description	Sample	From	To	Length	Au	Ag	As	Cu	Pb	Zn
34.7	39.9	Well Mineralized Quartz Viens	79073	34.7	35.7	1.0 m	(34)	(97.6)	150	12	(5.08)	32
	57.5	- four distinct qtz. veins from .30 - 2.3 m. wide, displaying Py.,	79074	35.7	36.7	1.0 m	(7.92)	(76.2)	(2.55)	9	(2.15)	29
		Ga., Sp., As in clusters up to 25% over .5 m	79075	36.7	37.4	0.7 m	(1.78)	3.8	1740	10	860	39
		- 10% Py., 3% Ga., 3% As., 2% Sp., over entire interval	79076	37.4	39.1	1.7 m	(13.57)	13.0	(1.01)	11	(.19)	37
		 sulphides occur as coarse, euhedral crystals, or as fine grained stringers pyrite roseites up to 1 cm in dia. locally slicks on foliation planes of wallrock fragments 5 - 10% ank/sid in qtz. material drusy textures locally over 5 cm widths 34.7 to 35.7 - 75% qtz. as 3 - 10 cm min'zd bands, up to 10% Ga. over 10 cm 36.7 to 37.4 - Bull Quartz mikly white colouration, < 3% Py., predominantly located near vein contacts tr. As. as coarse crystals 37.4 to 39.1 - py-rich qtz. vein single vein with <5% wallrock fragments 20 - 30% Py., 2-3% Ga., tr. As., Sp. rusty fracture surfaces drusy textures locally 	79077	39.1	39.9	0.8 m	(.54)	2.8	1300	21	564	37
39.9		- 45° contacts Sericitic Schist with Interbedded Ouartzite	79078	39.9	41.4	1.5 m	(.08)	.6	255	24	70	38
9.9	44.4	- as 15.4 - 31.8 (waxy green colouration, foliation well defined	79078	39.9 41.4	41.4	1.5 m 1.8 m	65	.4	70	28	56	38
		(55° to core), silicified near lower contact over 30 cm, gradational contacts)	79080	43.2	44.4	1.2 m	20	.4	45	25	28	62
4.4	47.8	Phyillitic Pelite	79081	44.0	45.0	1.0 m	10	.2	15	8	6	17
		- spotted texture consisting of preferrentially oriented 2 -	79082	45.0	46.5	1.5 m	20	.2	30	47	20	76
		4 mm white, rounded crystals parallel to foliation, possible retrograde, 15% composition overall, foliation well defined, oriented 35 - 55° to core	79083	46.5	47.8	1.3 m	105	.4	90	45	6	74
		oriented 35 - 55° to core 2 - 3% By as elemented crustely parallel to foliation										

- 2 - 3% Py as elongate crystals parallel to foliation

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RILL	HOLE	LOG						HOLE N	0.: DDH-	89-1	PAGE	NO.: 4 of
From	To	Description	Sample	From	То	Length	Au	Ag	As	Cu	РЪ	Zn
		 micaceous growths on fracture surfaces slicks on some foliation planes crenulations folds present with amp 5 cm wavelength 5 cm 										
		44.4 to 45.0 - Ankerite Quartz Vein - 10% Ank/Sid - 10% wallrock fragments - no visible sulphides 45.4 - Fault? - rubble, clay material over 10 cm										
47.8	50.6	 Weakly Graphitic Pelite foliation well defined at top of interval, oriented 40°, becomeing irregular, whispy and poorly defined downhole tan coloured ankerite porphyroblasts up to .5 cm throughout with no preferred orientation soapy, waxy appearance to dry surfaces minor crackle texture locally, weakly calcareous 	79084 79085	47.8 49.3	49.3 50.6	1.5 m 1.3 m	5 5	.6 .4	45 65	9 28	2 16	28 33
50.6	59.1	 Interbanded Sericite Schist and Quartzite alteration appears limited to schist, with suggested relict bedding 90° to core ankerite porphyroblasts locally within schist foliation well defined oriented 45° to core waxy green colouration overall very similar in appearance to 6.1 - 15.4 m and 39.9 - 44.4 m quartzite bands 20 - 40 cm wide, gradational contacts 	79086 79087 79088 79089 79090 79091	50.6 52.1 53.6 55.1 56.6 58.1	52.1 53.6 55.1 56.6 58.1 59.1	1.5 m 1.5 m 1.5 m 1.5 m 1.5 m 1.0 m	5 5 5 5 5 5	.2 .4 .2 .4 <.2 .4 <.2 .4	30 40 20 20 35 90	30 29 36 32 39 21	6 42 10 26 16 112	54 48 135 80 112 19
	59.1	End of Hole										

Drill Hole Summary

0.0 6.1 6.1

casing/overburden interbanded sericite schist and quartzite 10.6 - 11.8 - weakly minz'd ankeritic quartz vein 15.4

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RILL	HOLE	LOG						HOLE	NO.: DDH-	89-1	PAGE	NO.: 5 of
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		14.8 - 15.0 - fault/alteration zone										
15.4	34.7	serictie schist										
		21.4 - 22.0 - mineralized quartz vein										
		26.7 - 29.9 - weakly min'zd quartz vein										
34.7	39.9	well mineralized quartz veins										
		34.7 - 35.7 - vein										
		36.7 - 39.1 - vein										
39.9	44.4	sericite schist with interbanded quartzite										
44.4	47.8	phyllitic pelite										
		44.4 - 45.0 - ankeritic quartz vein										
		45.4 - Fault?										
47.8	50.6	weakly graphitic pelite										
50.6	59.1	interbanded sericite schist and quartzite										
	59.1	End of hole										

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LOCATIO)N: Jewell	ry Shop						HOLE N	O.: 89-2		PAGE 1	NO.: 1 of 7.
AZIM.: INCLINA	235 TION: 60	ELEV.: 1395 LENGTH: 76.7 m	SURV	FVS				PROPER	Craz	e Creek		
STARTEI COMPLE PURPOSI): 03/11/89 TED: 04/1	CORE SIZE: BGM METERAGE A (1/89 ewellry Shop Mineralization	ZIMUTH IN		CORR.IN	CLIN.		SECTIO LOGGEI DATE LA DRILLIN	NO.: Chap N: 335N D BY: A. 1 OGGED: (NG CO.: F D BY: Eco	Travis 14/11/89 Falcon		
From	То	Description	Sample	From	To	Length	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
0.0	5.2 m	Casing/Overburden										
5.2	21.1 m	Interbanded Sericite Schist and Quartzite	79092	5.2	6.8	1.6 m	<5	.4	35	15	34	47
		- light grey/green colour	79093	6.8 m	8.2 m	1.4 m	5	.2	35	22	14	70
		- varies from soft sericite layers to hard quartzite layers	79094	8.2 m	9.7	1.5 m	5	.2	15	19	22	84
		- mm scale white, soft	79095	9.7 m	10.8 m	1.1 m	5	<.2	35	17	24	80
		- ankerite porphyroblasts throughout (approximately 25%)	79096	10.8 m	11.7 m	0.9 m	10	.2	55	25	16	74
		- foliation poorly defined, oriented at 45° to core	79097	11.7 m	12.7 m	1.0 m	5	.2	20	7	10	21
		- 4 - 10 cm quartz ± ankeritic stringers cut core at 40° -	79098	12.7	13.6	0.9	5	.2	45	15	10	33
		60°	79099	13.6	14.6	1.0	<5	<.2	60	14	16	38
		- 1 cm qtz stringers also cut core at 10° - 20°	79100	14.6	15.6	1.0	5	<.2	70	38	8	38
		- slickensided clay alt'd on foliation	79951	15.6	16.7	1.2	5	.4	60	95	68	85
		- some drusy textures	79952	16.7	18.2	1.5	10	.2	65	106	8	80
		<u>5.9 m Weakly Mineralized Qtz ± Ankerite Vein</u>	79953	18.2	19.7	1.5	<5	.2	50	75	8	96
		 3 cm wide qtz ±ankerite vein cuts core at 40° trace galena 10.8 m - 11.7 m_Dark Green Sericite Schist Bands 	79954	19.7	21.1	1.4	5	.4	60	86	12	68
		- 10 cm and 40 cm wide										
		 ro cm and so cm whee trace to 1% pyrite as euhedral cubes (mm scale) some graphite? 117 m 211 m Ovarta Valuad Seriaita Schirt 										

<u>11.7 m - 21.1 m Quartz Veined Sericite Schist</u> - minor barite and ankerite - foliation approximately 45° to core

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DRILL	HOLE	LOG						HOLE N	O.: 89-2		PAGE NO).: 2 of 7
From	То	Description	Sample	From	To	Length	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Ln (ppm)
		 semi concordant smoky quartz veinlets (max 1 cm) discordant milky white quartz veins (1 - 12 cm) in some places shows barite in vugs white blocky fragments in milky white vein. hardness 5 - 6, feldspar? in places 5 - 10% of vein trace pyrite; concentrated along vein selvages and associated with darker green sericite schist gossanous halo's (max 10 cm) surrounding qtz/ankeritic veins crenulated foliation in places due to veining towards bottom of hole more ankeritic/alteration bands 										
21.1	38.0	Sericite Schist	79955	21.1	22.0	0.9	10	.2	35	52	12	58
		- light green waxy, well foliated bands approximately 2 mm	79956	22.0	23.6	1.6	10	<.2	55	16	18	28
		wide	79957	23.6	25.0	1.4	5	.2	110	8	26	59
		- foliation 35° - 45° to core	79958	25.0	26.5	1.5	5	.2	70	21	14	34
		- foliation can be crenulated	79959	26.5	28.0	1.5	<5	.2	25	28	14	55
		- discordant quartz veins cut core at 20°	79960	28.0	29.6	1.6	10	.2	35	25	12	69
		- near top of section heavily silicified zone over 1.5 m	79961	29.6	31.0	1.4	10	.2	265	68	8	98
		 in places silicification masks foliation 	79962	31.0	32.6	1.6	10	.2	365	36	14	43
		- up to 2 m wide fault/alteration zone noted	79963	32.6	34.1	1.5	30	<.2	100	24	12	68
		 - 1 - 3% disseminated euhedral pyrite (mm scale) 	79964	34.1	35.4	1.3	5	<.2	55	36	8	79
		22.0 - 23.6 quartz Veined Sericite Schist	79965	35.4	36.4	1.0	10	.2	155	50	20	48
		 quartz veins (0.5 - 2 cm) cut core at 20° -> 90° milky white, approximately 50% of core pale green sericite schist in places well foliated 	79966	36.4	38.0	1.6	30	.2	145	14	16	46
		 white ankerite porphyroblasts (mm scale) in sericite schist (10%) 										

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- trace pyrite as euhedral cubes (mm scale) along vein selvages

 $- \leq 1\%$ Arsenopyrite noted as fine grained blebs in qtz veins

23.6 - 26.5 Fault/Altered Zone

- rusty weathered, pale green sericite schist - rusty red spots, ankerite porphyroblasts

DRILL	HOLE	LOG						HOLE N	O.: 89-2		PAGE N	0.: 3 of
From	То	Description	Sample	From	To	Length	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppn
		- very broken up										
		- in fresher pieces 1 - 3% disseminated pyrite										
		- foliation 45° to core										
		- small blebs or eyes of qtz noted										
		26.5 - 28.0 Qtz Veined Sericite Schist										
		- similar to section 22.0 - 23.6										
		- no arsenopyrite noted										
		- not as much qtz veining										
		30.2 - 31.0 Fault/Altered Zone										
		- similar to section 23.6 - 26.5										
		- slightly lighter brown colour										
		35.4 - 38.0 Altered Sericite Schist										
		- gossanous bands up to 30 cm wide										
		 rusty red spots, ankerite porphyroblasts alt'd to clay along foliations 										
		- probable fault zone										
		- probable ladit Zolie										
38.0	51.4	Mineralized Quartz Veins	79967	38.0	39.0	1.0	(.42)	.4	310	10	40	38
		- eight distinct quartz veins which cut core at 25° - 30°	79968	39.0	40.3	1.3	(.88)	.4	435	20	62	51
		- milky white up to 50 cm wide	79969	40.3	41.7	1.4	(.39)	.4	1015	7	28	22
		- 1 - 3% pyrite	799 70	41.7	42.3	0.6	(2.11)	.4	5225	4	34	11
		- trace arsenopyrite	79971	42.3	43.9	1.6	(.10)	.4	315	9	24	36
		- minor pyrthotite	79972	43.9	44.8	0.9	(3.19)	1.2	3200	4	38 40	28 51
		- interbedded with garnetiferous light green silicified	79973	44.8	46.3	1.5	(.25)	.2	505	14	40 62	55
		sericite schist and darker almost graphitic schist	79974	46.3	47.7	1.4	(1.34)	.4	2425 200	11 20	40	57
		38.0 - 41.7 Qtz Veined Schist	79975	47.7	49.0	1.3	(.08)	.4	125	20	34	48
		- maximum 10 cm wide quartz veins	79976 79977	49.0 50.3	50.3 51.4	1.3 1.1	(<.03) (1.94)	.2 .4	485	6	28	24
		- 5% pyrite, very minor arsenopyrite	19911	50.5	51.4	1.1	(1.94)	.4	405	0	20	24
		41.7 - 42.3 Py, Aspy Qtz Vein - upper contact 10 ^o to core										
		- upper contact 10° to core										
		- 3 - 5% euhedral pyrite cubes (approximately 0.3 cm)										
		but cluster up to 1 cm										

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but cluster up to 1 cm
3% Arsenopyrite, especially near lower contact

DRILL	HOLE	LOG

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RILL	HOLE	LOG						HOLE N	O.: 89-2		PAGE NO).: 4 of
rom	То	Description	Sample	From	То	Length	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Ln (ppn
		42.7 - 43.9 Sericite Schist										
		- up to 30% white ankerite porphyroblasts (mm scale)										
		 small 10 cm bull qtz vein shows blocky fragments ? of ankerite (white-creamy colour) 										
		- trace pyrite										
		44.0 Qtz VEin										
		- 10 cm wide cuts core at 10°										
		- approximately 40% pyrite as euhedral cubes										
		44.5 - 44.8 Qtz Vein										
		- trace arsenopyrite in milky white qtz vein that cuts core at 55°										
		- minor pyrite at selvages										
		47.3 47.7 Qtz Vein										
		 broken up, difficult to distinguish if one vein or a series of smaller veins 										
		- <1% Arsenopyrite near upper contact										
		- 1% pyrite primarily along vein selvages										
		50.3 - 51.4 Qtz Veined Sericite Schist										
		- light green to dark green										
		- irregular milky white quartz veins (max 3 cm) that										
		generally cut core from 20° - 40°										
		- light green schist shows foliation at approximately 40°										
		to core, also shows ankerite porphyroblasts										
		- trace arsenopyrite noted near upper contact										
		- pyrite 3 - 5% as euhedral cubes, dominantly in schist										
		adjacent to veins										
1.4	67.6	Interbanded Sericite Schist and Quartzite	79978	51.4	52.9	1.5	140	.4	65	5	56	16
		- light grey/green colour	79979	52.9	53.4	1.5	95	.8	45	9	38	32
		- foliation 30° - 45° to core	79980	53.4	54.9	1.5	10	.6	45	6	320	22
		- upper and lower contacts with quartz veins noticeably	79981	54.9	56.4	1.5	15	.6	60 15	12	14 12	33 35
		darker	79982	56.4	57.9	1.5	5	.2	15 15	37 25	12	35 37
		- mm scale ankerite porphyroblasts that seems to be	79983	57.9	59.4	1.5	5 <5	.2 .6	15	25 26	44	36
		slightly larger than interval 5.2 m - 21.1 m,	79984	59.4	60.9 62.4	1.5 1.5	<5	.0	10	25	16	43
		approximately 30%	79985	60.9	02.4	1.5	5	.4	10	20	10	

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DRILL	HOLE	LOG						HOLE N	0.: 89-2		PAGE I	NO.: 5 of
From	Тө	Description	Sample	From	То	Length	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm
		- slickensides + clay alt'd on foliation	79986	62.4	64.0	1.6	5	.4	25 25 70	26 34 25	12	70
		- waxy appearance in places adjacent to quartz veins	79987	64.0	66.1	1.1	5	.4	25	34	14	122
		- concordant smoky grey quartz veins (max 1 cm) comprise up to 25% of core	79988	66.1	67.6	1.5	5	.4	70	25	14	48
		 white-creamy blocky ankerite comprise up to 10% of some qtz veins 										
		- 1% Pyrite										
		 63.1 Bull Quartz Vein non-mineralized 10 cm 10 - 15% Ankerite 										
67.6	71.4	Mineralized Quartz Vein	79989	67.6	68.8	1.2	5	1.2	25	41	92	19
07.0	71.4	- 75% Qtz ± Ankerite vein in banded sericite schist and	79990	68.8	70.1	1.3	10 5	<.2	5	20	8	9
		quartzite	79991	70.1	71.4	1.3	5	.4	15	54	12	42
		 up to 50% ankerite in qtz veins near lower contact 1 - 3% pyrite as euhedral cubes dominantly in vein selvages 1% Pyrrhotite in qtz ≤ ankerite veins vein contacts 20⁰ - 30⁰ to core foliation poor generally 40⁰ - 50⁰ to core 										
71.4	76.2	Interbanded Sericite Schist And quartzite	79992	71.4	73.1	1.7	5	.8	45	64	96	85
		- foliation approximately 30° to core	79993	73.1	74.4	1.3	5	.4	15	20 27	18	29
		- light green/grey colour - very similar to section 51.4 - 67.6	7994	74.4	76.2	1.8	5	.2	35	27	22	42
		- waxy green appearance especially near top of section										
		 ankerite porphyroblasts especially near top as white retrograde garnets approximately25% 										
		- 1% pyrrhotite + pyrite										
		72.2 m Mineralized Qtz Veinlets - 1 cm wide										
		- cuts core at 30 ⁰										

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DRILL	HOLE	LOG						HOLE NO.: 89-2	PAGE NO.: 6 of 7.
From	То	Description	Sample	From	То	Length	Au (ppb)	Ag (ppm) As (ppm) Cu (ppr	n) Pb (ppm) Zn (ppm)
		 73.1 - 75.3 Silicified Sericite Schist small qtz veins (max 2 cm) and qtz flooding of sericite schist 1% Pyrite dominantly along vein selvages and trace pyrrhotite Note only 20% recovery from 74.4 - 75.3 							

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76.2 End of Hole

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From	То	Description	Sample	From	То	Length	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
		Drill Hole Summary										
0.0	5.2 m	Casing/Overburden										
5.2	21.1 m	Interhanded Sericite Schist and Quartzite 5.9 m - weakly minz'd Qz/Ank Vein - tr ga 10.8 - 11.7 m Dark Green Sericite Schist Bands 11.7 - 21.1 m Qz ± Ba ± Ank Veined Sericite Schist										
21.1	38.0 m	Sericite Schist 22.0 - 23.6 m Qz Veined Sericite Schist 23.6 - 26.5 m Fault/Alteration Zone 26.5 - 28.6 m Qz Veined Sericite Schist 30.2 - 31.0 m Fault/Alteration Zone 35.4 - 38.0 m Altered Sericite Schist										
38.0	51.4 m	Mineralized Quartz VEins 38.0 - 41.7 m - Qz veined Sericite Schist 41.7 - 42.3 m - Py, As, Qz Veins 42.7 - 43.9 Garnetiferous Sericite Schist 44.0 m 10 cm Qz Vein 44.5 - 44.8 - Qz Vein 47.3 - 47.7 m - Qz Vein 50.3 - 51.4 m - Qz Veined Sericite Schist										
51.4	67.6 m	Interbanded Sericite Schist and Quartzite 63.1 m - Bull Qtz Vein (10 cm)										
67.6	71.4 m	Mineralized Quartz Vein										
71.4	76.2	Interbanded Sericite Schist and Quartzite 72.2 m - Mineralized Qz Veinlets 73.1 - 75.3 Silicified Sericite Schist (74.4 m - 75.3 - 80% core loss)										
76.2	E.O.H.											

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HOLE NO.: 89-2

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PAGE NO.: 7 of 7.

KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

D.D.H. #: LK 89-2

RECOVERY: 85% DATE: 05/11/89

Marked	Measured	Core		Marked	Measured	Core
Interval	Interval	Loss		Interval	Interval	Loss
(5.2 - 8.2) 3.0	2.9	3%				
(8.2 - 11.3) 3.1 (11.3 - 14.3) 3.0	3.0 3.0	3% 0%				
(14.3 - 17.4) 3.1	2.8	10%				
(17.4 - 20.4) 3.0	2.8	7%				
(20.4 - 23.5) 3.1	2.8	10%				
(23.5 - 26.5) 3.0 (26.5 - 29.6) 3.1	1.7 2.5	43% 19%				
(29.6 - 32.6) 3.0	2.8	7%				
(32.6 - 35.7) 3.1	2.9	6%				
(35.7 - 38.7) 3.0 (38.7 - 41.7) 3.0	2.7 2.8	10% 7%				
(41.7 - 44.8) 3.1	3.1	0%				
(44.8 - 47.9) 3.1	3.0	3%				
(47.9 - 50.9) 3.0	2.9 3.0	3%				
(50.9 - 53.9) 3.0 (53.9 - 57.0) 3.1	3.1	0% 0%				
(57.0 - 60.0) 3.0	3.0	0%				
(60.0 - 63.1) 3.1	3.0	3%				
(63.1 - 66.1) 3.0 (66.1 - 69.2) 3.1	1.3 3.1	57% 0%				
(69.2 - 72.2) 3.0	3.0	0%				
(72.2 - 75.3) 3.1	2.5	19%				
(75.3 - 76.2) 0.9	0.7	12%				
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LOCATION: AZIM.: 235° INCLINATION: STARTED: 0 COMPLETED: PURPOSE: De CORE RECOVI	: 45 4/11/89 05/11/89 fine Jewell	ELEV.: 1392 m LENGTH: 51.5 CORE SIZE: BGM METERAGE	SURVI AZIMUTH INC		CORR.I	NCLIN.		PROPER CLAIM 1 SECTIO LOGGEI DATE LA DRILLIM	O.: 89-3 RTY: Craze NO.: Chap N: 310N D BY: A. T OGGED: 0 NG CO.: F D BY: Eco	out Option Travis 05/11/89 Talcon	PAGE	NO.: 1 of 4.
From To	0	Description	Sample	From	То	Length	Au (g/t)	Ag	As	Cu	РЬ	Zn
	3.3 m in 	asing/Overburden terbanded Scricite Schist and Quartzite more siliceous near top of section light green/grey colour first 4 m oxidized bands showing rusty red spots of ankerite porphyroblasts (approximately 25%) in fresher parts garnets are soft, white approximately 2 mm quartzite approximately 20% of core foliation is crenulated in places but generally cuts core a 40° - 50° <1% pyrite as mm sized euhedral cubes 1 - 8.8 m 33% recovery 8 - 10.9 m Oxidized Qtz Veined Sericite Schist - fractured, oxidized ±ankerite - 70% recovery - two 0.5 m bands of veining at start and end of interval		6.1 8.8 9.9 10.9 12.1	8.8 9.9 10.9 12.1 13.3	2.7 1.1 1.0 1.2 1.2	<5 <5 35 <5 <5	2 2 2 2 2 2	5 85 95 90 25	28 21 11 46 27	38 38 10 18 14	61 107 42 83 77

DRILL	HOLE L	OG						HOLE N	IO.: 89-3		PAGE	NO.: 2 of
From	То	Description	Sample	From	То	Length	Au (g/t)	Ag	As	Си	Pb	Zn
13.3	16.8 m	Silicified Sericite Schist ± Graphite - noticeable increase in hardness and in colour to a dark	34651 34652	13.3 14.8	14.8 15.8	1.5 1.0	<5 (<.03)	.6	35	21	54	52
		 influctation interface in matchess and in corota to a dark green, almost black due to graphite slickensides and clay alt'd on foliation foliation 50 - 55° to core white ankerite porphyroblasts comprise approximately 25% of core (mm scale) 1% pyrite as euhedral cubes (mm) small qtz veins (<1 cm) comprising <1% of section contain 1 - 3% pyrite and trace galena few small bands of graphite rich schist with apparent concentration of pyrite 	34653	15.8	16.8	1.0	<5	.4	85	13	50	49
16.8	18.9 m	 Mineralized Qtz ± Ankerite VEins a series of smaller qtz ±ankerite veins, maximum 8 cm wide concentrated in upper 1 m and lower 0.5 m of section they generally cut core at 30° - 40° 30% wall rock of sericite schist with minor graphite giving a dark green colour 3 - 5% pyrite, trace pyrrhotite, galena ankerite as white-creamy blocky fragments in quartz veins (up to 25%) 18.2 Massive Pyrite band 1 cm wide cut core at approximately 90° 	34654 34655	16.8 17.8	17.8 18.9	1.0 1.1	(.47) (.37)	.8 .6	895 290	41 45	274 86	186 63
18.9	23.9	Silicified Sericite Schist ± Graphite - light grey/green with dark green to black bands (0.5 cm) - noticeable increase in graphite adjacent to qtz ± ankerite (<5%) and down hole - graphitic bands cut core at 70° - white, ankerite porphyroblasts comprise 20% of core - qtz augens (mm scale) 10%	34656 34657 34658	18.9 20.2 21.6	20.2 21.6 23.9	1.3 1.4 1.3	(<.03) <5 <5	.2 .2 .4	85 30 60	26 22 30	92 4 14	76 31 50

- qtz augens (mm scale) 10%

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RILL	HOLE	LOG						HOLE N	iO.: 89-3		PAGE	NO.: 3 of 4
From	То	Description	Sample	From	То	Length	Au (g/t)	Ag	As	Cu	Pb	Zn
		- 1% pyrite primarily as euhedral cubes disseminated throughout schist and concentrated along vein selvages										
23.9	26.0	Qtz Veined Sericite Schist	34659	23.9	24.5	0.6	15	.6	160	7	8	46
		 two distinct bands of qtz veining 40 and 30 cm respectively approximately 10% ankerite as white-creamy coloured blocks (approximately 2 mm) schist is garnetiferous, pale green (no graphite) ankerite porphyroblasts (25%) slickensides clay alt'd on foliation 1 - 3% pyrite in qtz ±ankerite veins, trace arsenopyrite 	34660	24.5	26.0	1.5	10	.4	140	10	18	32
					07.5		-6	•	70	10	26	49
26.0	51.5	Interbanded Sericite Schist and Quartzite	34661	26.0	27.5	1.5	<5	.2	70 75	19 60	20 12	45 97
		- pale green/grey	34662	27.5	29.0	1.5	10	.4	75	- 0 0 9	2	43
		- not as well foliated as other intervals (60° - 80° to core)	34663	29.0	30.5	1.5	<5	.2	80 25		34	43 76
		- cut by fault/alteration zone at 37 m	34664	30.5	32.0	1.5	<5	.4	25	38	24	67
		- few graphitic bands (approximately 1 cm)	34665	32.0	33.5	1.5	<5	.4	25	33	24 26	61
		- few small (scale 2 cm) qtz veins \pm ankerite, one contains	34666	33.5	35.2	1.7	<5	.4	30	25 43	28 12	77
		1 - 2% galena, trace pyrite	34667	35.2	36.8	1.6	<5	.6	30 55		2	45
		- silicified near upper contact	34668	36.8	38.1	1.3	5	.2		12 26	2	45 77
		- small non-mineralized smoky grey qtz veins concordant to	34669	38.1	39.5	1.4	<5	.4	40 25	20 17	2	54
		bedding	34670	39.5	42.4	2.9	<5	.2	6	17	4	74
		- <1% Pyrite as euhedral cubes		only 35% re		1.5	-5	2	<5	27	2	90
		- darker green to black towards end	34671 34672	42.4 43.9	43.9 45.4	1.5 1.5	<5 <5	.2 .4	15	65	10	96
		- also has a waxy appearance towards the end		43.9	45.4 46.9	1.5	<5	.4	10	60	2	92
		36.8 - 38.1 Fault/Altered Qtz Veined Zone	34673				<5	.4	<5	31	4	70
		- fault gouge	34674	46.9	48.4	1.5	<5	.2	25	47	2	102
		- schist is a paler green	34675 34676	48.4 49.1	49.1 50.0	0.7 0.9	<5 <5	.4 .4	20	62	<2	87
		- 10 cm wide qtz, ankerite (15%) cuts core at 30°			50.0 51.5	0.9	<5	.4	25	26	8	70
		 trace galena near upper contact 20 cm qtz, ankerite vein cuts core (40 - 60°), no subsider 	34677	50.0	51.5	1.3	<2	•4	4	20	U	10

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DRILL	HOLE L	.OG						HOLE N	iO.: 89-3		PAGE	NO.: 4 of 4
From	То	Description	Sample	From	То	Length	Au (g/t)	Ag	As	Cu	Pb	Zn
		 38.1 - 39.5 qtz Veined Sericite Schist smoky quartz veins (<1 cm) give this section a greyer appearance probably just soaking from above qtz vein zone 43.9 - 49.1 Qtz Veined Sericite Schist milky white qtz, maximum 2 cm wide pale green sericite schist bands (<1 cm) cut core at 50° - 60° but can be quite crenulated by qtz veins white blocky ankerite in qtz veins (approximately 10%) white ankerite porphyroblasts seem to be slightly 										
	51.5	smaller - <1% pyrite E.O.H.										
		Drill Hole Summary										
0.0	6.1 m	•										
6.1	13.3 m	Interbanded Sericite Schist and quartzite 8.8 - 10.9 m Oxidized Qtz Veined Sericite Schist										

- 16.8 m Mineralized Qtz ±Ankerite Vein 18.2 m massive pyrite band (1 cm) 23.9 m Silicified Sericite Schist ±Graphite 13.3 18.9 23.9 26.0 m Qtz Veined Sericite Schist
- 26.0 51.5 m Interbanded Sericite Schist and Quartzite
 - 36.8 38.1 Fault/Altered Qtz Vein Zone

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- 38.1 39.5 Qtz Veined Sericite Schist 43.9 49.1 Qtz Veined Sericite Schist

KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

D.D.H. #:89-3

RECOVERY: 83% DATE: 05/11/89

Marked Interval	Measured Interval	Core Loss		Marked Interval	Measured Interval	Core Los
	Interval					
(6.1 - 8.8) 2.7	0.9	1.8 m				
(8.8 - 11.9) 3.1	2.7	0.4 m				
11.9 - 14.9) 3.0 14.9 - 18.0) 3.1	3.0 3.1					
(18.0 - 21.0) 3.0	3.0					
(21.0 - 24.1) 3.1 (24.1 - 27.1) 3.0	3.1 3.0				[[
(27.1 - 30.2) 3.1 (30.2 - 33.2) 3.0	2.9	0.2 m				
(33.2 - 36.3) 3.1	3.0 3.1					
36.3 - 39.3) 3.0 39.3 - 45.4) 6.1	3.0 4.2	1.9 m				
45.4 - 48.5) 3.1	3.1	1.9 Ш				
(48.5 - 51.5) 3.0 51.5 EOH	3.0				1 1	
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LOCATIO	N: Jewell	ry Shop						HOLE N	iO.: 89-4		PAGE	NO.: 1 of 7.
AZIM.: INCLINA	235 TION: -60	ELEV.: 1392 m LENGTH: 60.7 m	SURV	rve				PROPE	RTY: Craze	Creek		
STARTEI COMPLE PURPOSI): 05/11/89 TED: 06/1	CORE SIZE: BGM METERAGE 60.7 1/89 wellry shop mineralization at depth	AZIMUTH ING		i CORR.II	NCLIN.		SECTIO LOGGE DATE L DRILLI	NO.: Chap N: 310N D BY: A. T OGGED: 0 NG CO.: F D BY: Eco	'ravis 5-06/11/89 Blcon		
From	То	Description	Sample	From	То	Length	Au 	Ag ppm (g/t)	As ppm (%)	Си ррт (%)	Pb ppm (%)	Zn ppm (%)
0.0	2.1 m	Casing/Overburden										
2.1	10.8 m	Interbanded Sericite Schist and Quartzite	34678	2.1	3.7	1.6	15	30	10	16	4	30
		- light grey/green with a few black graphitic bands	34679	3.7	5.2	1.5	5	.8	5	14	2	34
		- foliation cuts core at 35° - 45°	34680	5.2	6.5	1.3	5	.2	5	19	32	51
		- more silicified near top of section	34681	6.5	7.8	1.3	160	.2	5	6	4	48
		- few qtz ±ankerite non-mineralized veins cut core at 45°	34682	7.8	9.6	1.8	10	<.2	10	12	10	70
		 trace pyrite fewer porphyroblasts than in other sections (15 - 20%), more corroded 	34683	9.6	10.8	1.2	30	<.2	15	26	24	66
10.8	12.7 m	Gossanous Fault/Altered Zone	34684	10.8	11.9	1.1	15	.2	110	9	18	59
		 core very broken up clay alt'd on fractures rusty red spots of ankerite porphyroblasts white quartz augens (approximately 10%) 11.9 m Qtz Vein 10 cm non-mineralized contracts (15% to core) 	34685	11.9	12.7	0.8	40	<.2	170	<1	2	57

- gouge on contacts (15° to core)

From	То	Description	Sample	From	То	Length	Au	Ag As		Cu	Pb	Zn
							pph(g/t)	<u>ppm (g/t)</u>	<u>. ppm (%)</u>	<u>ppm (%)</u>	<u>ppm (%)</u>	<u>ppm (%)</u>
12.7	13.5	Oxidized Quartz Veins - upper 40 cm quartz vein with rusty pits and fractures - trace pyrite, arsenopyrite - foliation between veins 30° to core - lower 20 cm, qtz veins (max 3 cm) cut core at 35°	34685A	12.7	13.5	0.8	10	<.2	65	9	б	30
13.5	16.8	 Silicified Sericite Schist and Quartzite quartz eyes up to 3 mm especially towards centre of section (25%) bull quartz veins (max 3 cm) cut core at approximately 45° white ankerite porphyroblasts (approximately 2 mm) up to 25% at upper and lower contacts <1% pyrite as euhedral cubes (mm scale) 	34686 34687	13.5 15.2	15.2 16.8	1.7 1.6	15 <5	.2 <.2	50 65	1 14	2 2	38 37
16.8	18.0	 Silicified Sericite Schist and Quartzite ± Graphite becomes increasingly graphitic towards lower contact small fault cuts core at 25° at upper contact foliation cuts core at 45°- 60° some crenulation of foliation 1 - 3% pyrite, seems to be associated with more graphitic bands 	34688	16.8	18.0	1.2	(<.01)	.2	115	23	52	53
18.0	30.2	 Mineralized Quartz Veined Sericite Schist ± Graphite colour pale green to dark green/black seven quartz ±ankerite veins (10 cm - 40 cm) zones between veins generally have 1 - 3 cm qtz ± ankerite veins with 1 - 3% py the veins cut core at 30 - 40° 3 - 5% pyrite in larger quartz ankerite vein, chiefly concentrated along selvages in the richer graphitic schist <1% Arsenopyrite trace galena 	34689 34690 34691 34692 34693 34694 34695 34696 34697 34698	18.0 18.4 18.9 19.2 20.2 21.0 21.9 22.6 24.1 24.5	18.4 18.9 19.2 20.2 21.0 21.9 22.6 24.1 24.5 25.5	0.4 0.5 0.3 1.0 0.8 0.9 0.7 1.5 0.4 1.0	(.66) (.24) (<.01) (.02) (.03) (.02) (3.38) (.03) (.02) (.02)	.4 .8 .2 .2 .2 <.2 <.2 <.2 <.2 <.2 <.2	560 110 195 100 100 55 105 15 20 35	7 12 8 8 8 17 14 14 6 34	92 94 48 30 30 34 60 10 30 16	64 81 43 42 42 43 32 23 25 39

RILL	HOLE	LOG						HOLE I		PAGE NO.: 3 of 7		
rom	То	Description	Sample	From	То	Length	Au pph (g/t)	Ag ppm (g/t)	As (%)	Cu ppm (%)	Pb (%)	Zn ppm (%)
		- schist can be quite graphitic in places (<1 cm bands)	34699	25.5	26.2	0.7	(<.01)	<.2	60	23	34	45
		- white ankerite porphyroblasts (mm scale) 25%	34700	26.2	26.8	0.6	(.02)	.2	45	13	24	37
		18.0 - 18.4 Mineralized Qtz Vein	34701	26.8	27.7	0.9	(<.01)	.2	35	6	8	22
		- 5 - 10% ankerite as white-creamy blocky crystals	34702	27.7	28.7	1.0	(<.01)	.6	35	7	152	108
		- 3 - 5% pyrite in graphite rich schist as euhedral crystals	34703	28.7	29.7	1.0	(.02)	.4	100	4	18	27
		as large as 0.5 cm	34704	29.7	30.2	0.5	(.54)	.2	270	1	2	15
		- <1% Aspy ass. with py					· · /					
		18.9 - 19.2 Mineralized Qtz Vein										
		- 5 - 10% ankerite										
		- 1% pyrite along selvages										
		- trace arsenopyrite?										
		20.2 - 21.0 Qtz Veined Sericite Schist										
		- silica flooding										
		- greyer looking quartz										
		- 1% pyrite										
		- quartz up to 60% of core as < 1 cm bands										
		21.9 - 22.6 Mineralized Otz Vein										
		- difficult to distinguish angle to core, probably faulted in										
		- heavily graphitic at both contacts										
		- 5% pyrite principally towards lower contact surrounding										
		3 cm X 4 cm graphitic rich schist in a cockcade fashion										
		- pyrite as euhedral cubes up to 1 cm										
		- trace galena										
		- 1 - 3% ankerite as white creamy blocks (approximately										
		0.5 cm)										
		- lower 30 cm non-mineralized qtz vein cuts core at										
		approximately 30°										
		- <1% pyrite along selvages										
		24.1 - 24.5 Qtz Vein										
		- upper contact missing (faulted in?)										
		- lower contact approximately 25° to core										
		- graphitic + sheared also at lower contact (fault?)										
		- <1% pyrite										

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From	То	Description	Sample	From	To	Length	Au pph_(g/t)	Ag ppm (g/t)	As ppm (%)	Cu ppm (%)	Pb 	Zn ppm_(%)
		 25.5 - 26.2 Qtz Veined Fault/Alteration Zone upper contact with pale green sericite schist (progressively lighter towards contact) lower 40 cm alt'd to clay (fault zone) quartz heavily sheared 10 - 15% ankerite noted in the fresher pieces only 1 - 3% pyrite noted, but difficult to distinguish if any other mineralization due to shearing 26.8 - 27.7 Qtz Veined Sericite Schist Quartzite four qtz veins (2 cm - 8 cm) cut core at 40° - 60° 5 - 10% ankerite along vein edges 1% pyrite in vein selvages 28.5 Qtz Vein 0.3 cm contains 3% galena on split surface 29.7 - 30.2 Mineralized Qtz Vein upper contact with graphite rich schist which cuts core at approximately 25° lower contact missing 5% pyrite chiefly at upper contact in 0.8 cm band trace arsenopyrite (in band) 1 - 3% ankerite up to 1 cm annealed grains 										
30.2	41.2	 Interbanded Sericite Schist + Quartzite light grey/green colour, some places waxy green appearance; particularly towards lower contact foliation cuts core at 45° - 55° white ankerite porphyroblasts in sericite schist (aligned with foliation) approximately 65% quartzite some quartzite bands up to 0.5 m unit gets progressively lighter down hole minor non-mineralized qtz ±ankerite veins cut core at 35° - 55° 	34705 34706 34707 34708 34709 34710 34711 34712 34713 34714	30.2 31.7 32.7 33.2 34.7 36.3 37.0 37.9 38.8 39.8	31.7 32.7 33.2 34.7 36.3 37.0 37.9 38.8 39.8 41.2	1.5 1.0 0.5 1.5 1.6 0.7 0.9 0.9 1.0 1.4	(.01) <5 <5 5 5 35 105 110 20 280	.2 .6 .2 .4 .6 .2 .4 .6 .4	55 105 260 90 50 55 20 10 10 10 15	18 2 25 7 9 8 9 <1 10 9	32 148 12 16 132 140 2 <2 2 2 24	50 112 41 47 52 36 45 8 16 27

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DRILL	HOLE	LOG						HOLE N	NO.:		PAGE I	NO.: 5 of
From	То	Description	Sample	From	То	Length	Au pph (g/t)	Ag npm (g/t)	As ppm (%)	Cu ppm (%)	Pb ppm (%)	Zn
		 1% pyrite trace galena on split surfaces 32.7 - 33.2 Fault/Altered Zone very broken up sericite schist alt'd to clay few small (1 cm) qtz veins cut core at approximately 50° 1 - 3% pyrite 										
		 37.0 - 38.8 Quartzite Rich Sericite Schist 80% quartzite light green colour trace galena, pyrrhotite in fine fractures 										
41.2	42.1	Pyrite Rich qtz Vein - approximately 20% pyrite in qtz vein - pyrite as massive bands up to 4 cm wide - 1% ankerite	34715	41.2	42.1	0.9	135	1.4	180	21	12	15
42.1	53.0	Interbanded Sericite Schist + Quartzite - green/grey in colour, waxy green towards middle of	34716 34717	42.1 42.6	42.6 42.9	0.5 0.3	80 35	1.2 4.0	15 145	72 33	4 16	57 46
		interval - particularly well foliated toward middle, where it cuts	34718 34719	42.9 43.2	43.2 44.7	0.3 1.5	40 60	3.8 .2	15 40	71 49	12 <2	59 52
		core at 45° - 55°	34720	44.7	46.2	1.5	20	.2	20 20	76 51	8 2	81 104
		 silicified near upper contact white ankerite porphyroblasts up to 0.5 cm 	34721 34722	46.2 47.7	47.7 49.2	1.5 1.5	55 <5	1.0 .4	20	26	<2	94
		42.6 - 42.9 Mineralized Qtz Vein	34722	47.7	49.2 50.8	1.5	<5	.4	30	36	8	87
		- broken up core (fault zone?)	34723	50.8	51.9	1.0	5	2.8	35	36	18	43
		 3 cm massive pyrite band cubes of pyrite up to 1 cm X 2 cm 44.7 - 50.8 Wayy Green Sericite Schist white ankerite porphyroblasts up to 0.5 cm (35%) 	34725	51.9	53.0	1.1	<5	.6	35	13	<2	23

- approximately 10% smoky qtz veins (max 1 cm) that are concordant

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DRILL	. HOLE L	.0G						HOLE !	10.:		PAGE	NO.: 6 of
From	Το	Description	Sample	From	То	Length	Au pph (g/t)	Ag ppm_(g/t)_	As ppm (%)	Cu ppm (%)	Рb ррт (%)	Zn ppm_(%)
		 foliation 45 - 55° to core trace arsenopyrite, pyrrholite, pyrite in qtz veinlets 50.8 - 53.0 Qtz Veined Sericite Schist 45% qtz veined with 10 - 15% ankerite as white-creamy blocks up to 1 cm non-mineralized veins (7 cm - 35 cm) cut core at 35° - 50° 										
53.0	60.7	 Silicified Qtz Eye Sericite Schist + Qtzite grey/green colour slightly darker green than interval 13.5 - 16.3 looks like interbanded sericite schist and quartzite but also has quartz eyes (10 - 15% up to 4 mm) and is silicified foliation 45° - 60° to core few small <1 cm smoky qtz veins cut core at 60 - 80° trace arsenopyrite few small bands were more sericite schist and less than 5% qtz eyes 58.9 - 59.9 Qtz Veined Sericite Schist only 20% recovery (possible fault zone) non-mineralized 	34726 34727 34728 34729 34730 34731	53.0 54.6 56.1 57.6 58.9 59.9	54.6 56.1 57.6 58.9 59.9 60.7	1.6 1.5 1.5 1.3 1.0 0.8	<5 <5 <5 <5 <5 <5	.2 .4 .2 .2 .2	20 15 10 10 5 <5	16 14 28 33 3 28	<2 12 2 22 4 8	29 47 66 74 20 68
60.7	EOH											
0.0 2.1 10.8 12.7 13.5	2.1 m 10.8 m 12.7 m 13.5 16.8 m	Interbanded Sericite Schist and Quartzite										

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RILL	HOLE L	OG						HOLE N	O. :		PAGE N	10.: 7 of 7
From	То	Description	Sample	From	То	Length	Au ppb (g/t)	Ag ppm_(g/t)	As ppm (%)	Cu _ppm_(%)_	Pb ppm (%)	Zn ppm (%)
16.8	18.0 m	Silicified Sericite Schist ±Graphite 18.0 - 18.4 m Mineralized Otz Vein 18.9 - 19.2 m Mineralized Qtz Vein 20.2 - 21.0 m Qtz Veined Sericite Schist 21.9 - 22.6 m Mineralized Qtz Vein 24.1 - 24.5 m Qtz Vein 25.5 - 26.2 m Qtz Veined Fault/Alteration Zone 26.8 - 27.7 m Qtz Veined Sericite Schist + Quartzite 29.7 - 30.2 m Mineralized Quartz Vein										
30.2	41.2 m	Interbanded Sericite Schist and Quartzite 32.7 - 33.2 m Fault/Altered Zone 37.0 - 38.8 m quartzite Rich Sericite Schist										
41.2	42.1 m	Pyrite Rich Quartz Vein 41.6 - 41.9 m Massive Pyrite Bands										
42.1	53.0	Interbanded sericite Schist and Quartzite 42.6 - 42.9 m Mineralized Quartz Veins 44.7 - 50.8 Waxy Green Sericite Schist 50.8 - 53.0 m Quartz Veined Sericite Schist + Qtzite 58.9 - 59.9 Possible Fault										
60.7	E.O.H											

KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

D.D.H. #: 89-4

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RECOVERY: 97% DATE: 05/11/89

Marked Interval	Measured Interval	Core Loss	Marked Interval	Measured Interval	Core Loss
		Core Loss			

