FAME REPORT

ON THE

1987 KAMAD PROPERTY DIAMOND DRILL PROGRAM

Kamloops Mining Division, British Columbia

NTS: 82M/4W
Lat: 51° 8'N Long: 119° 49'W

Owner:
Kamad Silver Co. Ltd.
2095 West Trans-Canada Highway
Kamloops, British Columbia
V1S 1A7

Operator:
Esso Minerals Canada
A Division of Esso Resources Canada Limited
1600 - 409 Granville Street
Vancouver, British Columbia
V6C 1T2

Report By:
D.R. Heberlein

November 30, 1987

GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,701

FILMED

Distribution:
Ministry - 2
Kamad Silver - 1
EMC files - 1
Field - 1

MA07.C.601
720.B

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1.0 INTRODUCTION

1.1 Location and Access

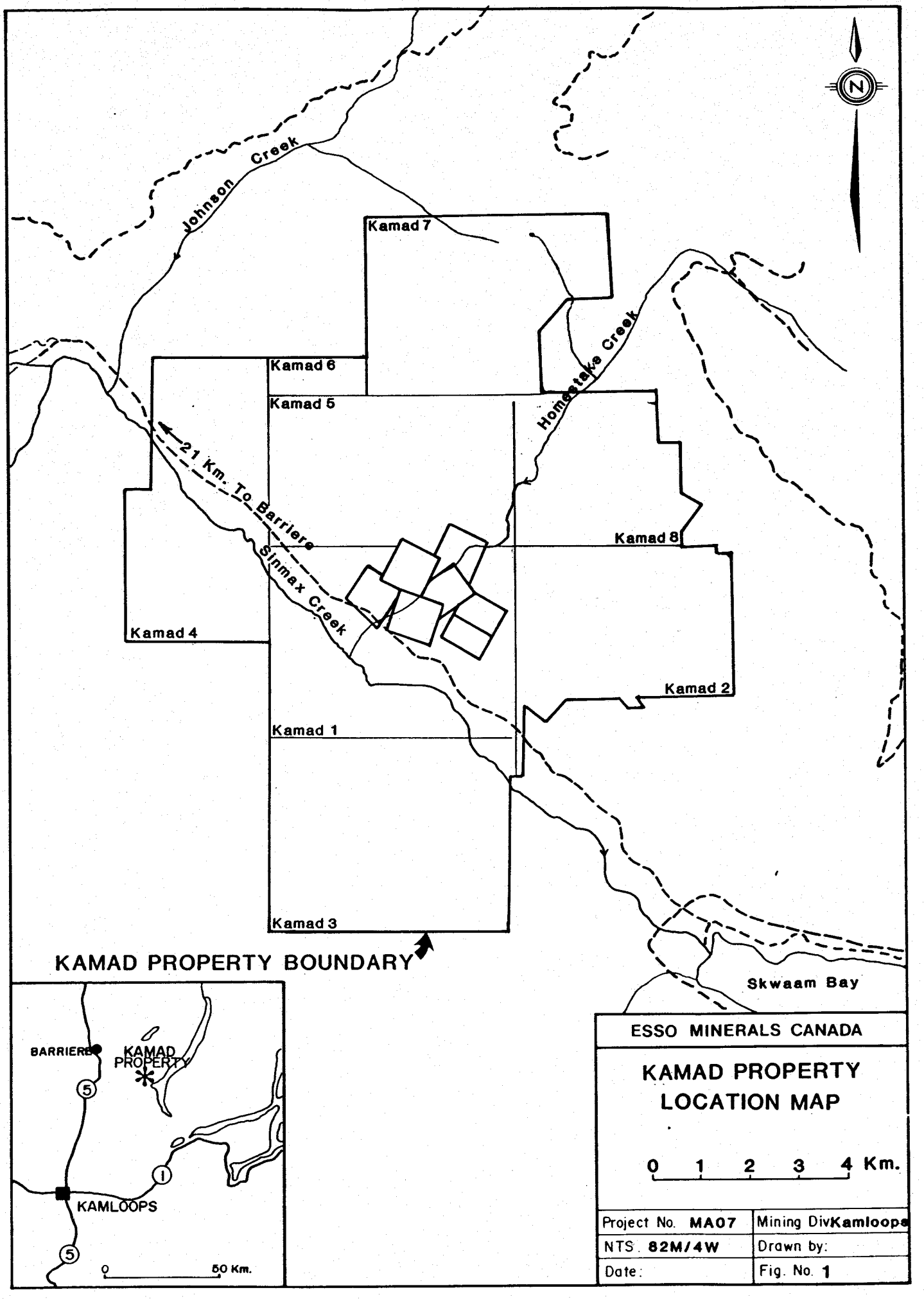
The Kamad Property is located 3km from the southwest shore of Adams Lake, 60km northwest of Kamloops, B.C. (Fig. 1). The claims are centered on the old Homestake Mine that has produced high grade silver ore intermittently between 1893 and the present day.

Access to the property can be gained from the North Thompson Valley via the Forest Lake road (Agate Bay Road) that leaves Highway 5, 2 km south of Barriere. An alternate route is an active logging road that follows the west shore of Adams Lake and joins with the Scotch Creek Road to the south. This road connects with the Trans Canada Highway at Squilax, 4km east of Chase.

1.2 Topography, Vegetation and Climate

This area of the province forms part of the interior plateau; an irregular area of tableland ranging from 1250m to 1800m in elevation. Valleys are typically steeply incised with U-shaped cross sections. Precipitous bluffs are common locally. Tree cover consists of spruce and pine in plateau areas. Here commercial logging operations have created excellent access by means of an extensive network of logging roads. Valley floors are occupied by small farms that raise primarily beef cattle.

Climate is semi-arid and typical of the South-Central Interior. Summers are hot with average temperatures in the high 20's. Winters are cold with variable snow-fall.


Johnson Creek
Kamad 7
Homestake Creek
Kamad 6
Kamad 5
21 Km. To Barriere
Sinmax Creek
Kamad 8
Kamad 4
Kamad 2
Kamad 1
Kamad 3
KAMAD PROPERTY BOUNDARY
Skwaam Bay
BARRIERE
KAMAD PROPERTY
5
1
KAMLOOPS
5
0
50 Km.
ESSO MINERALS CANADA
KAMAD PROPERTY LOCATION MAP
0 1 2 3 4 Km.
Project No. MA07
Mining Div Kamloops
NTS. 82M/4W
Drawn by:
Date:
Fig. No. 1

1.3 Geology

A geology map of the Adams Lake area, showing the location map of the Homestake Mine is shown in Figure 2.

Massive sulphide mineralization is hosted in the Eagle Bay Formation; a succession of Devono-Missippian volcanic and sedimentary rocks that outcrops between Clearwater and Shuswap Lake (Hoy and Goutier, 1985). Both Mafic and felsic volcanics are present in the sequence. These are interbedded with a variety of sedimentary units, including; argillite, greywacke and lesser limestone. The stratigraphy is complexly folded and thrusted with a strongly developed penetrative fabric. Cleavage dips at moderate angle to the northeast and appears to be axial planar to a regional series of isoclinal folds. Lineations indicate a shallow northwesterly plunge to the fold axes. Regional metamorphism is in the greenschist facies.

The main showings in the Eagle Bay Formation occur in the Birk Creek area, in the Homestake Belt (Fig. 2) and on the Adams Plateau. Mineralization is associated with a belt of felsic volcanics and sediments that occur structurally below the Tshinikin Limestone.

2.0 HISTORY

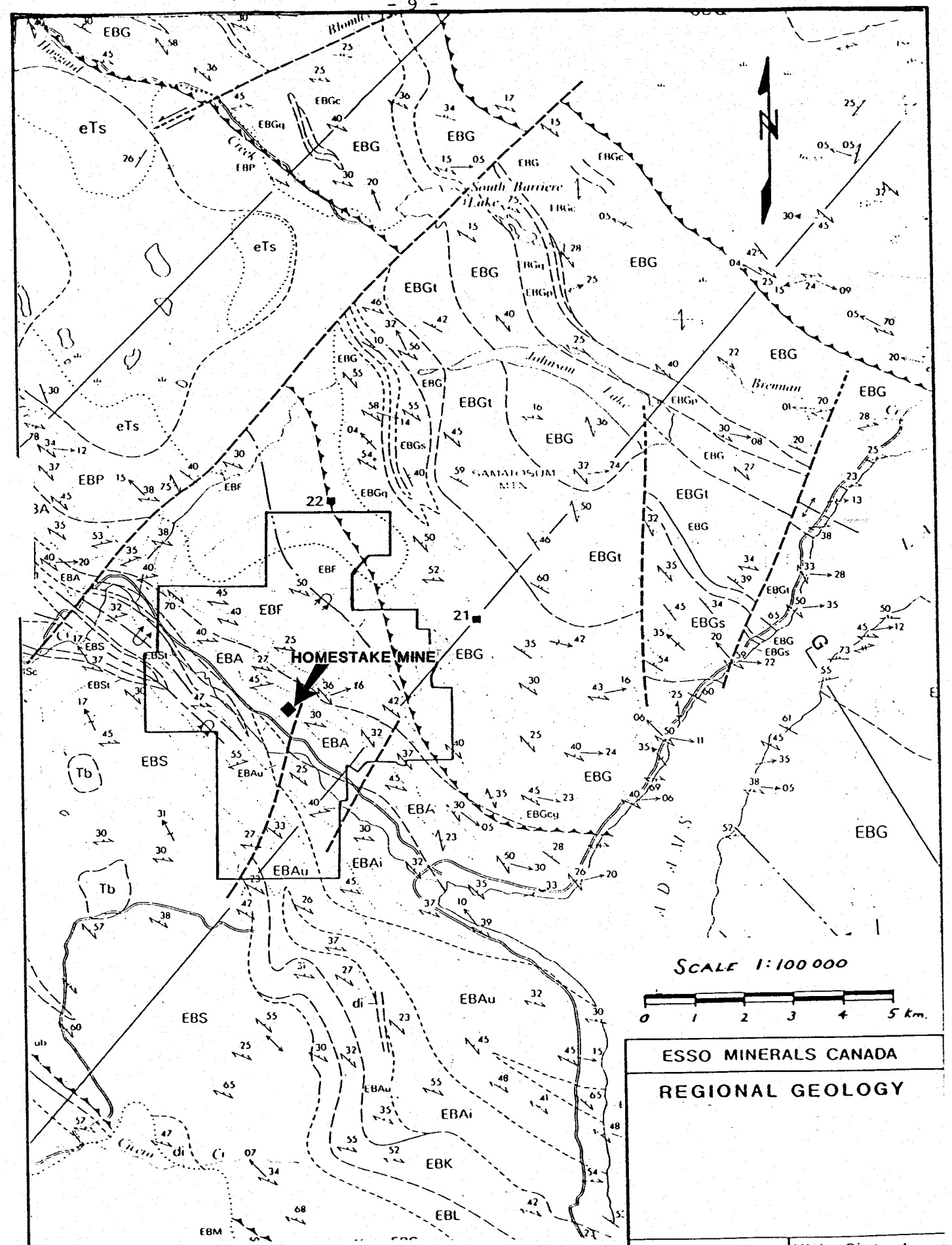
History of the Kamad property is essentially the history of the old Homestake Mine which is located on the north side of Sinmax valley, about 5 km west of Sqwaam Bay (Fig. 2).

The mine was worked by several owners on and off between 1893 and 1984. High grade operations removed 2770 tons in the period 1926/27. Between 1935 and 1936, 3000 tons were processed by a 50 ton per day mill located on the property.

Significant underground exploration was carried out between 1970 and 1973 by Kamad Silver who drove an adit into the hillside to explore three silver rich barite lenses. Canadian Reserve Oil and Gas continued underground exploration and development of the barite lenses in the early 1980's. They completed an 800m adit at the 1750 level and a production raise that joined the upper workings. From these workings 2072 m of underground drilling took place. A further 2993m of surface drilling accompanied the underground work. O.K. Ore processing Ltd. reopened the mine during the winter of 1983/84 and several shipments of ore were made to the smelter at Trail.

The discovery of the Rea Gold massive sulphide lens close to the northwest claim boundary in 1983 added a new impetus to exploration in the area. Geophysical and diamond drill programs carried out on the Kamad 7 claim in 1983 and 1984 identified a small massive sulphide lens on the Rea Horizon. In 1985, 259146 B.C. Limited drilled five holes totalling 369.7m into a this zone.

The property was optioned from Kamad Silver Company Ltd. by Esso Minerals Canada in December 1985. In 1986 Esso Minerals conducted an extensive geological, geochemical and geophysical evaluation of the Rea Horizon on the Kamad 7 and 8 claims. This was followed up by trenching and 1814m diamond drilling later that year. An additional 1125m of diamond drilling was completed in 1987 in the same area.



GEOLOGY IS TAKEN FROM B.C.M.E.M.P.R. PRELIMINARY MAP No. 56 COMPILED BY PAUL SCHIARIZZA & V.A. PRETO.

ESSO MINERALS CANADA

REGIONAL GEOLOGY

Project No. MA07	Mining Div Kamloops
NTS. 82M/4W	Drawn by: DRH
Date: Nov. 1987	Fig. No. 2

UPPER TRIASSIC AND LOWER JURASSIC NICOLA GROUP (?)

UPPER TRIASSIC OR LOWER JURASSIC

| kJv | ANDESITE PORPHYRY BRECCIA

UPPER TRIASSIC

| kl | DARK GREY LIMESTONE

DEVONIAN TO PERMIAN

ALLOCHTHONOUS INTERNALLY IMBRICATED OCEANIC ASSEMBLAGE

FENNELL FORMATION

UPPER STRUCTURAL DIVISION

| uFb | GREY AND GREEN PILLOWED AND MASSIVE META-BASALT, MINOR AMOUNTS OF BASALTIC BRECCIA, TUFF, DIABASE, GABBRO, AND CHERT

| uFc | GREY AND GREEN BEDDED CHERT

LOWER STRUCTURAL DIVISION

| lFc | GREY AND GREEN BEDDED CHERT, CHERTY ARGILLITE, SLATE, AND PHYLLITE

| lFb | GREY AND GREEN PILLOWED AND MASSIVE META-BASALT, MINOR AMOUNTS OF BASALTIC BRECCIA AND TUFF

| lFg | GABBRO, DIORITE, DIABASE

| lFp | LIGHT TO MEDIUM GREY QUARTZ-FELDSPAR PORPHYRY (RHYOLITE)

| lFs | LIGHT TO DARK GREY SANDSTONE, SILTSTONE, SLATE, PHYLLITE, AND QUARTZITE; MINOR AMOUNTS OF LIMESTONE AND CHERT; IN PLACES INCLUDES GREY TO GREEN QUARTZOSE AND FELDSPATHIC PHYLLITE (METATUFF)

| lFcg | INTRAFORMATIONAL CONGLOMERATE; CLASTS DERIVED EXCLUSIVELY FROM FENNELL FORMATION LITHOLOGIES

| lFu | UNDIVIDED, MAINLY lFc, lFg, and lFb, BUT MAY INCLUDE ANY OR ALL OF ABOVE ROCK TYPES

DEVONO-MISSISSIPPIAN AND OLDER
PARAUTOCHTHONOUS ROCKS (EBP TO SOO)

EAGLE BAY FORMATION (EBP TO EBG)

MISSISSIPPIAN

| EBP | DARK GREY PHYLLITE AND SLATE WITH INTERBEDDED SILTSTONE, SANDSTONE, AND GRIT; MINOR AMOUNTS OF CONGLOMERATE, LIMESTONE, AND METATUFF; EBPl–LIMESTONE; EBPv–METAVOLCANIC BRECCIA AND TUFF

DEVONIAN AND/OR MISSISSIPPIAN

| EBF | LIGHT TO MEDIUM GREY, RUSTY WEATHERING FELDSPATHIC PHYLLITE AND FRAGMENTAL PHYLLITE DERIVED FROM INTERMEDIATE TO FELSIC TUFF AND VOLCANIC BRECCIA; MINOR AMOUNTS OF DARK GREY PHYLLITE AND SILTSTONE; EBFq–LIGHT GREY MASSIVE "CHERTY QUARTZITE" (SILICEOUS EXHALITE ?)

DEVONIAN

| EBA | LIGHT SILVERY GREY TO MEDIUM GREENISH GREY SERICITE-QUARTZ PHYLLITE AND SERICITE-CHLORITE-QUARTZ PHYLLITE DERIVED FROM FELSIC TO INTERMEDIATE VOLCANIC AND VOLCANICLASTIC ROCKS INCLUDING PYRITIC, FELDSPATHIC, AND COARSELY FRAGMENTAL VARIETIES; LESSER AMOUNTS OF DARK GREY PHYLLITE, SILTSTONE, AND GREEN CHLORITIC PHYLLITE; INCLUDES BIOTITE-FELDSPAR-QUARTZ SCHIST AND GNEISS, BIOTITE-QUARTZ HORNFELS AND AMPHIBOLITE ADJACENT TO BALDY BATHOLITH; EBAf–FELDSPAR PORPHYRY, FELDSPATHIC PHYLLITE, PYRITIC SERICITE-FELDSPAR-QUARTZ PHYLLITE, METAVOLCANIC BRECCIA; EBAs–SERICITIC QUARTZO-FELDSPATHIC SCHIST AND GNEISS DERIVED FROM FELSIC INTRUSIVE ROCKS; EBAu–UNDIVIDED EBA and EBAf

DEVONIAN (?) AND/OR OLDER (?) (UNITS EBU TO EBG)

| EBU | LIGHT TO DARK GREEN CHLORITIC PHYLLITE, DARK GREY PHYLLITE AND SILTSTONE, LIMESTONE, QUARTZITE

| EBM | GREY AND GREEN VESICULAR AND PILLOWED METABASALT, GREENSTONE, CHLORITE SCHIST, MINOR AMOUNTS OF BEDDED CHERT, SILICEOUS PHYLLITE AND FINE-GRAINED QUARTZITE

| EBK | BANDED LIGHT GREY AND GREEN ACTINOLITE-QUARTZ SCHIST AND EPIDOTE-ACTINOLITE-QUARTZ ROCK, LESSER AMOUNTS OF GARNET-EPIDOTE SKARN, CHLORITIC SCHIST, AND SERICITE-QUARTZ SCHIST

DEVONIAN (?) AND/OR OLDER (?) (UNITS EBU TO EBG) *(CONTINUED)*

| EBL | CALCAREOUS BLACK PHYLLITE, DARK GREY LIMESTONE AND ARGILLACEOUS LIMESTONE

| EBS | GREY AND GREEN PHYLLITIC SANDSTONE AND GRIT, PHYLLITE, AND QUARTZITE, LESSER AMOUNTS OF LIMESTONE, DOLOSTONE, GREEN CHLORITIC PHYLLITE, SERICITE-QUARTZ PHYLLITE, AND FELDSPATHIC SERICITE-QUARTZ PHYLLITE; EBSq–LIGHT GREY TO WHITE QUARTZITE; EBSc–LIMESTONE, DOLOSTONE, MARBLE; EBSg–GREENSTONE, PILLOWED METABASALT, CHLORITIC PHYLLITE; EBScg–CONGLOMERATE; EBSp–GREY PHYLLITE AND SILTSTONE; EBSs–SIDERITE-SERICITE-QUARTZ PHYLLITE AND FELDSPATHIC PHYLLITE (META-TUFF); EBSx–PYRITIC SERICITE-QUARTZ PHYLLITE AND CHLORITOID-SERICITE-QUARTZ PHYLLITE

| EBG | MEDIUM TO DARK GREEN CALCAREOUS CHLORITE SCHIST AND FRAGMENTAL SCHIST DERIVED LARGELY FROM MAFIC TO INTERMEDIATE VOLCANIC AND VOLCANICLASTIC ROCKS, LESSER AMOUNTS OF LIMESTONE AND DOLOSTONE, MINOR AMOUNTS OF QUARTZITE, GREY PHYLLITE, AND SERICITE-QUARTZ PHYLLITE; EBGc–LIMESTONE, DOLOSTONE, MARBLE; EBGt–TSHINAKIN LIMESTONE MEMBER–MASSIVE, LIGHT GREY FINELY CRYSTALLINE LIMESTONE AND DOLOSTONE; EBGs–DARK TO LIGHT GREY SILICEOUS AND/OR GRAPHITIC PHYLLITE, CALCAREOUS PHYLLITE, LIMESTONE, CALC-SILICATE, CHERTY QUARTZITE, MINOR AMOUNTS OF GREEN CHLORITIC PHYLLITE AND SERICITE-QUARTZ PHYLLITE; EBGq–LIGHT TO MEDIUM GREY QUARTZITE; EBGp–DARK GREY PHYLLITE, CALCAREOUS PHYLLITE AND LIMESTONE, MINOR AMOUNTS OF RUSTY WEATHERING CARBONATE-SERICITE-QUARTZ PHYLLITE (META-TUFF ?); EBGcg–POLYMICTIC CONGLOMERATE

SPAPILEM CREEK–DEADFALL CREEK SUCCESSION (SOO)

LOWER CAMBRIAN (?) AND/OR HADRYNIAN (?)

| SOO | LIGHT TO DARK GREY QUARTZITE, MICACEOUS QUARTZITE, GRIT, AND PHYLLITE, LESSER AMOUNTS OF CALCAREOUS PHYLLITE, CARBONATE, AND GREEN CHLORITIC SCHIST; NORTHEASTERN EXPOSURES INCLUDE STAUROLITE-GARNET-MICA SCHIST, CALC-SILICATE SCHIST, AND AMPHIBOLITE

TERTIARY OR QUATERNARY

| Tb | OLIVINE BASALT

MIOCENE OR PLIOCENE

| mTb | PLATEAU LAVA OLIVINE BASALT

EOCENE

KAMLOOPS GROUP

| eTs | SKULL HILL FORMATION AND RELATED ROCKS, ANDESITE AND BASALT, INCLUDES MINOR AMOUNTS OF MUDSTONE AND SHALE IN THE VICINITY OF ALEX AND HAGGARD CREEKS

| eTc | CHU CHUA FORMATION SANDSTONE, SHALE, CONGLOMERATE, COAL

CRETACEOUS OR TERTIARY

| qp | QUARTZ-FELDSPAR PORPHYRY

CRETACEOUS

BALOY BATHOLITH, RAFT BATHOLITH, AND RELATED ROCKS

| Kg | GRANITE AND GRANODIORITE

AGE UNKNOWN

| di | FOLIATED DIORITE, QUARTZ DIORITE, AND GABBRO

| ub | SERPENTINITE

LATE DEVONIAN

| Dgn | GRANITE AND GRANODIORITE ORTHOGNEISS, Dgnp INCLUDES SILLIMANITE BEARING PARAGNEISS

LEGEND FOR FIGURE 2

LEGEND FOR FIGURE 2 (Cont.)

SYMBOLS

GEOLOGICAL CONTACT: DEFINED, APPROXIMATE, ASSUMED

BEDDING, TOP KNOWN: INCLINED, OVERTURNED

BEDDING, TOP UNKNOWN: HORIZONTAL, INCLINED, VERTICAL

FACING DIRECTION OF PILLOWED BASALT: INCLINED, OVERTURNED

SYNMETAMORPHIC SLATY CLEAVAGE, SCHISTOSITY, OR GNEISSOSITY: HORIZONTAL, INCLINED, VERTICAL

MINERAL LINEATION

POSTMETAMORPHIC CRENULATION CLEAVAGE: INCLINED, VERTICAL

CRENULATION LINEATION

MESOSCOPIC FOLD AXIS: SYNMETAMORPHIC, POSTMETAMORPHIC, LATE KINK

AXIAL TRACE OF SYNMETAMORPHIC FOLD: OVERTURNED ANTICLINE, OVERTURNED SYNCLINE; ESTABLISHED, INFERRED

AXIAL TRACE OF POSTMETAMORPHIC FOLD: ANTIFORM, SYNFORM

LATER (SYN OR POSTMETAMORPHISM) WEST TO SOUTHWESTERLY DIRECTED THRUST FAULT; TEETH ON UPPER PLATE: DEFINED, APPROXIMATE, ASSUMED

EARLY (PRE FOLDING AND METAMORPHISM) EASTERLY DIRECTED THRUST FAULT; TEETH ON UPPER PLATE: DEFINED, APPROXIMATE, ASSUMED

FAULT; DOT ON DOWNTHROWN SIDE, ARROWS INDICATE SENSE OF STRIKE SLIP MOVEMENT: DEFINED, APPROXIMATE, ASSUMED

CONODONT FOSSIL LOCALITY: MISSISSIPPIAN, PENNSYLVANIAN, PERMIAN

LOCATION OF RADIOMETRICALLY DATED SAMPLE (Pb/U ON ZIRCONS AND Rb/Sr WHOLE ROCK): INDICATE A DEVONIAN AGE FOR UNIT EBA AND FOR UNIT IFp

MINERAL OCCURRENCE

LIMIT OF GEOLOGICAL MAPPING OR OUTCROP

LINE OF GEOLOGICAL CROSS-SECTION

TOPOGRAPHICAL CONTOUR (200 METRE INTERVAL)

3.0 CLAIMS (Fig. 1)

CLAIM	RECORD NO.	UNITS	EXPIRY DATE
KAMAD 1	2685	20	1992-06-27
KAMAD 2	2686	20	1992-06-27
KAMAD 3	2687	20	1992-06-27
KAMAD 4	2688	18	1992-06-27
KAMAD 5	2689	15	1992-06-27
KAMAD 6	2690	2	1992-06-27
KAMAD 7	2691	20	1992-06-27
KAMAD 8	2692	12	1992-06-27
KAMAD 9 FR	2693	1	1992-06-27
KAMAD 10 FR	2694	1	1992-06-27
KE1 FR	6521	1	1988-19-02
TROUBLESOME	L829	1	1988-07-02
ARGENTUM	L830	1	1988-07-02
HOMESTAKE	L827	1	1988-07-02
SILVER STAR	L4566	1	1988-07-02
MAPLELEAF	L828	1	1988-07-02

4.0 SUMMARY OF WORK

This report presents the results of an 1898.6m diamond drill program that was performed in the vicinity of the Homestake Mine between September 1 and October 20, 1987. This work is submitted as part of the requirements of the B.C. Government FAME program.

5.0 DRILLING

5.1 Logistics

The diamond drillholes reported here were drilled by Atlas Drilling Ltd. of Kamloops, B.C. using a skid mounted Longyear Super 38 diamond drill. All holes were drilled using NQ diameter rods. Drill sites and access roads were constructed by Munsen Equipment Ltd. using a D7 cat.

Drillcore was logged by D. Heberlein and R. Carmichael on site using the GEOLOG system. All core boxes were labelled with aluminum tags and stored at a nearby farm (Map 1).

Drillhole locations are shown in Map 1 (in pocket) and drill hole data listings are in Appendix 1.

The tabulated data for the drillholes is as follows:

1987 KAMAD DRILLING - HOMESTAKE BLUFF AREA

DDH#	NORTHING	EASTING	ELEVATION (m)	DEPTH (m)	DIP
KAM22	0+50N	18+00W	720	247.5	-90°
KAM23	0+28N	16+84W	695	44.2	-90°
KAM23A	0+28N	16+84W	695	263.0	-90°
KAM24	1+10N	15+11W	725	206.0	-90°
KAM25	3+50N	14+00E	830	187.4	-90°
KAM26	2+50N	14+00E	785	144.5	-90°
KAM27	2+60N	18+00E	715	208.7	-90°
KAM28	4+40N	13+00E	923	260.9	-90°
KAM29	1+00N	8+80E	702	273.1	-90°
KAM30	1+60N	21+00E	570	135.6	-90°

5.2 Results

The purpose of the drill program was to test a series of soil geochemical anomalies identified within the Homestake Schist. This package of rocks contains a major zone of hydrothermal alteration that hosts silver rich barite lenses that are of economic significance at the Homestake Mine. The holes were positioned to provide maximum coverage of the schist stratigraphy both along and across strike.

In summary, all of the drillholes intersect a relatively homogeneous succession of sericite schist, quartz sericite schist and lensoid banded, cherty felsic volcanic. Lesser lithologies encountered include ankerite schist, chlorite dolomite schist and graphitic argillite. Alteration intensity and degree of mineralization show little variation from hole to hole. Background sulphide contents range from 5 to 10%, with the dominant sulphide being pyrite.

Pyrite occurs in veins, semi-massive bands and as disseminations in the schist. Sphalerite and galena are widespread but restricted to massive poly-metallic sulphide bands and quartz dolomite veins. Tetrahedrite is also present in these veins.

The key results of each drillhole are summarized below:

DDH KAM22:

This drillhole was designed to test a coincident Pb-Zn-Ag soil geochemical anomaly that is present near the top contact of the Homestake Schist. The hole intersected 247.5m of lensoid banded felsic volcanic and quartz sericite schist that was intensely weathered to a depth of 30m.

Pyrite, the dominant sulphide mineral occurs as disseminations throughout the hole with concentrations ranging from 5 to 10%. Narrow (5 to 15cm) semi-massive and massive pyrite bands are concentrated between 61.8 and 69.25m. These features

are hosted in a pale green sericite schist that is truncated by a zone of fault gouge and quartz dolomite veining between 71.5 and 102.2m. Base metal sulphides are present in these pyrite bands as intergrowths and mantles around pyrite crystals.

Quartz dolomite veins from 1 to 50cm in true width occur randomly throughout the hole. These contain traces of disseminated tetrahedrite

Alteration does not vary appreciably through the sequence. It is characterized by pervasive sericitization and patchy dolomitization.

DDH KAM23:

This hole was drilled to test a Pb-Zn-Ag soil geochemical anomaly that overlies the northwesterly extension of the Homestake Mine horizon, 100m southeast of KAM22. A similar sequence of quartz sericite schists to KAM22 was intersected. Deep weathering and the presence of numerous faults caused severe caving resulting in abandonment of the hole.

DDH KAM23A:

KAM23a was collared at the same location as KAM23. The hole intersected 263.0m of alternating lensoid banded felsic volcanic and quartz sericite schist. Numerous faults and gouge zones were intersected between 29.5 and 95.6m. Semi-massive sulphide bands were encountered at 24.62m (2cm), 113.25m (25cm), 145.2m (5cm), 149.15m (10cm), 150.7m (10cm) and 229.9m (20cm). These contain primarily pyrite with

traces of sphalerite, galena, tetrahedrite and chalcopyrite. There seems to be a spatial association the sulphide bands and quartz dolomite veins or faults in this hole.

DDH KAM24:

This hole was drilled at the upper contact of the Homestake Schist to test a coincident Pb-Zn-Ag soil geochemical anomaly. As in KAM22 and KAM23a the hole intersected alternating lensoid banded felsic volcanics and quartz sericite schist. Semi-massive to massive sulphide bands like those seen in the previous two holes were encountered at 76.7m (70cm), 158.0m (17cm) and 192.54m (51cm). Again these bands show a spatial relationship with quartz dolomite veins.

DDH KAM25:

This hole was drilled into 187.4m of moderately sericitized felsic lapilli tuff and ash tuff. Preservation of primary textures suggests that the intensity of alteration is significantly less than that seen west of the Homestake Mine in holes KAM22 to 24. Semi-massive to massive sulphide bands were intersected at 29.4m (40cm), 69.03m (2cm) and 175.4m (10cm). At 69.03m the sulphide band contains 20% chalcopyrite and 30% tetrahedrite. At 93.1m a brecciated cherty unit containing discrete quartz eyes contains 5% chalcopyrite, 5% tetrahedrite and <1% honey coloured sphalerite.

Quartz dolomite veins containing pyrite, chalcopyrite, sphalerite, galena and tetrahedrite were intersected throughout the hole. Vein intensity appears to be related to proximity to fault zones.

DDH KAM26:

Drillhole KAM26 intersected 137.0m of variably altered lensoid banded felsic volcanic. As with the previous drillholes the only mineralization encountered consisted of narrow bands of semi-massive to massive sulphide and quartz dolomite veins. Sulphide bands occur at 88.9m (55cm), 128.4m (10cm) and 130.05 (25cm). These bands contain mainly pyrite with variable amounts of sphalerite, galena, chalcopyrite and tetrahedrite. Tetrahedrite is present in almost all the quartz dolomite veins in amounts up to 10%.

DDH KAM27:

KAM27 was drilled to test a coincident Pb-Zn-Ag soil geochemical anomaly near the top of the Homestake Schist. The hole intersected 155.3m of felsic lapilli tuff with narrow interbeds of chert and fine grained ash tuff. Semi-massive to massive sulphide bands were intersected at 26.0m (40cm), 107.55m (19cm) and 129.25m (110cm). Quartz dolomite veining was not as intense in this drillhole.

DDH KAM28:

KAM28 was designed to intersect the stratigraphic equivalent to the Homestake Mine ore horizon approximately 700m southeast of the mine. The hole

was collared in intermediate volcanic rocks that lie structurally above the Homestake Schist. Above and below the contact graphitic argillite units were found. One at 114.7m contains rounded felsic volcanic clasts in a 50% fine grained pyrite matrix. A similar unit was found at 121.5m.

