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REPORT

On The

GEOLOGY, GEOCHEMISTRY AND TRENCHING

Of The

KENO HILL AREA SUB-LEASES and WORKING PERMITS

Rocket & Tyee: L 273,274  
Caliente, Sierra, Mexico, Navajo: L 572-575 incl.  
Silver Basin and Silver Basin 5: L 41, 600  
Caribou: L 926, Gold Hill #2: L 33  
Silver Basin #3: L 42, Silver Queen: L 33

Latitude 63°55'N - Longitude 135°15'W

NTS Sheet 105 M 14

Mayo Mining District, Yukon Territory

Period: July 8 - November 24, 1986

For

DAWSON ELDORADO MINES LTD.  
810, 910 - 7th Ave. S.W.  
Calgary, Alberta  
T2P 3N8

By

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Calgary, February 13, 1987



## TABLE OF CONTENTS

	Page
Summary .....	(i)
Introduction .....	1
Property and Title .....	2
Location and Access .....	4
Physiography .....	4
History .....	5
Geology .....	6
1986 Activities .....	11
Conclusions and Recommendations .....	22
Certificates .....	24 & 25
References .....	26
Table I                      Table of Geologic Formations	7
Appendix I                  Personnel and Cost Outlays	
Appendix II                 Smelter Data	

## LIST OF FIGURES

Figure 1	Location Map	After p. 1
Figure 2	Claim Map	Map pocket
Figure 3	Geology Map	Map pocket
Figures 4a,4b	Silver Basin, Trenches	After p. 11
Figures 5a-5e	Formo Group, Trench & Geology	Map pocket
Figures 6a-6f	Nabob Lease, Trenches	Map Pocket
Figure 7	Eagle Lease, Trenches	After p. 17
Figure 8	Rain & Shine Leases, Trenches	After p. 18
Figure 9	Caribou Lease, Geological Plan	Map pocket

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## SUMMARY

Dawson Eldorado Mines Ltd., of Calgary, Alberta, completed bulldozer trenching, geological geochemical investigations, and bulk sampling on a number of sub-leased claims in the Keno Hill silver mining camp of Central Yukon, in 1986.

The region is underlain by interlayered schist, quartzite and greenstone of Paleozoic age. These rocks are disrupted by a variety of faults, one set of which is host to a large number of silver-bearing siderite, sulphide veins. Small, but high-grade ore shoots are not uncommon.

The physical and chemical requirements which favoured ore-shoots are well known, making target determination more predictable. Ore shoots are typically located along faults with competent wallrocks, or where the fault passes from a competent host to a schistose "cap". Other favourable locations include fault intercepts and fault-attitude changes.

Many of the sub-leased claims cover such features and a few are on the postulated extension of known past producers. Although only minor high-grade, surface mineralization has been uncovered to date, the Company concludes that there is still excellent potential for this form of mineralization on the Formo Group and Caribou, Silver Basin, Gold Hill #2 leases. Many other claims have not been examined in enough detail to be pronounced favourable or not.

It has also been concluded that there is greater potential on these same claims for medium tonnages of medium-grade mineralization (eg. to 100,000 tons at 50 to 80 oz./T silver). Such reserves would be established with custom-mill beneficiation in mind. Of particular interest in such

(ii)

a scenario would be the Formo Group, Caribou and, possibly, Silver Basin leases.

The Company is currently recommending additional research and exploration for the Formo, Caliente, Caribbean and Bankeno groups of leases, and for the individual Caribou, Gold Hill #2 and Silver Basin leases. Bulldozer trenching on indicated or inferred structures has proven efficient historically and is the proposed exploration approach on all of these leases. Shallow diamond core or reverse circulation drilling, to test for medium-grade mineralization at 20 to 30 metre depths, is recommended for the Formo Group and the Caribou, Gold Hill #2 leases. Drifting along proven ore-bearing structures may be performed at a later date, as risk is reduced by surface work information.

## INTRODUCTION

Dawson Eldorado Mines Ltd. ("DEM"), of Calgary, Alberta, has completed detailed bulldozer-trenching, bulk sampling, geochemical and geological investigations on their sub-leased Keno Hill - Galena Hill silver-lead properties of Central Yukon. (Figure 1). The program was completed in order to determine the potential for commercial grades of silver mineralization amenable to surface-mining operations, as indicators to larger tonnages of subsurface mineralization.

Trenching, mapping and bulk sampling was carried out from July 8 to November 24, 1986. Bulk samples totalling 21.34 S.D.T. were obtained from one claim and were processed by Cominco Ltd. (Trail, B.C.) in early December 1986.

The authors have completed this report through review of Company documents, government publications and personal examination of the various work sites between July and November 1986.

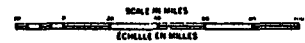


**LOCATION MAP**

SHOWING  
**KENO HILL SILVER PROPERTIES**

LEASED OR OPTIONED  
BY  
**DAWSON ELDORADO MINES LTD.**

YUKON



**LESSORS OR OPTIONORS**

**CONS. RIO PLATA RESOURCES LTD.**

- 42 MINERAL CLAIMS

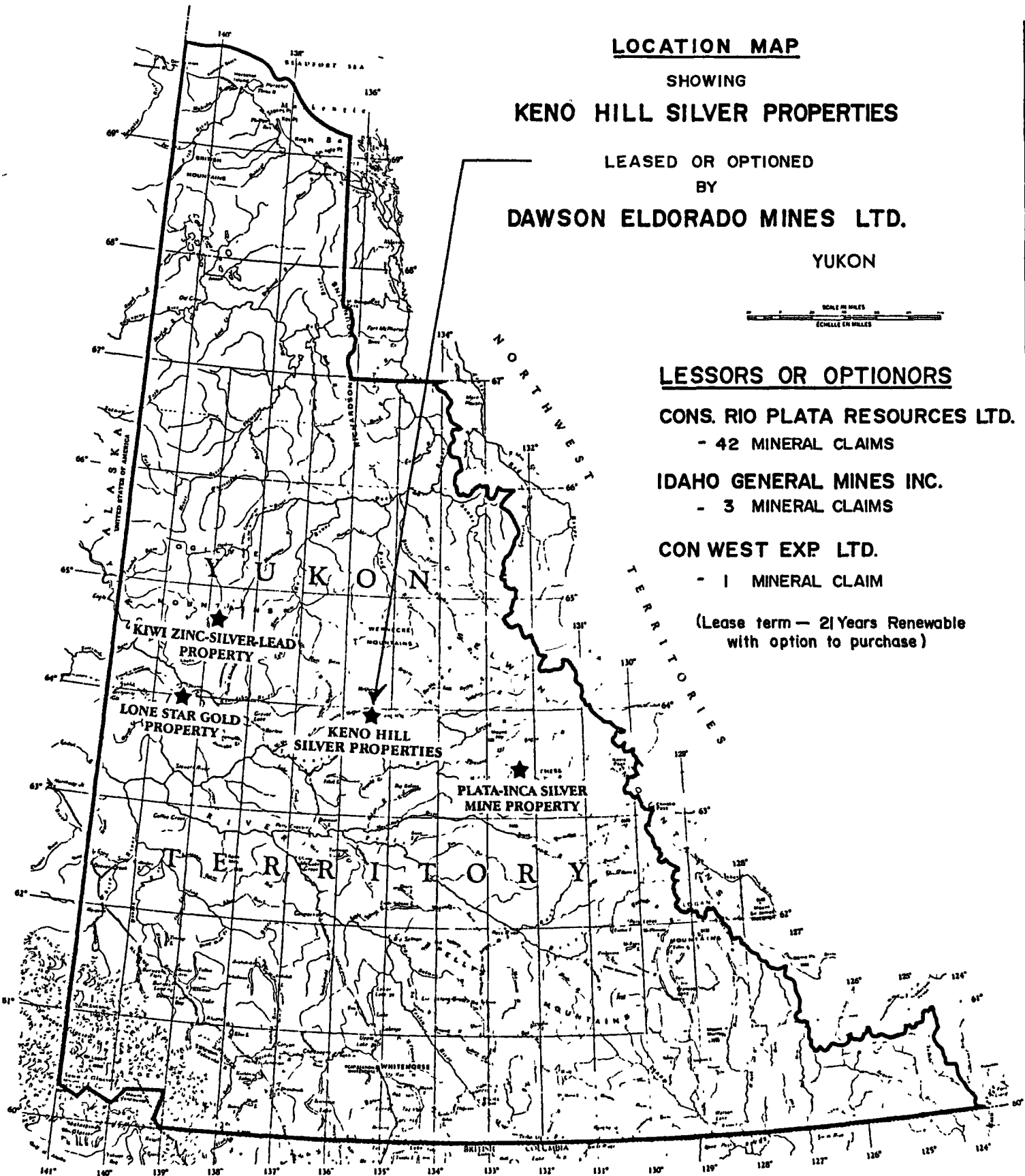
**IDAHO GENERAL MINES INC.**

- 3 MINERAL CLAIMS

**CON WEST EXP LTD.**

- 1 MINERAL CLAIM

(Lease term - 21 Years Renewable  
with option to purchase)



**PROPERTY and TITLE**

On June 13, 1986, the Company acquired a three year Sub-Lease, with option to purchase, covering 42 mineral claims in the Keno Hill Area, Mayo Mining District, Yukon Territory, from Consolidated Rio Plata Resources Ltd., comprising 2.6 square miles in area:

<u>Mineral Lease</u>	<u>Lot No.</u>	<u>Lease No.</u>	<u>Expiry Date</u>	<u>Acreege</u>
Chiko 1-8	687-94	2736-743	June 23,2000	380.69
Rocket	273	2447	Sep. 26,1997	51.46
Tyee	274	2448	Sep. 26,1997	45.52
Dorothy	650	2826	Aug. 3,2001	51.43
Papoose	654	2825	"	50.46
Tillicum	658	2824	"	49.53
Skookum	652	2823	"	14.95
Tagish	651	2822	"	40.60
Cheechaco	653	2821	"	16.30
Silver Basin 7	602	2820	"	40.72
Silver Basin 8	603	2819	"	49.13
Bra	655	2818	"	49.33
Premier	649	2817	"	46.41
Caribbean	555	2816	"	19.53
Horn silver	605	2815	"	37.04
Brook	569	2814	"	49.15
Birch	656	2813	"	3.82
Spruce	657	2812	"	23.40
Wimpy	660	2811	"	25.48
Duncan	637	2893	Jun. 26,2002	51.58
Silver Creek Fr.	634	2651	Feb. 25,2000	46.54
Navajo	575	2652	"	39.24
Mexico	574	2653	"	52.19
Silver Basin 5	600	2654	"	54.49
Silver Basin 6	601	2655	"	51.45
Caliente	572	2656	"	46.42
Sierra	573	2657	"	52.40
Bull	589	2658	"	27.42
Carscallen	557	2659	"	8.23
Keefer	562	2660	"	15.80
Caravan	551	2661	"	2.49
Golden Queen	638	2662	"	36.41
Golden Flat	633	2663	"	51.43
Silver Basin	41	2664	"	51.45
Cimarron	554	2939	Apr. 26,2003	<u>35.24</u>
42 LEASES			TOTAL ACREAGE	1,668.33

A three year Sub-Lease was obtained from Idaho General Mines Inc., of Wallace, Idaho, and Working Permits from Conwest Exploration Ltd., of Toronto, Ontario, and Bankeno Mines Ltd., of Calgary, Alberta.

<u>Mineral Lease</u>	<u>Lessor</u>	<u>Lot #</u>	<u>Lease #</u>	<u>Expiry Date</u>	<u>Acreage</u>
Silver Queen	Idaho Gen.	33	1494	Oct. 31, 1991	48.85
Gold Hill #2	"	34	1495	" "	51.16
Silver Basin #3	"	42	1496	" "	51.65
Caribou	ConWest	926	2896	Dec. 30, 2002	45.92
Pup	Bankeno	912	2246	Apr. 27, 1997	22.70
Scale	"	914	2247	" "	12.31
Petaim	"	908	2248	" "	45.97
Sorb	"	907	2249	" "	44.27
Whist	"	902	2250	" "	51.59
Lottie	"	901	2251	" "	49.13
Argo	"	903	2252	" "	42.53
Chrystal # 3	"	910	2253	" "	50.87
Ankeno 5 Fr.	"	825	2254	" "	21.88
" 4 Fr.	"	824	2255	" "	0.29
" 3 Fr.	"	823	2256	" "	0.94
" 2 Fr.	"	822	2257	" "	0.33
" 1 Fr.	"	911	2258	" "	10.37
Iron Clad	"	905	2259	" "	20.69
Star	"	904	2260	" "	43.64
Petaim # 2	"	906	2261	" "	41.18
Dorothy	"	909	2262	" "	15.49
Lyle	"	913	2263	" "	<u>32.07</u>
22 LEASES			TOTAL ACREAGE		657.91

In addition, the Company carried out evaluatory work on the following non-optioned claims. Negotiations on the first three have not been pursued. The Rain and Shine claims are still under negotiation.

<u>Mineral Lease</u>	<u>Lessor</u>	<u>Lot #</u>	<u>Lease #</u>	<u>Expiry Date</u>	<u>Acreage</u>
Nabob	B. O'Neil(Sub)	925	2246	Sep. 30, 1997	49.47
Gambler	" "	30	1241	" "	48.39
Eagle #4	Jersey Cons.	424	2721	Apr. 29, 2000	26.03
Rain	J. Hawthorne	453			51.65
Shine	"	454			40.57

All Claims are shown on Figure 2.

### LOCATION and ACCESS

The Keno Hill - Galena Hill silver camp is centered about Keno City, located 350 kilometres north of Whitehorse and 55 kilometres northeast of Mayo, Yukon Territory. (Figure 1). DEM's claims are situated within 9 kilometres of Keno City in NTS Map Sheet 105 M 14, Mayo Mining District (Figure 2). All of the claims are enclosed within an area bound by Latitudes  $63^{\circ}53'N$  and  $63^{\circ}58'N$ ; Longitudes  $135^{\circ}08'W$  and  $135^{\circ}22'W$ .

Access to the region is by road from Whitehorse, via Mayo. A commercial airport is also located at Mayo. Although two towns are located in the silver camp (Elsa and Keno City), all supplies are best obtained from Whitehorse or Mayo. Elsa is owned and operated by United Keno Hill Mines Ltd. (UKHM), and Keno City is a small settlement, with minimal supply outlets.

Access to the various claims is accomplished by 4 wheel drive vehicles along numerous gravel roads on Keno and Galena Hills.

### PHYSIOGRAPHY

The properties are located on Galena and Keno Hills, both members of the northeast-trending Gustavus Range of the Wernecke Mountains. The two hills are rounded with moderate slopes facing south and steep, ragged topography facing north. Drainage occurs as steep ravines and gulches.

Relief is in the order of 1150 metres, ranging from 700 metres ASL in the Keno-Ladue Valley (northern boundary of both Hills) to 1450 metres at Galena Hill and 1850 metres at Keno Hill. Vegetation consists of thick growths of black spruce, poplar and alder to altitudes of 1250 metres, with sparse conifers and alpine moss above timber line.

Overburden, consisting primarily of locally frozen glacial till, covers the shallow slopes, whereas coarse, frozen talus is observed in the north-facing cirques. The overburden varies from 2 to 20 metres in thickness. An important feature is the paucity of outcrop and the tendency for these to be frost-heaved.

### HISTORY

Exploration in the Keno-Galena Hills area dates back to the late 1890's, when the Klondike gold rush brought placer gold prospectors to the region. The first silver vein (the Silver King) was discovered in 1906 (Boyle 1957, Watson 1985). It was the 1919 discovery of numerous silver veins on Keno Hill, by L. Beauvette, which precipitated the first silver staking rush in the area. By the mid 1920's, the Treadwell Yukon Co. Ltd. had built a 125 ton per day mill for the Sadie-Ladue vein at Wernecke on Keno Hill. By 1929 most of the favourable ground on Keno and Galena Hills had been staked and was being actively prospected, explored and mined. Most of the silver production in the 1920's and 1930's was from Sadie-Ladue and Lucky Queen veins (Figures 2 and 3). In the late 1930's, emphasis turned to Galena Hill producers. The 150 ton/day Elsa mill (now 500 t/d) was put in operation in 1936 and was eventually acquired in 1945 by the Keno Hill Mining Co. as were most of the Treadwell interests. Keno Hill Mining Co. was reorganized as UKHM in 1948 and, by 1958 the company had acquired the majority of the known significant claims in the region.

