MAP NO.	ASSESSMENT REPORT		DOCUMENT NO.:	092037
	PROSPECTUS	X	MINING DISTRICT:	WATSON LAKE
105 B 1, 2	CONFIDENTIAL		TYPE OF WORK:	DIAMOND DRILLING
104 O 15, 16	OPEN FILE		1.5 N. 134685	

REPORT FILED UNDER: Klondike Silver Mines Ltd

DATE PERFORMED: 1981 **DATE FILED:** November 1981

LOCATION: **LAT.:** 59°58N - 60°02'N **AREA:** Tootsee River

LONG.: 130°27'W - 130°38'W **VALUE $:**

CLAIM NAME & NO.: **Y.T.** - BRU, S, REG, BABY P., PHIL, WILLY, RILEY, ROLLY, TONI, BULL, ANT

B.C. - BELL, DENIS, CAR, MAR, LISA, ROCK, LUCKY

WORK DONE BY: Wayne Darch

WORK DONE FOR: Klondike Silver Mines Ltd.

DATE TO GOOD STANDING		REMARKS: #3 LUCK

TERRA MINING AND EXPLORATION LIMITED

DETAILED EXPLORATION AND DIAMOND DRILLING ON THE KLONDIKE SILVER PROPERTY LIARD MINING DIVISION, BRITISH COLUMBIA AND WATSON LAKE MINING DISTRICT, YUKON TERRITORIES

BY

WAYNE DARCH

CLAIMS: Yukon territories (Bru, S, Reg, Baby P, Phil, Willy, Riley, Rolly, Toni, Bull and Ant)
: British Columbia (Bell, Denis, Car, Mar, Lisa, Rock, and Lucky)

N.T.S. REF: 105 B/1 West
105 B/2 East
105 B/2 West
104 O/15 East
104 O/16 West

November 1981

LATITUDE: 59° 58N to 60° 02N
LONGITUDE: 130° 27'W to 130° 38'W
OWNERSHIP: Klondike Silver Mines Ltd.
(Mr. Bruno Poulin)

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1. SUMMARY

The Klondike Property was optioned by Terra Mining and Exploration Limited from Klondike Silver Mines Limited; a private company of which Mr. Bruno Poulin from Whitehorse is the principal. The property, consisting of 287 contiguous claims, straddles the B.C./ Yukon border, approximately 75 miles west of Watson Lake, Yukon Territory (figure 1).

Argentiferous galena and sphalerite as vein type occurences were first discovered on the property, by prospecting, as early as 1906.

The property was brought to Terra's attention in late 1980 and an initial inspection was carried out in early January, 1981.

In early June, a preliminary examination of the property was undertaken in order to determine priority targets for a summer exploration programme. During the 1981 summer season, these targets were evaluated by detailed prospecting, geology, geophysics and sampling for assays. As a result of the detailed exploration programme, diamond drilling to test the mineralization at depth was proposed on four prospects.

Three of these prospects contain exposed bedrock mineralization with assay values up to 20.28 oz/ton silver, 31/8% lead and 32.8% zinc over a one metre sample width. Seven diamond drill holes, for a total of 736m, were drilled under these mineralized bedrock occurences. The drill results indicate that the mineralization occurs in alteration zones and is erratic in both grade and extent. The best drill intersection consisted of fine grained galena over a 0.1m width and graded 4.00 oz/ton silver, 15.4% lead and 4.38% zinc.

The fourth prospect, the Lucky Prospect, contains six "high" grade boulder trains. A total of 43 mineralized boulders were sampled and assayed for silver, lead and zinc. In addition 33 of these samples were assayed for copper and three were assayed for gold. The average assay values generated from these samples are:

270.45 oz/ton silver
57.90% lead
0.74% zinc
0.43% copper
< 0.001 oz/ton gold

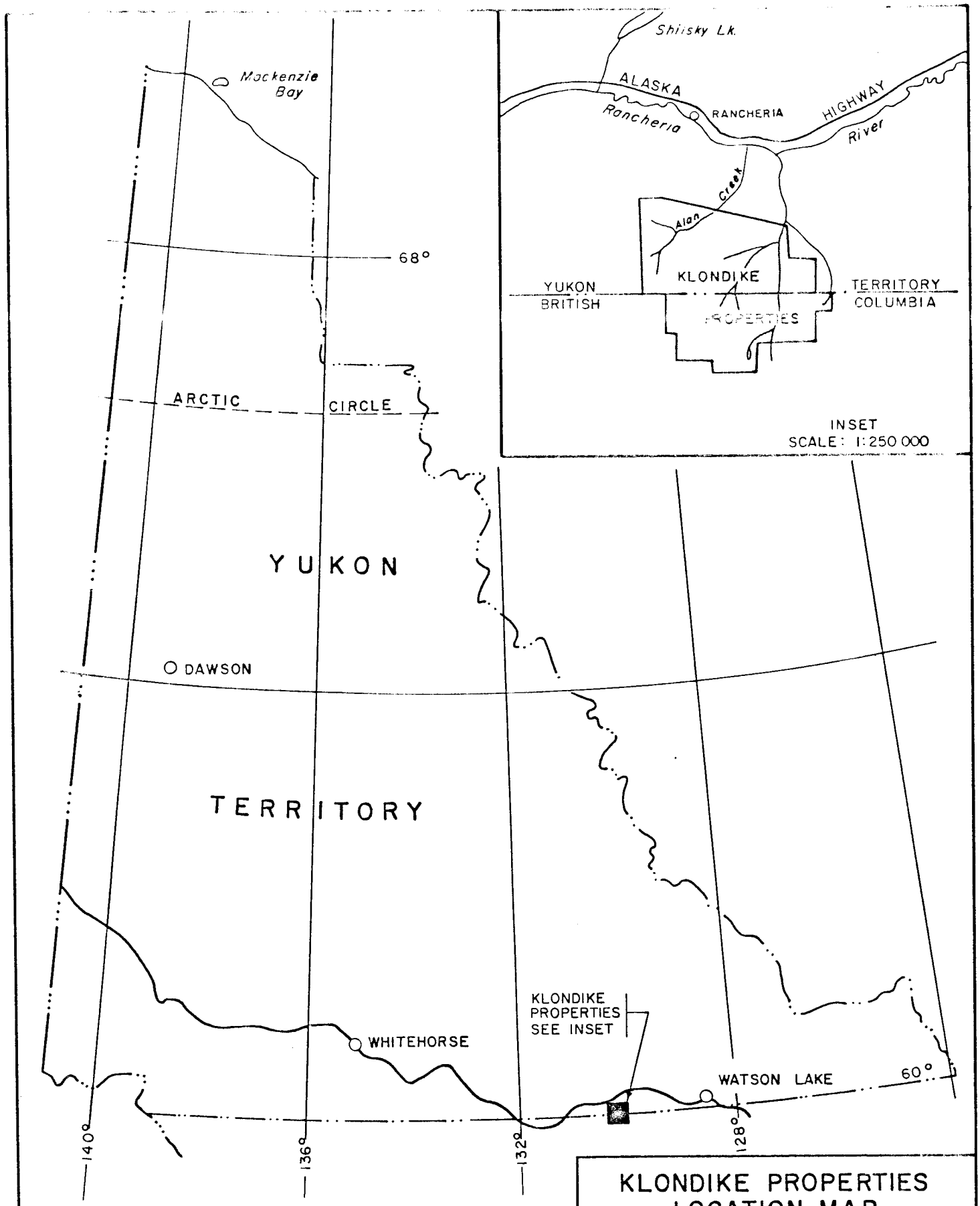
Geological mapping outlined three parallel alteration zones, partially exposed in outcrop and located upslope from the mineralized boulder trains. Similar alteration zones host the Ag/Pb/Zn mineralization at all the prospects examined on the Klondike Property.

A reconnaissance E.M. 16 (V.L.F.) survey indicated the presence of a conductor adjacent to the centre alteration zone.

The initial footage planned for the diamond drill programme was increased to test the possible source areas for the "high" grade boulders at the Lucky Prospect. Of the five holes planned to test this prospect only one was completed, due to poor weather and the drying up of the stream which supplied the water for the drill.

Drill hole DDH-81-8, intersected the lower alteration zone but no mineralization was encountered.

It is recommended that only the portion of the claim area protecting the Lucky Prospect be retained. Future work on this prospect would include additional prospecting, mapping and a detailed E.M. 16 (V.L.F.) survey. Prior to further drilling, the road to the prospect area should be completed and bulldozer stripping and trenching should be undertaken, upslope of the mineralized boulder trains.



