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SUMMARY REPORT on the PAVEY PROPERTY

Bennett Lake Area Atlin Mining Division



## GEOLOGICAL BRANCH ASSESSMENT REPORT

17,83

### SUMMARY REPORT

on the

### PAVEY PROPERTY

LQ ASSESSMENT REPORT

(PAVEY 1-6, LQ and BEN 1-4 Claims)

Bennett Lake Area

Atlin Mining Division

NTS 104-M-15W

Lat. 59°56'N, Long. 134°43'W

For:

LODESTAR EXPLORATIONS INC. Suite 19, 4078 Fourth Avenue Whitehorse, Y.T. Y1A 4K8

By:

G.S. DAVIDSON, P. Geol.

September, 1988

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### SUMMARY

The PAVEY property consists of 140 units located between Bennett and Tutshi Lakes in the Tagish Highlands of the Atlin Mining Division in northwestern British Columbia. The property covers gold and silver rich mineralization in shears and quarts veins related to several strong north and northwesterly trending faults. The claims are underlain by layered sedimentary, volcanic and metamorphic rocks intruded by granitic bodies and porphyry dykes.

Previous work by Du Pont of Canada and Texaco Canada Resources Ltd. located quartz-arsenopyrite and quartz-stibnite-arsenopyrite veins concentrated in the "main gully" and around the Ben Fault at the head of Ben Creek. The "main gully" is a steep sided gorge which descends from a plateau area down the westerly facing slope overlooking Bennett Lake. Along the rocky walls of this gorge mineralized veins occur over a 1000 meter section. The Ben Fault is a northwesterly trending structure that cuts argillites and Boundary Range metamorphic rocks on the upland plateau; veins and shear zones containing one or more of pyrite, arsenopyrite, galena, sphalerite, stibnite and chalcopyrite lie parallel and nearby the Ben Fault. Du Pont and Texaco completed extensive rock sampling and soil geochemical surveys from 1982-1983.

In 1987 the writer supervised a prospecting and sampling program on the PAVEY claims. In the "main gully" sample results correlated well with those obtained by Du Pont. Of the 10 samples taken (1987), 6 recorded gold values between 0.1 and 1.44 oz/ton; silver values were up to 12.6 oz/ton. No sampling was undertaken on the BEN claims as these claims were not under option to Lodestar until March, 1988. Earlier sampling by Texaco located seventeen mineral occurrence which produced gold values greater than or equal to 1.0 ppm and/or 70.0 ppm silver. Peak gold values are reported at 0.708 oz/ton and maximum silver values at 66.75 oz/ton.

At the south end of the PAVEY claims a 300 meter long adit, excavated in 1916-1917 remains open and in good condition. Apparently the drift was designed to intersect a ruby silver bearing ore body. Prospecting in 1987 located auriferous quartz veins above the adit returning values up to 0.433 oz/ton Au. However, no significant silver mineralization was found within or around the adit.

In 1988 a prospecting crew traced a .5-1m wide quartz vein (LQ vein) over a 350 m strike length on the LQ and adjoining BEN claim. The vein contains up to 20% arsenopyrite, 5% galena, 5% spalerite and less chalcopyrite. Gold value from six samples range from .05 to 0.28 oz/ton and silver values from 2.0 to 11 oz/ton.

A two phase exploration program is recommended for the PAVEY property. Phase I at a proposed budget of \$140,000 consists of blast and backhoe trenching, prospecting, geological work and road construction. Phase II consists mainly of diamond drilling and is proposed at a cost of \$195,000.

### INTRODUCTION

The PAVEY 1-6, BEN 1-4 and LQ Claims (140 units) cover gold and silver bearing, sulphide rich (Pb-Zn-As-Sb) quartz veins and shear zones located north of Paddy Pass and east of Bennett lake in the Atlin Mining District of northwestern British Columbia. The property is accessible via the Klondike Highway which passes within 1 km of the eastern margin of the claim block at Tutshi Lake. The Klondike Highway links Skagway, Alaska at tidewater to Whitehorse, Yukon.

The PAVEY 1-6 and LQ Claims were staked in 1986-1987 to cover ground previously held by Du Pont of Canada (Gaug Claims) which lapsed in 1986. The PAVEY and LQ Claims are owned by G. Harris and G. Davidson of Whitehorse; Lodestar Explorations Inc. holds an option to acquire a 100% interest in the claims. The BEN 1-4 Claims are held by Texaco Canada Ltd. and Lodestar can earn a 100% interest in these claims by fulfilling the terms of an option agreement.

Du Pont and Texaco completed work programs on their respective properties from 1982-1983 and reported numerous gold and silver bearing sulphide rich mineral occurrences associated with northwesterly trending faults and shears cutting volcanic and metamorphic rocks. Geochemical and geophysical surveys were also performed.

This report, prepared at the request of Brian Lueck, president of Lodestar Explorations Inc., summarizes an exploration program conducted on the PAVEY 1-6 claims in July, 1987 and 1988 and reviews assessment reports on the Gaug claims and reports on the BEN claims made available by Texaco Canada Ltd.

### LOCATION AND ACCESS

The PAVEY property is located in northwestern British Columbia, 28 km south of Carcross and 60 km south of Whitehorse on N.T.S. Map Sheet 104 M-15. Approximate geographical co-ordinates are 59°56' north and 134°43'west. The claims lie on the east side of Bennett Lake, with the White Pass and Yukon rail road passing through the western edge of the property. The Klondike Highway which links Skagway, Alaska to Whitehorse, Yukon is 1 km east of the claim block beside Tutshi Lake. A natural access route to the property is available via a northwesterly trending valley. An application to construct a road up this valley has been approved by the B.C. Ministry of Energy, Mines and Petroleum Resources. Figures 1 and 2 show the property location.



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### PHYSIOGRAPHY, CLIMATE and VEGETATION

The PAVEY property is situated in the Tagish Highlands of the Coast Mountain Ranges of the northwestern cordillera. The claims lie between 660 and 2200 meters, covering a steep westerly facing slope beside Bennett Lake and a broad upland interior featuring a till covered plateau surrounded by rocky ridges. Several small creeks occupy steep canyons which descend from the upland plateau down the slope overlooking Bennett Lake. In the upland area tarms lie at the headwaters of Ben Creek which flows into Tutshi Lake.

Alpine areas in northwestern British Columbia have a northern interior climate modified by the Pacific Ocean. The property lies on the western side of the Coast Mountain Ranges where winter snow packs are 2-3 meters deep and annual precipitation averages 75 cm. Summers last from late June to late September with temperature averaging 12°C.

Spruce forest and buckbrush are thick up to 1400 meters on the east shore of Bennett Lake. Elsewhere the property is generally above treeline and alpine grasses and moss are the dominant flora. Outcrop is extensive on the steep slopes and ridges surrounding the upland plateau.

#### PROPERTY

The PAVEY property consists of eleven claims registered with the district Gold Commissioner in Atlin, B.C., as listed in Table I. Figure 3 shows the claim plan.

<u>Claim Name</u>	Number of Unit	Record Number	Recording Date	Expiry Date
PAVEY 1	20	2659(8)	August 1, 1986	August 1, 1989
PAVEY 2	10	2660(8)	August 1, 1986	August 1, 1989
PAVEY 3	20	2661 (8)	August 1, 1986	August 1, 1989
PAVEY 4	6	2662(8)	August 1, 1986	August 1, 1989
PAVEY 5	12	2759(11)	Nov. 7, 1986	Nov. 7, 1989
PAVEY 6	12	2760(11)	Nov. 7, 1986	Nov. 7, 1989
LQ	15	3041	July 24, 1987	July 24, 1990*
BEN 1	15	1931(7)	July 4, 1983	July 4, 1994
BEIN 2	15	1932(7)	July 4, 1983	July 4, 1994
BEN 3	9	1933(7)	July 4, 1983	July 4, 1994
BEN 4	6	1934(7)	July 4, 1983	July 4, 1994

TABLE I PROPERTY DATA

\*applied for



G. Harris and G. Davidson of Whitehorse, Yukon are the registered owners of the PAVEY 1-6 and LQ claims, and Texaco Canada Ltd. is the registered owner of the BEN 1-4 claims. Lodestar Explorations Inc. has entered into separate agreements with Texaco and Harris-Davidson to acquire 100% interest in the respective claims.