Below the intermediate sequence the Homestake Schist is made up of felsic lapilli tuffs with lesser interbedded ash tuffs. Semi-massive sulphide bands were encountered at 149.6m (15cm), 181.85m (25cm), 219.2m (10cm) and 254.15m (20cm). These bands consist mainly of pyrite with trace amounts of sphalerite, galena and tetrahedrite.

DDH KAM29:

KAM29 was drilled to test a zone of intense sericitization, chloritization and pyrite veining in the lower portion of the Homestake Schist. 182m of moderately sericitized felsic lapilli tuff overlying 91m of variably chloritized quartz eye rhyolite was intersected. The alteration zone was not reached.

Most significant mineralization consisted of semi-massive sulphide bands at 112.65m (60cm), 139.10m (20cm), 153.0 (70cm)172.2m (10cm) and 196.05m (10cm). In contrast to the previous holes these bands contained abundant galena and sphalerite (up to 10% of each).

DDH KAM30:

KAM30 was drilled on a strong coincident Zn-Pb soil anomaly. The hole intersected 135.6m of lensoid banded felsic volcanic containing numerous 1 to 2cm foliation parallel pyrite veins and base metal rich semi-massive sulphide bands. Best sulphide intersections were encountered at 44.6m (45cm), 48.95m (5cm), 50.08m (10cm), 70.55m (25cm), 75.4m (20cm) 98.0m (10cm) and 135.1m (30cm).

6.0 COSTS

Direct drilling costs, i.e. invoices paid to the drilling company, totalled $54.56/metre. This figure includes the cost of mobilization, site preparation, coring, waterline maintenance, drill moves and casing. Associated costs for core logging , core removal and storage etc. are listed in Appendix 3.

APPENDIX 1

DRILL LOG DATA LISTINGS

ESSO Minerals Canada
KAMAD

DRILLHOLE/TRAVERSE : KAM22

JECT IDEN : KAMAD	START DATE : 87/ 9/ 6	COMPLETION DATE : 87/ 9/10	GEOLOGGED BY : DRH + DRH
LAR NORTHING: 50.00	COLLAR EASTING : -1800.00	COLLAR ELEVATION: 708.00	GRID AZIMUTH : 47.00
	TOTAL LENGTH : 247.50	CORE/HOLE SIZE : NQ	

SUMM
- -

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		227.00	-90.00		
001	76.20		227.00	-89.00		
002	167.64		227.00	-84.00		
003	247.49		227.00	-77.00		

ED First drillhole into Homestake schist. Objective is to test a
ED soil Zn-Pb-Ag anomaly and to obtain stratigraphic information.

F - I N T E R V A L - CORE % TYPI- QAL TEX- GRAIN FRAC- STRUCTUR-1 ALTERATION MINS ORE-TYPE MINS
L (UNITS = MT) RECOV- M ROCK FYING MIN TURES CHARACS TURE H H H H H ANY H H H ANY
A ERY I TM TM MAT TX TX F C % M T ID STK DIP A A A A A MIN A A A MIN
G F R O M - T O (%) X TYPE 1 2 QM1 1 2 F F C P # TK 1 AZM RT QZ BI CY CB MG XX PY CP GL YY SUMM
-- -----.-- -----.-- ----.- -- - ---- -- -- --- -- -- - - - - -- -- - - -- --- --- -- -- -- -- -- -- -- -- -- -- - -
F ROCK FOR EN RT TM QM2 TX TX S R S O DIP F T ID STK DIP KF MU CL EP HE HA PR MO SL HA
L QUAL MEM V Q LC- 3 3 4 O N H / SML I 2 AZM RT H H H H H H H H
G DESIG AGE COL R D P C STRUCTUR-2 A A A A A A A A

AS 0.00 10.20 .0 OVER P
0.00 10.20 Casing.

TH 10.20 13.30 48.0 QSSH LI PY PY= FO SP 40 P FO 64 P3 O+ LI D=
.0 YG MS MS6 BN 5 P6 T. O+
10.20 13.30 Core highly broken and oxidized. Limonite spots seem to be
10.20 13.30 replacing iron carbonate porphyroblasts.
11.00 11.30 A lensoid banded felsic volcanic typified by pale green silica.
11.00 11.30 Pale yellow-green sericite on foliations
11.00 11.30 comprises 20% of the rock.
11.00 11.30 Lenses or clasts in a pale yellow sericite matrix
11.00 11.30 comprise less than 20% of the rock.
11.00 11.30 X LBFV QZ PY PY= LB FO N FO 64 Z7 LI D=
YA MS MS2 SP $2 C.

TH 13.30 29.60 27.6 LBFV PY MS QZ7 FO LB 40 P FO 50 Z7 O= LI D+
5.0 8G QZ PY+ SP 4 H)
13.30 29.60 Lensoid banded pale yellow-grey felsic volcanic with variable
13.30 29.60 amounts of iron carbonate and pyrite.
13.30 16.80 Ground core.
/ 13.30 16.80 X QZVN QZ PY QZ9 N >9 <.
WW
16.80 22.30 Ground core.
23.20 23.60 Ground core.
23.20 23.20 Casing deepened to 23.2m to prevent cave-in of hole.
/ 23.20 23.25 X QZVN QZX MX N VX
TH 25.80 29.60 X LBFV PY AK AK= FO LB 40 D FO 50 Z7 O= LI D=
8G QZ PY+ SP 4 H+

DRILLHOLE/TRAVERSE : KAM22 (CONTINUED)

KEY	FROM	TO	CORE RECOVERY (%)	% MINERAL	ROCK TYPE	TYPING 1	TYPING 2	QAL MIN MAT	TEXTURES 1	TEXTURES 2	GRAIN CHARACS	FRACTURE	STRUCTURE-1 / STRUCTURE-2	ALTERATION MINS	ORE-TYPE MINS	SUMM
R	27.40	27.40				Water circulation lost.										
P	29.60	48.40	47.8		LBFV	MS	PY	QZ6	FO	LB	27	P	FO	54 Z4 Q)	DO D1	
L			5.0			YG		PY1	PA	$T	4			$3	V+	
R	29.60	48.40				Bright green streaks seen throughout interval may be										
R	29.60	48.40				fluoromuscovite or fuchsite.										
N	29.60	48.40			1 QSSH	PY	AK	MS6	IB	BN	39	N	FO	54	FM D1	
L						YA		QZ2	FO		6				O+	
R	36.40	36.60				Ground core.										
R	38.40	38.40				Mislatch.										
N F/	38.40	39.40			X GOUG			SAX	SA			N				
R	40.10	41.50				Broken core - Fault?.										
N F/	40.10	41.50			X FAUL							N				
N F/	42.50	48.40			X FAUL							N				
P	48.40	51.80	64.7	BN	CHER	PY		PY=	BN	MF		P	FO	47 X9	D=	
L			8.0			7A			MX	PB	6			$=		
N	48.80	49.00			X QSSH	MS	PY	MS6	FO	LB		N		L3	D=	
L						YG			PB		8			Z6		
P	51.80	61.25	68.8		LBFV	MS	PY	MS2	FO	LB	14	P	FO	50 L5	DO D+	
L			15.0			6A		PY+			3			$2 W*	Q(	
R	51.80	61.25				Lensoid banded felsic volcanic consisting of pale grey to whi										
R	51.80	61.25				silica as bands 1-3cm wide. Matrix is pale green										
R	51.80	61.25				sericite. Pyrite is disseminated throughout.										
P	61.25	93.20	64.9		SESH	PY	MS	PY=	FO	BN	22	P	FO	55 L1	D=	Q.
L			5.0			8A		MS7	SP		4			X7 W.		Q.
R	61.25	93.20				Finely foliated pale green sericite schist displaying a										
R	61.25	93.20				considerable variation in sulphide content. Pyrite increases to										
R	61.25	93.20				semi-massive over 15cm bands. These contain small quantities of										
R	61.25	93.20				sphalerite and galena.										
R	61.40	61.70				Significant increase in pyrite content over a 30cm interval.										
R	61.40	61.70				Pyrite occurs as disseminated crysTals and crystal aggregates										
R	61.40	61.70				up to 15mm in diameter.										
N	61.40	61.70			PY X SESH	PY	QZ	PY2	FO	PA		N	FO	58 Q2	D2	
L						GA	MS	QZ2	SP					X5		D(
R	61.80	61.85				Narrow base metal rich interval containing silver-grey										
R	61.80	61.85				sphalerite and fine galena. Tetrahedrite occurs in trace										
R	61.80	61.85				amounts.										
N SMS	61.80	61.85			X SMPY	PY	G<	PY5	SM	WF		N			D5	J+ TT
						AU										J1 D.
SMS	61.80	61.85			X SMSX	PY	G>	PY3	SP	IN		N	FO	60	R3	J1 TT
L							G>1		FO					J4		O= D*

DRILLHOLE/TRAVERSE : KAM22 (CONTINUED)

FKEY	LAG	FROM	TO	CORE RECOVERY (%)	%ROCK MIX	TYPIFYING MINERALS	QAL TEXTURES	GRAIN CHARACS	FRACTURE	STRUCTUR-1 / STRUCTUR-2	ALTERATION MINS	ORE-TYPE MINS	SUMM
K	F			ROCK QUAL DESIG	FOR MEM AGE	EN V RT Q LC- COL	TM QM2 TX TX S R S O DIP F 3 3 4 O N H / SML I R D P C			T ID STK DIP KF MU CL EP HE HA PR MO SL HA 2 AZM RT H H H H H H H H STRUCTUR-2 A A A A A A A A			
P		134.40	142.90	100.0		QSSH	PY MS MS4 FO FG	15	P FO	85 32		D+	
L				44.0			8A QZ QZ2 KB PA	2		X4 W(			
R		134.40	142.90	Homogeneous quartz sericite schist containing 3% pyrite. Silica									
R		134.40	142.90	content is slightly higher than in the sericite schist. This									
R		134.40	142.90	can be tested by crushing the sericite schist between the									
R		134.40	142.90	fingers.									
P		142.90	166.65	100.0		LBFV	MS QZ MS2 LB $T	18	P FO	68 Z4		DO D+	
L				26.0			9A DO DO2 FO	2		$2 W)		O2	
R		142.90	166.65	Homogeneous unit containing lensoid banded quartz/chert 1-3cm									
R		142.90	166.65	wide. These are separated by green sericite sheets. Cherty									
R		142.90	166.65	bands contain up to 20% dolomite spots.									
R		163.15	164.50	Brown carbonate and small quantities of chlorite suggest that									
R		163.15	164.50	this rock may have once been mafic in composition.									
		163.15	164.50			X	AKSS AK MS AK3 $T BN		N FO	70 V= $3		D1	
							6U PY FO			$=			
R		166.20	166.25	Coarse pyrite aggregates in a dolomite rich matrix characterize									
R		166.20	166.25	this unit. Interstitial quartz contains euhedral to subhedral									
R		166.20	166.25	dolomite.									
N	SMS	166.20	166.25			X	SMPY PY DO PY4 SM PB		N FO	65 L=		DO R4	
L							UA MS			$2		Q1	
R		166.30	166.65	Strongly sheeted fine brown ankerite and green sericite with									
R		166.30	166.65	lenses and bands of quartz. Pyrite aggregates up to 4mm are									
R		166.30	166.65	disseminated throughout.									
N		166.30	166.65			X	CSQS PY CL AK3 $T LM	56	N FO	50 L2 $3 <=		D=	
L							5U MS CL= FO BN	8		$3 W=			
P		166.65	168.70	100.0		LBFV	PY MS QZ6 LB $T	24	P FO	62 L6		R1	
L				43.0			9G MS3 FO	4		$2			
R		166.65	168.70	Lensoid banded white silica in a green sericite matrix. Quartz									
R		166.65	168.70	bands average 15mm in width.									
P		168.70	170.50	100.0	AK	CSSH	PY AK AK3 $T BN	26	P FO	60 L= $3		D=	
L				24.0			7U MS CL= LM FR	4		$3			
P		170.50	180.90	100.0	GS	AKSS	AK CL AK4 SP $T	23	P FO	56 L) L4		D=	
L							4U MS CL= FO PB	4		$4 O=			
R		170.50	180.90	Brown streaked rock composed of sheeted ankerite and sericite									
R		170.50	180.90	with lesser amounts of quartz as cherty bands. This unit is									
R		170.50	180.90	typified by whisps of a bright green mineral (fluoromuscovite).									
R		170.50	180.90	Minor variations in the quartz and pyrite content. Possible									
R		170.50	180.90	relict fragments senn in places (e.g. 172 to175m).									
N		170.50	171.10			X	CHER PY MS PY+ MX	4	N BD	50		D+	

DRILLHOLE/TRAVERSE : KAM22 (CONTINUED)

KEY	FROM	TO	CORE RECOVERY (%)	% MINERAL	TYPIFYING MATERIAL	QAL TM	MIN TM	TEXTURES MAT	TX 1	TX 2	GRAIN CHARACS F	C	% M	FRACTURE # TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS A	A	A	A	A	ANY MIN	ORE-TYPE MINS H	H	H	H	H	ANY MIN	SUMM
L (UNITS = MT)																			QZ	BI	CY	CB	MG	XX	PY	CP	GL	YY		
K	F		ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	LC-COL	TM 3	QM2 3	TX 4	TX O R	S D	R P	S C	O	DIP / SML	F I	T 2	ID	STK AZM	DIP RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A		
L			85.0				5A																								
N	172.20	172.45			X	CHER	PY	PY)	MX						N		BD	50												
N	177.30	177.70			X	DSSH	DO	MS	DO3	LB	BN				N		FO	60	L+												
L							8G	QZ	MS4	$T	FO			6																	
R	179.00	179.15		Pyrite content increased to 10%.																											
N	179.00	179.15			X	CSSH	DO	MS	DO2	LB	BN				N		FO	60	L=												
L							8U		MS5	$T	FO			2																	
R	179.40	179.50		6-8mm pyrite aggregates make up 60% of the rock. Fine																											
R	179.40	179.50		sphalerite is present in trace amounts.																											
N SMS	179.40	179.50			X	SMPY	DO	QZ	PY6	SM	WF				N		FO	75	J1												
L							AU	MS		$T																					
P	180.90	201.40	100.0			QSSH	QZ	MS	MS4	BN	$T			16	P		FO	60	L1												
L			40.0				GA	PY		FO	LB			2																	
R	180.90	201.40		Long interval consisting of alternating layers of quartz																											
R	180.90	201.40		sericite schist and sericitic chert. Contacts are gradational.																											
R	180.90	201.40		Average unit thickness is 60cm. Narrow sericite schist bands up																											
R	180.90	201.40		to 30cm are sparsly present. The sericite has a typical olive																											
R	180.90	201.40		green colour.																											
N	180.90	201.40			3	LBFV	PY	MS	QZ6	LB	WF			24	N		FO	60	L6												
L							8A		MS2	FR				4																	
N	182.80	183.55			X	SESH	MS	PY	MS9	LM	BN				N		FO	80													
L							GA	CL	CL1	FO																					
N V/	183.55	183.60			X	QZVN	QZ		QZX	MX					N		C/	85	VX												
L							WW																								
R	190.35	190.75		Pyrite is present as disseminated aggregates and as bands in a																											
R	190.35	190.75		cherty matrix. Some appears to be porphyroblastic in form.																											
N	190.35	190.75			X	LBFV	MS	PY	PY2						N				X3												
L							8A	QZ																							
N V/	197.50	198.50			X	QZVN	PY		QZ9	MX					N				>9												
L							WW		PY*																						
P	201.40	205.50	100.0			QSSH	MS	QZ	MS4	BN	FO			* 7 10	P		FO	65	Z5												
L							5A	PY	PY1	LB	FR			O 2			BN	65		$4											
R	201.40	205.50		Highly variable unit consisting of sericite schist (50%)																											
R	201.40	205.50		sericic chert (30%) and sericitic schist. Cherty intervals																											
R	201.40	205.50		consist of lensoid banded chert in a green sericite chert																											
R	201.40	205.50		matrix. This silica has the appearence of white quartz vein																											
R	201.40	205.50		material.																											
N	201.40	202.50			X	LBFV	QZ	MS	MS2	FO	LB				N		C/	55	Z8												
L							9Y			BD							FO	55		$2											
	202.50	205.50			1	LBFV	QZ	MS	MS2	FO	LB				N		C/	55	Z8												
L							YT			BD	IB									$2											
R	203.10	203.10		Possible loading structure - similar to a load cast or a																											

DRILLHOLE/TRAVERSE : KAM22 (CONTINUED)

K E Y	F L A G	- INTERVAL - FROM	TO	CORE RECOV-ERY (%)	% M I X	ROCK TYPE	TYPI-FYING 1	QAL MIN TM 2	MIN MAT QM1	TEX-TURES 1	TEX TX 2	GRAIN CHARACS F	C	%	M	FRAC-TURE #	TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS ORE-TYPE MINS H A QZ	H A BI	H A CY	H A CB	H A MG	H A XX	ANY MIN PY	H A CP	H A GL	H A YY	ANY MIN SUMM
K E Y	F L A G			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC- COL	QM2 3	TX 3	TX 4	S R O N R D	S O H P	DIP / C	F	SML I		T 2	ID	STK AZM STRUCTUR-2	DIP RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A	
R		203.10	203.10					slump fold.																								
N V/		203.70	203.75				X	PQVN	PY	QZ	PY6	CG	PB				N		C/		55	J4					DO	R6			
L									BR	DO	QZ2																	J2		D.		
P		205.50	216.85	100.0				LBFV	QZ	MS	QZ6	LB	FO		5		P		FO		60	Z6					DO	D=		FM	
L				85.0					9Y	PY	MS3	PA	$T		2								$3					Q=			W.	
R		205.50	216.85					This section of sericitic chert is characterized by white vein																										
R		205.50	216.85					like quartz. Bright green spots appear to be increasing down																										
R		205.50	216.85					interval. This mineral may be a fluoromica.																										
N	BRX	208.40	212.80				X	CHBR	QZ	MS	FR6	FR	LB		6	8	N		FO		65	*6					DO	D2			
L									4A	PY	MS2	$T	FO	5	8	L C							$2					Q+				
N	F/	211.60	211.90				X	FAUL									N															
N	V/	214.30	214.45				X	QDVN	QZ	DO	QZ9	CG	VG				N		C/		45	V9					DO	D.			
L									WW		DO=	MX	PA						C/		60						Q=				
N		214.45	216.75				X	LBFV	QZ	MS	QZ5	FR	$T		5	7	N		FO		70	*5					QZ	D2			
L									YG	PY	MS3	FO	SP	8	7	B C							$3					<+				
V/		216.75	216.85				X	QDVN	QZ	DO	QZ9	VG	MX				N		FR		10	V9					DO	D.			
L											DO=	PA	SP															Q=				
P		216.85	221.00	100.0				CSSH	CL	MS	CL3	FO	SP		8		P		FO		60	<+	$1				DO	D2			
L				75.0				AK	5G	PY	MS2	BN	LM	3									$2	$3				O2				
R		216.85	221.00					A very different unit containing essentially 30% sheeted																										
R		216.85	221.00					chlorite with lesser sericite. The groundmass contains 20% <1mm																										
R		216.85	221.00					subhedral, white dolomite crystals. Sparse quartz eyes up to																										
R		216.85	221.00					4mm in diameter are also present. Brown ankerite occurs as																										
R		216.85	221.00					sheets. Quartz-dolomite veinlets make up 3% of the interval.																										
N		220.60	220.80				X	ASSH	AK	MS	AK4	$T	FO				N		FO		60		$4				DO	D2			
L									8U	CL	MS1	SP											$1				O2				
P		221.00	223.50	100.0				QSSH	QZ	MS	QZ6	FO	FR		1	7 9	P		FO		80	Z6	$*				DO	D2			
L				75.0					6A	PY	MS3	$T		7	5	B O 2												O2				
P		223.50	226.90	100.0				CDPH	AK	DO	AK3	WF	SP			10	P		FO		65	I.	$3		P.		DO	R1			
L				60.0					GA	CL	DO5	$T				3							P1	W=			O5				
R		223.50	226.90					A carbonate rich phyllite with a weakly penetrative fabric.																										
R		223.50	226.90					Dolomite occurs as 1-5mm spots (50%). Chlorite concentration is																										
R		223.50	226.90					highly variably.																										
N		223.50	224.25				X	AKPH	AK	MS	AK5	FO	$T				N		FO		66	<*	$5				DO	D+			
L									5G	AK	CL=	$T											E=	W.			O1				
R		224.60	224.90					This interval is anomalously heavy. This may indicate the																										
R		224.60	224.90					presence of barite.																										
		224.60	224.90				X	STWK	DO	CL	DO5	<<	SP				N		FO		70	<*	$=				DO	<1			
L									5G	AK	CL=	$T																				
N		226.70	226.90				X	STWK	DO	CL	DO5	<<	SP				N		FO		70	<*	$+				DO	<1			

DRILLHOLE/TRAVERSE : KAM22 (CONTINUED)

K E Y	F L A G	- INTERVAL - (UNITS = MT) FROM	TO	CORE RECOV-ERY (%)	% M I X	ROCK TYPE	TYPI-FYING TM 1	TM 2	QAL MIN MAT QM1	TEX-TURES TX 1	TX 2	GRAIN CHARACS F	C	%	M	FRAC-TURE #	TK	STRUCTUR-1 T	ID	STK	DIP	ALTERATION MINS H A	H A	H A	H A	H A	ANY MIN	ORE-TYPE MINS H A	H A	H A	ANY MIN	SUMM
K E Y	F L G			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q		QM2 LC- 3 COL	TX 3	TX 4	S O N R	R H D P	S / C	O SML	DIP I	F	T 2 STRUCTUR-2	ID	STK AZM	DIP RT	KF A	MU A	CL A	EP A	HE A	HA A	PR A	MO A	SL A	HA A	
L									5G AK CL1 $T																E=				P5			
P		226.90	235.20	100.0			AKSS	AK	MS AK4 FR $T			5 7	27			P		FO		80	<)	P4					DO L=				
L				15.0					7U MS6 LM KB	3	1	C	O	5														<(				
R		226.90	235.20				Well developed chevron folding (5cm scale). When oriented the																											
R		226.90	235.20				axial planes plunge approximatly 15 degrees to the northwest.																											
R		226.90	235.20				Finely laminated, lapilli bearing ash tuff intervals are																											
R		226.90	235.20				interbedded. Fragments are concentrated over 10-30cm																											
R		226.90	235.20				intervals. They have aspect ratios of >4:1. The abundance of																											
R		226.90	235.20				ankerite may suggest a significant exhalative component.																											
N	V/	232.75	232.85			X	QZVN	QZ	DO QZ9 MX			IG				N					V9					DO D.					
L									DO1																		U1					
P		235.20	238.75	100.0			LBFV	MS	AK QZ8 LB WF			6 8	50			P		FO		65	<+	$*					DO D=				
L				.0					8A PY MS2 IB FR	5	7	E	C	7								$=						<+				
		236.50	237.25			9	AKSS	AK	MS LF3 FR FO			3 8				N		FO			V(	$4					DO D1					
									8U PY AK4 IB VV	5	5	F	O									P3						V*				
P		238.75	242.00	100.0			ASPH	AK	MS AK4 WF FR			5 7				P		FO		60	P4						DO D=				
L				25.0					8U PY MS3 $T KB	1	3	F	O									P3	03				Q=		D/		
R		238.75	242.00				Very finely sheeted ankerite sericite phyllite with sparse																											
R		238.75	242.00				elongate lithic fragments up to 2cm in length. Pyrite																											
R		238.75	242.00				porphyroblasts are surrounded by chlorite strain shadows.																											
P		242.00	244.05	100.0			QSSH	MS	QZ MS5 FR FO			4 5	26			P		FO		67	X2	$2					DO R=				
L				15.0					7A DO DO2 VV	5	5	B	O	5								$5	W.				P2		<(		
N	V/	242.90	243.05			X	QDVN	DO	QZ DO6 MX			IG				N		C/		45	M4						DO D)				
L									WW QZ4 CG																		M6		B+		
N	SMS	243.30	243.33			X	SMPY	PY	QZ PY8 CG PB							N					J1						DO R8				
L									BR DO QZ1																	J1				B.	
N	V/	243.75	244.05			5	QZVN	QZ	DO QZ9 MX							N					V9						DO				
L									WW DO=																		J=				
P		244.05	247.50	100.0			CHER	MS	PY MS2 $T				26			P		FO		60	X7						DO D1				
L				5.0					7A PY1 FO LB				7									$2					<+		D.		
N		244.05	245.60			X	LBFV	MS	PY MS4 LB $T							N		FO		65	Z6						DO D=				
L									8G FO													$4			<+			D.		
N		245.60	245.90			X	QSSH	MS	QZ MS3 FO BN							N		FO		60	L1	$1					DO D+				
L									6A AK AK1													P3					O=				
N	SMS	245.90	245.95			X	SMPY	PY	QZ PY5 PB SP							N					J3						DO R5				
L									BR DO																		J3				

ESSO Minerals Canada
KAMAD

DRILLHOLE/TRAVERSE : KAM23A

PROJECT IDEN : KAMAD | START DATE : 87/ 9/12 | COMPLETION DATE : 87/ 9/15 | GEOLOGGED BY : DRH + DRH
COLLAR NORTHING: 28.00 | COLLAR EASTING : -1684.00 | COLLAR ELEVATION: 695.00 | GRID AZIMUTH : 137.00
TOTAL LENGTH : 243.80 | CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00			-90.00		
001	122.00			-83.00		
002	183.00			-82.00		

R HED Drillhole into Homestake schist - lower section to test soil
R HED Pb-Zn-Ag anomaly and to test for possible mineralized horizons
R HED equivalent to the Homestake Mine ore horizons. Lithogeochemical
R HED sampling to test for chemical zonation vertically and laterally
R HED away from the mine.

K	L	F R O M	T O	CORE RECOVERY (FT.1)	% M I X	ROCK TYPE	TYPIFYING MINERALS	QAL TM MAT	TEXTURES	GRAIN CHARACTERS	FRACTURE	STRUCTURE-1	ALTERATION MINS	ORE-TYPE MINS	SUMMARY
E	A (UNITS = MT)											T ID STK DIP AZM RT	H H H H H ANY MIN	H H H H H ANY MIN	
Y	G						1 2	1 2	1 2	F F C % M	# TK	1	QZ BI CY CB MG XX	PY CP GL YY	
K				ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM QM2 LC- 3 COL	TX TX 3 4	S R S O N H / D P C	DIP F SML I	2	KF MU CL EP HE HA	PR MO SL HA	
E												STRUCTUR-2	A A A A A A A A		
Y	G														

P OVB 0.00 18.90 OVER P
R 0.00 18.90 Casing.

P WTH 18.90 20.90 55.0 QSSH MS QZ MS4 BN FO 68 P FO 48 L2 <= D=
L .0 9U PY QZ2 9 P4
R 18.90 20.90 Quartz sericite schist with 5-10mm bands of grey silica. These
R 18.90 20.90 amy be cherty laminations or foliation parallel quartz veins.
R 18.90 20.90 No fragments or quartz eyes are noted.

P 20.90 26.45 81.0 LBFV QZ MS QZ6 FO BN 36 P FO 55 L6 $+ D+ L(TT
L 8.0 TA MS4 LB 6 $4 J* O.
R 20.90 26.45 Silica bands from last intertval increase in abundance to
R 20.90 26.45 become the dominant component of the rock. Bands are foliated
R 20.90 26.45 and separated by sericitic sheets. Semi-massive sulphide bands
R 20.90 26.45 or veins are present at: 24.1 and 24.62m. The latter band
R 20.90 26.45 contains 40% Py, 20% Sl, 10% Gl and 1-3% Tt in a dolomite
R 20.90 26.45 matrix.
N MSX 24.62 24.64 X MSSX PY SL SX8 RX IN N C/ 68 J1 DO D4 B1 TT
L 2A GL PB BN J1 J2 O.
N 25.30 25.45 X CDSH MS CL CL1 BN FO N FO 50 L3 DO D1 D*
L GA DO DO2 LB P4 N1 C. L2 J(
P 26.45 68.90 64.0 QSSH MS QZ MS5 FO FG 3 7 28 P FO 65 L4 DO 7+ <- B(TT
L 45.0 9Y PY QZ4 FR KB 3 5 E O 4 P5 O+ N* <.
R 26.45 68.90 A very distinctive unit with a fine grained homogeneous
R 26.45 68.90 texture. Possible fine grained lithic fragments are present in

DRILLHOLE/TRAVERSE : KAM23A (CONTINUED)

K E Y	F L A G	- INTERVAL - FROM	TO (UNITS = MT)	CORE RECOVERY (FT.1)	% M I X	ROCK TYPE	TYPIFYING MIN 1	TM 2	QAL MAT QM1	TEXTURES TX 1	TX 2	GRAIN CHARACS F	C	%	M	#	TK	FRACTURE	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS A QZ	A BI	A CY	A CB	A MG	A XX	MINS ANY	ORE-TYPE MINS A PY	A CP	A GL	ANY YY	SUMMAR
K E Y	F L G	ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	LC- COL	TM 3	QM2	TX 3	TX 4	S R	S O N H	DIP / C	SML	F I				STRUCTUR-2	T	ID	STK AZM	DIP RT	KF	MU	CL	EP	HE	HA	PR	MO	SL	HA	
R		26.45	68.90				some sections. Thin (1-3cm bands) of massive sulphide occur																												
R		26.45	68.90				sporadically throughout the interval. These are at: 29.5,																												
R		26.45	68.90				41.5, 44.0 and 56.25. These bands consist of 30% Py, and 20%																												
R		26.45	68.90				interstitial brown and occasional blackjack sphalerite, 20% Gl																												
R		26.45	68.90				and traces of Tt.																												
N		26.45	68.90			2 SESH	MS	PY	MS9	FG	LM							N				L+							D=				
L							9A		PY=														P9											
R		29.50	38.50				Hematite stained fault zone with highly broken core.																												
N	F/	29.50	38.50	10.0		X FAUL												N															
R		32.30	35.40				Lost core.																												
N		32.30	35.40			X LOST												N															
N	V/	39.30	39.32			X QDVN	QZ	DO	CP4	PA	PB							N	C/		30	<3							DO	D1	R4		
L																							E)											
N	F/	47.15	53.40	41.6		X FAUL	MS											N															
L							8A																												
N	F/	59.70	59.85			X GOUG												N															
N	V/	63.05	63.10			X PYVN	PY	QZ	PY7	PB								N	C/		50	J2							DO	R7			
L								DO	DO1														E)							J1		D/		
P		68.90	84.90	30.6		SESH	MS	QZ	MS8	FO	LM		65					P	FO		64	L1	$(							D)				
L				.0			9A	PY	QZ1	$T			9										P8											
R		68.90	84.90				Highly fractured rock consisting of sericite schist with																												
R		68.90	84.90				laminations or narrow bands of silica. These may be fragments,																												
R		68.90	84.90				chert bands or foliation parallel veins.																												
R		74.40	74.40				Lost water circulation.																												
N	F/	74.80	84.70	18.8		8 FAUL	QZ	DO	GC	SH								N				V3		P2					DO	D*			
L							WW	MS	QV3														E2							V2				
P		84.90	89.70	100.0		AKSS	AK	MS	MS6	FO	$T		20					P	FO		55	$2							DO	D+			
L							7T	CL	AK2	SP	VV		5										P6	W)						L1				
R		84.90	89.70				High ankerite content gives the rock a distinctive brown																												
R		84.90	89.70				colour. Chlorite is present as streaks.																												
N	V/	86.80	87.00			X QZVN	QZ		QZX									N	C/		78	VX											
L							WW																											
N	V/	89.38	89.43			X QZVN	QZ		QZX									N				VX											
L							WW																											
P		89.70	96.55			FXTF	MS		FX3	SP	PA		2 6 35					P	FO		72	F/							DO	D+			
L							6A		WF				0 5										P2							Q1				
R		89.70	96.55				An unusually unaltered unit consisting of a weakly foliated																												
R		89.70	96.55				feldspar crystal tuff. Dolomite occurs as patches in the																												
R		89.70	96.55				groundmass. Lithic fragments up to 10mm in length are present.																												
N	F/	95.48	95.60			X FAUL												N															
P		96.55	99.26	100.0		LBFV	QZ	MS	QZ4	CH	MF		24					P	FO		62	Q4							DO	D)			

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KAMAD

DRILLHOLE/TRAVERSE : KAM23A (CONTINUED)

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  F  - I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-      STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K L (UNITS = MT)          RECOV-    M ROCK FYING MIN TURES CHARACS TURE                H  H  H  H  H ANY H  H  H ANY
E A                        ERY      I      TM TM MAT TX TX F C % M         T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y G  F R O M  -  T O      (FT.1)    X TYPE  1  2 QM1  1  2 F F C P  # TK   1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMAR
- --- -----.--  -----.--  ----.- -- - ---- -- -- --- -- -- - - - - -- -- - - -- --- --- -- -- -- -- -- -- -- -- -- --  - - -
K F                       ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F   T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E L                       QUAL   MEM  V  Q LC- 3       3  4 O N H / SML I   2   AZM  RT       H  H  H  H  H  H  H  H
Y G                       DESIG  AGE       COL              R D P C         STRUCTUR-2          A  A  A  A  A  A  A  A

L                                          GA    MS4 PA           4                        P4         P1
R      96.55     99.26         An unusual textured rock. This unit appears to be a sericitic
R      96.55     99.26         chert, however the usual banded or lensoid banded texture is
R      96.55     99.26         absent. Instead, the siliceous and sericitic components are
R      96.55     99.26         intermixed in a chaotic fashion. It is possibly that this
R      96.55     99.26         represents a fold hinge zone. If so the prevoius intervals
R      96.55     99.26         should be repeated.

