093L/07
HD Claims

821279

CORPORATION FALCONBRIDGE COPPER

6415 - 64th Street
Delta, B.C., Canada V4K 4E2
Telephone (604) 946-5451

October 30, 1986

Mr. W. Moll
P. O. Box
Houston, B. C.

Dear Mr. Moll;

Thank you for your package of maps, reports and rocks (herewith returned) regarding your Hilltop/HD property located north of Houston, B. C. There appear to be some interesting showings on the property which deserve to be investigated.

Unfortunately Corporation Falconbridge Copper will not be able to make an offer to participate in the exploration of this property at this time. This is due both to other projects and priorities as well as to the grassroots nature of the HD property. Perhaps some trenching and/or further drilling would help to bring the property to a stage which would be of more interest to us.

Thank you again for the submission and I wish you best of luck with your exploration efforts.

Yours truly,

A. J. Davidson
Exploration Manager
Western Canada

AJD/ik

eldorado

ELDOR RESOURCES LIMITED
2115-11th Street West,
SASKATOON, Saskatchewan

# PROJECT 585
# HD Claims (NTS 93L/7)
# 1985 Field Activities

DECEMBER 1985

R.D. CRUICKSHANK

## SUMMARY

The HD claims (total of 70 units) are located about 5 km north of the town of Houston, B.C. The area is underlain principally by felsic pyroclastic rocks of the Telkwa Formation (Hazelton Group, Jurassic). A number of copper-silver and zinc-lead showings are present. The copper-silver showings are small, fracture-controlled, and probably uneconomic. The zinc occurs principally as veins and disseminations, but in at least one place is in a chert horizon. Eldor Resources Limited decided to option the claims (commencing in 1984), in order to investigate the possibilty of locating a volcanic exhalative mineral deposit.

Work in the fall of 1984 consisted of a topographic survey, and sampling of all of the major zinc showings. This report discusses field work conducted in the summer of 1985, comprising a gravity survey, geological mapping, the completion of two short Winkie drill holes, and limited soil geochemistry, VLF-EM, and SP surveys.

Further evidence of volcanigenic deposits was not located. The principal alteration effects are silicification and carbonitization, rather than the necessary argillic type. Very little chert is present in the area, and only the one chert-related zinc showing has been located. The two most prominent gravity anomalies were checked by detailed soil geochemistry, VLF-EM, and SP; and one anomaly was tested by two shallow drill holes: it was determined that these phenomena are not related to zinc mineralization.

It is recommended that the property be relinquished, as the type of deposit being sought is unlikely to be present in the survey area.

eldorado

ELDOR RESOURCES LIMITED
2115-11th Street West,
SASKATOON, Saskatchewan

PROJECT 585
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## APPENDICES

# I. INTRODUCTION

The centre of the Hilltop-HD claim group is located on Mt. Harry Davis, about 5 km north of the town of Houston, B.C. (Figure 1). Access to the area is provided by a road which leads to radio towers and an M.O.T. facility on top of the mountain. The road is easily accessible to two-wheel drive vehicles. Elevations on the property range from about 670 metres to about 1280 metres. Northern and eastern slopes of the mountain are very steep, but elsewhere gentler slopes predominate. Most of the area is forested, and no part of the group extends above timberline.

The property consists of five modified grid claims, as shown on Figure 1 and listed in Table 1. The HD 1 to 4 claims were staked over the pre-existing Hilltop claim.

TABLE 1
MINERAL CLAIMS

| Claim Name | No. of Units | Date Recorded | Record No. |
|---|---|---|---|
| Hilltop | 4 | 17 Nov. 1977 | 856 |
| HD-1 | 15 | 21 April 1982 | 4564 |
| HD-2 | 20 | 21 April 1982 | 4565 |
| HD-3 | 15 | 21 April 1982 | 4566 |
| HD-4 | 20 | 21 April 1982 | 4567 |

Eldor Resources Limited is the registered owner of these claims, which are being explored under the terms of an option agreement with Mr. J.W. Moll, Mr. D. Merkley, and Mrs. G. Merkley, all of Houston, B.C.

Mt. Harry Davis has been prospected by many individuals and companies over a period of several decades. The Hilltop-HD property was formerly optioned by the Endako Mines Division of Placer Development Limited. Some of their results have been reported in Bulmer and Peters (1981), and Bulmer, Peters, and Buckley (1982). Tipper (1976) shows the claims area to be underlain by volcanic rocks of the Telkwa Formation

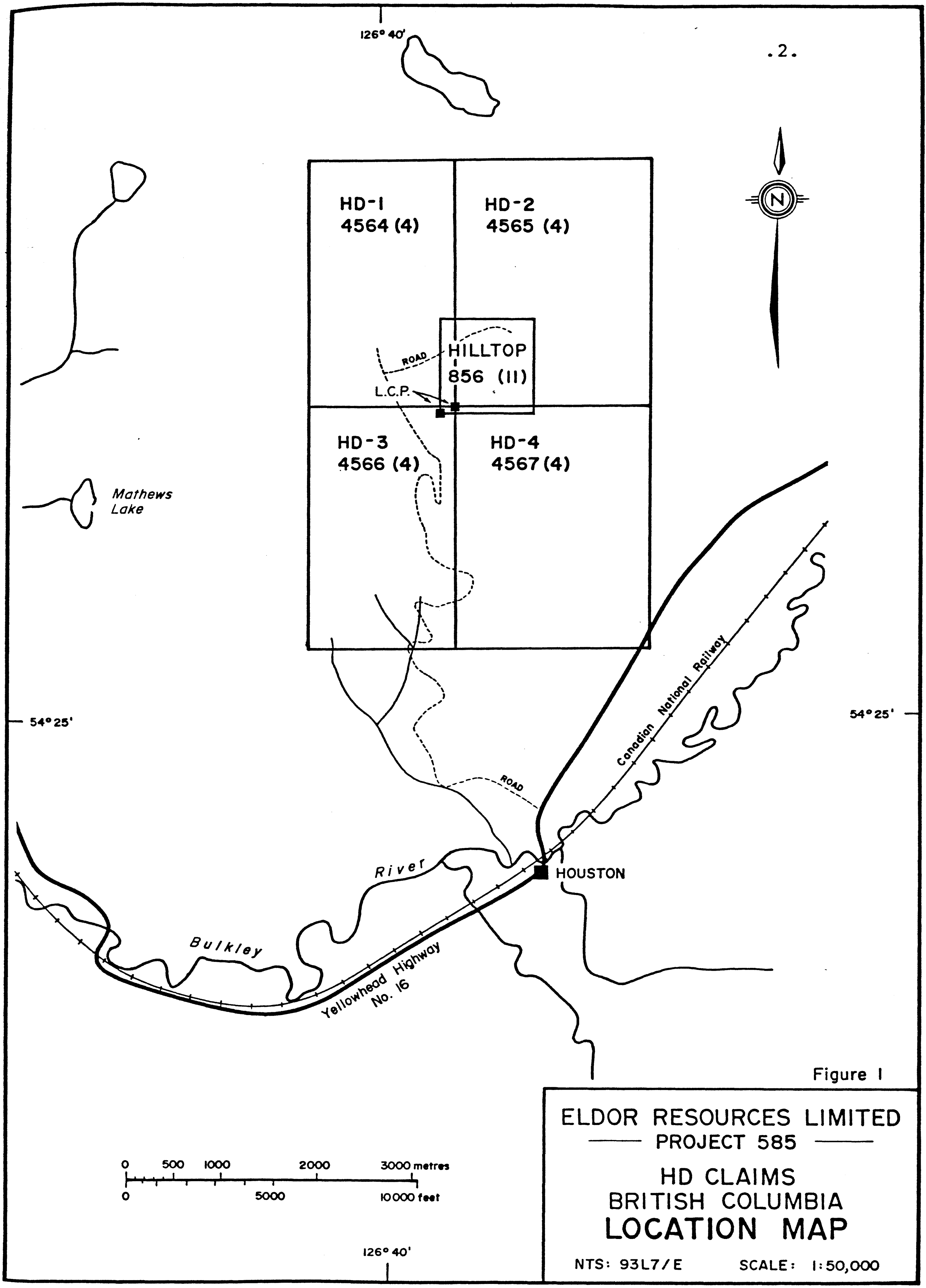


Figure 1

ELDOR RESOURCES LIMITED

PROJECT 585

HD CLAIMS
BRITISH COLUMBIA

LOCATION MAP

NTS: 93L7/E SCALE: 1:50,000

(oldest part of the Jurassic Hazelton Group). The mountain is underlain principally by pyroclastic rocks of rhyolitic composition; lesser quantities of intermediate to mafic volcanics, and some related intrusive rocks also occur. Most previous exploration activity was attracted by fracture-controlled copper-silver occurrences. Some zinc-lead showings are also present; the appearance of some of these suggested a stratabound, volcanogenic origin, and led to Eldor's interest in the property. The present Eldor grid was designed to cover only the area of known zinc occurrences.

Work in 1984 consisted of a property inspection, (Cruickshank, 1984a), a topographic survey (Cruickshank, 1984b), and sampling of known occurrences (Cruickshank, 1985a). The topographic survey was performed in order to provide control for a proposed gravity survey. Cruickshank (1985b) is a detailed analysis of the economic and gravity models, and the likely effectiveness of the gravity survey.

The 1985 field work consisted of a gravity survey (9.5 km at 10 m intervals); geological mapping at a scale of 1:2,000 (about 3.8 $km^2$); follow-up of two gravity anomalies with SP, VLF-EM, and soil sample surveys; limited additional rock sampling; and the completion of two short, "Winkie", diamond drill holes (total 45.8 m). All activities except drilling were conducted in the period June 20 to July 16, 1985; drilling was undertaken from August 22 to 26, 1985. Eldor personnel on the job consisted of P. Gudjurgis (geophysicist), who conducted the gravity survey and all pertinent calculations; and R.D. Cruickshank (project geologist) who handled all other tasks (with geophysical advice from P.G.), including drill supervision. The diamond drilling was performed with a Winkie drill and two-man crew, contracted from Van Alphen Exploration Services of Smithers, B.C.

Geological mapping and gravity surveying were conducted on all four HD claims (HD1, 2, 3, 4). One drill hole was completed on each of HD3 and HD4.

## II. GEOLOGY

1. Regional Geology: Bedrock in the HD area is part of the Telkwa Formation (Lower Jurassic age), which is the lowest formation of the Hazelton Group. The Telkwa Formation consists of volcanic and sedimentary rocks related to island arc volcanism. Tipper and Richards (1976) assign rocks in the HD area to the "Babine Shelf Facies", which are transitional from non-marine volcanic rocks that underlie the Telkwa Range, 40 km to the west, to thick deposits of marine rocks in the vicinity of Babine Lake, some 50 km to the northeast. Rocks of the Babine Shelf Facies are described as "calc-alkaline basalt to rhyolite; subaerial and subaqueous flow, breccia, and tuff; limestone, greywacke, siltstone, and shale" (Tipper and Richards, 1976).

### 2. Mineralization

Two principal types of mineralization are present on the property: copper-silver-arsenic, and zinc-lead with enhanced (but uneconomic) gold-silver-moly. The copper-silver-arsenic showings have received almost all of the past exploration activities. At least one shaft was sunk on a copper occurrence in previous decades. Some copper showings have been plotted on the geology map (Figures 3 and 4); many more are present outside of the grid area. It is the author's conclusion that these Cu-Ag-As occurrences are small, fracture-controlled, and unlikely to be economic.

Zinc has several modes of occurrence. In the chert horizon exposed in the area known as the Hilltop Showings (Figure 4), Zn appears to be syngenetic. The chert is dark grey, finely crystalline (median grain size about 50 microns, as seen in thin section), and varies from massive to laminated. Brown, honey-coloured sphalerite occurs as large (to several mm) irregular patches, which conform to the lamination, if present. Largish (1 mm) fluorite inclusions occur within the sphalerite. Discordant quartz or calcite veinlets (both ± sphalerite) are also present. Showings in the Hilltop area which are not hosted by chert are similar to the Switchback Showings (described below), but with more abundant fluorite.

At the Switchback area (Figure 4), zinc occurs in silicified pyroclastic rocks of rhyolitic affinities. In some of these rocks, faint outlines of pyroclasts are visible, and in others, the rock appears massive. Sphalerite occurs as disseminated ragged grains, usually less than 1 mm in diameter, and is usually rimmed by white mica. Rocks here contain a large number of very thin carbonate veinlets, which sometimes carry sphalerite. Secondary carbonate is also scattered through the matrix of these rocks. No thin sections of rocks from the Tower Showing (Figure 3) have been made, but in outcrop it appears similar to the Switchback area. Some rocks in the Tower area are a silicified tectonic breccia.

Zinc occurrences in the Baseline area (Figure 3) are clearly fracture controlled, and range from thin fracture coatings to a large calcite-sulphide vein several decimeters in width. A grab sample from a similar vein at 20+90E on line 32+00N (Figure 4) returned an analysis of about 28% Zn (Table II).

There is, therefore, a transition from apparently syngenetic zinc mineralization in a chert horizon, to clearly epigenetic zinc in quartz and carbonate veins. Disseminated sphalerite occurrences may be related to silicification of felsic pyroclastic and tectonic breccias.