### REGIONAL GEOLOGY

The Bennett Lake district overlies the contact between two terrains: (1) the Intermontane Belt of the western Cordillera and (2) the younger volcanic and intrusive suite of the Coast Intrusions.

The Intermontane Belt features a complex assemblage of deformed volcanic and sedimentary rock's consisting of the Upper Triassic/Lower Jurassic Lewes River Group (Takla-Nicola), the Lower and Middle Jurassic Laberge Group (Stuhini Group) and Proterozoic metamorphic rocks.

Cretaceous granitic rocks of the Coast Intrusions are the most common in the district; typically, they consist of fresh quartz monzonite or quartz diorite. Pendants of Proterozoic gneiss, schist and limestone occur in the granitic intrusives.

A younger series of andesite, dacite and rhyolite flows, tuffs and agglomerates, mapped as the Late Cretaceous-Tertiary Mount Skukum Group(Mount Nansen Group-Sloko Group) intrude and overlie granitic rocks at Montana Mountain, Mount Skukum and Mount Macauley. Also, dykes of Tertiary and Eccene age intrude all rocks in the district.

The geology of the Bennett Lake district was mapped by R.L. Christie of the G.S.C. (published as Map No. 19-1957) and the Tutshi Lake Area was remapped by M. Mihalynuk and J. Rouse of the B.C. Geological Survey Branch, published as OPEN FILE MAP 1988-5. Figure 4 shows the property geology.

Structurally, the area features major faults, primarily along river and lake valleys associated with movement in the Coast Intrusive complex and with early Tertiary volcanism at Mount Skukum, Mount Macauley and Montana Mountain. The Skukum Group volcanic rocks may be equivalent to the Sloko Group of norther B.C. and the Mount Nansen Group of central Yukon. Late stage features of Skukum Group volcanism include dacite, rhyolite and granitic dykes, emplaced in fractures and fault zones around the volcanic complexes, and quartz carbonate veining with significant precious and base metal mineralization.



### LEGEND LAYERED ROCKS QUATERNARY ON Decemended and glocid IIE and poorly sorted shukars. MODULE TO UPPER ARIADSEC (7) Maay Variageted syncolamic lapid huffs; blocked feldspor perphyry flaws. LOWER ARRASSEC LABERES CROUP, INKLIN FORMATION LABETREE GROUP, NOLEN FORMATION LLIA Arginita LLE Conditionation UPPER TRASSIC STURME GROUP dis Tuffs, Rows on threades PALEDITOL (IN TO UPPERMOST TRASSIC PIGE Conditionation PIGE Conditionationation PIGE Condi EPM Metamorphic terrain of uncertain origin EPMs Aralloceaus sitistance, faidoathic weekee and leaser faible pyroclastics pyrocitatics and corbonetes. PP4b Allwed pyroxemits, folded pabbres and molic flow successions. NTRUSIVE ROCKS UPPER CRETACEOUS COAST NTRUSCORS wind Medium Is cases grained hareheads and bistlie granites, wind Ledgen Is cases grained hareheads wind send the second second second second second CRTACCOMS Keekmand Granderite, coarts mensarile, granite and derite, CRTACCOMS Keekmand, Granderite, coarts mensarile, granite and derite, PALED2DIC ID TO TRASSIC Migd Attreed and detarmed intrusives, leucogranite and guarts-dorite. SYMBOLS Geological Boundaries Ninewn, appresimate, assumed,\_\_\_\_\_\_\_\_\_\_\_ Unconformity Idefined, assumed) .... Bedding linckined, vertical ... Y \* Schistopity, feliation Unclined, vertical. 4 × Joint Enclined, vertical. \* Cyke Undined, vertical .... × Anticine Idefined, opproximpte, pasumedi Synchre idefined, opproximate, assumed, Minor fold hingeline High ungle fault idefined, appresimate, assumedi-Thrust fault Idefined, appresenate, assumed .. Geology from B.C. Geological Survey Branch, Open File Map 1968-5. LODESTAR EXPLORATIONS INC. PAVEY PROPERTY REGIONAL GEOLOGY BENNETT LAKE AREA, BRITISH COLUMBIA NTB. TEDU DATE 6.0. MLR., 1968

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### HISTORY and PREVIOUS WORK

The Bennett Lake district was first explored by prospectors travelling along the major lakes and rivers in the early 1890's. The Klondike gold Rush brought a great influx of people to the area in 1898. Gold and silver bearing quartz veins were discovered around Bennett and Tagish Lakes, and in the Wheaton River drainage. High grade mining operations at the Engineer mine beside Taku Arm, Tagish lake, and at the Venus and Big Thing mines on Montana Mountain produced gold and silver periodically during the early 1900's.

Near Pavey, B.C. on the White Pass and Yukon Rail Road, two claims were staked by Fred H. Storey around 1913. The SILVER QUEEN and RUBY SILVER claims were reported to overly highgrade silver mineralization. The early workers built a 1.2 km tramway from the railroad at 660 m elevation up the mountain side to 1400 m elevation. They then excavated a 300 m long adit towards the perceived mineralization. This adit is located on the PAVEY #2 claim and remains open and in good shape. No records of production exist and from the appearance of the adit, ore was not intersected. Three shorter adits are located in a steep gully 2.5 km to the north (PAVEY #3 claim) of the Ruby Silver adit. The history of these workings is unknown. They uncover mineralized quartz veins which occasionally contain visible gold.

From the mid-1920's to the late 1960's, little exploration of significance took place. By 1970, many of the old showings were restaked as an increase in the value of base and precious metals rekindled the interest of mining companies and prospectors. The Venus and Arctic mines operated on Montana Mountain between 1969 and 1971. The Venus mine was rehabilitated again from 1980 - 1981 and a mew mill was installed at the southern end of Windy Arm, Tagish Lake.

In the 1980's the discovery and development of the Mount Skukum gold deposit in the Wheaton River area initiated a methodical staking rush in which much of the Wheaton River and Lake Bennett district has been staked. Gold production at Mount skukum commenced in 1986 and a production decision on the nearby Omni Resources property is pending.

From 1981 - 1986 Du Pont of Canada held the GAUG claims over the area presently covered by the PAVEY 1-4 claims. During 1982 and 1983 Du Pont completed geological and geochemical surveys on the upland plateau and over a steep rocky gully which descends form the upland area to the east shore of Bennett Lake. They rediscovered several old adits in the gully. Of 33 rock samples collected by Du Pont, 15 contained gold values of .1 - .805oz/ton and silver values up to 66 oz/ton. Du Pont also outlined strong precious and base metal geochemical anomalies in the gully and on the surrounding upland surface. Peak gold and silver values in soil were 1150 ppb and 46 ppm respectively. Du Pont ceased exploration activities in the region after the 1983 season.

In 1983 Texaco Canada Ltd. staked the BEN 1-4 claims and performed geological, geophysical and geochemical surveys. Seventeen mineral occurrences produced gold values greater than or equal to 1000 ppb and/or silver values greater than or equal to 70 ppm. The mineralized veins and shear zones contain one or more of pyrite, arsenopyrite, galena, spalerite, stibnite, chalcopyrite and rarely siderite. Although most of the mineral occurrence were of limited size Texaco's consultants concluded that there was potential for larger silver and gold deposits along or near a northwesterly trending fault which traverses the upland plateau passing through both the BEN and at that time GAUG claims. Further details of Du Pont's and Texaco's exploration work are summarized in Appendix I.

### 1987 EXPLORATION PROGRAM

On July 10, 1987 a four-man field crew mobilized onto the PAVEY property, locating camp just east of the PAVEY #6 claim. Crowsnest Helicopters, based in Whitehorse, provided air support.

A 1.75 km picket baseline trending north/south was established on the upland plateau with the BL 0+00 south picket located at the old legal cornerpost of Du Pont's GAUG 1 and 2 claims. 3.4 km of picket crosslines were extended primarily to the west of the baseline to tie in claim posts, old pits and quartz veins. The "main gully" where Du Pont located numerous mineralized veins and geochemical anomalies was also tied into the grid. The property plan is shown in Figure 5.

Blast and hand pits were excavated on quartz-sulphide veins in the "main gully" and beside a small tarm at the south end of the grid (PAVEY #4 claim). A Cobra gasoline drill was utilized for trenching.

Thirty rock samples were collected on prospecting and reconnaissance mapping traverses. The samples were first geochemically analyzed for 17 elements by Bondar-Clegg. Samples with high values in Au-Ag-Pb-Zn were then assayed. The Certificates of Analysis are presented in Appendix II. Sample values, locations and descriptions are summarized in Table II, and Figures 6,7 and 8 show the sample sites. Du Pont and Texaco data is included on the maps and in the following sections.