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LOCATION	: B Zon	e						HOLE N	iO.: 89-5		PAGE	NO.: 1 of 8.
AZIM.: 2 INCLINATI		ELEV.: 1430 m LENGTH: 47.2 m	SURV	EVS				PROPER	RTY: Craz	e Creek		
STARTED: COMPLET	07/11/89 ED: 07/1 To test B	CORE SIZE: BGM METERAGE A EOH 1/89 zone mineralization at depth	ZIMUTH IN		l CORR.II -45°	NCLIN.		SECTIO LOGGEI DATE L DRILLII	NO.: Chap N: 3N D BY: A. 1 OGGED: (NG CO.: F D BY: Eco	Fravis 16-07/11/89 Faicon		
From	То	Description	Sample	From	То	Length	Au ppb (g/t)	Ag	As	Cu	РЪ	Zn
0.0	4.6 m	Casing/Overburden										
4.6 m	13.8 m	 Interbanded Sericite Schist + Quartzite varies from weakly foliated with quartz eyes at the top of the section (with oxidized bands) to progressively more foliated down hole colour grey to green/grey as you go downhole foliation cuts core 40° - 60° increase in smoky quartz veins downhole (< 1 cm) 4.6 - 5.8 Oxidized Qtz Eye Sericite Schist rusty red spots of ankerite porphyroblasts fresher areas of qtz eyes (approximately 0.3 cm) up to 35% of rock <1% pyrite 7.0 m qtz Vein 10 cm wide cuts core at 40° 3% Pyrite trace arsenopyrite 8.1 - 8.5 m Fault/Alteration Zone oxidized, broken up qtz veined, 4 veins (approximately 2 cm) cut core at 40° 1% Py, Pyrrhotite 10.2 - 13.8 Qtz Veined Sericite Schist well foliated cuts core at 45° - 60° 	34732 34733 34734 34735 34736 34737 34738 34739	4.6 5.8 6.9 8.1 8.5 10.2 11.4 12.6	5.8 6.9 8.1 8.5 10.2 11.4 12.6 13.8	1.2 1.1 1.2 0.4 1.7 1.2 1.2 1.2	50 <5 <5 10 <5 <5 10 <5	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	10 15 15 5 5 10 15	7 15 17 62 53 77 49 40	14 28 26 32 18 14 18 22	27 32 21 43 60 81 50 57

DRILL	HOLE L	.OG						HOLE N	O.: 89-5		PAGE	NO.: 2 of t
From	То	Description	Sample	From	То	Length	Au ppb (g/t)	Ag	As	Cu	Pb	Zn
		 few milky white mineralized qtz veins, 1 - 3% pyrite, trace galena veins cut core at 45°, 2 cm wide mostly towards lower contact white ankerite porphyroblasts (mm scale) at top of section (25%) get smaller and less distinct as go down section 10- 15% ankerite in milky qtz veins smoky grey quartz bands (<1 cm) comprise over 30% of core 										
13.8	17.0 m	 Qtz Veined Sericite Schist ± Graphite becomes increasingly graphitic dark green to black 3 - 5% pyrite as euhedral cubes up to 0.5 cm foliation 40 - 55° to core but is crenulated adjacent to qtz veins a few qtz veins at top of section cut core at approximately 60° (approximately 3 cm) towards end of section quartz veins become irregular in graphitic schist oxidized 3 - 5% Pyrite in some qtz veins (up to 5 cm) heavy silica flooding 	34740 34741	13.8 15.5	15.5 17.3	1.7 1.8	<5 <5	<.2 <.2	10 <5	24 28	14 12	51 53
17.0	26.2 m	Interbanded Sericite Schist + Quartzite - grey/green colour - oxidized and broken near top of section (possible fault) - foliation cuts the core at 40° - 50° (some crenulation) - in some places the sericite schist has an almost waxy appearance - towards end of section broken up (fault?) - 1% pyrite - quartz eyes noted but not as distinct nor as abundant as	34742 34743 34744 34745 34746 34747 34748	17.3 17.9 19.5 20.3 22.0 23.6 24.9	17.9 19.5 20.3 22.0 23.6 24.9 26.2	0.6 1.6 0.8 1.7 1.6 1.3 1.3	<5 <5 <5 <5 <5 20 (.21)	<.2 <.2 <.2 <.2 <.2 <.2 <.2 <.2	5 5 15 75 70 120 120	37 22 39 46 43 29 27	12 14 38 52 2 32 22	63 60 66 94 68 48 43

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- quartz eyes noted but not as distinct nor as abundant as section 4.6 - 5.8 m

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DRILL	HOLE	LOG						HOLE	NO.: 89-5		PAGE N).: 3 of
From	То	Description	Sample	From	To	Length	Au ppb (g/t)	Ag	As	Cu	Pb	Zn
		 17.3 - 17.9 m Fault/Alteration Zone broken up core some qtz veining (<10%) (<1 cm) <1% pyrite, trace assenopyrite 19.5 - 20.3 Qtz Veined Graphite Rich Schist core broken up dark grey/black clay alt'd on foliation two small milky white quartz veins cut core at 55° 3 - 5% pyrite in veins 23.6 - 26.2 Fault/Alteration Zone becomes increasingly graphitic to lower contact with qtz vein green to dark green/black broken up core few (1 - 3%) milky white qtz veins cut core 30° - 60° smoky quartz veins (sweats?) < 1 cm concordant to foliation (35° - 45°) in pale green sericite schist last metre very broken up and graphite rich 1 - 3% pyrite 										
26.2	41.0	 Mineralized Qtz Veins 55% qtz veins in interbanded sericite schist and quartzite ±graphite pale green to dark green foliation 45 - 55° up to 25% ankerite porphyroblasts as white (mm scale) blebs few sections show quartz eyes (slightly smaller than garnets) veins from 5 cm - 1.5 m few massive sulphide bands (3 cm - 10 cm) bands average 3 - 5% Pyrite, 1 - 3% Arsenopyrite, <1% Galena 	34749 34750 34751 34752 34753 34754 34755 34756 34756 34757 34758 34759 34760 34761	26.2 26.7 27.6 27.7 28.0 29.3 30.6 31.7 32.4 33.6 34.2 35.6 35.9	26.7 27.6 27.7 28.0 29.3 30.6 31.7 32.4 33.6 34.2 35.6 35.9 37.2	0.5 0.9 0.1 0.3 1.3 1.3 1.1 0.7 1.2 0.6 1.4 0.3 1.3	(.30) (1.23) (17.93) (.99) (.15) (2.18) (.79) (.86) (.10) (2.74) (.21) (.13) (1.80)	<.2 0.4 35.9 0.2 <.2 1.2 1.8 <.2 0.2 0.2 0.2 0.2 0.8 <.2 1.4	235 7190 14.85% 3190 850 840 235 780 190 2.23% 280 170 3335	17 9 4 2 4 2 9 32 38 87 12 25	78 24 3.43% 138 76 762 1451 24 536 200 124 38 62	117 20 26 19 4 46 24 25 65 29 114 71 61

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RILL	HOLE	LOG						HOLE	NO.: 89-5	_	PAGE N	0.: 4 of
rom	То	Description	Sample	From	То	Length	Au ppb (g/t)	Ag	As	Cu	Pb	Zn
		26.2 - 26.7 Mineralized Qtz Vein	34762	37.2	38.8	1.6	(1.02)	0.2	5430	3	46	91
		- milky white qtz, except for selvages where pyrite bands	34763	38.8	40.1	1.3	(1.25)	69.8	1110	15	1.16%	28
		(1 cm and 2 cm) that cut core at 50°	34764	40.1	41.0	0.9	(.21)	0.2	235	13	78	19
		- pyrite 5% as euhedral cubes (0.5 cm)	34765	41.0	42.2	1.2	130	<2	260	16	70	95
		- vein contacts 50° to core										
		- graphitic at both contacts										
		26.9 - 27.1 Mineralized Qtz Vein										
		 milky white qtz vein cuts core at 45° 										
		- 2 cm band of massive arsenopyrite (75%) and pyrite										
		(25%) cut core at 35°										
		 arsenopyrite up to 1 cm and pyrite up to 0.5 cm 										
		- graphitic at both contacts										
		27.6 - 27.7 Massive Sulphide Band										
		- 20% Quartz										
		- 3% Galena										
		- 37% Arsenopyrite										
		- 40% Pyrite										
		- galena chiefly along qtz vein selvages										
		- pyrite up to 1 cm cubes and arsenopyrite up to 0.5 cm										
		28.0 - 29.3 Mineralized Qtz Vein										
		- 1% Pyrite towards lower contact and at lower contact										
		- <1% Arsenopyrite										
		- lower contact 30° to core										
		- 1 - 3% ankerite as white-creamy blocks (0.5 cm towards										
		lower contact)										
		29.3 - 30.6 Mineralized Qtz Veins										
		- two milky white qtz veins are 50 cm and the other							•			
		60 cm										
		- 7% pyrite in upper vein principally as two 2 cm bands						•				
		- euhedral cubes up to 0.4 cm										
		- 5% ankerite as white creamy blocks (0.5 cm)										
		- lower contact approximately 45° to core										
		- lower milky white qtz vein similar to upper vein but										
		also has trace galena										

RILL	HOLE	LOG						HOLE N	0.: 89-5		PAGE	NO.: 5 of
rom	То	Description	Sample	From	То	Length	Au ppb (g/t)	Ag	As	Cu	РЬ	Za
		30.6 - 31.7 Mineralized Qtz Vein										
		- 3 - 5% pyrite chiefly in graphite rich schist (that's ribboned in vein)										
		- up to 10% ankerite, blocky up to 1.5 cm										
		- trace galena										
		- vein contacts 40° - 60° to core										
		31.9 - 32.4 Mineralized Qtz VEin										
		- 5% pyrite chiefly at both contacts										
		- trace arsenopyrite at lower contact										
		- 5% ankerite										
		32.4 - 33.6 Interbanded Sericite Schist + Quartzite										
		- pale green/grey										
		- remanant garnets 30% (mm scale) - silicified										
		- qtz eyes slightly smaller than garnets up to 10% near										
		upper contact										
		- not very well foliated										
		33.6 - 34.2 Mineralized Qtz VEins										
		- three qtz veins 20, 12, 5 cm's										
		- first vein consists of 5% pyrite, 3% Arsenopyrite chiefly										
		at contacts										
		- up to 10% ankerite										
		- between first two veins massive sulphide band up to										
		4 cm wide consists of 75% arsenopyrite and 25% pyrite - second vein 45° to core, upper contact with massive										
		sulphide band lower contact consists of 5%										
		arsenopyrite, 5% pyrite										
		- lower vein consists of 1 - 3% Py and trace										
		arsenopyrite										
		35.6 - 35.9 Mineralized Qtz Vein										
		- 10 - 15% ankerite near upper contact										
		- vuggy in places										
		- 1 - 3% pyrite										

RILL	HOLE	LOG						HOLE N	0.: 89-5		PAGE	NO.: 6 of
rom	То	Description	Sample	From	То	Length	Au ppb (g/t)	Ag	As	Cu	Pb	Zn
		35.9 - 37.2 Qtz Veined Sericite Schist + Quartzite										
		 25% small qtz veins (max 4 cm) that cut interbanded sericite schist and quartzite 										
		- 3 - 5% pyrite and trace arsenopyrite in quartz veins										
		37.2 - 38.8 Mineralized Qtz Veins										
		- four veins 65 cm, 15 cm, 12 cm and 15 cm that cut core at 40 - 55°										
		- first vein consists of 1 - 3 Arsenopyrite, 3 - 5% Pyrite										
		chiefly in band at middle of vein, 1% ankerite near lower contact										
		- second vein consists of similar percentages, mostly at										
		lower contact										
		- third vein 3 - 5% Pyrite										
		- fourth vein 1 - 3% Pyrite										
		39.0 - 40.1 Mineralized Qtz VEin										
		- 3 - 5% Galena										
		- 1 - 3% Pyrite, >1% Arsenopyrite										
		- 5% Ankerite chiefly near contacts										
		- vein cuts core at 50°										
		40.1 - 41.0 Mineralized Qtz Veins										
		- two veins 6 cm and 30 cm contains 1% pyrite, trace										
		arsenopyrite cut core at 50°										
		- 1 - 3% Ankerite										
		41.0 - 42.2 Fault/altered Zone										
		- fault gouge										
		 broken up, oxidized interbanded Sericite schist and quartzite, clay alt'd on 										
		foliation										
		- qtz vein 20 cm (upper contact missing), contains 1%										
		Pyrite										
		- trace arsenopyrite										
		- lower contact irregular but approximately 50° to core										

RILL	HOLE	LOG						HOLE N	O.: 89-5		PAGE	NO.: 7 of 8
From	Тө	Description	Sample	From	То	Length	Au ppb (g/t)	Ag	As	Cu	Pb	Zn
42.2	47.2	Interbanded Sericite Schist + Quartzite	34766	42.2	43.7	1.5	<5	<.2	35	26	22	38
		- light grey/green	34767	43.7	45.0	1.3	<5	<.2	5	8	14	15
		- approximately 70% Quartzite and 30% Schist	34768	45.0	46.4	1.4	<5	<.2	10	11	16	45
		- increasingly quartzite downhole	34769	46.4	46.6	0.2	(1.75)	0.4	95	5	74	17
		 qtz eyes get larger downhole to 0.4 cm (30%) almost waxy green schist near top of section 46.4 - 46.6 Mineralized Qtz Vein cuts core at 40° - 50° 3 - 5% concentration of pyrite in 1 cm band in middle of vein 	34770	46.6	47.2	0.6	<5	<.2	30	12	8	41

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47.2 E.O.H.

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From	То	Description	Sample	From	То	Length	Au ppb (g/t)	Ag	As	Cu	РЪ	Zn
		Drill Hole Summary										
0.0	4.6 m	Casing/Overburden										
46	13.8 m	Interbanded Sericite Schist + Quartzite										
		4.6 - 5.8 m Oxidized Qtz Eye Sericite										
		7.0 m Qtz Vein										
		8.1 - 8.5 m Fault/Alteration Zone										
		10.2 - 13.8 m Qtz Veined Sericite Schist										
13.8	17.0 m	Qtz Veined Sericite Schist ±Graphite										
17.0	26.2 m	Interbanded Sericite Schist and Quartzite										
		17.3 - 17.9 m Fault/Alteration Zone										
		19.5 - 20.3 m Qtz veined Graphite Rich Schist										
		23.6 - 26.2 Fault/Alteration Zone										
26.2	41.0 m	Mineralized Quartz Veins										
		26.2 - 26.7 m Mineralized Qtz Vein										
		26.9 - 27.1 As above										
		27.6 - 27.7 m Massive Sulphides 28.0 - 29.3 m Mineralized Otz Vein										
		29.3 - 30.6 m As above										
		30.6 - 31.7 m As above										
		31.9 - 32.4 As above										
		32.4 - 33.6 Interbanded Sericite Schist + Quartzite										
		37.2 - 38.8 m Mineralized Otz Veins										
		39.0 - 40.1 m As above										
		40.1 41.0 m As above										
41.0	42.2 m	Fault/Alteration Zone										
42.2	47.2 m	Interbanded Sericite Schist + Quartzite										
47.2	E.O.H.											

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HOLE NO.: 89-5

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PAGE NO.: 8 of 8.

KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

D.D.H. #: 89-5

RECOVERY: 95% DATE: 07/11/89

Marked Interval	Measured Interval	Core Loss	Marked Interval	Measured Interval	Core Loss
4.6 - 5.1 5.8 - 84 8.8 - 11.9 11.9 - 14.9 14.9 - 18.0 18.0 - 21.4 21.0 - 24.2 24.1 - 27. 27.1 - 30.3 30.2 - 33.3 33.2 - 36. 36.3 - 39.3 39.3 - 42.4 42.4 - 45.4 45.4 - 47.2 47.2 E.O.H	8 2.6 9 3.0 9 3.0 0 3.0 1 3.1 1 2.3 2 2.6 2 2.6 2 2.9 3 2.9 3 3.0 4 2.7 4 3.0 2 1.8	0.1 0.4 0.1 0.2 0.5 0.1 0.2 0.4 			

DRILL HOLE LOG PAGE NO.: 1 of 6. HOLE NO.: 89-6 LOCATION: B-Zone **PROPERTY:** ELEV.: 1430 m AZIM.: 235° SURVEYS INCLINATION: 60° LENGTH: 75.9 m CLAIM NO.: Chaput Option METERAGE AZIMUTH INCLINATION CORR.INCLIN. CORE SIZE: BGM SECTION: 325N -58° ЕОН STARTED: 07/11/89 LOGGED BY: A. Travis COMPLETED: 08/11/89 DATE LOGGED: Nov. 8/89 PURPOSE: To test B-Zone mineralization at depth DRILLING CO.: Falcon ASSAYED BY: Eco-Tech CORE RECOVERY: 95% Pb Zn As Length Au Ag Cu То Description Sample From То From 0.0 3.7 Casing/Overburden 22 72 1.6 0.2 <5 52 Interbanded Sericite Schist and Quartzite 34771 3.7 5.3 <5 3.7 28.6 10 34 0.2 <5 15 5.3 6.8 1.5 <5 34772 - pale green-grey 10 34 <5 14 - sericite schist near middle to end of section is a waxy 34773 6.8 8.3 1.5 <5 0.2 12 120 1.5 <5 0.8 <5 109 9.8 green colour and better foliated 34774 8.3 14 112 <5 0.6 <5 119 - gtz veined and oxidized near top of section 34775 9.8 11.5 1.7 <5 82 16 96 11.5 13.1 1.6 <5 0.6 34776 - foliation cuts core 25 - 50° 18 78 <5 54 <5 0.4 - few small fault zones evidenced by clay alteration & 34777 13.1 14.6 1.5 84 68 1.6 <5 0.6 <5 106 16.2 34778 14.6 shearing 34 102 <5 107 <5 0.4 34779 16.2 18.0 1.8 - approximately 5% qtz veins which generally cut core at 20 54 227 23 18.0 19.0 1.0 <5 <.2 41 34780 - 45° 14 76 23 29 <5 <.2 - veins contain 1 - 3% py, trace Po, and trace Ga. 34781 19.0 20.5 1.5 72 24 22 43 - some veins have up to 10% ankerite 34782 20.5 22.1 1.6 <5 <.2 31 16 90 <.2 7 34783 22.1 23.6 1.5 <5 - qtz eyes (mm-scale) up to 2 mm generally <10 - 15%, 14 65 <.2 10 24 usually more abundant where sericite schist is less 34784 23.6 25.2 1.6 <5 78 32 10 80 <.2 34785 25.2 26.8 1.6 <5 abundant 126 >10,000 32 428 2.2 - ankerite porphyroblasts, smaller than normal noted 34787 28.1 28.6 0.5 (3.02)generally in sericite schist 3.7 - 5.3 - oxidized qtz. veined graphitic schist

- 30 cm qtz, vein cuts core at 35°

- schist dark green/black due to graphite

- very broken up

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DRILL	HOLE	LOG						HOLE	NO.: 89-6		PAGE NO.: 2 of 6			
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn		
		 no sulphides in vein, but gossanous pitted area, 10 - 15% ankerite in vein 5.3 - 8.3 - Qtz. flooded sericite schist and quartzite trace po & py milky white irregular veining concentrated at bottom & top of section with a partly oxidized zone between 13.1 - 19.0 - Qtz. flooded sericite schist and quartzite very similar to section 5.3 - 8.3 better foliation, waxy green appearance to sericite schist two types of quartz veining - one a generally non-mineralized smoky qtz. concordant veins - the other a few milky white qtz. veins with trace galena milky white veins (<4 cm) cut core at 20 - 60° these veins have up to 15% ankerite 1 - 3% along vein selvages foliation 30 - 45° small fault zones cut the core as evidenced by broken core. generally minz'd veins related to these faults. Note: 16.2 - 18.0 - only 45% very broken, qtz. veined, trace galena 21.6 - 21.7 - Fault gouge heavy clay alt'd interbanded sericite schist & quartzite 1 - 3% pyrite 28.1 - 28.4 - Fault Zone alt'd to clay four small qtz. veins cut core at 35 - 50° up to 30 cm fault gouge lower 20 cm <1 cm qtz. veins with 1 - 3% AsPy, 3 - 5% pyrite 												
28.6	59.8	Qtz. Veined Interbanded Sericite Schist and Quartzite - 30% milky white qtz veins of these one-half are principally 1 - 3% pyrite with up to 10% ankerite, other half (found principally in upper 15 m) contain up to 15%	34788 34789 34790 34791 34792	28.6 29.1 29.4 29.9 31.5	29.1 29.4 29.9 31.5 33.2	0.5 0.3 0.5 1.6 1.7	(4.59) (18.28) (1.74) (.14) (.22)	3.0 4.8 .6 .4 .4	2431 >10,000 4213 2551 855	13 109 30 26 30	968 78 16 68 18	27 41 12 60 35		

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DRILL H	IOLE	LOG						HOLE	NO.: 89-6		PAGE N	O.: 3 of
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		pyrite, 10% AsPy, 3 - 5% Ga, trace Sphalerite, veins cut	34793	33.2	33.6	0.4	(.76)	.8	217	4	26	20
		core 20 - 70°	34794	33.6	35.1	1.5	(.03)	.6	73	71	16	76
		- pale, green-grey, gets a little darker green adjacent to qtz.	34795	35.1	36.6	1.5	(.02)	.6	64	99	36	66
		veins, foliation 35 - 60° to core	34796	36.6	38.1	1.5	(.65)	.8	196	68	32	49
		- some bands (<1 m) of garnet rich sericite schist (up to	34797	38.1	39.6	1.5	(.09)	.6	83	75	22	64
		30%) as white soft	34798	39.6	41.2	1.6	(.02)	.6	145	24	28	88
		- up to 0.4 cm	34799	41.2	42.3	1.1	(35.30)	36.8	833	12	(2.68)	(1.39
		28.6 - 29.9 - Mineralized Qtz, Vein	34800	42.3	42.6	0.3	(65.51)	13.6	>10,000	27	346	222
		- upper contact 50° to core	34801	42.6	43.6	1.0	(.52)	1.0	1,852	12	84	89
		- 5 - 7% pyrite as euhedral cubes up to 1 cm	34802	43.6	44.9	1.3	(.11)	1.0	101	2	30	37
		- 1 - 3% AsPy up to 1 cm	34803	44.9	46.2	1.3	(.05)	0.6	1913	6	18	18
		- sulphides almost massive in up to 10 cm wide bands at	34804	46.2	47.1	0.9	(.03)	0.2	812	2	10	9
		29.4 m	34805	47.1	47.8	0.7	(.05)	0.4	110	5	24	22
		- massive sulphide band upper contact 60° to core	34806	47.8	48.3	0.5	(.03)	0.4	24	3	12	7
		- about 10% interbanded sericite schist quartzite in section	34807	48.3	49.8	1.5	(.05)	0.4	103	12	18	44
		33.2 - 33.6 - Mineralized Qtz. Vein	34808	49.8	51.4	1.6	(.36)	0.6	801	5	18	23
		- 1 - 3% pyrite	34809	51.4	52.9	1.5	(2.44)	1.0	6095	3	30	20
		- trace arsenopyrite	34810	52.9	54.6	1.7	(.51)	0.6	306	44	20	74
		- 15% ankerite	34811	54.6	56.2	1.6	(.86)	1.0	1873	16	16	29
		- sulphides mostly at upper contact which cuts core at	34812	56.2	57.3	1.1	(.73)	0.6	350	47	16	56
		approximately 40°	34813	57.3	58.8	1.5	(.23)	1.0	252	16	10	36
		41.2 - 42.3 - Mineralized Qtz. Vein - qtz. vein with	34814	58.8	59.8	1.0	(.13)	0.6	17	9	22	44
		- q12, vein with - up to 15% pyrite chiefly at upper contact (45° to core)										
		and in massive bands (up to 10 cm) in upper half of section (pyrite up to 0.7 cm)										

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and in massive bands (up to 10 cm) in upper half of section (pyrite up to 0.7 cm)
3 - 5% AsPy (with py), smaller than py
1 - 3% galena, harden sulphides, usually in irregular 1 mm veinlets
<1% sphalerite? chocolate brown in groundmass with other sulphides
5% scheelite as milky orange clusters
42.3 - 42.6 - Massive Sulphide Band
30% pyrite
10 - 15% arsenopyrite

DRILL	HOLE	LOG						HOLE N	iO.: 89-6	
From	То	Description	Sample	From	To	Length	Au	Ag	As	C
		- upper contact 45°								
		- pyrite cubes up to 1 cm, arsenopyrite up to 0.6 cm								
		- 40% milky white qtz.								
		46.2 - 47.1 - Mineralized Qtz. Vein								
		 - 3% pyrite in milky white qtz. vein which cuts core at approximately 30° 								
		- approximately 5% ankerite								
		47.8 - 48.3 - Mineralized Qtz. Vein								
		- 3 - 5% pyrite & trace ga & AsPy in milky white qtz. vein								
		that cuts core at approximately 40° (lower contact)								
		- Ga & AsPy near lower contact								
		49.8 - 51.4 - Qtz. Veined Fault Zone								
		- only 60% recovery								
		- upper half very broken up								
		- possible fault zone, clay alt'd on fractures, qtz. vein								
		faulted in?								
		- 1% pyrite - 1 - 3% ankerite								
		- clay alt'd contact with qtz. vein 10° to core								
		- both contacts missing								
		51.5 - 52.9 - Mineralized Otz. Veins								
		- consists of two veins, one at top of section that's 20 cm								
		cuts core at 65° contains 3 - 5% py								
		- probable fault between them								
		 lower 70 cm, one vein (possibly two) lower contact cuts core at 30° 								
		- upper contact rock very broken up. possible fault								
		- 5% pyrite								
		Flame								

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PAGE NO.: 4 of 6.