The Hector-Calumet mine on Galena Hill was the largest silver producer in the 50's and 60's, with Elsa's Husky mine remaining the single most important producer for UKHM since 1972.

Mining in the Keno-Galena Hill area, from 1913 to present, has

accounted for 4.54 million tonnes of ore averaging 1412 grams/T silver (41 ounces/T), 6.84% lead and 4.6% zinc from 30 past and present producers (Watson, 1985). There are few records of production from DEM's claims although most have seen extensive workings in the form of trenches, adits and shafts. DEM acquired its properties in 1986. At time of writing, UKHM has called for tenders on the Bellekeno decline adit and a shaft to be sunk nearby.

### GEOLOGY

The Keno-Galena Hill area is underlain by the Yukon Group, a meta-sedimentary package of PreCambrian to Paleozoic age (Boyle, 1965). The Yukon Group consists of various rock types, including schist, phyllite, argillite and quartzite (TABLE 1). Intruded into these rocks are sills of diorite and gabbro, now altered to greenstone. Monzonite batholiths of Cretaceous age, such as the Mayo batholith 13 kilometres southeast of Keno Hill, are also intrusive into the sedimentary package. The youngest rocks are represented by narrow, southeast-trending quartz-porphphyry sills of late Cretaceous to early Tertiary age, possibly related to the monzonitic intrusives.

The Yukon Group has been separated, lithologically, into three formations: the Lower Schist, Central Quartzite and Upper Schist (Figure 3).

The **LOWER SCHIST** formation (1) outcrops primarily on the north slopes Keno Hill and Galena Hill. The rocks in this formation consist of graphitic and chloritic schists and phyllites (1a). They tend to be highly foliated with numerous lenses of quartz. The vast majority of conformable greenstone bodies (4) occur within this unit. At least four quartzite horizons are included in the Lower Schist formation (No. 9 Quartzite, 1b).

## TABLE I

**TABLE OF GEOLOGICAL FORMATIONS**  
**(Adapted from Boyle, 1965)**

**TERTIARY - CRETACEOUS(?)**

- 5                    **FELSIC SILLS**  
 Pale quartz-feldspar porphyry, granite, diorite sills.

**CRETACEOUS or MISSISSIPPIAN**

- 4                    **GREENSTONE SILLS**  
 Meta-gabbro, meta-diorite.

**MISSISSIPPIAN and OLDER**

- 3                    **UPPER SCHIST**  
 Quartz-mica and graphitic schists; minor quartzite and limestone.
- 2                    **CENTRAL QUARTZITE**  
 Thick and thin bedded quartzite; minor phyllite, mica schist and calcareous quartzite/schist.
- 1                    **LOWER SCHIST**  
 1a - Graphitic schist and phyllite; minor quartzite and sericite schist. Includes (4) above.  
 1b - No. 9 Quartzite, thick bedded; phyllite and schist.

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These rocks are similar to the main Central Quartzite formation discussed below. Vein faults are present and economic where greenstone bodies and the No. 9 quartzite act either as the hanging wall or footwall to the faults. This is the case with the Sadie-Ladue ore bodies which were mined in the camp's infancy.

The Lower Schist formation has been assigned to the Precambrian to Mesozoic eras by various authors (eg. Boyle 1965, Tempelman-Kluit 1970), but, more recent investigations indicate a more precise Mississippian age, (Lynch, 1986, personal communication).

The **CENTRAL QUARTZITE** Formation (2) is composed of thick and thin bedded quartzite with intercalated schist layers. This 700 metre thick unit trends across Keno Hill and over to Galena Hill.

The vast majority of deposits occur within the Central Quartzite formation, including the Hector-Calumet, Husky and Silver King. Over 90% of the ore mined to date has come from this unit.

A Mississippian age has been assigned to this unit (Lynch 1986, pers. comm.). Conodonts found within an enclosed limestone bed have been used to assign this age.

The **UPPER SCHIST** Formation (3) is composed of quartz-mica schists and graphitic schists. It outcrops south of Keno Hill and along the top and southern slope of Galena Hill. No known ore bodies occur within this unit.

The unit age is in dispute; Boyle (1965) believes it to be conformable (Mississippian?), whereas Green (1971) believes it to be an overthrust Precambrian unit.

Many narrow sills of granite, quartz-porphry and diorite were intruded into all older rocks (5). Although common, these do not appear to be spatially associated with known vein mineralization. Locally they are offset by siderite veins.

Structurally, the region is defined by the east-trending, southerly dipping, south limb of the McQuesten antiform. This is reflected in the 20° to 30° southerly dips of most lithologies.

The region is also typified by abundant faulting which may be classified in three distinct sets: bedding faults, vein faults and cross-faults, (Boyle 1965). The bedding faults appear relatively insignificant as they developed as thrusts during folding (?Cretaceous?). The vein faults hosts the majority of the Keno ores. They consist of two intersecting (?splaying?) patterns of "transverse" and "longitudinal" faults both steeply dipping to the southeast. The first pattern strikes north to northeast; the second, 035° to 080°. These faults formed shears and sheeted zones in the schists, but created open-space breccia zones in the more competent quartzites and greenstones. The cross-faults offset all other structures and are believed to be locally contemporaneous with the vein faults. These are occasionally mineralized at their intersection with the vein faults.

There were two main mineralizing stages identified in the area (Watson 1985). The first consisted of quartz, arsenopyrite, jamesonite-boulangierite deposited in vein faults probably in late Mesozoic times. Later brecciation and continued faulting provided space for the main mineralizing event: deposition of siderite, galena, sphalerite, quartz, freibergite, chalcopyrite, dolomite and some barite. On Galena Hill there is primary pyrargyrite, polybasite and native silver within the veins. Mineralization was accompanied by little or no wallrock alteration.

Some believe the mineralization is related to the emplacement of the Mayo batholith and felsic-intermediate sills of unit 5 (Lynch pers. comm.). Boyle (1965) believes the ores to be related to syn-intrusive and post-intrusive metamorphic events. In either case mineralization appears slightly younger than the Cretaceous igneous phase.

Optimum locations for ore shoot emplacement occurred along vein faults within competent rocks, such as quartzite or greenstone; where two vein faults intersect or where vein faults are truncated and offset by cross-faults. Other locations that are favourable occur where a vein fault offsets a structurally competent rock and passes into a schist, or in areas where faults change dip, near surface. Ore shoots are typically less than 2 metres in width, and 100 metres in strike and dip length, although 25 metre widths and 250 metre lengths have been encountered at the Hector-Calumet mine, (Watson 1985). Grades from typical fresh ore-shoots average less than 70 oz./T Ag, although values in excess of 200 oz./T Ag have been obtained from various weathered near-surface exposures, eg.: Lucky Queen, 485 oz/T Ag, Boyle (1965). More than 65 near-surface deposits and prospects have been recognized within the district to date. On this basis DEM has obtained Sub-lease agreements for the most promising non-UKHM leases, in an effort to take advantage of the excellent, near-surface, high-grade silver potential of the mining camp.

## 1986 ACTIVITIES

DEM completed physical work on the Silver Basin and Silver Basin #5; Rocket and Tyee (Formo Group); Caliente, Sierra, Mexico, Navajo (Caliente Group); Gambler, Nabob, Eagle 1, Rain, Shine and Caribou leases, (Fig. 2). In addition, minor prospecting and soil sampling was carried out on a number of claims near or adjacent to those mentioned above (eg. Caliente Group). The Silver Basin, Silver Basin #5, Formo Group and Caliente Group of claims were included in the original Yukon Government Grant Application #EIP86-023. The Caribou and Idaho General Sub-Leases were included by amendment to the Application on February 11, 1987. APPENDIX I.

The physical work consisted of trenching by a Company owned Komatsu 355 ripper-bulldozer. A leased Caterpillar D8 ripper-dozer was also used for a month. The four man crew was stationed in a trailer camp in Keno City.

### SILVER BASIN and SILVER BASIN #5 LEASES

There is little mention of exploration and mining on the Silver Basin claims. At least five veins have been explored, as attested by a number of old cuts and adits. Only minor mineralization was encountered by Yukeno Mines Ltd. during adit extension work in 1952 (Boyle 1965). Rio Plata Silver Mines Ltd. found hand specimens of high-grade silver in the 1950's.

Work in 1986 consisted in excavating three trenches (4455 m<sup>3</sup>) in the vicinity of the Silver Basin adit, and one trench (1080 m<sup>3</sup>) in the Silver Basin #5 lease, adjacent to anomalous float (Figures 4a and 4b). A 250 metre access road had to be built (1500 m<sup>3</sup>). Fifty soil samples, taken 20 metres apart, were collected along the 1300 m. ASL contour through



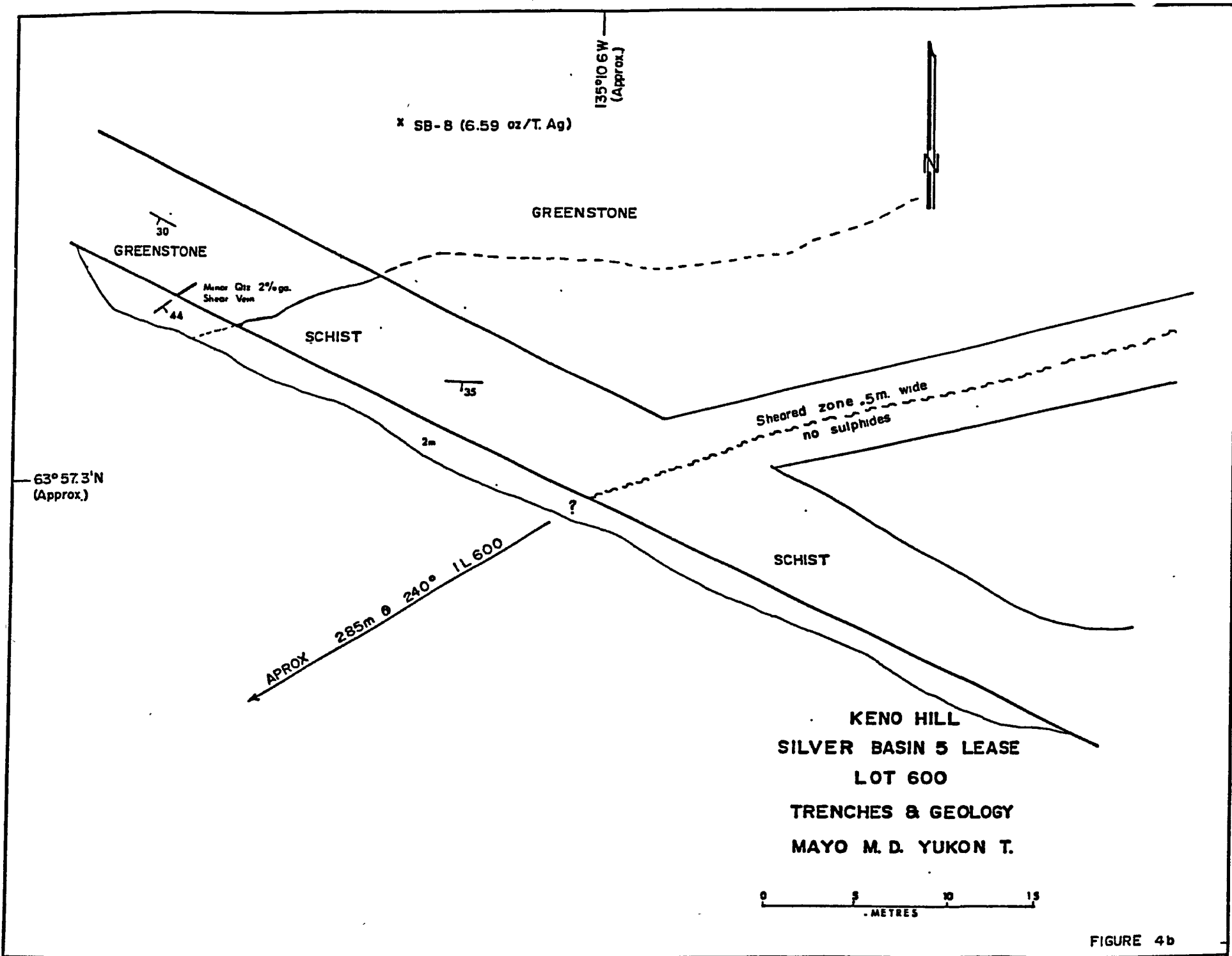


FIGURE 4b

the center of Silver Basin #5 and eastern edge of Silver Basin (Fig. 2). The soil samples have not yet been analysed.

Lower Schist units predominate in both areas. The Silver Basin claim is also host to a 10 metre thick quartzite band. The Silver Basin #5 diggings were carried out adjacent to a greenstone knoll.

A 0.5 to 1.5 metre wide limonitized vein containing siderite, pyrite, arsenopyrite and minor galena trends 030° (65° dip SE) near the adit and it contains up to 60 oz./T silver. Galena float from this area assayed 140 oz./T silver. This vein is probably a weathered remnant of a more sulphide-rich protolith. A minor mineralized shear zone was uncovered on Silver Basin #5.

The presence of a strong, weathered vein on Silver Basin indicates good potential for additional mineralization along this system. The Company recommends additional trenching to the northeast and southwest, along the postulated trace of the structure. Of particular interest are areas where the fault passes upwards from competent to schistose rocks.

#### FORMO GROUP - ROCKET AND TYEE LEASES

The Formo Group of claims was explored by H.E. Formo in the late 1920's, at which time some 35 tonnes of 225 oz./T silver ore was mined (Boyle 1965). The workings were described as a 25 metres deep inclined shaft, sunk on a 1.2 metre wide, northeast-trending vein comprising siderite, sphalerite, galena and calcite. The best ore came from a 0.7 metre wide shoot at a depth of 10 metres. The same shoot was 0.9 metre wide, but of lower grade, at the bottom of the shaft.

Between 1952 and 1953, Yukeno Mines Ltd. drove two adits and connecting drifts on two levels, 60 and 90 metres below the 1920 shaft, to explore the down-dip extension of the Formo Vein and parallel features. Diamond and percussion drilling programmes were subsequently undertaken in 1964 and 1975 respectively, with inconclusive results.

The most useful work to date has been by Rio Plata Silver Mines Ltd. who conducted exhaustive research and percussion drilling in 1980 (Wolfe 1980, 1981). A small shipment of 120-150 ounce material was made by J.B. O'Neal interests in 1983-84.

Results showed the Formo Vein to have greater potential for economic grades of surface and underground mineralization than originally thought. Wolfe also noted that the vein may be an offshoot of the famous Hector-Calumet vein system, 2 kilometres to the southwest. On the basis of these observations, DEM conducted a detailed evaluation of the claim block with several exploration trenches, in 1986 (Figure 5a).

On the main **Formo Vein** zone, a total of 6825 m<sup>3</sup> of rock has been removed from four trenches thereby exposing the Formo Vein and a number of satellite structures (Figure 5b). Three trenches were excavated on the **Northern Occurrence**, 155 metres northeast of Formo (Figures 5a & 5c). A total of 810 m<sup>3</sup> was removed from these. Two smaller trenches, totalling 360 m<sup>3</sup>, were dug periferal to a greenstone lens some 450 metres south of the Main Formo workings (Figures 5a, 5d, 5e).

The Formo group of claims is underlain by the Lower Schist formation, which consists of quartz-mica and graphitic schists with numerous, large greenstone lenses (Figure 5a).