## 3. Geological Mapping

### (a) Introduction

The grid area was mapped at a scale of 1:2000; results are presented in Figures 3 and 4; the legend is included separately as Figure 2. This map covers only that part of the property known to have zinc showings. The designation of volcanic lithologies is based upon appearance in the field, upon petrography and whole rock analyses performed in the winter of 1984-85 (Cruickshank, 1985a), and upon whole rock analyses of a few rocks collected during the summer mapping program (Table II). The legend (Figure 2) is very complete and descriptive, so only a brief description of the various rock units will be included here. The presence of numerous trenches put in by previous explorationists facilitated mapping in poorly exposed areas on the southern part of the grid.

### (b) Lithologies

Most rocks exposed on Mt. Harry Davis belong to the Telkwa Formation of Lower Jurassic age. Virtually all are of volcanic origin.

Chert was found at only two locations, and the two are quite dissimilar. Chert at the Hilltop Showing (discussed previously) is dense, dark grey to almost black in colour, carries moderate to heavy sphalerite mineralization, and varies from massive to laminated. The other chert occurrence, near the east end of line 30+00N (Figure 4) is red, well laminated, contains laminations of felsic ash tuff, and is unmineralized. Chert therefore appears to be very restricted in occurrence. This lithology does not necessarily indicate submarine conditions; exhalative subaqueous cherts can also be present in a predominantly subaerial environment, as reported by Sillitoe, et. al. (1984) from a late Tertiary maar volcano in Papua-New Guinea.

# TABLE II

## WHOLE ROCK
## (Major Oxide)
## Analyses

ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS, VANCOUVER B.C.
PH:(604)253-3158 COMPUTER LINE:251-1011

DATE RECEIVED JULY 18 1985
DATE REPORTS MAILED July 24/85

## GEOCHEMICAL ASSAY CERTIFICATE

SAMPLE TYPE : ROCK - CRUSHED AND PULVERIZED TO -100 MESH.
WHOLE ROCK RESULTS ARE DETERMINED BY ICP FROM .100 GM
SAMPLE FUSED BY LIBO2 AND DISOLVED BY 50 ML 5% HNO3.

ASSAYER V. Saundry . DEAN TOYE OR TOM SAUNDRY. CERTIFIED B.C. ASSAYER

**ELDOR RESOURCES** PROJECT 585 FILE# 85-1450

| SAMPLE | SIO2 % | AL2O3 % | lithology |
|---|---|---|---|
| 22706 | 73.15 | 11.37 | rhyolite lappilli tuff |
| 22707 | 67.27 | 14.42 | dacite porphyry |
| 22708 | 71.91 | 10.76 | rhyolite laminated tuff |
| 22709 | 70.66 | 13.02 | rhyolite ash tuff |
| 22710 | 61.44 | 14.79 | andesitic tuff |
| 22711 | 68.79 | 1.15 | laminated chert |
| 22713 | 66.56 | 14.14 | dacite porphyry |

Jurassic basalt occurs only at the extreme southeast corner of the grid area (Figure 4). Basalt is more common outside of the grid to the south, where it contains other copper showings.

The hematitic tuff unit ("Ht" on the map) is a very distinctive lithology. It is usually noticeably red in colour, and displays bedding, lamination, and/or preferred orientation of pyroclasts. It commonly contains accretionary lapilli. Whole rock analyses indicate that this unit is very siliceous (over 70% silica), and therefore of rhyolitic composition. All outcrops of this unit are polymictic pyroclastic rocks; most are ash or lapilli tuffs. These characteristics generally agree with Tipper and Richards (1976) criteria for sub-aerially-erupted Hazelton rocks. The well-defined bedding and apparent chilling of the outer layers of individual accretionary lapilli may indicate deposition in a lake or shallow sea.

A few beds or lenses of andesitic tuff are present. These are dark green, polymictic rocks in which bedding is occasionally discernable; both ash and lapilli tuffs are present. One whole rock analysis yielded results of about 61% $SiO_2$ and 15% $Al_2O_3$ (Table II), indicating andesitic composition.

Pale rhyolites are the most abundant rocks in the grid area, and are host to most of the zinc showings. A wide variety of sub-units were recognized, as can be seen by reference to the map legend (Figure 2). With few exceptions, these sub-units were not mappable over very great distances. A mappable body of coarse tuff (lapilli tuff and agglomerate) occurs along the north end of the baseline (Figure 3), and aphanitic varieties are locally mappable. Most outcrops are clearly pyroclastic in origin. The massive, aphanitic rocks (Rf) are more problematical, and may include dust tuffs, highly silicified coarser pyroclastics, or sub-volcanic intrusives. Analyses of rocks from this unit always produce $SiO_2$ contents of greater than 70% (Table II).

The dacite porphyry (Dp) is a very distinctive unit of uncertain origin. This rock has an aphanitic, dark grey matrix, with abundant euhedral white feldspar phenocrysts 1 to 2 mm in size. Close inspection of most outcrops also reveals the presence of angular, ash or lapilli-sized lithic fragments. The unit is therefore either a crystal-lithic tuff, or else a porphyry intrusion which contains a great many smallish inclusions. This rock is extremely uniform in appearance wherever found, and never displays bedding or preferred orientation of constituents; for these reasons, the author believes it to be an intrusive porphyry. The silica and alumina content of two rocks from this unit, from widely separated locations, are nearly identical: about 67% $SiO_2$ and 14% $Al_20_3$ (Table II).

Dark green basalt or andesite dykes (unit Bd) are abundant but volumetrically insignificant. They probably belong to the Endako Group of Tertiary age.

Till (unit Q) has been mapped where exposed in road cuts or trenches, and approximate thickness indicated. Overburden is usually thin, being 1 m or less, but attains a maximum of greater than 5 m in a road cut at the extreme south end of the map area. Till in excess of 1 m thick only occurs on lower slopes of the mountain. An unstable slope of continually slumping glacio-fluvial material is present a few hundred metres east of the southern end of the grid.

### c) Alteration

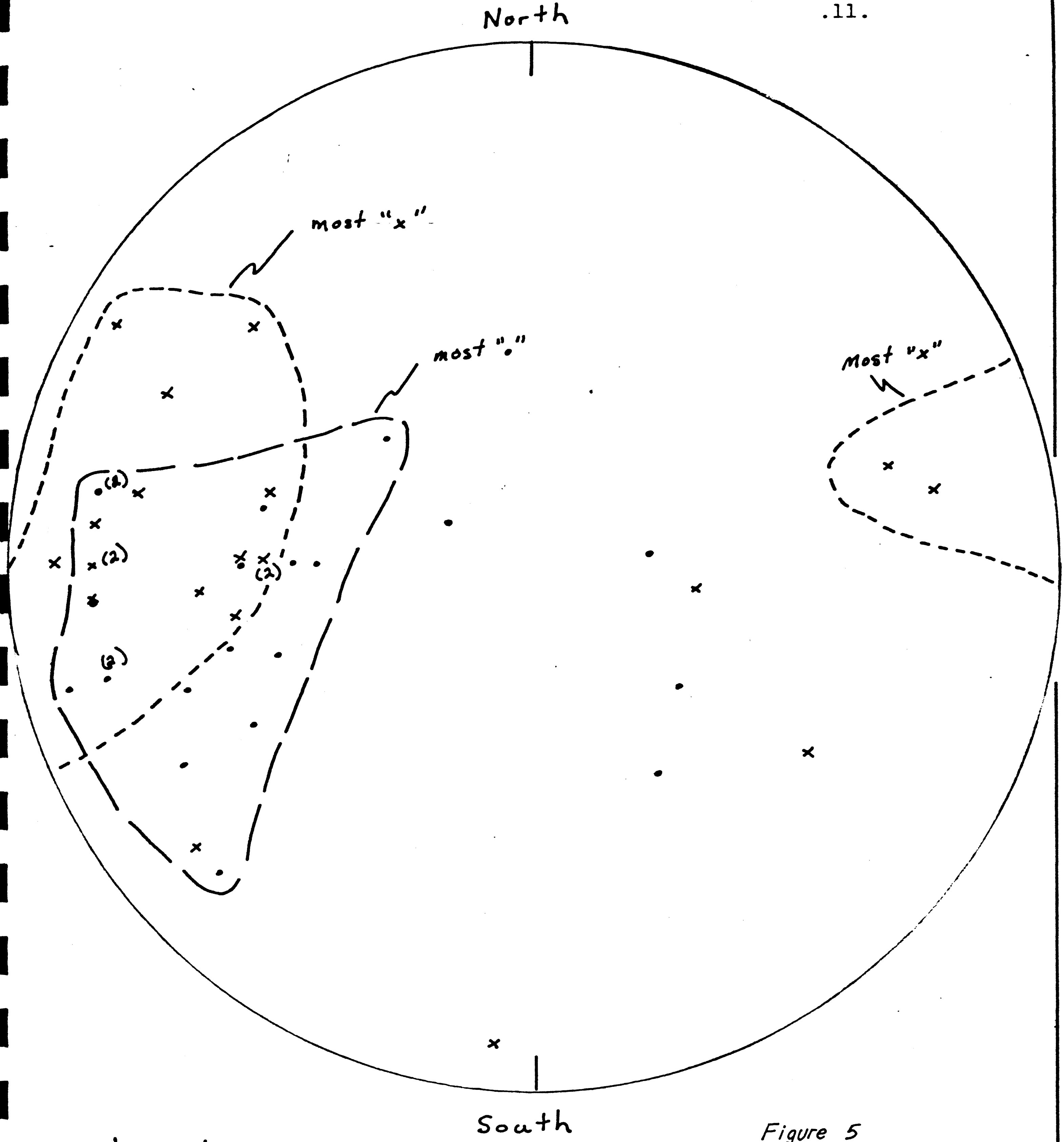
Silicification, and carbonitization (the later accompanied by numerous carbonate veinlets) were observed or inferred to occur at several locations, especially where zinc mineralization was present. However, argillic alteration or chloritization, such as might be expected to accompany volcanogenic massive sulphide deposits, was nowhere observed. Units mapped as chert are believed to be primary, and not due to silicification.

### (d) Structural Geology

Folding is not believed to be important on a property scale. The steep dip of most bedding may have resulted from much larger, regional scale folds. However, minor folding has never been observed in outcrop, and none of the mappable units, when traced along strike, appear to be folded. A stereo plot of poles to bedding, and to preferred clast orientation (Figure 5), does not show the arcuate pattern that would result from concentric folding. Instead, most poles are scattered in an area indicating north to northwest strike, and steep, usually easterly dips. The observed scatter is best explained by relative rotation on faults. A few poles in the centre of the stereonet represent relatively flat-lying beds.

Faults on all scales are the most characteristic structural features on Mt. Harry Davis. Smaller faults observed in outcrop most commonly trend northerly, and dip steeply either east or west (Figure 6). Several such faults are indicated on the map. Fractures in this set are the most common sites for copper or zinc mineralization and carbonate veins.

Two major faults trending about 55° to 60° have been identified. The first crosses the access road at about 23+00N; it is marked by a prominent gully on both sides of the mountain, and is inferred to cut off several mapped lithological units (Figure 4). Drill hole 85HD-1 was drilled in this structure, revealing it to consist of breccia and several generations of quartz veins. The fault zone is several



Legend

Lower hemisphere poles:

- • bedding
- × preferred orientation of pyroclasts

Stereographic (Wulff) Net

Figure 5

PROJECT 585 - HD CLAIMS
BRITISH COLUMBIA

ORIENTATION OF BEDDING SURFACES

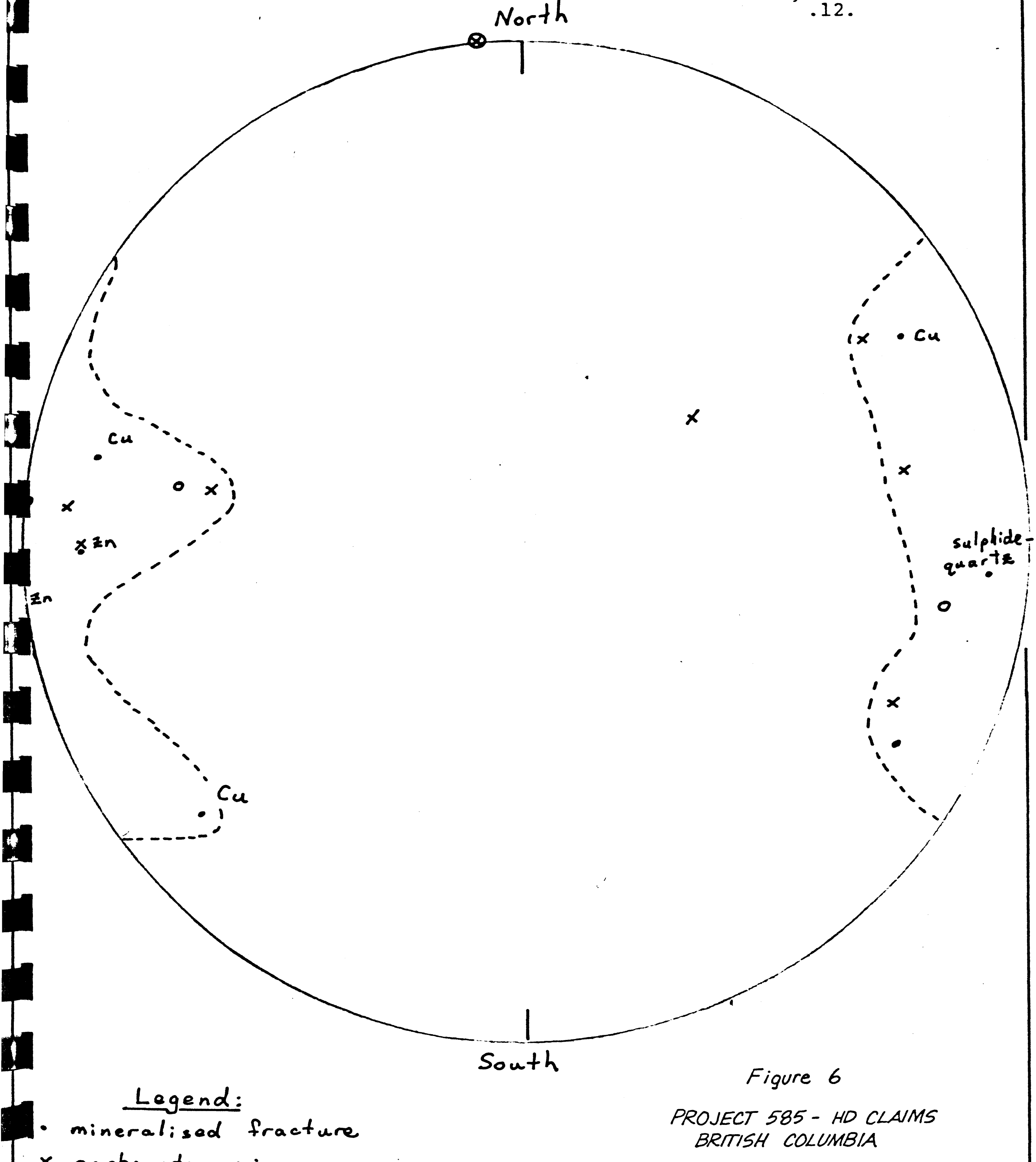


Figure 6

PROJECT 585 - HD CLAIMS
BRITISH COLUMBIA

## ORIENTATION OF FAULTS, VEINS, AND MINERALIZED FRACTURES

Legend:
- • mineralised fracture
- × carbonate vein
- o fault

lower hemisphere poles
Stereographic (Wulff) Net

tens of metres wide. This structure parallels a pronounced deflection in gravity contours (compare Figure 24). No slickensides were observed on any fault surfaces. This is interpreted to be a normal fault. The northern fault, with nearly identical strike, cuts the baseline at about 39+00N (Figure 3). The presence of this northern fault is indicated by the outcrop pattern of the dacite porphyry, and by local topography. Movement on this fault must have been largely vertical, as the dacite porphyry is much wider on the south side than on the north. The presence of two major normal faults in this area must have regional significance.

An extensive area of rocks displaying closely-spaced north-south shear fractures occurs west of the diorite porphyry contact between lines 38+00N and 46+00N.

### (e) Rock Sampling

A number of rock samples were collected during the mapping program. Their locations are indicated on the geology maps, Figures 3 and 4. Most of the known showings had been sampled previously (Cruickshank, 1985a) so that these newer samples were principally collected in order to check on the tenor of mineralization in smaller showings. Results of the 30 element ICP + Au by fire assay - AA analyses are presented in Table III. Most of these samples were composite grab samples; all are from outcrop. Seven rocks were also analyzed for $SiO_2$ and $Al_2O_3$ content, as an aid in determining lithology; these are listed in Table II.

The three highest zinc values shown in the Table (samples 22701, 22704, and 22719), ranging from about 1.5% Zn to about 28% Zn, are all high grade grab samples from carbonate-sphalerite veins. Numbers 22703 (0.5% Zn) and 22705 (0.8% Zn) are rhyolite tuffs from the Baseline Showings

# TABLE III
## Rock Sample Analyses

ACME ANALYTICAL LABORATORIES LTD. 852 E.HASTINGS ST.VANCOUVER B.C. V6A 1R6 PHONE 253-3158 DATA LINE 251-1011

## GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: ROCK CHIPS AU** ANALYSIS BY FA+AA FROM 10 GRAM SAMPLE. HG ANALYSIS BY FLAMLESS AA.

DATE RECEIVED: AUG 28 1985 DATE REPORT MAILED: Aug 30/85 ASSAYER. T. Saundry .DEAN TOYE OR TOM SAUNDRY. CERTIFIED B.C. ASSAYER

ELDOR RESOURCES PROJECT - 585 FILE # 85-2092 PAGE 1

| SAMPLE# | Mo | Cu | Pb | Zn | Ag | Ni | Co | Mn | Fe | As | U | Au | Th | Sr | Cd | Sb | Bi | V | Ca | P | La | Cr | Mg | Ba | Ti | B | Al | Na | K | W | Au** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PPM | PPM | PPM | PPM | PPM | PPM | PPM | PPM | % | PPM | PPM | PPM | PPM | PPM | PPM | PPM | PPM | PPM | % | % | PPM | PPM | % | PPM | % | PPM | % | % | % | PPM | PPB | |
| 22701 | 301 | 868 | 21182 | 283229 | 58.9 | 1 | 6 | 1131 | .69 | 3 | 5 | ND | 1 | 16 | 1803 | 59 | 40 | 3 | 2.75 | .02 | 15 | 1 | .04 | 7 | .01 | 2 | .11 | .01 | .08 | 1 | 140 | |
| 22702 | 4 | 41 | 191 | 3526 | .1 | 1 | 1 | 1297 | 1.05 | 5 | 5 | ND | 3 | 4 | 13 | 2 | 5 | 5 | .23 | .03 | 18 | 2 | .12 | 10 | .01 | 2 | .18 | .09 | .02 | 1 | 3 | |
| 22703 | 9 | 48 | 734 | 5243 | .7 | 3 | 10 | 4650 | 4.04 | 26 | 5 | ND | 1 | 6 | 19 | 2 | 3 | 25 | .11 | .06 | 7 | 4 | .69 | 102 | .01 | 2 | 1.22 | .01 | .14 | 1 | 11 | |
| 22704 | 16 | 16 | 1728 | 15848 | 5.2 | 1 | 2 | 44827 | .65 | 5 | 5 | ND | 2 | 58 | 45 | 2 | 2 | 17 | 25.28 | .01 | 2 | 1 | .30 | 25 | .01 | 2 | .17 | .01 | .01 | 1 | 18 | |
| 22705 | 8 | 44 | 93 | 8526 | .3 | 5 | 5 | 2962 | 1.93 | 2 | 5 | ND | 1 | 24 | 20 | 2 | 7 | 23 | .61 | .04 | 4 | 6 | .56 | 49 | .12 | 2 | .99 | .06 | .06 | 1 | 10 | |
| 22706 | 2 | 5 | 37 | 1543 | .1 | 1 | 3 | 3396 | 1.55 | 2 | 5 | ND | 1 | 9 | 5 | 2 | 2 | 10 | 1.30 | .04 | 13 | 4 | .38 | 196 | .01 | 2 | .72 | .06 | .09 | 1 | 2 | |
| 22707 | 1 | 1 | 24 | 169 | .1 | 3 | 3 | 1568 | 1.93 | 2 | 5 | ND | 1 | 4 | 1 | 2 | 3 | 11 | .70 | .04 | 15 | 4 | .19 | 58 | .01 | 2 | .53 | .04 | .16 | 1 | 1 | |
| 22708 | 5 | 391 | 210 | 388 | 1.1 | 3 | 3 | 1705 | .69 | 225 | 5 | ND | 1 | 19 | 1 | 2 | 2 | 2 | 2.08 | .03 | 15 | 3 | .15 | 224 | .01 | 2 | .21 | .01 | .14 | 1 | 7 | |
| 22709 | 9 | 83 | 1494 | 1281 | .3 | 1 | 4 | 2245 | 1.52 | 11 | 5 | ND | 1 | 8 | 3 | 2 | 3 | 8 | .71 | .03 | 17 | 1 | .16 | 126 | .01 | 2 | .54 | .02 | .21 | 1 | 5 | |
| 22710 | 1 | 2 | 14 | 297 | .1 | 17 | 10 | 3296 | 3.36 | 8 | 5 | ND | 1 | 45 | 1 | 2 | 2 | 46 | 1.42 | .04 | 8 | 43 | 1.01 | 61 | .05 | 3 | 1.51 | .05 | .14 | 1 | 21 | |
| 22711 | 2 | 3 | 27 | 134 | .1 | 6 | 5 | 2893 | 2.62 | 13 | 5 | ND | 3 | 50 | 1 | 7 | 2 | 31 | 6.66 | .03 | 2 | 4 | 1.35 | 12 | .01 | 2 | .06 | .01 | .02 | 1 | 1 | |
| 22712 | 2 | 1 | 18 | 106 | .2 | 2 | 5 | 2416 | 3.07 | 14 | 5 | ND | 2 | 49 | 1 | 7 | 2 | 33 | 6.41 | .02 | 2 | 3 | 1.39 | 28 | .01 | 2 | .05 | .01 | .02 | 1 | 1 | |
| 22713 | 2 | 1 | 13 | 118 | .1 | 4 | 3 | 1609 | 1.84 | 2 | 5 | ND | 1 | 7 | 1 | 2 | 4 | 12 | 1.17 | .04 | 11 | 4 | .19 | 67 | .01 | 2 | .38 | .02 | .12 | 1 | 2 | |
| 22714 | 6 | 9 | 11 | 36 | .1 | 1 | 3 | 471 | .93 | 20 | 5 | ND | 1 | 3 | 1 | 2 | 4 | 1 | .06 | .02 | 8 | 1 | .02 | 118 | .01 | 2 | .19 | .01 | .18 | 1 | 1 | |
| 22715 | 1 | 1 | 2 | 83 | .1 | 3 | 2 | 828 | 1.14 | 5 | 5 | ND | 2 | 2 | 1 | 2 | 2 | 5 | .11 | .02 | 14 | 3 | .18 | 39 | .01 | 2 | .44 | .04 | .12 | 1 | 2 | |
| 22716 | 1 | 1 | 7 | 52 | .1 | 1 | 4 | 475 | 1.68 | 3 | 5 | ND | 1 | 21 | 1 | 2 | 3 | 17 | .26 | .03 | 5 | 4 | .38 | 23 | .10 | 2 | .54 | .06 | .06 | 1 | 1 | |
| 22717 | 2 | 1 | 6 | 97 | .1 | 2 | 3 | 1685 | 1.26 | 4 | 5 | ND | 1 | 6 | 1 | 2 | 3 | 6 | .60 | .04 | 18 | 3 | .15 | 43 | .01 | 2 | .37 | .06 | .04 | 1 | 1 | |
| 22718 | 3 | 28 | 38 | 471 | .1 | 8 | 10 | 4758 | 3.59 | 11 | 5 | ND | 1 | 21 | 1 | 2 | 2 | 45 | 3.27 | .05 | 7 | 12 | .69 | 246 | .02 | 4 | .38 | .05 | .11 | 1 | 1 | |
| 22719 | 16 | 468 | 3484 | 20342 | 5.3 | 16 | 17 | 6077 | 4.84 | 89 | 5 | ND | 1 | 18 | 98 | 2 | 3 | 62 | 3.79 | .06 | 7 | 18 | 1.32 | 66 | .01 | 4 | .49 | .05 | .10 | 2 | 23 | |
| 22725 | 22 | 49 | 1702 | 7051 | .5 | 2 | 4 | 1836 | .86 | 19 | 5 | ND | 2 | 15 | 18 | 5 | 2 | 7 | 3.27 | .03 | 7 | 1 | .16 | 344 | .01 | 2 | 1.37 | .04 | 1.11 | 1 | 10 | 230 |
| 22726 | 325 | 148 | 6371 | 18921 | 9.9 | 2 | 13 | 1089 | 1.22 | 58 | 5 | ND | 1 | 7 | 92 | 28 | 2 | 10 | .17 | .06 | 13 | 3 | .05 | 199 | .01 | 2 | .27 | .02 | .16 | 1 | 14 | 680 |

(Figure 3) with disseminated sphalerite. Besides containing 28% Zn, sample 22701 produced values of 2% Pb, 59 g/tonne Ag, 0.18% Cd, 59 ppm Sb, 40 ppm Bi, and 0.14 g/tonne Au; unfortunately, this sample is from a very narrow vein at 32+00N, 20+85E (Figure 4).

# III. GRAVITY SURVEY

## 1. Rationale

The reasons for choosing the gravity method, calculation of mathematical models, and estimation of errors for this survey have all been discussed at length in a previous report (Cruickshank 1985b). That report concluded as follows:

> "It is concluded that further target definition by geophysical methods is desireable. Gravity is preferable to I.P. or E.M. methods because : (a) the target sphalerite mineralization may not be conductive, and (b) scattered, unrelated, fracture-controlled Cu showings would probably produce spurious anomalies. SP surveys may also be of value.
>
> It is further concluded that the proposed gravity survey has a good chance of discovering an economic zinc orebody if one is present. In fact, the survey as presently envisaged may be somewhat "over-specified", because the station spacing and terrain corrections may be more rigorous than required.
>
> The proposed station spacing is 10 m on profiles that are 200 m apart. This very close interval was selected so that a response from narrow orebodies (10 m or so) could be detected. The 200 m line spacing is reasonable since any orebody that may be present would be of variable width, grade, and depth below surface; therefore this interval increases the chance of discovery. The maximum number of gravity stations would be 2,050; this would be reduced if profiles in the north-east corner of the grid are eliminated because of extreme topography. It is hoped to have all latitude, terrain, free air, and Bouger corrections calculated prior to the field season, in order to expedite the daily data reductions.