#### 1988 EXPLORATION PROGRAM

On July 19, 1988 the writer and a two-man field crew flew onto the LQ claim from a base camp at Partridge Lake. Also, a two-man crew representing Total Erickson Resources Ltd. joined the writer on the property.

Reconnaissance mapping and prospecting traverses were performed primarily on the LQ claim. Twelve rock samples were collected and analysed for Au-Ag. The samples were analysed by Bondar-Clegg and MIN EN Laboratories Ltd. The lab reports are contained in Appendix II and sample values and descriptions are listed in Table II. Figure 9 shows the sample locations.

### Property Geology

The property is underlain by layered volcanic, sedimentary and metamorphic rocks extensively exposed on precipitous slopes overlooking Bennett Lake and on peaks and ridges surrounding the upland plateau. Intruding this sequence are granitic rocks of various ages and porphyry dykes of Late Cretaceous or Tertiary age. Mineralization is associated with Cretaceous and Tertiary volcanic activity.



The oldest rocks are the Paleozoic and Proterozoic Boundary Ranges Metamorphics which consist of northwesterly trending fault bounded blocks of gneiss, schist, sediments, pyroclastics and minor carbonates. Altered pyroxenites, foliated gabbros and mafic flows are also mapped as part of the metamorphic succession. Locally, gneiss can be divided into 1)mafic gneiss, composed of quartz, chlorite and amphibole; and 2)felsic gneiss, composed of quartz, feldspar and muscovite. All rocks of this age are metamorphosed to at least greenschist facies.

Triassic and Jurassic sedimentary and volcanic rocks occupy most of the remaining area of the property. Pebble conglomerate of Paleozoic to Upper Triassic age outcrops on the PAVEY #5 claim at the head of a small creek. The conglomerate contains chert and guartz pebbles in a black siltstone matrix. Contacts between conglomerate and granitic rocks are highly silicified and contained up to 2% pyrite.

The Upper Triassic Stuhini Group occurs in the southeastern corner of the claim block and consists primarily of green pyroxene-feldspar porphyry tuffs and breccias, and variegated feldspar-phyric tuffs and lesser flows. The Stuhini Group volcanics lie in unconformable contact with the Lower Jurassic Laberge Group and with Middle to Upper Jurassic volcanics. The Laberge Group consists of intermixed argillite, siltstone, greywacke and lesser conglomerate. The sediments are generally highly fractured and form vivid orange gossan zones when pyrite rich. The Middle to Upper Jurassic volcanics closely resemble volcanic rocks on Montana Mountain and in the Wheaton district which are considered Cretaceous or Tertiary in age. Thev consist of variegated pyroclastic lapilli tuffs and bladed feldspar porpyry flows of basaltic and andesitic composition. Basaltic flows weather a brownish green colour and contain up to 30% plagioclase phenocrysts. The tufaceous units weather a dark brown colour and contain subangular clasts up to 1 cm in size.

At least three stages of granitic intrusive rocks ranging in composition from diorite to quartz monzonite intrude and underlie the layered rocks. Altered and deformed intrusives, leucogranite, and quartz diorite of Paleozoic to Triassic age intrude sedimentary and metamorphic rocks in the western half of the claim block. Hornblend phenocrysts constitute up to 30% of the rock and maintain a northwesterly orientation. Minor pyrite, pyrrhotite and chalcopyrite are present in most samples.

Cretaceous granite and granodiorite plugs have been mapped by the B.C. Geological Survey Branch on the western margin of the claim block. Of limited extent the more easterly felsic plug hosts numerous sulphide bearing quartz veins and fractures zones. Du Pont workers identified this plug as a rhyolite porphyry body which the writer also believes. The most extensive intrusive rocks in the area are the Upper Cretaceous Coast Intrusions. They outcrop as prominent smooth faced cliffs in the southwestern corner of PAVEY # 1 and 2 claims. The Coast Intrusions are medium to coarse grained hornblend and biotite granites which lie in sharp fault contact with metamorphic and sedimentary strata to the east.

A variety of dykes and sills occur throughout the claim area. They penetrate all rock units except the Coast Intrusives, where they were not observed. The dykes are probably contemporaneous with Tertiary volcanic dykes of the Bennett Lake caldera complex located 15 km west of the property, or with the Late Cretaceous Montana Mountain volcanics located 12 km to the northeast. The most common dykes, range in composition from andesite to basalt and outcrop along the westerly facing slope above Bennett Lake. Typically they are less than 5 m wide, vary in colour from light green to dark brown and contain less than 10% fine phenocrysts. Two bodies of rhyolite porphyry occur in the main gully west of the upland plateau. The yellowish weathering rock contains feldspar and quartz eye phenocrysts that average 5 mm in size. The groundmass is very fine grained and siliceous. Pyrite and pyrrhotite comprise up to 5% of the rhyolite. Above the adit in Pavey #2 claim several granitic porphyry dykes intrude quartz diorites.

Structurally, two major northwesterly-trending faults run through the upland plateau. The western fault labelled the Ben Fault by Texaco was exposed in a blast trench. It consists of a 6 m wide fracture zone of gouge and argillite. The eastern fault called the Paddy Fault is the contact between metamorphosed sediments and altered intrusive rocks. A larger regional structure, the Llewellyn Fault, is a major northwesterly trending fault that passes through the eastern part of the LQ claim and most of the 104 M 15 map sheet.

### Mineralization

Four types of mineralization containing gold, silver, copper, lead and zinc values are present on the PAVEY property. In order of significance they are:

- 1) Arsenopyrite-quartz veins
- 2) Stibnite-arsenopyrite-galena-sphalerite-guartz veins
- 3) Chalcopyrite-magnetite in a shear zone
- 4) Massive pyrrhotite boulders



1) Quartz veins containing bands of massive arsenopyrite and minor pyrite, sphalerite and galena occur in fractures and shear zones in granitic, porphyritic and argillaceous rocks. Six veins ranging in size from a few centimeters to 40 cm in thickness are located at approximately 1000 m in elevation in the "main gully" (see Figure 6). 33 - A 25 m long adit follows one of these veins in a northeasterly direction. The adit exposes a quartz vein averaging 25 cm in width which pinches and swells along strike and dips to the west. The vein is surrounded by a 4 m wide bleached alteration zone in the host rhyolite porphyry. The alteration zone can be traced across outcrop for over 50 m from the portal. Gold and silver values of samples collected from the dump range up to 0.497 oz/ton and 12.3oz/ton respectively. A 20 cm chip sample taken on surface approximately 40 m north of the adit recorded 0.234 oz/ton Au and 6.19 oz/ton Aq.

On the LQ claim a large quartz vein containing up to 20% arsenopyrite and 5% galena outcrops in quartz chlorite schist in a creek bed. The vein forms the west bank of BEN creek for 10 m, averaging 70 cm in width, striking  $33^{\circ}$  and dips  $57^{\circ}$  east. A grab sample of well mineralized vein material assayed 0.114 oz/ton Au and 10.55 oz/ton Ag while a chip sample over 150 cm recorded values of 0.084 oz/ton Au and 10.44 oz/ton Ag (see Figures 7 and 9).

Quartz float was traced upstream for 350m to a second large quartz vein in outcrop. This vein also lies in the creek bed and is along strikes from the main vein. It averages .5 m in width over a 10 m length and .50 m chip sample assayed 0.27 oz/ton Au and greater than 50.0 ppm Ag.

On the BEN claims 6 locations host veins and shear zones predominately composed of quartz, arsenopyrite and less pyrite. The veins are generally less than one meter wide and the maximum values in rock samples collected by Texaco are 0.708 oz/ton Au and 66.7 oz/ton Ag.

Above the large adit in PAVEY #1 claim (see Figure 8) a quartzarsenopyrite vein occurs in quartz eye porphyry dyke. A grab sample returned a gold assay of 0.433 oz/ton.

The adit was examined and mapped at a scale of 1:100 - see Figure 10. The adit consists of a 180 m long drift and a 95 m crosscut with several short spurs. The adit was driven in 1915-1916 in a year-round operation to try and intersect a ruby silver ore zone. The workings cut fresh granodiorite for almost their entire length. One rhyolite porphyry dyke occurs at the end of the main drift and in a small spur. Apparently, no mineralization was intersected and the project was abandoned in 1916.