KLONDIKE PROPERTIES LOCATION MAP

SCALE : 1:5000 000

10 75 50 25 0 100 200

KILOMETRES

MAP No. 1 | FIGURE : 1

092037

2. RECOMMENDATIONS

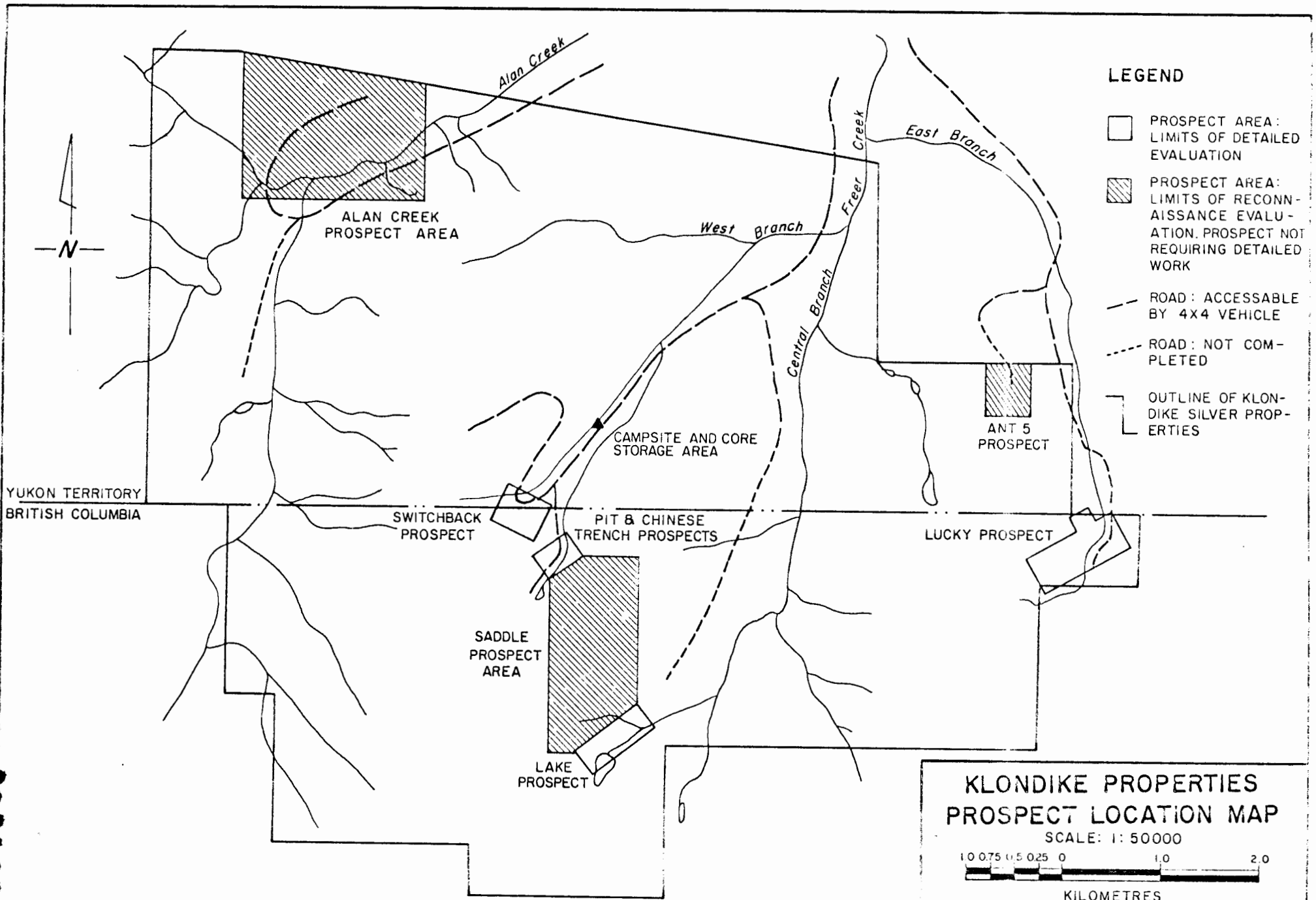
Of the prospects examined on the Klondike Property, only the Lucky Prospect has potential for an economic silver/lead/zinc deposit. It is recommended that Terra drops the option on the Klondike Property and renegotiates an option with Klondike Silver Mines Limited involving the following claims.

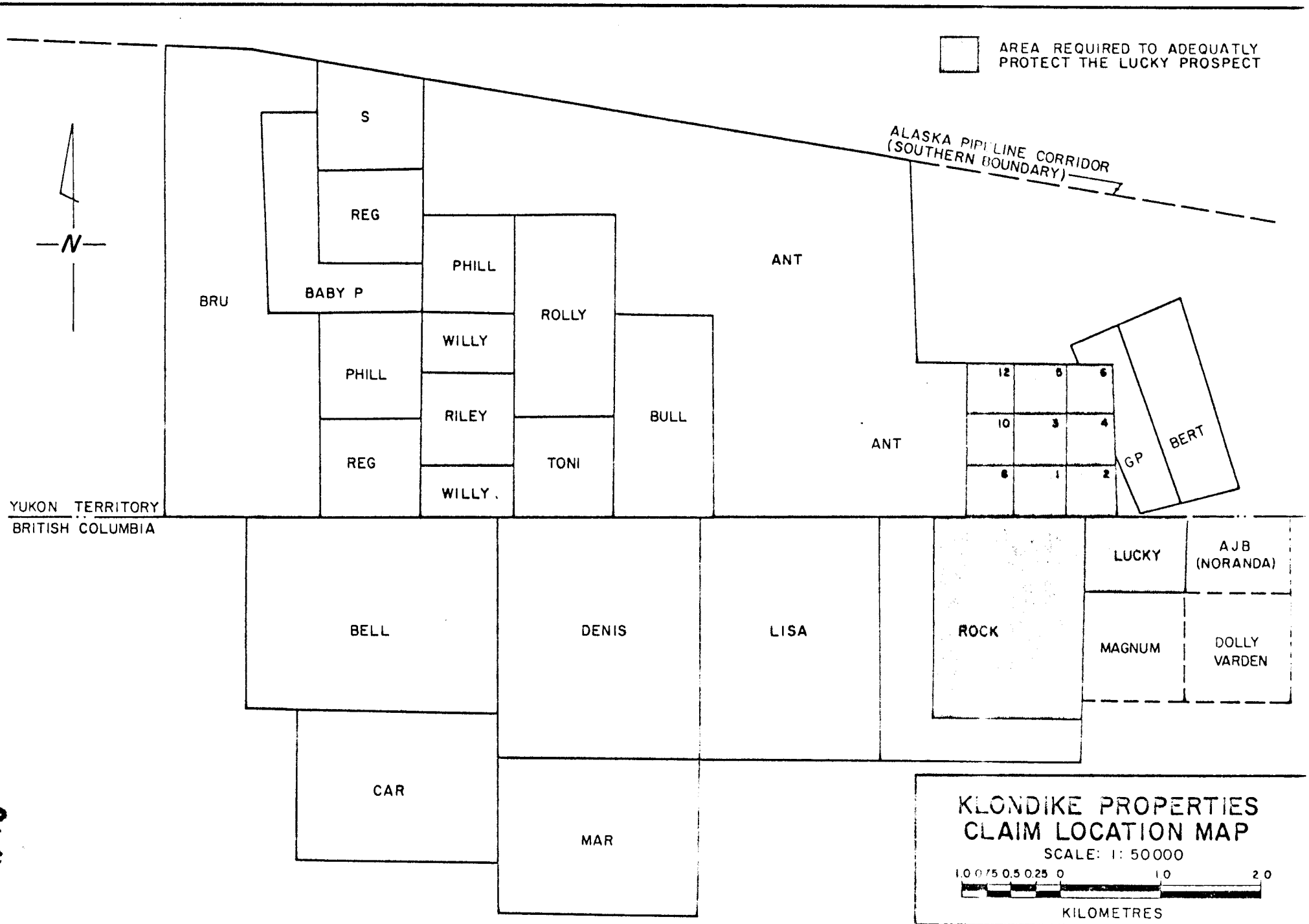
in British Columbia: the Lucky claim block (4 claims)
: the northeast portion of the Rock claim clock (12 claims)

in the Yukon Territory: Ant 1-6 claims and Ant 8, 10 and 12 claims (9 claims).

The above claims will encompass and surround the Lucky Prospect. The following work is recommended for these claims:

1) Complete the road to the Lucky claim area permitting access by 4-wheel drive vehicle. This would involve a maximum of 3.0 km of road building (figure 2).
2) Extend the 1981 flagged grid over the entire claim area.
3) Detailed mapping and prospecting (1:1,000 scale)
4) Conduct an E.M. 16 (V.L.F.) survey over the grid area.
5) Bulldozer trenching upslope of the mineralized boulder trains.
6) Diamond drilling to test results of the above programmes.


LEGEND
PROSPECT AREA: LIMITS OF DETAILED EVALUATION
PROSPECT AREA: LIMITS OF RECONNAISSANCE EVALUATION. PROSPECT NOT REQUIRING DETAILED WORK
ROAD: ACCESSABLE BY 4X4 VEHICLE
ROAD: NOT COMPLETED
OUTLINE OF KLONDIKE SILVER PROPERTIES
N
Alan Creek
ALAN CREEK PROSPECT AREA
West Branch
Freer Creek
East Branch
Central Branch
CAMPSITE AND CORE STORAGE AREA
ANT 5 PROSPECT
YUKON TERRITORY
BRITISH COLUMBIA
SWITCHBACK PROSPECT
PIT & CHINESE TRENCH PROSPECTS
LUCKY PROSPECT
SADDLE PROSPECT AREA
LAKE PROSPECT
KLONDIKE PROPERTIES
PROSPECT LOCATION MAP
SCALE: 1:50000
1.0 0.75 0.5 0.25 0 1.0 2.0
KILOMETRES
MAP No. 2
FIGURE: 2


AREA REQUIRED TO ADEQUATLY PROTECT THE LUCKY PROSPECT
ALASKA PIPELINE CORRIDOR (SOUTHERN BOUNDARY)
N
S
REG
PHILL
ANT
BRU
BABY P
ROLLY
WILLY
PHILL
RILEY
BULL
ANT
REG
TONI
WILLY
12
8
6
10
3
4
GP
BERT
8
1
2
YUKON TERRITORY
BRITISH COLUMBIA
LUCKY
AJB (NORANDA)
BELL
DENIS
LISA
ROCK
MAGNUM
DOLLY VARDEN
CAR
MAR
KLONDIKE PROPERTIES
CLAIM LOCATION MAP
SCALE: 1: 50000
1.0 0.75 0.5 0.25 0
1.0
2.0
KILOMETRES
MAP No. 3
FIGURE : 3

3. GENERAL INFORMATION

3.1 Introduction

This report deals with the evaluation of argentiferous galena (PbS) and sphalerite (ZnS) prospects situated in a large area of contiguous claims straddling the Yukon/B.C. border. The property consists of 287 contiguous claims, covering approximately 60 square kilometres (6,000 hectares) with 143 claims in the Yukon Territory and 124 claims in British Columbia. Terra Mining and Exploration Limited has an option on the claims held by Klondike Silver Mines Limited, a private company of which Mr. Bruno Poulin from Whitehorse is the principal.