It may be argued that calculating the terrain effect of the outer Hammer zones is unnecessary. The effect of these zones on individual profiles would certainly be negligible. However, the grid is large enough (3.8 km long in a north-south direction) that there would be some effect over the area as a whole. The principal reason for calculating the effect of all of the Hammer zones would be to improve the quality of a gravity map of the entire grid. This is admittedly a secondary priority, but as all calculations will be performed by computer, the additional cost would probably not be significant.

Finally, it should be emphasized that the chances of discovering an orebody with gravity methods increase in proportion to the economic value of the deposit. If a near-surface economic orebody occurs in the grid area, it should be detectable."

## 2. Method

All gravity surveying and correction was done by an Eldor Resources Limited geophysicist, P. Gudjurgis. Calculation of terrain corrections was contracted to Geoterrex Limited, of Ottawa, Ontario. Terrain corrections were based upon the topographic survey conducted by Eldor Resources in October, 1984 (Cruickshank, 1984b), and upon a 1:5000 scale topographic map taken from Peters, Bulmer, and Buckley (1982); without such good topographic control, the gravity survey would have been meaningless. Tidal corrections were obtained from the Gravity Division of the Department of Energy, Mines, and Resources in Ottawa.

A gravity base station was established on a rock outcrop near the road junction at about 11+95E, 31+30N. This station was read at the beginning and end of each day. Field procedure was to walk quickly down the line to be surveyed, collecting 5 or 6 readings en route; this established a few points that would have little drift effect among them, and that could be repeated during routine surveying on the return trip. When returning back along the line, stations were read at 10 m intervals. All readings were corrected for scale constant, tripod height, drift, tidal effect, elevation, latitude, Bouger gravity, and terrain. Readings taken on different days were normalized according to base station readings on the respective days. The specific gravity employed in calculation of the Bouger and terrain corrections was 2.60, a value considered representative of unmineralized rhyolite from this area, based on specific gravity determinations conducted the preceding winter (Cruickshank, 1985b). Gravity profiles were hand-plotted in the field.

A LaCoste and Romberg model "G" gravity meter (serial number 333), rented from Enertec Geophysical Services Limited, was employed in this survey. This was a replacement for a similar instrument, rented from a different firm, that was found to create repeatability problems. All data presented here were acquired with number 333.

A total of about 950 gravity stations were read, some of them several times. Repeats were generaly less than .05 mgal. Nails placed in the ground during the elevation survey were nearly always still present; if a nail was missing, then the station was missed. Missing stations on the profiles may be due to this cause, or else because an obviously spurious reading was obtained. Most of these rare spurious values are probably attributable to erroneous terrain corrections. Time was insufficient to survey all grid lines. The southern part of the grid was emphasized because of the presence of more zinc showings, and gentler topography.

## 3. Results

Gravity profiles are presented in Figures 7 to 19; Figure 20 is a stacked profile of all surveyed lines. All gravity values have had 4920 mgal subtracted; ie. a value of 7.90 was 4927.90 mgal in the field calculation. In general, the data are very smooth, indicating that potential sources of error have been controlled properly. All profiles show a gravity gradient trending to lower values to the east, regardless of topography. This reflects a regional trend of lower values to the southeast (Figure 20). Corrected gravity data are included as Appendix I of this report.

This survey was seeking short wave-length anomalies (Cruickshank 1985b). A number of these were detected, and are listed in Table IV. The chert occurrence with Zn mineralization occurs between lines 30+00N and 32+00N; unfortunately neither of these lines showed a related anomaly. Gravity anomalies in proximity to zinc showings are present only on lines 20+00N and 48+00N. The two "definite" anomalies listed in Table IV were selected for further investigation.

Figure 24 is a contour map of gravity data from line 16+00N to line 38+00N. The data from 48+00N and 50+00N were not included because they are rather distant from the rest of the surveyed lines. The contour interval on Figure 24 is 0.20 mgal, which is too broad to show the anomalies that were identified on the profiles (except for the anomaly on line 38+00N). The locations of anomalies listed in Table IV are shown on Figure 24.

## TABLE IV
## HD - POSITIVE GRAVITY ANOMALIES

### Definite Anomalies

| LINE | FROM | TO | PEAK | PEAK AMPLITUDE (mgals) | COMMENTS |
|---|---|---|---|---|---|
| 24N | 16+20E | 17+30E | 16+80 - 17+00E | .20 mgal | near fault |
| 38N | 14+20E | 14+90E | 14+40 - 14+60E | .15 mgal | poss. b/r high? |

### Possible Anomalies

| LINE | FROM | TO | PEAK | PEAK AMPLITUDE (mgals) | COMMENTS |
|---|---|---|---|---|---|
| 18N | 18+50E | 19+20E | 18+80E | .10 mgal | |
| 20N | 15+40E | 16+50E | 16+10E | .10 mgal | switchback Shwg |
| 22N | 14+10E | 14+70E | 14+50E | .10 mgal | near fault |
| 22N | 17+00E | 17+30E | 17+10E | .10 mgal | weak |
| 28N | 16+60E | 17+10E | 16+90E | .10 mgal | very weak |
| 30N | 11+50E | 11+90E? | 11+70E | .15 mgal | 2 bad readings on flank |
| 48N | 18+90E | 19+80E | 19+30E | .10 mgal | near Zn Shwg. |
| 48N | 24+00E | 25+10E | 24+50E | .10 mgal | very weak |

There is a marked regional gravity gradient trending to the east-southeast (Figure 24). This gradient is apparently independent of effects from bedrock strike (Figures 3 and 4) and topography (Figure 23). Whether it represents a genuine regional trend is unknown (it could, for instance, be due to the effect of topography outside of the area considered by the terrain correction).

The few deviations from this regional trend are discussed below:

(1) A marked low on the eastern end of line 32N is flanked by a pair of higher peaks (compare also Figure 15). The line at this location crosses an area of dacite porphyry outcrop (Figure 4). Topography here is very steep; the line runs in a sidehill direction across a south-facing, cliffy hillside. The local terrain effect at this location would be very large, and difficult to account for in the correction procedure. The validity of the data here is therefore somewhat doubtful, and this anomaly could result from a terrain effect.

(2) A small local high is present at the west end of line 24N. Its appearance on the map is due to the arbitrary choice of contours, and its peak amplitude is only 0.09 mgal. This anomaly occurs on a steep hillside which has no outcrop exposures. It could be caused by improper terrain corrections, or by a thinning of the overburden.

(3) A high in the centre of line 24N corresponds to an anomaly identified from the profile (Figure 11), and which is discussed in more detail in Section IV of this report. This anomaly was

tested by shallow drilling, but remains unexplained. The change in trend of contour lines in this area appears to coincide with a major fault recognized by the geological mapping (compare Figures 4 and 24). There is an apparent right-lateral displacement of gravity contours across this fault.

(4) The inflection of the 8.80 to 9.40 contours on line 36N coincides with the assumed location of another major northeasterly-trending fault (compare to Figure 3).

(5) A pronounced high occurs at the eastern end of line 18N. There are number of outcrops in this local area, in a part of the grid that generally is very poorly exposed. It is possible therefore, that this high could result from contrasts in overburden thickness.

## IV. ANOMALY FOLLOW-UP

### 1. Introduction

Two of the gravity anomalies were selected for further investigation. This consisted of prospecting and sampling adjacent outcrops, soil sampling, SP surveys, VLF-EM surveys, and in one instance, diamond drilling.

### 2. Anomaly on Line 38+00N

This anomaly occurs between about 14+20E and 14+90E. This occurs between an outcrop of quartz-rich rhyolite ash tuff to the west, and hematitic lapilli tuff to the east. Neither outcrop displays noticeable alteration, mineralizaton, or structure, and rock samples (numbers 22715 and 22716 on Table III) failed to produce interesting analyses. Soil sample (Figure 21 and Table V) and VLF-EM surveys were also negative, but a weak SP low is present between about 14+10E and 14+70E (Figure 22). In light of these results, it was concluded that no further investigation was justified, and the gravity result remains unexplained.

### 3. Anomaly on Line 24+00N

This anomaly was investigated in a similar manner. Zinc in soil results and soil sample locations are shown in Figure 21, and other analytical results listed in Table V. Results of SP and VLF-EM surveys are shown on Figure 22.

This anomaly, between about 16+30 and 17+20E, occurs in proximity to a major fault zone (Figures 4 and 11), and a smaller anomaly is also present on line 22+00N where crossed by the fault (Figure 10). A zinc showing is present where the fault zone crosses the access road (samples 22718 and 22719, Figure 4 and Table III), and Cu stain was noted on an outcrop immediately to the west of the anomaly (Figure 4).

TABLE V
SOIL SAMPLE
Analyses    Page 1

ACME ANALYTICAL LABORATORIES LTD.
852 E.HASTINGS ST.VANCOUVER B.C. V6A 1R6
PHONE 253-3158    DATA LINE 251-1011

DATE RECEIVED: JULY 18 1985

DATE REPORT MAILED: July 24/85

# GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: P1-2 -80 MESH SOILS P3-ROCKS AU* ANALYSIS BY AA FROM 10 GRAM SAMPLE.

ASSAYER: T. Saundry DEAN TOYE OR TOM SAUNDRY. CERTIFIED B.C. ASSAYER

ELDOR RESOURCES    PROJECT - 585    FILE # 85-1450    PAGE 1

| SAMPLE# | Cu PPM | Pb PPM | Zn PPM | Ag PPM | Cd PPM | Au* PPB |
|---|---|---|---|---|---|---|
| 585-40B-1 | 15 | 26 | 339 | .1 | 1 | 1 |
| 585-40B-2 | 16 | 19 | 222 | .1 | 1 | 1 |
| 585-40B-3 | 11 | 13 | 266 | .1 | 2 | 1 |
| 585-40B-4 | 15 | 10 | 192 | .1 | 1 | 2 |
| 585-40B-5 | 13 | 12 | 111 | .2 | 1 | 2 |
| 585-40B-6 | 10 | 16 | 162 | .1 | 1 | 6 |
| 585-40B-7 | 11 | 11 | 92 | .2 | 1 | 4 |
| 585-40B-8 | 9 | 10 | 95 | .2 | 1 | 4 |
| 585-40B-9 | 11 | 13 | 115 | .1 | 1 | 3 |
| 585-40B-10 | 7 | 5 | 102 | .1 | 1 | 3 |
| 585-40B-11 | 23 | 27 | 331 | .3 | 2 | 2 |
| 585-40B-12 | 27 | 30 | 304 | .2 | 1 | 2 |
| 585-40B-13 | 32 | 14 | 252 | .1 | 1 | 1 |
| 585-40B-14 | 67 | 18 | 494 | .2 | 2 | 2 |
| 585-40B-15 | 15 | 16 | 220 | .1 | 1 | 2 |
| 585-40B-16 | 22 | 19 | 733 | .1 | 1 | 2 |
| 585-40B-17 | 54 | 26 | 1540 | .3 | 6 | 1 |
| 585-40B-18 | 22 | 21 | 439 | .1 | 1 | 1 |
| 585-40B-19 | 121 | 39 | 480 | .2 | 2 | 2 |
| 585-40B-20 | 14 | 10 | 248 | .1 | 1 | 1 |
| 585-40B-21 | 87 | 22 | 226 | .1 | 1 | 2 |
| 585-40B-22 | 42 | 9 | 93 | .1 | 1 | 3 |
| 585-40B-23 | 9 | 14 | 167 | .1 | 1 | 6 |
| 585-40B-24 | 11 | 11 | 153 | .1 | 1 | 3 |
| 585-40B-25 | 11 | 13 | 179 | .1 | 1 | 2 |
| 585-40B-26 | 67 | 14 | 344 | .1 | 1 | 3 |
| 585-40B-27 | 11 | 11 | 189 | .1 | 1 | 2 |
| 585-40B-28 | 39 | 22 | 266 | .1 | 1 | 3 |
| 585-40B-29 | 17 | 16 | 336 | .1 | 2 | 2 |
| 585-40B-30 | 14 | 15 | 289 | .1 | 1 | 2 |
| 585-40B-31 | 12 | 12 | 100 | .1 | 1 | 2 |
| 585-40B-32 | 14 | 12 | 184 | .1 | 1 | 3 |
| 585-40B-33 | 11 | 10 | 52 | .1 | 1 | 1 |
| 585-40B-34 | 11 | 10 | 62 | .1 | 1 | 2 |
| 585-40B-35 | 16 | 8 | 111 | .1 | 1 | 2 |
| 585-40B-36 | 11 | 10 | 99 | .1 | 1 | 2 |
| STD C/AU 0.5 | 58 | 41 | 135 | 7.2 | 17 | 485 |

## TABLE V
## SOIL SAMPLE
## Analyses

Page 2

**ELDOR RESOURCES** PROJECT - 585 FILE # 85-1450

| SAMPLE# | Cu PPM | Pb PPM | Zn PPM | Ag PPM | Cd PPM | Au* PPB |
|---|---|---|---|---|---|---|
| 585-40B-37 | 13 | 15 | 87 | .2 | 1 | 1 |
| 585-40B-38 | 17 | 15 | 113 | .3 | 1 | 1 |
| 585-40B-39 | 10 | 20 | 91 | .1 | 1 | 2 |
| 585-40B-40 | 10 | 16 | 117 | .1 | 1 | 1 |
| 585-40B-41 | 16 | 15 | 150 | .2 | 1 | 1 |
| 585-40B-42 | 8 | 10 | 52 | .2 | 1 | 2 |
| 585-40B-43 | 10 | 15 | 102 | .2 | 1 | 1 |
| 585-40B-44 | 16 | 13 | 108 | .1 | 1 | 1 |
| 585-40B-45 | 17 | 17 | 101 | .1 | 1 | 2 |
| 585-40B-46 | 8 | 15 | 62 | .1 | 1 | 3 |
| STD C/AU 0.5 | 60 | 44 | 132 | 7.2 | 19 | 480 |

SP and VLF-EM both failed to produce coincident anomalies (Figure 22), but there is a partially coincident Zn in soil response (Figure 21). Because of the apparent coincidence of interesting structure and soil geochemistry with the gravity anomaly, it was decided to test this area with two shallow "Winkie" diamond drill holes. This work is discussed in the next section of this report.