2) Quartz veins containing massive stibnite and arsenopyrite with some galena, sphalerite and chalcopyrite are exposed primarily in the "main gully" on the south side of the creek and in old trenches located beside a small tarn at the head of Ben Creek on PAVEY #4 claim. The veins vary from a few centimeters up to 1 meter in width and are hosted by granodiorite and argillite. The vuggy quartz veins contain sulphide rich bands, up to 10 cm thick which consist of coarse bladed to fine grained stibnite and fine grained arsenopyrite.

In the main gully stibnite rich veins are exposed in shears and fractures along 1000 meters of outcrop and talus on the creek bank. Values from rock samples collected by Du Pont, Texaco and the writer are consistently over 0.1 oz/ton Au and 6 oz/ton Ag. Peak values in gold are 1.442 oz/ton and in silver 63 oz/ton.

Near the small tarn (Figure 7) two old blast pits were mucked out and sampled. Massive stibnite with 10% arsenopyrite, sphalerite and galena occurs in a fractured rhyolite porphyry. The sulphide zone is approximately 70 cm wide and appears to occupy a northwesterly trending shear zone in the felsic volcanics. Rock samples assayed up to 40 oz/ton Ag.

3) A zone of copper mineralization occurs on the west facing slope above Bennett lake on the PAVEY #3 claim. This occurrence was not visited by the writer but is described in the following paragraphs from the Du Pont 1982 report on the GAUG property.

"The zone is a four meters wide sheared and altered section of granodiorite. This sheared rock is traceable on the surface over a length of 10 meters. The zone strikes east-southeast with a moderate dip to the northeast. An adit has been driven horizontally into the lower portion of this altered zone. The adit is in good shape and is approximately  $1.0 \times 1.5$  meters in section and 15 meters long. It has been driven east into the hill then jogs to the north for seven meters.

Mineralization in the sheared rock is limited to a 30 cm wide section of massive to disseminated chalcopyrite and magnetite. Minor pyrite and bornite has also been noted in the rock. A strong malachite/azurite stain extends outward from the mineralization for a distance of one meter. Malachite staining covers the walls of the adit but only minor chalcopyrite was observed inside. Grab samples from inside and outside the adit varied from 3.3 to 9.5% copper. A sheared outcrop of malachite-stained granodiorite 450 meters below the adit ran 0.5% copper (grab sample). This suggests the mineralized shear zone may extend for several hundred metres across the property."

A summary of rock samples and their anomalous assay values for this copper zone is given in Table 2.

### TABLE 2 (from GAUG claims report)

### Copper Zone, rock Descriptions and Assays

Sample #	Location	Description	Assay
7700A	Above adit	Massive chalcopyrite, magnetite, malachite	Cu 9.49% Ag 2.74 oz/t
9952A	Inside adit	Altered granodiorite malachite/azurite	Cu 3,26% Ag 0.83 oz/t
9953A	600 meters northwest of adit	Altered granodiorite heavily chloritized malachite	Cu 0.585% Ag 0.50 oz/t

4) Boulders of massive platy pyrrhotite and pyrrhotite-bearing amphibole skarn are situated in a talus slope on the BEN claims and along a contact between argillite and granitic rocks on the PAVEY #2 claims. Two talus samples from separate locations contained gold values of 0.31 oz/ton and 0.240 oz/ton however, 5 other pyrrhotite samples produced low gold values. The source of the boulder samples has not been located.

### GEOCHEMICAL and GEOPHYSICAL RESULTS, 1982-1983

Soil geochemical surveys by Du Pont and Texaco produced strong precious and base metal anomalies in the "main gully" area and weak to moderate anomalies at the head of Ben Creek. The strongest gold values (up to 1150 ppb) were obtained by Du Pont on grid line 7+00 W. A series of anomalous values over 300 meters on this line were interpreted to come from a large fault or shear zone which runs parallel to the line and cuts across the creek bed. Other spot gold anomalies are scattered over the upland area around the "main gully" and around Ben Creek.

Silver, antimony, arsenic lead and zinc values correlate closely to gold values. The strongest anomalies are in the "main gully", where silver values reach 46.0 ppm. Other notable anomalies surround several of the old trenches on the BEN claims.

## TABLE II: ROCK SAMPLE VALUES, DESCRIPTIONS AND LOCATIONS

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Sample Number	Sample Type	Location	Description	Au (ppb)	Ag (ppm)	Cu {ppm}	Pb (ppm)	2n (ppm)	As (ppm)	Sb (ppm)	Sa (pom)	Mn (ppm)
17891	70 cm chip	PAVEY #4 claim, sample from blast pit	Quartz veins in guartz porphyry, massive galena, stibnite, sphalerite and arseno- pyrite	30	>50	28	>10,000	14,804	>2,000	>20,000	282	987
17892	grab		Massive sphalerite and stibnite	55	>50	103	4,032	>20,000	67	>20,000	<15	8277
17893	100 cm chip	PAVEY #4. claim, second blast pit	Quartz vein and quartz porphyry, arseno- pyrite	85	29.6	43	5,868	4,807	> 2,000	293	776	337
17894	50 cm chip	PAVEY #4 claim, blast pit	Narrow quartz veins in cherty meta- sedimentary rock, pyrite, arsenopyrite	35	0.1	157	1,398	306	1,697	1,043	088	578
17895	150 cm chip	LQ claim	Massive quartz voin, arsenopyrite, galena	5,900	>50	614	8,582	3,207	>2,000	3,385	<15	44
34501	grab	FAVEY #2 claim, ridge above the main adit	Quartz vein in granitic rocks, up to 5% arsenopyrite and pyrite	300	7.1	15	293	131	>2,000	367	615	51
34502	grab		Granitic rock containing 10% pyrite	10	4.4	84	220	91	442	52	<15	627
34503	grab		Metasedimentary rock (chert), 5% fine grained disseminated sulphidem	130	2.1	36	156	67	>2,000	340	1,170	155
34504	grab	PAVEY #1 claim, 100 m west of previous sample	Subhedral quartz vein, bands of massive arsenopyrite	780	7.4	26	301	91	>2,000	521	<15	15
34505	grab		Silicified metasedimentary rocks, 10% disseminated pyrite and arsenopyrite	75	1.1	30	85	89	>2,000	119	185	505
34506	grab	PAVEY #1 claim, ridge top at 5,700' ASL	Massive platey pyrrhotite from quartz gouge zone in cherts	10	2.8	894	49	39	>2,000	18	<15	153
34507	grab		Quartz gouge vein, 10% arsenopyrite, pyrita	400	6.1	209	256	22	>2,000	668	<15	129
34508	grab	PAVEY \$2 claim, ridge top at 5,600' ASL	Quartz vein talus, massive arsenopyrite	1,050	1.0	20	<5	17	>2,000	392	882	114
34509	grab	PAVEY #2 claim, 5,100' ASL	Granitic rock, hornfels, 2% pyrite, pyrrhotite, srsenopyrite	45	0.9	36	86	75	>2,000	25	464	651

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## TABIE II (cont'd)