The claim area is located 125 km (75 miles) west of Watson Lake at 1183 km (mile 710) on the Alaska Highway (fig.1). The northern boundary of the claim area is adjacent to the Alaska pipeline corridor.

The property is situated along the northeast flank of the Cassiar Batholith and is predominantly underlain by a medium to coarse grained granodiorite. This granodiorite is cut by numerous northeast/southwest trending alteration zones. The alteration zones are often mineralized with argentiferous galena and sphalerite.

A large portion of the claim area is accessable by 4-wheel drive vehicle on a network of bulldozed gravel roads (fig. 2). The remainder of the property is only accessable by walking or by helicopter.

The topography of the claim area is mountainous, with elevations ranging from 3,700 feet to 7,000 feet above sea level. The shaded northern slopes generally remain snow covered year round. Outcrop exposure is limited to steep slopes, ridges, cliff faces and river beds. The bases of the slopes are covered with large angular boulders (talus) while the valley's are covered with gravel and bouldery till resulting from alpine glaciation. Cirques are common at the heads of the valley's.

The summer (exploration) season is very short in this area with an average of two "snow free" months from mid June to mid August. During the last season the summer was shorter than usual at 1.5 months.

It should be noted here that several days were spent in locating claim posts. Many posts had been moved or misplaced and the tags had been removed from others. With the supervision of an R.C.M.P. officer, from Watson Lake, replacement posts and tags were placed in their appropriate locations.

It should also be noted that M. & W. Mining (Chuck Willman) holds a five year lease on the Willy 5-8 claims. This lease expires in 1985.

3.2 Previous Work

Mr. Bruno Poulin of Klondike Silver Mines Ltd. first became interested in the claims area in 1959 and since that time has held claims in the area which have lapsed and been restaked several times. The present parcel of land, under option to Terra Mining and Exploration Limited, was staked in 1979 thru 1980.

No record could be found of work conducted on the property prior to 1959 and opinions vary as to who has examined the property in the past, the extent and type of exploration work carried out and the results of this work.

Old collapsed prospectors cabins can be found on the property and claim posts dated 1906 have been reported. An old trench, now called the Chinese Trench prospect (section 6-4), is believed to have been blasted and dug during this time.

A winkie drill hole, collared in outcrop, was drilled under the "Chinese Trench" in the 1950's shortly before Mr. Poulin's involvement in the area. The exact date of when this drilling was done and who was responsible for the drilling is not known. The core from this hole has been dumped adjacent to the collar location and narrow sections of altered granodiorite could be seen in it, however, no silver/lead/zinc mineralization exists. The hole is rumored to have had a substantial mineralized intersection which was supposedly removed from the property.

In 1971, Bob Bailey (a prospector from Watson Lake) found silver/lead/zinc mineralized float at what is now called the Lake Prospect. A grid was established on this prospect and soil sampling and a magnetometer survey were conducted on the grid. Several pits were dug in an attempt to trace the float back to its source. No bedrock mineralization was encountered.

In 1972, Cone Mountain Mines Limited conducted a geochemical survey over the valley which contains the Lucky Prospect. A total of 211 soil samples were collected. These samples when analysed were found to average 10 ppm silver with some samples containing up to 31 ppm silver. In this area 2.5ppm silver in the soil is considered significant (Chapman, 1972). The presence of several good anomalies resulted in a bulldozer trenching programme. The switchback and trench on the Lucky claims, (Map No. 22), were completed during this time. This programme, although not successful in locating bedrock mineralization, did result in the discovery of a high grade boulder train, now called the Lucky #4 boulder train. In addition to the above work, road building was undertaken in order to provide access to the area.

During the early 1970's Mr. Poulin developed a bulldozed road to the Cat Claim Group, now called the Alan Creek prospect. Several pits were blasted in moderately altered, limonite stained granodiorite and erratic low grade zinc/silver mineralization was noted (Oberbillig, 1975).

Following the restaking of the claims area in 1979 a road was completed to provide access to the Switchback, Pit, and Chinese Trench prospects as well as to the Willy claims: presently Willy 5-8 claims are under a five year lease to Chuck Willman - a private operator. A small trailer camp was also established near the prospects. In 1979 and 1980 Mr. Poulin conducted bulldozed trenching on the Switchback Prospect and blasted and dug the Pit Prospect. High grade material from these prospects was hand sorted and stored in 45 gallon barrels. This resulted in a 14 ton bulk shipment of high graded ore. The assay results of this shipment are shown in Appendix 5. In 1980, two attempts at underground development work were made at the Switchback Prospect. Due to financial difficulties neither attempt progressed very far.

In the late fall of 1980, Mr. Poulin approached Terra Mining and Exploration Limited in regards to optioning the property.

All claims are in good standing until 1984.

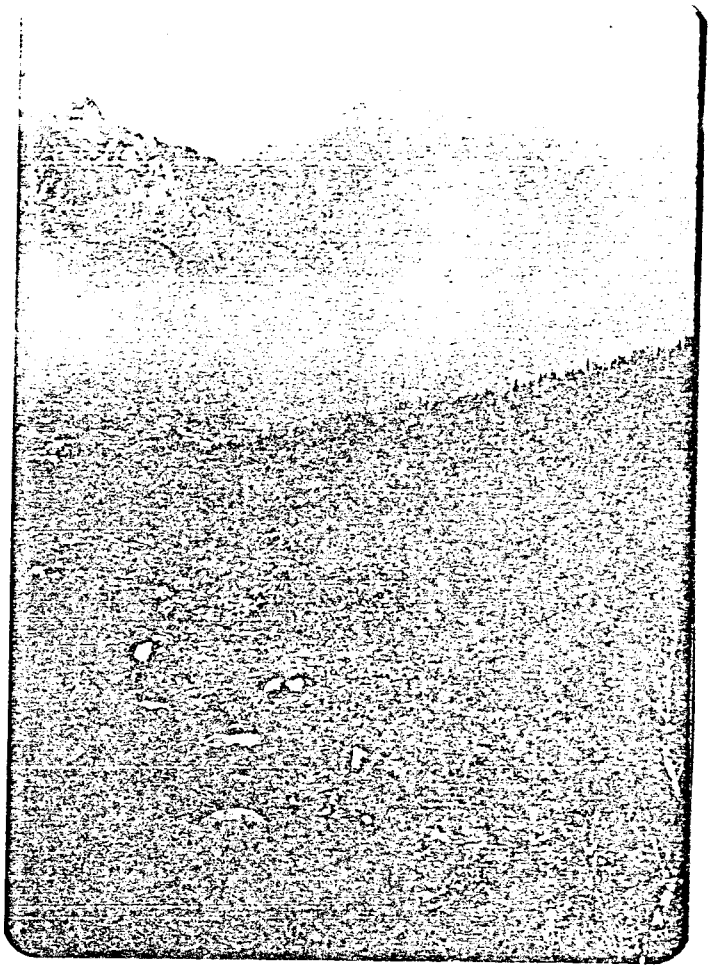


PLATE 1 View from Camp
(Switchback Prospect Area: foreground is in the Yukon Territory and the mountains in the background are in British Columbia)

4. GEOLOGY

4.1 General Geology & Structure

The claim area is situated along the northern flank of the Cassiar Batholith and is predominantly underlain by a medium to coarse grained granodiorite. The granodiorite is cut by numerous north-east/southwest trending alteration/fault zones which dip steeply to the northwest. In these fault zones the granodiorite has been strongly altered to chlorite, sericite and to a lesser extent kaolinite. The weathered surface of these alteration zones ranges from pale yellow/brown to a dark purple color due to limonite and manganese oxide staining.

Argentiferous galena (PbS) and sphalerite (ZnS), vein type mineralization is often associated with these alteration zones. Low grade copper (chalcopyrite) mineralization has also been noted.

Mafic dykes are often found in close proximity to and closely paralleling many of the alteration zones.

Pegmatite dykes and veins and related quartz veins are also found near the alteration zones. These rocks have intruded and filled in randomly oriented fractures.

Small rafts of greywacke have been observed in the granodiorite unit in the Alan Creek area. The rafts of sediments contain finely disseminated pyrite and the weathered surface is stained heavily with limonite. Only background values of silver, lead and zinc were noted, (i.e. 0.02 oz/ton Ag, 0.02% Pb and 0.02% Zn). Greywacke boulders with visible galena were found on the talus slopes in the Saddle Prospect area (Section 6-8).