Zn

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- 3% arsenopyrite

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- sulphides chiefly near upper contact
- 56.2 59.8 Qtz. Vein Sericite Schist & Quartzite 35% milky white qtz. veins from 1 10 cm that cut core 25 - 40°
- veins contain up to 10% ankerite, 3 5% pyrite generally at selvages

RILL	HOLE	LOG						HOLE N	iO.: 89-6		PAGE	NO.: 5 of
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		- foliation 35 - 45°										
		- trace arsenopyrite										
59.8	759	Interhanded Sericite Schist Quartzite	34815	59.8	61.3	1.5	(.12)	0.6	45	41	12	54
		- <1% pyrite (as vein selvages)	34816	61.3	62.8	1.5	<5	<.2	47	51	2	62
		- light grey/green colour	34817	62.8	64.3	1.5	<5	<.2	64	36	4	74
		- waxy, green near top of section	34818	64.3	65.8	1.5	<5	<.2	13	15	2	46
		- foliation cuts core at 35 - 50°	34819	65.8	67.3	1.5	<5	<.2	8	18	2	27
		- white retrograde garnets up to 0.4 cm (particularly in	34820	67.3	68.8	1.5	<5	<.2	8	22	2	28
		waxy green schist)	34821	68.8	70.4	1.6	<5	<.2	25	22	4	40
		- approximately 10% qtz. veins which consist of up to 10%	34822	70.4	72.0	1.6	<5	<.2	31	16	6	24
		ankerite (veins 1 cm - 30 cm)	34823	72.0	72.5	0.5	100	<.2	138	14	14	33
		- veins cut core at 30 - 60°	34824	72.5	74.2	1.7	<5	<.2	56	19	6	208
		- quartz augens comprise up to 20% of the core in places (<0.3 cm)	34825	74.2	75.9	1.7	<5	<.2	13	27	4	33
		72.0 - 72.5 - Quartz Vein										
		- 35 cm qtz. vein up to 10% ank.										
		- 1% pyrite as selvage at unper contact										

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- 1% pyrite as selvage at upper contact - qtz. vein cuts core at 50 - 60°

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75.9 EOH

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DRILL	HOLE	LOG	

RILL	HOLE	LOG						HOLE I	HOLE NO.: 89-6		PAGE NO.: 6 of 6		
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	РҌ	Zn	
		Hole Summary											
0.0	3.7	Casing/Overburden											
3.7	28.6	Interbanded Sericite Schist & Quartzite											
		3.7 - 5.3 - oxidized qtz. veined graphitic schist											
		5.3 - 8.3 - Qtz. flooded sericite schist & quartzite											
		13.1 - 19.0 - Qtz. flooded sericite schist & quartzite											
		21.6 - 21.7 - Fault gouge											
		28.1 - 28.4 - Fault Zone											
28.6	59.8	Qtz. Veined Interbanded Sericite Schist & Quartzite											
		28.6 - 29.9 - Mineralized qtz. vein											
		33.2 - 33.6 - Mineralized qtz. vein											
		41.2 - 42.3 - Mineralized qtz. vein											
		42.3 - 42.6 - Massive sulphide band											
		46.2 - 47.1 - Mineralized Qtz. vein											
		47.8 - 48.3 - Mineralized qtz. vein											
		49.8 - 51.4 - Qtz. veined fault zone											
		51.5 - 52.9 - Mineralized qtz. veins											
		56.2 - 59.8 - Qtz. veined sericite schist & quartzite											
59.8	75.9	Interbanded Sericite Schist and Quartzite											
		72.0 - 72.5 - Qtz. vein											
75.0	FOU												

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75.9 EOH

KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

D.D.H. #: 89-6

RECOVERY: 95% DATE: Nov. 8/89

Marked	Measured	Core	1	Marked	Measured	Core
Interval	Interval	Loss		Interval	Interval	Loss
			1		1 1	
3.7 - 5.8	2.0	0.1				
5.8 - 8.8	3.0					
8.8 - 11.9	2.9	0.2				
11.9 - 14.9	3.0		1			
14.9 - 18.0 18.0 - 21.0	2.0 2.9	1.1 0.1			1	
21.0 - 24.1	3.1					
24.1 - 27.1	3.0					
27.1 - 30.2	3.0	0.1			1	
30.2 - 33.2	2.3	0.7				
33.2 - 36.3 36.3 - 39.3	2.9	0.2				
39.3 - 42.4	3.0 3.1		1 1		1	
42.4 - 45.4	3.0					
45.4 - 48.5	3.1					
48.5 - 51.5	2.1	0.9				
51.5 - 54.6 54.6 57.6	3.1					
54.6 - 57.6 57.6 - 60.7	3.0 3.0	 0.1				
60.7 - 63.7	3.0					
63.7 - 66.8	3.1					
66.8 - 69.8	3.0					
69.8 - 72.8 72.8	2.9	0.1				
72.8 - 75.9 75.9 - E.O.H.	3.0	0.1				
75.9 - L.O.H.		3.7				
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LOCATIO	N: B Zon	e						HOLE N	IO.: 89-7		PAGE	NO.: 1 of 1.
AZIM.: INCLINA	-45° FION: 055	ELEV.: 1413 m 5° LENGTH: 14.3 m	SURV	EVS				PROPE	RTY: Craz	e Creek		
STARTED COMPLE PURPOSE): 08/11/89 FED: 08/1	CORE SIZE: BGM METERAGE 1/89 -zone mineralization at depth	AZIMUTH INC		I CORR.E	NCLIN.	SECTIO LOGGEI DATE L DRILLII	NO.: Chap N: 300N D BY: A. 7 OGGED: 1 NG CO.: F D BY: Ecc				
From	То	Description	Sample	From	То	Length	Au	Ag	As	Си	Pb	Zn
0.0	4.6 m	Casing/Overburden										
4.6	14.3 m	Interbanded Sericite Schist + Quartzite - light green to dark green - foliation approximately 40° to core - very poor recovery (20%) - box has been spilled so locations not definite 5.0 - 5.2 m Qtz Vein - both contacts missing - up to 10% ankerite - pitted, gossanous - trace galena	348%	5.0	5.2	0.2	<.5	<.2	<5	4	б	7
14.3	E.O.H.	Hole abandoned due to bank washing away and inability stay over collar	to									

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LOCATIO	N: B-Zor	1e						HOLE N	IO.: 89-8		PAGE	NO.: 1 of 4.
AZIM.: INCLINA	055° TION: -64	ELEV.: 1413 m 0 LENGTH: 63.7 m	SURV	FVS				PROPER	RTY: Craz	e Creek		
STARTEI COMPLE PURPOSI): 08/11/8 TED: 08/1	CORE SIZE: BGM METERAGE AZ 9 11/89 e B-zone mineralization at depth	IMUTH IN		CORR.I	NCLIN.		SECTIO LOGGEI DATE L DRILLII	NO.: Chap N: 300N D BY: A. OGGED: 0 NG CO.: 1 D BY: Eco	09/11/89 Falcon		
From	To	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
0.0	6.1	Casing/Overburden										
6.1	63.7	Interbanded Sericite Schist and Quartzite	34826	6.1	7.6	1.5	<5	<.2	5	21	14	66
		- pale green-grey, a waxy green colour were well foliated	34827	7.6	9.2	1.6	<5	<.2	5	36	12	71
		towards end of hole, few minor graphitic bands	34828	9.2	10.8	1.6	<5	<.2	15	38	14	96
		- approximately 10% milky white quartz veins up to 0.7 m	34829	10.8	12.3	1.5	<5	<.2	5	16	10	55
		- veins generally contain up to 10% ankerite, 1% pyrite,	34830	12.3	13.8	1.5	<5	<.2	10	37	12	29
		1% po	34831	13.8	14.6	0.8	(.05)	<.2	25	7	38	18
		- trace galena and sphalerite noted in one vein	34832	14.6	15.8	1.2	(.19)	<.2	30	40	10	46
		- foliation from 0° - 30° with six fold noses noted	34833	15.8	16.5	0.7	(.20)	.2	80	22	46	21
		- white ankerite porphyroblasts (up to 0.4 cm) in places up	34834	16.5	18.0	1.5	<5	<.2	30	32	14	76
		to 25% of rock	34835	18.0	19.5	1.5	10	<.2	35	30	8	80
		- trace pyrite to 1% pyrite in schist	34836	19.5	21.0	1.5	<5	<.2	15	32	12	61
		- crenulation of foliation usually associated with veining	34837	21.0	22.6	1.6	10	<.2	5	21	12	25
		12.3 - Fold Nose	34838	22.6	23.0	0.4	<5	<.2	15	61	24	40
		- interbanded sericite schist and quartzite 10 cm before	34839	23.0	24.7	1.7	5	<.2	20	23	12	56
		foliation cuts core at 5°, similar below contact	34840	24.7	26.4	1.7	65	<.2	20	25	12	62
		- slightly more graphitic layer is broken almost 0° to core	34841	26.4	26.8	0.4	35	.2	35	47	14	30
		and clay altered	34842	26.8	28.3	1.5	<5	<.2	45	25	20	49
		13.8 - 14.6 - Mineralized Quartz Vein	34843	28.3	29.8	1.5	<5	<.2	15	51	30	35
		1 30% swrite principally at contacts expectally upper one										

1 - 3% pyrite principally at contacts, especially upper one
trace galena at lower contact
upper contact 20° to core, lower contact 30° to core

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DRILL	HOLE	LOG						HOLE	NO.: 89-8		PAGE	NO.: 2 of
From	To	Description	Sample	From	То	Length	Au	Ag	As	Cu	Ръ	Zn
		14.6 - 15.8 - Fault Alteration Zone	34844	29.8	31.3	1.5	<5	<.2	20	78	10	42
		- very broken up core	34845	31.3	32.8	1.5	<5	<.2	10	103	12	37
		- foliation 0 - 25° to core, possible fold nose?	34846	32.8	34.0	1.2	<5	<.2	45	53	12	31
		- rusty red spots of ankerite porphyroblasts	34847	34.0	35.0	1.0	(3.38)	.4	525	17	36	30
		- some fault gouge, with qtz. veining	34848	35.0	36.5	1.5	10	<.2	80	51	20	49
		15.8 - 16.5 - Mineralized Quartz Vein	34849	36.5	38.0	1.5	<5	<.2	20	12	10	20
		- milky white, trace galena, <1% pyrite at selvages	34850	38.0	39.5	1.5	<5	<.2	135	31	16	43
		- cuts core 25° + 35° respectively	34851	39.5	41.0	1.5	<5	.2	110	24	22	44
		- 1 - 3% ankerite	34852	41.0	42.3	1.3	15	<.2	80	18	14	47
		16.5 - 18.0 - Fold Nose	34853	42.3	43.2	0.9	730	.6	1260	12	24	42
		- contact at 17.1 m in interbanded sericite schist ± graphite	34854	43.2	43.8	0.6	15	<.2	95	14	10	28
		- graphitic bands (0.3 cm) that cut core from 0 - 10°	34855	43.8	45.1	1.3	<5	<.2	85	11	14	28
		- <1% pyrite	34856	45.1	46.9	1.8	270	<.2	60	2	14	8
		19.0 - Fold Nose	34857	46.9	48.4	1.5	<5	<.2	65	5	42	30
		- as evidenced by quartzite band	34858	48.4	49.9	1.5	<5	<.2	90	18	64	51
		- since last fold nose <10° to core	34859	49.9	50.4	1.5	85	<.2	65	29	14	58
		20.8 - Fold Nose	34860	50.4	52.9	1.5	5	<.2	20	24	28	70
		- in interbanded sericite schist and quartzite	34861	52.9	54.4	1.5	<5	<.2	5	18	18	54
		22.6 - 23.0 - Mineralized Quartz Vein	34862	54.4	55.9	1.5	<5	<.2	35	53	6	111
		- 1% pyrrhotite and pyrite	34863	55.9	57.5	1.6	<5	<.2	40	31	4	63
		- trace galena and sphaterite	34864	57.5	59.0	1.5	<5	<.2	35	33	6	71
		- upper contact missing	34865	59.0	60.5	1.5	<5	<.2	15	20	8	43
		- lower contact 60° to core	34866	60.5	62.0	1.5	<5	<.2	15	25	6	56
		26.5 - 26.7 - Mineralized Quartz Vein	34867	62.0	63.7	1.7	<5	<.2	20	13	4	46
		- 1% pyrite, trace pyrrhotite										
		- 1 - 3% ankerite										
		- both contacts 40 - 45° to core mineralization at selvages										
		B										

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26.8 - 28.3 - Quartz Veined Graphite Rich Schist
foliation is crenulated with up to 15% ankerite at core at 35°

- 3 - 5% pyrite along selvages - foliation generally shallow to core 0 - 15° 34.0 - 35.0 - quartz Ankerite Veins - 60% ankerite

- 5 - 10 cm veins that make up 50% of core

RILL	HOLE	LOG						HOLE N	0.: 89-8		PAGE	NO.: 3 of
rom	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	РЪ	Zn
		- upper contact with graphite rich schist, contact										
		approximately 45° to core										
		 lower contact with pale green sericite schist contact 55° to core 										
		35.0 - 41.0 - Interbanded Sericite Schist and Quartzite										
		- waxy green colour especially in middle of section										
		- foliation from 25° near top, to 10° towards bottom										
		42.3 - 43.2 - Fault Alteration Zone										
		- fault gouge										
		- heavy clay altered sericite schist										
		- 20 cm qtz. vein at lower contact, qtz. vein 20° to core										
		- approximately 70% recovery										
		- vein has 5% ankerite										
		43.8 - 45.1 - Fault Alteration Zone										
		- sheared at top and bottom of section										
		- minor quartz veins										
		- very broken up core										
		45.1 - 46.9 - Quartz Veined Sericite Schist and Quartzite										
		- very broken up core										
		- approximately 40% milky white qtz. veins with 3% ank., 1 - 3% pyrite										
		- veins up to 20 cm that cut core at 30°										
		49.2 - Fault Gouge										
		- 10 cm of clay alteration and qtz. veined sericite schist										
		51.4 - Fold Nose										
		- in pale green sericite schist and quartzite										
		 ankerite porphyroblasts up to 0.5 cm with foliation crenulated around them 										
		56.3 - Fold Nose										
		- waxy green sericite schist and quartzite										
		- foliation up to 25° between noses										
		58.9 - Fold Nose										
		- as above										

RILL H	OLE	LOG						HOLE N	IO.: 89-8		PAGE	NO.: 4 of
rom	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		 59.0 - 63.7 - Quartzite cuts core at 20°, trace fuchite? interbanded sericite schist and quartzite 80% quartzite 										
63.7		End of Hole										
		Hole Summary										
0.0	6.1	Casing/Overburden										
6.1	63.7	Interband Sericite Schist & Quartzite 12.3 - Fold Nose 13.8 - 14.6 - Mineralized Qtz. Vein 14.6 - 15.8 - Fault/Alteration Zone 15.8 - 16.5 - Mineralized Qtz. Vein 16.5 - 18.0 - Fold Nose 19.0 - fold Nose 20.8 - Fold Nose 20.8 - Fold Nose 20.8 - Fold Nose 20.8 - Gul Nose 20.8 - Gul Nose 20.8 - Qtz. Veined Qtz. Vein 26.7 - Mineralized Qtz. Vein 26.7 - Mineralized Qtz. Vein 26.8 - 28.3 - Qtz. Veined Graphite Rich Schist 34.0 - 35.0 - Qtz. Ankerite Veins 35.0 - 41.0 - Interbanded Sericite Schist & Quartzite - waxy green 42.3 - 43.2 - Fault/Alteration Zone 43.8 - 45.1 - Fault/Alteration Zone 45.1 - 46.9 - Qtz. Veined Sericite Schist and quartzite 49.2 - Fault Gouge 51.4 - Fold Nose 56.3 - Fold Nose 58.9 - Fold Nose										

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63.7

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End of Hole

KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

D.D.H. #: 89-8

RECOVERY: 95% DATE: 09/11/89

Marked Interval	Measured Interval	Core Loss	Marked Interval	Measured Interval	Core Loss
$\begin{array}{r} 6.1 - 8.8\\ 8.8 - 11.9\\ 11.9 - 14.9\\ 14.9 - 18.0\\ 18.0 - 21.0\\ 21.0 - 24.1\\ 24.1 - 27.1\\ 27.1 - 30.2\\ 30.2 - 33.2\\ 33.2 - 36.3\\ 36.3 - 39.3\\ 39.3 - 42.4\\ 42.4 - 45.4\\ 45.4 - 48.5\\ 48.5 - 51.5\\ 51.5 - 54.6\\ 54.6 - 57.6\\ 57.6 - 60.6\\ 60.6 - 63.7\\ \end{array}$	2.7 2.8 3.0 3.1 2.9 3.0 3.0 2.6 3.5 3.0 2.2 2.0 3.1 2.6 3.1 3.0 3.0 3.0 3.0 3.1	0.3 			

LOCATIO	N: B Zon	e						HOLE N	O.: 89-9		PAGE	NO.: 1 of 5
INCLINAT		CORE SIZE: BGM METERAGE AZ	SURVEYS SURVEYS AZIMUTH INCLINATION CORR.INCLIN. 43° SECTION:									
	TED: 09/1	1/89 zone mineralization at depth in relation to Jewellery Shop			43*			LOGGEI DATE LA DRILLIN	N: 330N D BY: A. 1 DGGED: 1 NG CO.: F D BY: Eco	0/11/89 alcon		
From	To	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
0.0	6.1 m	Casing/Overburden										
6.1	6.3	Diorite - dark green - euhedral pyrite cubes up to 0.3 cm approximately 1% of interval	34897	6.1	6.3	0.2	5	.2	5	160	24	129
6.3	17.3	Interbanded Sericite Schist + Quartzite	34898	6.3	8.8	1.5	5	<.2	5	40	12	67
		- light grey/green colour with a few dark green graphite		8.8	10.4	1.6	5	<.2	10	38	26	105
		rich bands	34900	10.4	10.7	0.3	<5	<.2	20	16	10	76
		- approximately 60% quartzite with qtz eyes up to 0.3 cm	34901	10.7	12.3	1.6	10	<.2	5	10	20	27
		- white ankerite porphyroblasts in sericite schist up to	34902	12.3	13.9	1.6	<5	<.2	20	30	12	68
		0.4 cm aligned with foliation	34903	13.9	15.5	1.6	5	<.2	20	38	16	91
		 foliation 35° - 50° to core two bands (<0.5 m) where there's an increase in graphite and approximately 1% pyrite 6.3 m Oxidized Quartz VEin upper contact 50° to core 6 cm wide, lower contact missing 10.4 - 10.7 m Oxidized Sericite Schist + Ouartzite 	34904	15.5	17.3	1.8	10	<.2	45	26	18	71
		- potential shear/fault zone										

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porphyroblasts to rusty red pits
noticeable increase in graphite in wall rock before zone