Sample Number	Sample Type	Location	Description	Au (ppb)	Ag (ppm)	Cu (ppm)	₽b (ppm)	2n (ppm)	As (ppm)	Sb (ppm)	Ba (ppm)	Mn (ppm)
34510	grab	PAVEY #2 claim, 5,100' ASL	Metasedimentary rock, dark, fine grained, charty, disseminated pyrite, arseno- pyrite, pyrrhotite	5	1.2	236	78	60	>2,000	25	722	872
34511	grab	PAVEY 42 claim, 4,700' ASL	Buff weathering feldspar porphyry dyke, 4 m wide, narrow vuggy quartz veine	75	3.0	2	106	50	> 2,000	40	21	32
34512	grab	PAVEY #1 claim, 5,100' ASL	Quartz vein, bands of arsenopyrite occur in quartz feldspar porphyry dyke 3 m wide	>10,000	11	25	9	12	>2,000	398	60	27
34513	grab	PAVEY #1 claim, 4,400' ASL	Quartz vein, subhedral, 24 pyrite and arsenopyrite, minor chlorite	520	0.6	<1	88	85	>2,000	34	3336	208
34514	grab	PAVEY \$4 claim, 600 m west of tarn	Quartz-feldspar porphyry dyke containing minor arsenopyrite	500	<0.5	6	75	B	>2,000	36	920	14
34515	grab		Quartz-feldspar porphyry dyke cut by narrow quartz veins containing araeno- pyrite and galena	860	22.4	63	174	1,227	1,004	>20,000	<15	1,604
34516	grab	PAVEY #3, top of main gully	Banded guartz-limonite veins in felsic tuff, minor pyrite, arsenopyrite and galena	>10,000	>50	445	663	1,160	>2,000	>20,000	<15	252
34517	ğrab	PAVEY 43 claim, main gully, 4,500' ASL	Massive sulphide in quartz vein	40	1.2	40	56	46	302	205	324	1,101
34518	ğrab	PAVEY #3 claim, main gully, 4,400' ASL	Quartz vein containing arsenopyrite, pyrite, limonite	2,900	0.6	3	47	66	>2,000	531	246	450
34519	grab		Quartz-sulphide vein in porphyritic rock, vuggy, arsenopyrite, pyrite, sphalerite, galena	6,000	>50	299	8,569	19,883	>2,000	>20,000	<15	468
34520	3 m chip	PAVEY #3 claim, main gully, 4,500' ASL	Hand pit in goasan zone, narrow sulphide bearing quartz veins in gossan	800	5.6	8	563	552	>2,000	114	654	2,959
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Sample Number	Sample Type	Location	Description	Au (ppb)	Ag (ppm)	Cu (ppm)	Pb (ppm)	2n (ppm)	As (ppm)	Sb (ppm)	Ba (ppm)	Mn (ppm)
34521	grab	PAVEY #3 claim, main gully, 4,500' ASL	Hand pit, sample of quartz, limonite with minor sulphides	780	2.1	2	110	286	>2,000	516	217	1,399
34522	grab	н. п	Quartz-sulphide vein, stibnite	10,000	>50	594	1,010	1,569	662	20,000	<15	386
34523	grab	<b>n</b> 7	Quartz-sulphide vein, stibnite, galena, arsenopyrite, pyrite	5,400	>50	204	10,000	1,556	>2,000	>20,000	<15	38
34524	grab		Quartz-sulphide vein, stibnite, galena, arsenopyrite	4,300	>50	485	10,000	5,538	>2,000	>20,000	<15	94
34525	grab	PAVEY #3 claim, upland surface	Blast pit, massive stibnite vein in volcanics	2,100	49.2	42	83	165	151	>20,000	<15	306
63831	grab	BEN #2 claim	Chert containing 20% pyrite, rusty red weathering zone	38	1.3							
63832	grab	LQ Claim, 5000' ASL	Shear zone in andesite porphyry, limonite and calcite veining	6	0.4							
63833	grab	ю и	Porphyritic andesite containing pyrite blopbs and quartz eyes	10	1.1							
63834	grab	LQ claim, 4,700 ASL	Pyritic shear zone in andesite porphyry	<5	1.0							1
63835	grab	LQ claim, beside Ben Creek, 4,300' ASL	Cherty limestone containing pyrite and arsenepyrite on fractures	17	1.6							
63836	grab	LQ claim, beside Ben Creek, 4,400" ASL	Massive pyrrhotite vein (10 cm) at contac of dacitic dyke with argillite	et 52	1.8							
63837	100	LQ claim, Ben Creek 4,500' ASL	Chip sample across quartz vein out- cropping in creek bed: 10% arsenopyrite, 5% galena, 5% sphalerite, less chalcopyrite	3021	>50.0	1800	>10,00	C 4,690				

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		·····		A		( <u>ppm</u> )-	( <u>ppm</u> )
Sample No.	Type	Location	Description	(oz/ton)	Ag (oz/ton)	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	۵ח xxxxxxxxx xxxxxxxxx
63838	50	BEN #1 claim, Ben Creek, 4,600' ASL	Chip sample across quartz vein outcropping in creek bed; 15% arsenopyrite, 5% galena, 5% sphalerite, less chalcopyrite	8,590	>50.0	10,000	6,580
88-262	60	LQ claim	white guartz vein with 10% sulphides	1,540	60.2		
88-263	20	PAVEY-main gully	quartz vein, open boxwork	100	1.2		
88-264	40	PAVEY-main gully	quartz vein with 10% pyrite and arsenopyrite bands	3,700	8.0		
88-265	40	PAVEY-main gully	quartz vein above the portal with 10% arsenopyrit	e 7,280	960.0		
							25

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Anomalous copper values (up to 3830 ppm) occur over the chalcopyrite rich shear zone exposed by a short adit; north of the "main gully".

VLF and Magnetometer surveys performed by Texaco on two grids around the top of Ben Creek outlined the northwesterly trending Ben Fault. A prominent magnetic high on Grid 2 corresponds to a gossanous pyrrhotitebearing zone in gneiss. Weaker magnetic anomalies on Grids 1 and 2, and three northwesterly trending VLF anomalies on Grid 2 are not exposed in outcrop. The causes of these anomalies are uncertain.

### CONCLUSIONS and RECOMMENDATIONS

Consistently high gold and silver values have been obtained form numerous quartz-arsenopyrite and quartz-stibnite-arsenopyrite veins occurring within the Pavey property. These veins are generally less than 1 m in width however the abundance of mineralization indicates that there is a high potential for the discovery of a gold and silver deposit.

Rock sampling, geochemistry and geophysical surveys have been performed on the property. The gold and silver bearing showings and soil anomalies located by these work programs should be examined by an extensive trenching program. On the upland plateau the most effective method of trenching would be by backhoe while veins in the "main gully" should be opened up by blasting.

At the south end of the property the reported ruby silver occurrence above the adit has not been located. Further prospecting is necessary to rediscover the old showing.

A surface exploration program consisting of blast and backhoe trenching, geological mapping and sampling, and prospecting is recommended in Phase I. Also, a 4x4 road should be constructed onto the upland area from the Klondike Highway, a distance of 6 km. Further trenching and diamond drilling are recommended in Phase II. The proposed programs are outlined below:

### PHASE I - SURFACE EXPLORATION

Blast and backhoe trenching	\$35,000
Geological mapping and sampling	12,500
Prospecting	12,500
Camp and support	20,000
Transportation	15,000
Road construction	30,000
Contingency	12,500

\$140,000

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## PHASE II - DIAMOND DRILLING AND TRENCHING

Diamond drilling (2500')	\$125,000
Back hoe or blast trenching	25,000
Geology and supervision	12,500
Camp and support	10,000
Transportation	5,000
Contingency	17,500

\$195,000

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SCHROETER, T.G. (1986): Bennett Project. B.C. Ministry of Energy, Mines and Petroleum Resources - Paper 1986-1.

DAVIDSON, G.S. (1987): Exploration Report on the Pavey Property for Lodestar Explorations Inc.

### CERTIFICATE

I, GRAHAM DAVIDSON, of the City of Whitehorse in the Yukon Territory, HEREBY CERTIFY:

- 1. That I am a consulting geologist and that I supervised and participated in the work program described in this report.
- That I am a graduate of the University of Western Ontario (H.B.Sc., Geology, 1981);
- 3. That I am registered as a Professional Geologist by the Association of Professional Engineers, Geologists and Geophysicists of Alberta (No. 42308);
- 4. That I have been engaged in mineral exploration on a full and part time basis for seven years, five of which have been spent in the Yukon and Northwest Territories.

SIGNED at Whitehorse, Yukon, this \_/6 day of September.