The **Formo Vein** is located along the southwestern edge of a prominent greenstone "sill" on the Rocket claim (Lot 273). The vein, which strikes

016° and dips 45° to the east, has been traced for 43 metres and varies from 0.5 to 1.5 metre in width. The footwall is greenstone and the hanging-wall is graphitic schist which is highly brecciated within a few metres of the vein. The vein is composed of siderite with variable, but small, amounts of quartz, sphalerite, galena and freibergite. The cubiform galena occurs as clots and clusters rarely more than a few centimetres in size. The vein has been affected by post-mineralization fault movement, as well as intense weathering. Siderite and galena are commonly weathered to limonite and anglesite. The northern end of the vein is believed to be fault-displaced laterally to the southeast by several metres (**Formo North Vein?**) although this has not been proven conclusively. Both the **Formo** and **Formo North** veins have similar physical characteristics and grades (eg. samples 86-3,4 vs 86-9A,10). The southern extremity of the **Formo Vein** is invisible under overburden.

Two other parallel veins occur east of the main zone. The **Carbonate Lens** outcrops 5 metres to the east. It is up to 30 centimetres in width and has been traced for over 20 metres along strike. It is very similar to the main zone in all respects. The **East Vein**, occurring 12 metres east of the **Formo Vein**, consists of a shear zone up to 50 centimetres wide and traceable over 40 metres. Small pockets of galena contain up to 219 oz./T silver. In all of these veins, the silver occurs solely with the galena. The pure galena contains in excess of 100 ounces/ton silver, but the bulk of the veins/shears carry generally less than 20 ounces/ton silver. The exception is the **Formo North Vein**, where 83 ounces-per ton silver was recovered from a 1 metre wide section containing only 5% galena.

The **Northern Occurrence** consists of a 10 centimetres wide shear along the hangingwall contact of a 2 metre wide greenstone dike.

The **Southern Greenstone Occurrences** consists of two narrow veinlets of quartz with minor amounts of arsenopyrite. The larger veinlet trends 070°, 60°SE, is 8 centimetres wide and contains 0.58 oz./T Ag and 0.21 ounces/ton Au (Trench #1).

The Formo group of veins are hosted by schists, but the better developed ores are located against greenstone wallrocks. The 1986 excavations did not confirm Rio Plata's conclusions regarding the property's high-grade, near-surface silver potential. It was found that high-grade mineralization is sporadically distributed along a number of well developed veins. Potential still exists for such type of mineralization when one considers the total number of uncovered vein structures (6) and the high silver content of pure galena from these veins. Some localized enrichment of gold is an added bonus. The greatest potential is for medium tonnages of near-surface, medium grade mineralization in the 50 to 80 oz./T Ag class. Of particular interest is the north extension of the Formo Vein. On this basis, DEM strongly recommends further work on the property. Examinations of the south and north extremities of the Formo Vein and of accessible greenstone lenses is of high priority. This, combined with a detailed evaluation of old drill data, may point to delineation of millable silver-ore reserves.

CALIENTE GROUP - CALIENTE, SIERRA, MEXICO, NAVAJO LEASES

To the authors' knowledge, there is no record of any work carried out on these claims in the past.

The Caliente group is underlain by the Central Quartzite formation with a mica schist cap at the southern extremity of the group (Fig. 3). Exposure on the claim group is very limited. It consists of quartzite in frost-shattered condition. Talus and float in the area is also composed almost entirely of quartzite. No known vein faults occur in the group.

Work in 1986 consisted of minor soil geochemistry. A soil line, 1334 metres long, with samples taken every 20 metres (totalling 67 samples) was completed along the north-south common boundary of the four claims (Figure 2). The samples have not yet been analysed. Being underlain by quartzite and schist, the claim group offers unproven potential for typical Keno-type mineralization. DEM recommends more detailed exploration in the form of reconnaissance dozer trenching in the vicinity of the quartzite-schist contact.

#### **GAMBLER CLAIM**

The Gambler vein was discovered in 1920 and development work commenced in 1921 (Boyle 1965). Two 15 metre adits were driven in 1923, from which 48 tonnes, grading 10180 grams (297 oz./ton) silver, were extracted. During 1951-53, Comstock Keno Mines Ltd. extended the lower adit another 155 metres and the claim was leased to B. O'Neil in 1957, at which time 3650 tonnes, grading 7100 grams silver (207 oz./ton) was extracted from the lower adit. After a minor amount of trenching in 1981, activities on the claim have been at a standstill until DEM's investigation in 1986.

A single, 35 metre long, 6 metre wide, 2.5 metre deep trench was excavated above the upper adit in 1986 (525 m<sup>3</sup>). This is shown on Fig. 2.

The excavation uncovered Central Quartzite with lesser amounts of graphitic schist. The units strike 110° and dip 25° to the southwest. The quartzite underlies most of the western and central portions of the claim, whereas the Lower Schist unit outcrops to the east.

The Gambler vein, as exposed, strikes 060°, dipping 60° southeast and ranges from 1 to 2 metres in width. It consists of minor amounts

of quartz, arsenopyrite, galena, sphalerite and freibergite in massive siderite. Representative samples assayed 0.18 to 36.3 oz./T Ag with less than 25% Pb and 4% Zn. The vein is thought to be an extension of the Shamrock vein system (Boyle 1965).

Although potential exists for underground exploitation, DEM has opted not to pursue any interest in this claim, due to difficulty in obtaining a satisfactory Sub-Lease agreement thereon.

#### **NABOB CLAIM**

The Nabob claim was staked early in the camps history, but little work was carried out on the vein system (Boyle 1965). Three shafts, several cuts and one adit mark the location of the Nabob vein which is represented by a siderite zone up to 3 metres wide, trending at 075° and dipping 70° to the southeast. It is hosted by quartzite, which is overlain by schists to the southwest. Seven trenches, totalling 2115 m<sup>3</sup> of waste removed, were excavated in the vicinity of the old workings (Figures 6a to 6f). All were floored by quartzite with little or no evidence of veining. Minor brecciated quartzite in trenches 5 and 7 contained siderite, but no significant sulphides were present. Four grab samples of vein material in float contained 0.03 to 15.01 oz./T silver (Fig. 6a).

Although potential for buried mineralization has been indicated in the past (Boyle 1965), the Company has decided not to pursue this claim lease, for reasons akin to the Gambler claim situation.

#### **EAGLE 1 CLAIM**

The Eagle claims were staked in 1921 and acquired by Jersey Conso-

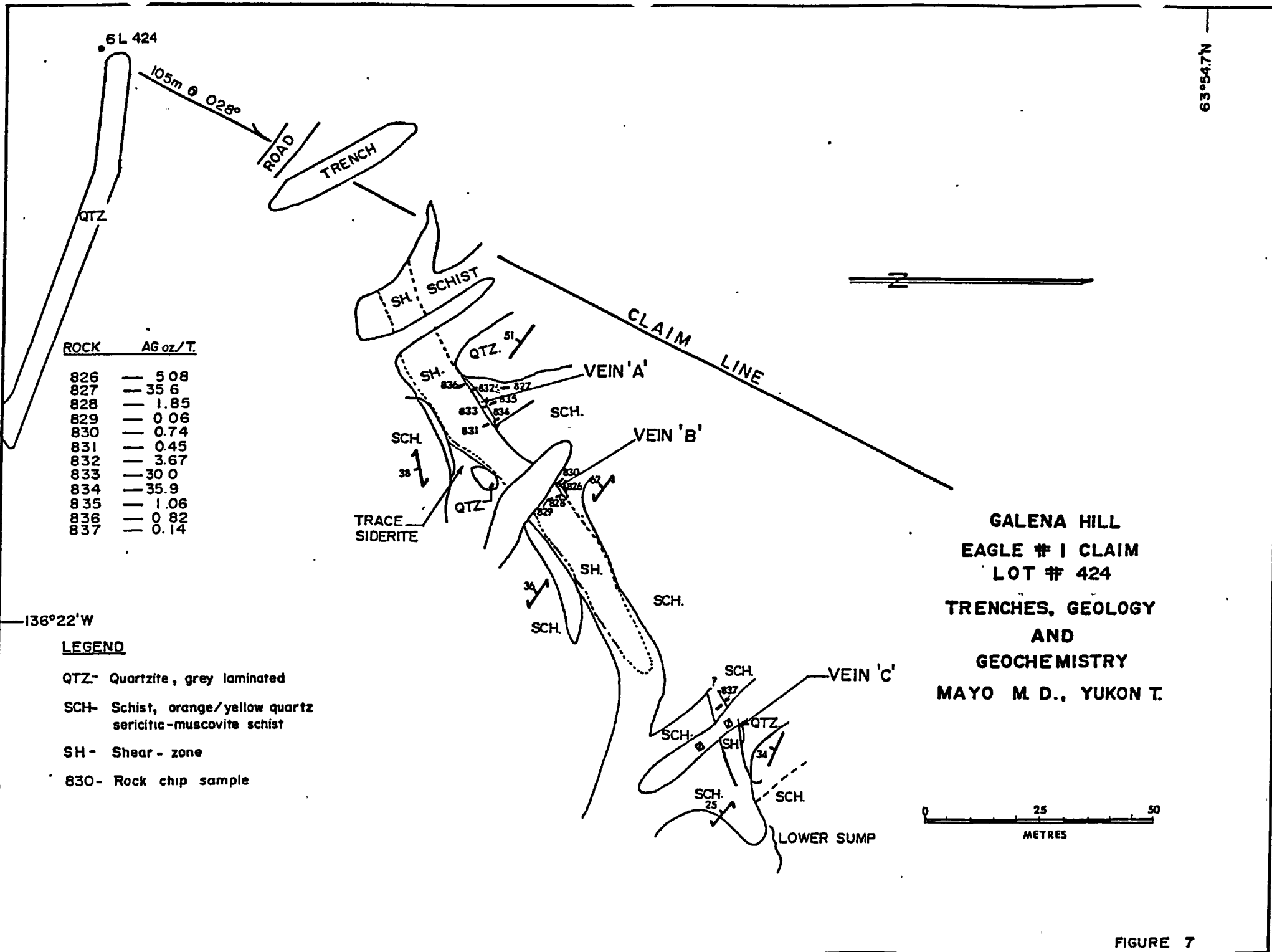


FIGURE 7

litated Mining Co. in 1951. Extensive trenching and 2000 metres of diamond drilling in 1964 by Teck Corp. revealed the presence of a 300 metres long, 1 to 5 metre wide shear zone, containing sparse lenses of galena and frieburgite (Archer, Cathro 1982). A single 2 metre intersection, grading 55 oz./T silver, was encountered at 30 metre depths.

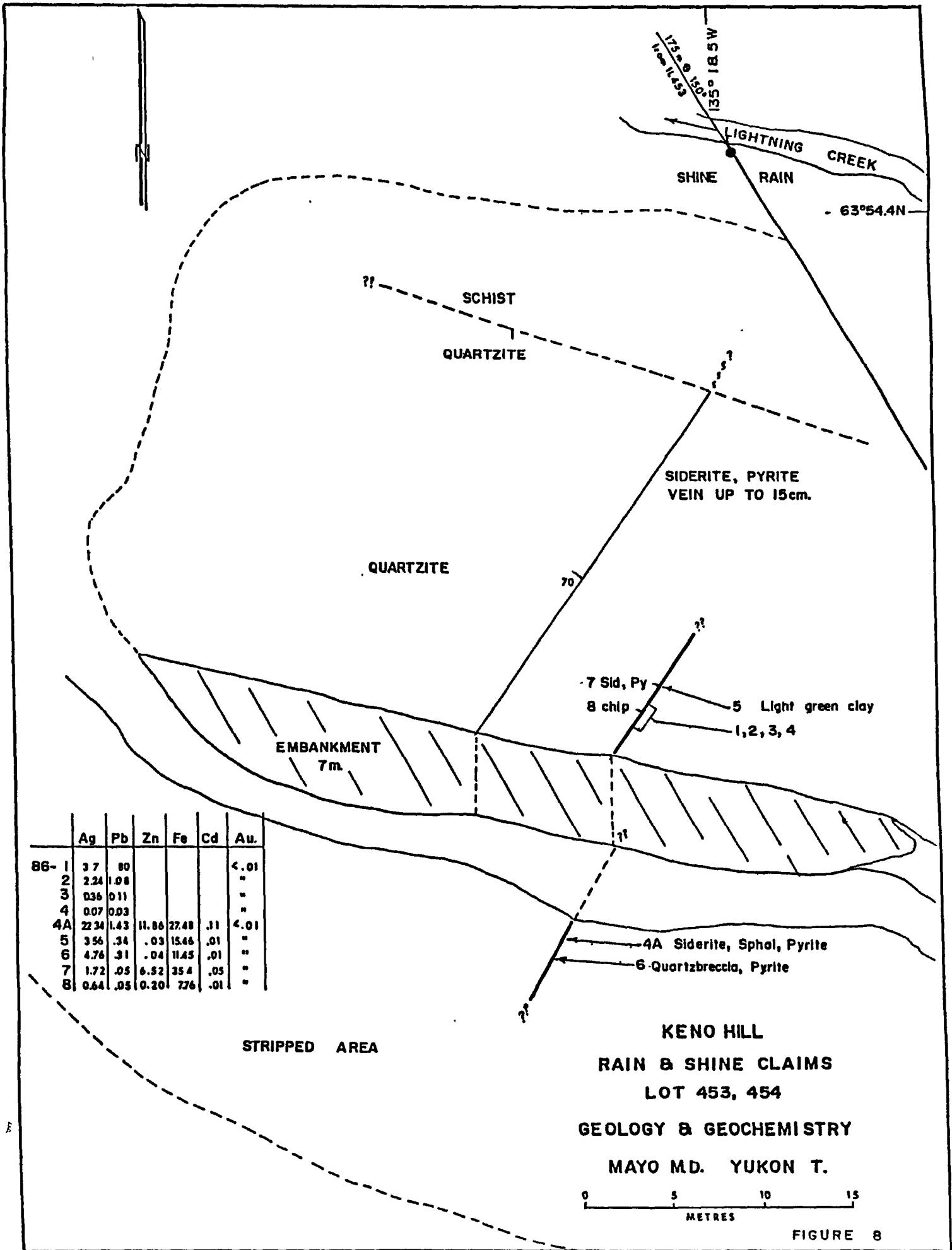
In 1986, 3920 m<sup>3</sup> of rock and gravel were excavated in reopening the old trenches (Figure 7). A 10 metre wide southwest-trending shear zone, cutting through mica schists (unit 3), was exposed. Two narrow quartzite beds were also bisected by the shear. Minor galena and pyrite veining was encountered at the shear-quartzite contacts. Vein "A" was traceable over 12 metres (30 cm. wide) and contained up to 36 oz./T silver.

As with the Gambler and Nabob claims, DEM has decided not to pursue option negotiations on the Eagle claims, but intends to reconsider negotiations with Teck Corporation in 1987. The Company had permission to prospect in 1986, but no Sub-Lease agreement was reached at the time.

#### **RAIN and SHINE CLAIMS**

There has been little work on the Rain and Shine claims. In 1986, trenching, totalling approximately 3500 m<sup>3</sup> of overburden removed, uncovered two small reverse longitudinal veins striking 035°, with 70° dip southeast (Figure 8). The siderite veins are up to 15 cm wide and contain minor galena, pyrite and limonite, with up to 22 oz./T silver. The veinlets are hosted by the Central Quartzite and Upper Schist formations.

The environment of quartzite overlain by schist and cut by vein faults is one of the most favourable in the Keno silver camp. For these reasons, DEM recommends further work on the claims, by stripping the quartzite-schist contact and tracing quartzite-hosted faults into the schist. The



	Ag	Pb	Zn	Fe	Cd	Au.
86-1	3.7	.80				<.01
2	2.24	1.08				"
3	0.36	0.11				"
4	0.07	0.03				"
4A	22.34	1.43	11.86	27.48	.11	<.01
5	3.56	.34	.03	15.46	.01	"
6	4.76	.31	.04	11.45	.01	"
7	1.72	.05	6.52	35.4	.05	"
8	0.64	.05	0.20	7.76	.01	"

claims are held by J. Hawthorne Estate, and negotiations to Sub-lease are current at time of writing.