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DRILL	HOLE	LOG						HOLE N	IO.: 89-9		PAGE N	O.: 2 of 5
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		 15.5 m Oxidized Sericite Schist + Quartzite probable fault zone, only 5 cm of core some minor quartz veining 										
17.3	42.4	Qtz Veined Sericite Schist + Quartzite ±Graphite	34905	17.3	17.8	0.5	595	<.2	245	24	40	44
		- pale green/grey to black	34906	17.8	19.6	1.8	15	<.2	45	8	18	34
		- cut by fault zones, where it's usually more graphitic	34907	19.6	21.5	1.9	(2.87)	0.2	105	3	14	17
		- milky white qtz veins (also related to faulting) comprise	34908	21.5	22.6	1.1	ີ5 ໌	<.2	70	18	10	16
		15% of section	34909	22.6	23.1	0.5	(2.38)	.8	390	2	42	17
		- veins cut core from 10° - 60° but usually 45° - 60°	34910	23.1	23.9	0.8	305	<.2	330	12	10	19
		- of these veins about 1/3 are mineralized	34911	23.9	25.1	1.2	5	<.2	20	15	16	21
		- the mineralized veins mostly have only 1 - 3% pyrite, but	34912	25.1	27.3	2.2	15	<.2	35	33	40	42
		one vein (0.3 m) contains 10% Galena and 3 - 5%	34913	27.3	29.0	1.7	115	<.2	125	15	14	589
		Sphalerite also	34914	29.0	30.8	2.2	10	<.2	40	11	18	43
		- foliation from 30° - 60°	34915	30.8	32.3	1.5	(1.08)	<.2	170	<1	34	21
		17.3 - 17.8 Mineralized Qtz Vein	34916	32.3	33.2	0.9	30	<.2	85	22	22	62
		 very broken core, 80% recovery 	34917	33.2	34.2	1.0	70	<.2	115	34	29	73
		- seems to cut core at shallow angle (10° - 15°)	34918	34.2	35.7	1.5	65	.2	90	17	34	82
		- massive pyrite (50% +) over 5cm but again shallow	34919	35.7	37.2	1.5	110	.6	125	33	178	77
		angle to core	34920	37.2	38.7	1.5	10	.4	70	23	42	111
		- graphitic bands (3 cm)	34921	38.7	39.0	0.3	545	(234.2)	30	12	19.16%	
		- pyrite cubes up to 1 cm	34922	39.0	40.7	1.7	215	1.0	140	24	158	68
		 19.6 - 21.5 Qtz Veined Fault/Alteration Zone very broken core approximately 30% milky white qtz veins (1 - 5 cm) 	34923	40.7	42.4	1.7	155	.6	105	31	246	104
		- approximately 30% milky white qtz veins (1 - 5 cm) - veins cut core at 35° - 60°										

veins cut core at 35° - 60°
up to 10% ankerite, 1 - 3% pyrite

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trace galena
zone fault bounded, slickensides on foliation where

quite graphitic
35% recovery
22.6 - 23.1 Mineralized Quartz Veins

- one 20 cm the other 2 cm

- milky white veins cut core at 45°

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DRILL	HOLE	LOG						HOLE	NO.: 89-9		PAGE	NO.: 3 of 5
From	То	Description	Sample	From	To	Length	Au	Ag	As	Cu	Pb	Zn
		- 5 - 7% pyrite, chiefly at selvages and in ribboned wall										
		rock caught in vein										
		 graphitic bands (< 1 cm) that are convoluted adjacent to veins 										
		- 1 cm pyrite band at lower contact cuts core at 35°										
		- trace galena, pyrrhotite										
		23.5 - 23.9 Mineralized Quartz Vein										
		- upper contact 30° to core										
		- 1 - 3% pyrite in one mass near centre of vein										
		25.1 - 27.3 Fault/Alteration Zone										
		- only 10% recovery										
		- 10 cm altered to clay										
		- upper contact with oxidized qtz vein										
		30.8 - 32.3 Quartz Veined Graphite Rich Schist										
		- 55% qtz veins (milky white)										
		- 1 - 3% pyrite										
		- 10 - 15% ankerite										
		- veins generally cut core at 30 - 40°										
		33.2 - 34.2 Fault/Alteration Zone										
		- very graphitic, clay alt'd on foliation and very strong										
		over 15 cm, fracturing of milky white qtz vein - 3 - 5% pyrite										
		38.7 - 39.0 Mineralized Otz Vein										
		- 10 - 15% Galena										
		- 3 - 5% Sphalerite										
		- upper contact 25° to core lower contact irregular,										
		averages 50° to core										
		- foliation 50° to core just before upper contact										
42.4	68.9	Interbanded Sericite Schist + Quartzite	34924	42.4	43.7	1.3	15	1.0	45	27	1138	574
		- pale green/grey	34925	43.7	45.1	1.4	15	.6	90	14	52	82
		- 10% milky white quartz veins	34926	45.1	46.5	1.4	10	.4	125	11	22	38
		- veins 1 - 10 cm wide which generally cut core at 10° ->	34927	46.5	47.0	0.5	(8.67)	11.4	9735	1	1416	21
		40°	34928	47.0	48.3	1.3	155	<.2	310	21	18	36
		- trace to 1% Galena in veins with 1 -3% pyrite	34929	48.3	49.7	1.4	35	<.2	50	18	28	38

HOLE NO.: 89-9 PAGE NO.: 4 of 5. Zn Length As Cu Pb Sample From To Au Ag From To Description 884 195 640 71 49.9 0.2 1.8 1 - foliation generally 45° - 50° to core 34930 49.7 34931 51.3 1.4 10 <.2 150 36 24 61 - major fault zone near end of section 49,9 40 68 200 16 - trace mariposite? in quartzite 34932 51.3 52.8 1.5 10 <.2 35 53.3 1.5 700 4.6 185 <1 3170 - white (0.2 cm) in sericite schist which in places can be 34933 52.8 30 48 140 <.2 60 almost waxy green 34934 53.3 54.9 1.6 5 32 56.5 1.6 5 <.2 30 20 42 42.4 Fault? 34935 54.9 28 115 65 46 34936 56.5 58.1 1.6 5 <.2 - small amount of clay 70 24 44 59 42.6 Mineralized Qtz Veinlet 34937 58.1 59.7 1.6 10 <.2 55 28 30 95 <.2 - 0.5 cm wide, cuts core at 60° 34938 59.7 61.3 1.6 5 21 50 49 2.4 5 <.2 25 - 10% chocolate brown sphalerite 34939 61.3 63.7 65 41 616 96 34940 66.8 3.1 15 2.8 - 5% Galena 63.7 53 50 19 24 68.9 2.1 5 <.2 46.5 - 47.0 Mineralized Qtz Veins 34941 66.8 - 10 cm quartz vein cuts core at 25° at upper contact, where there is trace arsenopyrite - lower contact 35° to core 49.7 - 49.9 Mineralized Qtz Vein - cuts core at 10° - 1% pyrite, trace arsenopyrite 3 - 5% Galena, 3 - 5% Ankerite 52.8 - 53.3 Mineralized Qtz Veins - irregular qtz vein(s) with 40% ankerite flooding interval - 1 - 3% Galena (near lower contact) - 1% pyrite, vein cuts core at 10° , vein could be <3 cm

61.3 - 68.9 Fault Zone

- very broken core, 30% recovery

- clay alt'd on foliation in pale green sericite schist

- very minor quartz veining with 1% pyrite

- foliation 60° to core

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DRILL	HOLE L	.OG						HOLE N	(O.: 89-9		PAGE	NO.: 5 of !
From	То	Description	Sample	From	To	Length	Au	Ag	As	Cu	РЪ	Zn
		Drill Hole Summary										
0.0	6.1 m	Casing/Overburden										
6.1	6.3 m	Diorite										
6.3	17.3 m	Interbanded Sericite Schist + Quartzite 6.3 m Oxidized Qtz Vein										
		10.4 - 10.7 m Oxidized Sericite Schist + Quartzite - probable fault zone										
17.3	42.4 m	15.5 Oxidized Sericite Schist + Quartzite Qtz Veined Sericite Schist + quartzite ± Graphite										
		17.3 - 17.8 Mineralized Qtz Vein										
		19.6 - 21.5 Qtz Veined Fault/Alteration Zone										
		22.6 - 23.1 Mineralized Qtz Veins										
		23.5 - 23.9 Mineralized Qtz VEin 25.1 - 27.3 Fault/Alteration Zone										
		30.8 - 32.3 Qtz Veined Graphite Rich Schist										
		33.2 - 34.2 Fault/Alteration Zone										
		38.7 - 39.0 Mineralized Qtz Vein										
42.4	68.9 m	Interbanded Sericite Schist + Quartzite										
		42.4 Fault?										
		42.6 Mineralized Qtz Veinlet										
		46.5 - 47.0 Mineralized Qtz Veins										
		49.7 - 49.9 Mineralized Qtz Vein										
		52.8 - 53.3 Mineralized Qtz Vein										
<i>(</i> 0 0	FOU	61.3 - 68.9 Fault Zone										
68.9	E.O.H.											

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KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

D.D.H. #: 89-9 RECOVERY: 84% DATE: 10/11/89

Marked	Measured	Core	[Marked	Measured	Core
Interval	Interval	Loss		Interval	Interval	Loss
			[
6.1 - 8.8	2.7					
8.8 - 11.9 11.9 - 14.9	2.8 3.0	0.3				-
18.0 - 21.0	2.1	0.9				
21.0 - 24.1	2.4	0.7				
24.1 - 27.1 27.1 - 30.2	1.2 3.1	1.8				
30.2 - 33.2	3.0					
33.2 - 36.3	3.1		1			
36.3 - 39.3 39.3 - 42.4	3.0 2.7	0.4				
42.4 - 45.4	3.1]]			
45.4 - 48.5 48.5 - 51.5	3.1 3.0					
51.5 - 54.5	2.8	0.2				
54.5 - 57.6	2.8	0.3				
57.6 - 60.7 60.7 - 63.7	3.1 1.5	1.5				
63.7 - 66.8	0.5	2.6				
66.8 - 68.9	0.8	1.3				
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LOCATIO	DN: Betwe	en B-zone and Jewellery Shop						HOLE !	NO.: 89-10		PAGE	NO.: 1 of 3.
INCLINA STARTEI COMPLE PURPOSI	D: 10/11/89 CTED: 10/1	CORE SIZE: BGM METERAGE A2 (1/89) wr continuity of minzn between B-zone and Jewellery Shop	SURV RIMUTH ING		i CORR.II	NCLIN.		CLAIM SECTIO LOGGE DATE L DRILLI	RTY: Craz NO.: Chap N: 330N D BY: A. 7 OGGED: 1 NG CO.: F D BY: Ecc	out Option Fravis 11/11/89 Falcon		
From	То	Description	Sample	From	То	Length	Au ppb (g/t)	Ag	As	Cu	Pb	Zn
0.0	6.1m	Casing/Overburden										
6.1	6 0.4	Interbanded Sericite Schist + Quartzite	34942	6.1	7.6	1.5	185	3.2	40 ⁴	16	3528	3230
		- pale green/grey colour	34943	7.6	9.1	1.5	15	<.2	20 70	16 57	60 60	67 187
		- very broken core near top of section	34944	9.1	11.6	2.5	100	<.2			60 66	52
		- also near top of section foliation is approximately 40° to	34945	11.6	14.6	3.0	90 10	<.2	350	18		48
		core	34946	14.6	17.7	3.1	10	<.2	35	13	52	40 103
		- some fault zones that are oxidized and have some quartz	34947	17.7	19.4	1.7	10	.6	10 30	6 101	76 24	50
		veining	34948	19.4	20.7	1.3	10	<.2 <.2		34	24 14	50 60
		- veins (<5%) generally cut core at 40° - 60° and contain	34949 34950	20.7 22.2	22.2 23.8	1.5 1.6	15 10	<.2 <.2	10		14	80
		1 - 3% pyrite	34950 34951	23.8	23.8 25.3	1.6	10	<.2 <.2	5	31	17	52
		- only one vein that is mineralized with more than pyrite its only 1 cm wide and contains 25% Galena, 10%	34951	25.8	25.5	1.5	5	<.2	25	32	14	70
		Sphalerite, 10% Pyrite	34952	25.5	28.1	1.3	5	<.2	10	40	14	38
		- foliations generally steepens to 70 - 80° towards end of	34954	20.8	29.1	1.0	5	<.2	5	12	24	19
		hole	34955	20.1	30.6	1.5	5	<.2	5	23	16	34
		- towards the end of the hole the sericite schist takes on a	34956	30.6	32.1	1.5	20	<.2	<5	41	30	72
		waxy green appearance	34957	32.1	33.6	1.5	20 5	<.2	10	33	18	85
		6.1 - 6.3 Oxidized Qtz Vein	34958	33.6	35.1	1.5	10	.4	15	20	62	48
		- broken core	34959	35.1	36.6	1.5	5	<.2	25	31	16	68
			54757	2011	50.0	1.5			20	••		

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HOLE NO.: 89-10

PAGE NO.: 2 of 3.

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From	То	Description	Sample	From	To	Length	Au ppb (g/t)	Ag	As	Cu	РЬ	Zn
		- qtz veining in alt'd sericite schist	34960	36.6	37.6	1.0	5	<.2	20	39	18	38
		- rusty red spots of ankerite porphyroblasts	34961	37.6	39.1	1.5	20	<.2	10	10	14	94
		6.9 m Mineralized Qtz Veinlet	34962	39.1	40.6	1.5	5	<.2	15	16	16	34
		- 1 cm qtz veinlet that cuts core at 55°	34963	40.6	42.1	1.5	10	.2	15	34	18	40
		- 25% Galena, 10% Sphalerite, 10% Pyrite	34964	42.1	43.6	1.5	10	.2	15	22	3Ū	24
		- concordant veinlet	34965	43.6	45.1	1.5	5	<.2	20	20	12	33
		9.1 - 14.6 Otz Veined Fault/Alteration Zone	34966	45.1	46.9	1.8	15	.2	20	18	10	40
		- 40% recovery, 14.6 - 17.7 15% recovery	34967	46.9	48.7	1.8	10	<.2	20	24	10	37
		- quartz veins with up to 10% ankerite and $<1\%$ pyrite	34968	48.7	50.2	1.5	10	.2	30	77	24	79
		cut core at approximately 35°, up to 50% of section	34969	50.2	51.7	1.5	5	.2	30	86	16	79
		- near end of section, qtz veining is oxidized	34970	51.7	53.2	1.5	10	.4	35	78	14	- 58
		17.7 - 19.4 Qtz Veined Sericite Schist + Quartzite	34971	53.2	54.7	1.5	10	.4	40	117	16	72
		- slight darker green appearance	34972	54.7	56.2	1.5	5	.4	30	107	18	77
		- approximately 50% non-mineralized quartz veins with	34973	56.2	57.7	1.5	5	.2	35	89	16	50
		up to 25% ankerite	34974	57.7	59.1	1.4	5	.4	30	70	20	- 59
		- veins 0.2 cm to flooding over 0.5 m	34975	59.1	60.4	1.3	5	.2	20	77	18	74
		- veins generally cut core at 40° - 60°										
		- foliation 60° to core (just past interval)										
		20.7 - 26.8 Interbanded Sericite Schist + Quartzite										
		- particularly well foliated as evidenced by core splitting										
		into "disks"										
		- clay alt'd on foliation										
		- foliation 70° - 80° to core										
		- white ankerite porphyroblasts 0.1 cm										
		- minor non-mineralized smoky qtz veins (<1 cm)										
		28.1 - 29.1 Qtz Flooded Sericite Schist + Quartzite										
		- quartz flooding, up to 70%										
		- non-mineralized, milky white										
		37.6 - 37.8 Qtz Vein										
		- non-mineralized										
		- upper contact 30° to core										
		- foliation approximately 60° just before vein										
		42.1 Qtz Vein										
		- 8 cm cuts core at 45°										
		- 1% pyrite in selvages										

DRUL HOLELOG

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DRILL	HOLE L	.OG						HOLE N	NO.: 89-10		PAGE	NO.: 3 of 3
From	То	Description	Sample	From	To	Length	Au ppb (g/t)	Ag	As	Cu	Pb	Za
		 45.1 - 48.7 Interbanded Sericite Schist + Quartzite an increase in sericite schist with a waxy green appearance 										
		 better foliated 60 - 65° to core minor qtz veins (non-mineralized) generally a grey to smoky colour 										
		- slight oxidation towards end of section										
		59.1 - 60.4 Interbanded Sericite Schist and Quartzite										
		- similar to interval 45.1 - 48.7										
		 clay alt'd on foliation foliation also 60° - 65°, between intervals foliation as 										
		shallow as 35°										
		- towards end of interval slightly oxidized on foliation										
60.4	E.O.H.											
		Drill Hole Summary										
0.0	6.1 m	Casing/Overburden										
6.1	60.4 m	Interbanded Sericite Schist + quartzite										
		6.1 - 6.3 m Oxidized Qtz Vein 6.9 m Mineralized Otz Vein										
		9.6 - 14.6 m Otz Veined Fault/Alteration Zone										
		17.7 - 19.4 Qtz Veined Sericite Schist + Quartzite										
		20.7 - 26.8 Interbanded Sericite Schist and Quartzite - well foliated										
		28.1 - 29.1 Qtz Flooded Sericite Schist + Quartzite										
		- waxy green appearance										
60.4	E.O.H.	· · · · · ·										

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KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

D.D.H. #: 89-10 RECOVERY: 85% DATE: 11/11/89

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LOCATIO	N: Nugget	Mtn/Switchback Showing						HOLE N	0.: 89-11		PAGE	NO.: 1 of 3.
INCLINA			SURVI ZIMUTH INC		CORR.II	NCLIN.		CLAIM I		e Creek		
STARTED COMPLE PURPOSE	TED: 12/11 E:	51.5 89 3%			DATE LO DRILLIN	N: D BY: A. T OGGED: H NG CO.: F D BY: Eco						
From	То	Description	Sample	From	To	Length	Au ppb (g/t)	Ag	As	Cu	Pb	Zn
0.0	7.6 m	Casing/Overburden										
7.6	5.15 m	Intensely Sheared Interbanded Sericite Schist and Quartzite	34976	7.6	9.8	2.2	5	<.2	20	10	20	47
		- pale green/grey, light brown where oxidized	34977	9.8	12.0	2.2	5	<.2	15	6	16	47
		- cut by numerous fault zones (entire core sheared)	34978	12.0	13.9	1.9	(2.15)	30.6g/t	160	10	3118	42
		- very poor recovery (33%), broken up (largest piece	34979	13.9	15.9	2.0	10	<.2	35	21	32	63
		10 cm)	34980	15.9	18.0	2.1	10	<.2	20	19	16	58
		- minor quartz veining and rubble of quartz vein (up to	34981	18.0	21.0	3.0	5	.4	10	19	18	62
		10%)	34982	21.0	24.0	3.0	(10.8)	17.4g/t	6335	16	3318	36
		- near top of section 3 - 5% Galena and Pyrite in Qtz	34983	24.0	27.1	3.1	40	<.2	90	23	28	52
		Vein (8 cm wide, both contacts missing)	34984	27.1	28.8	1.7	55	<.2	40	10	20	36
		- most contacts missing, in one case contact seen to cut	34985	28.8	30.6	1.8	5	<.2	60	14	16	64
		core at 40° in 1 cm milky white quartz vein	34986	30.6	32.0	1.4	10	<.2	35	16	18	62
		- in some places just clay (fault gouge?) for over 1.5 m	34987	32.0	33.2	1.2	10	<.2	25	17	20	169
		- clay alt'd on foliation and slickensides	34988	33.2	36.3	3.1	115	<.2	30	21	34	44
		- foliation near top of hole 50° to core	34989	36.3	39.3	3.0	10	<.2	75	27	40	61
		- white ankerite porphyroblasts (up to 0.4 cm) in sericite	34990	39.3	42.4	3.1	180	.6	70	6	18	66
		schist	34991	42.4	45.4	3.0	(1.22)	2.4g/t	3335	193	528	58
		12.0 - 13.9 m Mineralized Quartz Veins	34992	45.4	46.9	1.5	220	.2	70	97	74	48
		- up to 50% quartz veins	34993	46.9	48.3	1.4	(1.43)	1.4	280	250	1016	71

DRILL	HOLE	LOG
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51.5 E.O.H.

DRILL	HOLE L	OG						HOLE NO .:	89-11		PAGE	NO.: 3 of 3
From	То	Description	Sample	From	То	Length	Au ppb (g/t)	Ag	As	Cu	Pb	Zn
		Drill Hole Summary										
0.0	7.6m	Casing/Overburden										
7.6	51.5 m	Intensely Sheared Interbanded Sericite Schist and quartzite										
		12.0 - 13.9 m Mineralized Qtz Vein										
		21.0 - 24.0 m Intensely Sheared Qtz Vein/Fault Zone										
		30.6 - 32.0 m As above										
		33.2 - 42.4 m Intensely Sheared Qtz Veined Sericite Schist										
		+ quartzite/Fault Zone										
		42.4 - 48.3 m Fault Zone										
		48.5 - 51.5m As above										

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KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

D.D.H. #: 89-11

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RECOVERY: 33% DATE: 12/11/89

Marked Interval	Measured Interval	Core Loss	Marked Interval	Measured Interval	Core Loss
$\begin{array}{c} (7.6 - 11.9) \ 3.3 \\ (11.9 - 14.9) \ 3.0 \\ (14.9 - 18.0) \ 3.1 \\ (18.0 - 21.0) \ 3.0 \\ (21.0 - 24.0) \ 3.0 \\ (24.0 - 27.1) \ 3.1 \\ (27.1 - 30.2) \ 3.1 \\ (30.2 - 33.2) \ 3.0 \\ (33.2 - 36.3) \ 3.1 \\ (36.3 - 39.3) \ 3.0 \\ (39.3 - 42.4) \ 3.1 \\ (42.4 - 45.4) \ 3.0 \\ (45.4 - 48.5) \ 3.1 \\ (48.5 - 51.5) \ 3.0 \\ 51.5 - E.O.H \end{array}$	2.2 1.8 1.1 0.3 0.2 0.8 0.6 1.4 0.7 0.2 0.4 1.1 1.9 0.6	1.1 1.2 2.0 2.7 2.8 2.3 2.5 1.6 2.4 2.8 2.7 1.9 1.1 2.4			

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INCLINA STARTEI COMPLE PURPOSI	235 TION: -60 D: 13/11/89 TED: 14/1 E:	CORE SIZE: BGM METERAGE	SURVEYS AZIMUTH INCLINATION CORR.INCLIN.						NO.: 89-12 RTY: Craz NO.: N: D BY: A. 1 OGGED: 1 NG CO.: F D BY: Eco	PAGE NO.: 1 of t		
From	To	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
0.0	5.2 m	Casing/Overburden										
5.2	57.8 m	Interbanded Sericite Schist + Quartzite	34995	5.2	8.5	3.3	(10.48)	(42-8)	110	15	2182	33
		- pale green/grey, brown where oxidized	34996	8.5	10.0	1.5	10	.4	60	17	84	65
		- upper 20 m oxidized	34997	10.0	11.6	1.6	10	.2	15	14	20	39
		- core broken up (not as badly as 89-11)	34998	11.6	12.1	0.5	5	.2	60	35	44	99
		- minor quartz veining with shallow (approximately 10°)	34999	12.1	13.6	1.5	10	<.2	15	14	54	119
		core angle near top of section	35000	13.6	14.6	1.0	15	.2	20	24	74	60
		- foliation 30° - 40° near top of section	35001	14.6	16.1	1.5	5	<.2	10	14	12	31
		- fold nose at 23 m	35002	16.1	17.7	1.6	10	<.2	25	25	18	65
		- increase in foliation/core angle to 40° - 50° near end of	35003	17.7	19.2	1.5	10	<.2	15	15	16	50
		section	35004	19.2	20.7	1.5	5	<.2	10	14	12	50
		- where oxidized normally white ankerite porphyroblasts	35005	20.7	22.2	1.5	5	<.2	20	23	8	54
		are seen as rusty red spots (0.2 cm)	35006	22.2	23.8	1.6	10	<.Z	5	16	6	64
		- towards end of section interval becomes more competent	35007	23.8	25.3	1.5	5	<.2	5	14	52	46
		(increase in quartzite)	35008	25.3	26.8	1.5	5	<.2	<5	13	8	36
		- also towards end of section white (aligned with foliation)	35009	26.8	28.3	1.5	15	<.2	<5	14	6	49
		increase in size to 0.5 cm in places	35010	28.3	29.9	1.6	5	<.2	<5	35	18	81
		5.5 - 7.0 ? Intensely Sheared Minz'd Qtz Vein	35011	29.9	31.4	1.5	5	<.2	5	19	8	45
		- 10% recovery	35012	31.4	32.9	1.5	10	<.2	<5	21	14	42