G. S. DAVIDSON, P.Geol.

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(July 19, 1988)

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### PERSONNEL

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G. Davidson (Geologist)	\$ 250.00
B. Harris (Prospector)	200.00
K. Heneberry (Assistant)	150.00
M. Fekete (Geologist - Total Erickson)	200.00
(Assistant - Total Erickson)	100.00
TRANSPORTATION	
Jet Ranger helicopter (Heli-Dynamics Corp.) 2.5	1,375.00
Jet Ranger helicopter (Frontier Helicopters) 1.1	605.00
ANALYSES	
8 rock samples (Bondar-Clegg)	140.00
4 rock samples (MIN EN Laboratories Ltd.)	117.00
REPORT	
Preparation of Summary and Assessment Report	1,750.00
Drafting and printing (Integraphics)	450.00
Typing (Sourdough Secretarial Services)	126.00
TOTAL COSTS	<u>\$5,463.00</u>

APPENDIX I

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VALUES and DESCRIPTIONS OF ROCK SAMPLES FROM ASSESSMENT REPORT #11,044 (GEOLOGICAL and GEOCHEMICAL REPORT ON THE **GAUG** PROPERTY) and from **BEN** CLAIMS REPORT

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### TABLE 3

## Arsenopyrite-Quartz Veins, Descriptions and Assay Results

Sample #	Location	Description	Assay
9951A (grab)	Inside adit	Width 2 to 30 cm qtz aspy, py; strike approx - 030°	Au: 0.685 oz/t Ag: 1.70 oz/t As: 20.50 %
8900A (grab)	10 m west of adit	Exposed area 150 cm x 30 cm qtz, aspy, py, jarosite; orientation - 040°/60SE	Au: 0.255 oz/t Ag: 0.66 oz/t As: 9.25%
8901A (grab)	20 m east of adit	Width 10 to 40 cm ex- posed length 10 m; orientation 55°/45SE qtz, aspy, jarosite	Au: 0.805 oz/t Ag: 1.42 oz/t As: 17.6%
8196D (chip across 70 cm)	15 metres above adit	Width, average 70 cm aspy, qtz, jarosite; strike approx. 060°	Au: 0.234 oz/t Ag: 6.19 oz/t As: 4.75%
8197D (chip across 30 cm)	15 metres above 8196D	Width, average 30 cm aspy, qtz	Au: 0.104 oz/t Ag: 6.92 oz/t As: 5.55% Pb: 1.08%
8190D	South branch main creek EL: 1120 m	15 cm wide, qtz-aspy vein, exposed over 10 metres; orientation - 000/10E	Au: 0.695 oz/t Ag: 0.90 oz/t

Arsenopyrite - aspy Pyrite - py Quartz - qtz Chalcopyrite - cpy Sphalerite - ZnS Stibnite - Sb

## TABLE 4

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Stibnite-Arsenopyrite Quartz Veins, Descriptions and Assay Results

Sample #	Location	Description	Assay
8938A (grab)	North side creek, 1+76m EL: 1410 m	Shear zone in grano- diorite 3 cm thick vuggy qtz 10% combined py, cpy, sb	Au: 0.034 oz/t Ag: 1.57 oz/t Cu: 0.710% Sb: 0.28%
8941A (grab)	South side creek, 4+28m EL: 1425 m	3 cm wide, qtz-py-aspy -sb vein; striking 050°	Au: 0.069 oz/t Ag: 4.19 oz/t Pb: 3.53% Zn: 1.18%
8942A (grab)	North side creek, 4+28m EL: 1375 m	3 to 40? cm wide, qtz-sb-ZnS-py vein; orientation 074/80SE	Au: 0.670 oz/t Ag: 26.45 oz/t Pb: 6.44% Zn: 5.94% Cu: 0.110%
8943A (grab)	South side creek, 5+20m EL: 1355 m	Altered granodiorite wall rock of vein described under 8944A taken 10 cm from vein	Ag: 0.29 oz/t all others low
8944A (grab)	South side creek, 5+20m EL: 1355 m	40 cm wide, qtz(25%)- -aspy(50%)-cpy(10%)- -py(10%)- ZnS(minor); orientation 084/15S	Au: 0.052 oz/t Ag: 9.60 oz/t Pb: 0.44% Zn: 0.24%
9950A (grab)	South side creek, 5+10m EL: 1370 m	l m wide, qtz-sb(60%)- -aspy (10%)-ZnS (10%)- cpy(5%) vein; orienta- tion 058/76 NW	Au: 0.215 oz/t Ag: 11.20 oz/t Pb: 2.36% Zn: 4.93%
8945A chip sample over lm	South side creek 5+15m EL: 1345 m	l m wide, qtz-sb(10%) -aspy(25%)-cpy (5%)-py(10%) vein swarm orientation: 083/82 NW	Au: 0.352 oz/t Ag: 9.55 oz/t Zn: 0.32% Cu: 0.101%

## TABLE 4 - (continued)

Sample #	Location	Description	Ass	ay
8946A (grab)	South side creek 4+90 m EL: 1355 m	10 cm wide, qtz-aspy py vein, extension of vein in 8945A, 25 m east of 8945A	Au: Ag:	0.178 oz/t 0.20 oz/t
8947A (grab)	South side creek, 5+60m EL: 1330 m	10 cm wide, gtz-py(10%) -cpy(10%)-aspy(5%) vein, traceable over 20 m; striking: 098°	Au: Ag: Pb: Zn:	0.064 oz/t 9.95 oz/t 0.33% 0.89%
8948A (grab)	South side creek, 6+22m EL: 1345 m	50-100 cm wide qtz-py- galena-aspy-sb stringer vein zone strike: 090°	Au: Ag: Pb:	0.080 oz/t 7.08 oz/t 4.96%
8937A (grab)	South side creek	l m wide, gtz-sb- aspy-ZnS vein; orientation - 090/45S	Au: Ag: Pb: Zn:	0.358 oz/t 6.51 oz/t 0.30% 0.41%
8851A (talus)	South side creek, 8+27m	Talus from inacces- sible qtz vein, ex- posed over approx. 10 metres qtz boxwork strong goethite stain, minor py	Au: Ag: Pb:	0.142 oz/t 0.37 oz/t 0.26%
8852A (grab)	North side creek, 8+27m EL: 1205 m	Silicified zone in granodiorite py and boxwork to 20%, jaro- site & goethite stain	Au:	0.016 o/t
8853A Chip over lm	South side creek, 9+23m EL: 1170 m	Altered zone in grano- diorite silicified and feldspar altered, jarositic & hematitic soil	Au: Ag: Pb:	0.016 oz/t 0.085 oz/t 046%
8854A Chip over lm	South side creek, 9+25m EL: 1180 m	Silicified zone in granodiorite 10 m above 8853A, jarosite stain, disseminated py	Ag:	0.10 oz/t

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TABLE 4 - (continued)

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Sample #	Location	Description	Assay
8856A chip over lm	South branch main creek near adits EL: 1230 m	l m wide, qtz-aspy- sb-py vein; orienta- tion - 090/55S	Au: 0.032 oz/t Ag: 0.12 oz/t
8857A talus grab	South branch main creek near adits	Talus sample of massive coarse bladed sb, 10 cm thick	Au: 0.233 oz/t Ag: 63.00 oz/t Cu: 0.955% Pb: 2.48% Zn: 1.39%
8858A (grab)	Above south branch main creek	10-100 cm wide, qtz-sb-aspy-py vein; striking approximate- ly 090°	Au: 0.512 oz/t Ag: 19.85 oz/t Cu: 0259% Pb: 0.90% Zn: 0.76%

### TABLE III

### GOLD- AND/OR SILVER-BEARING LOCALES

	IDENTIFIER	SAMPLE TYPE	LOCATION	DESCRIPTION	GOLD PPm	SILVER ppm	OTHER METALS `%
	LOCALES WITHI	N BEN MIN	ERAL CLAIMS	<b>^</b>			
1.	TRENCHES B-1 and B-2	chip	on Ben Creek	A stratabound disseminated sulphide-bearing zone about 1 m in width is hosted by gneiss. Sulphides include galena, sphalerite, stibnite, arsenopyrite, pyrite and pyrrhotite. The sulphide-bearing zone parallels the layering in the gneiss and exists between a shear zone and a linear trend of irregularly shaped quartz boudins. The sulphide-bearing zone is traceable over a strike length of 20 m and is covered by till deposits at both ends.	TRENCH 0.32 across	B-1 108.1 0.96 m	
2.	TRENCH B-3	chip	on Grid 2 near a small pond	A siliceous felsic rock which contains disseminated galena and stibnite, and a massive vein of stibnite with galena, sphalerite and a minor amount of pyrite, is exposed in trench B-3. The trend and width of this zone is not known because barren rock was not exposed in the trench.	0.03 across	90.6 3.27 m	1.47 lea 1.30 antimony