### 4. Diamond Drilling

Two diamond drill holes were completed in order to test the gravity anomaly on line 24+00N, discussed in section IV.3. above. The drill and two-man crew were contracted from Van Alphen Exploration Services of Smithers, B.C. Figure 23 is a section through both drill holes; analytical results are tabulated in Table VI , and drill logs comprise Appendix II of this report. Hole 85HD-1 was collared at 24+00N, 17+15E; and hole 85HD-2 on the same line at 16+60E. Both holes were drilled at a vertical angle of $-45^{o}$ and an azimuth of $270^{o}$.

The first hole was completed at 29.2 m after being entirely drilled in the major fault zone. Core recovery was poor. Recovered rocks consisted mainly of siliceous tectonic breccia with several generations of quartz veins, and much clay gouge. The hole was unmineralized, except for traces of pyrite, and analytical results were all negative (Table VI). Two intervals of intermediate dykes were also intersected.

Hole 85HD-2, completed to 16.6 m, encountered fractured rhyolite, with numerous veinlets of white, grey, rose, and amethystine quartz, and calcite. the few sulphides present were mainly pyrite in quartz veinlets. A chloritized mafic dyke was also encountered. The entire drill hole was submitted for analysis, with negative results (Table VI).

This gravity anomaly remains unexplained.

# TABLE VI
# DRILL CORE
# Analyses

ACME ANALYTICAL LABORATORIES LTD. 852 E.HASTINGS ST.VANCOUVER B.C. V6A 1R6 PHONE 253-3158 DATA LINE 251-1011

## GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: ROCK CHIPS AU** ANALYSIS BY FA+AA FROM 10 GRAM SAMPLE. HG ANALYSIS BY FLAMLESS AA.

DATE RECEIVED: AUG 28 1985 DATE REPORT MAILED: Aug 30/85 ASSAYER. T. Saundry .DEAN TOYE OR TOM SAUNDRY. CERTIFIED B.C. ASSAYER

ELDOR RESOURCES PROJECT - 585 FILE # 85-2092 PAGE 1

### Drill Hole 85HD-1

| SAMPLE# | Mo PPM | Cu PPM | Pb PPM | Zn PPM | Ag PPM | Ni PPM | Co PPM | Mn PPM | Fe % | As PPM | U PPM | Au PPM | Th PPM | Sr PPM | Cd PPM | Sb PPM | Bi PPM | V PPM | Ca % | P % | La PPM | Cr PPM | Mg % | Ba PPM | Ti % | B PPM | Al % | Na % | K % | W PPM | Au** PPB | Hg PPB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22727 | 4 | 76 | 52 | 683 | .2 | 5 | 10 | 3761 | 2.01 | 25 | 5 | ND | 1 | 22 | 3 | 2 | 2 | 5 | 2.10 | .05 | 5 | 4 | .38 | 58 | .01 | 3 | .26 | .01 | .16 | 4 | 4 | 50 |
| 22728 | 3 | 154 | 39 | 252 | .3 | 2 | 9 | 2507 | 1.31 | 34 | 5 | ND | 1 | 19 | 1 | 2 | 2 | 2 | 1.66 | .04 | 10 | 1 | .23 | 47 | .01 | 2 | .26 | .01 | .16 | 1 | 2 | 50 |
| 22729 | 1 | 79 | 11 | 29 | .1 | 2 | 6 | 2082 | .98 | 33 | 5 | ND | 1 | 19 | 1 | 2 | 2 | 1 | 1.42 | .04 | 11 | 2 | .27 | 58 | .01 | 2 | .22 | .02 | .14 | 1 | 1 | 30 |
| 22730 | 1 | 6 | 5 | 29 | .1 | 1 | 2 | 2802 | 1.29 | 6 | 5 | ND | 1 | 37 | 1 | 2 | 2 | 2 | 2.07 | .03 | 14 | 1 | .38 | 682 | .01 | 3 | .25 | .02 | .14 | 1 | 1 | 20 |
| 22731 | 2 | 3 | 8 | 29 | .1 | 4 | 5 | 4590 | 1.87 | 6 | 5 | ND | 2 | 64 | 1 | 2 | 2 | 9 | 6.46 | .08 | 7 | 1 | .30 | 1081 | .01 | 3 | .44 | .01 | .12 | 1 | 2 | 20 |
| 22732 | 1 | 3 | 15 | 59 | .1 | 4 | 5 | 4958 | 2.46 | 5 | 5 | ND | 1 | 40 | 1 | 2 | 2 | 15 | 6.16 | .09 | 9 | 1 | .30 | 91 | .01 | 2 | .40 | .01 | .11 | 1 | 1 | 30 |
| 22733 | 2 | 6 | 8 | 46 | .1 | 9 | 6 | 5104 | 2.36 | 2 | 5 | ND | 2 | 48 | 1 | 2 | 2 | 9 | 4.01 | .10 | 8 | 4 | .78 | 65 | .01 | 2 | .33 | .03 | .13 | 1 | 1 | 20 |
| 22734 | 3 | 6 | 20 | 234 | .2 | 42 | 17 | 7271 | 5.25 | 4 | 5 | ND | 1 | 81 | 1 | 2 | 3 | 43 | 5.83 | .10 | 6 | 43 | 1.86 | 67 | .01 | 3 | .64 | .01 | .17 | 1 | 1 | 20 |
| 22735 | 5 | 3 | 4 | 28 | .1 | 2 | 3 | 3460 | 1.51 | 6 | 5 | ND | 1 | 29 | 1 | 2 | 2 | 2 | 3.37 | .03 | 3 | 3 | .49 | 24 | .01 | 2 | .22 | .04 | .07 | 1 | 2 | 30 |
| 22736 | 5 | 3 | 19 | 100 | .2 | 3 | 9 | 12947 | 4.85 | 2 | 5 | ND | 2 | 115 | 1 | 2 | 5 | 3 | 9.43 | .01 | 4 | 1 | 1.72 | 11 | .01 | 2 | .07 | .01 | .04 | 1 | 2 | 20 |

### Drill Hole 85HD-2

| SAMPLE# | Mo PPM | Cu PPM | Pb PPM | Zn PPM | Ag PPM | Ni PPM | Co PPM | Mn PPM | Fe % | As PPM | U PPM | Au PPM | Th PPM | Sr PPM | Cd PPM | Sb PPM | Bi PPM | V PPM | Ca % | P % | La PPM | Cr PPM | Mg % | Ba PPM | Ti % | B PPM | Al % | Na % | K % | W PPM | Au** PPB | Hg PPB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22741 | 2 | 8 | 12 | 49 | .1 | 1 | 3 | 891 | 1.50 | 23 | 5 | ND | 1 | 8 | 1 | 2 | 2 | 3 | .52 | .03 | 15 | 2 | .16 | 38 | .01 | 2 | .21 | .05 | .08 | 1 | 2 | 40 |
| 22742 | 2 | 9 | 4 | 53 | .1 | 3 | 2 | 1119 | 1.54 | 5 | 5 | ND | 1 | 10 | 1 | 2 | 2 | 4 | .75 | .03 | 14 | 1 | .20 | 48 | .01 | 2 | .22 | .05 | .11 | 1 | 1 | 20 |
| 22743 | 1 | 27 | 5 | 37 | .1 | 3 | 2 | 1063 | .99 | 2 | 5 | ND | 1 | 10 | 1 | 2 | 2 | 1 | .91 | .02 | 13 | 1 | .27 | 29 | .01 | 2 | .22 | .03 | .10 | 25 | 1 | 30 |
| 22744 | 1 | 9 | 3 | 64 | .2 | 3 | 4 | 1569 | 1.50 | 2 | 5 | ND | 1 | 19 | 1 | 2 | 2 | 2 | 1.33 | .02 | 9 | 1 | .53 | 40 | .01 | 2 | .24 | .04 | .10 | 1 | 1 | 30 |
| 22745 | 2 | 10 | 20 | 642 | .2 | 102 | 23 | 4940 | 6.86 | 2 | 5 | ND | 1 | 37 | 1 | 2 | 5 | 79 | 3.84 | .03 | 7 | 111 | 2.18 | 22 | .01 | 3 | 1.95 | .02 | .09 | 2 | 1 | 40 |

## V. CONCLUSIONS

It is unlikely that a large, near-surface, massive zinc deposit is present on that part of the claims covered by the gravity survey. Results of the gravity survey are largely negative, especially considering that the two best anomalies were investigated and found wanting. The zinc in chert occurrence at the Hilltop Showings is very interesting, but no other similar occurrence has been located, and no gravity anomalies are present on the adjacent grid lines. Argillic or chloritic alteration that should accompany the volcanogenic type of deposit do not appear to be present in this area. The vast majority of zinc showings are clearly epigenetic in origin.

To obtain a clearer picture of zinc mineralization in this area, the coincident Zn showings - gravity anomalies on lines 20+00N and 48+00N, and the Hilltop chert-zinc occurrence would have to be tested by drilling.

There are many mineral showings on this property. It is possible that it may attract the attention of explorationists interested in some other deposit model. However, the specific type of deposit sought by Eldor is unlikely to occur in the area covered by our grid.

## VI. RECOMMENDATIONS

It is recommended that no further work be undertaken on this property, primarily because further indications of massive sulphide mineralization were not located by this field program.

Respectfully submitted,

R Douglas Cruickshank.

R. Douglas Cruickshank

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# APPENDIX I

## HD CLAIMS 1985 GRAVITY RESULTS

# APPENDIX I

## HD Claims 1985 Gravity Results

| North | East | Elev. meters | Corrected Grav. mgal |
|---|---|---|---|
| 1600.00 | 1160.00 | 1013.16 | 8.06 |
| 1600.00 | 1170.00 | 1014.68 | 8.00 |
| 1600.00 | 1180.00 | 1015.83 | 8.00 |
| 1600.00 | 1200.00 | 1017.72 | 8.01 |
| 1600.00 | 1210.00 | 1018.75 | 7.98 |
| 1600.00 | 1220.00 | 1019.44 | 8.06 |
| 1600.00 | 1230.00 | 1020.26 | 8.06 |
| 1600.00 | 1240.00 | 1021.21 | 8.09 |
| 1600.00 | 1250.00 | 1022.65 | 8.09 |
| 1600.00 | 1260.00 | 1024.37 | 8.07 |
| 1600.00 | 1270.00 | 1026.20 | 8.06 |
| 1600.00 | 1280.00 | 1028.14 | 8.04 |
| 1600.00 | 1310.00 | 1034.52 | 7.93 |
| 1600.00 | 1320.00 | 1036.74 | 7.83 |
| 1600.00 | 1330.00 | 1038.75 | 7.75 |
| 1600.00 | 1340.00 | 1040.63 | 7.68 |
| 1600.00 | 1350.00 | 1042.29 | 7.68 |
| 1600.00 | 1360.00 | 1043.88 | 7.66 |
| 1600.00 | 1370.00 | 1045.92 | 7.59 |
| 1600.00 | 1380.00 | 1047.11 | 7.63 |
| 1600.00 | 1390.00 | 1049.75 | 7.58 |
| 1600.00 | 1400.00 | 1051.02 | 7.58 |
| 1600.00 | 1410.00 | 1052.56 | 7.56 |
| 1600.00 | 1420.00 | 1054.70 | 7.49 |
| 1600.00 | 1430.00 | 1056.92 | 7.47 |
| 1600.00 | 1440.00 | 1059.64 | 7.44 |
| 1600.00 | 1450.00 | 1062.46 | 7.40 |
| 1600.00 | 1460.00 | 1065.38 | 7.36 |
| 1600.00 | 1470.00 | 1068.41 | 7.30 |
| 1600.00 | 1490.00 | 1075.03 | 7.15 |
| 1600.00 | 1500.00 | 1077.77 | 7.10 |
| 1600.00 | 1510.00 | 1080.96 | 7.08 |
| 1600.00 | 1520.00 | 1084.12 | 7.06 |
| 1600.00 | 1530.00 | 1087.61 | 7.00 |
| 1600.00 | 1540.00 | 1090.87 | 7.02 |
| 1600.00 | 1550.00 | 1095.59 | 7.02 |
| 1600.00 | 1560.00 | 1100.93 | 6.97 |
| 1600.00 | 1570.00 | 1106.49 | 6.93 |
| 1600.00 | 1580.00 | 1111.66 | 6.91 |
| 1600.00 | 1590.00 | 1116.24 | 6.83 |
| 1600.00 | 1600.00 | 1120.84 | 6.79 |
| 1600.00 | 1610.00 | 1125.51 | 6.63 |
| 1600.00 | 1620.00 | 1129.66 | 6.69 |
| 1600.00 | 1630.00 | 1132.53 | 6.63 |
| 1600.00 | 1640.00 | 1133.70 | 6.64 |
| 1600.00 | 1650.00 | 1133.39 | 6.67 |
| 1600.00 | 1660.00 | 1133.71 | 6.72 |
| 1600.00 | 1670.00 | 1133.43 | 6.74 |
| 1600.00 | 1680.00 | 1133.03 | 6.72 |
| 1600.00 | 1690.00 | 1131.95 | 6.75 |
| 1600.00 | 1700.00 | 1130.77 | 6.72 |
| 1600.00 | 1710.00 | 1129.15 | 6.77 |
| 1600.00 | 1720.00 | 1126.30 | 6.70 |
| 1600.00 | 1730.00 | 1126.37 | 6.62 |
| 1600.00 | 1740.00 | 1125.24 | 6.65 |
| 1600.00 | 1750.00 | 1123.96 | 6.64 |
| 1600.00 | 1760.00 | 1122.74 | 6.59 |
| 1600.00 | 1770.00 | 1120.39 | 6.63 |
| 1600.00 | 1780.00 | 1117.96 | 6.59 |
| 1600.00 | 1790.00 | 1114.42 | 6.57 |
| 1600.00 | 1800.00 | 1110.06 | 6.58 |
| 1600.00 | 1810.00 | 1106.95 | 6.60 |
| 1600.00 | 1820.00 | 1104.42 | 6.51 |
| 1600.00 | 1830.00 | 1101.47 | 6.51 |
| 1600.00 | 1840.00 | 1097.85 | 6.52 |