P      99.26    100.90    100.0  GS   AKSS AK MS MS4 $T FO     2 6 16    P    FO      80   $3          DO D=        FM
L                          15.0          AU DO AK3 PA FR 7 5 E 0 3                      $4          Q1           W.
R      99.26    100.90         Sheeted ankerite sericite schist with characteristic emarald
R      99.26    100.90         green streaks. This rock has well preserved lenticular shaped
R      99.26    100.90         fragments. These are slightly elongated (2:1) and have a
R      99.26    100.90         maximum size of 25mm. These comprise 25% of the rock.

P     100.90    104.50    100.0      LBFV MS QZ MS4 WF PA     4 8 48    P    FO      58 Q5 $)          DO R*
L                                        7A    QZ5 FR    3 7 E 0 7                      $4          P1
R     100.90    104.50         A distinctive fragmental unit resembling the sericitic chert at
R     100.90    104.50         95.55-99.26m. This rock may be more appropriately called a
R     100.90    104.50         felsic lapilli tuff. Cherty patches may be felsic fragments.

P     104.50    107.30    100.0      QSSH MS AK MS6 FR $T     5 8 44    P    FO      60 *3 $2          DO D)
L                                        6A PY AK2 FO    3 7 F C 7                      $6          Q+
N     105.00    106.10    100.0    X AKSS AK MS AK5 $T FR     3 7 30    N    FO      57 *2 $5          DO D*
L                                        7U PY MS4      2 7 F 0 5                       $4          P)
P     107.30    112.40               LBFV QZ MS QZ5 WF PA        23    P    FO      80 Q5                R*
L                                        8A    MS5            4                         $5
R     107.30    112.40         This unit is atypical of the defined sericitic chert. The rock
R     107.30    112.40         consists of siliceous patches that are neither lensoid banded,
R     107.30    112.40         laminated or fragmental. The amount of silica varies over the
R     107.30    112.40         interval. Quartz looks like white quartz vein material, however
R     107.30    112.40         no veins are visible. This rock could represent a deformed
R     107.30    112.40         stringer zone with a sericitic halo. Sulphide content is below
R     107.30    112.40         average.
P     112.40    114.80    100.0      XATF QZ MS MS2 FG WF               P    FO      70 I*                 D)
L                                        6A PY QI* BN PA                                   P2
R     112.40    114.80         A weakly altered section of crystal ash tuff with crude banding
R     112.40    114.80         on a 1-15cm scale. Bands conSist of alternating sericite rich
R     112.40    114.80         and sericite poor units. Very small quartz eyes can be seen in
R     112.40    114.80         the sericite deficient matrix.
NS    113.25    113.50         X SMPY PY QZ PY4 SP SM               N    FO      65 J3 $-          DO R4
L                                        AU DO DO1 CG                                      P1 O(       P1
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KAMAD

DRILLHOLE/TRAVERSE : KAM23A (CONTINUED)

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   F   - I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = MT)           RECOV-    M ROCK FYING MIN TURES CHARACS TURE                 H  H  H  H  H ANY H  H  H ANY
E  A                         ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O      (FT.1)    X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMAR
- --- -----.--   -----.--   ----.- -- - ---- -- -- --- -- -- - - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - - -
K  F                        ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                        QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                        DESIG  AGE        COL             R D P C           STRUCTUR-2        A  A  A  A  A  A  A  A

P       114.80    117.20              AKSS AK MS AK3 $T FO     2 6 27    P    FO      58    $3            D=       FM
L                                          6U    MS4 FR    7     0 4                        $4 W-                  Q(
R       114.80    117.20         A bright green mineral (FM) occurs as sparse spots and patches.
R       114.80    117.20         The mineral is soft (3) and has a sub-vitreous lustre. Possibly
R       114.80    117.20         fluorite, though there are no visibly cleavages.
N       115.50    115.90              X QDVN QZ DO QZ5 PA FR              N    C/      86 Q5            DO D1       TT
L                                          WW PY DO1 CH                                 J2            P1       <* </

P       117.20    121.25  100.0       QSSH QZ MS MS4 LM VV        31    P    FO      65 L4              D*
L                                          9A PY QZ4 LB PA         4                        $4 $-
R       117.20    121.25         Finely banded quartz in a sheeted sericitic matrix. Quartz
R       117.20    121.25         bands seem to have a lenticular habit with aspect ratios of
R       117.20    121.25         >10:1. These could be stretched fragments or irregular quartz
R       117.20    121.25         veins.
N V/    117.20    121.25              4 QZVN QZ MS QZ9 VV LN              N    FO      65 V9              D(
L                                          WW DO                                        E2

P       121.25    125.40  100.0       ASHT MS PY MS2 BD FO        19    P    FO      45 F/              D+
L                                          6A    PY+               3                        P2
R       121.25    125.40         Fine grained relatively unaltered crystal ash tuff with poor
R       121.25    125.40         foliation and a crude banding on a 20-30cm scale. Pyrite is
R       121.25    125.40         finely disseminated throughout.
N V/    122.60    122.90              4 PYVN PY QZ PY8 VV SM              N    C/      60 J2              M8
L                                          9A        CG                                 E1
R       124.85    125.40         Euhedral dolomite porphyroblasts replaced by white clay.
N V/    124.85    125.40              X QZVN QZ DO QZ9 MX                 N    C/      28 V9         DO
L                                          WW                                                H*       U*
P       125.40    136.05  100.0 GS   AKSS AK MS AK4 $T SP        12    P    FO      60 J3 $4          DO D1       PP
L                                          6T DO MS1 PA FO         2                        $1                     O*
R       125.40    136.05         The green spotted mineral seen in this interval is
R       125.40    136.05         characteristic of the ankeritic phyllite unit. This mineral has
R       125.40    136.05         been described as fluoromica, fluorite and pyrophyllite in
R       125.40    136.05         previous intervals. Other possibilities are talc, gypsum and
R       125.40    136.05         chloritiod. Pyrite habit varies from euhedral disseminations to
R       125.40    136.05         coarse cryatal aggregates.
R       129.80    132.80         Finely banded or laminated chert with sericitic intervals.
R       129.80    132.80         Sericite content varies from <5% to 30% -  averages 20%.
N       129.80    132.80              X CHER QZ MS MS2 RB LM         16    N    FO      50 L8              DO D)       QZ
L                                          9G PY     $T FO         2          BN      75    L2           <(       <. V+
N V/    133.30    134.05              4 QDVN DO QZ DO6 CG IG              N    C/      80 V4              DO
L                                          9T    QZ4                            C/      76    E/           V6       D.
P       136.05    168.65  100.0       LBFV QZ MS QZ6 BN LB        15    P    FO      64 X6              DO D=    L(
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DRILLHOLE/TRAVERSE : KAM23A (CONTINUED)

K E Y	F L A G	- INTERVAL - FROM	TO	CORE RECOV-ERY (FT.1)	% M I X	ROCK TYPE	TYPI-FYING 1	2	QAL MIN MAT QM1	TEX-TURES 1	2	GRAIN CHARACS F	C	% M	FRAC-TURE #	TK	STRUCTUR-1 T	ID	STK	DIP	ALTERATION MINS H A	H A	H A	H A	H A ANY MIN	ORE-TYPE MINS H A	H A	H A ANY MIN	SUMMAR
K E Y	F L G			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	LC- COL	TM 3	QM2	TX 3	TX 4	S R O N D P	H / C	DIP	F I	STRUCTUR-2 T	ID	STK	DIP	KF	MU	CL	EP	HE	HA	PR	MO	SL	HA
L				45.0				9G PY MS3 $T WF				2										$3					<)			L(
R		136.05	168.65		A relatively homogeneous unit dominated by lensoid banded																									
R		136.05	168.65		silica (chert) in a sheeted sericitic matrix. Semi-massive																									
R		136.05	168.65		pyrite and massive Pyrite-sphalerite-galena occur sporadically																									
R		136.05	168.65		across the interval. Silica lenses vary in size. Smaller																									
R		136.05	168.65		versions occur in the more sericitic sections.																									
R		136.05	168.65		Quartz-dolomite-calcite veins cross-cut the Interval																									
N	V/	136.35	136.55		X	QDVN	QZ	DO QZ8		CG	IG						N		C/	50	V8				DO			
L								DO2		VV															V2			
N		136.55	137.00		X	SESH	MS	MS9		FR	FO	1 8					N		FO	45					L)			
L												5 7 F O										P9							
N	MSX	145.20	145.25		X	MSSX	PY	G<	PY4	MX	PB						N		BD	68	J=				R4		Q1	
L								BR			IG																L2	
N	SMS	149.15	149.25		X	SMPY	PY	QZ	PY4	PB	CG						N		C/	60	J2				DO	R4		
L								BR	DO													$1			J1			
N	SMS	150.70	150.80		X	SMPY	PY	QZ	PY3	PB	CG						N		C/	60	J3				DO	D3		
L								AU	DO													$1			J1			
N	V/	152.75	152.95		X	QZVN	QZ		QZX	MX	VV						N											
L								WW																				
N	V/	153.90	154.80		X	QDVN	DO	QZ	DO6	MX	IG						N		C/	70	V4				DO	V-		
L								WW		QZ4	CG														V6			
P		168.65	174.60	100.0		AKSS	AK	MS	MS6	FG	FO						P		FO	78	V=	$2				D*		
L								4T		AK2												P6						
N		171.40	172.10		X	QSSH	MS	QZ	MS4	FO	$T						N		FO	75	L5				QZ	D+		
L								7G	PY	QZ5	LB								C/	75		$4						
N		172.10	173.10		X	AKSS	AK	MS	AK5	$T	SM				28		N		FO	62	L=	$5			DO			QZ
L								5U	PY	MS3	<<				4							$3			<=			
R		173.25	173.45		Irregular quartz dolomite vein. Looks like the vein has been																									
R		173.25	173.45		plastically deformed.																									
N	V/	173.25	173.45		X	QDVN	QZ	DO	DO3	VV	IG						N		C/	10	V7				DO			
L								WW			CG														V3			
P		174.60	199.20	100.0		LBFV	MS	QZ	MS4	LB	FO				29		P		FO	70	X5				DO	8+		
L				72.0				YA	PY	QZ5	BN				4							$4			<+			
R		174.60	192.20		A very uniform unit consisting of lensoid banded grey silica in																									
R		174.60	192.20		a sheeted sericitic matrix. Although the unit does not exhibit																									
R		174.60	192.20		strong compositional variation the silica content varies from																									
R		174.60	192.20		sericitic chert to sericite schist. Pyrite is concentrated in																									
R		174.60	192.20		bands that may be veins or beds. These are characteristicly																									
N		174.60	192.20		2	QSSH	MS	QZ	MS7	FO	BN				29		N		FO	63	L2				DO	7+		
L								YA	PY	QZ2	LB				4							P7			<)			
N	V/	186.90	187.35		X	QZVN	QZ	DO	QZ9	MX					27		N		C/	60	V9				DO	<+		
L								WW	PY	DO+					4							S)			Q+			

DRILLHOLE/TRAVERSE : KAM23A (CONTINUED)

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   F   - I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-      STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = MT)           RECOV-    M ROCK FYING MIN TURES CHARACS TURE                H  H  H  H  H ANY H  H  H ANY
E  A                         ERY      I      TM TM MAT TX TX F C % M         T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O      (FT.1)    X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMAR
- --- -----.--   -----.--   ----.- -- - ---- -- -- --- -- -- - - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - - -
K  F                        ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                        QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                        DESIG  AGE        COL             R D P C          STRUCTUR-2        A  A  A  A  A  A  A  A

R        189.20    189.60          A different type of vein consisting of quartz and intergrown
R        189.20    189.60          ferroan carbonate. This carbonate has been tentatively
R        189.20    189.60          identified as dolomite or ankerite.
N V/     189.20    189.60               X QDVN QZ DO QZ7 PA MX              N    C/      60
L                                          WW    DO3
R        193.60    193.95          Semi-massive pyrite bands make up to 20% of this interval.
R        193.60    193.95          These bands have sharp contacts. It is not certain if these
R        193.60    193.95          features are veins or recrystallized beds. The sharp contacts
R        193.60    193.95          and porphyroblastic habit of the pyrite imply a vein origin.
N        193.60    193.95               2 SMPY PY QZ PY7 XA PB              N    C/      69 J3            DO R7
L                                          AU DO QZ3                                                    J)

P        199.20    203.45  100.0        AKPH AK CL CB3 LM BN     * 7 23    P    BN      65    $2         DO D*       DO
L                           40.0             AU MS CL= FR MT 7 7 B O 3                        $1 7=      L5          <(
R        199.20    203.45          A distinctive unit consisting of finely banded
R        199.20    203.45          carbonate-chlorite and sericite. Foliationis poor and quartz is
R        199.20    203.45          essentially absent. Pyrite is concentrated in lens shaped
R        199.20    203.45          patches of chlorite and in chlorite veins.
P        203.45    207.40  100.0        QSSH MS QZ MS4 FR BN     4 7 27    P    FO      84 F4            DO D*
L                                          QZ4 FO $T 7 7 B O 4                        P4 $(       P2
R        203.45    207.40          An alternate name for this unit would be 'felsic lapilli tuff'
R        203.45    207.40          and/or ash tuff. Some sections display well preserved fragments
R        203.45    207.40          from 1-5cm in length. They are elongated with aspect ratios of
R        203.45    207.40          >2:1. Foliation is less well developed in these sections. Ash
R        203.45    207.40          tuff sections are well banded and consist of bands of
R        203.45    207.40          yellow-green sericite intermixed with more siliceous grey
R        203.45    207.40          sericite bands. Pyrite decreases down section.
R        205.25    205.90          Banded ash tuff comprised of massive olive green sericite.
N        205.25    205.90               X SESH MS DO MS9 BN LM              N    FO      80               DO D.
L                                          YG        VV                                  P9             <*
R        205.90    207.40          Lapilli are pervasively altered to dolomite.
N        205.90    207.40               X LLTF MA QZ LL4 FR FO     4 7 27    N    FO        F/           DO D.
L                                          9A        KB    6 8 E O 4                        $2         P2
P        207.40    212.40  100.0        LLTF MS CB LL6 FR EL     6 8 28    P    FO      60               DO D(
L                                          6A PY MS3 FO KB 5 8 B C 4                        P3 O*      Q2
R        207.40    212.40          Interbedded section of not so altered lapilli tuff. Ash tuff
R        207.40    212.40          and sheeted ankerite-sericite schist. A bedded tuff sequence?
N        210.10    210.40               X LLTF DO MS DO6 PA SM              N                          DO D*
L                                          9T        LN                                               P6
R        210.50    211.05          Pyrite occurs within chlorite patches that are 5-15mm in
R        210.50    211.05          length.
N        210.50    211.05               X AKSS MS AK LL2 FO $T     2 7      N    FO      45    $3           D+
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DRILLHOLE/TRAVERSE : KAM23A (CONTINUED)

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   F   - I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = MT)           RECOV-    M ROCK FYING MIN TURES CHARACS TURE                H  H  H  H  H ANY H  H  H ANY
E  A                         ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O      (FT.1)    X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMAR
- --- ---------  ---------   ---------- -- - ---- -- -- --- -- -- - - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - - -
K  F                        ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                        QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                        DESIG  AGE        COL             R D P C           STRUCTUR-2        A  A  A  A  A  A  A  A

L                                                7U PY AK3 SP KB 7 7 B O                          $3 Q=
R       211.05     211.40        Chloritic sericite phyllite showing fine fragmental textures.
R       211.05     211.40        Rock was probably an intermediate to mafic tuff with lithic
R       211.05     211.40        fragments. Alteration seems to be decreasing down hole.
N       211.05     211.40             X CLPH CL AK CL4 FR PA              N    FO      68    $+          DO D(
L                                        3G MS AK+ $T WF                                   $1 P4       O+
R       211.40     211.70        Bedding and foliation intersect at a high angle. Bedding is
R       211.40     211.70        steeper than foliation implying tops down.
N       211.40     211.70             X SESH MS CL     BD FO              N    BD      69               DO
L                                        YG       BN                        FO     D24    X8 L1       Q1
N       211.70     212.40             X AKSS AK MS AK4 $T FO              N    FO      64 Q= $4         DO 7+
L                                        6U PY MS2 BN KB                                   $2          7=

P       212.40     217.10   100.0        LLTF MS PY MS3 WF FR              P    FO      60 X4             D*
L                                        8A                                                P3
R       212.40     217.10        Weakly foliated unit with a relict fragmental texture. This
R       212.40     217.10        rock is equivalent to the sericitic chert but less foliated and
R       212.40     217.10        altered.
P       217.10     223.50   100.0       AKPH AK CL AK3 $T IB        18    P    FO      70 <+ $3         DO D=
L                                        6U MS CL2 PA          3                           $2 P2       81
R       219.20     219.90        Ankerite-sericite phyllite with patches and streaks of
R       219.20     219.90        chlorite. Dolomite occurs as conspicuous cream spots and
R       219.20     219.90        patches. These may be replaced fragments.
N       219.20     219.90             X AKPH DO AK DO2 SP PA              N    FO      66 <* $1         DO Q+
L                                        4A MS AK1 WF $T                                   P= Q)       Q2
R       221.40     223.50        Highly veined section of ankerite phyllite. Veins are at a high
R       221.40     223.50        angle to the core axis. They range in width from 1-35cm. Spots
R       221.40     223.50        of dolomite pervade the wallrocks.
N V/    221.40     223.50             4 QDVN QZ DO DO4 MX IG              N              V6               DO
L                                              QZ6                                                       64
P       223.50     251.20              LBFV QZ MS QZ6 LB $T        40    P    FO      70 Z6            DO 8+
L                                        YA PY MS2 WF          6                           $2          82
R       223.50     251.20        A highly silicified unit comprised of lensoid banded silica in
R       223.50     251.20        a sheeted sericitic matrix. Rock has a pseudo fragmental
R       223.50     251.20        texture. This may be caused by foliation of a competant
R       223.50     251.20        siliceous unit.
N MSX   229.90     230.10             X MSPY PY QZ PY8 CG XA              N    C/      64 J1 Q)         DO R8
L                                        BR DO QZ1 <<                                      5=          J+
N F/    245.30     245.90             X FAUL                              N
N       246.90     246.98             X FAUL                              N
N       250.60     250.70             X FAUL DO GR DO3 PB                 N                           DO          GR
L                                        2A    GR/ FO          X
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ESSO Minerals Canada
KAMAD

DRILLHOLE/TRAVERSE : KAM24

PROJECT IDEN : KAMAD | START DATE : 87/ 9/18 | COMPLETION DATE : 87/ 9/21 | GEOLOGGED BY : DRH + DRH
COLLAR NORTHING: 109.00 | COLLAR EASTING : -1511.00 | COLLAR ELEVATION: 725.00 | GRID AZIMUTH : 47.00
TOTAL LENGTH : 206.80 | CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		227.00	-90.00		
001	61.00		227.00	-89.00		
002	122.20		227.00	-87.00		
003	190.80		227.00	-77.00		

K	L	FROM	TO	CORE RECOVERY (%)	% ROCK	TYPE	FYING 1	MIN 2	MAT QM1	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	GRAIN CHARACS C	FRACTURE %	FRACTURE M	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS H A QZ	H A BI	H A CY	H A CB	H A MG	ANY MIN XX	ORE-TYPE MINS H A PY	H A CP	H A GL	ANY MIN YY	SUMM
K	F			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC- COL	QM2 3	TX 3	TX 4	S O R D	R N P	S H C	O /	DIP SML	F I	STRUCTUR-2 T	ID	STK AZM	DIP RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A	
P		0.00	4.60					OVER									P														
		0.00	4.60					Casing.																							
P	WTH	4.60	43.95	17.0				LBFV QZ MS QZ8 BN $T									P	FO	40 L8						DO D+			LI		
L								9A PY MS1						X				BN	40 $1						O=			T-		
R		4.60	43.95	Highly ground core consisting of FELSIC VOLCANIC. This consists																											
R		4.60	43.95	of 80% banded silica. The bands are separated by sheeted																											
R		4.60	43.95	sericite. This is close to being a banded chert. Silica bands																											
R		4.60	43.95	contain fine grained cream coloured dolomite as spots and																											
R		4.60	43.95	patches. Top 25cm of the hole is limonite stained.																											
P		43.95	56.40	90.7				LBFV QZ MS QZ6 BN LB						20			P	FO	45 X6						DO W)					
L				5.0				8A PY MS3 $T						4					$3						P=					
R		43.95	56.40	Homogeneous LB FELSIC VOLC. intervals with little variation.																											
R		43.95	56.40	Silica content decreases slightly down interval. Interbeds of																											
R		43.95	56.40	quartz sericite shist up to 20cm wide occur in the lower third																											
R		43.95	56.40	of the unit.																											
N		43.95	56.40	1 QSSH QZ MS QZ5 FO LB													N	FO	70 L5						DO D=					
L				8A PY MS5															P5						P)					
R		52.40	52.40	Lost water circulation.																											
P		56.40	77.40	95.2				QSSH MS QZ MS6 MF PA						28			P	FO	45 P2						DO D)					
L				15.0				8A DO QZ2 FR						5					P6						D1					
R		56.40	77.40	Quartz content rapidly decreases down interval. This quartz																											
R		56.40	77.40	sericite schist is at the silcia poor end of the scale i.e.																											
R		56.40	77.40	bordering on a sericite schist composition. Possible relict																											
R		56.40	77.40	fragmental texture. This rock could have been a felsic																											
R		56.40	77.40	fragmental.																											
R		61.05	62.20	Highly fractured rock and disrupted rock, brecciated in places																											
R		61.05	62.20	- fault zone.																											
N	F/	61.05	62.20	X FAUL					SH CH								N														

DRILLHOLE/TRAVERSE : KAM24 (CONTINUED)

K E Y	F L A G	- INTERVAL - FROM	TO (UNITS = MT)	CORE RECOVERY (%)	% ROCK MINERAL X	TYPIFYING TYPE	QAL TM 1	MIN TM 2	MAT QM1	TEXTURES TX 1	TX 2	GRAIN CHARACS F	C	%	M	FRACTURE P	#	TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS A QZ	A BI	A CY	A CB	A MG	H ANY MIN XX	H A PY	H A CP	H A GL	H ANY MIN YY	ORE-TYPE MINS SUMM
K E Y	F L G	FROM	TO	ROCK QUAL DESIG	FOR MEM AGE	EN V RT Q	LC- COL	TM 3	QM2	TX 3	TX 4	S O R D	R N P C	H	/	DIP SML	F I		STRUCTUR-2	T	ID	STK AZM	DIP RT	KF	MU	CL	EP	HE	HA	PR	MO	SL	HA
L									BR																								
N		62.20	65.50			X	QSSH	MS	QZ	QI/	FO	PA				25		N		FO		50	P1								DO	7=
L								YA	PY	MS7	<<					4								P7								81	
N		65.50	73.60			8	QSSH	MS	DO	MS6	FO	PA				13		N		FO		50	F1								DO	D=
L								8A	QZ	DO2	SP									C/		50		P6								72	
R		73.60	74.00			20cm wide qz-dol vein with irregular contacts. On the lower																													
R		73.60	74.00			contact pyrite is concentrated as a 3cm selvage. A 10cm wide																													
R		73.60	74.00			envelope of dark grey sericite is present.																													
N	V/	73.60	74.00			7	QDVN	QZ	DO	QZ4	VV	MX						N		C/		60	V4								S1	TT
L								WW	PY	DO3	CG													E2	5=							O.
N		74.00	76.70			X	SDSH	MS	DO	DO1	FO	PA				16		N		FO		60	F1								DO	D=
L								8A	PY	MS6	BN													P6								J=	
R		76.70	77.40			Coarse grained massive pyrite with a crystal aggregate texture.																													
R		76.70	77.40			The matrix is composed of a mosaic of fine grained dolomite and																													
R		76.70	77.40			quartz.																													
N	MSX	76.70	77.40			X	MSPY	PY	DO	PY9	CG	MX						N		C/		50	J=								DO	
L								BR	QZ		PA	XA												$*								J=	
P		77.40	86.00	100.0			QSSH	MS	DO	MS6	FO	SP				23		P		FO		70	62								DO	D1
L								8A	PY	DO1	PA													P6	E.							Q1	
R		77.40	86.00			Fairly homogeneous looking, moderately foliated, pyrite spotted																													
R		77.40	86.00			interval. Pyrite content is noticably higher than previous																													
R		77.40	86.00			interval.																													
P		86.00	98.05	100.0			LBFV	QZ	MS	QZ4	LB	$T				20		P		FO		60	X4								DO	D+
L									DO	MS4	BN					4								P4								D1	
R		86.00	98.05			Sericitic chert consisting of lensoid banded silica-dolomite																													
R		86.00	98.05			masses up to 4cm across, separated by sheeted olive green																													
R		86.00	98.05			sericite. Pyrite is disseminated in the siliceous portions of																													
R		86.00	98.05			the rock.																													
P		98.05	113.10	100.0	GS		AKSS	AK	MS	AK3	FO	$T				16		P		FO		58	6=	$3							DO	D1
L								7T	DO	MS4	<<	PA				3								P4								71	
R		98.05	113.10			The green spotted unit. This is more variable in texture and																													
R		98.05	113.10			composition than in other examples noted so far. Here it is																													
R		98.05	113.10			composed of orange-brown sheeted sheeted carbonate																													
R		98.05	113.10			interfoliated with sericite. Dolomite is abundant throughout.																													
R		98.05	113.10			It occurs as spots, patches and veins that give the rock a																													
R		98.05	113.10			white spotted or patchy texture. An unidentified green mineral																													
R		98.05	113.10			is present as spots and streaks.																													
R		98.05	99.35			A non-descript unit consisting of a chaotic textured																													
R		98.05	99.35			dolomite-sericite schist. The messy texture is caused by																													
R		98.05	99.35			irregular patches of dolomite.																													
N		98.05	99.35			X	DSSH	DO	MS	MS5	CH	FO						N		FO		62	P/								DO	D(

DRILLHOLE/TRAVERSE : KAM24 (CONTINUED)

KEY	FROM (UNITS = MT)	TO	CORE RECOVERY (%)	% MINERALIZATION	ROCK TYPE	QUALIFYING MINERALS	TEXTURES	GRAIN CHARACTERS	FRACTURE	STRUCTURE-1	ALTERATION MINS	ORE-TYPE MINS	SUMM
K EY						TM TM MAT TX TX	F C % M		T ID STK DIP	H H H H H ANY H H H ANY A A A A A MIN A A A MIN			
K EY			ROCK QUAL DESIG	FOR MEM AGE	EN V Q LC-	TM QM2 TX TX	S R S O N H	O DIP F / SML I	T ID STK DIP	KF MU CL EP HE HA PR MO SL HA H H H H H H H H A A A A A A A A			
L					8A	DO2 PA SP				P5	P2		
N	98.05	102.52		X	AKSS AK MS	AK3 WF SP		N	FO 60	$3	DO D2		
L					6T PY	PY2 PA				P3	<1		
R	99.35	102.52	A much weaker foliation is present in this interval. Pyrite										
R	99.35	102.52	occurs as 20% fine disseminations.										
R	102.20	104.10	An unusual pseudo-fragmental texture to this unit is caused by										
R	102.20	104.10	lens shaped patches of of quartz and dolomite. These reach 4cm										
R	102.20	104.10	in length and have an aspect ratio of >2:1. They account for										
R	102.20	104.10	30% of the interval.										
N	102.20	104.10		X	AKSS AK DO	AK4 $T PA		N	FO 67 72	$4	DO 81		
L					5U	DO3 << WF				P1	Q3		
N V/	102.52	102.65		X	QDVN QZ DO	QZ6 BN IG		N	C/ 65 V6		DO		
L									C/ 35		V4		
N V/	106.90	106.95		X	QDVN DO QZ	DO6 CG IG		N	C/ 75 V4		DO D.		
L					WW	QZ4			C/ 60		V6		+(
N V/	110.05	110.50		X	QDVN QZ DO	QZ3 CG IG		N	C/ 75 V3		DO D*		
					WW	DO7 PA					U7		
P	113.10	130.80	100.0		LBFV QZ MS	QZ7 LB $T	7 15	P	FO 58 Z7	O.	DO Q=		
L			80.0		GA DO	MS2 BN PA	2 E O 2		FO 56	$2	P1		
R	113.10	130.80	FELSIC VOLCANIC unit with less well developed lensoid banding										
R	113.10	130.80	than ADJACENT units. In places the silica content reaches 90%.										
R	113.10	130.80	This could be considered as a chert with minor sericite. Pyrite										
R	113.10	130.80	is present as disseminations that form lens shaped patcheds.										
R	113.10	130.80	These contain traces of sphalerite. Sericite is an olive green										
R	113.10	130.80	colour.										
N	117.80	119.50		X	QSSH QZ MS	MS2 $T FO		N	FO 55 Z4	$)	DO D+		
L					7A AK	QZ4 SP				P2			
P	130.80	135.00	100.0	GS	AKSS AK MS	AK3 FO $T	9	P	6*	$3	DO D=		
L					7U DO	MS2 PA	2			P2 O+	6 1		
R	130.80	135.00	Green spots comprise >1% of the interval. Dark green chlorite										
R	130.80	135.00	spots are quite different from the bright green mineral.										
R	133.70	134.15	Here the green spots are present unassociated with ankerite.										
N	133.70	134.15		GS X	QSSH QZ MS	QZ4 FO		N	FO 55 F4		DO D(		
L					8A	MS2				P2 O(	P*		
P	135.00	137.80	100.0		DSSH MS PY	MS4 PA FO	8 8	P	FO 80		DO D+		
L					7A QZ	DO4 BN FR	5 7 B O 1		BN 50	P4	P4		
R	135.00	137.80	This is a very silica poor unit composed of fine grained										
R	135.00	137.80	sericite and patchy dolomite. Dolomite is pervasive throughout										
R	135.00	137.80	the matrix as cream patches and discrete porphyroblasts or										
R	135.00	137.80	spots. Matrix fizzes strongly in HCL when powdered. Darker grey										
R	135.00	137.80	bands appear to be primary compositional variations - possibly										

DRILLHOLE/TRAVERSE : KAM24 (CONTINUED)

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 F   - I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-      STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K L (UNITS = MT)         RECOV-    M ROCK FYING MIN TURES CHARACS TURE                H  H  H  H  H ANY H  H  H ANY
E A                       ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y G   F R O M  -  T O     ( % )    X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMM
- --- ---------  ---------  -------- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - -
K F                       ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E L                       QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y G                       DESIG  AGE       COL            R D P C          STRUCTUR-2        A  A  A  A  A  A  A  A

R       135.00    137.80        fragments or beds. These reach 8cm in diameter.
N       135.00    137.80            = SESH MS DO MS5 PB BN              N    C/      50              DO D*
L                                         DO2                                      P5              V2

P       137.80    140.60  100.0 GS   AKSS AK MS AK5 $T FO          7    P    FO      52    $5        DO M1
L                                       6U PY MS4 SP            1                      P4        6+
R       137.80    140.60        Unidentified green mineral occurs as 8mm spots that comprise
R       137.80    140.60        <1% of rock.
R       138.60    138.90        Pyrite appears to be vein related rather than syngenetic.
N MSX   138.60    138.90            X MSPY PY DO PY9 MX XA          N    C/      45              DO Z9
L                                       BR QZ DO= CG <<                                        61

P       140.60    153.35  100.0       QSSH MS QZ MS3 LB FR    3 8 14   P    FO      80 62           D(
L                           5.0         8A    QZ2 FO $T 3 7 F 0 2                    $3
R       140.60    153.35        Quartz sericite schist displaying good fragmental textures.
R       140.60    153.35        This is less altered than adjacent intervals. Lithic lapilli
R       140.60    153.35        fragments range in size from 5 to 40mm in width. Sericitic
R       140.60    153.35        chert units in this interval may be lapilli tuffs. Fragments
R       140.60    153.35        differ from chert bands in that they are weakly sericitized.
R       149.30    150.90        A typical example of sericitic chert consisting of white
R       149.30    150.90        'vein-like' silica as quartz bands or lenses up to 4cm wide.
R       149.30    150.90        These contain finely pervasive dolomite. White quartz-dolomite
R       149.30    150.90        veins are also noted.
N       149.30    150.90            X LBFV QZ MS QZ6 LB BN          22   N    FO      75 66           DO D(
L                                       8G DO MS3 FO $T         4                      $3        81