#### CARIBOU LEASE

Local reports mention the production of 120 tons of high-grade oxidized ore from the Caribou claim in the late 1920's (Boyle 1965). Two adits, five shafts (pits) and numerous trenches have been located and all but the single, iced-in, northeast adit, are caved (Figure 9). Affidavits from the Mayo Mining Recorder's Office (records #36023-33) show that, in 1952, MacLeod White initiated the northeastern adit as well as five southern pits and trenches.

The claim is underlain almost entirely by quartzite. These are overlain to the southwest by mica schists. All of the workings are in quartzite. According to Archer (1980), the northeast adit was driven perpendicular to a longitudinal vein; a possible southwestern extension of the adjacent Alice vein (unknown potential). It trends 050° with a 60° southeast dip. The south pits define the north-trending, transverse Caribou vein; a structure believed by Archer to be similar to the well-known Keno #9 vein, a few kilometres to the west; (ten million ounces were produced from the #9, at its junction with a longitudinal fault). The two exposures are 240 metres apart, raising the possibility for strike-length potential on both vein fault systems. In agreement with Archer (1980), it is believed that the junction of the Alice and Caribou vein has been the most favourable site for the development of commercial grade ore shoots. Assays of selected 1971 grab samples, from dumps at the northeast and south workings, range from 16.7 to 317 oz./T Ag, 0.04 to 0.12 oz./T gold and 5.2 to 79% lead (Figure 9). On this basis, DEM carried out stripping and trenching of the south workings. A total of 33680 m<sup>3</sup> of rock were excavated and a 21.335 S.D.T. bulk sample was obtained from

three small ore shoots in September to November 1986. A 1 kilometre access road had to be rebuilt for access as part of the project.

The excavations exposed three, near parallel veinlets ranging from 3.5 to 5 metres long and 0.15 to 0.3 metres wide. They appear to be part of a wider, silicified, shear and breccia zone averaging 5 metres in width but flaring out to 12 metres at vein #3. All three shoots are composed of siderite with variable amounts of podiform segregations of sphalerite and massive, cubiform galena. The veins are bound by manganiferous gouges up to a few centimetres wide, and are hosted by grey quartzite with minor schist lenses. Much of the vein material has been highly weathered with manganiferous limonite and clayey anglesite, replacing the siderite and galena. Assays from Vein #1 range from 5.8 to 142.7 oz./T Ag; Vein #2, 18.7 to 816.2 oz./T Ag; and Vein #3, 98.8 to 181.5 oz./T Ag. The bulk sample from all three veins averaged 178.4 oz./T Ag, 0.035 oz./T Au, 57.4% Pb and 0.7% Zn. (APPENDIX II).

Massive galena/anglesite was shown to carry most of the silver, with probable frieborgite, (assays in excess of 120 oz./T Ag). Weakly mineralized siderite rarely carried more than 70 oz./T Ag.

The 1986 work showed that the Caribou vein structure has high potential for commercial grades of surface and underground silver mineralization. It also reinforces the potential for mineralization at the junction between the Caribou and Alice veins. In addition, the schist quartzite contact in the southwestern corner of the claim is a very favourable environment for mineralization, particularly if the Alice vein extends to this contact.

For these reasons, DEM strongly recommends further work on the lease in the form of additional trenching of the Caribou and Alice veins, as well as in shallow exploratory drilling of these, in an effort to determine

underground potential. Exploratory drifting along the Caribou vein towards the Alice structure may be envisaged at a later date.

#### **BANKENO and IDAHO GENERAL LEASES**

Neither of these Lease groups, under Working Option and Sub-Lease respectively, have been investigated in detail in 1986.

The Bankeno group of leases is underlain by Central Quartzite and minor Lower Schist unit (Figure 3). A number of minor mineral occurrences are located on the group (eg. Apex and Ankeno veins), but these have not been significant structures (Boyle 1965). Soil sampling, completed in 1965, delimited a number of anomalies, most of which were trenched with disappointing results (Van Tassel 1965). The favourable position of the claim block and the presence of additional, as yet unexamined, lead soil anomalies indicates the group to have some potential for vein mineralization. DEM recommends, for 1987, detailed prospecting and bulldozer trenching of old workings and of promising lead-zinc soil anomalies.

The Idaho General claims were last explored in 1980 and 1981, at which time only the Gold Hill #2 Lease was deemed worthy of further work. Gold Hill #2 is underlain by No. 9 quartzites and mica schists of the Lower Schist formation. The claim is also on the projected northeastern extension of the Comstock Vein, from which 18000 tons of 50 oz./T Ag were produced by Comstock Keno Mines in 1954 (Rodgers 1980). The favourable locations of the three Idaho General leases and the results of previous exploration programs has led DEM to recommend further work on all three claims. Detailed trenching of the Comstock and Nabob-Main Vein extensions is suggested. Drilling on a shallow dipping, gold-bearing quartz vein is also recommended on the Gold Hill #2 claim.

## CONCLUSIONS and RECOMMENDATIONS

The Keno Hill - Galena Hill silver camp is by no means exhausted. Historically, the near-surface mineralization has been detected by prospecting and, buried ore shoots have been "chased" by drifting along promising vein-faults. The current exploration method of trenching appears to be an efficient one, as an informative precursor to drifting.

The geological environment, favourable to the occurrence of mineralized bodies, is reasonably well understood, making the delineation of prospective exploration targets more predictable. The environments of interest include vein-faults hosted by competent rocks, particularly where the vein passes upwards from a competent rock to a schistose rock. Other advantageous environments include fault intercepts and fault-attitude changes. Greater potential exists where these environments occur along the postulated extension of known mineralized faults.

Such favourable environments occur to varying degrees on most of DEM's Sub-Leases. The Formo, Caliente, Caribbean and Bankeno groups offer many targets. (Figure 3). The Caribou, Gold Hill #2 and Silver Basin leases are similarly attractive for exploration.

Although these groups of leases may still contain commercially viable, near-surface silver ore-shoots, greatest potential exists for medium tonnages (100,000 tons) of medium-grade (50 to 80 oz./T Ag), custom-millable silver ores. The Formo, Caribou and Silver Basin leases appear most promising in this respect. Drilling to test these structures at 0 to 30 metre depths is indicated.

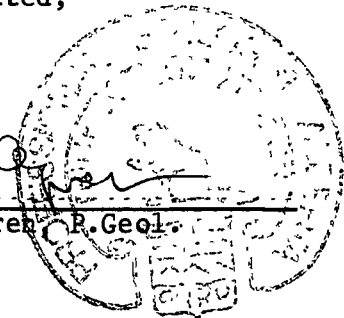
For these reasons, DEM is recommending additional work be carried out on the Formo, Caribou, Silver Basin, Gold Hill #2, Bankeno, Caliente

and Caribbean lease groups for 1987. The recommended exploration approach involves further bulldozer trenching and possible drilling of known and inferred mineralized structures (eg. Formo, Caribou and Gold Hill #2). Detailed recommendations for each lease will be completed after review of historical and current data.

Respectfully submitted,

*Phil D. Van Angeren*

Philip D. Van Angeren, P. Geol.



*Paul S. White*

Paul S. White, P. Eng. (Mining)



**CERTIFICATE**

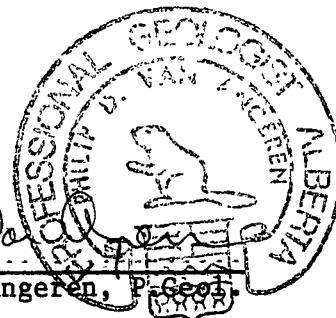
I, **PHILIP D. VAN ANGEREN**, residing at 2123 Deerside Dr. S.E., Calgary, Alberta, hereby certify that:

1. I am a geologist having practised my profession for the last 10 years.
2. I am a graduate of McGill University, Montreal, P.Que., having graduated with a B.Sc. degree in Geology with Honours, in 1977.
3. I am a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
4. I have no interest, direct or indirect, in the securities or properties of Dawson Eldorado Mines Ltd., nor do I expect any.
5. I am an author of this report, which is based on personal examination of the properties on July 31 to August 5 and October 21 to 25, 1986, and on a study of historical data made available by Dawson Eldorado Mines Ltd.

Signed and dated on the 13th day of February, 1987.

*Philip D. Van Angeren*

Philip D. Van Angeren, P. Geol.




**CERTIFICATE**

I, **PAUL S. WHITE**, with business addresses in Whitehorse, Yukon Territory, and Calgary, Alberta, and residential addresses at Whitehorse and Calgary, do hereby declare that:

1. I am a 1956 graduate at the University of British Columbia in Applied Science (Mining Engineering).
2. I am and have been continuously registered as a Professional Engineer in both Alberta (since 1959) and Yukon Territory (since 1964).
3. I have been engaged in mining, mineral exploration and evaluation, and mineral resource development in Northern Canada since 1959. Since 1979, I have been the President of Dawson Eldorado Mines Ltd., as Chief Executive Officer, Director and minerals manager.
4. I have had 5 years experience over the 1964-1986 period, and full access to previous data on the Caribou, Formo and Ankeno properties on Keno & Galena Hills, Yukon Territory.
5. I am the largest single shareholder of Dawson Eldorado Mines Ltd., which is the operator of programs on properties referred to in this Report, and otherwise have no direct interest in the properties or companies referred to in this Report.
6. All work described by this Report has been under my direct supervision.

Signed and dated on the 13th day of February, 1987.

  
 \_\_\_\_\_  
 Paul S. White, P.Eng. (Mining) B.A. ALBERTA  
 A.L.S., C.L.S.



## REFERENCES

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- Wolfe, R., 1980 A Summary Report on the Formo Property, Keno Hill, Yukon. Unpub. report for Rio Plata Silver Mines Ltd., dated June 12, 1980.



A P P E N D I X I

\*\*\*\*\*

- PERSONNEL -

AND

- COST OUTLAYS -

\*\*\*\*\*

### LIST OF PERSONNEL

The July to November 1986 exploration programme was completed by the following personnel:

C. Evert, Geologist, of Calgary,  
 - 10 days Preliminary Evaluation (June)  
 - Field Supervision (July to end of September)  
 - 5 days Data Compilation (September)

P.D. Van Angeren, P. Geologist (see Certificate),  
 - 10 days Preliminary Evaluation (June)  
 - Supervision (July, August and October)  
 - 10 days Report Preparation (February 1987)

D.G. White, of Whitehorse (July to end of August)  
 E. Huggard, of Whitehorse (August to end of November)  
 R. Blackburn, of Whitehorse (September to end of November)  
 - Trenching supervision, prospecting, bulk sampling and geochemical sampling.

A. Dendys, of Whitehorse (July and August)  
 F. Burkhard, of Dawson City (August to end of November)  
 R. Jackson, of Whitehorse (October and November)  
 R. Empey, of Whitehorse (July to November)  
 - Bulldozer operators and mechanic.

M. Swazinski, of Keno City (October 29 - November 23)  
 - Lessor of D-8 bulldozer

Aerovan Transport (1985) Limited, of Calgary  
 - Fixed wing support.

\*\*\*

APPLICABLE ACTIVITIES - EIP86-023

(A) Formo Group; Trenching, Geological Prospecting, Geochemical Surveys.

- July 8-30 incl., Sept. 13-17 incl., Nov. 18-24 incl. (35 days):
- C.Evert (28 days); D.G. White (23 days); R. Empey (5 days); P.D. Van Angeren (5 days); A. Dendys (23 days); F. Burkhard (12 days).

- Yardage - Rocket Lot 273 - 7050 m<sup>3</sup> from five trenches:

#1 60 x 6 x 2 m. (approx.)

#2 60 x 6 x 2 m. "

#3 60 x 10 x 8 m "

#4 45 x 6 x 4 m "

Greenstone #2 25 x 6 x 1.5 m.

Tyee Lot 274 - 810 m<sup>3</sup> from three trenches:

#1,2,3 30 x 6 x 2 m. (approx.)

Dorothy Lot 650 - 225 m<sup>3</sup> from one trench:

Greenstone #1 25 x 6 x 1.5 m.

- Geochem: 17 Rock Assays  
(Grab samples, Fire Assayed for Ag, Pb and Au by Bondar Clegg, Whitehorse).

(B) Caliente Group: Geochemical Line Survey.

- August 21, 22, 1986 (2 days)
- C. Evert & E. Huggard
- 1.3 km. surveyed, soil samples not yet analysed.

**(C) Silver Basin Group; Trenching, Geological (prospecting), Geochemical.**

- August 11-20 and August 23-September 3, 1986. (22 days)
- C. Evert (22 days); D.G. White (7 days); E. Huggard (17 days);  
R. Empey (5 days); F. Burkhard (16 days); A. Dendys (4 days).

- Yardage Silver Basin Lot 41 - 4455 m<sup>3</sup> from three trenches:
  - #1 65 x 6 x 3.5 m.
  - #2 60 x 7 x 4 m.
  - #3 60 x 6 x 2.5 m.

" " Lot 41 - 1500 m<sup>3</sup> from 250 m. access  
road.

Silver Basin #5 Lot 600 - 1080 m<sup>3</sup> from two trenches:
 

- #1 65 x 6 x 2 m.
- #2 30 x 6 x 2 m.

- Line Survey: 1.1 kilometre
- Geochem.: 13 Rock Assays  
(Grabs, Fire Assayed for Ag, Pb and Au).

**(D) Caribou Lease: Trenching, Geological (Prospecting), Geochemical and Bulk Sample.**

- Sept. 12-16 incl. and Sept. 18 - Nov. 24, 1986 (73 days).
- C. Evert (21 days); P.D. Van Angeren (2 days); E. Huggard (61 days);  
R. Empey (8 days); F. Burkhard (71 days); R. Jackson (21 days);  
R. Blackburn (69 days).

- Yardage: Caribou Lot 926 - 33680 m<sup>3</sup> from a zone trenched and stripped; includes 15770 m<sup>3</sup> ripped and trenched to recover the bulk sample; 100 x 110 x 30 m. (approx.).
  
- Bulk Sample: 21.335 Short Dry Tons.
  
- Geochem.: 29 Rock Assays  
(Grab Samples, Fire Assayed for Ag, Pb and Au).

\*\*\*



Economic Development:  
Mines & Small Business  
Box 2703, Whitehorse, Yukon Y1A 2C6  
(403) 667-5811 Telex 036-8-260

EXPLORATION INCENTIVES PROGRAM

FORM 2 - APPLICATION FOR PAYMENT

DESIGNATION NUMBER EIP86-023

1. NAME DAWSON ELDORADO MINES LTD.

3. MAILING ADDRESS 810, 910 - 7th Ave. S.W.

Calgary,

Province Alberta Postal Code T2P 3N8

3. TELEPHONE (403) 269-2122

4. HEAD OFFICE ADDRESS SAME

Province \_\_\_\_\_ Postal Code \_\_\_\_\_

5. PRINCIPAL BUSINESS ACTIVITY MINERALS EXPLORATION

6. IF A CORPORATION - List names of all persons or corporations who own 10% or more of your outstanding shares (if insufficient space attach separate sheet)

<u>Name</u>	<u>No. of Shares</u>	<u>% of total</u>
<u>PAUL S. WHITE</u>	<u>953,527</u>	<u>17.75</u>
<u>J. ANDREW INNES</u>	<u>626,521</u>	<u>11.66</u>

7. MINERAL INCOME Do you expect to have any income from mineral production (prior to deduction of exploration expenses) during the year for which this application is made? (Yes/No) YES If yes, state how much \$26,823.86

8. SOURCES OF FUNDING (attach copies of agreements and proof of funding)

FROM COMPANY TREASURY, INCOME FROM LONE STAR OPTION PAYMENTS AND

REVENUE FROM PLATA-INCA SILVER MINING.



Sampling costs 15,767 m<sup>3</sup> @ 5.53 (Bulk Sample) = \$ 87,154  
= \$ \_\_\_\_\_

Assays, petrographic analyses, X-ray analyses etc.