4.2 Lithologies

Greywacke (Unit 1):

Small rafts of this unit can be seen in outcrop along the Alan Creek River bed. Outcroppings of greywacke have also been noted both north and east of the claim area, along the edge of the Cassiar Batholith. The rock is fine grained, grey to black in colour and is non to weakly magnetic.

The weathered surface is an orange/brown colour due to limonite staining. Pyrite is finely disseminated throughtout the unit.

Granodiorite (Unit 2):

This is a medium to coarse grained, white/grey, non magnetic rock. When unaltered it consists of 50-60% subhedral feldspar, 20-30% quartz, 15-20% hornblende and 10-15% biotite. The mafic component is often segregated and concentrated in small patches and bands. In the altered portions the feldspars and mafic components alter to kaolinite, chlorite and sericite. All the silver/lead/zinc mineralization encountered is associated with these alteration zones. Chlorite and kaolinite rich clay and mud seams are often found in the altered sections, as was particularly noted in the diamond drill core.

Mafic dykes (Unit 3):

This unit is aphanitic, dark grey, moderatelymagnetic and is diabasic in composition. These dykes generally trend parallel to the alteration zones within the granodiorite.

Pegmatite (Unit 4):

This is a coarse grained, leucocratic, non magnetic rock. It consists of 70% feldspar and 30% quartz. This unit intrudes the granodiorite along randomly oriented fractures.

5. GEOPHYSICS

During an initial examination of silver/lead/zinc prospects on the Klondike Property, grab samples were collected from the various prospects. These samples, when tested with a multimeter, were found to be very conductive. As a result E.M. 16 (V.L.F.) surveys were initiated on the following prospects:

1) Switchback Prospect
2) Chinese Trench and Pit Prospects
3) Lake Prospect
4) Lucky Prospect

5.1 Switchback Prospect

A 4.5 line km grid was established on the Switchback Prospect and an E.M. 16 (V.L.F.) survey was conducted over the grid. Readings were taken from two stations, NAA(Maine), and NPM (Hawaii).

Both stations detected a weak conductor which closely corresponds with the mineralized alteration zone (Map No.'s 14 and 15). As indicated by diamond drilling (section 7) this conductor is the result of the highly fractured and permeable nature of the altered granodiorite.

5.2 Chinese Trench and Pit Prospects

An E.M. 16 (V.L.F.) survey was carried out over the 3.1 line km grid established over the Chinese Trench and Pit Prospects. Readings were taken from two transmitting stations (NAA and NPM). The survey did not detect the mineralization and suggests that it is narrow and erratic (Map No.'s 17 and 18).

5.3 Lake Prospect

An E.M. 16 (V.L.F.) survey was conducted on the 5.6 line km grid established over the Lake Prospect. Readings were taken from both NAA(Maine) and NPM (Hawaii) stations.

Station NAA detected a conductor which closely parallels an alteration zone and an adjacent mafic dyke (Map No. 20). The argentiferous galena and sphalerite boulders, which comprise the Lake Prospect, are situated in the overburden which partially covers this alteration zone.

Station NPM detected a weak and discontinuous conductor which corresponds to that indicated by station NAA (Map No. 21). The weaker response of this station is attributed to the transmitter signal direction being at an oblique angle to the strike of the conductor axis, whereas, the Maine signal is perpendicular to the conductor axis.

5.4 Lucky Prospect

A reconnaissance E.M. 16 (V.L.F.) survey was conducted over the western portion of the prospect area. This survey covered the area surrounding the Rock #1 and Lucky #1 boulder clusters (Map No. 22). Readings were recorded from two stations (NAA and NPM). The plotted results from both stations indicate a moderate to strong conductor located 75 to 100m upslope of the Lucky #1 mineralized boulder cluster.

6. MINERALIZATION AND PROSPECT EVALUATION

6.1 General

Numerous vein type occurrences of argentiferous galena and sphalerite mineralization have been noted on and in close proximity to the Klondike Property. Hydrothermally altered, east northeast trending faults host this vein type mineralization. Three styles of mineralization occur within these alteration zones on the Klondike Property. These are as follows:

1) Low Grade (<1.0 oz Ag/ton, <1% Pb and <1% Zn), erratic mineralization associated with limonite stained patches in zones of weak to moderate alteration. This mineralization is finely disseminated and contains only minor amounts of visible galena and sphalerite. The Alan Creek Prospect and several alteration zones intersected in diamond drilling at the Switchback Prospect are of this style of mineralization.

2) Moderate grade (1.0 to 50.0 oz Ag/ton, 1.0 to 25.0% Pb and 1.0 to 10.0% Zn), coarse grained, segregated bands of argentiferous galena, sphalerite and minor chalcopyrite mineralization. The mineralization consists of a series of bands which alternate from quartz with disseminated pyrite and minor chalcopyrite to coarse grained massive sphalerite to coarse grained massive galena. This style of mineralization is erratic in grade and extent as indicated by diamond drill results (Section 7). The Switchback, Chinese Trench, Pit, Lake and Saddle Prospects contain this type of mineralization.

3) High grade (>50 oz Ag/ton and >25% Pb) with moderate to low grade sphalerite and chalcopyrite. This style of mineralization has only been recognized in the boulders which comprise the Lucky Prospect.

In addition to the mineralization of the altered granodiorite there is also low to moderate grade argentiferous galena and sphalerite mineralization in the sediments. Near the Saddle Prospect greywacke boulders, with visible galena and sphalerite, have been found in skree at the base of a ridge. The mineralization occurs along narrow fractures. Assay results indicate low to moderate grades of silver, lead and zinc (Appendix 2).

6.2 Alan Creek Prospect

The Alan Creek Prospect is situated within the S, Reg and Baby P claim groups in the northwest corner of the Klondike Property in the Yukon Territories (fig. 2 and 3). The prospect was previously reported to contain 0.5 to 3.0 oz Ag/ton over several thousand feet of strike and width. This mineralization would have potential as a high tonnage, low grade silver deposit amenable to open-pit mining. The above grade is based on grab samples taken from several small, closely spaced pits (Oberbillig, 1975). These pits have been dynamited into limonite stained patches in a zone of weakly altered granodiorite. The granodiorite has been in part altered to chlorite and sericite. There is also a distinct increase in the quartz and pyrite content in the limonite stained patches in the altered rock.

A detailed sampling programme was conducted in the prospect area in order to determine the grade and extent of the mineralization. The assay results from this sampling programme indicate that the low grade mineralization is only associated with sporadically distributed limonite stained patches in the weakly altered granodiorite. Assay values from these patches ranged from 0.02 to 0.62 oz Ag/ton. The surrounding rock averages 0.03 oz Ag/ton.

6.3 Switchback Prospect

The Switchback Prospect is located within the Denis Claim block in British Columbia. As the prospect is situated on the steep, north facing slope of a mountain, outcrop exposure is limited due to thick talus slopes and prolonged snow cover.

Two outcrop exposures with argentiferous galena and sphalerite, vein type mineralization occur in the prospect area (Map No. 13). One exposure is near the base of the slope and one is at the top of the mountain. These outcrops are separated by 300m horizontal distance and 275m vertical distance and are on strike from each other at 027° and dip at 55° to the west. The mineralization is found in an alteration zone in the granodiorite. The alteration minerals are chlorite and sericite and to a lesser degree kaolinite. There is also an increase in silica and pyrite content in the altered sections. The weathered surface of the altered granodiorite is heavily stained with manganese oxide and limonite. This alteration zone can be traced intermittently between the two mineralized outcrop exposures and at one point is 30m in width. This 30m wide section in the alteration zone was chip sampled on 1.0m intervals. The results are tabulated in Appendix 2, and an assay profile is shown on Map No. 23 (Appendix 7). Assay values over this alteration zone range from 0.02 to 0.52 oz Ag/ton, 0.02 to 3.80% Pb and 0.02 to 1.08% Zn and average 0.1 oz Ag/ton, 0.38% Pb and 0.23% Zn.

The mineralized outcrop at the top of the mountain was sampled and assayed. The results are as follows:

Interval	oz Ag/ton	%Pb	%Zn
0.0 to 0.5m	5.40	6.89	4.35
0.5 to 1.0m	0.24	0.70	0.54

In addition to this narrow ridge of outcrop there are numerous small mineralized boulders in the scree adjacent to the exposure. These boulders suggest a total thickness of the vein of more than the 1.0m exposed. A composite sample was taken of these boulders and the assay results are as follows:

22.38 oz Ag/ton, 37.10% Pb and 16.30% Zn.

The mineralization at the base of the slope consists of segregated bands of massive sphalerite, galena and pyrite. Hand sorted samples from this section of the prospect made up the majority of the 14 ton bulk sample shipped in 1979 (Appendix 5). Samples were reported to contain visible gold, however, detailed prospecting and sampling did not verify this.

A grid consisting of 4.1 line kilometres was chained and flagged over this portion of the prospect and detailed mapping (Map No. 13) and an E.M. 16 (V.L.F.) survey (section 5) were conducted. The mineralized exposure was also sampled for assay. The results of this sampling are as follows:

Interval	oz Ag/ton	oz Au/ton	%Pb	%Zn
0.0 to 1.0m	0.12	<0.003	0.06	0.17
1.0 to 2.0m	12.26	<0.003	14.20	1.84
2.0 to 3.0m	20.28	0.003	31.80	8.99
3.0 to 4.0m	2.90	<0.003	2.63	32.80
4.0 to 5.0m	0.38	<0.003	0.47	3.01
5.0 to 6.0m	0.56	<0.003	1.41	1.92

Diamond drilling was later conducted on this portion of the prospect to test the continuity of the mineralization at depth and along strike. The diamond drilling aspect is discussed in Section 7.