P       153.35    157.75  100.0       ASHT MS QZ MS1 BD BN        30   P    FO      50              D=
L                                       7A PY PY= WF            4                      P1
R       153.35    157.75        Fine grained weakly altered felsic tuff exhibiting fine
R       153.35    157.75        compositional banding or bedding. Very fine grained pyrite is
R       153.35    157.75        dusted throughout the unit.
R       155.40    155.90        Compositionally banded sericitic chert. 3mm ankerite band at
R       155.40    155.90        155.5m
N       155.40    155.90            X SECH QZ MS QZ7 LB BN          N    BN      80 Z7 L*        D(
L                                       8G    MS2 $T                   FO      70    $2

P       157.75    206.00  100.0       LBFV QZ MS QZ7 LB $T        10   P    FO      70 Z7           D1
L                                       5A PY MS2 BN            3                      $2
R       158.00    158.17        This is a semi-massive pyrite band possibly associated with
R       158.00    158.17        quartz dolomite veining.
N SMS   158.00    158.17            X SMPY PY QZ PY6 CG SM          N                J3        DO R6      TT
                                        7Y DO QZ3 XA RX                                        J1         D.
R       160.60    161.70        This interval contains numerous, small (1-20cm) quartz
R       160.60    161.70        dolomite pyrite veins. These veins are irregular in shape and
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DRILLHOLE/TRAVERSE : KAM24 (CONTINUED)

F K E Y	L A G	- INTERVAL - (UNITS = MT) FROM	TO	CORE RECOV-ERY (%)	% ROCK TYPE	TYPI-FYING TM 1	TM 2	QAL MIN MAT QM1	TEX-TURES TX 1	TX 2	GRAIN CHARACS F	C	% M	FRAC-TURE # TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS H A QZ	H A BI	H A CY	H A CB	H A MG	ANY MIN XX	ORE-TYPE MINS H A PY	H A CP	H A GL	ANY MIN YY	SUMM
K E Y	F L G			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC- COL	QM2 3	TX 3	TX 4	S O R	R N D	S H P	O / C	DIP SML	F I	T 2	ID	STK AZM STRUCTUR-2	DIP RT	KF	MU	CL	EP	HE	HA	PR	MO	SL	HA
R		160.60	161.70	have the same composition as the previous nested interval.																											
N		160.60	161.70	X SECH QZ PY QZ6 << BN												N			Z6						DO R2					
L				5A MS PY2 LB																	$1					$1					
R		168.16	168.35	Bottom contact of vein is very irregular.																											
N V/		168.16	168.35	X QDVN QZ DO QZ8 << MX												N	CU		45 M9						DO					TT
L				WW DO2																						J2					
R		169.80	170.03	A 23cm wide white quartz vein with sparse dolomite. A similAr																											
R		169.80	170.03	vein occurs at 168.3m																											
N V/		169.80	170.03	X QDVN QZ DO QZ9 << MX												N	CU		45 M9						DO					
L				WW DO1													CL		60							J1					
N V/		175.17	175.30	X QDVN QZ DO QZ9 << MX												N			M9						DO					
L				WW																						J1					
N V/		185.63	185.85	X QDVN QZ DO QZ8 << MX												N	CU		75 M8						DO					
L				WW																						U2					
R		188.46	188.56	This unit appears to be a pyrite rich chert band rather than a																											
R		188.46	188.56	vein.																											
		188.46	188.56	X PYCH QZ PY QZ7 FO LB												N	FO		65 Z7						DO D2					TT
L				7A MS PY2 BN																						O=					D.
R		192.54	193.05	Bands of semi-massive pyrite look like veins. Four occur in the																											
R		192.54	193.05	interval. They range from 1-10cm																											
N SMS		192.54	193.05	5 PYVN QZ PY PY4 CG RX												N	CU		70 F4						DO R4 D.					TT
L				BR DO QZ4 XA													CL		70	$=						J2					D-
R SAM		194.00	194.00	Hand sample of sericitic chert.																											
R		194.46	195.58	There are several foliation parallel quartz dolomite veins in																											
R		194.46	195.58	this interval. Silica rich portions have a lensoid banded																											
R		194.46	195.58	texture - unusual for this rock type.																											
N		194.46	195.58	X AKSS AK QZ AK4 FO BN												N	FO		62 Z3	$4					DO D1					
L				7U DO QZ3 << LB																$=						J2					

ESSO Minerals Canada
KAMAD

DRILLHOLE/TRAVERSE : KAM25

PROJECT IDEN : KAMAD | START DATE : 87/ 9/23 | COMPLETION DATE : 87/ 9/30 | GEOLOGGED BY : RGC + DRH
COLLAR NORTHING: 350.00 | COLLAR EASTING : 1400.00 | COLLAR ELEVATION: 830.00 | GRID AZIMUTH : 47.00
TOTAL LENGTH : 187.40 | CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		227.00	-90.00		
001	60.96		227.00	-89.00		
002	121.92		227.00	-86.00		

K E Y	F L A G	- INTERVAL - FROM	TO (UNITS = MT)	CORE RECOVERY (%)	% M I X	ROCK TYPE	TYPIFYING MIN 1	TYPIFYING MIN 2	QAL MAT QM1	TEXTURES TX 1	TEXTURES TX 2	GRAIN CHARACS F	GRAIN CHARACS C	FRACTURE % M	FRACTURE # TK	STRUCTUR-1 T	ID	STK	DIP	RT	ALTERATION MINS H QZ	H BI	H CY	H CB	H MG	H XX	ANY MIN H PY	H CP	H GL	H YY	ANY MIN SUMM
K	F			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	LC- COL	QM2 3	TX 3	TX 4	S O R	R N D	S H P	O / C	DIP SML	F I	STRUCTUR-2 T	ID	STK	DIP	RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A
P	OVB	0.00	21.40		OVER											P														
R	WTH	0.00	21.30		Casing.																									
P		21.40	25.60	100.0		LLTF	QZ	DO	QZ6	FR	LB	7	8	13		P	FO	42	Z7						DO	D1				
L				80.0			3A	MS	DO2	$T	EL	1	7	F	C 3					$1					J2					
R		21.40	25.60		This unit is similar to the LBFV except for two important																										
R		21.40	25.60		diferences: a) absence of yellow sericite and b) absence of																										
R		21.40	25.60		coarse pyrite. Pyrite is present as very fine disseminations																										
R		21.40	25.60		and as bands between cherty lenses.																										
R		22.60	22.92		This unit grades into and out of chert breccia. A 20cm																										
R		22.60	22.92		section in the middle of the interval contains sheeted yellow																										
R		22.60	22.92		sericite and numerous Qz-Do-Py veins.																										
N		22.60	22.92		X	LLTF	QZ	MS	QZ7	BN	VV					N	FO	55	Z7						DO	D=				
L							8Y	DO	MS2	$T	LB									$2					J1					
N	V/	22.92	23.02		X	QDVN	QZ	DO	QZ5	IG	MT					N		35							DO	D.			TT	
L							7A	PY	DO5																+5				D.	
N		23.90	23.97		X	QDVN	QZ	DO	QZ6	FR	LB	7	8	13		D	FO	42	Z7						DO	D1				
L							3A	MS	DO2	$T	EL	1	7	F	C 3					$1					J2					
N		24.32	24.52		X	QDVN	QZ	DO	QZ6	FR	LB	7	8	13		D	FO	42	Z7						DO	D1				
L							3A	MS	DO2	$T	EL	1	7	F	C 3					$1					J2					
P		25.60	30.91	100.0		LLTF	QZ	MS	QI/	LB	FR	3	6	18		P	FO	60	*5							D=			TT	
L				30.0			7A	DO	MS3	BN	FO	1	7	F	O 5					$3									Q.	Q.
R		25.60	30.91		This unit ranges from a fresh quartz eye bearing felsic																										
R		25.60	30.91		fragmental to a sericitized tuff with lensoid banded quartz. It																										
R		25.60	30.91		is very variable over the inteval. This may be caused by																										
R		25.60	30.91		interbedding and mixing of the overlying and underlying units.																										
R		25.60	30.91		At 27.65 a small patch of Tt and brown Sl are intergrown with																										
		25.60	30.91		Py.																										
N	F/	25.96	26.20		X	FAUL										N														
N		26.36	29.40		X	LLTF	QZ	MS	QZ5	LB	BN					N			Z5						DO	D=			TT	
L							7Y	PY	MS4											$4					J=				D.	

DRILLHOLE/TRAVERSE : KAM25 (CONTINUED)

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 F  - I N T E R V A L -   CORE     %     TYPI- QAL  TEX-  GRAIN FRAC-      STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K L (UNITS = MT)          RECOV-   M ROCK FYING MIN TURES CHARACS TURE                H  H  H  H  H ANY H  H  H ANY
E A                        ERY     I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y G  F R O M  -  T O      ( % )    X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMM
- --- -----.--  -----.--  ----.- -- - ---- -- -- --- -- -- - - - - -- -- - - -- --- --- -- -- -- -- -- -- -- -- -- --  - -
K F                       ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F   T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E L                       QUAL   MEM  V  Q LC- 3       3  4 O N H / SML I  2    AZM  RT       H  H  H  H  H  H  H  H
Y G                       DESIG  AGE       COL            R D P C            STRUCTUR-2         A  A  A  A  A  A  A  A

R      26.36    29.40        This interval is typified by abundant yellow sericite. It seems
R      26.36    29.40        to be intermediate between QSSH and LBFV in alteration
R      26.36    29.40        intensity.
R      28.03    28.17        This feature is more of a pervasive zone of silicification than
R      28.03    28.17        a vein. Sheets of sericite occur within the interval and
R      28.03    28.17        lensoid banded textures are poorly preserved.
N V/   28.03    28.17            X QDVN QZ DO QZ4 LB $T               N              Z4             DO D=       TT
L                                     WW PY DO4                                          $1          J4       D. D.
R      29.40    29.80        A base metal bearing band of semi-massive sulphide. It is not
R      29.40    29.80        clear if these bands are recrystallized from syngenetic
R      29.40    29.80        sulphide or related to a veining episode. Textural evidence as
R      29.40    29.80        well as the presence of Tt and Py in Qz-Do veins suggests the
R      29.40    29.80        latter.
N SMS  29.40    29.80            X SMSX QZ PY QZ4 SM BN               N              X4             DO R4 D. D/ TT
L                                     3A DO PY4 RX CG                                    $=          J1       D/ D(
N F/   30.57    30.65            X FAUL                               N

P      30.91    44.75     100.0       LLAT MS DO LF1 FR FO     1 7 10  P    FO     58 <* P/           DO D*
L                          10.0            5T              7 7 B O 3                    P2           71
R      30.91    44.75        A very fine grained homogeneous ash tuff containing sparse
R      30.91    44.75        lapilli. Abundant dolomite together with the absence of free
R      30.91    44.75        silica suggests a less felsic, possibly intermediate or mafic
R      30.91    44.75        protolith. Lapilli are highly siliceous.
N V/   34.65    34.67            X QDVN QZ DO QZ7 IG IN               N    CU     55 M7               DO          TT
L                                     WW TT DO3                            CL     60                  J3          J=
R      34.65    34.67        An unusually high Tt content in this vein.
N      37.22    38.22            X LLTF MS QZ LF4 LB BN     4 7       N              *3 <)          DO Q=
L                                     9T PY     FO FR 5 7 F C                            P2          61
R      37.22    38.22        A siliceous fragmental unit with interbeds of ash tuff. Py is
R      37.22    38.22        concentrated in the finer grained sections. A 5cm massive Do
R      37.22    38.22        vein is present at 37.22m. Adjacent ash tuff is ankeritized.
N F/   44.73    44.74            X FAUL                               N

P      44.75    63.20     100.0       IXLT CL MS LF= BN FR     = 7 15  P    FO     45 <*              DO D.
L                          40.0            3G DO CL= FO << 3 7 F O 5                    P= &= H2     +*
R      44.75    63.18        This unit is very similar to the QSSH  and differs only in that
R      44.75    63.18        chlorite is abundant as bands. These increase to a maximum at
R      44.75    63.18        44.73 where a small fault zone is present.
R      52.00    52.10        A small fault dipping 60 degrees and striking perpendicular to
R      52.00    52.10        the foliation. A narrow Qz-Do vein is present on the fault
R      52.00    52.10        plane.
       52.00    52.10            X FAUL QZ CL QZ3 HO SP       10     D    LM     65 I3              DO D1
                                      3G DO CL3 MF BN                                       $3       03
R      53.67    54.42        A very irregular Qz-Do vein containing Tt. These veins make
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DRILLHOLE/TRAVERSE : KAM25 (CONTINUED)

KEY	FROM	TO	CORE RECOV-ERY (%)	% ROCK TYPE	TYPING 1	TYPING 2	QAL MIN MAT	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	GRAIN CHARACS C	GRAIN CHARACS %	FRACTURE M	FRACTURE #	STRUCTURE-1 / STRUCTURE-2	ALTERATION MINS / ORE-TYPE MINS
R	53.67	54.42														up50% of the interval. Do occurs as selvages to the quartz and
R	53.67	54.42														as intergrown patches. Brecciation of the vein and infilling
R	53.67	54.42														with quartz indicates a complex history.
N V/	53.67	54.42		5	QDVN	QZ	DO QZ5	IG	MT				N		M5	DO TT
L					WW		DO5									Q5 D.
N F/	54.50	55.55		X	FAUL								N			
R	63.18	65.80														Lensoid bands of Do spotted quartz occur in a dark grey
R	63.18	65.80														foliated groundmass composed of fine grained Py. The interval
R	63.18	65.80														ranges from 90% Qz-Do to 10%. The upper contact is sharp and
R	63.18	65.80														conformable, the lower is faulted.
P	63.20	65.80	100.0	LLTF	PY	QZ	LF3	LB	FR	8	7	23	P	FO	55 *6	DO &3 TT
L			.0		9A	DO		FO		1	7	E C 7			$=	O2 D. D.
P	65.80	74.70	100.0	LBFV	MS	PY	LF7	LB	FR	7	15		P	FO	50	DO D1 TT
L			40.0		YA			FO		3	7	L C 3			$2	O1 D. D.
	65.80	187.40														A compositionally homogeneous unit consisting of lensoid banded
R	65.80	187.40														Qz-Do. Band thickness varies suggesting changes in fragment
R	65.80	187.40														grainsize. Sericite-Py laminae occur between the silica lenses.
R	69.03	69.05														This thin but high grade massive sulphide band on the surface
R	69.03	69.05														between two Qz-Do lensoid bands. There is no evidence of
R	69.03	69.05														veining near this band.
N SMS	69.03	69.05		X	SMSX	PY	TT PY5	IG	RX				N		Q=	DO R5 R2 TT
L					5U	CP	TT3									Q= R/ R3
R	72.57	72.64														This interval has an unusually high Tt content. This mineral
R	72.57	72.64														occurs as disseminations along foliations and throughout the
R	72.57	72.64														silica lenses. The rock is almost cherty in appearence.
N	72.57	72.64		X	LBFV	QZ	MS QZ7	LB	FO		12		D		Z7	DO D=
L					5A	DO	MS2	BN	$T		5				$2	$1 D=
P	74.70	187.40	100.0	LBCH	QZ	MS	QZ7	LB	FO		12		P		Z7	DO D1
L			40.0		7A	DO	MS2	BN	$T		5				$2	O1
R	74.70	76.95														This interval differs from the PGI in that the Qz content is
R	74.70	76.95														much lower. Qz occurs as widely spaced bands of translucent
R	74.70	76.95														silica. One 2cm band of bull Qz occurs at 75.7m and cuts the
R	74.70	76.95														foliation at right-angles. The remainder of the interval
R	74.70	76.95														consists of semi-massive, fine grained pyrite and a very soft
R	74.70	76.95														greasy grey mineral that could be talc or pyrophyllite. Small
R	74.70	76.95														euhedra of Do with disseminated Tt (<1%) occur in the Qz
R	74.70	76.95														bands. A 10cm band of Do spotted Qz with disseminated Tt, Py
R	74.70	76.95														and Cp occurs at 76.5m.
	74.70	76.95		X	LBFV	QZ	MS QZ3	BN	LB		12		D		Z3	DO D2
					2A	PY	MS3	BN	$T		5				$3	O2
R	76.95	78.50														An unusual unit typified by its extreme softness and almost

DRILLHOLE/TRAVERSE : KAM25 (CONTINUED)

KEY	FROM	TO	
R	76.95	78.50	translucent dark yellow-green colour. Py occurs as finely
R	76.95	78.50	disseminated bands along darker green bands and lenses
R	76.95	78.50	(chloritic?). The unit grades into SECH at the bottom of the
R	76.95	78.50	interval.
N	76.95	78.50	2 SECH QZ MS QZ6 LB $T N X6 D1 TT
L			5A PY MS3 SP $3 D.
N	76.95	78.50	8 ASTF MS PY MS8 BN MT N FO 40 O1 D1
L			YG QZ PY1 FO M8
N F/	79.70	80.00	X FAUL BR N
N	83.84	83.89	X LLTF QZ DO QZ4 LB RX N Q4 DO D2 TT
L			5A PY DO3 O3 D1
R	84.85	85.05	A tuffaceous interbed in the lbfv. Adjacent to this interval
R	84.85	85.05	the LBFV has a texture similar to a chert pebbly conglomerate.
R	84.85	85.05	Small TT bearing Qz spots or fragments are present.
N	84.85	85.05	X FETF QZ MS QZ4 SP FO 12 D O4 DO D1 TT
L			5U PY MS4 FG $T 5 P4 O1 D.
	87.40	87.97	This unit contains abundant sulphide bands especially towards
R	87.40	87.97	the upper and lower contacts. Tt occurs in Py bands and also
R	87.40	87.97	within the quartz eyes.
N	87.40	87.97	X QITF QZ MS QZ3 SP FO N I3 DO D1 D. TT
L			5U PY MS1 BN $1 D*
N F/	93.00	93.10	X FAUL N
R	93.10	93.60	A texturally unique and sulphide rich interval. Qz occurs
R	93.10	93.60	both as opaque white cryptocrystalline silica fragments and as
R	93.10	93.60	translucent grey matrix.Sulphides include Py-Tt-Cp and honey
R	93.10	93.60	coloured sphalerite. They occur as blebs and as semi-massive
R	93.10	93.60	4cm bands.
N	93.10	93.60	X CHBR QZ PY QZ7 BR PA N *7 DO D2 D= TT
L			5A TT PY2 RX O= D* D=
R	100.52	100.90	An intensly folded, silica poor interval. Silica bands contain
R	100.52	100.90	lots of creamy Do. Possible ankerite is suggested by the brown
R	100.52	100.90	colour of the martix.
N	100.52	100.90	X LLTF QZ MS QZ3 KB FO 12 D P3 $= DO D1
L			5U DO DO3 VV $T 5 $3 O3
R	102.50	103.12	A buff coloured intermediate, quartz eye bearing tuff. Py
R	102.50	103.12	occurs as fine grained laminae. It increases in abundance
R	102.50	103.12	towards contacts.
R	102.50	103.12	Several bvery irregular Qz-Do veins occur in this interval. Of
R	102.50	103.12	particular interest is a 8cm band of semi-massive sulphide that
R	102.50	103.12	occur in one of the veins. This sulphide band is cut by a later
R	102.50	103.12	white Qz-Do vein. It is not clear whether the sulphides are
	102.50	103.12	primary or secondary.
	102.50	103.12	5 QITF MS QZ MS7 FO BN N I3 D=
L			5U PY QI3 M7

DRILLHOLE/TRAVERSE : KAM25 (CONTINUED)

KEY	FROM	TO	CORE RECOVERY (%)	% ROCK	TYPE	TYPIFYING 1	TYPIFYING 2	QUAL MIN MAT	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	GRAIN CHARACS C	FRACTURE %	FRACTURE P	FRACTURE #	FRACTURE TK	STRUCTUR-1	ALTERATION MINS H	ALTERATION MINS H	ALTERATION MINS H	ALTERATION MINS H	ALTERATION MINS H	ORE-TYPE MINS ANY H	ORE-TYPE MINS H	ORE-TYPE MINS H	ORE-TYPE MINS ANY	SUMM
																	T ID STK DIP	A	A	A	A	A MIN	A	A	A MIN	
																	1 AZM RT	QZ	BI	CY	CB	MG XX	PY	CP	GL YY	
K	F		ROCK	FOR	EN	RT	TM	QM2	TX	TX	S	R	S	O	DIP	F	T ID STK DIP	KF	MU	CL	EP	HE HA	PR	MO	SL HA		
E	L		QUAL	MEM	V	Q	LC- 3		3	4	O	N	H	/	SML	I	2 AZM RT			H	H	H H	H	H	H H		
Y	G		DESIG	AGE			COL				R	D	P	C			STRUCTUR-2			A	A	A A	A	A	A A		
N	V/	102.50	103.12			5	QDVN	QZ	DO	QZ6	IG	RX				N			M6				DO	D1	D*	D* TT	
L								WW	TT	DO2													J2		D*	D*	
R		106.86	106.90	An excellent example of intergrown Tt and Sl in a Qz-Do vein.																								
R		106.86	106.90	The vein crosscuts the foliation and has irregular contacts.																								
N	V/	106.86	106.90			X	QDVN	QZ	MS	QZ7	LB	FO		12	D		CU		45	Z7			DO	D1			
L								7A	DO	DO1	BN	$T		5			CL		45		$2		O1		R1	R1	
N	V/	117.09	117.47			X	QDVN	QZ	MS	QZ9	VG	MX		12	D		CU		45	M9			DO	D.			
L								WW	PY	MS1	BN	$T		5			CL		0		$2		A1				
R		117.92	118.00	A 5cm fault with a well developed gouge zone.																								
N	F/	117.92	118.00			X	FAUL									N											
R		118.20	119.45	A large (1.25m) gouge filled fault zone. Fragments of white,																								
R		118.20	119.45	Qz-Do vein occur throughout the gouge. The hangingwall contact																								
R		118.20	119.45	is parallel to the foliation.																								
N	F/	118.20	119.45			X	FAUL									N											
R		119.45	121.32	Veins occur at 120.2, 120.3, 120.5 and 120.7 and range from 2																								
R		119.45	121.32	to 30cm in width. Contacts are sub-parallel to the foliation.																								
N	V/	119.45	121.32			4	QDVN	QZ	DO	QZ9	MX	VG				N			M9				DO	D.		TT	
L								WW		DO1													A1			D.	
N	F/	122.60	122.90			X	FAUL									N											
L														X													
R		124.00	125.32	An interval of LBFV containing cherty silica. This interval																								
R		124.00	125.32	contains traces of Tt and Sl . These minerals occur in lenses																								
R		124.00	125.32	of grey silica associated with aggregates of white Do.																								
N	V/	124.00	125.32			1	QDVN	QZ	DO	QZ8	MX	PA				N			M8				DO			TT	
L								WW	TT	DO2													J2			D*	
N		124.00	125.32			9	LBFV	QZ	MS	QZ7	LB	BN				N			L7				DO	D1		TT	
L								3A	PY	MS1	VV	SP									$1		O+		D.	D.	
R		125.32	127.37	A buff coloured tuffaceous unit. The upper contact is sharp and																								
R		125.32	127.37	Py bands are more abundant close to it. Spots of Do occur																								
R		125.32	127.37	throughout the interval.																								
N	V/	125.32	127.37			2	QDVN	QZ	DO	QZ9	MX					N			M9				DO			TT	
L								WW		DO1													J1			D.	
N		125.32	127.37			8	QITF	MS	QZ	MS6	FO	BN				N		FO		60 I2			DO	D1		TT	
L								5U	DO	QI2	SP	VV									$6		O2			D.	
N	V/	129.84	130.00			9	QDVN	QZ	DO	QZ7	IG	PA		12	D				M7				DO	D*			
L								WW	DO	DO3	BN	$T		5							$2		Q3				
R		131.25	132.75	A lensoid banded chert with a high Py content.																								
N		131.25	132.75			X	LBCH	QZ	MS	QZ5	LB	BN				N			L5				DO	D3			
L								5A	PY	MS3	SP	FO									$3		O1				
N	V/	133.60	134.03			8	QDVN	QZ	DO	QZ9	MX	IG				N			M9				DO	D.		TT	
L								WW	TT	DO1													J1			D*	
	F/	133.60	134.03			2	GOUG									N											
R		133.60	134.03	Vein is associated with a small fault.																								

DRILLHOLE/TRAVERSE : KAM25 (CONTINUED)

F - INTERVAL -			CORE	%	TYPI-	QAL	TEX-	GRAIN	FRAC-	STRUCTUR-1	ALTERATION MINS					ORE-TYPE MINS					
K L (UNITS = MT)			RECOV-	M ROCK	FYING	MIN	TURES	CHARACS	TURE		H	H	H	H	H ANY	H	H	H ANY		
E A			ERY	I	TM TM	MAT	TX TX	F C % M		T ID STK DIP	A	A	A	A	A MIN	A	A	A MIN		
Y G	FROM - TO		(%)	X TYPE	1 2	QM1	1 2	F F C P	# TK	1 AZM RT	QZ	BI	CY	CB	MG XX	PY	CP	GL YY		SUMM
K F			ROCK	FOR EN RT	TM	QM2	TX TX	S R S O	DIP F	T ID STK DIP	KF	MU	CL	EP	HE HA	PR	MO	SL HA		
K L			QUAL	MEM V Q	LC- 3		3 4	O N H /	SML I	2 AZM RT		H	H	H	H H	H	H	H H		
Y G			DESIG	AGE	COL			R D P C		STRUCTUR-2		A	A	A	A A	A	A	A A		
N V/	135.00	135.24		5 QDVN QZ DO QZ8 MX PA					N		M8				DO D=			TT		
L				WW PY DO2											Q2			D*		
N F/	135.00	135.24		5 FAUL					N											
R	136.93	138.16	This section of LBCH has been sheared and distorted, probably																	
R	136.93	138.16	by a fault. Lensoid bands show distinct kinks and in places																	
R	136.93	138.16	have been destroyed.																	
N	136.93	138.16		4 LBCH QZ MS QZ7 LB KB					N		L7				D1					
L				3A PY MS2 CH VV								$2								
N V/	136.93	138.16		6 QDVN QZ DO QZ8 VG MX					N		M8				DO					
L				WW DO2 PA											Q2					
R	143.12	144.00	This interval of LBCH is distinctive for several reasons. 1)																	
R	143.12	144.00	pyrite occurs in distinct bands from 0.5 to 10cm rather than on																	
R	143.12	144.00	foliation surfaces. 2) very yellow sericite makes the																	
R	143.12	144.00	sectionresemple a sericitic tuff. 3) Three small bands each																	
R	143.12	144.00	10cm in width contain abundant sulphides. These occur at																	
R	143.12	144.00	143.12, 144.0, 143.8m. They are semi-massive and contain																	
R	143.12	144.00	Py-Sl-Gl-Tt and Cp with interstitial Qz and Do.																	
N	143.12	144.00		X LBCH QZ MS QZ6 LB KB					N		L6				DO L2 D.			D. TT		
L				9Y PY MS2 BN								$2			O1			D. D.		
R	147.70	155.20	Eight small veins occur in this interval. They range from 5 to																	
R	147.70	155.20	90cm in width. Sulphides are absent.																	
N V/	147.70	155.20		3 QDVN QZ DO QZ8 MX PA					N		M8				DO					
L				WW DO2 VG											Q2					
N	165.85	168.12		X QITF MS QZ MS6 BN SP					N		I2 $2				DO D*			TT		
L				7U AK QI2 FO VV								$6			O1			D.		
R	165.85	168.12	A buff coloured unit with Qz lenses that are elongated parallel																	
R	165.85	168.12	to the foliation. Dark bands rich in fine grained pyrite occur																	
R	165.85	168.12	at random. This unit is cut by a few small foliation parallel																	
R	165.85	168.12	veins.																	
R	175.40	175.58	A typical Qz-Do vein hosted semi-massive sulphide band.																	
N SMS	175.40	175.58		X SMSX QZ PY QZ5 IG RX					N		X5				DO R3 R*			R? TT		
L				3A DO PY3 XA											O1			R= R=		
R	183.68	184.40	Shattered core suggests that this may be a fault zone. A bright																	
R	183.68	184.40	green spotted mineral occurs in this unit - Fuchsite?																	
N	183.68	184.40		X QITF MS QZ MS6 FO BN					N		I4				DO D.			FU		
L				5U DO QZ4 SP X											O1			O.		
R	186.50	186.90	This interval contains four small (to 3cm) bands of																	
R	186.50	186.90	semi-massive sulphide in a Qz-Do matrix.																	
N	186.50	186.90		X LBCH QZ MS QZ7 LB BN					N		L7				DO D1 D.			D/ TT		
L				7Y PY MS2								$2			O1			D* D*		
	187.03	187.20		6 SESH MS PY MS9 FO BN					N						L1					
				5U PY1								$9								
N V/	187.03	187.20		4 QDVN QZ DO QZ8 MX IG					N		M8				DO			TT		

DRILLHOLE/TRAVERSE : KAM25 (CONTINUED)

- INTERVAL -	CORE	%		TYPI-	QAL	TEX-		GRAIN		FRAC-		STRUCTUR-1				ALTERATION MINS					ORE-TYPE MINS				
K L (UNITS = MT)	RECOV-	M	ROCK	FYING	MIN	TURES		CHARACS		TURE						H	H	H	H	H	ANY	H	H	H	ANY
E A	ERY	I		TM	TM	MAT	TX	TX	F	C	%	M		T	ID	STK	DIP	A	A	A	A	A	MIN	A	A	A	MIN	
Y G FROM - TO	(%)	X	TYPE	1	2	QM1	1	2	F	F	C	P	#	TK	1	AZM	RT	QZ	BI	CY	CB	MG	XX	PY	CP	GL	YY	SUMM
K F	ROCK	FOR	EN	RT		TM	QM2	TX	TX	S	R	S	O	DIP	F	T	ID	STK	DIP	KF	MU	CL	EP	HE	HA	PR	MO	SL	HA
E L	QUAL	MEM	V	Q	LC-	3		3	4	O	N	H	/	SML	I	2		AZM	RT			H	H	H	H	H	H	H	H
Y G	DESIG	AGE			COL					R	D	P	C				STRUCTUR-2					A	A	A	A	A	A	A	A
L					WW	TT	DO2																		Q2			D*	

ESSO Minerals Canada
KAMAD

DRILLHOLE/TRAVERSE : KAM26

PROJECT IDEN : KAMAD START DATE : 87/ 9/30 COMPLETION DATE : 87/10/ 1 GEOLOGGED BY : RGC + DRH
COLLAR NORTHING: 260.00 COLLAR EASTING : 1400.00 COLLAR ELEVATION: 785.00 GRID AZIMUTH : 47.00

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00			-90.00		
002	60.96			-85.00		

K E Y	F L G	- INTERVAL - FROM - TO (UNITS = MT)	CORE RECOV-ERY (MT.1)	% M I	ROCK TYPE	TYPI-FYING TM	QAL MIN TM	TEX-TURES MAT	GRAIN CHARACS TX	FRAC-TURE TX	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS H A QZ	H A BI	H A CY	H A CB	H A MG	H A ANY MIN	ORE-TYPE MINS H A XX	H A PY	H A CP	H A GL	H A ANY MIN
P		0.00 9.10			OVER						P														
R	CAS	0.00 9.10			Casing.																				
P		9.10 16.20	100.0		LBFV	QZ	MS	QZ6	LB	BN	P	FO		50	L6					DO	D1		D.		
L			10.0			5A	PY	MS2	FO	SP						$2				O1					
R		9.10 16.20			This interval is compositionally homogeneous, however it does																				
R		9.10 16.20			show some textural variation. The size of the silica lenses																				
R		9.10 16.20			increase down the interval to about 12m and then remain																				
R		9.10 16.20			constant.																				
R		9.10 9.25			The fault zone is indicated by slickensides and quartz dolomite																				
R		9.10 9.25			vein. Slickensides are orientated at 28 degrees to the core																				
R		9.10 9.25			axis and indicate dip-slip movement. Tetrahedrite is noted in																				
R		9.10 9.25			the quartz vein.																				
N	F/	9.10 9.25			X	FAUL					N														
R		15.95 16.05			Foliation parallel quartz dolomite vein with blebs of																				
R		15.95 16.05			tetrahedrite and/or galena.																				
N	V/	15.95 16.05			X	QDVN	QZ	DO	QZ8	MX	PA	N			M8					DO		D.	TT	
L						WW	TT	DO2					<<	50						Q2			A(	
P		16.20 19.85	100.0		SETF	MS	QZ	MS7	FO	BN	14	P	FO	60	I1	$/				DO	D=			
L						7B	DO	QZ1	SP	VV	5					$7				$1				
R		16.20 19.85			A buff coloured unit with good quartz eyes. Fizzes vigorously																				
R		16.20 19.85			in Hcl if powdered indicating dolomite. Contacts with LBFV are																				
R		16.20 19.85			sharp and dark pyritic bands increase in frequency toward																				
R		16.20 19.85			them. A small (10cm) interbed of LBFV suggests that these units																				
R		16.20 19.85			are interbedded.																				
R		17.10 19.00			Four qz-dol veins from 5 to 40cm. Weathered orange on fracture																				
R		17.10 19.00			surfaces.																				
R		17.10 19.00			This interval has a composition between LBFV and SETF. Definate																				
R		17.10 19.00			lensoid bands and small quartz lenses are present. These																				
R		17.10 19.00			appear to be felsic volcanic fragments, perhaps lapilli.																				
N		17.10 19.00			2	QDVN	QZ	DO	QZ7	MX	PA	N			M7					DO				
L						WW		DO3												J3				
N		17.10 19.00			8	LBFV	QZ	MS	QZ6	VV	LB	N			Z6					DO	D1			