Note: all values have had 4920 mgal subtracted from the calculated value (ie 8.00 was originally 4928.00)

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1600.00     1850.00     1095.48        6.47
1600.00     1860.00     1093.87        6.48
1600.00     1870.00     1093.47        6.43
1600.00     1880.00     1092.34        6.40
1600.00     1890.00     1089.77        6.38
1600.00     1900.00     1086.64        6.36
1600.00     1910.00     1082.21        6.31
1600.00     1920.00     1077.23        6.31
1600.00     1930.00     1074.06        6.28
1600.00     1940.00     1072.29        6.20
1600.00     1950.00     1070.42        6.20
1600.00     1960.00     1067.77        6.20
1600.00     1970.00     1064.08        6.17
1600.00     1980.00     1063.34        6.08
1600.00     1990.00     1059.65        6.11
1600.00     2000.00     1057.85        6.06
1600.00     2010.00     1056.70        6.07
1600.00     2020.00     1055.50        6.04
1600.00     2030.00     1054.76        6.02
1600.00     2040.00     1054.41        5.96
1600.00     2050.00     1053.33        5.98
1600.00     2060.00     1050.94        5.96
1600.00     2070.00     1048.78        5.93
1600.00     2080.00     1046.30        5.90
1600.00     2090.00     1043.28        5.88
1600.00     2100.00     1040.16        5.79
1800.00     1160.00     1062.07        7.88
1800.00     1170.00     1065.60        7.85
1800.00     1180.00     1068.88        7.82
1800.00     1190.00     1072.25        7.75
1800.00     1200.00     1074.87        7.79
1800.00     1210.00     1077.84        7.80
1800.00     1220.00     1079.96        7.77
1800.00     1230.00     1082.25        7.75
1800.00     1250.00     1086.44        7.72
1800.00     1260.00     1088.23        7.65
1800.00     1270.00     1090.35        7.59
1800.00     1280.00     1090.29        7.59
1800.00     1290.00     1089.00        7.61
1800.00     1300.00     1087.72        7.60
1800.00     1320.00     1085.32        7.62
1200.00     1330.00     1084.52        7.57
1800.00     1340.00     1084.61        7.56
1800.00     1350.00     1085.58        7.51
1800.00     1360.00     1087.71        7.43
1800.00     1370.00     1089.61        7.37
1300.00     1380.00     1090.93        7.36
1800.00     1400.00     1095.95        7.33
1800.00     1420.00     1103.16        7.24
1800.00     1430.00     1106.41        7.28
1800.00     1440.00     1111.00        7.26
1800.00     1450.00     1115.49        7.25
1800.00     1460.00     1119.19        7.25
1800.00     1470.00     1123.12        7.21
1800.00     1480.00     1127.94        7.10
1800.00     1490.00     1130.54        7.08
1800.00     1500.00     1134.23        7.08
1800.00     1510.00     1138.01        7.06
1800.00     1520.00     1143.00        6.95
1800.00     1530.00     1146.47        6.95
1900.00     1540.00     1150.81        6.94
1800.00     1550.00     1154.51        6.96
1800.00     1560.00     1157.48        6.93
1800.00     1570.00     1159.98        6.91
1800.00     1580.00     1163.06        6.92
1800.00     1590.00     1165.02        6.85
1800.00     1600.00     1166.20        6.87
1800.00     1610.00     1165.95        6.87
1800.00     1620.00     1166.01        6.84
1800.00     1630.00     1165.67        6.83
1800.00     1650.00     1160.87        6.84
1800.00     1660.00     1157.24        6.84
1800.00     1680.00     1153.94        6.82
1800.00     1690.00     1152.66        6.85
1800.00     1700.00     1150.63        6.81
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1800.00     1710.00     1148.25        6.82
1800.00     1720.00     1146.82        6.75
1800.00     1730.00     1145.31        6.76
1800.00     1740.00     1143.57        6.81
1800.00     1750.00     1140.32        6.77
1800.00     1760.00     1136.53        6.76
1800.00     1770.00     1133.51        6.78
1800.00     1780.00     1132.16        6.70
1800.00     1790.00     1131.25        6.68
1800.00     1800.00     1129.19        6.70
1800.00     1810.00     1126.03        6.73
1800.00     1820.00     1122.43        6.72
1800.00     1830.00     1120.73        6.64
1800.00     1850.00     1113.91        6.71
1800.00     1860.00     1109.42        6.72
1800.00     1870.00     1104.36        6.74
1800.00     1880.00     1098.60        6.80
1800.00     1890.00     1093.21        6.80
1800.00     1900.00     1087.51        6.75
1800.00     1910.00     1083.73        6.77
1800.00     1920.00     1083.50        6.70
1800.00     1930.00     1082.90        6.60
1800.00     1940.00     1083.86        6.44
1800.00     1950.00     1084.54        6.40
1800.00     1960.00     1085.67        6.33
1800.00     1970.00     1085.44        6.33
1800.00     1980.00     1083.92        6.35
1800.00     1990.00     1080.51        6.32
1800.00     2000.00     1076.33        6.41
1800.00     2010.00     1071.92        6.48
1800.00     2020.00     1067.41        6.54
1800.00     2030.00     1064.09        6.58
1800.00     2040.00     1059.80        6.56
1800.00     2050.00     1055.45        6.62
1800.00     2060.00     1052.35        6.60
1800.00     2070.00     1050.95        6.53
1800.00     2080.00     1049.94        6.48
1800.00     2090.00     1047.10        6.50
1800.00     2100.00     1042.74        6.52
2000.00     1460.00     1144.93        7.36
2000.00     1470.00     1146.20        7.31
2000.00     1480.00     1146.59        7.27
2000.00     1490.00     1145.69        7.23
2000.00     1510.00     1145.00        7.18
2000.00     1520.00     1146.16        7.19
2000.00     1530.00     1148.86        7.18
2000.00     1540.00     1153.88        7.22
2000.00     1560.00     1162.78        7.22
2000.00     1580.00     1167.28        7.22
2000.00     1590.00     1169.95        7.23
2000.00     1600.00     1171.98        7.22
2000.00     1610.00     1174.17        7.25
2000.00     1620.00     1177.49        7.22
2000.00     1630.00     1179.07        7.18
2000.00     1640.00     1178.98        7.15
2000.00     1650.00     1177.61        7.12
2000.00     1660.00     1175.98        7.08
2000.00     1670.00     1173.98        7.04
2000.00     1680.00     1172.83        7.06
2000.00     1690.00     1170.45        7.05
2000.00     1700.00     1167.13        7.03
2200.00     1210.00     1096.96        8.14
2200.00     1220.00     1100.50        8.13
2200.00     1230.00     1103.00        8.10
2200.00     1240.00     1105.80        8.11
2200.00     1250.00     1108.14        8.07
2200.00     1260.00     1109.74        8.06
2200.00     1270.00     1111.32        8.01
2200.00     1280.00     1112.90        7.99
2200.00     1290.00     1113.88        7.97
2200.00     1300.00     1115.04        7.91
2200.00     1310.00     1116.06        8.01
2200.00     1320.00     1117.71        7.98
2200.00     1330.00     1118.68        7.98
2200.00     1350.00     1122.99        7.96
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2200.00    1360.00    1124.64     7.95
2200.00    1370.00    1126.21     7.98
2200.00    1380.00    1127.66     7.94
2200.00    1390.00    1128.33     7.93
2200.00    1400.00    1129.41     7.89
2200.00    1410.00    1130.65     7.94
2200.00    1420.00    1131.62     7.95
2200.00    1430.00    1132.56     7.96
2200.00    1440.00    1133.71     7.95
2200.00    1450.00    1134.80     7.95
2200.00    1460.00    1136.03     7.90
2200.00    1470.00    1138.31     7.76
2200.00    1480.00    1139.95     7.76
2200.00    1490.00    1142.15     7.72
2200.00    1500.00    1144.96     7.78
2200.00    1510.00    1148.40     7.63
2200.00    1520.00    1152.71     7.57
2200.00    1530.00    1157.56     7.58
2200.00    1540.00    1161.58     7.56
2200.00    1550.00    1165.96     7.55
2200.00    1360.00    1170.18     7.53
2200.00    1580.00    1179.53     7.51
2200.00    1610.00    1187.47     7.38
2200.00    1620.00    1190.49     7.37
2200.00    1630.00    1190.78     7.32
2200.00    1640.00    1189.02     7.35
2200.00    1650.00    1187.37     7.29
2200.00    1630.00    1185.70     7.25
2200.00    1670.00    1185.00     7.26
2200.00    1680.00    1181.16     7.29
2200.00    1690.00    1175.50     7.27
2200.00    1700.00    1170.04     7.32
2200.00    1710.00    1166.44     7.38
2200.00    1720.00    1165.42     7.33
2200.00    1730.00    1166.34     7.25
2200.00    1740.00    1167.18     7.18
2200.00    1750.00    1166.09     7.20
2200.00    1760.00    1165.30     7.19
2200.00    1770.00    1165.13     7.11
2200.00    1780.00    1164.37     7.12
2200.00    1790.00    1161.28     7.19
2200.00    1800.00    1157.76     7.20
2200.00    1810.00    1152.66     7.20
2200.00    1820.00    1149.87     7.41
2400.00    1180.00    1118.26     8.39
2400.00    1190.00    1122.55     8.35
2400.00    1210.00    1129.76     8.37
2400.00    1220.00    1131.80     8.37
2400.00    1230.00    1133.83     8.42
2400.00    1240.00    1135.92     8.45
2400.00    1250.00    1138.81     8.44
2400.00    1260.00    1141.74     8.39
2400.00    1270.00    1144.53     8.37
2400.00    1280.00    1148.96     8.25
2400.00    1290.00    1153.81     8.26
2400.00    1300.00    1159.14     8.17
2400.00    1310.00    1164.46     8.15
2400.00    1320.00    1170.06     8.13
2400.00    1330.00    1176.57     8.15
2400.00    1340.00    1181.84     8.02
2400.00    1350.00    1186.12     8.04
2400.00    1360.00    1189.84     8.05
2400.00    1370.00    1194.07     8.04
2400.00    1380.00    1197.38     8.07
2400.00    1400.00    1201.22     7.99
2400.00    1410.00    1203.35     8.00
2400.00    1420.00    1205.18     7.97
2400.00    1430.00    1207.12     7.97
2400.00    1440.00    1208.51     7.95
2400.00    1460.00    1208.74     7.96
2400.00    1470.00    1207.22     7.92
2400.00    1480.00    1206.72     7.93
2400.00    1490.00    1207.32     7.87
2400.00    1510.00    1207.10     7.88
2400.00    1520.00    1207.27     7.86
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2400.00     1530.00     1207.76        7.84
2400.00     1540.00     1207.93        7.86
2400.00     1550.00     1207.02        7.84
2400.00     1560.00     1208.02        7.83
2400.00     1570.00     1209.23        7.79
2400.00     1580.00     1210.58        7.73
2400.00     1590.00     1210.92        7.70
2400.00     1600.00     1209.45        7.70
2400.00     1610.00     1206.81        7.70
2400.00     1620.00     1204.90        7.71
2400.00     1630.00     1200.69        7.79
2400.00     1640.00     1196.66        7.84
2400.00     1650.00     1193.32        7.87
2400.00     1660.00     1190.20        7.86
2400.00     1670.00     1186.88        7.87
2400.00     1680.00     1183.31        7.91
2400.00     1690.00     1178.66        7.84
2400.00     1700.00     1175.10        7.94
2400.00     1710.00     1173.04        7.90
2400.00     1720.00     1171.86        7.86
2400.00     1740.00     1171.20        7.69
2400.00     1750.00     1171.11        7.67
2400.00     1760.00     1171.70        7.62
2400.00     1770.00     1172.44        7.55
2400.00     1780.00     1171.80        7.55
2400.00     1790.00     1171.00        7.49
2400.00     1800.00     1172.60        7.36
2400.00     1810.00     1172.00        7.31