6.4 Chinese Trench Prospect

The Chinese Trench Prospect is located within the Denis claim block and is 500m southeast of the Switchback prospect. A 2.7 line km chained and flagged grid was established over this prospect. Detailed mapping and an E.M. 16 (V.L.F.) survey (section 5) were conducted on the grid. Mapping outlined five narrow, argentiferous galena and sphalerite mineralized veins which vary in strike from 065° to 090° and dip near vertical (Map No. 16).

Several pits have been blasted and hand dug on these veins but the mineralization is still poorly exposed. The main vein has a trench, 30m long and 1.0m deep, blasted along its strike. The sides of this trench have partially caved in covering the mineralization. A vein of massive galena and sphalerite has been reported to exceed 1.0m in width in the trench. Hand sorted, high grade material from this vein is piled adjacent to the trench and five representative samples were collected and assayed. The assay values are as follows:

Sample No.	oz Ag/ton	%PB	%Zn
C18629	6.16	47.4	0.80
C18630	40.20	68.0	0.68
C18631	40.80	64.8	0.32
C18632	36.80	32.0	0.56
C18633	60.40	70.0	0.32

The maximum width of 15cm of vein material in the samples suggests a maximum width of 15 cm for bedrock vein material.

Two additional trenches were blasted in an attempt to intersect the mineralization at either end of the existing trench. Both trenches, dynamited perpendicular to the vein, cut the limonite stained alteration zone which hosts the mineralization. No visible mineralization was noted in either trench. The trenches were chip sampled and the resulting assay values are tabulated in Appendix 2 and are shown on the trench (assay) profile Map No. 24 in Appendix 7.

This prospect was tested at depth by diamond drilling (Section 7).

6.5 Pit Prospect

The Pit Prospect is located 200m northeast of the Chinese Trench Prospect and is situated within the Denis claim block. The grid established for the Chinese Trench Prospect also covers this prospect.

A narrow zone of altered granodiorite hosts the mineralization. This alteration zone varies from 0.25m to 2.0m wide and can be traced for 50m into areas of heavy overburden. The mineralization occurs as large lenses of argentiferous galena surrounded by thin bands of sphalerite and pyrite and as sparsely disseminated argentiferous galena and sphalerite in the altered granodiorite.

The largest lense of mineralization, 0.3m wide and 1.0m long, is situated at a flexure in the vein (Map No. 16). This lense is exposed on the bottom of a pit, 15m long and 2.5m deep, which was blasted and cleared with a front end loader in 1980. A total of six chip samples were taken over 1.0m sample lengths, perpendicular to the vein (Map No. 16). The best assay results were generated

from the sample taken across the largest lense. This sample assayed 6.38 oz Ag/ton, 22.6% Pb and 1.11% Zn.

Only one diamond drill hole was drilled beneath this prospect in order to test the mineralization along the flexure at depth (section 7).

6.6 Lake Prospect

The Lake Prospect is located on the boundary of the Denis and the Mar claim blocks, in British Columbia. A 4.8 line km grid was established over this prospect and detailed mapping (Map No. 19) and an E.M. 16 (V.L.F.) survey (section 5.3) were conducted over the grid area.

This prospect consists of a previously discovered, concentration of argentiferous galena and sphalerite mineralized boulders. These boulders are located on a small but steep slope north of a small lake. Three forms of mineralization were observed in the boulders and each occupied a different position on the slope. At the top of the slope are the heavier more massive mineralized boulders. A composite sample of these assayed 3.56 oz Ag/ton, 48.6% Pb and 6.16% Zn. The mineralization at the centre of the slope consisted of vuggy, coarse grained galena and sphalerite in altered granodiorite boulders. A composite sample of these boulders graded 6.60 oz Ag/ton, 48.0% Pb and 14.6% Zn. At the base of the slope medium to coarse grained galena occupies small spaces in white "dogtooth" quartz slabs. A composite sample graded 35.0 oz Ag/ton, 2.38% Pb and 3.14% Zn.

The maximum vein width, as indicated by the maximum dimensions of the boulders, would be between 10 and 20 cm.

Several pits and trenches were hand dug down to bedrock, beneath and upslope from the mineralized boulders, in an attempt to trace the boulders back to their bedrock source. The overburden averaged 1.0m in thickness.

Within these pits and trenches a zone of altered granodiorite, adjacent to a mafic dyke, could be traced up the slope. No mineralization was found in the bedrock.

Detailed mapping and prospecting of the grid area resulted in the discovery of another concentration of mineralized boulders 125m southeast of the first concentration. These boulders are all composed of galena in "dogtooth" quartz. A composite sample of these boulders resulted in the following assay values: 2.26 oz Ag/ton, 20.6% Pb and 2.24% Zn. The maximum vein thickness noted in these boulders is 0.1m.

The mineralization at this prospect does not have the necessary grade or width, as interpreted from the mineralized boulders, required to make this an economically interesting target.

6.7 Lucky Prospect

The Lucky Prospect is located at the extreme east end of the Klondike Property. It is situated in the Lucky claim block and extends slightly into the Rock claim block (fig. 2). The prospect consists of six high grade boulder trains or concentrations named Lucky 1 to 5 and Rock 1 (Map No. 22).

Prior to the 1981 exploration programme the Lucky Prospect consisted of only two known high grade boulder trains, Lucky 1 and 4, situated on the opposite slopes of the valley formed by the east branch of Freer Creek.

This summer a 9.15 line km grid was established, chained and flagged, in order to provide adequate control for the evaluation of this prospect. The baseline is 1.0km long and is oriented at 060°, parallel to several alteration zones noted in a reconnaissance traverse. The crosslines are spaced at 50m intervals. This grid was mapped and prospected in detail. The prospecting resulted in the discovery of Rock 1, Lucky 2,3 and 5 high grade boulder concentrations.

The clinometer on a Brunton compass was used to measure the angle of the slope between grid stations in order to establish topographic control for the prospect area. Detailed (1:50,000) topographic maps do not exist for this portion of the property. The elevation of the prospect area ranges from 5,200 to 6,600 feet above sea level.

Samples were collected for assay from 43 of the mineralized boulders, from the various concentrations. The results of these assays are tabulated in Appendix 2. The average grade of the mineralized boulders at the Lucky Prospect, as calculated from the 43 samples, is as follows:

oz Ag/ton	oz Au/ton	%Cu	%Pb	%Zn
270.45	<0.001	0.43	57.9	0.74

In previously conducted sampling, boulders were reported to assay as high as 1126.3 oz Ag/ton.

The mineralized boulders are composed of fine grained argentiferous galena with lesser amounts of sphalerite, chalcopyrite, bornite and pyrite. Highly altered granodiorite often comprises a portion of these boulders.

Geological mapping on the grid outlined several parallel alteration zones in the granodiorite, partially exposed in outcrop and located upslope from the mineralized boulder trains. In addition a reconnaissance E.M. 16 (V.L.F.) survey indicated the presence of a conductor adjacent to one of the alteration zones (Map No. 22).

A 1,500 foot diamond drill programme was planned to test for the source of the Lucky 1 and 2 mineralized boulders. This programme would test the alteration zones and geophysically interpreted conductor axis. The diamond drilling is discussed in section 7.

6.8 Others

Several other occurrences of argentiferous galena and sphalerite were examined during the 1981 evaluation of the Klondike property. These occurences were examined in a reconnaissance fashion and, although no follow-up work was recommended, they are briefly described in this section.

Saddle 1: This prospect is located 500m southeast of the Chinese Trench Prospect and is at the top of a steep ridge. Coarse grained argentiferous galena and sphalerite form a narrow vein

in altered granodiorite, adjacent to a large mafic dyke. A pit has been blasted into the vein. A selective high grade sample was taken from the pit to obtain a maximum assay value. This sample assayed 2.00 oz/ton Ag, 40.8% Pb and 5.08% Zn. The low silver content and high lead and zinc content are typical of the coarse grained mineralization. A manganese oxide and limonite stained sample of the altered wall rock was also assayed and the following results were generated: 0.88 oz/ton Ag, 1.30% Pb and 9.44% Zn.

Saddle 2: This mineralization is located 250m southeast of the Chinese Trench Prospect and is at the base of the ridge. Angular greywacke boulders containing visible galena along narrow randomly oriented fractures were discovered on the talus slope. Two samples were assayed and the values are listed below:

oz Ag/ton	%Pb	%Zn
0.28	0.64	0.06
2.70	4.32	0.86

Saddle 3: This prospect is located 200m north of Saddle 1 and is approximately 3/4 of the way up the slope of the same ridge where Saddle 1 is situated. Visible galena was noted in several boulders that were traced upslope to an alteration zone adjacent to the same mafic dyke observed at Saddle 1. This alteration zone is on the opposite side of the dyke. The alteration occurs in erratic patches, ranging from 0.1m to 0.5m in thickness. No mineralization was observed in the altered rock but a sample was taken. This sample assayed 8.40 oz/ton Ag, 0.032% Pb and 6.72% Zn. A boulder from the base of the slope graded 36.0 oz/ton Ag, 17.6% Pb and 2.48% Zn while a sample from a boulder at midslope assayed 18% oz/ton Ag, 2.22% Pb and 6.96% Zn.

Lake 4: This prospect is located 750m north of the Lake Prospect and 750m South of Saddle 1. This prospect consists of one quartz boulder with visible galena. No assay values were obtained and only the one boulder could be found.