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RILL	HOLE	LOG						HOLE N	IO.: 89-12		PAGE	NO.: 2 of
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		- 1 - 3% Galena, 3% Pyrite in milky white quartz vein	35013	32.9	34.4	1.5	5	<.2	10	21	8	81
		that has been sheared and clay alt'd	35014	34.4	35.9	1.5	5	<.2	5	13	4	50
		11.6 - 12.1 m Fault/Alteration Zone	35015	35.9	37.0	1.1	10	<.2	<5	10	6	49
		- very broken up core	35016	37.0	39.0	2.0	180	.4	30	35	76	79
		- tan brown coloured clay	35017	39.0	42.1	2.1	30	.2	5	9	18	43
		- clay alt'd on foliation in pale green sericite schist and	35018	42.1	45.1	3.0	95	<.2	35	48	58	79
		quartzite with rusty red spots (0.3 cm) of ankerite	35019	45.1	48.2	3.1	10	.2	10	29	24	72
		porphyroblasts	35020	48.2	50.2	3.0	55	.6	50	14	20	56
		- foliation seems to cut core at 10°	35021	50.2	51.3	1.1	90	<.2	30	36	16	97
		12.1 - 14.6 m Oxidized Qtz Vein	35022	51.3	51.8	0.5	5	<.2	15	33	46	111
		- lower contact cuts core at 10°, upper contact missing	35023	51.8	53.3	1.5	5	1.2	5	23	318	125
		- trace pyrite, 10% ankerite	35024	53.3	54.8	1.5	5	<.2	20	23	24	88
		- last metre (same vein?), similar mineralogy, very	35025	54.8	56.3	1.5	50	.4	45	42	130	106
		gossanous at end of interval	35026	56.3	57.8	1.5	5	.4	55	31	66	66
		23.0 m Fold Nose										
		- as expressed in pale green sericite schist and quartzite										
		- clay alt'd on foliation										
		- core becomes "fresher" and less broken up										
		- some minor milky white quartz veining near fold nose										
		29.8 Fault Gouge										
		- sericite schist alt'd to clay over 10 cm										
		- core broken up adjacent to zone										
		37.0 - 39.0 m? Fault Gouge										
		 alt'd to clay (light brown), small pieces of sericite schist + quartzite 										
		39.0 - 42.1 Quartz Vein										
		- very broken core, largest piece 10 cm										
		- up to 15% ankerite in milky white quartz veins										
		- all contacts missing										
		42.1 - 50.2 Fault/Alteration Zone										
		 strong clay alteration of interbanded sericite schist and quartzite 										
		- quartz vein rubble for last 2 m										
		- near middle of section 0.4 m of more resistant quartizte										
		- pyrite cubes 0.3 cm in quartz rubble										

RILL	HOLE L	.OG						HOLE M	IO.: 89-12		PAGE	NO.: 3 of (
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Ръ	Zn
		 foliation in sericite schist, just past zone is 50° to core 51.3 - 51.8 Fault? broken core in otherwise competent section slickensides and a "sheer" on foliation minor non-mineralized milky white qtz veins trace galena noted on split surface 										
57.8	64.4 m	 Graphite Rich Phyllitic Mudstone banded/Jayered on mm scale and cm scale dark grey/black 3 - 5% pyrite as euhedral cubes (≤1 cm) milky white quartz vein near middle of section, which as been sheared foliation ranges from 30° - 55° to core foliation can be extremely crenulated adjacent to milky white qtz veins (<1 cm) slickensides + clay alt'd on some foliations slightly calcareous white ankerite porphyroblasts (up to 0.5 cm) aligned with foliation, in some places up to 25% of the core pyrite also seems to be aligned with foliation 60.5 - 61.3 quartz Vein milky white with up to 10% ankerite most contacts missing, but vein seems to cut core at shallow angle 75% quartz vein, remainder phyllite which has euhedral pyrite (5%) up to 0.5 cm vein "broken up" near middle (fault?) 	35027 35028 35029 35030 35031	57.8 59.2 60.5 61.3 62.9	59.2 60.5 61.3 62.9 64.4	1.4 1.3 0.8 1.6 1.5	550 5 135 60 5	.8 .4 .8 .4	300 55 75 75 65	50 56 16 81 63	70 60 38 148 52	62 99 45 77 94
64.4	74.5 m	Quartzite - less than 20% sericite schist, primarily towards end of section - pale grey/green colour	35032 35033 35034 35035	64.4 66.4 67.4 69.0	66.4 67.4 69.0 69.7	2.0 1.0 1.6 0.7	65 5 55 495	.2 .8 .8 1.0	60 90 35 135	26 51 19 19	20 22 40 66	43 96 68 33

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DRILL	HOLE I	_OG						HOLE N	O.: 89-12	PAGE NO.: 4 of		
From	Тө	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		- approximately 10% milky white qtz veins with up to 15%	35036	69.7	71.4	1.7	<5	.2	60	14	12	55
		ankerite in places and 5% pyrite	35037	71.4	72.2	0.8	155	.2	150	4	8	29
		- veins generally cut core at 30° - 50°	35038	72.2	73.5	1.3	5	.2	110	16	20	52
		- trace mariposite in quartzite	35039	73.5	74.5	1.0	35	.4	75	17	40	37
		66.3 - 66.4 Quartz Vein										
		 - 3 - 5% pyrite in selvage at upper contact which cuts core at 40° 										
		- 1 - 3% ankerite										
		67.4 - 67.7 quartz Vein										
		- upper contact missing, lower contact 30° to core, 10 - 15% ankerite										
		69.0 - 69.5 Quartz Vein										
		- upper contact 35° to core										
		- 3 - 5% pyrite (as large as 1 cm) in vein selvages										
		- 10 - 15% ankerite										
		69.6 - 69.7 Quartz Vein										
		- lower contact 40° to core										
		- 10 - 15% ankerite										
		- 3 - 5% pyrite in vein selvages										
		71.4 72.2 Mineralized Qtz Veins										
		- most abundant pyrite (5 - 7%)										
		- two veins 40 cm and 10 cm										
		- first vein lower contact 30° to core										
		- 10 - 15% ankerite near top of vein										
		- lower vein 50° to core, 5% pyrite along upper vein										
		selvage										
74.5	90.8 m	Graphite Rich Phyllitic Mudstone	35040	74.5	76.0	1.5	60	.2	35	46	24	2
		- similar to interval 57.8 - 64.4 m	35041	76.0	77.8	1.8	<5	.4	10	110	146	3
		- dark grey/black	35042	77.8	78.1	0.3	5	1.6	10	73	816	3
		- banded/layered appearance (mm scale - cm scale)	35043	78.1	79.6	1.5	5	.2	5	78	28	6
		- in places shows fine layering with possible flame	35044	79.6	81.1	1.5	<5	.2	5	55	54	6
		structures	35045	81.1	82.6	1.5	5	<.2	<5	58	22	10
		- some (<10%) coarser grained layers of sericite schist with	35046	82.6	84.1	1.5	<5	<.2	<5	48	22	10
		minor quartzite	35047	84.1	85.6	1.5	5	<.2	<5	35	12	5'

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DRILL	HOLE	LOG						HOLE N	O.: 89-12		PAGE	NO.: 5 of
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		 pyrite 3 - 5% as euhedral cubes as large as 1 cm, aligned with foliation which cuts core at 40° - 50° (but can be crenulated in places) one 30 cm mineralized quartz vein that contains 1% Galena, 3% Pyrite along selvages and trace Sphalerite clay alt'd on foliation planes in sericite schist white ankerite porphyroblasts up to 0.5 cm and 20% of rock, aligned with foliation minor carbonate 77.8 - 78.1 Mineralized Quartz Vein 1% Galena 3 - 5% Pyrite along vein selvages trace sphalerite upper contact 25° to core, lower contact 30° to core 	35048 35049	85.6 87.8	87.8 90.8	2.2 3.0	55	.4 .4	<5 <5	38 59	50 52	61 28

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90.8 E.O.H.

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DRILL	HOLE L	.OG						HOLE N	O.: 89-12		PAGE	NO.: 6 of (
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		Drill Hole Summary										
0.0	5.2m	Casing/Overburden										
5.2	57.8 m	Interbanded Sericite Schist + Quartzite										
		5.5 - 7.0 m Intensely Sheared Minz'd Qtz Vein										
		11.6 - 12.1 m Fault/Alteration Zone										
		12.1 - 14.6 m Oxidized Qtz Vein										
		23.0 m Fold Nose										
		29.8 m Fault Gouge										
		37.0 - 39.0 m As above										
		39.0 - 42.1 m Quartz Vein										
		42.1 - 50.2 m Fault/alteration Zone										
		51.3 - 51.8 m Fault?										
57.8	64.4 m	Graphite Rich Phyllitic Mudstone										
64.4	74.5 m	Quartzite										
		66.3 - 66.4 m Quartz Vein										
		67.4 - 67.7 m Quartz Vein										
		69.0 - 69.5 m Quartz Vein										
		69.6 - 69.7 m Quartz Vein										
		71.4 - 72.2 m Mineralized Qtz Veins										
74.5	90.8 m	Graphite Rich Phyllitic Mudstone										
90.8 m	E.O.H.											

KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

D.D.H. #:89-12

RECOVERY: 68% DATE: 13/11/89

Marked	Measured	Core		Marked	Measured	Core
Interval	Interval	Loss		Interval	Interval	Loss
5.2 - 5.5	0.03	0.27				
5.5 - 8.5	0.3	2.7				
8.5 - 11.6	1.8	1.3				
11.6 - 14.6	2.6	0.4				
14.6 - 17.7 17.7 - 20.7	1.8 2.6	1.3				
20.7 - 23.8	2.0	0.4 0.9				
23.8 - 26.8	2.8	0.2				
26.8 - 29.9	1.6	1.5	ł –			
29.9 - 32.9	3.0					
32.9 - 36.0	2.7	0.4				
36.0 - 39.0	1.3	1.7				
39.0 - 42.1	0.9	2.2				
42.1 - 45.1	1.2	1.8				
45.1 - 48.2	1.2	1.9			}	
48.2 - 51.2	2.5	0.5	ł –			
51.2 - 54.3 54.3 - 57.3	3.1					
57.3 - 60.4	2.8 2.5	0.2 0.6				
60.4 - 63.4	2.8	0.0				
63.4 - 66.4	1.7	1.3				
66.4 - 69.5	1.8	1.3				
69.5 - 72.5	3.0					
72.5 - 75.6	3.0	0.1				
75.6 - 78.6	2.9	0.1				
78.6 - 81.7	3.1		ļ			
81.7 - 84.7	3.0					
84.7 - 87.8	1.6	1.5	1			
87.8 - 90.8 90.8 - E.O.H.	0.9	2.1				
90.6 - Е.О.П.						
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LOCATIO)N: Level	2 Trench						HOLE	NO.: 89-13		PAGE	NO.: 1 of 4.
AZIM.: INCLINA	55° TION: -45	ELEV.: 2010 m P LENGTH: 45.4 m	SURV	EVS				PROPE	RTY: Craz	e Creck		
STARTEL COMPLE PURPOSI): TED: 5:	CORE SIZE: BGM METERAGE 45.4	AZIMUTH IN		N CORR.II	NCLIN.		LOGGE DATE 1 DRILLI	NO.: N: 1865N D BY: A. 1 OGGED: 1 NG CO.: F CD BY: Ecc	Fravis 17/11/89 ¹ aicon		
From	То	Description	Sample	From	То	Length	Αυ	Ag	As	Cu	Pb	Zn
0.0	12.2 m	Casing/Overburden										
1.2	27.8 m	 Oxidized Interbanded Sericite Schist + Quartzite core broken and oxidized brown colour with rusty red spots (02. cm) of ankerite porphyroblasts (25%) one milky white quartz vein (70 cm) near top of interval foliation 70 - 80° to core axis possible fault near upper contact of first quartz vein and towards end of of interval clay alt'd and slickensides on some foliations quartz eyes (0.3 cm) in quartzite bands <1% pyrite (euhedral cubes ≤0.5 cm) 14.0 - 14.9 m Quartz Vein both contacts missing milky white with gossanous pits (remanant pyrite?) core broken more than normal near upper contact (fault?) 16.6 m Quartz Rubble small pieces (max 2 cm) of milky white quartz vein, correct location? 	35056	12.2 14.0 14.9 16.4 18.0 19.5 21.0 22.5 24.1 27.1	14.0 14.9 16.4 18.0 19.5 21.0 22.5 24.1 27.1 27.8	1.8 0.9 1.5 1.6 1.5 1.5 1.5 1.6 3.0 0.7	70 30 75 15 5 10 10 10 270 10	.1 .2 .2 .1 .6 .1 .1 .2 .2	71 28 147 86 69 120 56 44 56 23	25 5 18 22 12 24 16 21 34 60	28 6 17 35 20 224 27 29 116 58	227 48 418 123 58 39 64 638 122
		 core broken more than normal near upper contact (fault?) 16.6 m Quartz Rubble small pieces (max 2 cm) of milky white quartz vein, 										

DRILL	HOLE L	.OG						HOLE N	O.: 89-13		PAGE	NO.: 2 of
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		 no mineralization noted 21.8 - 22.1 m Fault gouge, light brown colour clay alt'd with pieces of sericite schist (0.5 cm) 24.1 - 27.1 m Qtz Veined Sericite Schist + Quartzite 10% recovery 50% Qtz vein, no contacts quartz vein is slightly gossanous and fractured (but no mineralization noted) slightly vuggy 										
27.8	42.4 m	 Banded/Layered Limestone 0.5 cm alternating bands of limestone and sericite schist that grades into a grey massive limestone from the middle of the section onwards foliation cuts core 80 - 85° <5% quartz veinlets (semi-concordant) < 1 cm wide, usually non-mineralized 1% Galena in 3 cm quartz vein though, near end of interval styolites in limestone cut core at 50 - 60° lower contact - fault contact 27.8 - 33.2 m Banded Sericite Schist + Limestone 0.5 cm layers of grey/green schist and oxidized layers of limestone foliation 80° to core clay alt'd on foliation 33.2 - 34.7 Grey Styolitic Limestone irregular white-grey limestone styolites cut core at 50° - 60° 39.3 - 39.9 m Grey Styolitic Limestone similar to interval 33.2 - 34.7 m has a few narrow bands of sericite schist that are oxidized 	35061 35062 35063 35064 35065 35066 35067 35068	27.8 30.2 31.7 33.2 34.7 36.3 39.3 41.1	30.2 31.7 33.2 34.7 36.3 39.3 41.1 42.4	2.4 1.5 1.5 1.6 3.0 1.8 1.3	5 5 10 15 10 25 10	.3 .2 .1 .4 .3 .2 .3 1.0	20 3 8 9 13 5 11 18	18 23 96 11 16 20 17 31	31 20 19 74 46 71 124 826	67 17 49 66 30 15 6 29

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DRILL	HOLE L	.OG						HOLE N	iO.: 89-13		PAGE	NO.: 3 of 4.
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		 limestone heavily oxidized (ankerite) towards lower contact with fault minor sericite schist near middle of section where also oxidized also towards end of interval quartz veinlets (<0.5 cm) <10% cut core at steep angles 										
42.4	42.9 m	Fault - oxidized, broken core - carbonate veinlets - brown to orange/brown colour - ankerite (iron carb.)	35069	42.4	43.9	1.5	10	.1	34	161	26	110
42.9	45.4	 Interband Sericite Schist + Quartzite oxidized patches (ankerite alt'd) account for 70% of the section in fresher sections ankerite porphyroblasts (0.3 cm) 25% foliation 50° - 60° sericite has a pale blue-green appearance (visible only with hand lens) trace to 1% pyrite 	35070	43.9	45.4	1.5	30	.1	47	117	19	117

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45.4 E.O.H.

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DRILL	HOLE L	.0G						HOLE N	NO.: 89-13		PAGE	NO.: 4 of 4
From	То	Description	Sample	From	То	Length	Aυ	Ag	As	Cu	Pb	Zn
		Drill Hole Summary										
0.0	12.2 m	Casing/Overburden										
12.2	27.8 m	Oxidized Interbanded Sericite Schist + Quartzite										
		14.0 - 14.9 m Quartz Vein										
		16.6 m Quartz Rubble										
		20.8 - 20.9 m Quartz Rubble										
		21.8 - 22.1 m Fault										
		24.1 - 27.1 m Qt Veined Sericite Schist + Quartzite										
27.8	42.4 m	Banded Limestone										
		27.8 - 33.2 m Banded Sericite Schist and Limestone										
		33.2 - 34.7 m Grey Styolitic Limestone										
		39.3 - 39.9 m Grey Styolitic Limestone										
		41.4 - 42.4 m White Limestone										
42.4	42.9m	Fault										
42.9	45.4 m	Interbanded Sericite Schist + Quartzite										
45.4	E.O.H.											

KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

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D.D.H. #: 89-13 RECOVERY: 45% DATE: 17/1189

Marked Interval	Measured Interval	Core Loss	Marked Interval	Measured Interval	Core Loss
12.2 - 14.9 14.9 - 18.0 18.0 - 21.0 21.0 - 24.1 24.1 - 27.1 27.1 - 30.2 30.2 - 33.2 33.2 - 36.3 36.3 - 39.3 39.3 - 42.4 42.4 - 45.4 45.4 - E.O.H.	1.0 1.2 1.7 1.6 0.3 1.6 1.7 1.2 0.3 2.0 2.4	1.7 1.9 1.3 1.5 2.7 1.5 1.3 1.9 2.7 1.1 0.6			

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INCLINA STARTEL COMPLE PURPOSI	235° TION: -45): 18/11/89 TED: 19/1	ELEV.: 1351 m ° LENGTH: 66.8 m CORE SIZE: BGM METERAGE EOH 1/89 libernian mineralization at depth	SURV AZIMUTH ING		i corr.I -46	NCLIN.		PROPE CLAIM SECTIO LOGGE DATE L DRILLI	(O.: 89-14 RTY: Craz NO.: Chap N: 525N D BY: A. 1 OGGED: 1 NG CO.: F D BY: Eco	out Option Travis 19/11/89 Falcon	PAGE	NO.: 1 of
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
0.0	6.1 m	Casing/Overburden										
5.1	21.1 m	Graphite Rich Phyllitic Mudstone - grey/black, graphite rich bands (<1 cm) cut coarser	35071 35072	6.1 7.2	7.2 8.2	1.1 1.0	5	.1 .>	13 10	39 26	11 14	61 35
		grained sericite schist and quartzite	35072	7.2 8.2	8.2 8.8	0.6	5	<.1 <.1	8	20	14	35
		- foliation generally cuts core at 50 - 70° but can be quite		8.8	9.5	0.7	5	.1	10	49	17	47
		crenulated in places	35075	9.5	10.7	1.2	10	.1	29	57	14	60
		- white ankerite porphyroblasts (0.3 cm) aligned with	35076	10.7	11.7	1.0	5	<.1	11	21	17	30
		foliation (up to 25%, especially towards top of interval)	35077	11.7	12.2	1.5	5	.1	14	38	22	43
		- three milky white qtz veins near top of interval (20 cm -		12.2	13.7	1.5	5	<.1	1	37	41	37
		60 cm) cut core at 40 - 45° and contain up to 15%	35079	13.7	15.2	1.5	10	<.1	4	39	45	45
		ankerite	35080	15.2	16.7	1.5	5	.3	6	50	72	53
		- 3 - 5% pyrite, predominatly in graphite rich layers as	35081	16.7	18.0	1.3	20	.6	9	73	82	44
		cubes and rectangles aligned with foliation	35082	18.0	19.6	1.6	10	.1	12	33	37	49
		- some foliation clay alt'd with slickensides	35083	19.6	21.1	1.5	5	.3	25	69	40	35
		- slightly calcareous										
		7.9 - 8.2 Fold Nose? - crenulation of foliation on small scale or fold nose?										
		8.2 - 8.8 m Quartz Vein										
		 milky white with gossanous fractures and pits (ankerite, pyrite?) 										
		9.0 - 9.5 m Fault/Alteration Zone										

strong clay alteration with milky white quartz rubble
 shearing seems to be along foliation (45° to core)

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DRILL	HOLE L	_OG						HOLE N	NO.: 89-14		PAGE	NO.: 2 of
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		 10.7 - 11.7 m Quartz Veins two veins 20 cm wide that cut core at 35° - 50° veins contain up to 15% ankerite and 3 - 5% pyrite along selvages lower contact of first vein possible fault zone 11.9 - 12.2 m Qtz Veined Sericite Schist + quartzite 50% qtz veins (<3 cm) that cut core at steep angles up to 10% ankerite, trace scheelite? 12.7 m Fault Gouge strong clay alteration over 5 cm 18.3 - 18.5 m Quartz Vein broken core, contacts missing up to 15% ankerite 19.0 m Fault Gouge 10 cm of strong clay alteration some quartz, ankerite veining 										
21.1	38.5 m	Interbanded Sericite Schist + Quartzite	35084	21.1	22.6	1.5	35	.1	19	37	13	84
		- grey/green colour	35085	22.6	24.1	1.5	5	.1	11	65	24	76
		- banded on the mm scale and up to a 3.3 m band of	35086	24.1	26.0	1.9	5	.1	32	28	18	58
		quartzite	35087	26.0	27.7	1.7	10	.1	21	109	13	92
		- white ankerite porphyroblasts (up to 0.4 cm) aligned	35088	2 7.7	29.3	1.6	5	.1	21	111	14	87
		with foliation (25%)	35089	29.3	31.0	1.7	15	.4	58	30	19	65
		- foliation 25° - 30° near top of interval	35090	31.0	32.7	1.7	10	.3	38	22	51	47
		- trace to 1% pyrite (<0.2 cm cubes)	35091	32.7	34.3	1.6	80	.2	45	14	35	55
		- foliation steepens to 60° at 30 m	35092	34.3	34.7	0.4	(1.20)	.6	(.14)	9	29	9
		26.0 - 29.3 Quartzite	35093	34.7	36.0	1.3	20	.3	51	30	37	87
		- grey to light grey/green	35094	36.0	37.3	1.3	310	.5	131	26	99	66
		 minor (1 - 3%) quartz veins (0.5 cm) cut core at 50° - 60° with 1 - 3% pyrrhotite and pyrite veins a dilatant filling of small fractures 29.3 - 34.3 m Qtz Veined Sericite Schist + quartzite 	35095	37.3	38.5	1.2	15	.5	114	18	282	275
		- 10% milky white quartz veins in a almost waxy green sericite schist and grev quartzite										

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for a miney white quartz vents in sericite schist and grey quartzite
foliation 60° to core