K E Y	F L G	ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC- COL	QM2 3	TX 3	TX 4	S O R D	R N P	S H C	O /	DIP SML	F I	T 2	ID	STK AZM	DIP RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A
																		STRUCTUR-2											

DRILLHOLE/TRAVERSE : KAM26 (CONTINUED)

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  F   - I N T E R V A L -   CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-        STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = MT)           RECOV-    M ROCK FYING MIN TURES CHARACS TURE                   H  H  H  H  H ANY H  H  H ANY
E  A                         ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O      (MT.1)    X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMAR
- --- -----.--   -----.--   ----.- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - - -
K  F                        ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                        QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                        DESIG  AGE       COL           R D P C             STRUCTUR-2          A  A  A  A  A  A  A  A

L                                            7A DO MS2 PA                                   $2        01
P       19.85     94.00     100.0     LBFV QZ MS QZ7 LB BN        10    P     FO      55 L7           DO D2       TT
L                            70.0            5A PY MS2 VV SP       3                        $2        01          D.
R       19.85     94.00         This unit is compositionally homogeneous. Subtle variations in
R       19.85     94.00         texture do occur. These involve the size of silica lenses.
R       19.85     94.00         Quartz dolomite veins up to 70cm wide occur throughout the
R       19.85     94.00         interval. Generally they are present in clusters and are
R       19.85     94.00         associated with fault zones. Several 10cm massive sulphide
R       19.85     94.00         bands are present.
R       19.85     94.00         This interval contains 10 veins ranging from 1 to 25cm in
R       19.85     94.00         width. Small bands of quartz occur in the sericite schist.
N       19.85     94.00              8 QSSH MS QZ MS6 FO BN             N             I3            DO D1
L                                            8Y PY QZ3 VV                                   $6        01
R       25.65     26.20         A 55cm interval of broken core and some clay gouge. A small
R       25.65     26.20         pyrite-tetrahedrite bearing quartz ddolomite vein occurs at the
R       25.65     26.20         footwall contact.
N F/    25.65     26.20              X FAUL                             N
R       27.90     28.10         This interval contains two small bands of of sulphide composed
R       27.90     28.10         of py cp sl gl tt. These bands are lenticular in shape and
R       27.90     28.10         appear to within a single silica lens.
N SMS   27.90     28.10              1 SMSX QZ PY QZ4 XA IG             N             F4                R4 D= D? TT
L                                            YU TT PY4 SM                                                   D= D=
R       30.30     30.90         This unit is remarkable in that it  contains abundant fine
R       30.30     30.90         grained "sooty pyrite" which occurs between silica lenses.
R       30.30     30.90         Dolomite content is above average.
N       30.30     30.90              X LBFV QZ PY QZ6 LB BN             N             L6            DO D3       TT
L                                            3A DO PY3 SP                                   $1        01          D.
R       32.90     33.15         These are very irregular veins. They do not cross-cut the core,
R       32.90     33.15         they occur as patches along the edge as if the core is just
R       32.90     33.15         clipping a vein. Quartz and dolomite are banded perpendicular
R       32.90     33.15         to the vein contacts (Cockscomb texture).
N       32.90     33.15              4 QDVN QZ DO QZ5 IG PA             N             Q5            DO D*    D. TT
L                                            WW TT DO5 MX                                             Q5          D*
R       35.30     36.50         Highly broken core with some fault gouge.
N F/    35.30     36.50              X FAUL                             N
N V/    35.60     37.50              2 QDVN QZ DO QZ8 MX IG             N             M8            DO       D.
L                                            WW    DO2 PA                                             Q2
R       42.05     42.15         Four small qz-dol veins occur in this interval.
N       42.05     42.15              5 QDVN QZ DO QZ9 MX PA             N             M9            DO          TT
L                                            WW TT DO1                                                J1          D*
R       42.15     43.80         This interval stands out due to its unusual colour. The orange
R       42.15     43.80         brown colour appears to be caused by ankerite, however it does
R       42.15     43.80         not react to HCl.  Spots of a bright green mineral are present.
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ESSO Minerals Canada

KAMAD

DRILLHOLE/TRAVERSE : KAM26 (CONTINUED)

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  F  - I N T E R V A L -   CORE      %     TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K L (UNITS = MT)           RECOV-    M ROCK FYING MIN TURES CHARACS TURE                 H  H  H  H  H ANY H  H  H ANY
E A                         ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y G   F R O M  -  T O      (MT.1)    X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY   SUMMAR
- --- -----.--   -----.--  ----.- -- -- ---- -- -- --- -- -- - - - - -- -- - - -- --- --- -- -- -- -- -- -- -- -- -- --   - - -
K F                        ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E L                        QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y G                        DESIG  AGE       COL           R D P C            STRUCTUR-2          A  A  A  A  A  A  A  A

R       42.15      43.80          This could be barium or flouro-mica.
N       42.15      43.80               9 QSSH MS AK MS4 FO LB                N                X4 $2           FM D.
L                                            OU PY QZ4 BR                                        $4           W-
R       43.80      47.50          This is a fairly typical lensoid banded chert except for the
R       43.80      47.50          presence of scattered spots of green mineral. These spots make
R       43.80      47.50          up an insignificant portion of the rock (<<1%) but are
R       43.80      47.50          distinctive and unique to this interval.
N       43.80      47.50               X LBFV QZ MS QZ4 LB BN                N    FO      50 L4               DO D2
L                                            7A DO MS3 FO                                        $3           Q2
N F/    44.50      44.55               X FAUL                                N
R       47.50      51.30          Six veins occur in this interval. They range from 3 to 20 cm in
R       47.50      51.30          width. The majority carry traces of pyrite and tetrahedrite and
R       47.50      51.30          at 51.0m chalcopyrite is noted. This is not commonly noted on
R       47.50      51.30          these veins. The veins are roughly parallel to the foliation
R       47.50      51.30          which is at 25 degrees to CA over much of the interval. This
R       47.50      51.30          could be a fold hinge zone.
N       47.50      51.30               1 QDVN QZ DO QZ8 MX PA                N                M8              DO D. D.     TT
L                                            WW TT DO2                                                        Q2           D.
R       51.30      60.00          This interval is texturally typical of the LBFV but has some
R       51.30      60.00          compositional variations:
R       51.30      60.00          a) Pyrite occurs as several semi-massive bands from 1 to 5cm
R       51.30      60.00          wide. Some bands are actually are contained in silica lensoids.
R       51.30      60.00          Pyrite is 'Sooty'.
R       51.30      60.00          b) Sericite is brown rather than yellow as seen elsewhere. and
R       51.30      60.00          contains up to 50% green flouromica.
R       51.30      60.00          c) Lenses and bands of semi-massive grey dolomite are present.
N       51.30      60.00               X LBFV QZ MS QZ6 LB BN                N    FO      60 L6               DO D2
L                                            7A PY MS2 SP                                        $2           O2
N F/    51.50      51.55               X FAUL                                N
N F/    51.50      51.55               X FAUL                                N
R       62.50      62.60          This interval has an unusually high pyrite content. A Qz-Dol
R       62.50      62.60          vein shows very distinct folding, suggesting that this section
R       62.50      62.60          is on n overturned fold limb.
N       62.50      62.60               X LBFV QZ PY QZ5 VV SM                N    FO      65 L5               DO P4
L                                            3A MS PY4 LB                                        $1           $1
R       81.60      83.92          Three  veins are present. They range from 15 to 80cm in width.
R       81.60      83.92          Galena and Tetrahedrite occur sporadically but are abundant at
R       81.60      83.92          81.6m. Here the veins crosscut the foliation (60 degrees to
R       81.60      83.92          CA). The veins dip at 40 degrees to CA and strikes
R       81.60      83.92          perpendicular to the LBFV. This suggests a fault.
N       81.60      83.92               6 QDVN QZ DO QZ9 MX MT                N                M9              DO        D. TT
L                                            WW    DO1                                                        Q1           D.
R       84.48      84.55          This irregular but roughly foliation parallel 1 to 2cm vein is
R       84.48      84.55          unusually rich in tetrahedrite and blackjack sphalerite.
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DRILLHOLE/TRAVERSE : KAM26 (CONTINUED)

K E Y	F L A G	- INTERVAL - FROM	TO	CORE RECOV-ERY (MT.1)	% M I X	ROCK TYPE	TYPI-FYING	QAL MIN TM	TEX-TURES	GRAIN CHARACS	FRAC-TURE	STRUCTUR-1	ALTERATION MINS	ORE-TYPE MINS	SUMMAR
K E Y	F L G			ROCK QUAL DESIG	FOR MEM AGE	EN V RT Q	TM QM2 LC-3 COL	TX TX 3 4	S R S O N H R D P C	DIP F / SML I	T ID STK DIP 1 AZM RT	KF MU CL EP HE HA PR MO SL HA H H H H H H H H STRUCTUR-2 A A A A A A A A		
N		84.48	84.55		X	QDVN	QZ DO QZ7 IG PA			N		M7	DO	TT	
L							WW TT DO1						$1	B1 B1	
R		84.68	84.78				This is an excellent example of the typical massive sulphide								
R		84.68	84.78				bands found in the Homestake schist. Sulphides occur in a								
R		84.68	84.78				quarzty- dolomite gangue in foliation parallel bands. They are								
R		84.68	84.78				crudely banded themselves. It is difficult to determine if								
R		84.68	84.78				these represent true bands or veins, perhaps in a feeder zone.								
N	MSX	84.68	84.78		X	MSSX	PY QZ PY7 IG RX			N	CU 50	J1	DO R7	R? TT	
L							BR DO QZ1				CL 55		J=	R= R=	
R		86.55	86.95				This interval is noteworthy because of a steepening of the								
R		86.55	86.95				foliation.								
R		86.55	86.95				An extremely irregular vein composed of grey translucent								
R		86.55	86.95				quartz. This is diferent from the usual white quartz seen in								
R		86.55	86.95				the veins. The contorted shape of the vein is also unusual.								
R		86.55	86.95				This is probably a sulphide poor equivalent to interval 84.6 to								
R		86.55	86.95				84.78.								
N		86.55	86.95		6	LBFV	QZ MS QZ7 LB BN			N	FO 30	L7	D1		
L							5A PY MS2 FO					$2			
N		86.55	86.95		X	QDVN	QZ DO QZ7 LB BN			N		M7	D1 R2	R? TT	
L							5A PY DO1 FO RX						O1	R1 R1	
N	V/	86.55	86.95		4	QDVN	QZ DO QZ7 LB			N		L7	DO R2	R/ TT	
L							5A PY DO1 FO RX						O1	R1 R1	
R		86.95	87.40				This interval has an unusually high sulphide and sericite								
R		86.95	87.40				content. The dark yellow sericite combined with green								
R		86.95	87.40				fluoromica gives it a distinct colouration. Sulphides occur as								
R		86.95	87.40				disseminated crystal aggregates in translucent grey silica								
R		86.95	87.40				bands.								
N		86.95	87.40		X	LBFV	QZ MS QZ4 LB FO			N		L4	R2 R*	R? TT	
L							YG PY MS4 BN					$4		R(R(	
R		88.90	89.45				A section of semi-massive pyrite with abundant green-yellow								
R		88.90	89.45				sericite. some TT and SL are also present.								
N		88.90	89.45		4	QDVN	QZ DO QZ9 MT MX			N	CU 55	M9	DO D(	TT	
L							WW TT DO1				CL 60		Q1	B* B*	
N	SMS	88.90	89.45		3	SMPY	PY QZ PY6 XA RX			N		J3	R6	D* TT	
L							3A MS QZ3 IG <<					$1		D* D*	
R		92.75	94.00				This is a typical lensoid banded chert with one important								
R		92.75	94.00				difference. Disseminated TT and SL occur with PY within								
R		92.75	94.00				individual lensoids.								
N		92.75	94.00		X	LBFV	QZ PY QZ7 LB BN			N		L7	DO D2	D- TT	
L							3A MS PY2 FO					$1	O=	D- D-	
P		94.00	111.00	100.0		CHBR	QZ PY CL8 FR EL		X 8 14	P	FO 70	*8	<1 D.	D. TT	
L				50.0			5A MS PY1 LB		8 2 E C 3			$=		D. D.	

DRILLHOLE/TRAVERSE : KAM26 (CONTINUED)

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   F   - I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = MT)           RECOV-    M ROCK FYING MIN TURES CHARACS TURE                 H  H  H  H  H ANY H  H  H ANY
E  A                         ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O      (MT.1)    X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMAR
- --- -----.--  -----.--    ----.- -- - ---- -- -- --- -- -- - - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - - -
K  F                        ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                        QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                        DESIG  AGE       COL            R D P C           STRUCTUR-2        A  A  A  A  A  A  A  A

R        94.00     111.00        A coarse grained fragmental containing clasts of grey silica
R        94.00     111.00        tentatively identified as chert. Clasts are hosted in a fine
R        94.00     111.00        grained matrix of sericite and dusty pyrite. Pytite seems to
R        94.00     111.00        occur as foliation parallel microveins. Bands of semi-massive
R        94.00     111.00        sulphide up to 2cm in width are present sporadically and
R        94.00     111.00        contain PY, CP, SL, GL and TT. A good example occurs at
R        94.00     111.00        103.55m. Traces of galena are disseminated throughout the
R        94.00     111.00        interval.
R        94.00     95.15         Polymictic conglomerate containing flattened, rounded clasts
R        94.00     95.15         that make up 80% of the rock. Clasts consist of 50% felsic
R        94.00     95.15         fragments, 20% chert, 10% massive sooty pyrite. The unit is
R        94.00     95.15         crudely graded. Tops down is indicated. Maximum fragment size
R        94.00     95.15         is 5cm (aspect ratio 4:1), Minimum fragment size is 1cm. Matrix
R        94.00     95.15         is composed of sericite (80%) and bright green mica (10%) and
R        94.00     95.15         sooty pyrite (5%).
N        94.00     95.15              X CONG QZ MS QZ6 CL GB     8 8       N    FO      68 *6              D=       TT
L                                      5A PY MS2 PM    5 8 F C                      $2                    +. +.
N V/     103.20    104.00             X QDVN QZ DO QZ8 MX                  N            M8           DO       0+
L                                      WW    DO2                                                     Q2
R        104.50    107.70        Highly flattened polymictic conglomerate containing felsic
R        104.50    107.70        clasts (30%), grey chert clasts (30%), and massive pyrite (10%)
R        104.50    107.70        clasts. The groundmass consists of fine grained ankerite,
R        104.50    107.70        sericite and pyrite. Streaks of bright green mica are common
R        104.50    107.70        throughout.
N        104.50    107.70             X CONG PY AK FR7 CL EL     6 8       N    FO      62 *5 $+           DO *=
L                                      AU MS     $T PM 3 7 F C                      $1           <1
R SAM    105.90    106.00        Hand sample taken.
R        107.70    108.15        A very soft unit composed of fine grained dusty pyrite in a
R        107.70    108.15        groundmass of sericite. Sheeted ankerite gives the rock a
R        107.70    108.15        banded appearence. Spots of bright green mica are present.
N        107.70    108.15             X ASTF PY AK PY3 FO MX               N    FO      62 <+ $1             X3
L                                      2A MS MS5                                        P5
N F/     108.15    108.45             X GOUG                               N    C/      25

P        111.00    124.40   100.0        LBFV MS DO MS2 FO LB     8 8 10    P    FO      70 *6              DO D*
L                                      YA    QZ8 $T FR 7 5 E C 2           BD      45    $2       Q+
R        111.00    124.40        Alternation between coarser and finer grained intervals
R        111.00    124.40        suggests a crude layering.
N F/     120.50    120.85             X FAUL                               N
N        120.85    121.30             4 QZVN QZ CL QZ4 MX                  N    CU      50 M9              DO D.
L                                      WW DO DO)                              CL      70     S= S+       <)
P        124.40    128.50   100.0        ASTF PY MS MS4 BN LM              P    BN      63 L4              DO L2 &. &*
L                           10.0          5A    PY2 IB                         FO      63    L4          7)       &*
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DRILLHOLE/TRAVERSE : KAM26 (CONTINUED)

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   F   - I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = MT)           RECOV-    M ROCK FYING MIN TURES CHARACS TURE              H  H  H  H  H ANY H  H  H ANY
E  A                         ERY      I      TM TM MAT TX TX F C % M         T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O       (MT.1)   X TYPE  1  2 QM1  1  2 F F C P  # TK   1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMMAR
- --- -----.--   -----.--    ----.- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - - -
K  F                        ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F   T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                        QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I   2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                        DESIG  AGE       COL            R D P C          STRUCTUR-2        A  A  A  A  A  A  A  A

R       124.40    128.50        A finely laminated unit comprised of felsic ash tuff, pyrite
R       124.40    128.50        and chert. These are interlaminated at a 5mm scale. Wider bands
R       124.40    128.50        of massive sulphide (to 2cm) are dispersed throughout. The
R       124.40    128.50        laminated unit is interbedded with LBFV and bright yellow
R       124.40    128.50        sericitic ash tuff. Bright green mica is concentrated in the
R       124.40    128.50        yellow tuffs. A potential ore horizon?
R       124.40    128.50        Bright yellow bands contain green mica. Dark interlaminations
R       124.40    128.50        consist of PY, SL, CP and GL.
N       124.40    128.50             3 LBFV MS PY PY2 FR LB     4 8      N              <=              &1 &* &*
L                                          6A    LF4 FO IB 3 5 F C                        P2                 &*
N       124.40    128.50             2 SETF MS PY MS4 LM BN              N    FO      62 F1            DO &1 &= &= TT
L                                          5Y    SX2 FO                                   L4 $)       +)       &= &/
R       128.40    128.50        A concentration of 1 to 2cm sulphide bands in a fine grained
R       128.40    128.50        felsic fragmental host.
N MSX   128.40    128.50             4 SMSX SL PY QZ2 BN LM              N              J2               DO &3    D+ TT
L                                          5A QZ SX4                                                    J2       J= D)

P       128.50    140.40   100.0       PYCH QZ SX QZ8 LB $T              P    FO      50 X8            DO &= B) D) TT
L                           10.0             7A MS SX1 FO                                  $=          Q+       &= D.
R       128.50    140.40        Lensoid banded chert with white to pale grey chalcedonic
R       128.50    140.40        silica. This differs markedly from the siliceous 'fragments'
R       128.50    140.40        seen elsewhere, although superficially the units resemble
R       128.50    140.40        eachother. This unit is significant because contains bands of
R       128.50    140.40        massive sulphide ranging from 1 to 10 cm in width. The
R       128.50    140.40        abundance oc chalcopyrite is unusual.
R       128.50    129.00        A fold hinge zone with a well developed closure. Small
R       128.50    129.00        parasitic "S" folds are present above and below the closure.
N       128.50    129.00             X SETF QZ DO QZ6 FD FO              N    FO      70 P6 $+         DO L=    D.
L                                          YA MS DO1 BN LM                               $1          O1       J/
R       130.05    130.30        An irregular shaped pod of massive sulphide containing Cp, Py
R       130.05    130.30        and Sl with unusually low Gl and Tt. This interval is
R       130.05    130.30        internally banded - probably due to deformation. irregular
R       130.05    130.30        contactc indicate that this may be a sulphide fragment. If so
R       130.05    130.30        where has it come from? Contacts of the clast are oblique to
R       130.05    130.30        the foliation.
N MSX   130.05    130.30             6 MSSX CP PY CP3 GB XA              N    CL      15 J=               R3 B3 D) TT
L                                          BR SL PY3 RX MX                                  $*                  J1 D/
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ESSO Minerals Canada
KAMAD

DRILLHOLE/TRAVERSE : KAM27

PROJECT IDEN : KAMAD | START DATE : 87/10/ 3 | COMPLETION DATE : 87/10/ 6 | GEOLOGGED BY : DRH + DRH
COLLAR NORTHING: 260.00 | COLLAR EASTING : 1800.00 | COLLAR ELEVATION: 715.00 | GRID AZIMUTH : 47.00
TOTAL LENGTH : 196.31 | CORE/HOLE SIZE : NQ

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		227.00	-90.00		
002	60.96		227.00	-84.00		
003	121.92		227.00	-83.00		

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   F   - I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = MT)           RECOV-    M ROCK FYING MIN TURES CHARACS TURE                 H  H  H  H  H ANY H  H  H ANY
E  A                         ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O      ( % )    X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMM
- --- ---------  ---------  -------- -- - ---- -- -- --- -- -- - - - - -- -- - - -- --- -- -- -- -- -- -- -- -- -- -- -- -- - -
K  F                       ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                       QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I   2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                       DESIG  AGE       COL            R D P C           STRUCTUR-2        A  A  A  A  A  A  A  A

P OVB      0.00      18.60      .0      OVER                              P
           0.00      18.60        This interval contains highly weathered and oxidized sericite
R          0.00      18.60        schist that cannot be cored  without danger of caving.

P F/       18.60     37.19    65.0      GOUG CY MS CY4 BR SH              P              F/    P4       DO D= &- B. TT
L                              .0           8A QZ     VV          X                      P2          V=       B- B.
R          18.60     37.19        This hole seems to be starting in a fault zone. The rock
R          18.60     37.19        appears to have been the LBFV member of the Homestake schist
R          18.60     37.19        package. Now it is completely brecciated and ground to a fine
R          18.60     37.19        clay rich gouge. This may be the major fault that offsets the
R          18.60     37.19        Homestake schist.
R          26.00     26.40        Rubbly zone in fault composed of semi-massive to massive pyrite
R          26.00     26.40        bands. Bands contain Py, Cp, Sl with galena and tetrahedrite.
R          26.00     26.40        True width is impossible to estimate. Bands up to 3cm.
N SMS      26.00     26.40             4 SMPY PY CP PY3 RX CG               N              J4           DO &3 R= O. TT
L                                          BR SL CP= XA BN          X                                  J=       B* B-
R          30.00     30.70        Massive grey chert with bands of disseminated Py and Sl.
N          30.00     30.70             9 CHER PY SL SX2 FO LB         32    N    FO       25      <+        Q1    O-
L                                      PY 4A MS MS1 FR               5                    $1                D)

P          37.19     51.10    96.0      LBFV MS PY MS1 LB FR     8 8      P    FO       55 X7           DO &=
L                              29.0           4A    PY= $T    7 7 E C 3                    $1           O=
R          37.19     51.10        Pyrite occurs as fine grained discontinuous bands and lenses,
R          37.19     51.10        in between silica lensoids. Silica lenses may be felsic
R          37.19     51.10        fragments or caused by foliation of a massive unit. Silica
R          37.19     51.10        contains fine dolomite spots.
R          44.20     45.60        A much more sericitic interval with fewer felsic fragments.
           44.20     45.60             X SETF MS AK MS3 $T FO     3 6      N    FO       60 *2 $=          D=
L                                          YA        FR    5 5 F O                      P3 W)
N SMS      46.00     46.03             X SMSX PY SL PY7 XA RX               N              J=           R7    D( TT
L                                          BR TT SL2 BN                          CU       60                J2 O/
R          47.25     47.63        An unusual unit consisting of very fine grained asshy material
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  F  - I N T E R V A L -   CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K L (UNITS = MT)           RECOV-    M ROCK FYING MIN TURES CHARACS TURE                H  H  H  H  H ANY H  H  H ANY
E A                         ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y G  F R O M  -  T O       ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK   1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMM
- --- -----.--  -----.--   ----.- -- - ---- -- -- --- -- -- - - - - -- - -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - -
K F                        ROCK  FOR EN RT   TM QM2 TX TX S R S O DIP F     T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E L                        QUAL  MEM  V  Q LC- 3     3  4 O N H / SML I     2    AZM  RT       H  H  H  H  H  H  H  H
Y G                        DESIG AGE       COL          R D P C             STRUCTUR-2          A  A  A  A  A  A  A  A

R      47.25     47.63         with sparse Qz eyes and lithic fragments. Pyrite occurs as thin
R      47.25     47.63         but distinct laminations at the lower contact. Colour is a
R      47.25     47.63         pinkish brown. Pink colour is caused by sheeted ankerite.
N      47.25     47.63             X XLAT MS AK QI= LM BN     2 6      N    FO      70    $=            L1
L                                         1T PY PY1 $T    5     0                         P3

P      51.10     55.60               LBFV MS QZ MS4 LB FO     4 7 28   P    FO      54 X6             DO D+
L                           70.0          8Y    QZ6 FR        0 4                         $4          Q=
R      51.10     55.60         A much more sericitic felsic volcanic showing the typical
R      51.10     55.60         yellow sericite colour. This distinguishes it from the LBFV
R      51.10     55.60         seen elsewhere. Pyrite content is anomalously low.
R      52.90     53.15         A very similar unit to the ASTF at 47.25m. It contains much
R      52.90     53.15         more laminated pyrite. The pyrite is very fine grained "muddy"
R      52.90     53.15         pyrite. The presence of quartz eyes suggests a tuffaceous
R      52.90     53.15         component.
N      52.90     53.15             X ASTF PY MS PY4 LM BN              N    FO      46    P/            L4
                                          2U    QI/ FO                                    P3                  J+
R      54.30     55.30         A highly fractured and comminuted section - reduced to clay
R      54.30     55.30         gouge in places.
N F/   54.30     55.30             7 GOUG CY    LF4 BR SH              N
L                                                             X

P      55.60    102.50     100.0     LBFV QZ MS QZ6 LB $T     5 7 15   P    FO      62 X6             DO D)
L                           60.0          6A PY MS3 BN FR 7 5 E C 3         FO      72    $3          P=
R      55.60    102.50         A thick sequence of felsic fragmentals typified by lenticular
R      55.60    102.50         siliceous 'fragments' or bands in a sheeted sericitic matrix.
R      55.60    102.50         Intervals with a yellow sericitic colour and white silica stand
R      55.60    102.50         out against the bland grey of the remainder of the LBFV. Pyrite
R      55.60    102.50         content is variable. In most places it is less than 5%, however
R      55.60    102.50         over narrow widths it reaches up to 15%.
R      71.30     72.15         Fault breccia with a clay gouge matrix. Central 40% of the
R      71.30     72.15         interval is unbrecciated.
N F/   71.30     72.15             6 FAUL MS QZ MS2 BR FR              N    FO      55 X2    P1           D=
L                                         9A CY     FR            X                       P2
N F/   73.70     73.90             X FAUL           BR                 N
R      74.51     79.70         A bleached variation of the LBFV. This unit is more massive
R      74.51     79.70         than adjacent intervals and has a yellow cream colour. The
R      74.51     79.70         silica lenses scratch and fizz in HCl when powdered.  This
R      74.51     79.70         suggests the presence of dolomite. This occurs as nebulous
R      74.51     79.70         patches.
N      74.51     79.70             X LBFV MS QZ QZ4 LB $T        17    N    FO      50 X4             DO D+
                                          YA DO DO3           3                           $2          P3
       86.75     88.85         This unit resembles the SECH seen in holes KAM 22-24. It
R      86.75     88.85         contains lensoid banded white silica in a yellow sericite
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DRILLHOLE/TRAVERSE : KAM27 (CONTINUED)

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 F   - I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
 K  L (UNITS = MT)        RECOV-    M ROCK FYING MIN TURES CHARACS TURE                 H  H  H  H  H ANY H  H  H ANY
 E  A                      ERY      I      TM TM MAT TX TX F C % M         T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
 Y  G   F R O M  -  T O    ( % )    X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMM
 - --- -----.--  -----.--  ----.- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - -
 K  F                     ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
 E  L                     QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
 Y  G                     DESIG  AGE       COL            R D P C           STRUCTUR-2        A  A  A  A  A  A  A  A

 R       86.75    88.85        matrix. In this unit pyrite occurs as fine disseminations and
 R       86.75    88.85        microveins that form a reticulate pattern along the foliation.
 R       86.75    88.85        The distinction between LBFV and SECH is subtle. The former is
 R       86.75    88.85        highly sericitized (<30%) and contains grey silica lenses or
 R       86.75    88.85        fragments.
 N       86.75    88.85            X SECH MS QZ MS4 $T LB          13    N    FO      62 X5            DO W=
 L                                      9Y PY QZ5                 2                   $4            P=
 N V/    92.40    92.50            X QDVN QZ DO QZ6 CG IG                N    CU      70 M6            DO
 L                                      WW    DO4 EU                           CL      50               U4
 R       95.50    95.60        A 'Z' folded pyrite vein. Vergence suggests closure down the
 R       95.50    95.60        hole.
 R       96.34    96.50        Fold closure in LBFV. Banding reverses direction abruptly at
 R       96.34    96.50        96.7m.