Alan Creek Alteration Zone Three closely spaced parallel, alteration zones were discovered along the south slope of a mountain, north of the Alan Creek Prospect. These alteration zones, visible from a long distance due to the brightly coloured limonite staining, can be traced along the slope for approximately 500m. A selective sample containing minor visible galena was assayed and the results are as follows: 0.04 oz/ton Ag, 0.30% Pb and 0.06% Zn.

Ant 5 This prospect, reported to contain significant silver, lead and zinc mineralization, is situated within the Ant 5 claim approximately 1.0 km north of the Lucky prospect. The Ant 5 prospect was examined and consists of a blasted trench in a narrow zone of alteration in the granodiorite. No visible mineralization was observed.

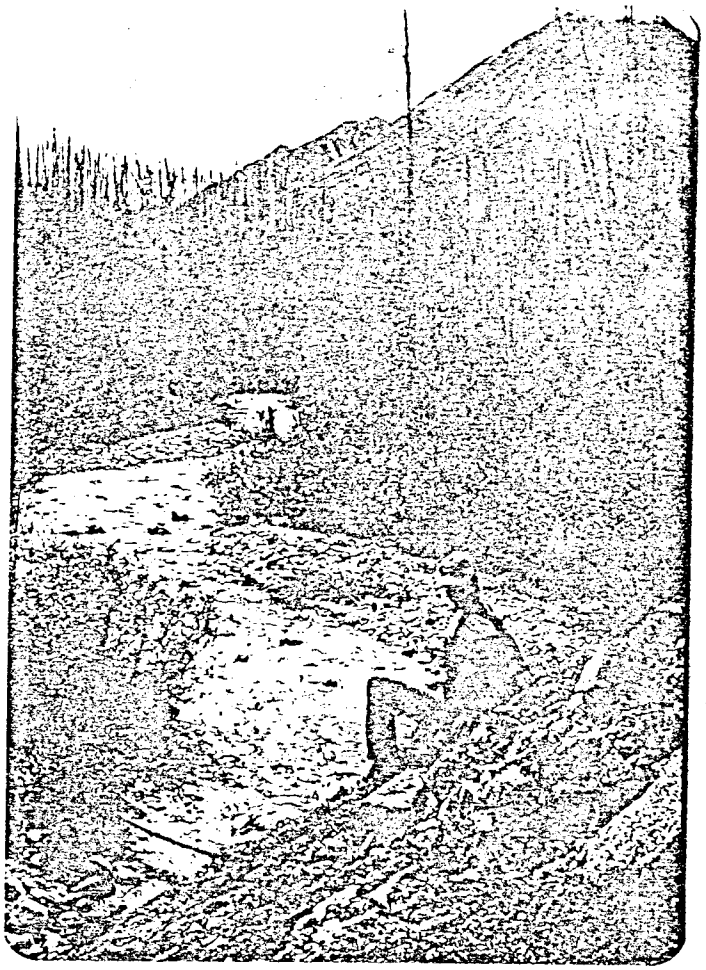


PLATE 2 Alan Creek Prospect Area

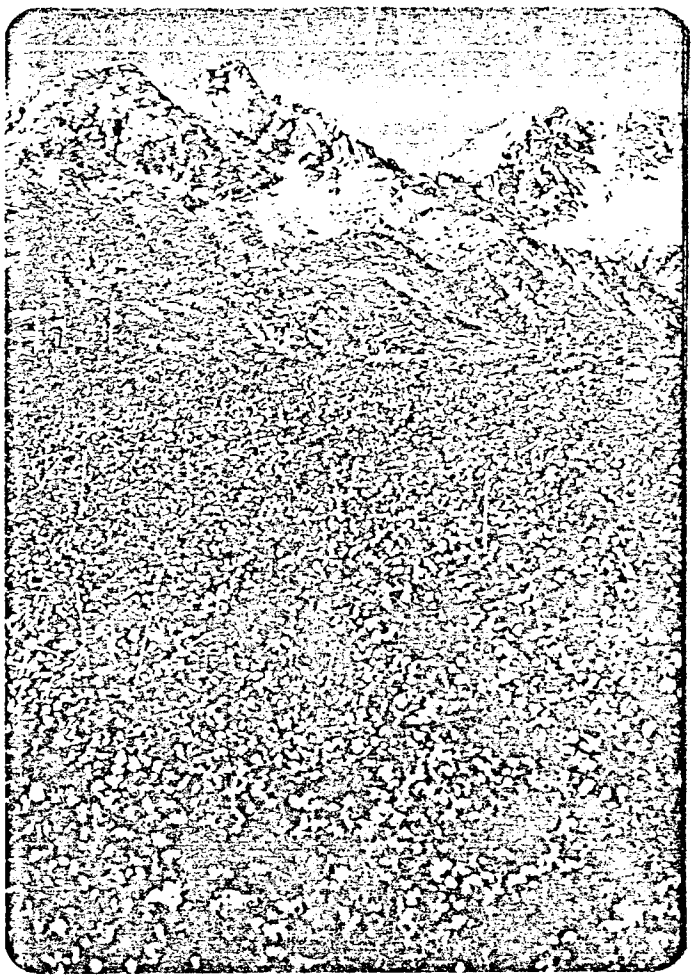


PLATE 3 Switchback Prospect Area

7. DIAMOND DRILLING

7.1 Logistics

An initial 914m (3,000 ft.) diamond drill programme was planned to test priority targets as outlined by the 1981 exploration programme. These targets consist of the following mineralized bedrock occurrences: Switchback Prospect
: Chinese Trench Prospect
: Pit Prospect

These prospects are all accessable by road and a bulldozer was used to move the drill. Once the high grade nature of the Lucky Prospect boulders had been established, an addition of 457m (1,500 ft) of drilling was planned to test favorable targets upslope of the boulders for a bedrock source. This programme would require helicopter support.

A contract for a minimum 914m (3,000 ft.) of drilling was awarded to G & D Diamond Drilling of Surrey, British Columbia. The drill crew was to have been mobilized to the Klondike Property during the final week of July, however, due to delays on the part of G & D the crew (Appendix 8) and drill unit did not arrive until August 21. This delay and several mechanical breakdowns in drill equipment (table 1) resulted in the drill programme running into the late fall (mid September). Due to the slow progress and poor results (section 7.2) in the initial drill programme the priority shifted to the Lucky prospect and the drill was mobilized as soon as helicopter support became available.

Initially a Bell 206-B helicopter, from Frontier Helicopters of Watson Lake, was sent to service the drill. Due to the elevation at the Lucky Prospect, 6,000 ft (plus), the 206-B could not lift the heaviest sections of the drill. Time was lost until a larger helicopter, an A-star, was available. It was during this waiting period that DDH-81-7 was drilled to test the Pit prospect.

During the drilling of the first hole planned for the Lucky Prospect it became increasingly apparent that the weather was rapidly deteriorating with heavy snowfall and fog during the day and freezing conditions at night. The main concern was that the source

of water, the east branch of Freer Creek, was quickly drying up due to the freezing of the ground water that feeds the stream. The water hose froze and one of the service pumps cracked even though a coil heater was in operation at the time. The hose was 500m long with a 213m lift from the water source to the drill.

On September 24, the drilling was stopped due to the lack of water. Only one hole was completed on the Lucky prospect.

It should be noted that NQ core was drilled, in order to avoid the poor core recovery reported from similar programmes in the area, and as a result the recovery was estimated at 99%.

7.2 Results The primary objective of the diamond drilling was:

1) To test at depth, the vein type, argentiferous galena and sphalerite mineralization noted in outcrop at the Switchback, Chinese Trench and Pit prospects.
2) To test favorable targets upslope of the high grade argentiferous galena boulders at the Lucky prospect.

7.2(1) The Switchback Prospect was tested with three holes (see figure 4). In each hole, visible pyrite and galena were intersected in alteration zones which when extrapolated to surface, corresponded with the outcropping mineralization. The mineralization at depth was low grade, narrow and was either in small lenses, along narrow fractures or was sparsely disseminated throughout the altered rock.