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RILL	HOLE	LOG						HOLE N	IO.: 89-14		PAGE	NO.: 3 of
om	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		- veins (<1 cm) cut core at 30° - 45° and contain up to										
		10% ankerite and 1% pyrite										
		34.3 - 34.7 m Mineralized Quartz Vein										
		 milky white quartz Vein(s)? 										
		- upper contact 45° to core, lower contact irregular										
		- 10% pyrite, predominantly towards lower contact in										
		almost massive bands										
		34.7 - 38.5 Qtz Veined Sericite Schist + Quartzite										
		- 10% milky white qtz veins that cut core at 35° - 45°										
		- veins (1 - 10 cm) average 2 cm										
		- trace galena, sphalerite, up to 5% pyrite in some vein										
		selvages										
		- trace scheelite?										
.5	66.8	Interbanded Sericite Schist + Quartzite	35096	38.5	39.4	0.9	35	.3	102	33	33	69
		- a distinctive waxy green to pale green, well foliated	35097	39.4	40.9	1.5	15	.2	21	37	11	71
		sericite schist and quartzite	35098	40.9	42.4	1.5	5	.2	9	26	9	100
		- foliation near top of interval 30° - 40°	35099	42.4	43.9	1.5	5	.4	7	55	8	89
		- white ankerite porphyroblasts aligned with foliation (up	35100	43.9	45.4	1.5	5	.2	22	17	10	97
		to 0.5 cm and 30%)	35101	45.4	46.1	0.7	15	.1	70	10	8	84
		- foliation steepens to 60° near 45 m and continues to end	35102	46.1	47.5	1.4	5	.2	70	44	10	52 81
		of hole	35103	47.5	49.0	1.5	5	.3	80	11 27	10 9	64
		- 10% milky white quartz veins from 1 cm - 70 cm, with up	35104	49.0	50.5	1.5	5	.1	84 89	36	12	80
		to 10% ankerite and cut core at 30° - 45°	35105	50.5	52.1	1.6	5	.2	69 36	50	4	12
		- some quartz veins contain up to 5% pyrite and 1%	35106	52.1	52.7	0.6	70 10	.2 .2		21	11	54
		pyrrhotite	35107	52.7 53.7	53.7 54.6	1.0 0.9	10 20	.2	90 74	26	10	39
		- 2.7 m wide quartzite band contains 1% Sphalerite and	35108 35109	54.6	54.0 55.3	0.9	20 10	.2	37	20 72	14	33
		Galena in qtz veinlets - towards end of hole sericite schist becomes enriched in	35109	55.3	55.5	1.0	5	.3	81	36	22	46
			35110	56.3	57.6	1.3	20	.2	58	15	13	47
		chlorite giving it a darker green appearance 39.1 - 39.2 m Quartz Vein	35112	57.6	59.3	1.5	255	.5	101	16	23	43
		- milky white, up to 10% ankerite	35112	59.3	60.6	1.7	15	3.0	33	21	(.17)	(.12)
		- minky while, up to 10.76 and 20.00	35115	60.6	62.0	1.5	10	.5	24	22	34	49
		39.3 - 39.4 m Fault	35114	62.0	63.5	1.5	10	.2	27	36	19	62
		- clay alt'd and quartz rubble over 10 cm	35115	63.5	64.8	1.3	10	.3	12	36	34	55

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DRILL HOLE	LOG						HOLE N	0.: 89-14		PAGE	NO.: 4 of
From To	Description	Sample	From	To	Length	Au	Ag	As	Cu	РЪ	Zn
	46.1 - 47.5 m Qtz Flooded Sericite Schist + Quartzite	35117	64.8	65.8	1.0	15	.2	3	93	14	93
	 inregular milky white qtz veins (1 - 5 cm) with up to 10% ankerite in places up to 15 cm of intense flooding 52.1 - 52.7 m Mineralized Quartz Vein cuts core at shallow angle (true width 3 cm) 5 - 7% ankerite, 5% pyrite (in one mass) two small veins, since last mineralized vein, 1% pyrrhotite 57.4 - 57.5 m Quartz Vein rubble (<1 cm pieces) of milky white qtz vein up to 5% ankerite fault zone? 59.3 - 62.0 m Quartzite light grey/green 1% Gatena, 1% Sphalerite, 1% Pyrite in milky white quartz veinlets + fractures (0.5 cm) that cut core at 45° - 70° 64.8 - 66.8 m Interbanded Sericite Schist + Quartzite slightly darker green appearance probably due to increase in chlorite 1% pyrrhotite, trace pyrite white ankerite porphyroblasts (0.3 cm) up to 25% foliation 55° - 60° to core axis 	35118	65.8	66.8	1.0	10	.2 .2	5	118	17	82

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DRILL	HOLE L	.OG						HOLE N	O.: 89-14		PAGE	NO.: 5 of
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	РЬ	Zn
		Drill Hole Summary										
0.0	6.1 m	Casing/Overburden										
6.1	21.1 m	Graphite Rich Phyllitic Mudstone										
		7.9 - 8.2 m Fold Nose?										
		8.2 - 8.8 m Quartz Vein										
		9.0 - 9.5 m Fault/Alteration Zone										
		10.7 - 11.7 m Qtz Veins										
		11.9 - 12.2 m Qtz Veined Sericite Schist + Quartzite										
		12.7 m Fault Gouge										
		18.0 m Fault Gouge										
		18.3 - 18.5 m Quartz Vein										
		19.0 m Fault gouge										
21.1	38.5 m	••••••										
		26.0 - 29.3 m Quartzite										
		29.3 - 34.3 m Qtz Veined Sericite Schist + Quartzite										
		34.3 - 34.7 m Mineralized Quartz Vein										
38.5	66.8 m	34.7 - 38.5 m Qtz Veined Sericite Schist + Quartzite										
38.5	00.8 m											
		- waxy green 39.1 - 39.2 m Quartz Vein										
		39.3 - 39.4 m Fault										
		46.1 - 47.5 m Qtz Flooded Sericite Schist + Quartzite										
		52.1 - 52.7 m Mineralized Quartz Vein										
		54.6 - 54.8 m Mineralized Quartz Vein										
		57.4 - 57.5 m quartz Vein										
		59.3 - 62.0 m Quartzite										
		64.8 - 66.8 m Interbanded Sericite Schist and Quartzite										
		- chlorite rich										

KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

D.D.H. #: 89-14

RECOVERY: 95% DATE: 19/11/89

Marked Interval	Measured Interval	Core Loss	Marked Interval	Measured Interval	Core Loss

			DRILL H									
LOCATIO	N: Hiberr	lien						HOLE N	O.: 89-15		PAGE	NO.: 1 of 6
ZIM.:		ELEV.: 1351 m						PROPER	tTY: Craz	e Creek		
	: 19/11/89 FED: 20/1	CORE SIZE: BGM METERAGE A2 75.9 1/89 libernian mineralization at depth	SURVI XIMUTH ING		CORR.II	NCLIN.		SECTIO LOGGEI DATE LA DRILLI	NO.: Chaj N: 525N D BY: A. (OGGED: J NG CO.: I D BY: Eco	Fravis Nov. 21/89 Falcon		
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
0.0	4.6m	Casing/Overburden										
4.6	26.6 m	Graphite Rich Phyllitic Mudstone	35119	4.6	6.2	1.6	<5	.6	46	28	55	20
		- not as graphitic as in DDH 89-14 unit borders on	35120	6.2	7.8	1.6	<5	.6	25	31	40	28
		graphite rich sericite schist and quartzite	35121	7.8	9.1	1.3	<5	.4	26	21	30	5
		- 1 - 10 cm graphite rich bands	35122	9.1	10.5	1.4	<5	.3	25	16	50	7
		- grey/black banded appearance	35123	10.5	11.0	0.5	<5	4	51	34	54	11
		- foliation generally cuts core at 35° - 60° but can be quite	35124	11.0	12.1	1.1	<5	.2	27	10	51	8
		crenulated in places, especially adjacent to milky white	35125	12.1	13.3	1.2	<5	.4	40	15	96	11
		quartz veins (<1 cm)	35126	13.3	14.9	1.6	<5	.2	26	12	67	20
		- three quartz veins near top of interval approximately	35127	14.9	16.4	1.5	<5	.2	25	15	97	12
		10 cm each	35128	16.4	17.9	1.5	<5	.1	26	13	96	8
		- clay alt'd and slickensides on some foliations	35129	17.9	18.7	0.8	<5	.2	68	22	105	3
		- white porphyroblasts of ankerite (0.3 cm) up to 25% of	35130	18.7	20.2	1.5	<5	.2	35	31	62	3
		core, aligned with foliation, dominant near top of interval	35131	20.2	21.7	1.5	<5	.3	67	39	83	1
		- slightly calcareous	35132	21.7	23.2	1.5	<5	.2	42	33	89 74	8
		6.2 - 9.1 m Quartz Veins	35133	23.2	24.1	0.9	<5	.1	37	24	74	35 31
		- three milky white qtz veins cut core at 45° - 60°	35134	24.1	25.4	1.3	<5	.3	38	49 36	41 69	11
		 veins 50 cm, 20 cm, 20 cm veins contain up to 10% ankerite veins have gossanous pits + fractures (remanant pyrite?) fault zone between 2nd - 3rd veins at approximately 8.0 m 	35135	25.4	26.6	1.2	<5	.2	55	90	40	11

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DRILL	HOLE I	LOG						HOLE N	NO.: 89-15		PAGE	NO.: 2 of 6
From	То	Description	Sample	From	То	Length	Au	Ag	As	Си	Pb	Zn
		 9.3 m Fault Gouge -graphite rich clay over 5 cm minor quartz veining 10.5 - 11.0 m Fault/Alteration Zone -strong clay alt'd in two places over 10 cm 11.0 - 13.3 m Qtz Veined Sericite Schist + Quartzite 20% milky white quartz veins (0.5 cm - 20 cm) cut core at steep angles 14.1 - 14.9 m Quartzite grey/green colour quartz eyes 0.2 cm minor white ankerite porphyroblasts in some sericite schist bands foliation 70° to core axis 17.9 - 18.7 m Fault/Alteration Zone strong clay alteration of pale green sericite schist, minor qtz veining 19.0 - 19.1 m Quartz Vein milky white qtz vein upper contact 60° to core, lower contact (fault contact) at approximately 45° to core 24.0 - 24.1 m Quartz Vein milky white quartz vein with up to 10% ankerite, cuts core at 45° 24.1 - 26.6 m Qtz Veined Phyllitic Mudstone graphitic bands (<1 cm) and milky white qtz veins (<1 cm) are crenulated giving the core a "swirled appearance" 1 - 3% pyrite up to 0.5 cm, probable fault at lower contact 										
26.6	75.9 m	Interbanded Sericite Schist + Quartzite - green/grey to waxy green colour and better foliated as you go down the section - foliation 45° - 60° - white ankerite porphyroblasts (0.1 - 0.5 cm) especially large in waxy green sericite schist up to 30% in places	35136 35137 35138 35139 35140 35141	26.6 28.1 29.3 30.4 31.0 32.5	28.1 29.3 30.4 31.0 32.5 34.0	1.2 1.1 0.6 1.5 1.5	<5 <5 10 <5 10	.1 .3 .1 .2 .1 .2	26 53 86 51 35 13	12 35 15 7 21 109	89 84 67 47 56 34	28 14 23 91 30 242

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DRILL HO	OLE	LOG						HOLE N	iO.: 89-15		PAGE	NO.: 3 of
From	То	Description	Sample	From	To	Length	Au	Ag	As	Cu	Pb	Zn
		- 10% milky white quartz veins that cut core anywhere	35142	34.0	35.6	1.6	<5	.2	2	71	21	69
		from 30° - 80° and have up to 10% ankerite, 3% pyrite,	35143	35.6	36.4	0.8	<5	.2	24	17	24	70
		3% Galena	35144	36.4	36.7	0.3	<5	6.5	17	(.63)	(.21)	37
		- trace mariposite/fuchsite? in quartzite	35145	36.7	38.2	1.5	<5	.8	28	111	92	64
		29.3 - 29.5 m Fault/Alteration Zone	35146	38.2	39.7	1.5	<5	.5	47	82	217	43
		- strong clay alteration of sericite schist and quartzite	35147	39.7	40.6	0.9	<5	.9	18	24	48	43
		- seems to cut core at 45°	35148	40.6	41.7	1.1	<5	.5	15	25	32	46
		30.4 - 31.0 m Mineralized Quartz Veins	35149	41.7	42.8	1.1	<5	.8	35	133	(.18)	30
		- two veins one 20 cm the other 30 cm	35150	42.8	44.3	1.5	<5	.5	20	46	42	51
		- veins cut core at approximately 60° (average)	32851	44.3	45.8	1.5	<5	.6	125	26	81	34
		- first vein vuggy in places with up to 30% ankerite and	32852	45.8	47.3	1.5	<5	.2	26	8	54	20
		1% pyrite	32853	47.3	48.8	1.5	<5	.3	48	11	46	42
		- second vein contains 1 - 3% pyrite chiefly in one band	32854	48.8	50.3	1.5	<5	.4	37	10	69	12
		and also 1 - 3% ankerite	32855	50.3	51.7	1.4	<5	.5	42	21	71	27
		33.0 - 33.1 m Mineralized Quartz Vein	32856	51.7	52.9	1.2	<5	.4	25	47	45	21
		- milky white quartz vein cuts core at 30°	32857	52.9	54.0	1.1	<5	.6	26	192	41	15
		- 3% Galena, 1% Pyrite, 10% Ankerite	32858	54.0	55.5	1.5	<5	.2	81	22	91	58
		35.6 - 36.1 m quartz Veins	32859	55.5	57.0	1.5	<5	.4	17	26	63	68
		- two veins 10 cm and 20 cm	32860	57.0	58.5	1.5	<5	.7	115	87	81	74
		- most contacts missing, one cuts core at 65° (which is	32861	58.5	60.2	1.7	<5	.7	64	75	152	74
		probably a fault contact)	32862	60.2	61.6	1.4	<5	.3	16	34	44	47
		- milky white qtz vein contains up to 10% ankerite and	32863	61.6	62.5	0.9	<5	.2	4	19	12	86
		1% pyrite	32864	62.5	63.7	1.2	<5	.5	33	24	61	68
		36.4 - 36.7 m Quartzite	32865	63.7	65.1	1.4	90	.4	9	19	34	136
		- pale green/grey	32866	65.1	66.6	1.5	25	.4	6	34	28	85
		- 1 - 3% Galena, trace sphalerite in fine fractures	32867	66.6	68.0	1.4	<5	.2	11	5	25	65
		- lower contact 60° to core	32868	68.0	69.8	1.8	<5	.4	25	8	59	45
		37.0 m Fault?	32869	69.8	71.3	1.5	<5	.6	42	18	<u>91</u>	20
		- broken more than usual, clay alt'd on foliation with	32870	71.3	72.8	1.5	<5	.4	43	11	97	17
		milky white quartz veins (<2 cm)	32871	72.8	74.3	1.5	<5	.4	51	17	96	22
		40.6 - 42.8 m Quartzite	32872	74.3	75.9	1.6	<5	.5	59	29	89	25

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- 80% quartzite, 20% sericite schist
- carbonate stringers (<0.5 cm) cut quartzite (70° - 80° to core) <5%

DRILL	HOLE	LOG	

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PAGE NO.: 4		O.: 89-15	IIVIAS IN								RILL
Pb Zn	Cu	As	Ag	Au	Length	То	From	Sample	Description	То	rom
									- trace galena, trace to 1% sphalerite near end of		
									interval		
									45.8 m Fault		
									-small amount of gouge over 5 cm		
									- foliation 50° to core, adjacent to gouge		
									- an increase in quartz veining (<1 cm) below fault		
									50.3 - 50.5 m Quartz Vein		
									- 10 - 15% ankerite, contacts irregular (but fairly steep		
									to core) 70 - 80°		
									- trace pyrite and pyrrhotite		
									51.7 - 54.0 Quartzite		
									- grey/green colour		
									- trace pyrite + pyrrhotite disseminated throughout		
									- near middle of interval qtz vein (2 cm) cuts core at 30°		
									and contains 1% Galena, 1% Pyrite		
									56.1 - 57.0 m quartz Veins		
									- two veins 50 cm and 30 cm		
									- first vein irregular cutting core near 0° for 40 cm then		
									turning to cut core at 45°, 10% ankerite		
									- second vein cuts core at 55° and contains 15% ankerite		
									- lower contact - fault contact		
									57.6 - 60.2 m Sericite Schist + Quartzite		
									- waxy green colour with porphyroblasts of ankerite up		
									to 0.5 cm, aligned with foliation - foliation cuts core at 55°		
									60.2 - 61.6 m Quartzite		
									- 75% Quartzite, the remainder pale green sericite schist		
									- quartizte pure towards the middle where its a light grey		
									colour		
									61.6 - 62.5 m quartz Veins		
									- two main veins 20 cm and 10 cm		
									- first vein upper contact 35° to core		
									- smaller veins and second vein cuts core at 30°		
									 smaller veins and second vein cuts core at 30° veins contain 10 - 15% ankerite and 1% pyrite 		

DRILL	HOLE	LOG						HOLE NO.	: 89-15		PAGE	NO.: 5 of 6
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		 63.7 - 68.0 Qtz Veined Sericite Schist + Quartzite 20% milky white qtz veins, one 1 cm wide pyrite band veins are 1 - 10 cm wide and cut core at 40° - 50° veins contain up to 10% ankerite and 1% pyrite along selvages 69.8 75.9 m Interbanded Sericite Schist + Quartzite a distinctive waxy green colour with larger porphyroblasts of ankerite (up to 0.5 cm) foliation 55 - 60° to core porphyroblasts aligned with foliation 										

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RILL	HOLE L	.0G						HOLE N	O.: 89-15		PAGE	NO.: 6 of
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		Drill Hole Summary										
0.0	4.6 m	Casing/Overburden										
4.6	26.6 m	Granhite Rich Phyllitic Mudstone										
		6.2 - 9.1 m Quartz Veins										
		9.3 m Fault gouge										
		10.5 - 11.0 m Fault/Alteration Zone										
		11.0 - 13.3 m Qtz Veined Sericite Schist + Quartzite										
		14.1 - 14.9 m Quartzite 17.9 - 18.7 m Fault/Alteration Zone										
		24.0 - 24.1 m Quartz Vein										
		24.1 - 26.6 m Quartz Veined Phyllitic Mudstone										
26.6	75.9 m	Interbanded Sericite Schist + Quartzite										
		29.3 - 29.5 m Fault/Alteration Zone										
		30.4 - 31.0 m Mineralized Quartz Veins										
		33.0 - 33.1 m As above										
		35.6 - 36.1 m Quartz Veins										
		36.4 - 36.7 m Quartzite										
		37.0 m Fault										
		40.6 - 42.8 m Quartzite										
		45.8 m Fault 50.3 - 50.5 m Quartz Vein										
		51.7 - 54.0 m Quartzite										
		56.1 - 57.0 m Quartz Veins										
		57.6 - 60.2 m Sericite Schist + Quartzite										
		60.2 - 61.6 m Quartzite										
		61.6 - 62.5 m Quartz Veins										
		63.7 - 68.0 m Qtz Veined Sericite Schist + Quartzite										
		69.8 - 75.9 Interbanded Sericite Schist + Quartzite										
		- waxy green										

KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

D.D.H. #: 89-15 RECOVERY: 98% DATE: Nov 20/89

Marked	Measured	Core		Marked	Measured	Core
Interval	Interval	Loss	ľĽ	Interval	Interval	Loss
16 60	0.0					
4.6 - 5.8 5.8 - 8.8	0.2 2.7	1.0 0.3				
8.8 - 11.9	3.1					
11.9 - 14.9	3.0					
14.9 - 18.0 18.0 - 21.0	3.1 3.0					
21.0 - 24.1	3.1					
24.1 - 27.1	3.0					
27.1 - 30.2 30.2 - 33.2	3.1 3.0					
33.2 - 36.3	3.1					
36.3 - 39.3	3.0					
39.3 - 42.4 42.4 - 45.4	3.1 3.0					
45.4 - 48.5	3.1		[[
48.5 - 51.5	3.0					
51.5 - 54.5 54.5 - 57.6	3.0 3.1					
57.6 - 60.7	3.1					
50.7 - 63.7	3.0					
63.7 - 66.8 66.8 - 69.8	3.1 3.0				•	
69.8 - 72.8	3.0					
72.8 - 75.9	3.1					
75.9 - E.O.H.						
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LOCATIO)N: Hiber	nian						HOLE N	IO.: 89-16		PAGE	NO.: 1 of 6.
AZIM.: INCLINA	235° TION: -45	ELEV.: 1351 m LENGTH: 60.7 m	SURV	EVS				PROPE	RTY: Craz	e Creek		
STARTEI COMPLE PURPOSI): 20/11/89 TED: 21/1	CORE SIZE: BGM METERAGE A EOH 1/89 libernian mineralization at depth	ZIMUTH IN		CORR.II -47°	NCLIN.		SECTIO LOGGE DATE L DRILLI	NO.: Chaj N: 550N D BY: A. 1 OGGED: 1 NG CO.: H D BY: Eco	Fravis 21/11/89 Falcon		
From	То	Description	Sample	From	То	Length	Au	Ag	As	Св	Pb	Zn
0.0	6.1 m	Casing/Overburden										
6.1	19.3 m	Interbanded Sericite Schist + Quartzite	32873	6.1	7.6	1.5	<5	.1	11	12	19	8
		- grey/green with minor graphitic bands (1%) particularly	32874	7.6	9.1	1.5	<5	.1	9	9	21	10
		towards end of section	32875	9.1	10.6	1.5	<5	.1	10	10	31	21
		- 5% milky white quartz veins (1-10cm) that cut core at	32876	10.6	12.1	1.5	<5	.1	22	8	43	14
		40° - 80° but are generally quite steep	32877	12.1	13.0	0.9	<5	.2	21	12	69	9
		- veins are concentrated towards top of interval	32878	13.0	13.6	0.6	<5	.2	34	17	62	10
		- white ankerite porphyroblasts (<0.4 cm) in sericite schist	32879	13.6	14.9	1.3	<5	.1	37	9	76	10
		(25%), aligned with foliation	32880	14.9	16.0	1.1	<5	.2	36	10	89	27
		- trace sphalerite, trace to 1% Pyrite	32881	16.0	16.3	0.3 m	<5	.2	106	30	63	2
		- foliation 60° - 90° to core	32882	16.3	17.8	1.5 m	<5	.2	33	11	55	7
		 13.0 - 13.6 m Qtz Veined Sericite Schist + Quartzite increase in veining and graphite fault through middle of section small (<1 cm) irregular milky white to smoky qtz veins 1 - 3% pyrite foliation 65°, but quite crenulated in places 16.0 - 16.3 m Graphite - Rich Phyllitic Mudstone 	32883	17.8	19.3	1.5 m	<5	.1	22	12	35	9
		- dark grey/black										
		- dark grey/diack										

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dark grey/black
foliation 60° to core
clay altered, graphitic on foliation planes
weakly calcareous

RILL	HOLE L	OG						HOLE N	iO.: 89-16		PAGE	NO.: 2 of
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		18.0 - 19.3 m Ouartzite										
		- 80% grey quartzite, remainder sericitic schist,										
		particularly towards end of section foliated 70° to core										
		- porphyroblasts of ankerite in sericite schist up to .4 cm										
		- one 5 cm milky white qz vein cuts core at 55°, seen to										
		splay then join again										
		- trace to 1% py										
19.3	40.0 M	Qz Veined, Graphite - Rich Sericite Schist and Quartzite	32884	19.3	20.4	1.1 m	<5	.1	49	10	107	10
-		- light grey/green to black graphitic bands up to 1 m wide	32885	20.4	21.3	0.9 m	<5	.2	61	24	47	21
		and 25% of the interval	32886	21.3	21.7	0.4 m	<5	.1	56	13	82	9
		- 20% milky white qz veins that average 2 cm wide near	32887	21.7	22.4	0.7 m	<5	.1	7	12	26	16
		upper half of section, but average .5 m downhole and	32888	22.4	24.1	1.7 m	<5	.1	33	14	73	6
		contain up to 10% py. Veins cut core at 50 - 60°	32889	24.1	24.8	0.7 m	20	.7	41	98	60	28
		- foliation generally 60 - 80°, with fold nose at 29.5 m	32890	24.8	25.6	0.8 m	<5	.2	18	26	83	7
		- local crenulations near qz veins	32891	25.6	27.2	1.6 m	<5	.2	43	23	61	8
		3 cm white/creamy ankerite porphyroblasts within sercite	32892	27.2	28.8	1.6 m	<5	.3	68	48	74	15
		schist	32893	28.8	30.3	1.5 m	<5	.2	41	29	76	12
		- 3 - 5% in graphitic bands as euhedral cubes up to .6 cm	32894	30.3	31.7	1.4 m	60	.3	18	21	40	47
		19.3 - 19.5 m Graphite - Rich Phyllitic Mudstone	32895	31.7	32.1	0.4 m	(1.15)	.5	10	29	49	375
		- 3 - 5% pyrite cubes up to 0.6 cm	32896	32.1	33.3	1.2 m	25	.3	49	11	48	53
		- 10% quartz veinlets (0.3 cm)	32897	33.3	34.2	0.9 m	(1.05)	.2	32	19	19	148
		- foliation crenulated	32898	34.2	35.0	0.8 m	50	.4	143	26	95	51
		20.4 - 21.3 m Graphite - Rich Phyllitic Mudstone	32899	35.0	35.5	0.5 m	(2.03)	1.2	11	73	23	821
		- very similar to above	32900	35.5	37.0 m	1.5 m	40	.5	68	43	67	90
		- foliation crenulated but averages 60° to core axis	32901	37.0	38.0 m	1.0 m	40	.2	5	7	18	26
		- lower contact faulted	32902	38.0	38.4	0.4 m	15	.1	24	13	24	86
		21.3 - 21.7 m Fault/Alteration Zone	32903	38.4	39.3	0.9 m	458	.2	7	133	27	166 74
		- grey/green, clay altered	32904	39.3	40.0	0.7 m	365	.2	3	19	31	/4
		- weakly graphitic										