 P      102.50   146.60  100.0      SETF MS QZ MS3 BN WB          22    P    FO      65 X4            DO D=    +. TT
                          65.0           8Y PY QZ4 $T              3                   $3            P2       +. +.
 R      102.50   146.60        A slightly different unit to the LBFV. This unit exhibits true
 R      102.50   146.60        banding - not lensoid banding. It contains siliceous bands with
 R      102.50   146.60        10% pervasive dolomite. Sparse Qz eyes are noted. There seems
 R      102.50   146.60        to be a crude layering manifest by the amount of siliceous
 R      102.50   146.60        bands. They average 60% at the top of a bed and decrease in
 R      102.50   146.60        size and abundance to <5% at the base. Here the rock is a
 R      102.50   146.60        banded sericitic ash tuff with laminated pyrite and ankerite.
 R      102.50   146.60        Pyrite bands appear to be partly transposed beds. At 120.1 good
 R      102.50   146.60        bedding/foliation intersection indicates that tops is down i.e.
 R      102.50   146.60        the stratigraphy is locally overturned.
 N      102.50   146.60            3 ASTF MS PY MS6 LM FO     2 6      N    FO      78 *2            DO &2
 L                                      QZ PY1 BN    7 3 F O           BD      65    P6            P=
 N F/   104.50   104.60            X GOUG                            N
 N V/   105.90   106.30            6 QDVN QZ DO QZ9 MX CG            N              M9             DO
 L                                      WW    DO1                                                  Q1
 N SMS  107.10   107.15            X SMPY PY MS PY6 RX XA            N    C/      60 J=            DO R6
 L                                      4U DO MS2 SM                                   J1           J+          D/
 R      107.55   107.63        Massive pyrite bands 1-5cm wide are crosscut by Qz-Ak vein.
 R      107.55   107.63        Vein is 3cm wide and contains specks of Tt.
 N SMS  107.55   107.63            5 SMPY PY QZ     BN LM            N    BD      75 J2               M8
 L                                      BR SL     VV                                                        D.
 N V/   107.55   107.63            5 QAVN QZ AK QZ8 IG EU            N    C/      30 V8 +2                  TT
 L                                      WW TT AK2 CK                                                      D.
 R      120.30   121.05        Highly folded Qz veins. The folds are buckle structures caused
 R      120.30   121.05        by compression. This may indicate proximity to a fold closure.
 C      120.30   121.05            8 QZVN QZ MS QZ9 FD FO            N    CU      83 V9            DO D* W= B. TT
 L                                      9G PY PY=                                      $1            P=          D.
 R      121.05   123.60        This interval contains several irregular Qz-Do veins ranging
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DRILLHOLE/TRAVERSE : KAM27 (CONTINUED)

F K E Y	L A G	- I N T E R V A L - (UNITS = MT) FROM	TO	CORE RECOV-ERY (%)	% M I X	ROCK TYPE	TYPI-FYING TM 1	TM 2	QAL MIN MAT QM1	TEX-TURES TX 1	TX 2	GRAIN CHARACS F C	F C	% M P	FRAC-TURE # TK	STRUCTUR-1 T	ID	STK DIP	RT	ALTERATION MINS H A QZ	H A BI	H A CY	H A CB	H A MG	ANY MIN A XX	H A PY	H A CP	ORE-TYPE MINS H A GL	ANY MIN YY	SUMM
K E Y	F L G			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM QM2 LC- 3 COL	TX 3	TX 4	S O R D	R N P	S H C	O /	DIP SML	F I	T 2 STRUCTUR-2	ID	STK DIP AZM	RT	KF	MU	CL	EP	HE	HA	PR	MO	SL	HA
R		121.05	123.60		from 4cm to 15cm																									
N V/		121.05	123.60		4	QDVN	QZ	DO	DO3	CG	IG					N	V/		65	M7					DO	D*			TT
L							9T		QZ7	EU																U3				D.
N		125.85	126.80		6	ASTF	MS		MS7	LM	BN					N	LM		55	&3					DO				
L							7Y			IB	FD											L7				+=				
N		125.85	126.80		4	CHER	QZ	DO	QZ8	BN	BD					N	BD		65	L8					DO	D*			
L							6A	MS	DO1	IB												J1				P1				
N F/		128.30	128.35		X	FAUL										N														
N SMS		129.25	129.26		X	SMPY	PY	QZ	PY7	SM	RX					N	CU		55	J1					DO	M7			
L							BR		QZ1								CL		80		J(				J+				D/
R		130.27	130.35		A folded sulphide band. Folds have wavelength of 5 to 10cm																									
N SMS		130.27	130.35		5	SMPY	PY	QZ	PY6	FD	MX					N	FO		70	J2					DO	D6			
L							BR		QZ2	FO												J/				J=		D.		
N F/		134.25	134.30		X	FAUL										N														
R		134.65	134.90		Buckled Qz-Do-Py vein.																									
N F/		134.65	134.90		X	FAUL										N														
P		146.60	154.10	100.0		FLBR	MS	CY		BR		6	8			P						P/								
L				60.0			8A					2	2	B	C X															
R		146.60	154.10		A major fault zone consisting of breccia. Rock comminuted to a																									
R		146.60	154.10		mixture of fragment sizes. Fragments range from <1mm to 3cm.																									
R		146.60	154.10		They are angular shape.																									
N V/		151.40	151.95		X	QDVN	QZ	DO	QZ8	MX	IG					N	C/		70	M8					DO				
L							WW		DO2	EU												<(				U2				
P		154.10	158.95	100.0		TUFF	MS	QZ	MS4	LB	BD			10		P	FO		55	63					DO	L=			
L				85.0			GA	PY	QZ3	PA	VV			1			BD		50		P4				+=				
R		154.10	158.95		A mixed interval of felsic tuffs, interbedded on a 50 to 75cm																									
R		154.10	158.95		scale. These units are veined by Qz-Do veins that cut the core																									
R		154.10	158.95		at a high foliation parallel angle. The units are described in																									
R		154.10	158.95		detail in the following nested intervals.																									
R		154.10	155.30		An unusual textured sericitic tuff unit containing lenses of																									
R		154.10	155.30		Qz-Do in which Py occurs as patches of disseminated crystals.																									
R		154.10	155.30		This unit seems to be a silica poor version of the SECH seen in																									
R		154.10	155.30		Kam 22 - 24.																									
N		154.10	155.30		X	SETF	QZ	MS	MS4	FO	LM					N	FO		55	&3					DO	Q=			
L							YG	PY	QZ3	VV	PA										P4					<1				
N V/		154.10	155.30		1	QDVN	QZ	DO	QZ7	MX	IG					N	FO		50	V7					DO				TT
L							WW	TT	DO3	SP							C/		48						+3				B(
R		154.75	154.77		Semi-massive sulphide band consisting of sphalerite is a creamy																									
R		154.75	154.77		yellow colour.																									
		154.75	154.77		A semi-massive sulphide band containing sphalerite and pyrite.																									
		154.75	154.77		Sphalerite is a creamy yelow colour.																									
N SMS		154.75	154.77		X	SMSX	PY	SL	PY2	BN	SP					N	CU		55	J5						R2			

DRILLHOLE/TRAVERSE : KAM27 (CONTINUED)

F K E Y	L A G	- I N T E R V A L - (UNITS = MT) FROM	TO	CORE RECOVERY (%)	% M I X	ROCK TYPE	TYPIFYING MINERALS 1	2	QAL MAT QM1	TEXTURES 1	2	GRAIN CHARACS F	C	% M	FRACTURE # TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS H A QZ	H A BI	H A CY	H A CB	H A MG	ANY MIN XX	ORE-TYPE MINS H A PY	H A CP	H A GL	ANY MIN YY	SUMM
K E Y	F L G			ROCK QUAL DESIG	FOR MEM AGE	EN V RT Q	LC- 3 COL		QM2	TX 3	TX 4	S R D	O N P	S O H C	DIP F / SML I	STRUCTUR-2 T	ID	STK AZM	DIP RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A	
L					PY 2U QZ SL3											CL		58										B3		
R		154.77	155.35		Finely laminated pytite in a sericitic matrix. The rock has a																									
R		154.77	155.35		bronze colour. This is reminiscent of the 'Muddy Tuff' in the																									
R		154.77	155.35		Rea stratigraphy.																									
R		154.77	155.35		This interval is heavily veined with Qz-Do veins. They are																									
R		154.77	155.35		sub-parallel to foliation and range from 2 to 5cm in width.																									
N		154.77	155.35		X	ASTF	PY	MS	PY4	LM	VV					N		FO	50							L4			
L							1U		MS5																P5				L/	
N	V/	154.77	155.35		6	QDVN	QZ	DO	QZ6							N				V6				DO					
L							WW		DO4																+4					
N	F/	155.30	155.45		X	GOUG										N													
R		155.35	155.95		A well preserved crystal ash tuff containing sericitized																									
R		155.35	155.95		feldspar xenocrysts and sparse quartz eyes. Quartz eyes average																									
R		155.35	155.95		1.5mm in diameter. Euhedral pyrite cubes have quartz strain																									
R		155.35	155.95		shadows.																									
N		155.35	155.95		X	FQXT	MS	PY	FX4	FO						N		FO	55	I+						V+			
L							8T		QI+	BD								C/	55	U4	P6								
R		155.95	156.25		Interbedded pyritic ash tuff and lapilli ash tuff beds ranging																									
R		155.95	156.25		from 2 to 5cm in width.Interval contains anout 50% of each rock																									
R		155.95	156.25		type. Lapilli are very flattened. Aspect ratio is >10:1. A 5cm																									
R		155.95	156.25		semi-massive sulphide band present.																									
N		155.95	156.25		X	LATF	PY	MS	PY2	FR	BN	4	7			N		FO	46							&2			
L							PY	8A		LF4		5	3	F	O						P1								&.
R		156.25	158.95		Lapilli tuff composed of felsic fragments in a sericitic ash																									
R		156.25	158.95		matrix. Fragments are closely packed and highly elongated (AR																									
R		156.25	158.95		>7:1). Maximum fragment size is ~4cmx0.5cm																									
N		156.25	158.95		X	LLTF	MS	QZ	LF8	FR	EL					N		FO	60							D-			
L							8A		MS2			5	3	F	C						P2								
P		158.95	160.40	100.0		RBCH	QZ	PY	PY+	RB	LM					P		LM	70	V2				DO		L+			
L							PY	2A		VV															+=					
R		158.95	160.40		Fineely laminated pyritic chert. Laminations average 0.5cm in																									
R		158.95	160.40		thickness. They are very regular.																									
R	SAM	159.20	159.30		Hand sample taken.																									
P		160.40	171.20	100.0		LLTF	MS	PY	MS1	FR	FO	4	7	20		P		FO	60	V*				DO		D+			
L				80.0			6A	QZ	PY+	PA	BN	5	5	F	C 3						Q1				<(					
R		160.40	171.20		A weakly altered felsic lapilli tuff. Well preserved lithic																									
R		160.40	171.20		fragments range in size from <1 to 10cm. Size distribution																									
R		160.40	171.20		indicated a crude bedding that fines down. Lapilli are highly																									
R		160.40	171.20		flattened with aspect ratios of >4:1. Alteration occurs as																									
R		160.40	171.20		patches. It looks like the lapilli tuff is being altered to																									
R		160.40	171.20		yellow sericite along lobate alteration fronts.																									
R	SAM	160.40	171.20		Hand sample showing lobate alteration front.																									

DRILLHOLE/TRAVERSE : KAM27 (CONTINUED)

KEY	FROM	TO	CORE RECOVERY (%)	% ROCK TYPE	TYPIFYING MINERALS 1	TYPIFYING MINERALS 2	QAL MIN MAT QM1	TEXTURES 1	TEXTURES 2	GRAIN CHARACS F	GRAIN CHARACS C	GRAIN CHARACS % M	FRACTURE P	FRACTURE # TK	STRUCTUR-1 T	STRUCTUR-1 ID	STRUCTUR-1 STK AZM	STRUCTUR-1 DIP RT	ALTERATION HA QZ	ALTERATION HA BI	ALTERATION HA CY	ALTERATION HA CB	ALTERATION HA MG	ALTERATION MINS ANY XX	ORE-TYPE HA PY	ORE-TYPE HA CP	ORE-TYPE HA GL	ORE-TYPE MINS ANY YY	SUMM
KEY	FROM	TO	ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	QM2 LC-COL	TX 3	TX 4	S O R	N H D	R / P	DIP SML C	F I	STRUCTUR-2 T	STRUCTUR-2 ID	STRUCTUR-2 STK AZM	STRUCTUR-2 DIP RT	HA KF	HA MU	HA CL	HA EP	HA HE	HA HA	HA PR	HA MO	HA SL	HA HA	
R	168.50	169.50		A finer grained section showing bands of yellow sericite.																									
P	171.20	202.70	100.0	LBFV	MS	PY	LL8	FR	EL	8	8		P	FO	55	V)							DO	Q(		&.	TT	
L			60.0		7A		MS1	BN	LB	7	5	F C 2								P1			+*			&.	&.	
R	171.20	202.70		A monotonous sequence of felsic fragmentals showing																									
R	171.20	202.70		considerable variation in grainsize and fragment abundance.																									
R	171.20	202.70		Compositionally there is little variation. Crude grading is																									
R	171.20	202.70		noted. Graded units range from 0.5 to 2.5m in thickness.																									
R	171.20	202.70		Rounded patches of fine grained pyrite are present throughout.																									
R	171.20	202.70		These seem to be concentrated in fragments between 184.0 and																									
R	171.20	202.70		187.0m. Massive sulphides occur as narrow bands. Some sulphide																									
R	171.20	202.70		patches may be clasts.																									

ESSO Minerals Canada
KAMAD

DRILLHOLE/TRAVERSE : KAM28

PROJECT IDEN : KAMAD
COLLAR NORTHING: 430.00
START DATE : 87/10/ 7
COLLAR EASTING : 1300.00
TOTAL LENGTH : 257.80
COMPLETION DATE :
COLLAR ELEVATION: 923.00
CORE/HOLE SIZE : NQ
GEOLOGGED BY : RGC + DR
GRID AZIMUTH : 47.00

SURVEY FLAG	SURVEY POINT LOCATION	FORESIGHT	AZIMUTH (DEGREES)	VERTICAL ANGLE (DEGREES)	NORTHING	EASTING
000	0.00		227.00	-90.00		
002	60.96		227.00	-84.00		
003	121.92		227.00	-76.00		
004	182.88		227.00	-76.00		

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   F   - I N T E R V A L -   CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = MT)            RECOV-    M ROCK FYING MIN TURES CHARACS TURE                 H  H  H  H  H ANY H  H  H ANY
E  A                          ERY      I      TM TM MAT TX TX F C % M            T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O       ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK      1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  S
- --- -----.--   -----.--    ----.- -- - ---- -- -- --- -- -- - - - - -- - -   - -- --- --- -- -- -- -- -- -- -- -- -- --  -
K  F                         ROCK   FOR EN RT   TM QM2 TX TX S R S O DIP F      T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                         QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I     2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                         DESIG  AGE       COL           R D P C              STRUCTUR-2        A  A  A  A  A  A  A  A
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K	F	FROM	TO	
P		0.00	9.10	OVER P
R		0.00	9.10	Casing
P		9.10	31.35	10.0 INTF MS CA MS3 FO << 15 P FO 55 32 D1
L				4.0 7U PR CA2 SP 3 P3
R		9.10	31.35	A calcite rich, dull brown intermediate tuff. This unit is
R		9.10	31.35	very homogeneous and rather nondescript. It is cut by calcite
R		9.10	31.35	microveins.
R		10.70	10.90	This interval is made up of one 1 to 2cm quartz-calcite vein
R		10.70	10.90	and a 10cm section of Intermediate Tuff cut by quartz-calcite
R		10.70	10.90	microveins containing pyrite. Galena and sphalerite occur in a
R		10.70	10.90	0.5cm microvein which is separate from the others. Clay gouge
R		10.70	10.90	indicates a fault association.
N	V/	10.70	10.90	6 QCVN CA QZ CA8 XA PA N CU 35 J2 F8 R1 R-
L				WW PY QZ2 CL 35 D-
R		12.25	12.75	A 50cm wide quartz-calcite vein. Fault gouge along the top
R		12.25	12.75	contact indicates that this vein is fault related. The lower
R		12.25	12.75	contact is gradational through a microveined zone.
N	V/	12.25	12.75	X QCVN CA QZ CA6 IG PA N CU 45 P4 F6 D+
L				WW EP QZ4 Q1
R		19.80	19.95	A small fault zone with related quartz-calcite microveins.
N	F/	19.80	19.95	X FAUL << N F/ 55
R		23.45	23.60	A fault gouge zone with one calcite microvein.
N	F/	23.45	23.60	X FAUL N
R		23.90	24.15	A white massive quartz-calcite vein with patches of epidote.
R		23.90	24.15	One small spot of tetrahedrite (?) was noted at the bottom
R		23.90	24.15	contact.
N		23.90	24.15	X QCVN QZ CA QZ5 IG PA N CU 50 M5 M5 TT
L				WW EP CA5 CL 48 P1 D.
R		25.70	26.00	Apparently two stages of calcite veining; an early grey colored
R		25.70	26.00	stage and a late white colored stage.

DRILLHOLE/TRAVERSE : KAM28 (CONTINUED)

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    F   - I N T E R V A L -    CORE      %     TYPI- QAL  TEX-  GRAIN FRAC-        STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K   L (UNITS = MT)             RECOV-    M ROCK FYING MIN TURES CHARACS TURE                  H  H  H  H  H ANY H  H  H ANY
E   A                           ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y   G    F R O M  -  T O       ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK     1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  S
- --- -----.--   -----.--      ----.- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  -
K   F                          ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E   L                          QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y   G                          DESIG  AGE       COL             R D P C           STRUCTUR-2         A  A  A  A  A  A  A  A

N        25.70      26.00                X CAVN CA PY CAX PA MT              N                      MX        D=
L                                               7A    PY= <<

P        31.35      72.35       10.0       INTF MS CA MS3 SP <<        15    P    FO       55       0. 32        3=
L                                3.0            3T PY CA2 FO BN        3                       P3    0.
R        31.35      72.35          This unit is the same as the last PGI with some minor
R        31.35      72.35          differences, primarily a reduction in the pyrite content and a
R        31.35      72.35          more spotty occurrence.  Carbonate content is still quite
R        31.35      72.35          significant and free silica is again absent.  Differences from
R        31.35      72.35          the previous interval are thought to be a result of alteration,
R        31.35      72.35          not primary litholotgy.
R        33.10      33.28          A white quartz-calcite with fragments of wall rock in it.
N V/     33.10      33.28              9 QCVN QZ CA QZ5 IG               N    CU      50 M5        M5
L                                               WW    CA5
R        36.40      37.25          An interval with numerous, irregular quartz-calcite veins.
N        36.40      37.25              3 QCVN QZ CA CA6 PA MT            N                M4        Q6
L                                               9A    QZ4 IG
R        37.90      38.55          Intermediate tuff with an unusually high pyrite content.
R        37.90      38.55          Pyrite occurs as laminations parallel to foliation and also as
R        37.90      38.55          cross-cutting bands which are possibly veins, as suggested by
R        37.90      38.55          the presence of vugs in similar features further down the hole,
R        37.90      38.55          but may also represent compositional layering.  The pyrite is
R        37.90      38.55          fine grained.
N        37.90      38.55              X INTF MS CA MS3 FO SP            N    FO      54            02         L2
L                                               3T PY CA2 BN                                   P3
R        38.90      39.00          A 2cm quartz-carbonate vein related to a steeply dipping fault.
N F/     38.90      39.00              5 FAUL QZ CA QZ8                  N    F/      30 M8        Q2
L                                               7A CY CA2
R        40.45      40.55          A clay gouge zone with ground up quartz and calcite fragments
R        40.45      40.55          indicating movement along a quartz-calcite vein.
N F/     40.45      40.55              X GOUG CY QZ CY7 BR               N
L                                               5A CA QZ2
R        42.70      42.80          The largest of a number of such semi-massive pyrite bands or
R        42.70      42.80          lenses in this intermediate tuff.  These range from this 10cm
R        42.70      42.80          band to 1cm long lenses.  Pyrite is predominantly fine grained
R        42.70      42.80          but occasionally quite coarse grained, as at 45.4m.
N SMS    42.70      42.80              X SMPY PY QZ PY7 RX XA            N                J2        J1         R7
L                                               BR CA QZ2
R        47.20      47.35          An irregular quartz-calcite vein indicating at least two stages
R        47.20      47.35          of veining and containing fragments of wall rock.
N V/     47.20      47.35              X QCVN QZ CA QZ7 MT IG            N                M7        J3
L                                               7A    CA3
R        50.00      50.05          A typical massive pyrite occurrence for this hole.  This
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DRILLHOLE/TRAVERSE : KAM28 (CONTINUED)

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   F   - I N T E R V A L -  CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = MT)           RECOV-    M ROCK FYING MIN TURES CHARACS TURE                H  H  H  H  H ANY H  H  H ANY
E  A                         ERY      I      TM TM MAT TX TX F C % M         T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O      ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  S
- --- ---------  ---------  ---------- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  -
K  F                       ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                       QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                       DESIG  AGE       COL            R D P C          STRUCTUR-2        A  A  A  A  A  A  A  A

R        50.00     50.05        section suggests the pyrite is a compositional layer and shows
R        50.00     50.05        the beginning of transposed bedding.
N MSX    50.00     50.05            7 MSPY PY QZ PY8 RX XA              N              J1              R8
L                                       BR MS QZ1 VG                                    $1
R        50.50     51.50        Steeply dipping quartz-calcite veins in an interval of
R        50.50     51.50        shattered core suggesting a fault zone.
N V/     50.50     51.50            6 QCVN QZ CA QZ6 IG MT              N              M6      Q4
L                                       7A    CA4
R        55.35     55.75        Three small (1cm), vuggy quartz-calcite veins occur in this
R        55.35     55.75        interval.  Vugs are coated with drusy calcite crystals.
N V/     55.35     55.75            1 QCVN QZ CA QZ6 VG IG              N              F6      J4
L                                       WW    CA4
R        57.40     57.60        A gouge filled fault zone.
N F/     57.40     57.60            9 GOUG                              N
R        58.35     58.80        This interval contains bands of semi-massive pyrite (10cm)
R        58.35     58.80        separated by vuggy quartz-calcite veins.
N SMS    58.35     58.80            4 SMPY PY QZ PY6 IG GB              N              J2      J2      R6
L                                       BR CA QZ2 RX XA
N V/     58.35     58.80            4 QCVN QZ CA QZ5 IG VG              N              F5      Q5      D=
L                                       9A PY CA5 PA
R        60.90     60.95        This band of semi-massive pyrite is typical of those occurring
R        60.90     60.95        in this unit but is noteworthy because of the presence of vugs.
N SMS    60.90     60.95            5 SMPY PY QZ PY6 IG RX              N              J4              R6
L                                       BR    QZ4 VG
R        65.80     70.20        This interval is made conspicuous by wispy bands which appear
R        65.80     70.20        to be pyrite-epidote microveins.  This type of pyrite
R        65.80     70.20        occurrence is unusual in this unit.  (See sketch on Geoform).
N        65.80     70.20            X INTF MS CA MS/ FO                 N                      O1      1
L                                       3T PY CA1                                       P1     <*
R        70.40     70.95        A very siliceous fragmental unit.  Fragments are 100% silica
R        70.40     70.95        and the groundmass is siliceous as well.  A series of core-axis
R        70.40     70.95        parallel microfaults cuts this interval.  Offset is about 1cm
R        70.40     70.95        and calcite stringers occupy the fault zones.
N        70.40     70.95            X TFLP QZ MS QZ4 BN FR     5 7      N    FR       0 F4      <1      D*
L                                       5T    MS2 <<    7 7 F O                        P2                      +?
R        71.60     72.35        This is a fragmental with large, lensoid shaped sisiceous
R        71.60     72.35        fragments in a matrix which is largely sericite.  The most
R        71.60     72.35        obvious feature is the large (0.8cm) granoblastic pyrite
R        71.60     72.35        crystals scattered throughout.
N        71.60     72.35            8 TFLP QZ MS QZ2 GB LB     2 7      N              F2      O1      U1
L                                       5T PY MS2 BN FR 5 7 F O                         P2

P        72.35     74.85    10.0 0    ARGR GR PY GR/ << HO                P              <=              GR 7=
L                           5.0            NN    PY=                                                    P/
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DRILLHOLE/TRAVERSE : KAM28 (CONTINUED)

K E Y	F L A G	- INTERVAL - FROM	TO	CORE RECOVERY (%)	% M I X	ROCK TYPE	TYPIFYING TM 1	TYPIFYING TM 2	QAL MIN MAT QM1	TEXTURES TX 1	TEXTURES TX 2	GRAIN CHARACS F	C	% M	FRACTURE P	# TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION H A QZ	H A BI	H A CY	H A CB	H A MG	ANY MIN XX	H A PY	H A CP	H A GL	ANY MIN YY	S
K E Y	F L G			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC- COL	QM2 3	TX 3	TX 4	S O R D	R N P	S H C	O /	DIP SML	F I	T 2	ID STRUCTUR-2	STK AZM	DIP RT	KF H	MU H	CL H	EP H	HE H	HA A	PR H	MO H	SL H	HA A	
R		72.35	74.85		A very black graphitic argillite. Quartz-pyrite microveins																										
R		72.35	74.85		occur as does disseminated pyrite. The fine grain size of this																										
R		72.35	74.85		disseminated pyrite suggests it is primary. The upper contact																										
R		72.35	74.85		is extremely sharp and is marked by a 3cm band of almost pure																										
R		72.35	74.85		graphite. The lower contact is more gradational and is marked																										
R		72.35	74.85		by abundant pyrite which occurs both as porphyroblasts in the																										
R		72.35	74.85		argillite and as a small (2cm) semi-massive band.																										
P		74.85	96.30	10.0	INTF	CA	MS	CA2	<<	HO		10		P							$*		O2			U)				
L				5.0		5G	PY	MS1				3									P1									
R		74.85	96.30		A green, homogeneous intermediate tuff. This unit appears to																										
R		74.85	96.30		be less altered than the overlying tuff and is more calcareous.																										
R		74.85	96.30		Pyrite porphyroblasts are scattered throughout as are calcite																										
R		74.85	96.30		stringers and microveins.																										
R	F/	85.40	86.00		Shattered core and some gouge indicate a fault zone.																										
N	F/	85.40	86.00		X	FAUL	CA	MS	CA2					N											G1	O2				
L						5G		MS1													P1									
R	F/	92.70	93.10		A graphitic shear zone with one 10cm wide graphite band. Clay																										
R	F/	92.70	93.10		gouge occurs in this interval as well. Ankerite content is																										
R	F/	92.70	93.10		elevated in the tuff adjacent to this zone.																										
N	F/	92.70	93.10		X	FAUL	GR	CY	GR2	<<				N																
L						NN		CY2																						
R		93.30	93.65		A fine grained mafic dyke. Feldspar phenocrysts as well as																										
R		93.30	93.65		crystals of a black mineral (hornblende?) make up the bulk of																										
R		93.30	93.65		the rock, the remainder being quartz as framework crystals and																										
R		93.30	93.65		microveins.																										
N		93.30	93.65		X	MFDK	AX	FX	AX5	FG	SP			N								<2								
L						BW	QZ	FX3	<<																						
R	V/	93.65	94.30		A massive white quartz vein with minor calcite and pyrite.																										
N	V/	93.65	94.30		X	QCVN	QZ	CA	QZ9	MX	MT			N		CU		60	M9		Q1			D)					
L						WW		CA1								CL		55												
R		94.30	94.55		This interval has been intensely silicified and original																										
R		94.30	94.55		textures have been destroyed. The rock is made up of silica																										
R		94.30	94.55		lensoid bands separated by sheeted silicified sericite.																										
N		94.30	94.55		X	INTF	QZ	MS	QZ8	LB				N						P8									R1	
L						5T	PY													$1										
P		96.30	111.80	10.0	BASL	FX	CL	FX2	PO	HO		4		P																
L				9.5		5G	EP		SP			2													<)					
R		96.30	111.80		A green homogeneous unit with feldspar phenocrysts. This rock																										
R		96.30	111.80		is relatively unaltered, although epidote stringers are																										
R		96.30	111.80		present. White feldspars occur in a homogeneous, green																										
R		96.30	111.80		groundmass. The rock is extremely competent with core lengths																										
R		96.30	111.80		up to 1m.																										

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DRILLHOLE/TRAVERSE : KAM28 (CONTINUED)

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   F  - I N T E R V A L -   CORE      %     TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = MT)           RECOV-    M ROCK FYING MIN TURES CHARACS TURE                H  H  H  H  H ANY H  H  H ANY
E  A                         ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O      ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  S
- --- -----.--   -----.--   ----.- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  -
K  F                        ROCK    FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                        QUAL    MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                        DESIG   AGE       COL           R D P C             STRUCTUR-2        A  A  A  A  A  A  A  A

R       96.55      97.40        Silicified and veined basalt with abundant pyrite
R       96.55      97.40        porphyroblasts.  Reduced chlorite content is indicated by pale
R       96.55      97.40        color.  Vuggy quartz veins 20cm and 30cm wide occur at 97.1m
R       96.55      97.40        and 96.3m.
N       96.55      97.40           X BASL QZ PY QZ4 << PB              N            64                U=
L                                         7A    PY= SP
R F/    105.00     105.75       Bleached, angular fragments in a carbonate matrix are the
R F/    105.00     105.75       components of this healed fault breccia.  Some large,
R F/    105.00     105.75       unbleached fragments are present but most are intensely
R F/    105.00     105.75       altered.
N F/    105.00     105.75          X BRFA CA    FR8 BR VG     8 7      N                  #3
L                                         9T        PA    3 1   C

P       111.80     113.15    10.0      LLAT MS PY FR= FO FR     = 6  4    P    FO      65 <*                 C=
L                            10.0          7T       SP << 3 5 F O 2                      P2
R       111.80     113.15       An ash tuff with scattered fragments of semi-massive pyrite.
R       111.80     113.15       These fragments are elongated parallel to foliation and in some
R       111.80     113.15       places have been folded by small folds in the tuff.
R       111.80     113.15       This lapilli tuff consists of large, siliceous lenticular
R       111.80     113.15       clasts serarated by sheeted yellow sericite and dusty pyrite.
R       111.80     113.15       The interval is intensly fractured and fault gouge occurs
R       111.80     113.15       throughout. The lower cocntact is faulted, the upper is
R       111.80     113.15       conformable and sharp.

P       113.15     114.70    100.0     LLTF MS PY LF7 FR FO     7 7 15    P    FO      55 *6                 L2
L                                         7A             1 7 E C 7                   $2

P       114.70     124.55    100.0     PYST PY    LF3 FR BD     3 8 20    P    FO      53 *3              DO Z5
L                            30.0         1U        FO    2 8 E 0 5                                     <*
R       114.70     124.55       This interval is composed of very fine grained muddy pyrite.
R       114.70     124.55       Fragmental, almost conglomeratic beds are interbedded with very
R       114.70     124.55       fine pyritic siltites. Some exhibit very sharp bedding
R       114.70     124.55       contacts. Poor grading is shown in places. This suggests tops
R       114.70     124.55       up. Fragments are composed of silica with with pervasive
R       114.70     124.55       spotted carbonate. A few graphitic argillite fragments are also
R       114.70     124.55       noted. The upper contact is faulted and the lower gradational
R       114.70     124.55       into a less pyritic felsic fragmental. Secondary disseminated
R       114.70     124.55       pyrite  (<1%) is present throughout.
R       114.70     115.40       A silicified graphitic argillite. The rock is pervasively
R       114.70     115.40       silicified and microveined, but some sections of massive
R       114.70     115.40       graphite are present.
N       115.40     124.55          X ARGL GR QZ GR4 <<                 N            8/                          GR
L                                         NN    QZ/                                                         P4
R       121.50     122.50       A bed of very fine grained pyrite with small scattered
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K E Y	F L A G	- INTERVAL - (UNITS = MT) FROM	TO	CORE RECOV-ERY (%)	% M ROCK I X	TYPI-FYING TM 1	TM 2	QAL MIN MAT QM1	TEX-TURES TX 1	TX 2	GRAIN CHARACS F	F	C	FRAC-TURE %	M	#	TK	STRUCTUR-1 T	ID 1	STK AZM	DIP RT	ALTERATION MINS H A QZ	H A BI	H A CY	H A CB	H A MG	H A ANY MIN XX	ORE-TYPE MINS H A PY	H A CP	H A GL	H A ANY MIN YY	S
K E Y	F L G			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC- COL	QM2 3	TX 3	TX 4	S O R	R N D	S H P	O / C	DIP SML	F I	T	ID 2	STK AZM STRUCTUR-2	DIP RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A	
R		121.50	122.50		siliceous clasts.																											
N		121.50	122.50		X	PYST	PY	PY6	FR	HO	1	6		N		*1												Z6				
L							1U		FO	5	7	F	O																			
R		122.50	122.90		This vein occurs in a thin graphitic argillite unit and is																											
R		122.50	122.90		composed of coarse euhedral dolomite crystals intergrown with																											
R		122.50	122.90		white quartz. This slivers of graphitic material are included																											
R		122.50	122.90		in the vein.																											
R		122.50	122.90		Black graphitic argillite cut by large quartz-dolomite veins.																											
R		122.50	122.90		Euhedral dolomite porphyroblasts occur adjacent to the vein																											
R		122.50	122.90		contact.																											
N	V/	122.50	122.90		5	QDVN	DO	DO7	CG	IG				N		M4											DO				
L							7A																				U6				
N		122.50	122.90		5	ARGL	GR	DO GR/	PB	>>				N												DO				GR
L							NN																				U1				P/
R	SAM	123.70	123.80		Hand sample.																											
R	SAM	123.70	124.20		Hand sample.																											
R		123.85	124.35		Another bed oF muddy pyrite with scattered small fragments of																											
R		123.85	124.35		silica.																											
N		123.85	124.35		X	PYST	PY	PY7	FR	FO	3	6		N		*3												Z7				
P		124.55	147.40	100.0		LBFV	PY	MS LF8	FR	WF	8	7	20	P	FO	63	*7											L3				
L							7A				1	7	E	C	7		$1															
R		124.55	147.40		A very pyritic felsic fragmental. Fragments are primarily																											
R		124.55	147.40		silica. They range in size from 0.2cm to greater than the																											
R		124.55	147.40		diameter of the core. No sorting. The fragments are hosted in a																											
R		124.55	147.40		matrix of sheeted sericite with some fine dusty purite.																											
R		130.05	132.90		An altered equivalent of the PGI. Increased pyrite sericite and																											
R		130.05	132.90		decreased pyrite content and the presence of bright green																											
R		130.05	132.90		fuchsite spots are the main differences.																											
N		130.05	132.90		X	LBFV	MS	PY MS2	LB	FR	8	7		N		*7											D1				FU
L							YG	FU FU*	SP		1	7	E	C		$2															O*
R		135.65	138.90		Small quantities of sphalerite, galena and chalcopyrite occur																											
R		135.65	138.90		as crystal aggregates. These are crudely banded. The sphalerite																											
R		135.65	138.90		is a honey yellow colour.																											
N		135.65	138.90		X	LBFV	PY	MS LF8	FR	WF	8	7		N		*7											L3	R)	R)		
L							7A				1	7	E	C		$1													R)		
R		136.90	138.65		Compositionally equivalent to the LBFV but finer grained.																											
N		136.90	138.65		X	LLTF	MS	PY LF8	FR	FO	8	7		N		*8											Z3				
L							7A				1	7	E	O		$1															
P		147.40	163.50	100.0		LBFV	PY	MS LF8	LB	FR	8	7	20	P	FO	55	*8											L2				
L				10.0			5A		FO	3	7	E	C	6		$1															
R		147.40	163.50		A felsic fragmental with fragments larger than the core																											
R		147.40	163.50		diameter. As a general observation the sericite increases and																											

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     F   - I N T E R V A L -    CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-      STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
  K  L (UNITS = MT)             RECOV-    M ROCK FYING MIN TURES CHARACS TURE                 H  H  H  H  H ANY H  H  H ANY
  E  A                           ERY      I      TM TM MAT TX TX F C % M           T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
  Y  G   F R O M  -  T O        ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK     1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  S
  - --- -----.--   -----.--     ----.- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  -
  K  F                          ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F     T ID STK DIP KF MU CL EP HE HA PR MO SL HA
  E  L                          QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I     2    AZM  RT       H  H  H  H  H  H  H  H
  Y  G                          DESIG  AGE       COL           R D P C              STRUCTUR-2         A  A  A  A  A  A  A  A

  R       147.40     163.50          the pyrite decreases down the interval.
  R       148.30     148.55          A typical LBFV with small amounts of galena, sphalerite and
  R       148.30     148.55          chalcopyrite. These sulphides seem to occur at random in this
  R       148.30     148.55          unit. These may be a relationship between the mineralization
  R       148.30     148.55          and small fractures that are more abundant in this interval.
  N       148.30     148.55               X LBFV PY SL LF8 LB FR      8 7        N                *8                 L2 R* R*
  L                                              5A        FO    3 7 E C                                                 R*
  R       149.60     149.75          A band of massive coarse grained pyrite with a silica matrix.
  R       149.60     149.75          This type of pyrite usually occurs in veins as seen in previous
  R       149.60     149.75          drillholes.
  N MSX   149.60     149.75               X MSPY PY QZ PY8 RX XA                 N                J2                 R8    R.
  L                                              BR        IG
  R       159.00     162.10          Essentially the same composition as the PGI, although with more
  R       159.00     162.10          sericite and less pyrite. The major difference is in the
  R       159.00     162.10          fragment size.
  N       159.00     162.10               X LLTF MS PY LF7 FR FO      7 7        N                *6                 L1
  L                                              7A              3 7 E C                             $2
  R       159.70     159.75          A small quartz vein with traces of galena and honey coloured
  R       159.70     159.75          sphalerite.
  N       159.70     159.75               X QZVN QZ        MX                    N                MX                 D.    D.
  L                                              WW                                                                      D.