Type \_\_\_\_\_ No. \_\_\_\_\_ @ \$ \_\_\_\_\_ /sample = \$ \_\_\_\_\_  
\_\_\_\_\_ No. \_\_\_\_\_ @ \$ \_\_\_\_\_ /sample = \$ \_\_\_\_\_  
\_\_\_\_\_ No. \_\_\_\_\_ @ \$ \_\_\_\_\_ /sample = \$ \_\_\_\_\_

Metallurgical or process studies (specify) \_\_\_\_\_  
= \$ \_\_\_\_\_  
= \$ \_\_\_\_\_

Other costs (specify) Report Preparation = \$ 1,750  
= \$ \_\_\_\_\_  
= \$ \_\_\_\_\_

(b) For the following activities only 25% of total costs are eligible:

On-property construction costs

Access roads \_\_\_\_\_ km @ \$ \_\_\_\_\_ / km = \$ \_\_\_\_\_ x 25% = \$ \_\_\_\_\_  
Camps \_\_\_\_\_ \$ \_\_\_\_\_ x 25% = \$ \_\_\_\_\_  
Other (specify) \_\_\_\_\_ \$ \_\_\_\_\_ x 25% = \$ \_\_\_\_\_  
\_\_\_\_\_ \$ \_\_\_\_\_ x 25% = \$ \_\_\_\_\_

Shaft sinking, drifting, raising etc. required for underground drilling and sampling

Shaft sinking \_\_\_\_\_ m @ \$ \_\_\_\_\_ / m = \$ \_\_\_\_\_ x 25% = \$ \_\_\_\_\_  
Drifting \_\_\_\_\_ m @ \$ \_\_\_\_\_ / m = \$ \_\_\_\_\_ x 25% = \$ \_\_\_\_\_  
Raising \_\_\_\_\_ m @ \$ \_\_\_\_\_ / m = \$ \_\_\_\_\_ x 25% = \$ \_\_\_\_\_

TOTAL \$ 280,416

SUPPLEMENTARY INFORMATION The following information is required in order to help us determine the contribution which mineral exploration activity makes to the Yukon economy, and relates to the utilization of Yukon vs outside labour and services. Only figures directly attributable to the field program should be included (approximate figures acceptable, but please be as accurate as possible).

(a) Employment, wages & salaries

Type	Number employed		No. Person-days		Salaries/wages paid	
	Yukon	Outside	Yukon	Outside	Yukon	Outside
Prospectors	2		133		\$19,518	\$
Linecutters					\$	\$
Technicians					\$	\$
General labourers	1		69		\$ 8,814	\$
Drillers/helpers					\$	\$
Equip. operators	4		175		\$31,479	\$
Geologists		2	95	20	\$14,385	\$ 2,875
Geophysicists					\$	\$
Geochemists					\$	\$
Engineers					\$	\$
Supervisory					\$	\$
Consulting	1		50		\$10,000	\$
Secretarial					\$	\$
Managerial					\$	\$
Legal					\$	\$
Accounting					\$	\$
Surveyors						
Others (specify)	4		32		\$ 8,380	\$
Others (specify)					\$	\$
<b>TOTALS</b>	<b>12</b>	<b>2</b>	<b>554</b>	<b>20</b>	<b>\$92,576</b>	<b>\$ 2,875</b>

(b) Goods & Services

<u>Description</u>	<u>Expenditure</u>	
	<u>Yukon</u>	<u>Outside</u>
Meals, Groceries etc.	\$ <u>6,002</u>	\$ _____
Camping Supplies, Equipment etc.	\$ <u>6,126</u>	\$ <u>28,427</u>
Accommodation	\$ <u>1,163</u>	\$ _____
Transportation - Scheduled Air	\$ _____	\$ _____
Air Charter	\$ _____	\$ _____
Vehicle Rentals	\$ <u>3,645</u>	\$ _____
Vehicle O & M costs	\$ _____	\$ _____
Other (specify) <u>FUEL</u>	\$ <u>34,028</u>	\$ _____
Equipment Rentals Trenching etc.	\$ <u>15,000</u>	\$ _____
Geophysical etc.	\$ _____	\$ _____
Other (specify) _____	\$ _____	\$ _____
Other (specify) _____	\$ _____	\$ _____
Contract Drilling	\$ _____	\$ _____
Consultant Services	\$ <u>10,000</u>	\$ _____
Assays and analyses	\$ <u>2,587</u>	\$ _____
Communications	\$ _____	\$ _____
Other (specify) <u>FREIGHT</u>	\$ <u>16,410</u>	\$ <u>1,202</u>
Other (specify) <u>INSURANCE</u>	\$ _____	\$ <u>5,564</u>

10. DECLARATION. I hereby apply for a contribution for a designated exploration project under the Yukon Exploration Incentives Program, and declare the information given above to be true and accurate.

Name Dawson Endofago MINES LTD. Signature Paul S. White Date 17 Feb. 1987  
PAUL S. WHITE

**A P P E N D I X    I I**

**\*\*\*\*\***

**- SMELTER DATA -**

**\*\*\*\*\***



09 JANUARY 1987

BERISFORD METALS CORPORATION  
230 PARK AVENUE  
NEW YORK, N.Y. 10017  
U.S.A.

DAWSON ELDORADO GOLD LTD.  
FINAL LOT NO 29

CAR NUMBERS: 1 TRUCK  
(47 BAGS)

DATE RECEIVED: 1986 11 25

WEIGHTS: NET WET 46180 MOIST 7.6 % NET DRY 42670 S.D.T. 21.3350

ASSAYS:

LEAD	57.4 %	ZINC	0.7 %	SILVER	178.40 OZ/TN	GOLD	0.035 OZ/TN
COPPER	0.11 %	IRON	3.5 %	SULPHUR	8.6 %	ALUMINA	1.5 %
ARSENIC	0.05 %			ANTIMONY	0.8 %		

QUOTATIONS: DEC AVERAGE - LEAD ZINC SILVER GOLD COPPER

EXCHANGE:	DEC	\$US TO \$C	1.379800	STERLING TO \$US	1.439277
LABOUR RATE:		\$ 19.27		CPI: 319.10	

CALCULATED PRICES:

LEAD	PB-LME	342.4850 * 1.3798 * 1.439277	
		/ 2204.60 * .40	0.1234048
	PB-USL	27.7380 * 1.3798 / 100. * .60	0.2296373
			0.3530421
		0.3530421 - ( .353040 - .33 ) * 100. * .0025	
		- .120000	
SILVER	5.3640 * 1.3798 * .97		22.72821 \$/LB
GOLD	390.9210 * 1.3798 * .98		7.17921 \$/OZ
			528.60494 \$/OZ

PAYMENTS: (PER SHORT DRY TON)

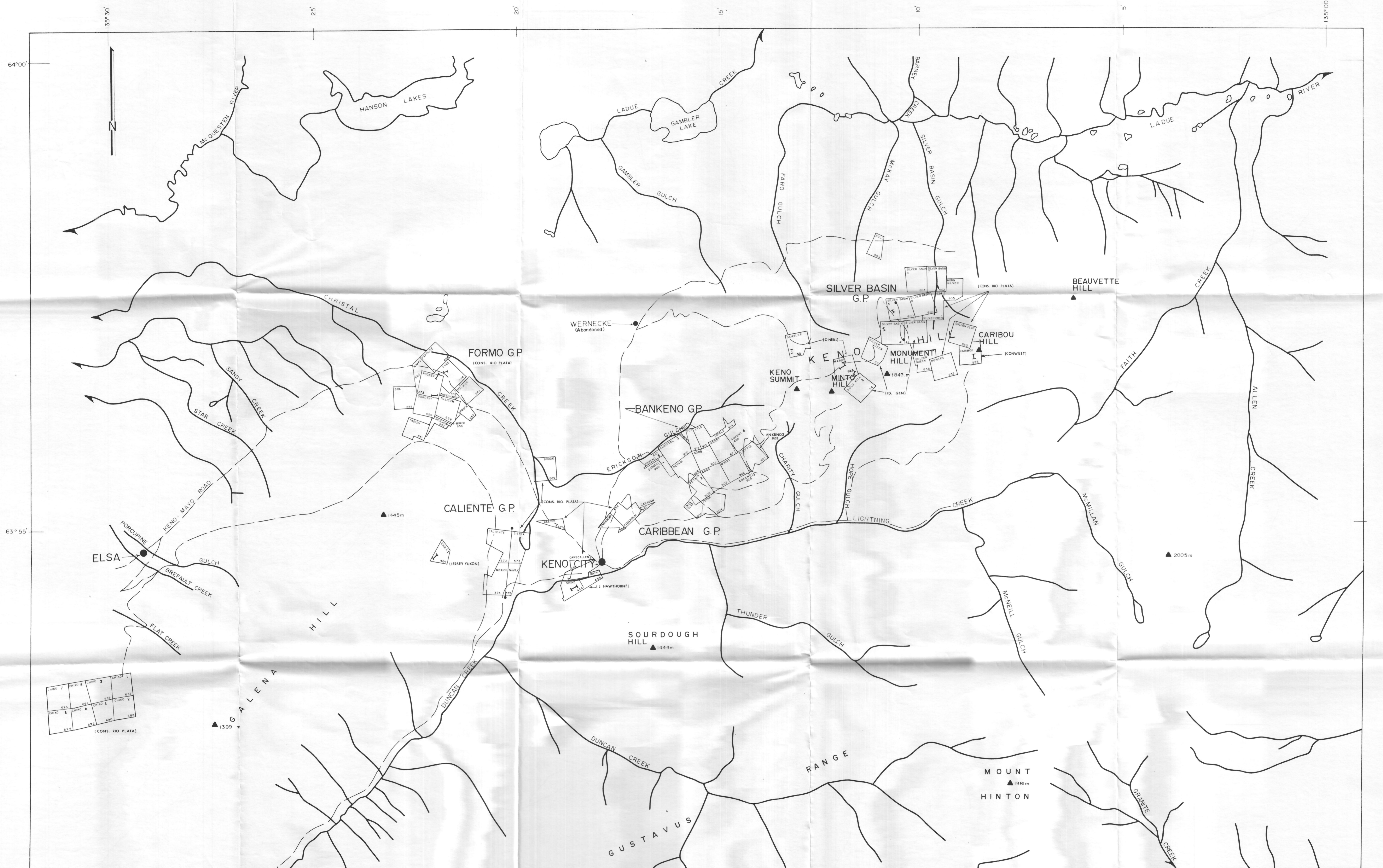
	CONTENT	DEDUCTIONS	PAID FOR		
LEAD	1148.0000 LB	91.8400 LB	1056.1600 LB	\$	240.05
SILVER	178.4000 OZ	12.5085 OZ	165.8915 OZ	\$	1190.97
GOLD	0.0350 OZ	0.0300 OZ	0.0050 OZ	\$	2.64
			TOTAL PAYMENT	\$	1433.66

DEDUCTIONS: (PER SHORT DRY TON)

BASIC TREATMENT CHARGE	:		\$	-165.00
C.P. INDEX	:	( 319.10 - 300. ) * .25		-4.78
LABOUR: LABOUR RATE	:	( 19.27 - 18.25 ) * 100. * .05		-5.10
ALUMINA PENALTY	:	( 1.50 - .50 ) * .90		-0.90
ANTIMONY PENALTY	:	( (.80 + .05 ) - .50 ) * 1.75		-0.61
		NET DEDUCTIONS	\$	-176.39

NET VALUE (PER SHORT DRY TON)

	\$	1257.27
GROSS LOT VALUE	\$	26823.86
PREVIOUS PAYMENTS		-20000.00
BALANCE PAID	\$	6823.86



LEGEND:  
 --- ZONE OF TRENCHING AND STRIPPING  
 - - - SOIL SAMPLE LINE  
 ——— TRAIL



DAWSON ELDORADO MINES LTD.  
 KENO HILL PROPERTIES  
 (CONNS. RIO PLATA, CONWEST, IDAHO-GENERAL,  
 BANKENO, HAWTHORNE LEASES)

**CLAIM MAP  
 TRENCH LOCATIONS**

MAYO MINING DISTRICT 105 M/14  
 SCALE 1:31,680 DATE FEB, 1987  
 BY P.D.V.A. DFTG:STH FIGURE 2



**LEGEND**  
 (Adapted from Boyle 1965)  
 TERTIARY/CRETACEOUS  
 9 FELSIC SILLS (Not shown)  
 CRETACEOUS/MISSISSIPPIAN  
 4 GREENSTONE  
 MISSISSIPPIAN AND OLDER  
 3 UPPER SCHIST  
 2 CENTRAL QUARTZITE  
 1b LOWER SCHIST  
 1a No 9 QUARTZITE

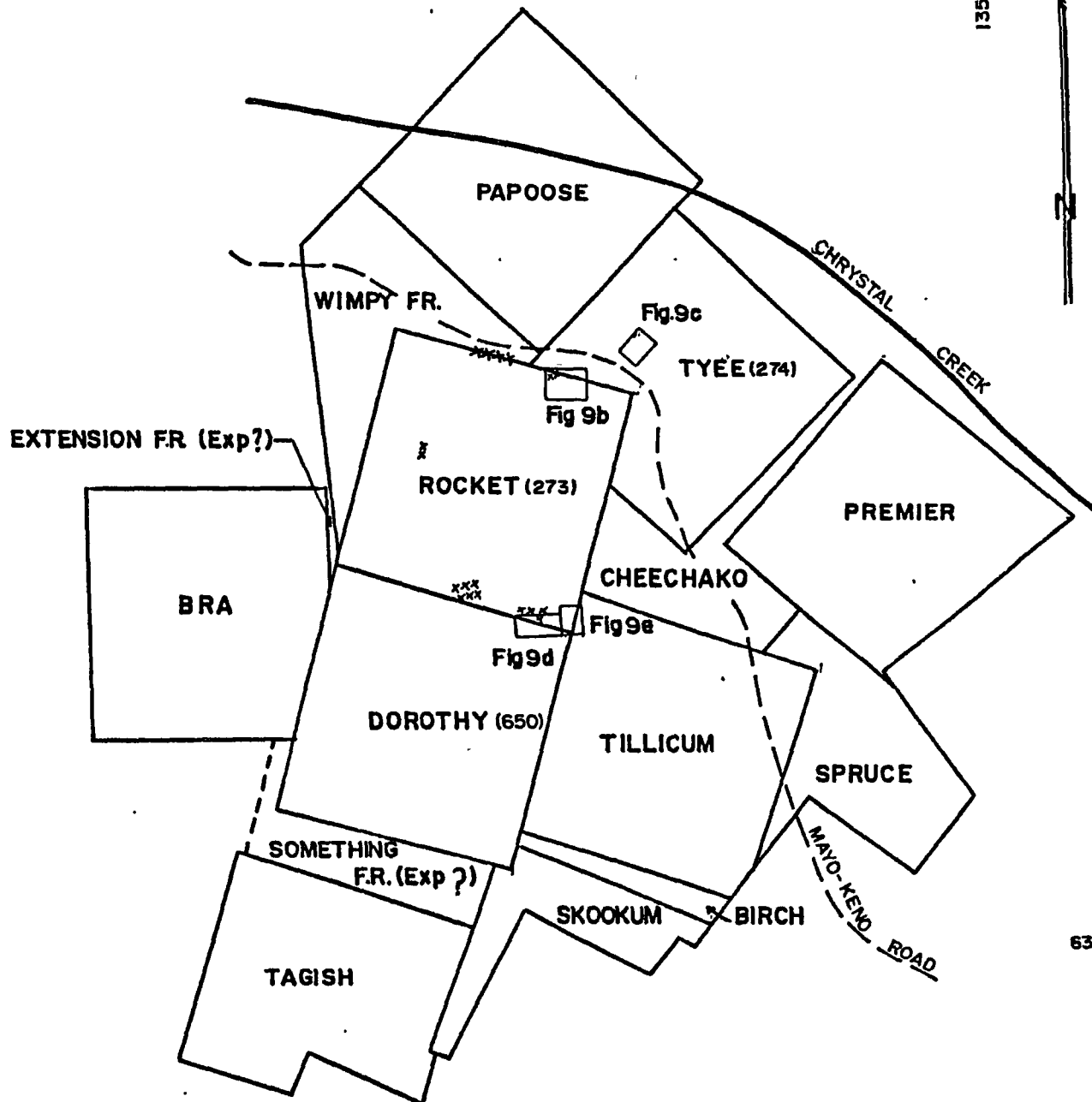
**SYMBOLS**  
 - - - - - GEOLOGICAL CONTACT (Approximate)  
 - - - - - LONGITUDINAL / TRANSVERSE FAULT (Defined, approximate)  
 - - - - - CROSS FAULT  
 - - - - - DEM CLAIM OUTLINE  
 (2) MINERAL OCCURRENCE  
 - - - - - ROAD  
 - - - - - FORMO CLAIM NAME