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- weakly graphine
- qz veins (<1 cm), 1 - 3% py
21.7 - 22.4 m quartzite
- light grey/green
- small fractures that give a darker grey appearance

RILL	HOLE	LOG						HOLE N	iO.: 89-16		PAGE 1	NO.: 3 of
om	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Zn
		22.9 - 23.1 m Quartz Vein										
		 irregular milky white qz vein with up to 15% ankerite and trace scheelite 										
		- graphitic at contacts (av 75°) with bands to next vein										
		24.1 - 24.8 Fault/Alteration Zone										
		- three 2 cm quartz veins with 1% py, cut core at 70°										
		- strong clay alteration to end of interval										
		- moderately graphitic with some qz rubble with pyrite										
		cubes in gouge										
		25.6 - 25.7 Fault/Alteration Zone										
		 broken core, qz vein (<1 cm) with up to 15% ankerite core becomes more graphitic below contact 										
		25.7 - 28.8 m Graphite - Rich Sericite Schist and Quartzite										
		- banded appearance of black graphitic layers (<1 cm) in										
		grey/green schist and quartzite										
		- white ankerite porphyroblasts up to 0.4 cm and 25% of										
		core										
		- 3 - 5% pyrite										
		- foliation 70 - 80° to core										
		29.5 m Fold Nose										
		- expressed in pale green sericite schist, 0.7 m down										
		section foliation is 65°										
		30.3 - 31.7 m Fault/Alteration Zone										
		 begins with minor qz veining in sericite schist and qzite then into strong clay alteration 										
		- qz veins contain up to 10% ankerite										
		- 1% py as 0.3 cm cubes in clay-altered rubble										
		31.7 - 32.1 m Mineralized Quartz Vein										
		- irregular milky white vein (cuts core at 30 - 50°)										
		- contains up to 15% ankerite										
		- 5 - 7% py chiefly along selvages, cubes up to 0.5 cm										
		- lower contact 5 cm past vein is faulted at 45° to core										
		32.1 - 33.3 Graphite - Rich Sericite Schist and Quartzite										
		- black graphite - rich bands (0.5 - 5 cm) in green/grey										
		sericite schist and quartzite										

RILL	HOLE	LOG						HOLE N	iO.: 89-16		PAGE	NO.: 4 of
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Рь	Zn
	•	- smoky qz veins in graphite - rich schist										
		- ankerite porphyroblasts up to 0.4 cm										
		- 3 - 5% pyrite cubes (up to 0.3 cm)										
		33.3 - 34.2 Mineralized Quartz Veins							-			
		- two veins 15 cm and 40 cm wide										
		- first vein upper contact 40° to core										
		- 5% ankerite at lower contact										
		- 10 cm graphite - rich crenulated band between veins										
		- second vein upper contact 45° to core										
		- up to 10% pyrite, chiefly in selvages and in wallrock up										
		to 20 cm past qz vein										
		- 5% ankerite towards lower contact										
		35.0 - 35.5 m Mineralized Quartz Vein										
		- upper contact 60° to core										
		- milky white vein with 10% pyrite (all at upper contact)										
		and 5% ankerite										
		- sericite schist and qzite between veins show noticeable										
		increase in pyrite to 1 - 3%										
		36.1 m Mineralized Quartz Veinlet										
		- 2 cm milky white vein										
		- cuts core at 60°										
		- 15% ankerite										
		37.0 - 38.0 quartz Vein										
		- milky white with 5% ankerite										
		- upper contact 45° to core, lower contact 30°										
		38.4 - 40.0 m Mineralized Quartz Vein(s)										
		- 1 or 2 veins at 39.3 m										
		- first vein cuts core at 45°										
		85% of vein has 7% ankerite, 5% pyrite, mostly near										
		upper contact										
		- second vein upper contact approximately 60° to core,										
		though contact very irregular, seen to run parallel to										
		core locally, lower contact 30° to core										
		 - 1 - 3% pyrite in wallrock - 5 - 7% ankerite in qz vein 										
		- 5 - 770 allerine il qe vell										

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DRILL	HOLE L	OG						HOLE N	0.: 89-16		PAGE	NO.: 5 of 6
From	То	Description	Sample	From	То	Length	Au	Ag	As	Cu	Pb	Źn
40.0	60.7 m	Interbanded Sericite Schist and quartizite	32905	40.0	41.5	1.5 m	<5	.2	19	62	29	40
		- pale green/grey to waxy green sericite schist towards end	32906	41.5	43.0	1.5 m	<5	.3	16	95	30	18
		of hole	32907	43.0	44.5	1.5 m	<5	.2	58	31	68	45
		- foliation cuts core at steep angles (80 - 90°) near top of	32908	44.5	46.0	1.5 m	<5	.2	44	22	73	26
		interval, flattening to 60° toward end of hole	32909	46.0	47.5	1.5 m	<5	.3	38	31	95	24
		- ankerite porphyroblasts up to .5 cm in waxy green schist	32910	47.5	49.0	1.5 m	<5	.3	42	32	59	18
		(up to 30%)	32911	49.0	50.5	1.5 m	<5	.4	75	17	76	43
		- minor quartz veining (<5%) particularly toward top of	32912	50.5	52.0	1.5 m	20	.3	24	19	53	21
		section where there is some silica flooding	32913	52.0	53.6	1.6 m	<5	.4	50	18	68	19
		- weakly graphitic near upper contact	32914	53.6	55.2	1.6 m	<5	.2	55	15	70	22
		- trace galena and sphalerite in qz veinlet near upper	32915	55.2	56.8	1.6 m	<5	.3	8	11	77	21
		contact	32916	56.8	58.4	1.6 m	<5	.5	37	74	36	8
		- trace pyrite overall	32917	58.4	59.9	1.5 m	<5	.5	31	106	27	20
		- new price orden	32918	59.9	60.7	0.8 m	<5	.3	28	15	29	42

DRILL	HOLE L	OG						HOLE NO.: 89-16		PAGE NO.: 6 of		
From	То	Description	Sample	From	To	Length	Au	Ag	As	Cu	Pb	Zn
		Drill Hole Summary										
0.0	6.1 m	Casing/Overburden										
6.1	19.3 m	Interbanded Sericite Schist and quartzite - 13.0 - 13.6 m: Qz veined sericite schist and quartzite - 16.0 - 16.3 m: Graphite - rich Phyllitic mudstone - 18.0 - 19.3 m: Quartzite										
19.3	40.0 m	 quartz Veined Graphite - Rich Sericite Schist and quartzite 19.3 - 19.5 m: Graphite rich phyllitic mudstone 20.4 - 21.3 m: As above 21.3 - 21.7 m: Fault/Alteration Zone 21.7 - 22.4 m: Quartzite 22.9 - 23.1 m: Qz vein 24.1 - 24.8 m: Fault/alteration zone 25.6 - 25.7 m: As above 25.7 - 28.8 m: Graphite - rich sericite schist and quartzite 27.5 m: fold nose 30.3 - 31.7 m: Fault/alteration zone 31.7 - 32.1 m: Mineralized quartz vein 32.1 - 33.3 m: Graphite - rich sericite schist and quartzite 33.3 34.2 m: Mineralized quartz veins 35.0 - 35.5: as above 36.1 m: Mineralized qz veinlet 37.0 - 38.0 m: Qz vein 38.4 - 40.0 m: Mineralized qz vein(s) 										-
40.0	60.7 m	- 38.4 - 40.0 m: Mineralized qz vein(s) Interbanded Sericite Schist and Quartzite										

KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

D.D.H. #: 89-16 RECOVERY: 97% DATE: 21/11/89

_	Marked	Measured	Core	Marked	Measured	Core
	Interval	Interval	Loss	Interval	Interval	Loss
-	6.1 - 8.8 (2.7) 8.8 - 11.9 (3.1) 11.9 - 14.9 (3.0) 14.9 - 18.0 (3.1) 18.0 - 21.0 (3.0) 21.0 - 24.1 (3.1)	1.7 3.1 3.0 3.0 3.0 3.0	0.1 m 0.1 m			
-	$\begin{array}{c} 24.1 - 27.1 (3.0) \\ 27.1 - 30.2 (3.1) \\ 30.2 - 33.2 (3.0) \\ 33.2 - 36.3 (3.1) \\ 36.3 - 39.3 (3.0) \\ 39.3 - 42.4 (3.1) \\ 42.4 - 45.4 (3.0) \end{array}$	2.9 2.9 2.6 3.1 3.0 3.1 3.0	0.1 m 0.2 m 0.4 m			
aig:	45.5 - 48.5 (3.1) 48.5 - 51.5 (3.0) 51.5 - 54.6 (3.1) 54.6 - 57.6 (3.0) 57.6 - 60.7 (3.1) 60.7 - E.O.H.	3.1 3.0 3.1 3.0 3.1				
-						
-						
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LOCATIO	N: Hiberr	ian						HOLE N	0.: 89-17		PAGE	NO.: 1 of 5
	235°	ELEV.: 1351 m						PROPER	TY: Craz	e Creek		
	: 21/11/89 FED: 22/1	CORE SIZE: BGM METERAGE A EOH 1/89 ibernian mineralization at depth								CLAIM NO.: Chaput Option SECTION: 550N LOGGED BY: A. Travis DATE LOGGED: 22/11/89 DRILLING CO.: Falcon ASSAYED BY: Eco-Tech		
From	То	Description	Sample	From	To	Length	Au	Ag	As	Cu	Pb	Zn
0.0	6.1 m	Casing/Overburden										
5.1	75.9 m	Interbanded Sericite Schist + Quartzite	32919	6.1	7.6	1.5	<5	.2	33	12	45	10
		- grey/green colour, slightly graphitic near upper half,	32920	7.6	8.3	0.7	<5	.1	14	10	16	7
		downhole it seems to be slightly greener	32921	8.3	8.6	0.3	<5	.2	23	9	63	3
		- foliation 40 - 60° although it can be crenulated, especially	32922	8.6	10.1	1.5	<5	.1	41	8	62	13
		where graphitic adjacent to quartz veining	32923	10.1	11.6	1.5	<5	.1	59	9	91	10
		- fault/alteration zones are found above and below quartz	32924	11.6	13.1	1.5	<5	.2	33	11	43	25
		veins (mineralized and non-mineralized)	32925	13.1	14. 1	1.0	<5	.1	32	12	74	15
		- mineralized veins have up to 5% pyrite, trace galena,	32926	14.1	15.0	0.9	<5	.2	46	14	43	27
		sphalerite and arsenopyrite and minor pyrrhotite	32927	15.0	16.5	1.5	<5	1.0	8	227	27	42
		- towards the end of the hole the sericite schist is an	32928	16.5	17.7	1.2	<5	.2	22	10	16	30
		almost waxy green colour with white (up to 0.4 cm)	32929	17.7	18.9	1.2	<5	.2	29	25	46	26
		porphyroblasts of ankerite up to 25%, aligned with	32930	18.9	20.4	1.5	<5	.3	58	9	73	9
		foliation which is 40° towards end of hole	32931	20.4	21.5	1.1	<5	.2	26	10	62	10
		83 8.6 m quartz Vein	32932	21.5	23.2	1.7	<5	.2	21	11	33	14
		- milky white upper contact 20° to core, lower contact	32933	23.2	24.7	1.5	<5	.2	37	10	94	8
		missing	32934	24.7	26.2	1.5	<5	.3	23	13	81	10
		- fault towards lower contact	32935	26.2	27.7	1.5	<5	.2	25	21	109	10
		- fault cuts core at 75°	32936	27.7	29.0	1.3	<5	.3	33	14	104	15

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DRILL HO	DLE LOG						HOLE N	iO.: 89- 17		PAGE	NO.: 2 of
From 7	To Description	Sample	From	То	Length	Au	Ag	As	Св	Pb	Za
	- 5 cm of diorite? near lower contact	32937	29.0	30.1	1.1	<5	.3	31	16	164	17
	8.8 m Fault	32938	30.1	30.7	0.6	<5	.2	32	46	113	19
	 broken and clay alt'd sericite schist and quartzit 	e 32939	30.7	32.2	1.5	<5	.9	68	247	130	14
	11.7 - 15.0 m Fault/Alteration Zone	32940	32.2	33.7	1.5	<5	.2	45	32	52	7
	- three smaller faults cut the interval	32941	33.7	35.2	1.5	<5	.1	67	33	91	9
	- slightly more graphitic	32942	35.2	36.7	1.5	<5	.2	60	29	109	9
	- first fault at top of interval	32943	36.7	37.9	1.2	<5	.2	64	34	66	17
	- 20 cm quartz vein also near top of interval but	cuts 32944	37.9	39.1	1.2	<5	.2	42	21	77	35
	core at shallow angle (10 - 20°)	32945	39.1	40.3	1.2	<5	.3	37	13	67	89
	- core broken, foliation 50° to core	32946	40.3	42.3	2.0	105	.2	7	3	7	65
	17.7 - 21.5 m Interbanded Sericite Schist + Quartzi	te 32947	42.3	43.7	1.4	<5	.3	16	51	76	80
	- a noticeable light green to almost waxy green se	aricite 32948	43.7	44.9	1.2	20	.2	10	74	23	62
	schist, better foliated (45° - 55°)	32949	44.9	46.4	1.5	<5	.3	27	78	34	101
	- white/creamy coloured ankerite porphyroblasts (up to 32950	46.4	47.9	1.5	95	.9	7	498	12	194
	0.4 cm)	32951	47.9	49.4	1.5	55	.6	26	212	45	94
	 graphite rich bands towards middle of of interva 	d 32952	49.4	50.7	1.3	340	.5	22	70	39	248
	21.5 - 23.2 m Qtz Veined Sericite Schist + quartzite	e 32953	50.7	52.0	1.3	(1.91)	1.1	142	184	164	81
	- 35% milky white qtz veins (1 cm - 30 cm) cut c		52.0	53.1	1.1	(1.56)	2.9	13	(.10)	23	182
	50° - 70°	32955	53.1	54.2	1.1	615	.1	8	66	4	584
	- veins contain up to 15% ankerite and 1% pyrite	in 32956	54.2	55.3	1.1	200	.1	2	8	7	117
	places along selvages	32957	55.3	55.8	0.5	460	.2	6	9	18	238
	 quartzite rich towards end of interval 	32958	55.8	57.0	1.2	(18.74)	4.6	16	732	(.24)	398
	- foliation 60° to core	32959	57.0	58.5	1.5	365	.4	26	20	31	151
	27.2 - 27.3 m Fault Gouge	32960	58.5	60.0	1.5	85	.2	12	16	21	166
	 clay alt'd sericite schist + quartzite 	32961	60.0	61.5	1.5	(11.89)	5.8	12	(.47)	31	269
	- more graphitic adjacent to zone	32962	61.5	63.0	1.5 m	<5	3.8	4	(.2)	47	84
	- fault cuts core at 70°	32963	63.0	64.5	1.5 m	60	.3	43	70	83	70
	- foliation 60° adjacent to zone	32964	66.1	67.0	0.9 m	<5	.3	13	16	64	45
	30.1 - 30.7 m Fault/alteration Zone - broken core, strong clay alteration at end of inte	32965 erval	67.5	69.1	1.6 m	<5	.2	6	12	52	74

broken core, strong clay alteration at end of interva minor quartz veining (<5%) in green/grey sericite schist + quartzite
 31.3 - 31.5 m Mineralized Quartz Vein

 trace sphalerite
 vein contacts 45° to core axis

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RILL	HOLE	LOG						HOLE N	O.: 89-1 7		PAGE	NO.: 3 of
rom	То	Description	Sample	From	To	Length	Au	Ag	As	Cu	Pb	Zn
		- 10 - 15% ankerite										
		- more graphitic adjacent to vein										
		35.0 m Fault										
		- gouge over 5 cm, infilled with quartz vein (2 cm) that										
		cuts core at 50°										
		36.6 m Mineralized Quartz Vein										
		- trace galena, 5% ankerite										
		- 3 cm wide, cuts core at 30°										
		- foliation 60° to core										
		38.8 m Fold Nose										
		 foliation 0° to core, crenulation on small scale (within 10 cm foliation at 60° to core) 										
		40.3 42.3 m Mineralized Ouartz Vein										
		- upper contact 20° to core, lower contact 25°										
		- milky white (true width approximately 1 m)										
		- trace galena, pyrrhotite, sphalerite? and trace - 1%										
		pyrite										
		43.7 - 44.9 m Mineralized Quartz Veins										
		- two veins one 20 cm, the other 70 cm										
		- first vein 1% pyrite along lower contact (45° to core)										
		- second vein, core broken, upper contact 25° to core,										
		5% ankerite										
		44.9 - 52.0 qtz Veined Sericite Schist + quartzite										
		- 15% quartz veins (avg. 10 cm wide) cut core at 40° - 60°										
		- fault at 48.5 m cutting core at 50°										
		- unit becomes more graphitic and quartzite rich										
		- foliation 55° - 65° to core										
		- pyrite 3 - 5% in some qtz veins										
		 trace galena, sphalerite in fine fractures and veinlets in quartzite 										
		52.0 - 55.3 m Mineralized Qtz Vein										
		- upper contact 20° to core, lower contact missing										
		- 1% pyrite along selvages, trace galena, arsenopyrite										

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RILL	HOLE I	LOG						HOLE N	iO.: 89-17		PAGE	NO.: 4 of
rom	То	Description	Sample	From	To	Length	Au	Ag	As	Ca	Pb	Zn
		55.8 - 57.0 m Mineralized Qtz Vein										
		- 75% qtz vein (milky white) upper contact irregular										
		approximately 20° to core										
		- 3 - 5% pyrite, trace sphalerite 1 - 3% ankerite										
		- lower contact 60° to core										
		- sphalerite at lower contact										
		57.5 - 60.0 m Mineralized Qtz Veins										
		- 50% quartz veins in sericite schist and quartzite (veins										
		10 cm - 20 cm) - 1% pyrite in milky white qtz veins that cut core at										
		approximately 40°										
		- foliation 45° to core										
		60.0 - 61.5 m Fault/Alteration Zone										
		- broken, clay alt'd sercite schist + quartzite										
		- 40% quartz veins (0.5 cm - 7 cm)										
		- fault seems to cut core at 50°										
		- one 7 cm qtz vein cuts core at 40° and contains 1%										
		pyrite and trace galena										
		61.5 - 75.9 m Interbanded Sericite Schist and quartzite										
		 a distinctive waxy green colour, particularly towards top of section 										
		 foliation varies from 60° near the top to 40° at end of section 										
		- two mineralized quartz veinlets (0.5 cm) near top of										
		interval (40° to core, up to 50% Galena)										
5.9	E.O.H.											

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DRILL	HOLE LOG							HOLE N	iO.: 89-17		PAGE !	NO.: 5 of 5.	
From	То	Description	Sample	From	To	Length	Au	Ag	As	Cu	Pb	Zn	

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Drill Hole Summary

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0.0	6.1 m	Casing/Overburden
6.1	75.9	Interbanded Sericite Schist + Quartzite
0.1		8.3 - 8.6 m quartz Vein
		8.8 m Fault
		11.7 - 15.0 m Fault/Alteration Zone
		17.7 - 21.5 m Interbanded Sericite Schist + quartzite
		21.5 - 23.2 m Qtz Veined Sericite Schist + Quartzite
		27.2 - 27.3 m Fault Gouge
		30.1 - 30.7 m Fault/Alteration Zone
		31.3 - 31.5 m Mineralized quartz Vein
		35.0 m Fault
		36.6 m Mineralized Quartz Vein
		38.8 m fold Nose
		40.3 - 42.3 m Mineralized Quartz Vein
		43.7 - 44.9 m As Above
		44.9 - 52.0 m Qtz Veined Sericite Schist + Quartzite
		52.0 - 55.3 m Mineralized Quartz Vein
		55.8 - 57.0 m As Above
		57.5 - 60.0 Mineralized Quartz Veins
		60.0 - 61.5 m Fault/Alteration Zone
		61.5 - 75.9 m Interbanded Sericite Schist + Quartzite
		-
	5.0.11	- waxy green
75.9	E.O.H.	

KEEWATIN ENGINEERING INC.

CORE RECOVERY LOG

D.D.H. #: 89-17

RECOVERY: 99% DATE: 22/11/89

-	Marked Interval	Measured Interval	Core Loss		Marked Interval	Measured Interval	Core Loss
	6.1 - 8.8 8.8 - 11.9 11.9 - 14.9 14.9 - 18.0 18.0 - 21.0 21.0 - 24.1 24.1 - 27.1 27.1 - 30.2 30.2 - 33.2 33.2 - 36.3 36.3 - 39.3 39.3 - 42.4 42.4 - 45.4 45.4 - 45.5 48.5 - 51.5 51.5 - 54.6 54.6 - 57.6 60.6 - 63.7 63.7 - 66.8 66.8 - 69.8 69.8 - 72.8 72.8 - 75.9 75.9 - EOH	Interval 2.7 3.1 3.0 3.1 3.0 2.7 3.0 2.6 3.0 3.1 3.0 3.0 3.1 3.0 3.1 3.0 3.1 3.0 3.0 3.1 3.0 3.0 3.1 3.0 3.1 3.0 3.0 3.1 3.0 3.1 3.0 3.0 3.1 3.0 3.1 3.0 3.0 3.1 3.0 3.1 3.0 3.0 3.1 3.0 3.0 3.1 3.0 3.0 3.1 3.1 3.0 3.0 3.1 3.0 3.0 3.1 3.0 3.0 3.1 3.1 3.0 3.0 3.1 3.1 3.0 3.0 3.1 3.1 3.0 3.1 3.1 3.0 3.0 3.1 3.1 3.1 3.0 3.1 3.1 3.1 3.1 3.1 3.1 3.1 3.1	Loss		Interval	Interval	Loss
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