  P       163.50     205.45     100.0       LBFV MS PY LF8 FR LB      8 7 10     P     FO      50                    D1          FU
  L                                              YA FU     FO    5 7 E C 3                           $2                          O*
  R       163.50     205.45          A felsic fragmental with elongated siliceous fragments. This
  R       163.50     205.45          interval is typified by sheeted yellow sericite separating
  R       163.50     205.45          individual clasts, uniformly disseminated pyrite and spots of
  R       163.50     205.45          green mica.
  R       177.30     180.30          A grain size variation of the LBFV unit.
  N       177.30     180.30               X LLTF MS PY LF8 FR FO      8 7        N                                                 FU
  L                                              YA FU     LB    5 7 E C                             $2                          O*
  R       181.85     182.10          A band of almost massive pyrite with interstitial quartz. A
  R       181.85     182.10          small fault cuts the middle of this band as indicated by a thin
  R       181.85     182.10          gouge zone. No other sulphides are noted in this interval.
  N SMS   181.85     182.10               X SMPY PY QZ PY7 RX XA                 N                J3                 R7
  L                                              BR
  N       182.10     182.80               X LLTF MS PY LF8 FR FO      8 7        N                                   D1          FU
  L                                              YA FU     LB    5 7 E C                             $2                          O*
  R       184.20     185.55          This interval of LBFV is noteworthy due to its increased pyrite
  R       184.20     185.55          content. Pyrite is present as bands and disseminations. Traces
  R       184.20     185.55          of galena and sphalerite are noted.
  N       184.20     185.55               X LBFV MS PY LF8 LB FR      8 7        N                                   D2    O.
  L                                              7A        BN    3 7 E C                             $2                O.
  R       194.15     194.70          A dark grey heterolithic fragmental. Fragments are angular,
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DRILLHOLE/TRAVERSE : KAM28 (CONTINUED)

K E Y	F L A G	- INTERVAL - FROM	TO	CORE RECOV- ERY (%)	% M I X	ROCK TYPE	TYPI- FYING TM 1	QAL MIN TM 2	MAT QM1	TEX- TURES TX 1	TX 2	GRAIN CHARACS F C	F	C	FRAC- TURE % M	#	TK	STRUCTUR-1 T	ID 1	STK AZM	DIP RT	ALTERATION MINS H A QZ	H A BI	H A CY	H A CB	H A MG	H A ANY MIN XX	ORE-TYPE MINS H A PY	H A CP	H A GL	H A YY	ANY MIN S
K E Y	F L G			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC- COL	QM2 3	TX 3	TX 4	S O R	R N D	S H P	O / C	DIP SML	F I	T 2	ID	STK AZM	DIP RT	KF	MU	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A	
R		194.15	194.70		elongated and separated by black, graphitic argillite. 80% of																												
R		194.15	194.70		clasts are dark grey siliceous siltstone, 15% are muddy pyrite																												
R		194.15	194.70		and 5% are green sericitic material. The sericite content of																												
R		194.15	194.70		the adjacent LBFV is unusually high. A 3cm Qz-Do vein with																												
R		194.15	194.70		traces of galena is also present.																												
N		194.15	194.70		X	PYST	PY	MS	LF9	FR		9	8		N			*4										*2		D.	GR
L							1A	GR			3	3	E	C								P1									$1
R		196.20	196.40		Another siliceous siltstone with laminations that have not been																												
R		196.20	196.40		disrupted. Primary dusty pyrite occurs associated with massive																												
R		196.20	196.40		green sericite. Laminations have been drag folded along a																												
R		196.20	196.40		microfault.																												
N		196.20	196.40		X	SILT	GR	PY	GR1	LM	DF				N		LM		75										L2		GR
L							1A			BN	LM												X3								
R		198.60	199.85		This interval is a lapilli tuff with thin interbeds of																												
R		198.60	199.85		siliceous, graphitic siltstone.It is cut by numerous small																												
R		198.60	199.85		faults. The tuff is made up of siliceous lapilli separated by																												
R		198.60	199.85		sheeted green-yellow sericite and fine grained disseminated																												
R		198.60	199.85		pyrite. Sericite content increases towards the contact with the																												
R		198.60	199.85		siltstone. The siltstone is dark grey, laminated and siliceous.																												
R		198.60	199.85		The laminations are weakly folded adjacent to small fault																												
R		198.60	199.85		structures.																												
N		198.60	199.85		9	LLTF	MS	PY	LF7	FR	BN		7	7	N														D1			
L							7A																$2									
N		198.60	199.85		1	SILT	GR		GR1	LM	FO				N														D1			GR
L							1A																									$1
R		203.40	203.90		Two siltstone bands occur in this interval. The LBFV in between																												
R		203.40	203.90		contains lensoid bands of siliceous material separated by																												
R		203.40	203.90		sheeted graphite, suggesting a mixture of sedimentary and																												
R		203.40	203.90		pyroclastic material.																												
N		203.40	203.90		5	SILT	GR	PY	GR1	LM	LB				N														D1			GR
L							1A																									$1
P		205.45	207.85	100.0		LLTF	MS	PY	LF8	FR	FO		8	7	16	P		FO		55	*8							D1			
L				70.0			5A			LB		3	7	E	C	5							$2									
R		205.45	207.85		A felsic lapilli tuff with siliceous lapilli fragments																												
R		205.45	207.85		separated by sheeted sericite. Disseminated pyrite is present																												
R		205.45	207.85		throughout.																												
P		207.85	212.65			LA	LATF	PY	MS	LF5	FR	LB		5	8	25	P			*4									D1			
L				.0			7A					1	5	E	0	7							S=									
R		207.85	212.65		An ash tuff containing about 50% siliceous lapilli fragments.																												
R	SAM	211.00	211.10		Hand sample.																												
R		211.40	212.65		A lithic ash tuff containing 60% sub-lapilli sized fragments																												
R		211.40	212.65		(i.e <2mm).																												

DRILLHOLE/TRAVERSE : KAM28 (CONTINUED)

KEY	FL	FROM	TO	CORE RECOVERY (%)	%MINERALIZATION / ROCK TYPE	TYPING TM1	TYPING TM2	QAL MAT QM1	QAL MIN QM2	TEXTURES TX1	TEXTURES TX2	GRAIN CHARACS F	GRAIN CHARACS C	GRAIN CHARACS %	FRACTURE M	STRUCTURE-1 T	STRUCTURE-1 ID	STRUCTURE-1 STK AZM	STRUCTURE-1 DIP RT	ALTERATION MINS H1	ALTERATION MINS H2	ALTERATION MINS H3	ALTERATION MINS H4	ALTERATION MINS H5	ALTERATION MINS ANY	ORE-TYPE MINS H1	ORE-TYPE MINS H2	ORE-TYPE MINS H3	ORE-TYPE MINS H4	ORE-TYPE MINS ANY
		(UNITS = MT)																												
K	F			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	LC-COL				SRDP	ONHC	/SML	I	STRUCTUR-2 T	ID	STK AZM	DIP RT	KF A	MU A	CL A	EP A	HE A	HA A	PR MIN	MO A	SL A	HA A		
N		211.40	212.65		X	LLAT		PY	MS	LF6	SP	FR		6	6	N										D1				
L						3A						3	7	E	O										$=					
P		212.65	215.10	100.0		LLTF		MS	PY	LF8	FR			8	7	12	P	FO	50 *8							D1				
L				60.0		7A						1	7	E	C	5									M1					
R		212.65	215.10	Lapilli tuff with siliceous fragments in a green sericite																										
R		212.65	215.10	matrix. Disseminated pyrite is present throughout.																										
R		213.10	213.40	A very distinct interval due to its very unusual colour. The																										
R		213.10	213.40	orange brown colour is caused by abundant sericite with																										
R		213.10	213.40	intermixed ankerite. No HCl reaction was observed. Large silica																										
R		213.10	213.40	fragments contain disseminated pyrite. Whispy pyrite is present																										
R		213.10	213.40	in the groundmass.																										
N		213.10	213.40		X	LATF		MS	PY	LF3	FR	LM		3	5	N			*3 $?							L1				
L						OU	AK					3	7	E	O										$4					D.
P		215.10	221.10	100.0		LBFV		MS	PY	LF7	FR	LB		7	7	13	P		*7							D=				D.
L				40.0		7A			MT			3	7	E	C	5									$3					D.
R		215.10	221.10	Lensoid banded fragmental with a green sericite matrix.																										
R		215.10	221.10	Disseminated pyrite is present throughout. Occasional thin																										
R		215.10	221.10	bands of semi-massive pyrite contain sphalerite and galena.																										
R		215.10	221.10	A band of massive pyrite with a matrix of grey translucent																										
R		215.10	221.10	quartz. A very thin (<1cm) band containing blebs of																										
R		215.10	221.10	chalcopyrite and sphalerite occurs at the upper contact of the																										
R		215.10	221.10	pyrite band.																										
N	MSX	215.10	221.10		8	MSPY		PY	QZ	PY8	XA	RX				N			J2							R8	D.	D.		
L						BR		QZ2	IG																					D.
R		216.35	216.45	Two 2cm bands (veins?) of massive sulphide in a grey																										
R		216.35	216.45	translucent quartz. Honey coloured sphalerite is the most																										
R		216.35	216.45	plentiful sulphide.																										
N	SMS	216.35	216.45		4	SMSX		QZ	SL	SL2	RX	XA				N		C/	55 J4							R1	R1	R=		
L						1A	PY	PY1	IG																					R2
P		221.10	231.75	100.0		FETF		MS	PY	LF7	FR	LB		7	7	13	P	FO	55 *6							D1				
L				.0		7A			HT			1	7	E	C	5									$1					
R		221.10	231.75	Although this interval is compositionally uniform, considerable																										
R		221.10	231.75	textural variations are seen. The rock varies from lensoid																										
R		221.10	231.75	banded to lapilli tuff to ash tuff over 10cm intervals. The																										
R		221.10	231.75	unit is a mixture of fragment sizes suggesting a very poor																										
R		221.10	231.75	degree of sorting. All fragments are siliceous with yellow																										
R		221.10	231.75	sericite and pyrite in the matrix.																										
R		221.10	223.00	Siliceous lapilli in a yellow sericite matrix. Pyrite is																										
R		221.10	223.00	disseminated throughout.																										
N		221.10	223.00		X	LLTF		MS	PY	LF8	FR			8	7	N										D1				

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DRILLHOLE/TRAVERSE : KAM28 (CONTINUED)

```
   F   - I N T E R V A L -   CORE      %      TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K  L (UNITS = MT)            RECOV-    M ROCK FYING MIN TURES CHARACS TURE                 H  H  H  H  H ANY H  H  H ANY
E  A                          ERY      I     TM TM MAT TX TX F C % M           T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y  G   F R O M  -  T O       ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  S
- --- -----.--   -----.--    ----.- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  -
K  F                         ROCK    FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E  L                         QUAL    MEM  V  Q LC- 3       3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y  G                         DESIG  AGE       COL             R D P C            STRUCTUR-2          A  A  A  A  A  A  A  A

L                                             7A          1 7 E C                       $2
R        226.20     226.30       Siliceous breccia fragments in a sericitic pyritic matrix.
R        226.20     226.30       Breccia fragments are identical in composition to the fragments
R        226.20     226.30       in LBFV.
N        226.20     226.30           6 BRXX QZ PY LF7 BR        7 7       N              *7                D1
L                                             7A MS          2   0                        P2
R        226.85     228.20       Four quartz veins are present in this interval. They contain
R        226.85     228.20       sericitic patches that appear to be included wall rock slivers.
N V/     226.85     228.20           5 QZVN QZ    QZ9 MX                  N              M9
L                                             WW
R        229.00     229.15       Pyritic breccia with fragments of quartz and dolomite. A few
R        229.00     229.15       small galena blebs are noted but the grey blue colour of the
R        229.00     229.15       rock suggests significant amounts of fine grained galena or
R        229.00     229.15       tetrahedrite may be present.
N        229.00     229.15           X BRXX PY QZ LF4 BR XA                N              *3             DO R2    D/ TT
L                                             1A        LB                                               D3          D?
R        230.25     231.75       A sericitic ash tuff with scattered siliceous lapilli.
N        230.25     231.75           X LATF MS QZ LF3 FR SP     3 6       N              *3
L                                             5A          3 9   0                        P3

P        231.75     234.55              ARGL GR PY GR2 LM            18     P                                 L1         GR
L                                             NN                     5                                                   P2
R        231.75     234.55       A graphitic argillite with whisps and bands of muddy pyrite.
R        231.75     234.55       Both contactc are gradational over 20cm.

P        234.55     235.81   100.0      ASHT MS PY LF3 FR LM     3 5 15     P                                 D1
L                             60.0            YA          3 7 L O 5                      $3
R        234.55     235.81       A sericitic ash tuff with scattered very small siliceous
R        234.55     235.81       fragments.

P        235.81     237.75   100.0      ARGL GR PY GR3 LM                   P                                 L1         GR
L                             10.0            NN                                                                         P3
R        235.81     237.75       A graphitic argillite with muddy pyrite laminae. Tuffaceous
R        235.81     237.75       laminae suggest a mixed souce.

P        237.75     245.50   100.0      LATF MS PY LF3 FR FO     3 6        P    FO     55 *3                 D1
L                             60.0            5A          3 7 L O                        P3
R        237.75     245.50       This interval consists mainly of lapilli or lapilli ash tuff
R        237.75     245.50       with thin interbeds of graphitic argillite and ash tuff. The
R        237.75     245.50       lapilli tuff contains about 30% silica fragments in a
R        237.75     245.50       sericitic, fine grained matrix. Lapilli abundance varies
R        237.75     245.50       greatly.
R        239.35     242.85       This interval is an interbedded and mixed interval of graphitic
R        239.35     242.85       argillite and siliceous lapilli tuff. The fragments are very
```

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DRILLHOLE/TRAVERSE : KAM28 (CONTINUED)

K E Y	F L A G	- INTERVAL - (UNITS = MT) FROM	TO	CORE RECOVERY (%)	% M I X	ROCK TYPE	TYPIFYING MIN TM	TM	MAT QM1	QAL TEXTURES TX 1	TX 2	GRAIN CHARACS F	C	%	M	FRACTURE P	#	TK	STRUCTUR-1 T	ID	STK AZM	DIP RT	ALTERATION MINS H A	QZ A	BI A	CY A	CB A	MG A	XX MIN	ORE-TYPE MINS H A	PY A	CP A	GL A	YY MIN	SUMM
K E Y	F L G	ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	LC- COL	TM 3	QM2	TX 3	TX 4	S O R	R N D	S H P	O / C	DIP SML	F I		T 2	ID STRUCTUR-2	STK AZM	DIP RT	KF H A	MU H A	CL H A	EP H A	HE H A	HA H A	PR H A	MO H A	SL H A	HA H A			
R		239.35	242.85				elongated. Graphitic laminae and fragments are seen are seen in																												
R		239.35	242.85				the tuff and some fragments are present in the argillite. Muddy																												
R		239.35	242.85				pyrite as well as coarser disseminated pyrite is present																												
R		239.35	242.85				throughout.																										
N		239.35	242.85			3 ARGL	GR	PY	GR3	LM	PA							N									L1		GR			
L							NN																								P3		
N		239.35	242.85			7 LLTF	PY	GR	LF7	FR			7	7				N				*7					L2		GR			
L							1A					3	5	E	C																L1		
N		242.85	245.50			X ASTF	MS	PY		LM	FO							N				P2					D1					
L							5A	QZ															P3									
P		245.50	251.31			ARGL	GR	PY	GR3	LM	PA			20		P		FO		58							L1		GR			
L				10.0			NN			BN																				P3		
R		245.50	251.31			A black graphitic argillite with laminated muddy pyrite as well																												
R		245.50	251.31			as coarser disseminated, probably recrystallized pyrite. Two																												
R		245.50	251.31			ash tuff interbeds occur in the interval.																												
R		245.90	246.20			An ash tuff interbed with a sharp upper contact and a																												
R		245.90	246.20			gradational lower contact. The latter contains fragments and																												
R		245.90	246.20			laminae of argillite. Tops up is indicated.																												
N		245.90	246.20			X ASTF	MS	QZ	MS2	LM								N				F/					D1					
L							7T																P2									
R		247.30	248.35			A fine ash tuff containing 20% very small lithic fragments.																												
N		247.30	248.35			X ASTF	MS	PY	LF2	FR	FO		2	5				N				F1					D1					
L							7A					5	7	L	O								P2									
P		251.31	260.91			FT FETF	MS	QZ	LF7	FR	LB		7	7		P		FO		55	*7					D)		D.			
L				40.0			7A			FO	MT	1	5	E	C								$3						D.			
R		251.31	260.91			A sericite rich rock with siliceous fragments. Pale green																												
R		251.31	260.91			sericite forms the groundmass. Sorting is very poor. Pyrite																												
R		251.31	260.91			content is lower than average. It occurs as scattered crystal																												
R		251.31	260.91			aggregates.																												
R		251.85	252.80			Graphitic argillite cut bynumerous quartz-dolomite microveins.																												
N		251.85	252.80			X ARGL	GR	PY	GR2	<<	LM							N		FO		50 <3				DO							
L							NN																			+1							
R		253.30	255.80			Five veins up to 30cm in width occur in this interval. The																												
R		253.30	255.80			veins contain white quartz with patches of grey dolomite.																												
N	V/	253.30	255.80			1 QDVN	QZ	DO	QZ7	MT	IG							N				M7				DO							
L							7A		DO3																	Q3							
R		254.25	254.35			Three small bands of recrystallized sulphide made up of pyrite,																												
R		254.25	254.35			sphalerite, galena and chalcopyrite. The bands occur in a																												
R		254.25	254.35			section of LBFV and seem to occur both in fragments and in the																												
R		254.25	254.35			matrix. This implies an epigenetic origin.																												
N	SMS	254.25	254.35			2 SMSX	SL	PY	SL2	XA	RX							N											R2	R1	R1		
L							1A			IG																					R2		

DRILLHOLE/TRAVERSE : KAM28 (CONTINUED)

```
ALTERATION MINS  ORE-TYPE MINS                %      TYPI- QAL  TEX-  GRAIN FRAC-      STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
 H  H  H  H ANY H  H  H ANY                   M ROCK FYING MIN TURES CHARACS TURE                 H  H  H  H  H ANY H  H  H ANY
 A  A  A  A  A MIN A  A  A MIN                I      TM TM MAT TX TX F C % M                T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
IZ BI CY CB MG XX PY CP GL YY  SUMM           X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMM
-- -- -- -- -- -- -- -- -- --  - -  ---- -- -- --- -- -- - - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - -
KF MU CL EP HE HA PR MO SL HA       FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
   H  H  H  H  H  H  H  H            MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
    A  A  A  A  A  A  A  A          G AGE       COL             R D P C          STRUCTUR-2       A  A  A  A  A  A  A  A
```

Hand sample.

ite,

```
*8                R2 D. R2 TT
  $2                    R= R?


                  &2    R2 TT
                        R= R?

                  D2
  $=

g or
ndant

                  R2 R1 R3 TT
  $=                    R1 R/

*5                X1
  P3

e

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*5                X2
  $3
te.

*5                R4
  $2


J5                R2    R2 TT
                        R1 R/
e

                  R2    R2 TT
                        R1 R/

*7                X1
  $4
```

DRILLHOLE/TRAVERSE : KAM30 (CONTINUED)

```
 %       TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
 M ROCK FYING MIN TURES CHARACS TURE                   H  H  H  H  H ANY H  H  H ANY
 I       TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
 X TYPE  1  2 QM1  1  2 F F C P  # TK     1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMM
- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - -
OR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
EM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
GE       COL            R D P C          STRUCTUR-2        A  A  A  A  A  A  A  A
```

tains 20% yellow sericite and 10% dusty pyrite.
cm band of semi-massive sulphide with bluish galena, pyrite,
alerite and traces of tetrahedrite.

```
  X SMSX GL PY SX5 RX XA     8 7 10    D    FO      35 *8              R2 D. R2 TT
         9Y SL     FO    1 7 E C 3                      $2                   R= R?
```

s unit contains scattered thin (<0.5cm) bands of
i-massive sulphide.

```
  X SMSX GL PY SX5 RX XA               N                                &2    R2 TT
         1A SL     BN                                                        R= R?

    FETF PY MS LF8 FR MT     8 8 12    P    FO      50                 D2
         5A        FO    1 7 E C 5                      $=
```

gments range in size from 1mm to 10cm. Dusty pyrite and
rse sheeted sericite occur between fragments. No sorting or
ding is apparent. Economic sulphides are relatively abundant
gh background).

```
  1 SM  GL PY SX6 RX XA     8 8 12    D    FO      50                 R2 R1 R3 TT
         4A SL     FO    1 7 E C 5                      $=                R1 R/

    LLAT MS PY LF6 FR MT     6 7 11    P              *5                 X1
         YA              1 7 E O 3                        P3
```

ericitic ash tuff containing sub-lapilli sized lithic
gments in a sericite-pyrite matrix. The rock has a crude
ding or mottling that may be reflecting differential
eration. Dusty and granoblastic pyrite are both present.

```
    FETF MS PY LF8 FR LB     8 7 16    P              *5                 X2
         YA              1 7 E C 7                        $3
```

bands of silica containing up to 80% granoblastic pyrite.
bands of sheeted sericite are present throughout.

```
  X SMPY PY MS PY4 IG RX     8 7 16    D              *5                 R4
         BR        PB XA 1 7 E C 7                      $2
```

i-massive sulphide in what looks like a large silica
gment.

```
  2 SMSX GL PY GL2 IG RX               N              J5                 R2    R2 TT
         1U SL PY2                                                             R1 R/
```

hin (0.5cm) bands of semi-massive sulphides parallel the
iation.

```
  2 SMSX GL PY GL2 IG BN               N                                 R2    R2 TT
         1A SL PY4 RX                                                          R1 R/

    L  MS PY LF7 LB FR     7 7       P    FO      55 *7                 X1
         YG        MT    1 7 E O                        $4
```

ighly sericitized interval. Original textures have been

/10/12 GEOLOGGED BY : RGC + DRH
0.00 GRID AZIMUTH : 47.00

GLE NORTHING EASTING

R-1 ALTERATION MINS ORE-TYPE MINS
H H H H H ANY H H H ANY
DIP A A A A A MIN A A A MIN
RT QZ BI CY CB MG XX PY CP GL YY SUMM
DIP KF MU CL EP HE HA PR MO SL HA
RT H H H H H H H H
R-2 A A A A A A A A

35 *8 D= D. D. TT
$1 D. D.
d clasts

ted in
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bands
ce

ts . In
s than
and a 5cm

45 *7 X1
$=
65 M9 DO
50 Q1

rked by

MX D.

pyrite,
slo

*8 D1 R(TT
$1 R(D/
ein.

DRILLHOLE/TRAVERSE : KAM30 (CONTINUED)

F K E Y	L A G	- INTERVAL - (UNITS = MT) FROM	TO	CORE RECOV-ERY (%)	% M I X	ROCK TYPE	TYPI-FYING TM 1	TM 2	QAL MIN MAT QM1	TEX-TURES TX 1	TX 2	GRAIN CHARACS F	F	C	%	M	FRAC-TURE #	TK	STRUCTUR-1 T	ID	STK	DIP	ALTERATION MINS H A	H A	H A	H A	H A	ANY MIN	ORE-TYPE MINS H A	H A	H A	ANY MIN	SUMM
K E Y	F L G			ROCK QUAL DESIG	FOR MEM AGE	EN V	RT Q	TM LC- COL	QM2 3	TX 3	TX 4	S O R D	R N P	S H C	O /	DIP SML	F I	T 2	ID	STK AZM STRUCTUR-2	DIP RT	KF	MU	CL	EP	HE	HA	PR	MO	SL	HA			
N	V/	32.10	32.20		X	QDVN	QZ	DO	QZ9	MX	PA							N		CU	55	M9				DO			D.			
L							WW		DO1	IG										CL	35					Q1							
N		32.35	32.95		X	LBFV	MS	PY	LF8	LB	FR		8	7	10			D		FO	35	*8					D2	D.	D.	TT		
L							9Y			FO		1	7	E	C	3							$1						D.	D.		
R		33.60	34.40		Semi-massiove sulphides occur as irregular bands and patches in																													
R		33.60	34.40		the silica fragments.																													
N	SMS	33.60	34.40		1	SMSX	PY	GL	PY3	RX	IG							N									D3	D1	D2			
L								SL	GL2																				D2			
R		36.50	36.65		A 1cm foliation parallel band of semi-massive pyrite,																													
R		36.50	36.65		sphalerite and galena. This could be a narrow vein or a																													
R		36.50	36.65		transposed syngenetic feature.																													
N	SMS	36.50	36.65		2	SMSX	PY	SL	PY4	RX	XA							N									R4		R1			
L							2U		SL2																					R2			
N	V/	41.30	42.10		2	QDVN	QZ	DO	QZ9	MX								N				M9				DO						
L							WW		DO1																	Q1						
P		42.10	50.20	100.0		LBFV	PY	MS	LF8	LB	FR		8	7	10			P		FO	35	*8					X2	D.	D.	TT		
L							7A			FO		1	7	E	C	3							$1						D.	D.		
R		42.10	50.20		This interval contains significantly more pyrite and less																													
R		42.10	50.20		sericits than the previous interval. The two intervals are																													
R		42.10	50.20		separated by a thin sericitic ash tuff unit.																													
R		42.10	43.20		A green chloritic ash tuff with quartz dolomite microveins and																													
R		42.10	43.20		patches of dolomite. Whisps and laminations of dusty pyrite																													
R		42.10	43.20		occur. The lower contact is marked by a 2cm steeply dipping																													
R		42.10	43.20		gouge zone. The upper contactis marked by a 10cm																													
R		42.10	43.20		quartz-dolomite vein.																													
N		42.10	43.20		X	ASTF	CL	PY	CL3	FG	<<							N								DO	X1					
L							5G	DO		LM	FO													P3		O=						
R		43.20	44.60		A highly unsorted fragmental with fragments ranging in size																													
R		43.20	44.60		from0.5cm to 10cm. These occur in a matrix containing 20% fine																													
R		43.20	44.60		grained dusty pyrite and 10% sericite.																													
N		43.20	44.60		X	FETF	PY	MS	LF8	FR			8	7				N				*7					X2					
L							7A					1	7	E	O								$1									
R		44.60	45.05		Bands of semi-massive bluish galena with tan coloured																													
R		44.60	45.05		sphalerite, chalcopyrite and tetrahedrite																													
N	SMS	44.60	45.05		=	SMSX	GL	PY	GL3	XA	RX							N				F4					R2	R=	R3	TT		
L							1A	SL	PY2																					R2	R?		
N	SMS	48.95	49.00		5	SMSX	GL	PY	GL3	XA	RX		8	7	10			D		FO	35	*8					R2	R=	R3	TT		
L							1A	SL	PY2	FO		1	7	E	C	3							$1							R2	R?		
L		50.20	59.40	100.0		LBFV	MS	PY	LF8	LB	FR		8	7	10			P		FO	35	*8					X1	D.	D.	TT		
L							9Y			FO		1	7	E	C	3							$2						D.	D.		
R		50.20	59.40		This interval is a variation of the basic LBFV unit. It																													

ESSO Minerals Canada

KAMAD

DRILLHOLE/TRAVERSE : KAM30 (CONTINUED)

```
  F   - I N T E R V A L -    CORE      %       TYPI- QAL  TEX-  GRAIN FRAC-       STRUCTUR-1 ALTERATION MINS  ORE-TYPE MINS
K L (UNITS = MT)             RECOV-    M ROCK FYING MIN TURES CHARACS TURE                 H  H  H  H  H ANY H  H  H ANY
E A                           ERY      I      TM TM MAT TX TX F C % M          T ID STK DIP  A  A  A  A  A MIN A  A  A MIN
Y G   F R O M  -  T O        ( % )     X TYPE  1  2 QM1  1  2 F F C P  # TK    1    AZM  RT QZ BI CY CB MG XX PY CP GL YY  SUMM
- --- -----.--   -----.--    ----.- -- - ---- -- -- --- -- -- - - - - -- -- -  - -- --- --- -- -- -- -- -- -- -- -- -- --  - -
K F                          ROCK   FOR EN RT    TM QM2 TX TX S R S O DIP F    T ID STK DIP KF MU CL EP HE HA PR MO SL HA
E L                          QUAL   MEM  V  Q LC- 3      3  4 O N H / SML I    2    AZM  RT       H  H  H  H  H  H  H  H
Y G                          DESIG  AGE       COL             R D P C          STRUCTUR-2          A  A  A  A  A  A  A  A

L                                             YA        FO   1 7 E C 5                    $1
R       127.60     127.80        A thin 20cm band of lithic ash tuff containing 5% small silica
R       127.60     127.80        fragments. Most of this rock is brownish sericite, possibly
R       127.60     127.80        with some ankerite. Both contacts with LBFV are conformable.
R       127.60     127.80        Grading is not obvious.
N       127.60     127.80            X LATF MS QZ QZ= FR FO     + 5       N               F=
L                                             5U             1 7 L O                      $6
R       131.60     132.70        An unusual section of core. The foliation is parallel to the
R       131.60     132.70        core axis, but the rock immediately above and below has
R       131.60     132.70        foliation dips of 55 degrees to the core axis. This indicates a
R       131.60     132.70        possibly fold closure. Some of the core appears to be missing.
N       131.60     132.70            X LBFV MS PY LF8 LB FR     8 8 10    D    FO       0 *7                  X1
L                                             YA        FO   1 7 E C 5                    $2
R       135.10     135.40        Fairly significant sulphides occur between the silica
R       135.10     135.40        fragments
N SMS   135.10     135.40            2 SMSX PY GL SX5 RX XA               N                                  R2    R2
                                              3A SL     IG                                                         S1
R END   135.60      135.60
```

APPENDIX 2

GEOCODER

GEOLOG HOW-SCALE

LINE	HOW CODE	HOW DESCRIPTION	SYMBOL NUMBER	VALUE
1	"	Clear Field	0	0.00
2	#	Breccia fillings	0	0.00
3	$	Sheeting	0	0.00
4	&	BANDS	0	0.00
5	)	CL/MG replaces MF	0	0.00
6	*	Clasts	0	0.00
7	+	Within quartz vein	0	0.00
8	0	Fresh,primary rock	0	0.00
9	1	A, minor > and/or scat. Crysta	0	0.00
10	2	Macroveins and Veins	0	0.00
11	3	Veins, Spots or Patches	0	0.00
12	4	Veins, and/or occas. Envelopes	0	0.00
13	5	Veins, and/or abundant Envelop	0	0.00
14	6	P or D Less Than <, S, and E	0	0.00
15	7	P or D Equal To <, S, and E	0	0.00
16	8	P or D Greater Than <, S and E	0	0.00
17	9	P or D, V, <, S and E	0	0.00
18	<	Microveins, fracture fillings	0	0.00
19	=	MS/CY replaces FX	0	0.00
20	>	Macroveins	0	0.00
21	A	A, cavity fillings	0	0.00
22	B	Blebs	0	0.00
23	C	Coatings & encrustations	0	0.00
24	D	Disseminations, scat. crystals	0	0.00
25	E	Envelopes	0	0.00
26	F	Framework crystals	0	0.00
27	G	Gouge	0	0.00
28	H	Replaced phenocrysts	0	0.00
29	I	Eyes,augen	0	0.00
30	J	Interstitial	0	0.00
31	K	Stockwork	0	0.00
32	L	Laminations/bedded	0	0.00
33	M	Massive	0	0.00
34	N	Nodules	0	0.00
35	O	Spots	0	0.00
36	P	Pervasive	0	0.00
37	Q	Patches, as in quilts	0	0.00
38	R	AGGREGATES	0	0.00
39	S	Selvages	0	0.00
40	T	Stainings, as in tarnish	0	0.00
41	U	Eu-hedral crystals	0	0.00
42	V	Veins	0	0.00
43	W	WHISPS	0	0.00
44	X	K and/or $, M and/or L	0	0.00
45	Y	Dalmationite	0	0.00
46	Z	Massive,Laminated/Bedded	0	0.00