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	IDENTIFIER	SAMPLE TYPE	LOCATION	DESCRIPTION	GOLD ppm	SILVER ppm	OTHER METALS &
3.	3PLP051	grab	200 m south of camp	An old trench, which is largely collapsed and filled in, exposes a quartz vein. A dump of massive sulphide vein material exists beside the trench. The sulphides include galena, sphalerite, arsenopyrite and pyrite. Sample 3PLP051 contains abundant arsenopyrite. Sample 2PLM035, which was, collected in 1982 from this site, is comprised of galena and sphalerite, and contains 0.94 ppm gold, 4,011.0 ppm silver, 36% lead and 10.6% zinc.	12.45	2,136.0	
4.	3XFP017	grab	300 m northeast of the small lake on BEN 2 mineral claim	This sample was collected from an outcrop where a narrow vein of massive arsenopyrite strikes about 040° and dips 50° southeast. Talus boulders indicate the vein is at least 10 m long.	22.66	8.0	
	3XF0031	chip	300 m northeast of the small lake on BEN 2 mineral claim	This sample was collected from an old trench that is about 25 m northwest of sample 3XFP017. In the trench is a quartz vein that ranges in width from 30 cm to 50 cm, and strikes 040° and dips 55° southeast. The vein is at least 15 m long. The sample is from an arsenopyrite-rich portion of the vein. Sample 3XF0032, which was collected from an arsenopyrite-poor portion of the vein, contains less than 1.00 ppm gold.	6.59 across	28.0 0.30 m	

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	IDENTIFIER	SAMPLE TYPE	LOCATION	DESCRIPTION	GOLD ppm	SILVER ppm	OTHER METALS %
5.	3DHP001	grab	on Ben Creek 200 m northeast of trench B-1	Arsenopyrite and pyrite exist in boulders of quartz vein material 10 m north of the creek. Old overburden pits are present, but do not expose bed rock. On the south side of the creek a barren quartz vein 40 cm wide by at least 8 m long strikes 020° and dips 70° east.	9.29	18.0	
6.	3PLP018	grab	about 400 m southeast of trench B-1	Talus boulders of dark green amphibole skarn contain up to 10 volume per cent pyrrhotite and a trace of chalcopyrite. The source of the boulders was not discovered, but probably is upslope and to the west of the sample site in a talus-covered area.	9.91	2.7	
7.	3PLP024	grab	on the north shore of the lake at the toe of the glacier within BEN 4 mineral claim	A boulder of sugary quartz vein material with 20 volume per cent mafic wall rock fragments contains 20 volume per cent arsenopyrite. This boulder was also sampled in 1982; that sample contains 12.51 ppm gold.	10.63	1.8	
8.	3XFP005	grab	less than 100 m north of BEN mineral claims legal corner post	A narrow fracture zone, 2 cm in width, cuts fine grained greywacke and is associated with other fractures and a small quartz vein. The fracture zone has a primary cobalt mineral, erythrite stain, and minor amounts of pyrite.	6.62	1.7	0.37 cobal:

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IDENTIFIER	SAMPLE TYPE	LOCATION	DESCRIPTION	GOLD PPM	SILVER ppm	OTHER METALS %
3PLP022	grab	at the toe of the glacier within BEN 2 and BEN 3 mineral claims	A boulder of quartz siderite vein material that contains arsenopyrite and galena. This boulder was also sampled in 1982; that sample contains 1.58 ppm gold, 373.7 ppm silver and 2.07% lead.	1.99	145.7	1.13 le
3XFP022	grab	at the toe of the glacier within BEN 2 and BEN 3 mineral claims	A boulder of massive pyrrhotite with a minor amount of carbonate material was collected from moraine. A sample, which was collected in 1982 from a similar boulder nearby, contains 1.54 ppm gold.	7.69	1.9	
3DHP004	grab	300 m southeast of ME 3 mineral claim legal corner post	Arsenopyrite exists in a quartz vein which is less than 1 m wide, that is exposed in an old trench. Shears exist nearby.	1.02	1,8	
3PLP016	grab	on Ben Creek 300 m east of camp	A rusty quartz vein, 10 cm in width, is poorly exposed in the creek bank. The vein strikes 015° and dips 72° west, and is hosted by fractured gneiss.	0.49	295.6	1.00 L
	IDENTIFIER 3PLP022 3XFP022 3DHP004 3PLP016	IDENTIFIER TYPE 3PLP022 grab 3XFP022 grab 3DHP004 grab 3PLP016 grab	IDENTIFIERSAMPLE TYPELOCATION3PLP022grabat the toe of the glacier within BEN 2 and BEN 3 mineral claims3XFP022grabat the toe of the glacier within BEN 2 and BEN 3 mineral claims3DHP004grab300 m southeast of ME 3 mineral claim legal corner post3PLP016grabon Ben Creek 300 m east of camp	SAMPLE IDENTIFIERSAMPLE TYPELOCATIONDESCRIPTION3PLF022grabat the toe of the glacier within BEN 2 and BEN 3 mineral claimsA boulder of quartz siderite vein material that contains arsenopyrite and galena. This boulder was also sampled in 1982; that sample contains 1.58 ppm gold, 373.7 ppm silver and 2.07% lead.3XFP022grabat the toe of the glacier within BEN 2 and BEN 3 mineral claimsA boulder of massive pyrrhotite with a minor amount of carbonate material was collected from moraine. A sample, which was collected in 1982 from a similar boulder nearby, contains 1.54 ppm gold.3DHP004grab300 m southeast of ME 3 mineral claim legal corner postArsenopyrite exists in a quartz vein which is less than 1 m wide, that is exposed in an old trench. Shears exist nearby.3PLP016grabon Ben Creek 300 m east of campA rusty quartz vein, 10 cm in width, is poorly exposed in the creek bank. The vein strikes 015° and dips 72° west, and is hosted by fractured gneiss.	SAMPLE IDENTIFIERSAMPLE TYPELOCATIONDESCRIPTIONGOLD ppm3PLF022grabat the toe of the 	SAMPLE IDENTIFIERTYPELOCATIONGOLD DESCRIPTIONSILVER ppm3PLP022grabat the toe of the glacier within BEN 2 and BEN 3 mineral claimsA boulder of quartz siderite vein material that contains arsenopyrite and galena. This boulder was also sampled in 1962; that sample contains 1.56 ppm gold, 373.7 ppm silver and 2.07% lead.1.99145.73XFP022grabat the toe of the glacier within BEN 2 and BEN 3 mineral claimsA boulder of massive pyrntotite with a minor amount of carbonate material was collected from moraine. A sample, which was collected in 1982 from a similar boulder nearby, contains 1.54 ppm gold.7.691.93DHP004grab300 m southeast of ME 3 mineral claim legal corner postArsenopyrite exists in a quartz vein which is less than 1 m wide, that is exposed in an old trench. Shears exist nearby.1.021.83PLP016grabon Ben Creek 300 m east of campA rusty quartz vein, 10 cm in width, is poorly exposed in the creek bank. The vein strikes 015° and dips 72° west, and is hosted by fractured gneiss.0.49296.6

	IDENTIFIER	SAMPLE TYPE	LOCATION	DESCRIPTION	GOLD PPm	SILVER ppm	OTHER METALS %
12.	3DHC001	chip	on Ben Creek near ME 3 mineral claim legal corner post	Chip sample across a quartz vein which contains galena, pyrite, sphalerite, chalcopyrite and arsenopyrite. Sulphides comprise 4 to 7 volume per cent of the quartz vein. The vein strikes 033° and dips 57° east and is exposed in the creek bed over a length of 7 m; it varies in width from 0.40 to 0.80 m. An old trench is present, as are several pits along strike which failed to expose the vein.	1.69 across	124.5 0.80 m	
	3DHP002	grab	50 m upstream of 3DHO001	A well mineralized grab sample from an old rock dump. Material in the dump probably came from a trench near 3DHO001. The sample comprises quartz vein material containing galena, pyrite, sphalerite and arsenopyrite.	3.66	337.7	2,26 lea
13.	3XF0034	chip	300 m southeast of camp	This sample was collected from a 30 cm wide vein that is at least 20 m in length. The vein contains from 5 to 10 volume per cent arsenopyrite and 2 to 3 volume per cent pyrite, and strikes 015° and dips 80° west.	0.35 across	76.1 0.30 m	