2400.00     1820.00     1169.88        7.33
2400.00     1830.00     1167.15        7.33
2400.00     1840.00     1164.30        7.29
2400.00     1850.00     1161.36        7.21
2400.00     1860.00     1156.16        7.29
2400.00     1870.00     1152.95        7.25
2400.00     1880.00     1151.98        7.15
2400.00     1890.00     1150.60        7.14
2400.00     1900.00     1146.22        7.21
2400.00     1910.00     1141.87        7.18
2400.00     1920.00     1141.20        7.09
2400.00     1930.00     1141.40        7.07
2400.00     1940.00     1142.03        7.04
2400.00     1950.00     1142.83        6.99
2400.00     1960.00     1143.37        6.99
2400.00     1980.00     1141.33        6.96
2400.00     1990.00     1139.13        6.90
2400.00     2000.00     1137.30        6.84
2400.00     2010.00     1136.87        6.85
2400.00     2020.00     1136.20        6.88
2400.00     2030.00     1134.54        6.85
2400.00     2050.00     1132.16        6.85
2400.00     2060.00     1129.68        6.81
2400.00     2070.00     1127.28        6.79
2400.00     2080.00     1126.02        6.76
2400.00     2090.00     1123.19        6.77
2400.00     2100.00     1120.20        6.78
2600.00     1380.00     1220.35        8.28
2600.00     1390.00     1220.66        8.40
2600.00     1400.00     1220.82        8.37
2600.00     1410.00     1219.97        8.38
2600.00     1420.00     1220.45        8.37
2600.00     1430.00     1221.30        8.36
2600.00     1440.00     1221.54        8.32
2600.00     1450.00     1221.28        8.31
2600.00     1460.00     1217.69        8.31
2600.00     1470.00     1214.90        8.29
2600.00     1480.00     1215.83        8.28
2600.00     1490.00     1217.86        8.24
2600.00     1500.00     1217.92        8.21
2600.00     1510.00     1216.97        8.17
2600.00     1520.00     1216.39        8.19
2600.00     1530.00     1219.77        8.07
2600.00     1540.00     1219.52        8.11
2600.00     1550.00     1219.25        8.06
2600.00     1560.00     1220.19        8.06
2600.00     1570.00     1218.98        8.03
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2600.00     1580.00     1218.47          8.03
2600.00     1590.00     1219.30          8.04
2600.00     1600.00     1217.34          8.04
2600.00     1610.00     1214.00          8.03
2600.00     1620.00     1212.60          7.96
2600.00     1630.00     1210.55          7.94
2600.00     1640.00     1210.85          7.94
2600.00     1660.00     1209.76          7.96
2600.00     1670.00     1209.52          7.94
2600.00     1680.00     1207.93          7.93
2600.00     1690.00     1206.85          7.88
2600.00     1700.00     1209.43          7.94
2600.00     1710.00     1209.62          7.92
2600.00     1720.00     1209.63          7.86
2600.00     1730.00     1211.79          7.85
2600.00     1740.00     1211.23          7.81
2600.00     1750.00     1210.54          7.84
2600.00     1760.00     1207.87          7.85
2600.00     1770.00     1206.94          7.75
2600.00     1780.00     1205.37          7.73
2600.00     1790.00     1203.39          7.72
2600.00     1800.00     1202.50          7.73
2600.00     1810.00     1198.00          7.72
2600.00     1820.00     1192.44          7.61
2600.00     1830.00     1188.82          7.45
2600.00     1840.00     1186.99          7.43
2600.00     1860.00     1183.40          7.38
2600.00     1870.00     1181.04          7.39
2600.00     1880.00     1178.37          7.31
2600.00     1900.00     1172.10          7.22
2600.00     1910.00     1167.10          7.21
2600.00     1920.00     1162.06          7.10
2600.00     1930.00     1156.92          7.10
2600.00     1940.00     1151.24          7.10
2600.00     1950.00     1147.06          7.06
2600.00     1960.00     1141.74          7.08
2600.00     1970.00     1136.16          6.98
2600.00     1980.00     1131.49          6.97
2600.00     1990.00     1126.30          6.99
2600.00     2000.00     1121.52          7.00
2800.00     1150.00     1168.29          8.55
2800.00     1160.00     1174.39          8.53
2800.00     1170.00     1180.76          8.48
2800.00     1180.00     1184.76          8.38
2800.00     1190.00     1187.26          8.37
2800.00     1200.00     1188.34          8.39
2800.00     1220.00     1189.69          8.53
2800.00     1230.00     1192.86          8.53
2800.00     1240.00     1194.98          8.56
2800.00     1250.00     1198.80          8.61
2800.00     1260.00     1201.25          8.57
2800.00     1280.00     1204.40          8.58
2800.00     1300.00     1206.99          8.52
2800.00     1310.00     1206.39          8.55
2800.00     1320.00     1205.45          8.57
2800.00     1330.00     1204.56          8.55
2800.00     1340.00     1202.52          8.53
2800.00     1350.00     1201.79          8.55
2800.00     1360.00     1201.48          8.54
2800.00     1370.00     1201.44          8.51
2800.00     1380.00     1201.06          8.53
2800.00     1390.00     1201.02          8.46
2800.00     1400.00     1200.21          8.49
2800.00     1410.00     1199.40          8.49
2800.00     1420.00     1198.81          8.44
2800.00     1430.00     1197.79          8.50
2800.00     1440.00     1196.84          8.50
2800.00     1450.00     1195.56          8.47
2800.00     1460.00     1194.10          8.48
2800.00     1470.00     1192.78          8.44
2800.00     1480.00     1192.40          8.42
2800.00     1490.00     1190.71          8.46
2800.00     1500.00     1189.01          8.41
2800.00     1510.00     1187.09          8.39
2800.00     1520.00     1185.41          8.36
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 2800.00      1530.00      1184.06         8.32
 2800.00      1540.00      1182.80         8.29
 2800.00      1550.00      1180.46         8.28
 2800.00      1560.00      1179.12         8.28
 2800.00      1570.00      1178.49         8.21
 2800.00      1580.00      1177.77         8.15
 2800.00      1590.00      1177.60         8.14
 2800.00      1600.00      1177.83         8.07
 2800.00      1610.00      1177.73         8.00
 2800.00      1620.00      1176.31         8.06
 2800.00      1630.00      1174.18         8.11
 2800.00      1640.00      1171.38         8.08
 2800.00      1650.00      1169.68         8.04
 2800.00      1660.00      1170.13         8.03
 2800.00      1670.00      1170.03         8.02
 2800.00      1680.00      1169.42         8.02
 2800.00      1690.00      1167.22         8.03
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| 4800.00 | 1610.00 | 1164.14 | 10.29 |
| 4800.00 | 1620.00 | 1164.80 | 10.33 |
| 4800.00 | 1630.00 | 1168.10 | 10.36 |
| 4800.00 | 1640.00 | 1170.83 | 10.34 |
| 4800.00 | 1650.00 | 1172.11 | 10.36 |
| 4800.00 | 1660.00 | 1172.37 | 10.31 |
| 4800.00 | 1670.00 | 1173.29 | 10.30 |
| 4800.00 | 1680.00 | 1173.66 | 10.28 |
| 4800.00 | 1690.00 | 1172.29 | 10.26 |
| 4800.00 | 1700.00 | 1172.34 | 10.21 |
| 4800.00 | 1710.00 | 1171.85 | 10.20 |
| 4800.00 | 1720.00 | 1170.16 | 10.15 |
| 4800.00 | 1730.00 | 1169.11 | 10.06 |
| 4800.00 | 1740.00 | 1167.16 | 10.04 |
| 4800.00 | 1750.00 | 1162.85 | 9.99 |
| 4800.00 | 1760.00 | 1157.77 | 9.88 |
| 4800.00 | 1770.00 | 1155.23 | 9.79 |
| 4800.00 | 1780.00 | 1150.37 | 9.77 |
| 4800.00 | 1790.00 | 1147.39 | 9.69 |
| 4800.00 | 1800.00 | 1148.35 | 9.67 |
| 4800.00 | 1810.00 | 1150.38 | 9.64 |
| 4800.00 | 1820.00 | 1152.58 | 9.57 |
| 4800.00 | 1830.00 | 1155.52 | 9.61 |
| 4800.00 | 1840.00 | 1156.86 | 9.59 |
| 4800.00 | 1850.00 | 1157.01 | 9.57 |
| 4800.00 | 1860.00 | 1155.64 | 9.57 |
| 4800.00 | 1870.00 | 1155.55 | 9.54 |
| 4800.00 | 1880.00 | 1155.51 | 9.52 |
| 4800.00 | 1890.00 | 1155.64 | 9.56 |
| 4800.00 | 1900.00 | 1156.16 | 9.58 |
| 4800.00 | 1910.00 | 1158.31 | 9.58 |
| 4800.00 | 1920.00 | 1159.18 | 9.60 |
| 4800.00 | 1930.00 | 1158.44 | 9.61 |
| 4800.00 | 1940.00 | 1156.94 | 9.56 |
| 4800.00 | 1950.00 | 1154.33 | 9.49 |
| 4800.00 | 1960.00 | 1150.29 | 9.47 |
| 4800.00 | 1970.00 | 1150.11 | 9.39 |
| 4800.00 | 1980.00 | 1149.17 | 9.39 |
| 4800.00 | 1990.00 | 1145.08 | 9.33 |
| 4800.00 | 2000.00 | 1145.92 | 9.31 |
| 4800.00 | 2010.00 | 1149.37 | 9.36 |

```
  4800.00    2020.00    1151.22       9.30
  4800.00    2030.00    1150.97       9.32
  4800.00    2040.00    1150.76       9.33
  4800.00    2050.00    1151.81       9.33
  4800.00    2060.00    1150.75       9.32
  4800.00    2070.00    1149.15       9.32
  4800.00    2080.00    1147.06       9.34
  4800.00    2090.00    1144.49       9.28
  4800.00    2100.00    1143.19       9.26
  4800.00    2110.00    1141.12       9.22
  4800.00    2120.00    1137.88       9.24
  4800.00    2130.00    1133.18       9.23
  4800.00    2140.00    1129.91       9.20
  4800.00    2150.00    1124.81       9.16
  4800.00    2160.00    1119.16       9.16
  4800.00    2180.00    1110.91       8.95
  4800.00    2190.00    1105.38       8.92
  4800.00    2200.00    1098.72       8.89
  4800.00    2220.00    1084.54       8.73
  4800.00    2240.00    1067.25       8.47
  4800.00    2250.00    1059.64       8.37
  4800.00    2260.00    1053.96       8.27
  4800.00    2270.00    1048.02       8.23
  4800.00    2280.00    1043.55       8.14
  4800.00    2290.00    1039.21       8.09
  4800.00    2310.00    1030.93       8.06
  4800.00    2320.00    1026.53       8.05
  4800.00    2330.00    1023.35       8.02
  4800.00    2340.00    1020.78       8.02
  4800.00    2350.00    1020.45       7.92
  4800.00    2360.00    1018.94       7.88
  4800.00    2370.00    1017.37       7.91
  4800.00    2380.00    1015.46       7.89
  4800.00    2390.00    1013.15       7.89
  4800.00    2400.00    1010.79       7.99
  4800.00    2410.00    1006.77       8.00
  4800.00    2430.00    1005.58       7.99
  4800.00    2440.00    1002.00       8.04
  4800.00    2450.00     995.57       8.05
  4800.00    2460.00     989.09       8.04
  4800.00    2470.00     985.97       8.02
  4800.00    2490.00     973.41       8.03
  4800.00    2500.00     971.18       8.00
  4800.00    2510.00     969.90       7.89
  4800.00    2520.00     967.76       7.88
  4800.00    2530.00     963.44       7.96
  4800.00    2540.00     959.31       7.90
  4800.00    2550.00     956.66       7.99
  4800.00    2560.00     956.73       7.95
  4800.00    2570.00     958.17       7.93
  4800.00    2580.00     959.47       7.98
  4800.00    2590.00     961.05       8.00
  5000.00    2000.00    1075.05       9.53
  5000.00    2010.00    1074.66       9.49
  5000.00    2020.00    1075.65       9.50
  5000.00    2030.00    1074.75       9.46
  5000.00    2040.00    1070.78       9.34
  5000.00    2050.00    1062.93       9.29
  5000.00    2060.00    1055.70       9.32
  5000.00    2080.00    1041.79       9.26
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eldorado

# APPENDIX II
# DRILL LOGS
# HD CLAIMS

**E L D O R A D O**
Eldorado Resources Limited
Eldor Resources Limited

ND DRILL HOLE LITHOLOGIC RECORD

PROJECT NO. 585

HOLE NO. 85 HD-1

TION HD

OGRAM 1985 - Winkie

NAME HD

E CO-ORDINATES 24+00N, 17+15E

OSE OF HOLE test gravity and soil (Zn) anomalies

ATION 1172.5 m (interpolated)

UTH 270° ANGLE -45°