GEOLOG G-SCALE

LINE	G-CODE	G-CODE DESCRIPTION	SYMBOL NUMBER	VALUE
1	"	Clear Field	0	0.00
2	(	.05 to <.2	0	0.10
3	)	.5 to < 2	0	1.00
4	*	.2 to <.5	0	0.30
5	+	2 to < 3	0	2.50
6	-	.02 to <.05	0	0.03
7	.	Trace = <.02	0	0.01
8	/	Est. Impossible	0	0.07
9	0	Nil, Absent	0	0.00
10	1	7 to <15	0	10.00
11	2	15 to <25	0	20.00
12	3	25 to <35	0	30.00
13	4	35 to <45	0	40.00
14	5	45 to <55	0	50.00
15	6	55 to <65	0	60.00
16	7	65 to <75	0	70.00
17	8	75 to <85	0	80.00
18	9	85 to 99	0	90.00
19	=	3 to < 7	0	5.00
20	?	Poss. Present	0	0.00
21	X	Essentially 100%	0	00.00

GEOLOG SIZE-SCALE

LINE	SIZE CODE	SIZE DESCRIPTION	SYMBOL NUMBER	VALUE
1	"	Clear Field	0	0.00
2	0	< .004 mm	0	0.00
3	1	.004 to .016 mm	0	0.01
4	2	.016 to .06 mm	0	0.03
5	3	.06 to .25 mm	0	0.13
6	4	.25 to 1 mm	0	0.51
7	5	1 to 4 mm	0	2.00
8	6	4 to 16 mm	0	8.00
9	7	16 to 64 mm	0	32.00
10	8	64 to 256 mm	0	28.00
11	9	256 to 1 m	0	12.00

GEOLOG $-SCALE: SHAPE

LINE	SHAPE CODE	SHAPE DESCRIPTION	SYMBOL NUMBER	VALUE
1	"	RETURN TO BLANK		
2	B	BLADED		
3	C	COMPACT, CUBIC		
4	E	ELONGATED		
5	F	FLATTENED		
6	I	IRREGULAR		
7	L	LENGTHENED		
8	M	MIXED		
9	P	PLATY		

GEOLOG ROCK CODES

LINE	ROCK CODE	ROCK DESCRIPTION	SYMBOL NUMBER	VALUE
1	AGLM	Agglomerate	1005	0.00
2	AKPH	ANKERITE PHYLLITE	405	0.00
3	AKSS	ANKERITE SERICITE SCHIST	405	0.00
4	AN#F	Andesite flow	1015	0.00
5	ANTF	Andesite, tuff	1011	0.00
6	ARGL	Argillite	1005	0.00
7	ARGR	GRAPHITIC ARGILLITE		0.00
8	ARSL	Argillite, with siltstone	1024	0.00
9	ARSN	Argillite, with sandstone	1025	0.00
10	ASHT	ASH TUFF	408	0.00
11	ASTF	ASH TUFF - ALTERNATE FORM		0.00
12	BASL	Basalt	1034	0.00
13	BRFA	BRECCIA, FAULT		0.00
14	BRHM	Breccia, homolithic (polymicti	1068	0.00
15	BRHT	Breccia, heterolithic	1067	0.00
16	BRQC	Breccia, quartz-carbonate	1065	0.00
17	BRSX	Breccia, sulphide	1075	0.00
18	BRVC	Breccia, volcaniclastic	1080	0.00
19	BRXX	Breccia, general	1051	0.00
20	BS#F	Basalt flow	1078	0.00
21	CAVN	CALCITE VEIN		0.00
22	CDPH	CHLORITE DOLOMITE PHYLLITE	403	0.00
23	CDSH	CHLORITE DOLOMITE SCHIST.		0.00
24	CGCP	Conglomerate, chert pebble	1107	0.00
25	CHBR	CHERT BRECCIA	208	0.00
26	CHER	CHERT	222	0.00
27	CLPH	CHLORITE PHYLLITE		0.00
28	CONG	CONGLOMERATE		0.00
29	CSQS	CHLORITE SERICITE QZ SCHIST	406	0.00
30	CSSH	CHLORITE SERICITE SCHIST	400	0.00
31	DSSH	DOLOMITE SERICITE SCHIST	401	0.00
32	FAUL	Fault (zone)	1154	0.00
33	FETF	MIXED FELSIC TUFFS		0.00
34	FLBR	FAULT BRECCIA		0.00
35	FQXT	FELDSPAR QUARTZ CRYSTAL AST TF		0.00
36	FXTF	FELDSPAR CRYSTAL TUFF		0.00
37	GOUG	GOUGE ZONE - FAULT	303	0.00
38	GSCH	Greenschist	1181	0.00
39	GSTN	Greenstone	1182	0.00
40	GWAC	Graywacke	1184	0.00
41	GWTF	Wacke tuff	1186	0.00
42	INTF	INTERMEDIATE TUFF		0.00
43	LAPL	Lapillistone	1212	0.00
44	LATF	LITHIC ASH TUFF		0.00
45	LBFV	LENSOID BANDED FELSIC VOLCANIC		0.00
46	LIMS	Limestone	1210	0.00
47	LLAT	LAPILLI BEARING ASH TUFF		0.00
48	LLTF	FELSIC LAPILLI TUFF		0.00
49	LOST	Lost core	1208	0.00
50	MFDK	MAFIC DYKE		0.00
51	MSPY	MASSIVE PYRITE	331	0.00
52	MSSU	Massive sulphates	1233	0.00
53	MSSX	Massive sulphides	1234	0.00
54	MTSD	Metasediments, general	1239	0.00
55	MXTF	MAFIC CRYSTAL TUFF		0.00
56	OVER	Overburden	407	0.00

GEOLOG ROCK CODES

LINE	ROCK CODE	ROCK DESCRIPTION	SYMBOL NUMBER	VALUE
57	PEB.	Pebbles, overburden	1267	0.00
58	PHYL	Phyllite	1290	0.00
59	PQVN	PYRITE-QUARTZ VEIN	233	0.00
60	PSLT	PYRITIC SILTITE		0.00
61	PYCH	PYRITIC CHERT		0.00
62	PYST	PYRITIC SILTITE (MUDDY TUFF)		
63	PYVN	PYRITE VEIN		0.00
64	QAVN	QUARTZ ANKERITE VEIN		0.00
65	QCVN	QUARTZ CALCITE VEIN	301	0.00
66	QDVN	QUARTZ DOLOMITE VEIN	301	0.00
67	QSSH	QUARTZ SERICITE SCHIST	404	0.00
68	QZPH	Quartz phyllite	1301	0.00
69	QZVN	Quartz vein, alternative form	1294	0.00
70	RBCH	RIBBON BANDED CHERT		0.00
71	SAND	Sandstone	1328	0.00
72	SCH#	Schist	1325	0.00
73	SCHS	Schist, alternative form	1335	0.00
74	SDSH	SERICITE DOLOMITE SCHIST		0.00
75	SECH	SERICITIC CHERT	223	
76	SESH	SERICITE SCHIST	319	0.00
77	SETF	SERICITIC TUFF		0.00
78	SHAL	Shale	1335	0.00
79	SILT	Siltstone	1333	0.00
80	SLAT	Slate	1343	0.00
81	SMPY	SEMI-MASSIVE PYRITE	127	0.00
82	SMSX	SEMI-MASSIVE SULPHIDES GEN	127	0.00
83	STWK	STOCKWORK	321	0.00
84	SULF	Sulphide	1349	0.00
85	TFLP	Tuff, lapilli	1383	0.00
86	TFWL	Tuff, welded	1387	0.00
87	TFXL	Tuff, crystal lapilli	1370	0.00
88	TFXT	Tuff, crystal	1374	0.00
89	TUFF	Tuff	1378	0.00
90	VEIN	Vein	1397	0.00
91	XATF	CRYSTAL ASH TUFF		0.00
92	XLAT	CRYSTAL LITHIC ASH TUFF		0.00

GEOLOG TEXTURE CODES

LINE	TEXTURE CODE	TEXTURE DESCRIPTION	SYMBOL NUMBER	VALUE
1	"	Clear Field	0	0.00
2	$T	SHEETED		
3	<<	Microveined	0	0.00
4	>>	Macroveined	0	0.00
5	A*	Amygdaloidal	0	0.00
6	BD	Bedded	0	0.00
7	BN	Banded	0	0.00
8	BR	Brecciated	0	0.00
9	BT	Botryoidal	0	0.00
10	CG	COARSE GRAINED		
11	CH	CHAOTIC TEXTURE		
12	CK	COCKSCOMB TEXTURE IN VEIN		
13	CL	CLASTIC TEXTURED		
14	CS	Closed-structured	0	0.00
15	CT	Clastic	0	0.00
16	DF	Drag-folded	0	0.00
17	EL	ELONGATE FRAGMENTS		
18	EQ	Equigranular	0	0.00
19	EU	EUHEDRAL CRYSTALS		
20	F$	Fissile	0	0.00
21	FB	Flow banded	0	0.00
22	FD	FOLDED		
23	FG	FINE GRAINED		
24	FO	Foliated	0	0.00
25	FR	Fragmental	0	0.00
26	GB	GRADED BEDDED		
27	GL	Granulose	0	0.00
28	GY	Greasy, sectile	0	0.00
29	HO	Homogeneous	0	0.00
30	HT	Heterogeneous	0	0.00
31	IB	Interbedded	0	0.00
32	IG	INTERGROWN		
33	IN	INTERSTITIAL MINERALIZATION		
34	KB	KINK BANDED		
35	LB	LENSOID BANDED		
36	LM	Laminated	0	0.00
37	LN	Lenticular	0	0.00
38	MF	MODERATELY WELL FOLIATED		
39	MT	MOTTLED		
40	MX	Massive	0	0.00
41	ND	Nodular	0	0.00
42	OS	Open-structured	0	0.00
43	PA	Patchy	0	0.00
44	PB	PORPHYROBLASTIC		
45	PH	Phyllitic	0	0.00
46	PI	Pisolitic, pea-like	0	0.00
47	PM	POLYMICTIC		
48	PO	PORPHYRYTIC		
49	RB	Ribbon-like, banded	0	0.00
50	RT	RETICULATE VEINED		
51	RW	Reworked	0	0.00
52	RX	RECRYSTALLIZED		
53	SA	SANDY		
54	SC	Schistose	0	0.00
55	SH	SHATTERED		
56	SL	Slaty	0	0.00

GEOLOG TEXTURE CODES

LINE	TEXTURE CODE	TEXTURE DESCRIPTION	SYMBOL NUMBER	VALUE
57	SM	SEMI-MASSIVE		
58	SP	SPOTTED		
59	SW	Stockworked	0	0.00
60	VG	Vuggy	0	0.00
61	VS	Vesicular	0	0.00
62	VV	Veined	0	0.00
63	WB	WEAKLY BEDDED		
64	WF	WEAKLY FOLIATED		
65	WL	Welded	0	0.00
66	XA	CRYSTAL AGGREGATES		
67	XB	Cross-bedded	0	0.00
68	XC	Cross-cutting	0	0.00

GEOLOG TYPIFYING MINERALS

LINE	MINERAL CODE	ROCK DESCRIPTION	SYMBOL NUMBER	VALUE
1	"	Clear Field	0	0.00
2	AB	Albite	0	0.00
3	AH	Anhydrite	0	0.00
4	AK	ANKERITE		
5	AL	Alunite	0	0.00
6	AS	Arsenopyrite	0	0.00
7	AX	AMPHIBOLE, GENERAL		
8	AZ	Azurite	0	0.00
9	BA	Barite	0	0.00
10	BI	Biotite	0	0.00
11	BK	Biotite : hornblende	0	0.00
12	BL	BI>HB	0	0.00
13	BM	BI=HB	0	0.00
14	BN	BI<HB	0	0.00
15	C<	CY<MU	0	0.00
16	C=	CY=MU	0	0.00
17	C>	CY>MU	0	0.00
18	CA	Calcite	0	0.00
19	CB	Carbonates, general	0	0.00
20	CD	Chloritoid	0	0.00
21	CE	Cerussite	0	0.00
22	CI	Cuprite	0	0.00
23	CL	Chlorite	0	0.00
24	CP	Chalcopyrite	0	0.00
25	CY	Clay	0	0.00
26	D:	Dolomite : calcite	0	0.00
27	D<	DO<CA	0	0.00
28	D=	DO=CA	0	0.00
29	D>	DO>CA	0	0.00
30	DO	Dolomite	0	0.00
31	EP	EPIDOTE		
32	FL	Fluorite	0	0.00
33	FM	FLUOROMICA		
34	FU	FUCHSITE		0.00
35	FX	FELDSPAR, GENERAL		
36	G:	Galena : sphalerite	0	0.00
37	G<	GL<SL	0	0.00
38	G=	GL=SL	0	0.00
39	G>	GL>SL	0	0.00
40	GD	Gold	0	0.00
41	GL	Galena	0	0.00
42	GO	Goethite	0	0.00
43	GR	Graphite	0	0.00
44	GY	Gypsum	0	0.00
45	H:	Hematite : magnetite	0	0.00
46	H<	HE<MG	0	0.00
47	H=	HE=MG	0	0.00
48	H>	HE>MG	0	0.00
49	HB	HORNBLENDE		
50	JA	Jarosite	0	0.00
51	KF	K-spar, orthoclase	0	0.00
52	LI	Limonite	0	0.00
53	M:	Malachite : azurite	0	0.00
54	M<	MC<AZ	0	0.00
55	M=	MC=AZ	0	0.00
56	M>	MC>AZ	0	0.00

GEOLOG TYPIFYING MINERALS

LINE	MINERAL CODE	ROCK DESCRIPTION	SYMBOL	NUMBER	VALUE
57	MA	Magnesite		0	0.00
58	MC	Malachite		0	0.00
59	MG	Magnetite		0	0.00
60	MI	Micas, general		0	0.00
61	MS	Muscovite-sericite		0	0.00
62	MU	Muscovite		0	0.00
63	PF	PLAGIOCLASE FELDSPAR			
64	PL	Pyrolusite		0	0.00
65	PP	Pyrophyllite		0	0.00
66	PR	Pyrrhotite		0	0.00
67	PY	Pyrite		0	0.00
68	QZ	QUARTZ			0.00
69	RC	Rhodochrosite		0	0.00
70	RN	Rhodonite		0	0.00
71	SD	Siderite		0	0.00
72	SF	Sericite-fluorite assemblage		0	0.00
73	SL	Sphalerite		0	0.00
74	SS	Silver & sulphosalts		0	0.00
75	SU	Sulphates, general		0	0.00
76	SV	Silver		0	0.00
77	SX	Sulphides, general		0	0.00
78	TA	Talc		0	0.00
79	TN	Tennantite		0	0.00
80	TT	Tetrahedrite		0	0.00
81	TX	TT & TN,undif		0	0.00
82	ZI	Zircon		0	0.00

APPENDIX 3

ASSAYS

Eco-Tech
LABORATORIES LTD.

ENVIRONMENTAL TESTING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ASSAYING

10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 2J3 Phone (604) 573-5700
Telex: 048-8393

September 25,1987

CERTIFICATE OF ANALYSIS ETK 87-504

CLIENT: Esso Minerals Canada
1600, 409 Granville Street
VANCOUVER, B.C.
V6C 1T2

ATTENTION: Mr. Jack Marr

SAMPLE IDENTIFICATION: 8 core samples received September 18,1987
PROJECT: KAMAD 107

ETK #	Description	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Ba (%)	As (%)
504- 1	KAM 22 61.25 - 61.40	.05	.8	<0.01	.03	.06	.10	.02
504- 2	61.4 - 61.85	.36	6.2	.01	.1	.07	.12	<0.01
504- 3	61.85 - 63.4	.11	1.1	<0.01	.07	.08	.08	.06
504- 4	121.0 - 121.6	.04	.2	<0.01	.01	.01	.07	.07
504- 5	163.15 - 164.5	<.03	.1	.01	<0.01	.01	.09	<0.01
504- 6	179.4 - 179.5	.04	.8	.02	.04	.04	.09	.01
504- 7	237.2 - 238.7	.04	.2	.01	.06	.12	.14	.01
504- 8	238.7 - 240.0	<.03	.3	<0.01	.01	.02	.08	.02

NOTE: < = less than

ECO-TECH LABORATORIES LTD.
Sonja P. Benischek
B.C. Certified Assayer

Sb/jk
c.c. Jim Oliver
4377 Karindale Road
Site 1, Box 40
R.R. #1
KAMLOOPS, B.C.
V2C 1Z3

Eco-Tech
LABORATORIES LTD.

ENVIRONMENTAL TESTING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ASSAYING

10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 2J3 Phone (604) 573-5700
Telex: 048-8393

October 6,1987

CERTIFICATE OF ANALYSIS ETK 87-527

CLIENT: Esso Minerals Canada
1600, 409 Granville Street
VANCOUVER, B.C.
V6C 1T2

ATTENTION: Mr. Jack Marr

RE: PROJECT KAMAD - #107

SAMPLE IDENTIFICATION: 16 rock samples received September 25,1987

ETK #	Description	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Ba (%)
527 - 1	KAM 23 24.0 - 25.0	.07	2.8	<.01	.15	.20	.02
527 - 2	25.0 - 26.45	.06	2.9	<.01	.10	.11	.02
527 - 3	63.05 - 64.05	.07	4.0	<.01	.06	.48	.03
527 - 4	115.5 - 115.9	.05	2.1	<.01	.01	.03	.0<
527 - 5	129.8 - 131.3	.05	2.0	<.01	<.01	.01	.07
527 - 6	131.3 - 132.8	.06	.7	<.01	<.01	<.01	.03
527 - 7	145.2 - 145.6	.15	.9	<.01	<.01	<.01	.03
527 - 8	149.15 - 150.80	.05	1.8	<.01	.01	<.01	.0<
527 - 9	KAM 24 73.6 - 74.0	.04	1.7	<.01	.01	.10	.06
527 - 10	76.7 - 77.4	.05	.8	<.01	.12	.04	.01
527 - 11	138.6 - 138.9	.04	.8	<.01	.01	<.01	<.01
527 - 12	157.75 - 158.0	<.03	1.1	<.01	<.01	<.01	.02
527 - 13	158.6 - 159.0	.03	1.5	<.01	.04	.03	.01
527 - 14	192.54 - 193.05	.07	2.0	.01	.11	.17	<.01

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Telex: 048-8393

REISSUED: DECEMBER 3, 1987 TO CORRECT DESCRIPTIONS FOR #2 AND #3.

November 18, 1987

CERTIFICATE OF ANALYSIS ETK 87-628

CLIENT: Esso Minerals Canada
1600, 409 Granville Street
VANCOUVER, B.C.
V6C 1T2

ATTENTION: Mr. Jack Marr

RE: PROJECT KAMAD #107 - KAM #25

DEC 02 '87

SAMPLE IDENTIFICATION: 23 core samples received October 29, 1987

ETK #	Description		Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Ba (%)	As (%)
628 - 1	KAM 25	73.0 - 74.0	.10	<.1	.01	.04	.02	.05	<.01
628 - 2	KAM 25	74.0 - 75.0	.07	1.0	.02	.05	.02	.05	<.01
628 - 3	KAM 25	79.0 - 80.0	.11	<.1	.01	.04	.02	.04	.02
628 - 4	KAM 25	80.0 - 81.0	.06	<.1	<.01	.04	.14	.06	<.01
628 - 5	KAM 25	81.0 - 82.5	.06	<.1	<.01	.01	.01	.05	<.01
628 - 6	KAM 25	82.5 - 84.0	.07	<.1	<.01	.01	.01	.04	<.01
628 - 7	KAM 25	84.0 - 85.5	.10	<.1	<.01	.06	.07	.05	<.01
628 - 8	KAM 25	85.5 - 86.5	.07	<.1	<.01	.08	.07	.05	<.01
628 - 9	KAM 25	93.0 - 94.0	.09	3.1	.03	.44	.86	.05	.04
628 - 10	CAN 5	10.5 - 12.0	.07	2.1	.03	.01	.05	.07	.05
628 - 11	CAN 5	26.4 - 27.9	.07	1.2	.01	<.01	.01	.03	<.01
628 - 12	CAN 5	27.9 - 29.0	.06	1.3	<.01	<.01	.01	.02	<.01
628 - 13	CAN 5	56.7 - 57.7	.51	2.1	.01	.02	.03	.12	.12
628 - 14	CAN 5	57.7 - 58.7	.38	3.1	.01	.02	.02	.08	.25
628 - 15	CAN 5	58.7 - 59.7	.58	1.0	.01	.01	.03	.10	.10
628 - 16	CAN 5	59.7 - 60.7	.54	2.1	.01	.02	.04	.05	.20
628 - 17	CAN 5	111.5 - 112.	.04	<.1	<.01	<.01	.01	.03	.01
628 - 18	CAN 5	112.5 - 113.	.06	1.2	.03	.07	.13	.03	.02
628 - 19	CAN 5	113.5 - 114.	.06	2.0	.02	.03	.09	.05	.03
628 - 20	CAN 5	138.5 - 139.	.05	1.3	.01	<.01	.01	.12	.06
628 - 21	CAN 6	88.7 - 90.2	.06	<.1	.01	<.01	.02	.04	.09
628 - 22	CAN 6	159.5 -	.05	1.2	.01	<.01	.02	.02	.11
628 - 23	BC 1		.08	3.5	<.01	.01	.01	.04	.03

NOTE: < = less than

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October 24, 1987

CERTIFICATE OF ANALYSIS ETK 87-576

CLIENT: Esso Minerals Canada
1600, 409 Granville Street
VANCOUVER, B.C.
V6C 1T2

ATTENTION: Mr. Jack Marr

RE: PROJECT: K A M A D - #107

SAMPLE IDENTIFICATION: 18 rock samples received October 13, 1987

ETK #	Description	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Ba (%)	As (%)
K A M A D								
576 - 1	27.0 - 27.9	.10	.4	.01	.04	.05	.02	.09
576 - 2	27.9 - 28.1	.14	2.1	.04	.39	.55	.02	.08
576 - 3	28.1 - 29.1	.09	.3	.01	.02	.02	.01	.11
576 - 4	29.1 - 30.3	.08	.2	.01	.02	.02	.02	.08
576 - 5	30.3 - 31.6	.09	.1	.01	.02	.02	.04	.07
576 - 6	62.0 - 62.6	.10	.1	<.01	.02	.02	.04	.08
576 - 7	84.4 - 84.8	.13	7.1	.05	1.50	9.30	.05	.05
576 - 8	84.8 - 86.55	.09	.6	<.01	.07	.04	.04	.04
576 - 9	86.55 - 87.4	.15	2.0	.02	.14	.56	.02	.10
576 - 10	87.4 - 88.9	.10	1.3	.01	.11	.17	.03	.08
576 - 11	101.0 - 101.5	.09	.3	<.01	.02	.01	.03	.09
576 - 12	101.5 - 103.0	.11	.7	.03	.10	.17	.04	.06
576 - 13	103.0 - 103.5	.10	.2	.01	.01	.01	.02	.04
576 - 14	103.5 - 104.5	.11	.3	<.01	.01	.01	.56	.02
576 - 15	124.4 - 125.9	.09	.9	.01	.09	.19	.02	.01
576 - 16	125.9 - 127.4	.11	3.6	.02	.44	2.50	.01	.04
576 - 17	127.4 - 128.5	.10	.7	.01	.08	.09	.02	.09
576 - 18	130.0 - 130.3	.12	30.8	.67	1.90	2.30	.01	.07

NOTE: < = less than

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Telex: 048-8393

November 27, 1987

CERTIFICATE OF ANALYSIS ETK 87-686

CLIENT: Esso Minerals Canada
1600, 409 Granville Street
VANCOUVER, B.C.
V6C 1T2

ATTENTION: Mr. Jack Marr

RE:

SAMPLE IDENTIFICATION: 12 rock samples received November 20, 1987

ETK #	Description		Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Ba (%)	As (%)
686 - 6	KAM 27	26.0 - 26.4	.13	5.5	.05	.97	1.27	.03	<.01
686 - 7		30.0 - 30.7	.09	2.4	.02	.58	.53	.08	.03
686 - 8		40.0 - 46.5	.03	2.7	.01	.19	.29	.34	.07
686 - 9		120.0 - 121.05	.05	.6	.01	.03	.04	.25	<.01
686 - 10		121.5 - 122.4	.04	.3	.01	.01	.01	.31	.03
686 - 11		129.25 - 139.35 ?	.04	<.1	<.01	<.01	<.01	.15	<.01
686 - 12		191.2 - 191.5	.03	26.5	.17	4.40	1.13	<.01	.05

NOTE: < = less than
SAMPLE #11 - COULD NOT READ TAG

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Telex: 048-8393

November 18, 1987

CERTIFICATE OF ANALYSIS ETK 87-596

CLIENT: Esso Minerals Canada
1600, 409 Granville Street
VANCOUVER, B.C.
V6C 1T2

NOV 23. 87
VANCOUVER

ATTENTION: Mr. Jack Marr

RE: PROJECT KAMAD #107 - KAM #28

SAMPLE IDENTIFICATION: 14 core samples received October 19, 1987

ETK #	Description	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Ba (%)
596 - 1	42.5-43.5	<.03	1.2	.01	.01	.03	.04
596 - 2	115.6-116.6	<.03	3.3	<.01	.01	.02	.13
596 - 3	116.6-117.6	.03	3.5	<.01	.01	.02	.16
596 - 4	117.6-118.6	.03	3.8	<.01	.02	.05	.12
596 - 5	118.6-119.6	.03	3.8	.01	.03	.05	.12
596 - 6	120.6-121.6	<.03	2.1	.01	.02	.02	.13
596 - 7	121.6-122.6	.03	2.1	.01	.02	.01	.14
596 - 8	122.6-123.6	.04	1.6	.01	.02	.01	.13
596 - 9	123.6-124.6	.04	.5	.01	.02	.01	.12
596 - 10	124.6-125.6	<.03	<.1	<.01	.01	.01	.14
596 - 11	183.7-184.7	<.03	.7	.01	.10	.16	.08
596 - 12	215.7-216.7	<.03	1.7	.05	.15	.50	.06
596 - 13	254-254.5	.10	9.6	.05	.13	.80	.11
596 - 14	119.6-120.6	<.03	<.1	.01	.01	.02	.14

NOTE: < = less than

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Telex: 048-8393

November 18, 1987

CERTIFICATE OF ANALYSIS ETK 87-595

CLIENT: Esso Minerals Canada
1600, 409 Granville Street
VANCOUVER, B.C.
V6C 1T2

...ED
...RALS
NOV 2 3. 87
...UVER

ATTENTION: Mr. Jack Marr

RE: PROJECT KAM 29

SAMPLE IDENTIFICATION: 10 core samples received October 18, 1987

ETK #	Description	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Ba (%)
595 - 1	77.0-77.5	<.03	5.2	.01	.02	.03	.07
595 - 2	138.5-139.5	<.03	1.5	.02	.28	.26	.07
595 - 3	151.0-152.0	<.03	.4	<.01	.07	.12	.08
595 - 4	152.0-153.0	<.03	3.6	<.01	.02	.01	.10
595 - 5	153.0-154.0	<.03	<.1	<.01	.03	.06	.09
595 - 6	154.0-155.0	<.03	2.1	.01	.02	.04	.05
595 - 7	155.0-156.0	<.03	1.8	<.01	.01	.01	.10
595 - 8	172.0-172.5	<.03	1.8	<.01	.01	.01	.09
595 - 9	195.75-196.25	<.03	11.3	.04	.14	.79	.06
595 - 10	215.5-217.0	<.03	2.1	<.01	.01	.01	.14

NOTE: < = less than

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Telex: 048-8393

November 18, 1987

CERTIFICATE OF ANALYSIS ETK 87-627

CLIENT: Esso Minerals Canada
1600, 409 Granville Street
VANCOUVER, B.C.
V6C 1T2

ESS
NOV 23 87
VANCOUVER

ATTENTION: Mr. Jack Marr

RE: PROJECT KAMAD #107 - KAM 30

SAMPLE IDENTIFICATION: 12 core samples received October 29, 1987

ETK #	Description		Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Ba (%)	As (%)
627 - 1	KAM 30	30.9 - 31.9	.06	2.0	<.01	.22	.01	.10	<.01
627 - 2	KAM 30	33.0 - 34.0	.08	2.1	.02	.10	.24	.06	<.01
627 - 3	KAM 30	34.0 - 35.0	.10	1.2	.01	.06	.10	.05	<.01
627 - 4	KAM 30	36.2 - 37.2	.06	1.3	<.01	.04	.09	.16	<.01
627 - 5	KAM 30	44.4 - 45.4	.09	2.1	.02	.27	.32	.06	<.01
627 - 6	KAM 30	45.4 - 46.4	.08	1.4	.02	.01	.01	.07	<.01
627 - 7	KAM 30	48.0 - 49.0	.05	<.1	<.01	.01	.01	.06	<.01
627 - 8	KAM 30	60.5 - 61.5	.10	1.6	<.01	.03	.07	.07	<.01
627 - 9	KAM 30	61.5 - 62.5	.16	1.3	.01	.19	.16	.06	<.01
627 - 10	KAM 30	88.0 - 89.0	.06	2.2	.01	.07	.32	.05	.02
627 - 11	KAM 30	89.0 - 90.0	.05	1.0	<.01	.02	.03	.05	.03
627 - 12	KAM 30	97.5 - 98.5	.06	1.0	.01	.07	.10	.04	<.01

NOTE: < = less than

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APPENDIX 4

STATEMENT OF COSTS

STATEMENT OF COSTS

GEOLOGY:

Labour:		
Project Geologist - 60 days @ $245/day		$ 14,700.00
Geologist - 20 days @ $135/day		$ 2,700.00
Assistant - 30 days @ $80/day		$ 2,400.00

DRILL SITE CONSTRUCTION:

Blasting		$ 7,750.42
Road Construction		$ 27,960.00

DRILLING:

KAM22 - 247.5 m @ $54.56/m	$ 13,503.60	
KAM23 - 44.2 m @ $54.56/m	$ 2,411.65	
KAM23A - 263.0 m @ $54.56/m	$ 14,349.90	
KAM24 - 206.0 m @ $54.56/m	$ 11,239.85	
KAM25 - 187.4 m @ $54.56/m	$10,224.99	
KAM26 - 144.5 m @ $54.56/m	$ 7,884.26	
KAM27 - 202.7 m @ $54.56/m	$ 11,059.79	
KAM28 - 260.9 m @ $54.56/m	$ 14,235.32	
KAM29 - 273.1 m @ $54.56/m	$ 14,900.98	
KAM30 - 135.6 m @ $54.56/m	$ 7,398.66	
		$107,209.00

ASSAYS:

(Au,Ag,Cu,Pb,Zn,Ba and As) 97 samples @ $35.25/sample	$ 3,419.25

LOGISTICS:

Meals and Groceries	$ 2,007.16
Supplies and Equipment	$ 1,050.41
Accommodation	$ 1,088.50
Vehicle Rental	$ 2,213.00
Fuel and Maintenance	$ 1,038.88
TOTAL COSTS	$173,536.62

APPENDIX 5

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, David R. Heberlein, of 821 Pinemont Avenue, Port Coquitlam, in the Province of British Columbia, do hereby certify that:

1. I am a Geologist in the employment of Esso Resources Canada Limited of 1600 - 409 Granville Street, Vancouver, British Columbia.

2. I am a Graduate of the University of Southampton, England with a Bachelor of Science (Honours) Degree in Geology (1980).

3. I am a Graduate of the University of British Columbia with a Master of Science Degree in Geology (1985).

4. I am a Fellow of the Geological Association of Canada (F5050).

5. I have been employed as a contract and full-time geologist in Mineral Exploration since my graduation in 1980.

6. I personally supervised the field work summarized in this report.

7. I have no financial interest in the property described herein.

DATED THIS 11 DAY OF December, 1987 AT VANCOUVER, B.C.

D.R. Heberlein, Project Geologist

GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,701

REVISIONS

By	Date	Approv. By

ESSO MINERALS CANADA

KAMAD PROJECT
HOMESTAKE BLUFFS
1987 DRILL HOLE LOCATIONS

SCALE 1:5000

0 100 200 300 400 metres

To accompany a report by D. Heberlein

Project No:	107	Report No:	c.601
Mining Div:	Kamloops	NTS:	82M/4W
Survey By:		Drafted By:	
Date:	Dec. 1987	Map No:	1