**OCCURRENCES**  
 1 HUSKY  
 2 EL SA  
 3 HECTOR  
 4 CALUMET  
 5 FORMO  
 6 GALKENO  
 7 EAGLE  
 8 FELLEKENO  
 9 SADIE-LADUE  
 10 LUCKY QUEEN  
 11 ANKENO  
 12 APEX  
 13 SHAMROCK  
 14 GAMBLER  
 15 KENO #9  
 16 NABOB-MAIN  
 17 SILVER BASIN  
 18 ALICE  
 19 CARIBOU  
 20 ONEK  
 21 COMSTOCK





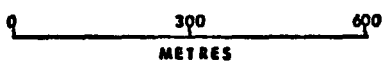
DAWSON EL Dorado MINES LTD.  
 KENO HILL PROPERTIES  
 (CONS. RIO PLATA, CONWEST, IDAHO GENERAL,  
 BANKENO AND HAWTHORNE LEASES)  
**GEOLOGY  
 AND  
 MINERAL OCCURRENCES**  
 MAYO MINING DISTRICT 105 M/14  
 SCALE 1:31,680 DATE FEB. 1987  
 BY P.D.V.A. D.F.T.G. S.T.H. FIGURE 3

135°21'W



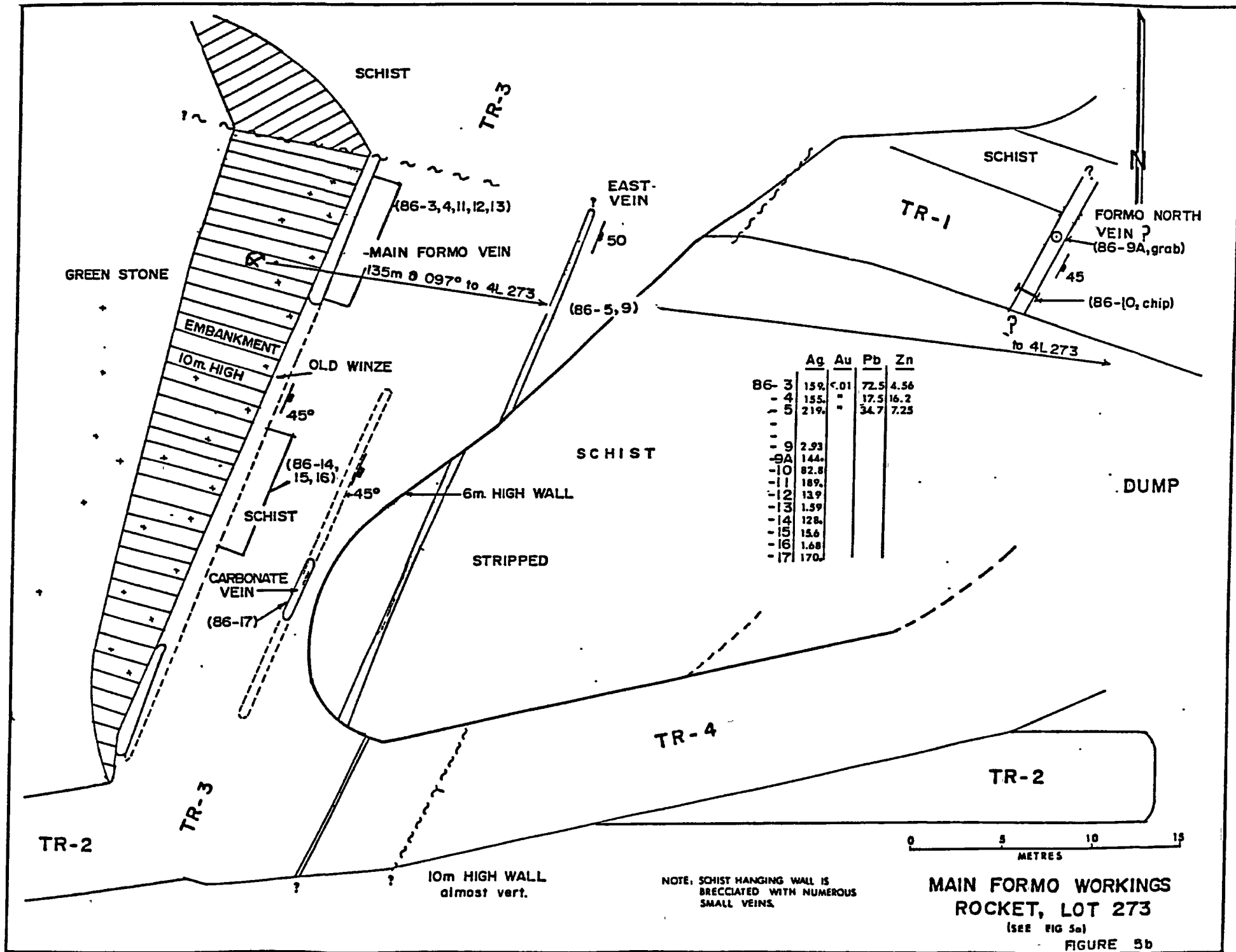
63°56' N

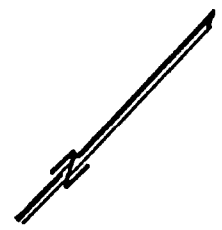
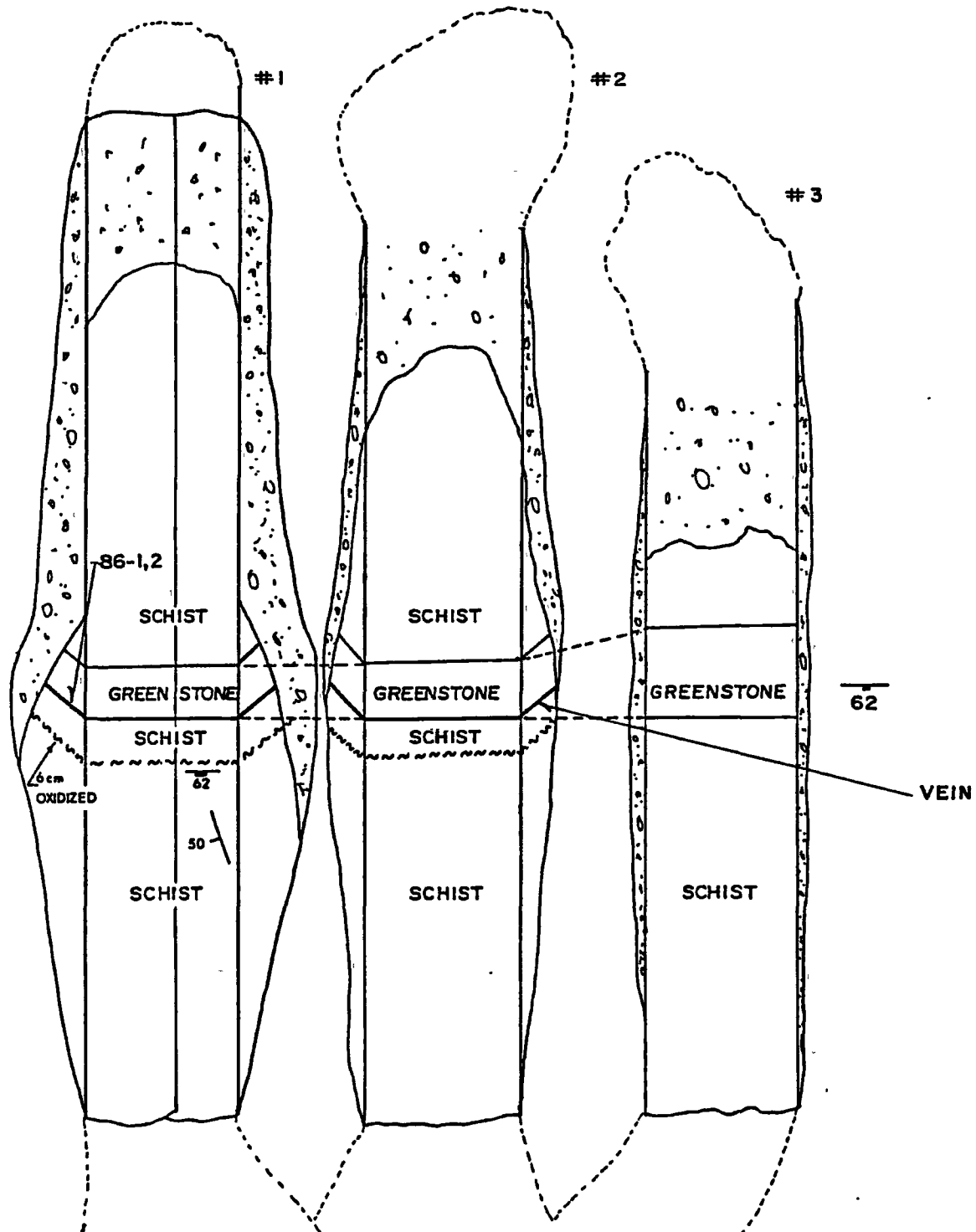
-  - GREENSTONE
-  - AREA OF DETAILED WORK



<b>DAWSON ELDORADO MINES LTD.</b>
<b>FORMO GROUP</b>
<b>GALENA HILL</b>
<b>ROCKET, TYEE, DOROTHY</b>
<b>LOTS 273, 274, 650</b>
<b>1986 WORK AREAS</b>
<b>MAYO M.D. YUKON T.</b>

FIGURE 5a



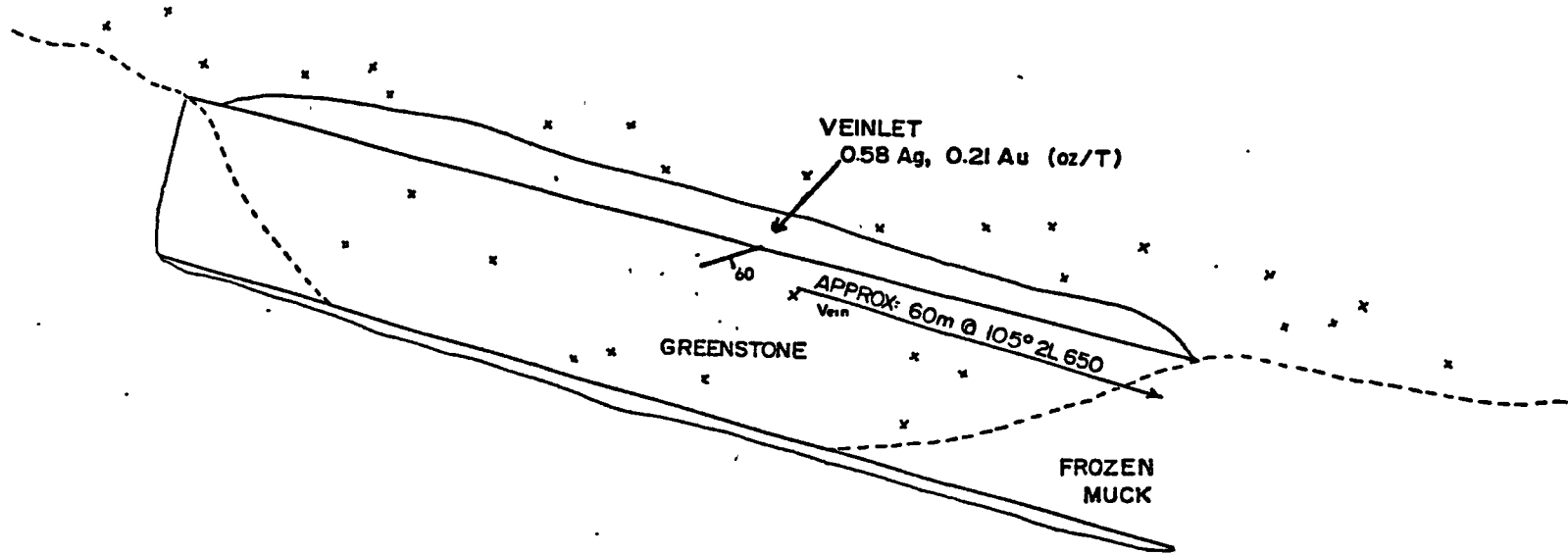


	Ag <sub>ppm</sub> /T	Au <sub>ppm</sub> /T	Pb <sub>%</sub> /A
86-1	6.71	0.16	1.46
2	2250	0.01	45.0



FORMO  
NORTH OCCURRENCE  
TYEE, LOT 274  
TRENCHES 1 - 3  
(SEE FIG. 5a)