NAL DEPTH 29.2 m

OGY BY R.D. Cruickshank

CORE SIZE EW

CONTRACTOR Van Alphen Exploration

DATE STARTED 1985 August 22

DATE COMPLETED 1985 August 24

CEMENTED no

CORE STORAGE lab and Saskatoon

GEOPHYSICAL LOGS none

CASING pulled

COLLAR SURVEY CO-ORDINATES

GRID

DOWN HOLE SURVEY

| METHOD | DEPTH | CORRECTED ANGLE | CORRECTED AZIMUTH |
|---|---|---|---|
| | | | |

MMARY OF RESULTS

| | |
|---|---|
| 0-4.3 m | Casing. |
| 4.3-25.9 m | Siliceous tectonic breccia. Several generations of quartz veins; clay gouge. |
| 25.9-26.8 m | Intermediate dyke. Plagioclase and hornblende microphenocrysts. No breccia; quartz veinlets present. |
| 26.8-27.2 m | Siliceous breccia. Relict pyroclasts visible (silicified rhyolite tuff). |
| 27.2-27.7 m | Intermediate dyke. |
| 27.7-29.2 m | Siliceous tectonic breccia. |

STRUCTURE: Hole drilled in major fault zone. Several periods of fracturing and veining.

MINERALIZATION:- Traces of disseminated pyrite, especially from 4.3-17.0 m; pyrite in grey quartz veins, especially at 27.9-28.0 and 29.0-29.2 m
- Flecks (very minute) of (?) native copper 11.1-11.6 and 13.7-15.1 m.

CORE RECOVERY: Generally very poor (see detailed log).

ELDORADO RESOURCES LIMITED

DIAMOND DRILL HOLE LITHOLOGIC RECORD

Hole No. 85 HD-1

Page 2 of 4

Date Drilled August 22 to 24, 1985

| METRES | | Description |
|---|---|---|
| From | To | |
| 0 | 4.3 | Casing. |
| [illegible] | 25.9 | FORMATION:<br>Siliceous tectonic breccia; major fault zone. Includes vein quartz and probably some silicified rhyolite tuff.<br>COLOUR:<br>Generally pale grey-green.<br>TEXTURE AND COMPOSITION:<br>- usually aphanitic and highly brecciated<br>- possibly nearly 100% quartz<br>- traces of pyrite, native copper (?), calcite.<br>STRUCTURE:<br>- entire interval highly fractured, brecciated<br>- evidence for several periods of fracturing and quartz veining<br>- abundant thin veinlets of grey quartz-pyrite and white quartz-calcite; in every possible orientation<br>- drillers report many seams of clay gouge (not recovered)<br>- recovered core is generally completely full of fractures and veinlets on a millimetric scale<br>ALTERATION:<br>Probable silicification of entire interval. Green colour may be due to traces of chlorite or sericite.<br>MINERALIZATION:<br>Traces disseminated pyrite common from 4.3 to 17.0 m. For other details see below.<br>CORE RECOVERY:<br>Very poor. From 4.3 to 16.8 m is about 15%; from 16.8 to 25.9, about 32%<br>FURTHER COMMENTS:<br>- 3 mm sphalerite crystal at about 6 m. |

| STRUCTURE AND FABRIC | | | | | SAMPLES - | | | |
|---|---|---|---|---|---|---|---|---|
| Depth | Angle toCore | Fault-ing | Bedd-ing | Gneiss-osity | No. | From | To | Width |
| | | | | | 22727 | 4.3 | 9.8 | 5.5 |
| | | | | | 22728 | 9.8 | 13.1 | 3.3 |
| | | | | | 22729 | 13.1 | 16.3 | 3.2 |
| | | | | | 22730 | 16.3 | 19.1 | 2.8 |
| | | | | | 22731 | 19.1 | 21.6 | 2.5 |
| | | | | | 22732 | 21.6 | 24.4 | 2.8 |
| | | | | | 22733 | 24.4 | 25.9 | 1.5 |
| | | | | | 22734 | 25.9 | 27.7 | 1.8 |
| | | | | | 22735 | 27.7 | 29.0 | 1.3 |
| | | | | | 22736 | 29.0 | 29.2 | 0.2 |

ELDORADO RESOURCES LIMITED

AMOND DRILL HOLE LITHOLOGIC RECORD

Hole No. 85 HD-1

Page 3 of 4

Date Drilled August 22 to 24, 1985

| METRES | | Description | STRUCTURE AND FABRIC | | | | | SAMPLES - | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| From | To | | Depth | Angle toCore | Faulting | Bedding | Gneissosity | No. | From | To | Width |
| | | - very minute flecks of pyrite and (?) native copper from 11.1-11.6 m<br>- very minute pyrite flecks from 11.6-13.1 m; pyrite more abundant in grey quartz veinlets<br>- tiny flecks of (?) native copper 13.7-15.1 m<br>- green (epidote or chlorite) matrix and flecks of native copper from 16.8-17.1 m<br>- brecciated grey quartz is predominant in recovered material from 21.0-22.7 m<br>- veinlets of dark green mineral (epidote or chlorite) from 24.4 to about 25.0 m | | | | | | | | | |
| 25.9 | 26.8 | FORMATION:<br>Intermediate dyke.<br>COLOUR:<br>Dark grey-green.<br>TEXTURE AND COMPOSITION:<br>- fine to medium crystalline; micro-phenocrysts to 2 mm long; generally less than 1 mm<br>- generally unoriented or radiating plagioclase microlites (50% of rock) and a mafic mineral (hornblende?) (5% of rock) in an aphanitic matrix<br>- from 26.1 to 26.3, is about 30% hornblende<br>STRUCTURE:<br>- no breccia as such<br>- randomly oriented quartz-calcite veins are less than 5% of rock; various orientations.<br>ALTERATION :<br>Soft, easily scratched by steel; probable sericitic or chloritic alteration.<br>MINERALIZATION:<br>None visible. | | | | | | | | | |

ELDORADO RESOURCES LIMITED

DIAMOND DRILL HOLE LITHOLOGIC RECORD

Hole No. 85 HD-1 Page 4 of 4

Date Drilled August 22 to 24, 1985

| METRES | | Description | STRUCTURE AND FABRIC | | | | | SAMPLES - | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| From | To | | Depth | Angle toCore | Dyke Contact | | | No. | From | To | Width |
| | | CORE RECOVERY;<br>About 93%. | | | | | | | | | |
| 6.8 | 27.2 | FORMATION:<br>Siliceous tectonic breccia as from 4.3-25.9.<br>COMMENTS:<br>- contains indistinct pink, grey, and whitish angular clasts from 1 to 15 mm in size - these are probable relict pyroclasts<br>- rock still appears silicified | | | | | | | | | |
| 7.2<br>and at | 27.7<br>27.78 | FORMATION:<br>Intermediate dyke as at 25.9 to 26.8.<br>COMMENT:<br>At 27.78, the unit is about 2 cm wide and has contacts at about 45° to core axis. | | | | | | | | | |
| 7.7 | 29.2 | FORMATION:<br>Siliceous breccia as from 4.3-25.9.<br>COMMENTS:<br>- more cohesive here; core recovery is about 67%<br>- intervals 27.9-28.0 and 29.0-29.2 are dark grey quartz with ubiquitous disseminated pyrite (less than 5%), some red quartz, and many white quartz and quartz-calcite veinlets. | 27.78 | 45° | | | | | | | |
| 29.2 | | End of Hole. | | | | | | | | | |

R Douglas Cruickshank.

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Eldorado Resources Limited
Eldor Resources Limited

**DIAMOND DRILL HOLE LITHOLOGIC RECORD**

ATION HD Claims
RAM 1985
GRID NAME HD
E CO-ORDINATES 24+00N, 16+60E
POSE OF HOLE test gravity/soil Zn anomaly
ELEVATION 1190.2 m
MUTH 270° ANGLE -45°
AL DEPTH 16.6 m
GEOLOGY BY R.D. Cruickshank

CORE SIZE EW
CONTRACTOR Van Alphen Exploration Services
DATE STARTED August 25, 1985
DATE COMPLETED August 26, 1985
CEMENTED no
CORE STORAGE all sampled
GEOPHYSICAL LOGS none
CASING none

PROJECT NO. 585
HOLE NO. 85 HD-2

COLLAR SURVEY CO-ORDINATES
GRID
DOWN HOLE SURVEY

| METHOD | DEPTH | CORRECTED ANGLE | CORRECTED AZIMUTH |
|---|---|---|---|
|  |  |  |  |

UMMARY OF RESULTS

| | |
|---|---|
| 0-4.3 | Casing. |
| 4.3-16.0 | Rhyolite intrusive or flow. |
| 16.0-16.6 | Mafic dyke. |

STRUCTURE:
- entire interval highly fractured (many different orientations)
- clay gouge at 12.2 m and 16.6 m

ALTERATION AND MINERALIZATION:
- fractures filled with stringers of white and grey quartz, rose quartz-amethystine quartz, calcite
- pyrite commonly in quartz veinlets
- rhyolite possibly silicified
- mafic dyke entirely chloritized

ELDORADO RESOURCES LIMITED

DIAMOND DRILL HOLE LITHOLOGIC RECORD

Hole No. 85 HD-2

Page 2 of 4

Date Drilled August 25-26, 1985

| METRES | | Description | STRUCTURE AND FABRIC | | | | | SAMPLES - | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | To | | Depth | Angle toCore | Fault-ing | Bedd-ing | Gneiss-osity | No. | From | To | Width | U(ppm) |
| 0 | 4.3 | CASING. | | | | | | 22741 | 4.3 | 7.8 | | |
| | 16.0 | FORMATION:<br>Rhyolite flow or intrusive.<br>COLOUR:<br>Purple when dry; reddish-brownish-orange when wet<br>COMPOSITION:<br>- 4.3 to 12.0 m, is about 10% pale grey quartz microphenocrysts .. about 5% vein material (mainly quartz, some calcite); remainder or rock aphanitic<br>- 12.0 to 16.0 m, as above except no phenocrysts<br>TEXTURE:<br>- porphyritic from 4.3 to 12.0 m; phenocrysts form wormy, myrmekite-like pattern<br>- otherwise massive<br>STRUCTURE:<br>- rock highly fractured, but not brecciated<br>- fractures in many different orientations; no attempt at measurement made.<br>- no slickensides on fractures; therefore most are probably tension gashes<br>- thin quartz (sometimes calcite) stringers on most fractures<br>- pale buff clay gouge encountered after 12.2 m (8 cm of gouge in box)<br>ALTERATION AND MINERALIZATION:<br>- white or grey quartz veinlets ubiquitous<br>- quartz-pyrite stringers common<br>- rose quartz-amethystine quartz ± pyrite stringers are common from 9.0-16.0 m<br>- rhyolite is very hard, possibly silicified | | | | | | 22742<br>22743<br>22744<br>22745 | 7.8<br>10.8<br>13.1<br>16.0 | 10.8<br>13.1<br>16.0<br>16.6 | | |

ELDORADO RESOURCES LIMITED

OND DRILL HOLE LITHOLOGIC RECORD

Hole No. 85 HD-2 Page 3 of 4

Date Drilled August 25-26, 1985

| ETRES | | Description | STRUCTURE AND FABRIC | | | | | SAMPLES - | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | To | | Depth | Angle toCore | Fault-ing | Bedd-ing | Gneiss-osity | No. | From | To | Width | U(ppm) |
| | | CORE RECOVERY:<br>- 4.3 to 7.8 m: 26%<br>- 7.8 to 10.8 m: 57%<br>- 10.8 to 14.0 m: 30%<br>- 14.0 to 15.8 m: 6%<br>COMMENTS:<br>- at 5.0 thin dark grey quartz stringers parallel core axis<br>- 4.3 6.4 very broken, much limonite stain<br>- 8.0 speck (2mm) of sphalerite<br>- 9.7-10.0 heavy limonite stain<br>- 10.4, 10.9 specks of sphalerite (1-3 mm)<br>- 15.8-15.85 highly fractured, much amethystine quartz in veinlets; white quartz veinlets often vuggy | | | | | | | | | | |
| .0 | 16.6 | FORMATION:<br>Finely-crystalline mafic dyke.<br>COLOUR:<br>Medium and dark green<br>COMPOSITION:<br>- no primary minerals visible<br>- rock soft, green, probably mostly chlorite<br>- about 10% vein material (quartz > calcite)<br>TEXTURE:<br>- alternating patches of medium green (90%) and dark green (10%) rock<br>- dark green patches often bounded by fractures and veinlets, have angular or fibrous outlines, millimetric in scale.<br>STRUCTURE:<br>- highly fractured with many narrow veinlets in may orientations<br>- high fracture density on millimetric scale<br>- no slickensides seen | | | | | | | | | | |

ELDORADO RESOURCES LIMITED

OND DRILL HOLE LITHOLOGIC RECORD

Hole No. 85 HD-2

Page 4 of 4

Date Drilled August 25-26, 1985

| ETRES | | Description | STRUCTURE AND FABRIC | | | | | SAMPLES - | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| From | To | | Depth | Angle toCore | Faulting | Bedding | Gneissosity | No. | From | To | Width | U(ppr |
| | | - upper contact: preserved in core; is 15° to core axis, "fingers" of this rock extend 1 to 2 cm into the rhyolite<br>- hole stopped in clay gouge zone | | | | | | | | | | |
| | | ALTERATION AND MINERALIZATION:<br>- fractures have veinlets of white quartz, rose quartz, and calcite<br>- no sulphides seen; some flecks native copper in quartz veinlets<br>- chlorite is probably secondary | | | | | | | | | | |
| | | CORE RECOVERY:<br>From 15.8 to 16.6 is 69% | | | | | | | | | | |
| | | COMMENT:<br>- 8 mm wide calcite vein at 16.3 m | | | | | | | | | | |
| 16.6 | | End of Hole. | | | | | | | | | | |

R Douglas Cruickshank