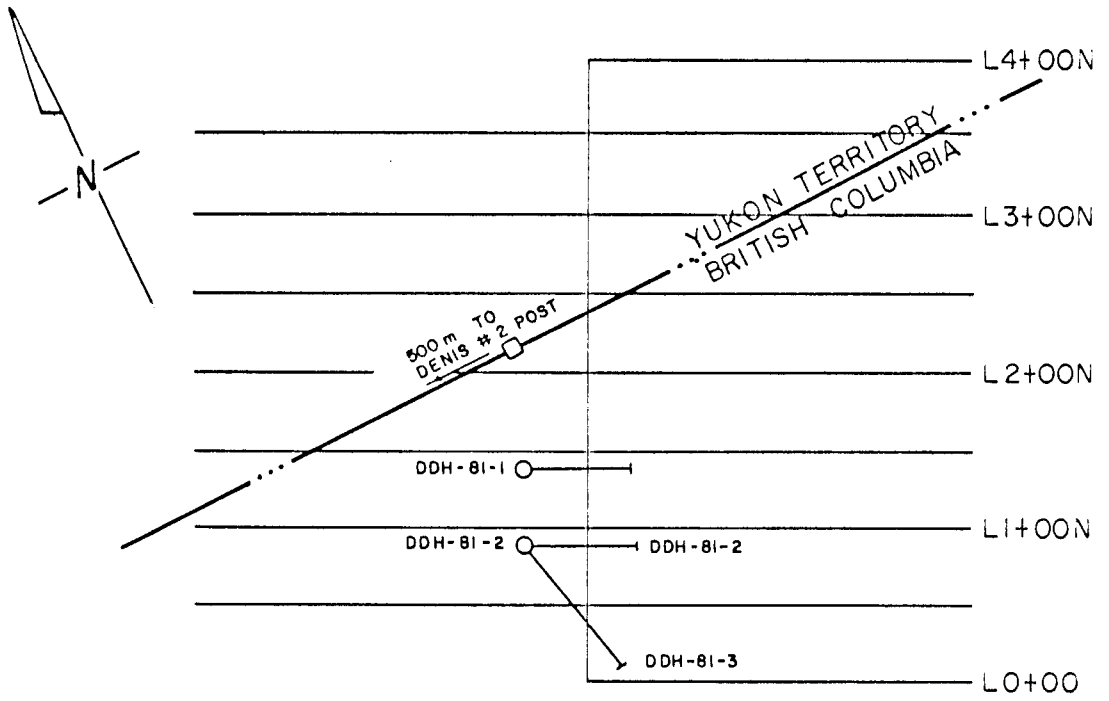
7.2(2) The Chinese Trench Prospect was also tested with three diamond drill holes (fig. 4). Each hole intersected weak mineralization along alteration zones (Appendix 6). The numerous mineralized veins noted on surface (Map No. 16) do not continue at depth. This drilling is summarized in table 1.

7.2(3) The hole drilled beneath the exposed surface mineralization at the Pit Prospect intersected 20cm of visible pyrite and coarse grained galena (table 1 and figure 4). The grade and width of this intersection was insufficient to warrant additional drilling.

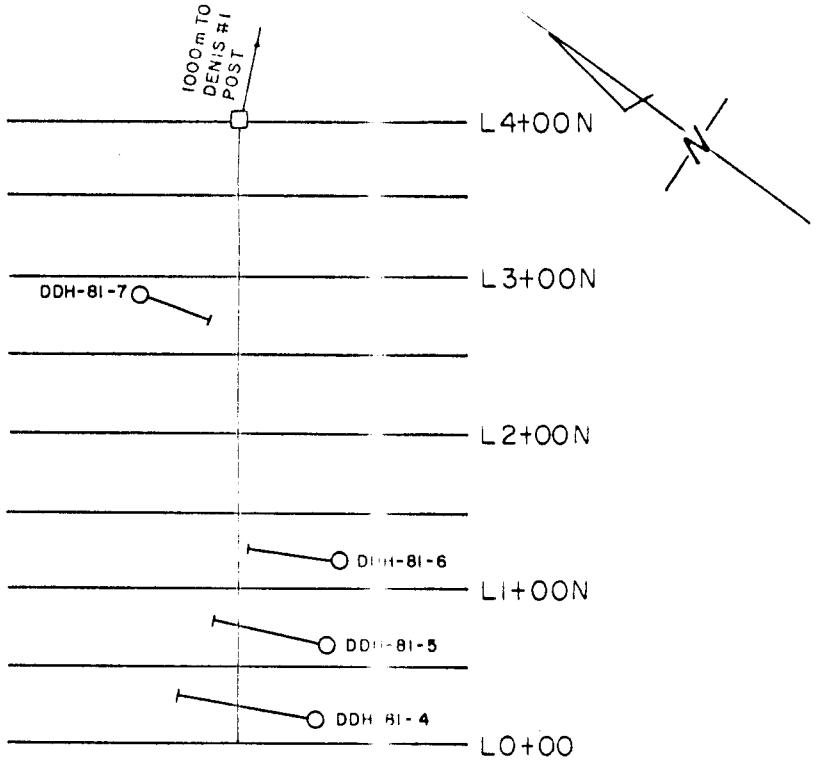
7.2(4) Only one diamond drill hole was completed on the Lucky Prospect (figure 4 and Map No. 22). The target, a partially exposed alteration zone 30m upslope from the Lucky 1 high grade

boulder concentration, was intersected at 15m vertical depth. The overburden covered area between the alteration zone and the mineralized boulders was also tested. No mineralization was encountered in this hole.

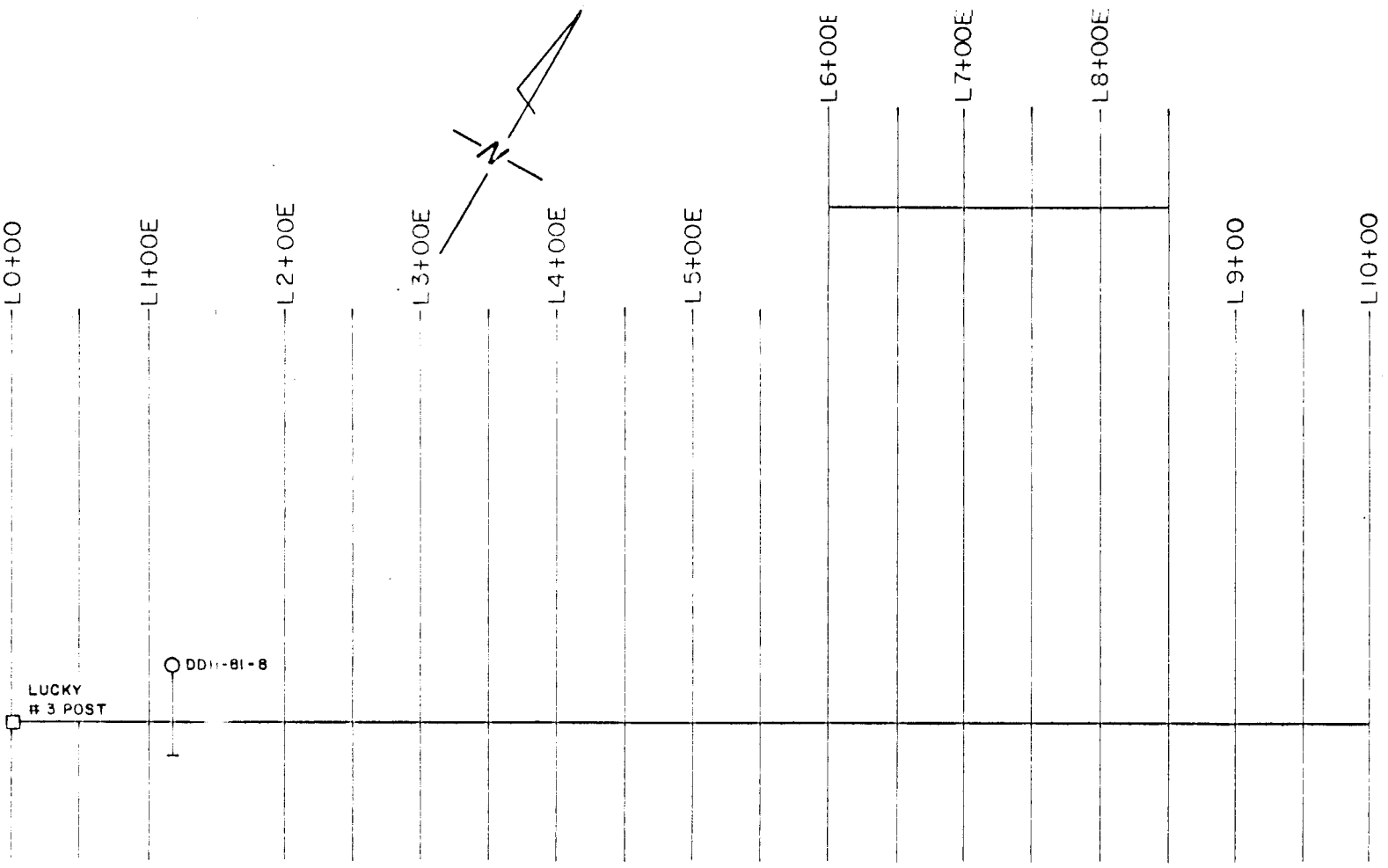
All assays obtained from the diamond drill programme are tabulated in Appendix 3 and are shown on the drill logs and drill hole sections in Appendix 6.