FIGURE 5c

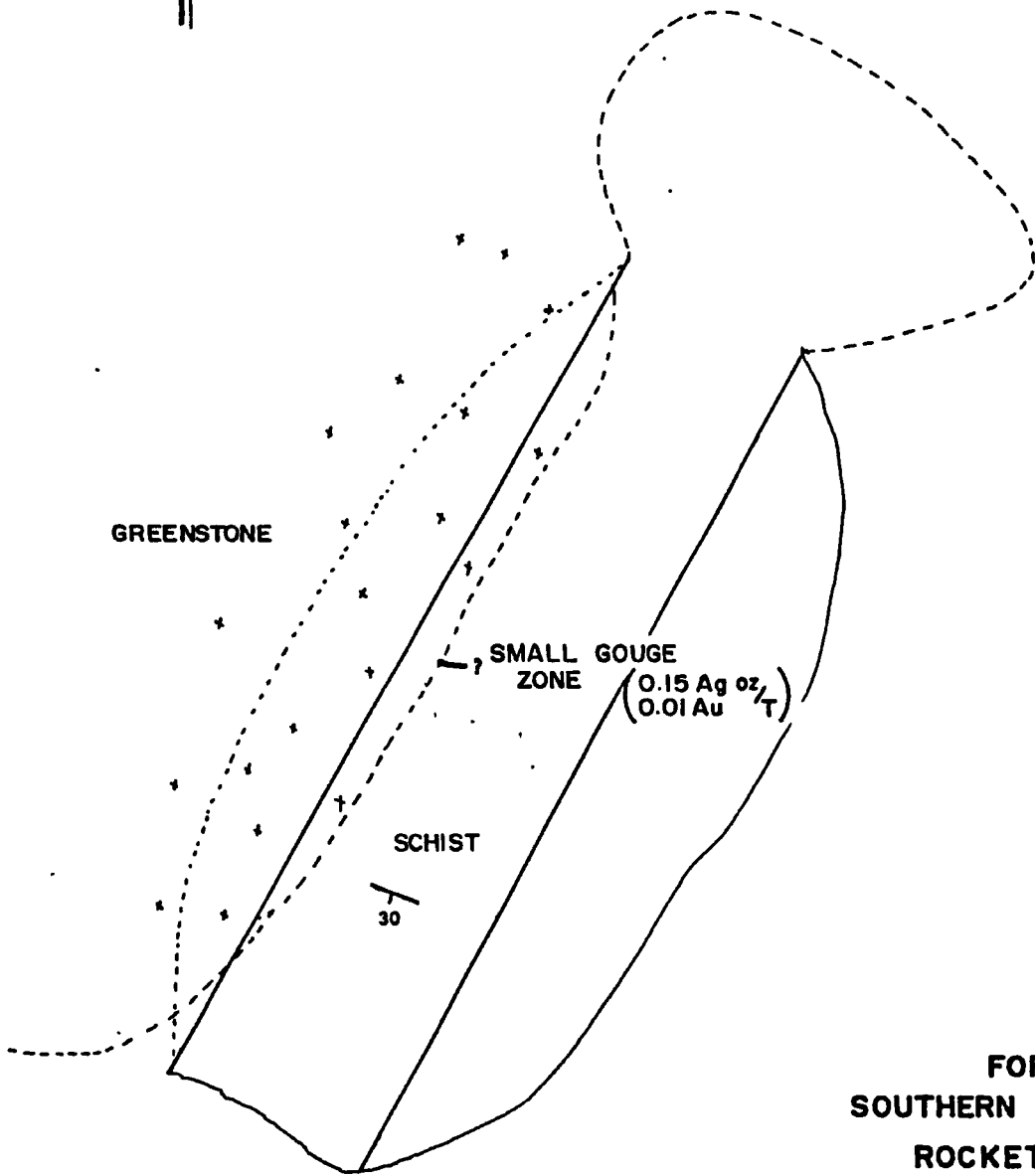


**FORMO**  
**SOUTHERN GREENSTONE**  
**DOROTHY LOT 650**

**TRENCH # 1**  
**(SEE FIG. 5a)**



**FIGURE 5 d**



**FORMO  
SOUTHERN GREENSTONE  
ROCKET LOT 273**

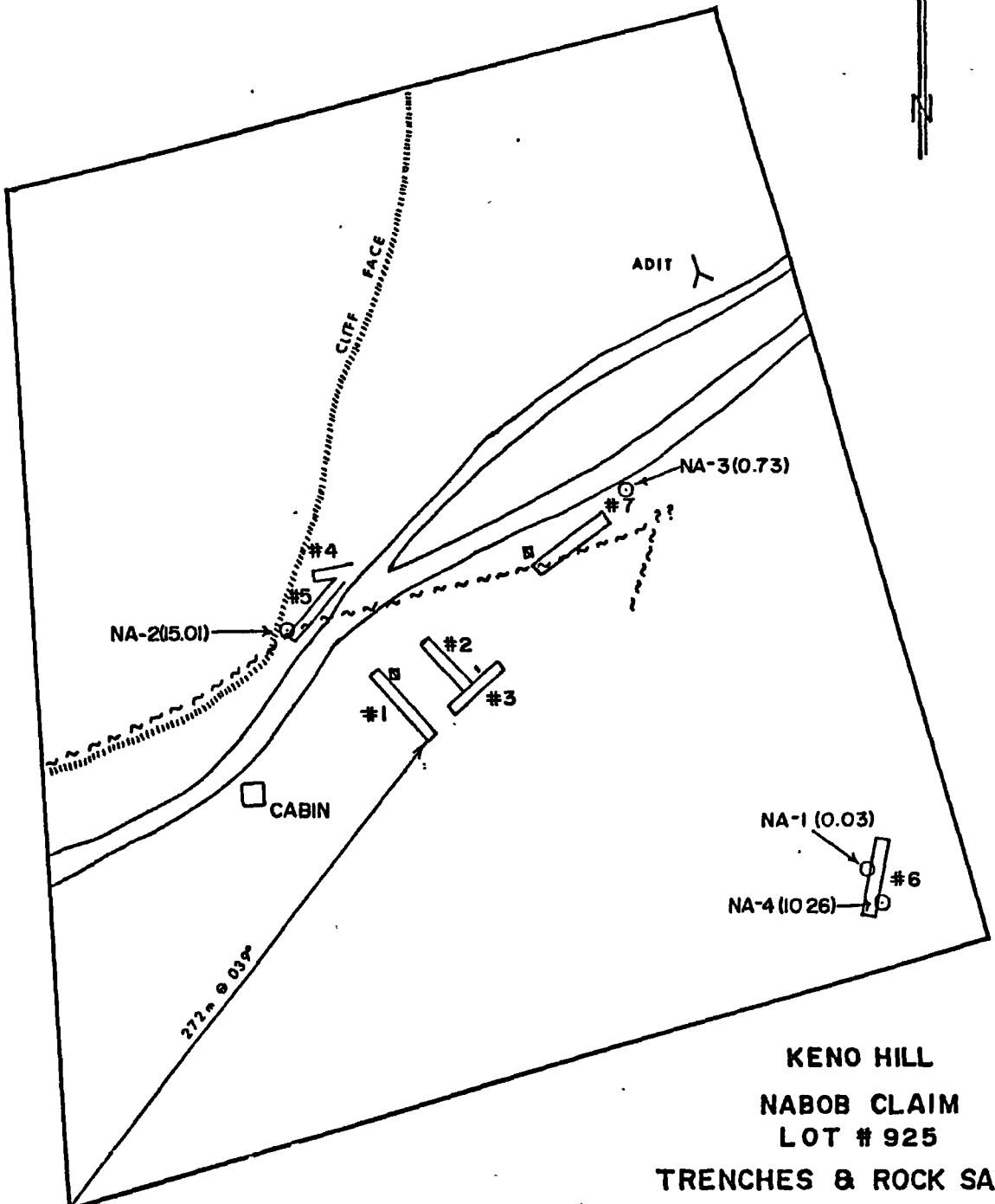
**TRENCH # 2  
(SEE FIG. 5a)**



■ (APPROX.)  
2L273  
2L650

**FIGURE 5e**

135°12'W



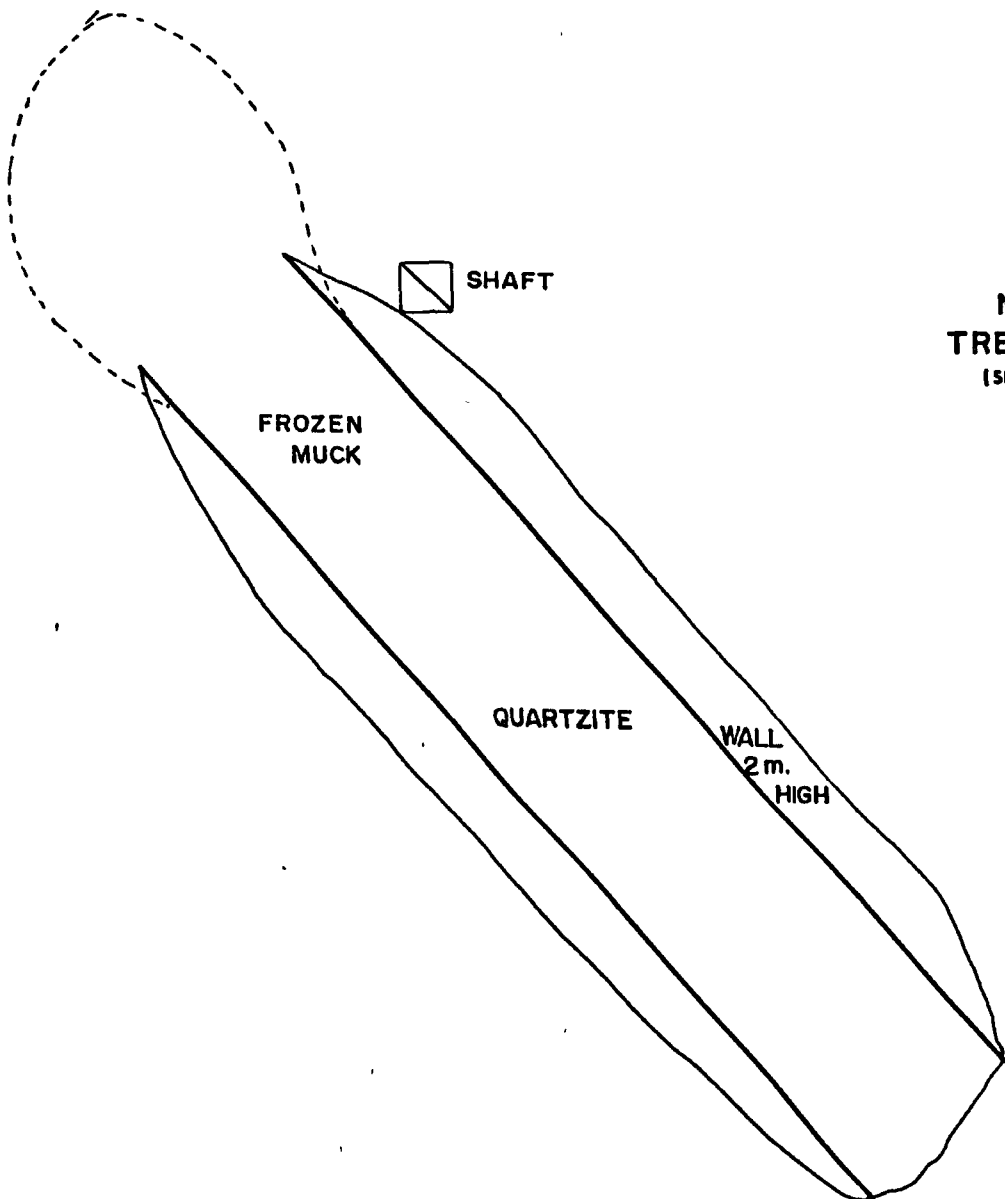
**KENO HILL  
 NABOB CLAIM  
 LOT # 925  
 TRENCHES & ROCK SAMPLES  
 MAYO M. D., YUKON T.**



63°56.5'N

5L692

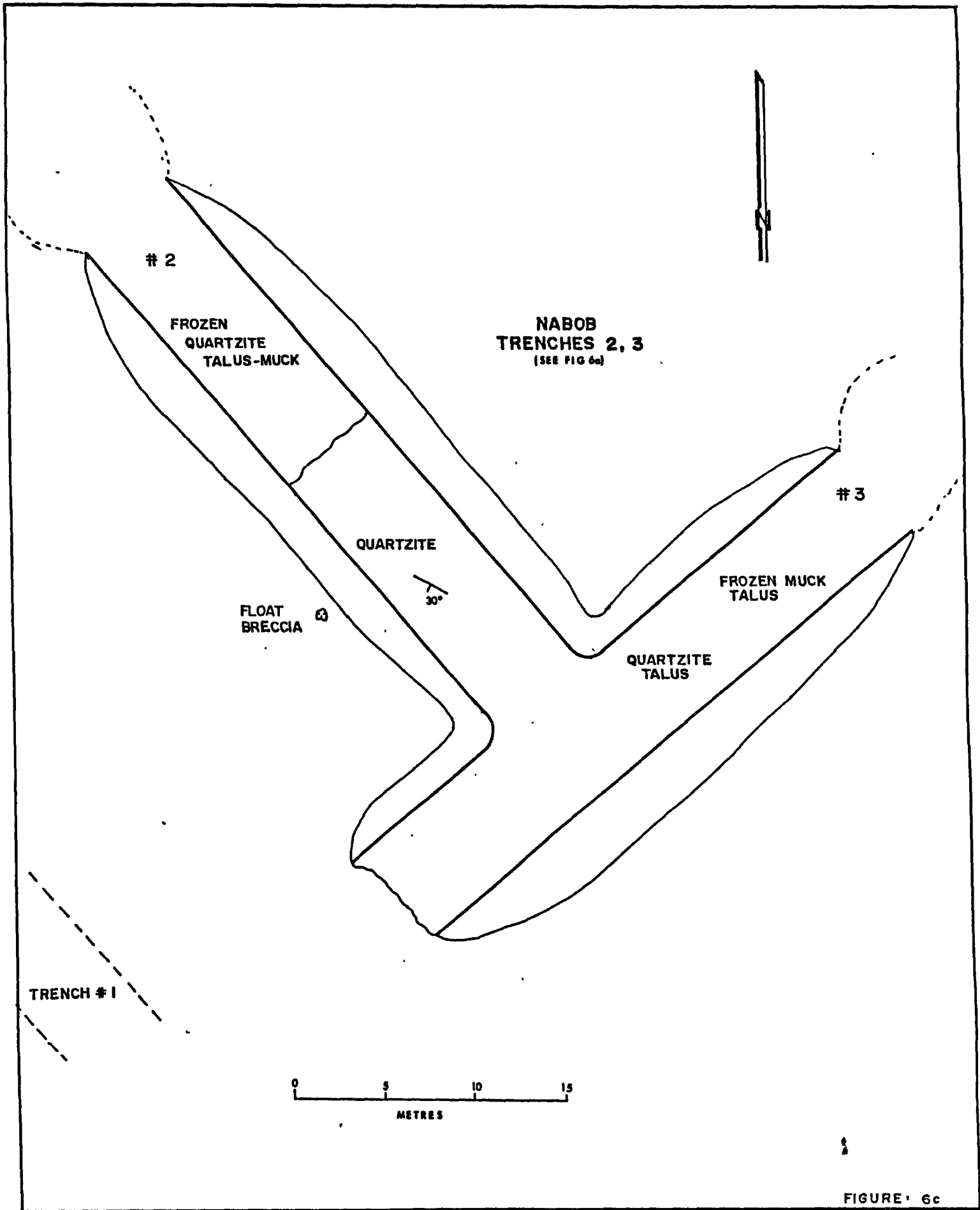
○ NA-3 (0.73)  
 Rock sample (Ag in oz/T)