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	IDENTIFIER	SAMPLE TYPE	LOCATION	DESCRIPTION	GOLD ppm	SILVER ppm	OTHER METALS %
	LOCALES EAST	OF BEN MI	NERAL CLAIMS				
14.	30HP005	grab	just outside the northeast corner of BEN 1 mineral claim	Massive arsenopyrite exists in three parallel fracture zones which trend 058° and dip 84° southeast and are hosted by volcanic flows. The arsenopyrite-bearing portions of the fracture zones are up to 30 cm wide and 11 m long.	13.37	1.2	
15.	3DHP007	grab	about 400 m east of BEN 1 mineral claim	Galena and chalcopyrite exist in a vuggy quartz vein which strikes 060° and dips vertically. The vein is about 30 cm wide and is covered by talus at one end and pinches out at the other end.	0.07	253.7	1.34 lead
	LOCALES WITH	HIN GAUG MI	INERAL CLAIMS				
16.	. 3PLP025	grab	within GAUG 3 mineral claim	A sample of silicified, sheared granodiorite which contains 10 volume per cent arsenopyrite and 3 volume per cent pyrite was collected from muck at the entrance to an old adit. The dimensions of the sulphide-bearing zone in the sheared granodiorite are unknown.	15.91	394.3	

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1	DENTIFIER	SAMPLE TYPE	LOCATION	DESCRIPTION	GOLD ppm	SILVER ppm	OTHER METALS %
17.	3PLP026	grab	on GAUG 2 mineral claim	A fractured and silicified zone in granodiorite, less than 1 m in width, locally contains up to 20 volume per cent arsenopyrite and 10 volume per cent pyrite. The zone trends 109° and dips vertically. The sample is a well mineralized piece from the fractured zone.	1.43	3.8	

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APPENDIX II

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## CERTIFICATES OF ANALYSIS

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# Geochemical Lab Report

R	EPORT: 127-	5560						PR	OJECT: P	VEY		PAGE 1A	1
S N	AMPLE JMBER	ELEMENT UNITS	Au PPB	Cu PPM	РЪ РРМ	Zn PPM	lio PPti	Co PPH	Ni PPM	lin PPM	Ag PPM	Bi PPfi	T PP
R	2 17891	a diana	. 30	28	>10000	14804	8	3	6	987	>50.0	5	é.x
R	2 17892	12-12-12	55	103	4032	>20000	20	6	9	8277	>50.0	16	
R	2 17893		85	43	5868	4807	2	1	3	337	29.6	2	10
R	2 17894	合力的资源	35	157	1398	306	3	17	19	578	8.1	(2	(ACTO
R	2 17895		5900	614	8582	3207	2	30	10	44	>50.0	508	No.
R	2 34501	Reinfordig	300	15	293	131	4.	6	-14	51	7.1	6	1
R	2 34502	EST SEASE	. 10	84	220	91	4	5	21	627	4.4	2	ik to
R.	2.34503	Contraction of the second	130	36	156	67	14	90	33	155	2.1	<2	是这
R	2 34504		780	26	301	91	医生生	2	22	15	7.4	16	(東京
R	2 34505		75	30	85	89	6	2	9	505	1.1	<2	
R	2 34506		10	884	49	39	4	4	43	153-	2.8	(2	各員
R	2 34507		400	209	256	22	. 3	6	6	129	6.1	<2	44%
R	2 34508		1050	20	<5	17	5	6	11	114	1.0	. 2	
R	2 34509	<b>新了副会社</b>	45	36	86	75	14.	20	43	651	0.9	<2	100
R	2 34510	的時間對於	5	236	78	60	243 A 3	11	10	872	. 1.2	-<2	
R	2 34511		75	2	106	50	1	1	6	32	3.0	<2	花法
R	2 34512	Const Themand in	>10000	11	25	9	12	3	5	27	2.4	10	14
Collector R	34513	CONCERNENCE CONCERNENCE	520	1	88	85	Saran Sarah	3.4	9	108	0.6	<2	對於
R	2 34514	<b>新学校和新学校</b>	500	6	75	- 8-	2	2	5	14	<0.5	<2	
R	2 34515	線的政治的	860	63	174	1227		2 -	6	1604	22.4	(2) 	
R	2 34516	at the st	>10000	445	663	1160	1	1	12	252	\$>50.0	<2	建度
R	34517		40	40	56	46	3	S	12	1101	1.2	<2	and the second
- R	- 34518		2900	3	47	66	1	6	8	450	0.6	12-	10.7
R.	34519	Phone	6000	299	8569	19883	to and so	at the S	Stall .	468	>50.0		A.S.
N States	2 34520	NPC TRATIN	800	8	563	552	17	$\sim 1$	5.690	2959	5.6	<2	
R	34521	ALC AND	780	2	110	286	1		10	1399	2.1	<2	<b>林</b> 市
R	2 34522		>10000	594	1010	1569	1	1	10	386	>50.0	<2	(Ball
R	34523		5400	204	>10000	1556	4	2	9	38	>50.0	<2	and the second
R	2 34524	Strangely	4300	485	>10000	5538	Carling 4	5	15	94	>50.0	<2	
R	34525	· 一方方面	2100	42	83	165	医 1		6	306	49.2	<2	后唐

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Geochemical Lab Report

REPORT: 127-	5560						PR	OJECT: PAVEY	PAGE 1B
SAMPLE	ELEMENT UNITS	As PPM	H PPM	Ba PPM	Se PPM	Sb PPM	Ст РРМ		
R2 17891	100 m	>2000	<10	282	9	>20000	56		
R2 17892		67	96	<15	20	>20000	40		125.
R2 17893		>2000	<10	776	<1	293	70		
R2 17894	AND INCOME.	1697	<10	880	1	1043	58		
R2 17895	えたりと言い	>2000	<10	<15	10	3385	247		
R2 34501	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	>2000	<10	615	6	367	170		and the sead of the
R2 34502	Stand for the same	442	<10	<15	5	52	75	Care China and	AL TRANSPORT
R2 34503		>2000	<10	1170	5	340	94	e og talende en der konstanten.	
R2 34504		>2000	<10	<15	13	521	361		
R2 34505		>2000	<10	185	1	119	58	State and	
R2 34506	12. 15 m	>2000	<10	<15	6	18	48		国际游戏的建立。 第二十二章
R2 34507	Sector Charles	>2000	<10	<15	6	668	432		
R2 34508		>2000	<10	882	S	392	69		
R2 34509	Sector Sector	>2000	<10	464	<1	25	119	A Standard	Sale Charles States and States
R2 34510		>2000	<10	722	1	25	51	的。這個目的	
R2 34511		>2000	<10	21	1	40	159		
R2 34512	The second	>2000	<10	60	6	398	250	Contraction of the	
R2 34513	<b>新公司</b> 在16月	>2000	<10	3336	3	34	119	State of the state of the	Chief (chief and the State of the server
R2 34514	11 × 5 × 6	>2000	<10	920	1	36	115	A Warman A.A.	A CHILDREN THE ACT
R2 34515		1004	<10	<15	1	>20000	$-\pi$		
R2 34516		>2000	<10	<15	4	>20000	8		
R2 34517		302	<10	324	1	205	241		
R2 34518	States and Cares	>2000	<10	246	1	531	253	and the second second	in the state of the
R2 34519	aparte 16 feb	>2000	<10	<15	d	>20000	101		A Start Constant, -
R2 34520		>2000	<10	654	<1	114	108		
R2 34521		>2000	<10	217	231	516	340		
R2 34522		662	<10	<15	4	>20000	(2		S. 5. 100 States
R2 34523		>2000	<10	<15	2	>20000	141		用一位的影响的问题。
R2 34524	<b>的</b> 这些生活的的	>2000	<10	<15	1	>20000	96		
R2- 34525	<b>建成</b> 。1993年	151	<10	<15	4	>20000	<2		21.120%。自己的现在分

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R2 63831 R2 63832 R2 63833 R2 63834 R2 63835	38 1.3   6 0.4   10 1.1   <5 1.0   17 1.6	
V R2 63836 R2 63837 R2 63838 R2 63838 R2 63839 R2 63840	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	111 4690 1143/TT- L.Q. VEIN 111 6580 ~ 1250/Ton L.Q. VEIN



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TIMMINS OFFICE: 33 EAST IROQUOIS ROAD P.O. BOX 867 TIMMINS, ONTARIO CANADA P4N 7G7 TELEPHONE: (705) 264-9996

<u>Certificate of ASSAY</u>

Company:TOTAL ERICKSON RESOURCES LTD. P oject:SKUKUM RECCE Autention:M.FEKETE

File:8-1025/F1 Date:JULY 23/88 Type:ROCK ASSAY

<u>H hereby certify the following results for samples submitted.</u>

S mple N mber	AG G/TONNE	AG OZ/TON	AU GZTONNE	AU 07770N	
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8 -263	1. 2	0.04	.10	0.003	
85-264	9.0	0.23	3.70	0.108	
88-265	960.0	28.00	7.28	0.212	
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