**NABOB  
TRENCH # 1**  
(SEE FIG. 6a)



FIGURE 6b



**NABOB  
TRENCHES 2, 3**  
(SEE FIG 6a)

# 2

FROZEN  
QUARTZITE  
TALUS-MUCK

QUARTZITE

FLOAT  
BRECCIA B

30°

# 3

FROZEN MUCK  
TALUS

QUARTZITE  
TALUS

TRENCH # 1



6c

FIGURE 6c



**NABOB  
TRENCHES 4, 5**  
(SEE FIG 6a)

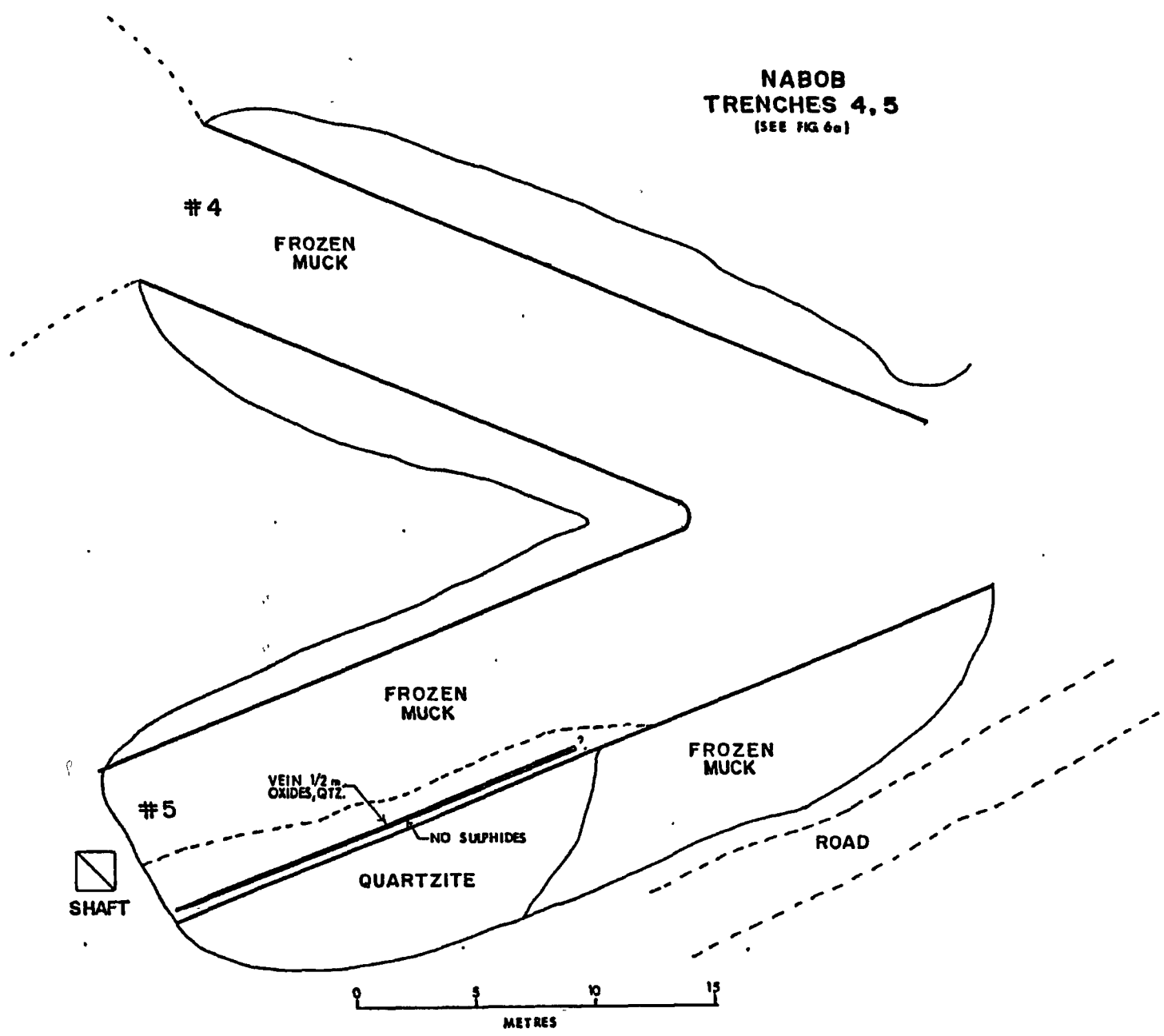
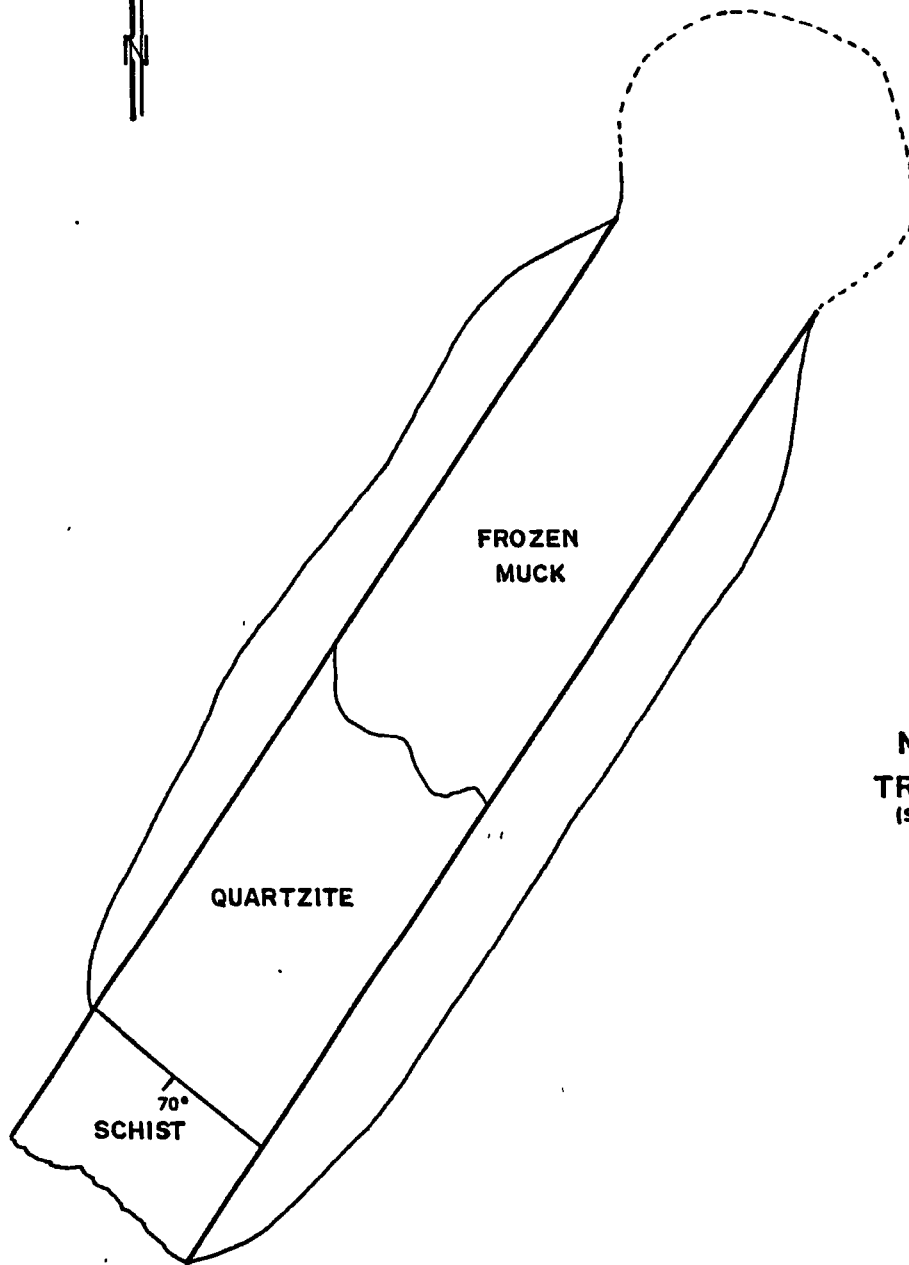


FIGURE 6d



**NABOB  
TRENCH # 6**  
(SEE FIG. 6e)



**FIGURE 6 e**

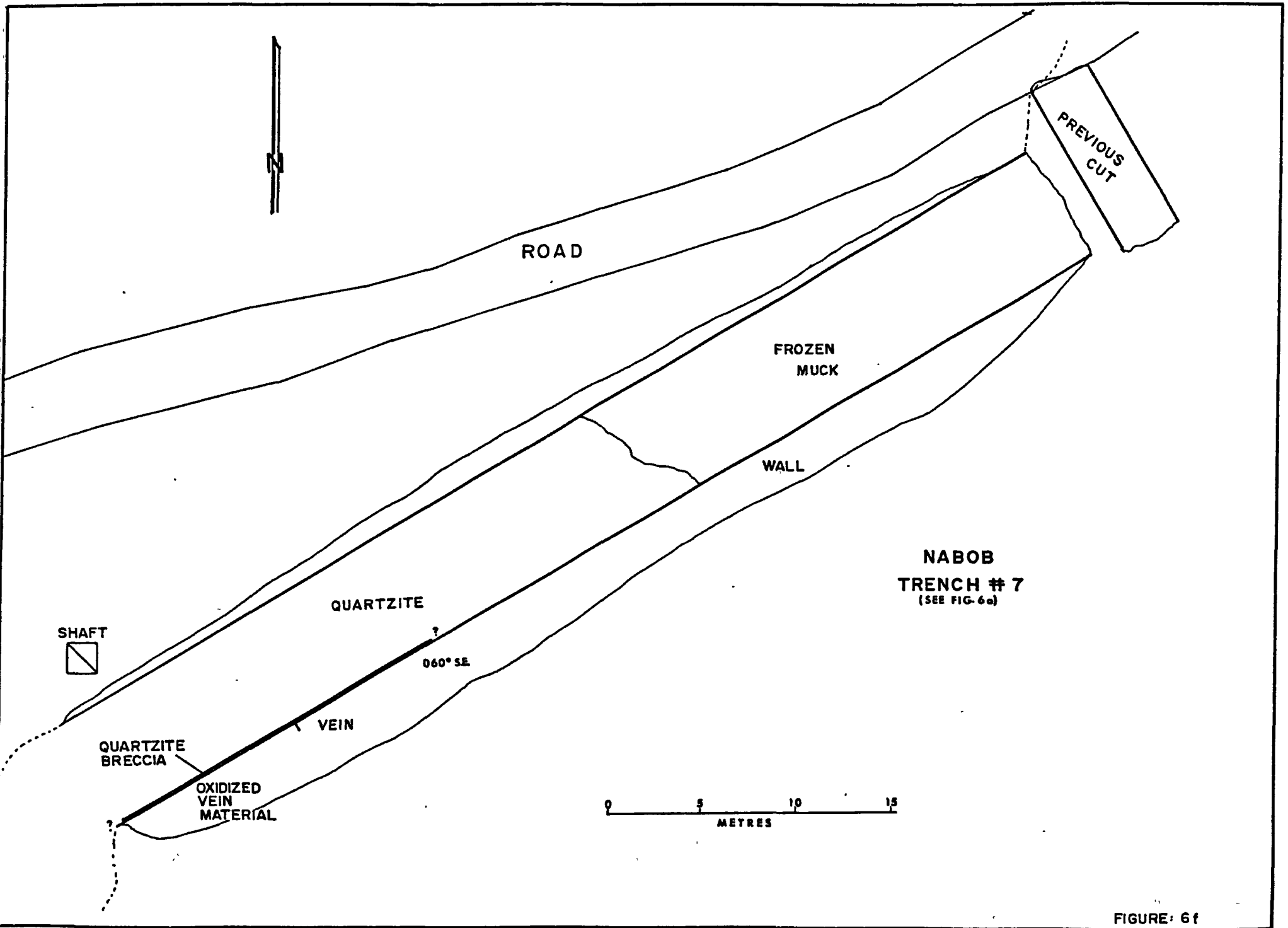
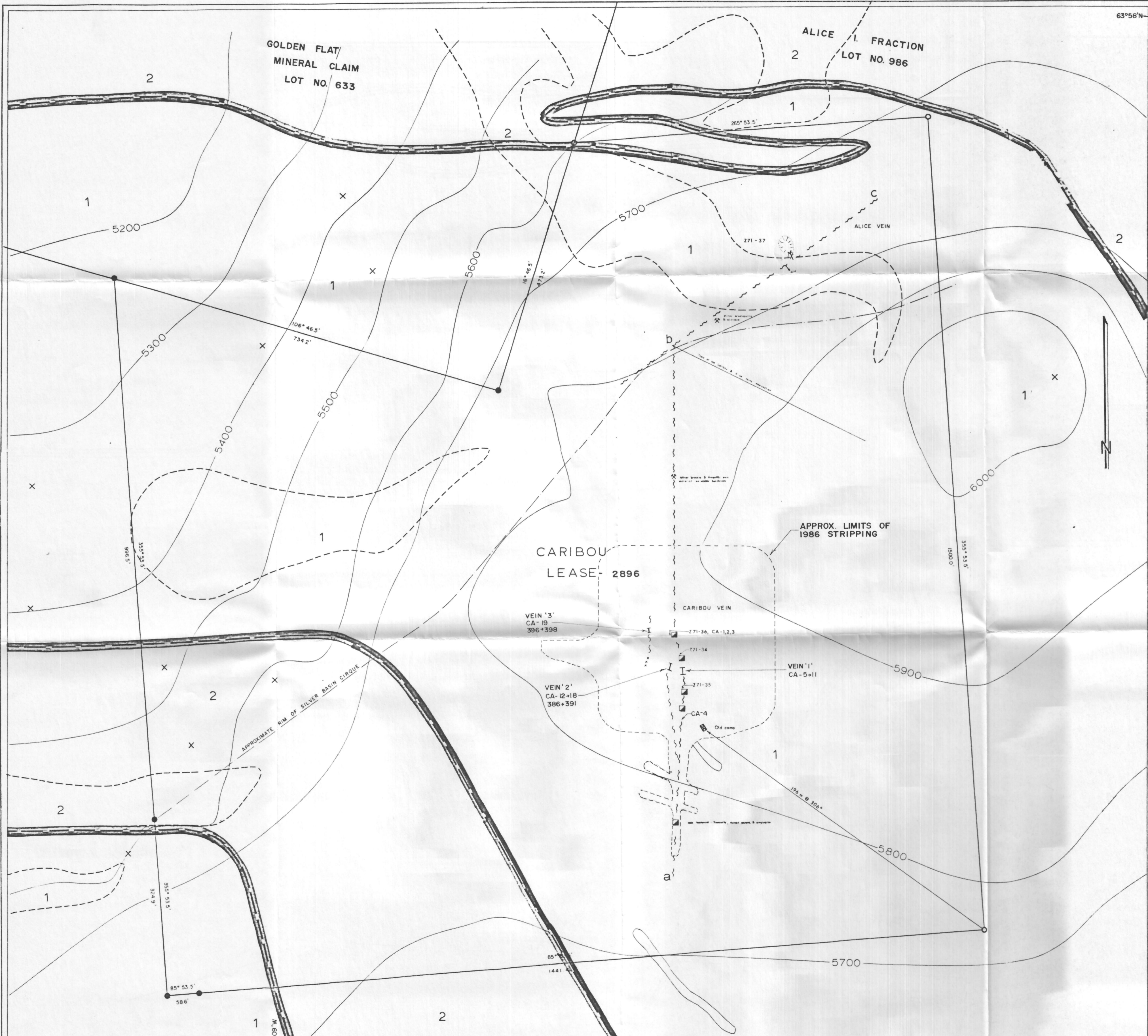


FIGURE: 6 f



LEGEND

- Pale grey blocky quartzite, minor graphitic phyllite
- Quartz-muscovite schist and quartz-muscovite-chlorite schist, grey phyllite
- Area of outcrop, small outcrop
- Dump
- Bulldozer trench
- Adit
- Shaft
- Mineral occurrence
- Vein fault
- Geological contact
- Surveyed claim boundary
- Claim post - erected, found

1971 SAMPLE DATA

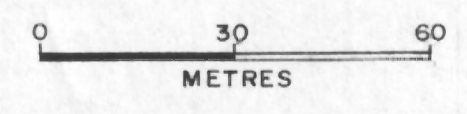
NO. Z71-34 - (Mn stained limonite & siderite, minor galena) 0.04 oz/ton Au, 16.64 oz/ton Ag, 5.2% Pb, 196% Zn.

NO. Z71-35 - (Mn stained limonite & siderite, galena, anglesite) 0.12 oz/ton Au, 222.4 oz/ton Ag, 20.1% Pb, 110% Zn.

NO. Z71-36 - (Galena) 0.08 oz/ton Au, 3170 oz/ton Ag, 79.2% Pb, 0.14% Zn.

NO. Z71-37 - (Galena & grey copper) 0.04 oz/ton Au, 87.28 oz/ton Ag, 53.0% Pb, 3.90% Zn.

SAMPLE	AG oz/T	Pb%	AUoz/T
CA-1	228.0	73.3	0.01
CA-2	79.9	24.8	0.02
CA-3	5.3	1.1	<0.01
CA-4	25.8	6.5	<0.01
CA-5	153.1	80.1	
CA-6	5.8	6.8	
CA-7	56.7	27.8	
CA-8	28.3	10.0	
CA-9	74.3	4.4	
CA-10	142.7	79.5	
CA-11	126.6	84.7	
CA-12	490.5	62.0	
CA-13	226.6	75.7	
CA-14	343.2	41.2	
CA-15	724.4	53.4	
CA-16	18.7	3.3	
CA-17	167.7	74.1	
CA-18	258.7	64.0	
CA-19	181.5	74.4	
CA-386	816.2	28.9	0.06
CA-387	539.4	79.0	
CA-388	34.4	14.8	<0.01
CA-389	69.1	27.5	0.02
CA-390	238.2	85.6	0.02
CA-391	2.2	0.6	<0.01
CA-396	0.3	0.1	
CA-397	101.5	64.4	
CA-398	90.8	38.6	



References  
 Conwest surface plan (1971)  
 G.S.C. Geology of Galena Hill - Keno Hill area Yukon Territory by K.C. McTaggart, Bulletin 58 (1960)

**DAWSON ELDERADO MINES LTD.**  
 Suite 810 910 - 9th Ave S.W. Calgary Alberta T2P 2K6

**CARIBOU LEASE**  
 GROUP No. 1054  
 LOT No. 926  
 KENO HILL, YUKON TERRITORY  
**GEOLOGICAL PLAN**

DATE: 8/5 DRAWN: CHECKED: REVISION: 1:11 FILE NO: 1054-926

FIGURE 9