SWITCHBACK PROSPECT



PIT AND CHINESE TRENCH PROSPECT



LUCKY PROSPECT

KLONDIKE PROPERTIES
DIAMOND DRILL HOLE LOCATIONS
SCALE: 1:5 000

MAP No. 4	FIGURE: 4

TABLE 1

SUMMARY OF DRILLING - KLONDIKE PROPERTY 1981

Hole	Prospect	Grid Co-ordinates	Collar Dip	Azimuth	Length(m)	Date Start	Date Finish	Comments
DDH-81-1	Switchback	L1+35N;0+40W	-45°	117°	108.2	Aug. 23	Aug. 27	Three shifts (1.5 days) down due to pump seizing up. Best intersection of 1.24 oz/ton Ag, 3.24% Pb & 0.24% Zn over 0.2m. (0.55 oz/ton Ag, 0.75% Pb & 0.22% Zn over1.7m)
DDH-81-2	Switchback	L0+80N;0+40W	-45°	117°	108.5	Aug. 28	Sept. 2	8 shifts (4 days) lost due to "Cat" operator not showing up to move drill. Best intersection: 0.12 oz/ton Ag,0.1% Pb and 0.18% Zn over 1.0m.
DDH-81-3	Switchback	LO+80N;0+40W	-45°	165°	129.8	Sept. 3	Sept. 5	Best intersection: 0.14 oz/ton Ag,0.44% Pb and 0.28% Zn over 1.0m.
DDH-81-4	Chinese Trench	L0+13N;0+50E	-45°	075°	122.2	Sept. 6	Sept. 9	Best intersection: 0.12 oz/ton Ag, 0.06% Pb and 2.16% Zn over 0.3m.
DDH-81-5	Chinese Trench	L0+63N;0+58E	-45°	075°	114.3	Sept. 10	Sept. 15	Seven shifts (3.5 days) lost due to mechanical problems with bulldozer. Best intersection: 0.31 oz/ton Ag, 0.43% Pb, 2.0% Zn over 0.4m.
DDH-81-6	Chinese Trench	L1+13N;0+66E	-45°	075°	84.8	Sept. 16	Sept. 17	Best intersection: 4.00 oz/ton Ag, 15.4% Pb and 4.38% Zn over 0.1m.
DDH-81-7	Pit	L2+90N;0+68W	-45°	165°	68.6	Sept. 18	Sept. 19	Best intersection: 0.58 oz/ton Ag, 3.48% Pb and 2.94% Zn over 0.2m.
DDH-81-8	Lucky	L1+15E;0+45N	-45°	150°	91.4	Sept. 20	Sept. 23	No substantial mineralization.
				TOTAL	827.8m (2,715 feet)			

Drilling terminated after DDH-81-8 due to freezing condition and the drying up of the water supply (Freer Creek - East Branch).

PLATE 4 Switchback Prospect
(Note: Diamond Drill: DDH-81-2)

8. CONCLUSIONS

The surface evaluation and the diamond drill results of the various argentiferous galena and sphalerite, (vein type) mineralized prospects on the Klondike Property, indicate that the mineralization occurs as lenses and as sparsely disseminated grains in alteration zones in the granodiorite.

Diamond drilling on the Switchback, Chinese Trench and Pit prospects intersected the mineralized alteration zones exposed on the surface. Results, however, indicate that substantial grade, thickness and continuity do not exist at depth within these veins.

The Lucky Prospect is the only evaluated area on the Klondike Property which has economic potential and warrants further exploration work. The assay results from the sampled boulders that form the six high grade boulder trains and concentrations indicate an average grade of between 200-400 oz/ton silver and 40-60% lead over an estimated average thickness of 20cm. Diamond drilling results were inconclusive on this prospect since only one hole was completed.

Further exploration on the Lucky prospect would include detailed prospecting, an E.M. 16 (V.L.F.) survey and bulldozer trenching as outlined in Section 2 of this report. The road to the prospect would also have to be improved to allow access by 4 x 4 vehicle. Additional diamond drilling should also be considered pending the results of the above activities.

9. REFERENCES

Chapman (1972)	Presidents Letter to Shareholders.
McKechnie, N.D. (1971)	Sandy Claim Group (Lake Prospect), Reconnaissance Magnetometer Survey, B.C.
Oberbillig, J.J.	Report on Cat Claim Group (Alan Creek Prospect), Yukon Territory

APPENDIX 1

SEMIQUANTITATIVE SPECTROGRAPHIC ANALYSIS OF FOUR SELECTIVE SAMPLES

SAMPLE NO:	PROSPECT
8629	PIT
8630	SWITCHBACK
8631	LAKE
8632	LUCKY

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Terra Mining & Exploration Ltd.
202, 7608 - 103rd St.
Edmonton, Alta.
T6E 4Z8
ATTN:

CERTIFICATE NO. SP 979
INVOICE NO. 42201
RECEIVED June 26/81
ANALYSED July 17/81

SAMPLE NO. :	Lower Conc. Limit PPM	8629	8630	8631	8632
Antimony	100	1000	bcl	bcl	2000
Arsenic	100	100	bcl	bcl	500
Beryllium	5	bcl	bcl	bcl	bcl
Bismuth	10	7	10	10	bcl
Boron	20	bcl	bcl	bcl	30
Cadmium	50	70	700	50	30
Chromium	10	50	50	50	< 50
Cobalt	20	bcl	bcl	bcl	bcl
Copper	2	500	1000	30	1500
Lead	10	> 5000	> 5000	> 5000	> 5000
Manganese	5	200	> 5000	1500	2000
Molybdenum	10	bcl	bcl	bcl	bcl
Nickel	10	bcl	bcl	bcl	bcl
Silver	1	1000	100	100	> 5000
Thorium	200	bcl	bcl	bcl	bcl
in	10	70	70	bcl	bcl
Titanium	20	bcl	70	bcl	50
Vanadium	50	bcl	bcl	bcl	bcl
Zinc	20	> 5000	> 5000	5000	5000
Zirconium	20	bcl	20	bcl	bcl

SEMI QUANTITATIVE SPECTROGRAPHIC ANALYSES

>5000 ppm => 5000 ppm		50 ppm	= 25–100 ppm
5000 ppm =	2500–10000 ppm	20 ppm	= 10–50 ppm
2000 ppm =	1000–4000 ppm	10 ppm	= 5–20 ppm
1000 ppm =	500–2000 ppm	5 ppm	= 2–10 ppm
500 ppm =	250–1000 ppm	2 ppm	= 1–4 ppm
200 ppm =	100–400 ppm	1 ppm	= 0.5–2 ppm
100 ppm =	50–200 ppm	bcl	= below concentration limit

Ranges for Iron, Calcium & Magnesium are reported in %

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: ....

082037

APPENDIX 2

ASSAY RESULTS

SAMPLES ASSAYED BY:

Assay tag No.'s: C18001 to C18034 (inclusive)

By : Chemex Laboratories
212 Brooksbank Ave.
North Vancouver, B.C.

Assay tag No.'s: C18035 to C18100 and
C18601 to C18680

By : Rossbacker Laboratories
2225 South Springer
Burnaby, B.C.

Assay tag No. : C18683

By : Loring Laboratories
629 Beaverdam Road, N.E.
Calgary, Alberta

ASSAY TAG#	PROSPECT	SAMPLE LOC. (GRID CO-ORDINATES)	OUTCROP (SAMPLE INTERVAL)	BOULDER (DIMENSION) CM	ASSAY VALUES Ag (OZ/TON)	Au (OZ/TON)	Pb (%)	Zn (%)	Cu (%)	COMMENTS
C18029	Switchback	L0+85N; BL	0-1.0m		0.12	0.003	0.06	0.17		- *Northern most mineralized exposure along vein. (Ground is frost shattered).
C18030	Switchback	L0+85N; BL	1.0-2.0m		12.26	0.003	14.20	1.84		
C18031	Switchback	L0+85N; BL	2.0-3.0m		20.28	0.003	31.80	8.99		
C18032	Switchback	L0+85N; BL	3.0-4.0m		2.90	0.003	2.63	32.80		
C18033	Switchback	L0+85N; BL	4.0-5.0m		0.38	0.003	0.47	3.01		
C18034	Switchback	L0+85N; BL	5.0-6.0m		0.56	0.003	1.41	1.92		
C18035	Switchback	L0+00; BL	0-1.0m		0.16		0.10	0.52		- *Central exposure (100m south of above outcrop). Alteration zone with minor amounts of disseminated galena. Weathered surface is limonite and manganese oxide stained.
C18036	Switchback	L0+00; BL	1.0-2.0m		0.10		0.02	0.60		
C18037	Switchback	L0+00; BL	2.0-3.0m		0.12		0.06	0.28		
C18038	Switchback	L0+00; BL	3.0-4.0m		0.52		2.48	0.12		
C18039	Switchback	L0+00; BL	4.0-5.0m		0.46		3.60	0.54		
C18040	Switchback	L0+00; BL	5.0-6.0m		0.02		0.06	0.24		
C18041	Switchback	L0+00; BL	6.0-7.0m		0.02		0.06	0.72		
C18042	Switchback	L0+00; BL	7.0-8.0m		0.08		0.10	0.30		
C18043	Switchback	L0+00; BL	8.0-9.0m		0.12		0.18	0.24		
C18044	Switchback	L0+00; BL	9.0-10.0m		0.44		3.80	1.08		
C18045	Switchback	L0+00; BL	10.0-11.0m		0.02		0.02	0.40		
C18046	Switchback	L0+00; BL	11.0-12.0m		0.12		0.08	0.12		
C18047	Switchback	L0+00; BL	12.0-13.0m		0.02		0.08	0.02		
C18048	Switchback	L0+00; BL	13.0-14.0m		0.02		0.02	0.08		
C18049	Switchback	L0+00; BL	14.0-15.0m		0.02		0.12	0.06		
C18050	Switchback	L0+00; BL	15.0-16.0m		0.04		0.04	0.06		
C18051	Switchback	L0+00; BL	16.0-17.0m		0.02		0.02	0.02		
C18052	Switchback	L0+00; BL	17.0-18.0m		0.10		0.02	0.04		
C18053	Switchback	L0+00; BL	18.0-19.0m		0.12		0.02	0.06		
C18054	Switchback	L0+00; BL	19.0-20.0m		0.06		0.02	0.04		
C18055	Switchback	L0+00; BL	20.0-21.0m		0.06		0.02	0.02		
C18056	Switchback	L0+00; BL	21.0-22.0m		0.06		0.08	0.10		

* See Trench Profiles

ASSAY TAG#	PROSPECT	SAMPLE LOC. (GRID CO-ORDINATES)	OUTCROP (SAMPLE INTERVAL)	BOULDER (DIMENSION) CM	ASSAY VALUES Az (OZ/TON)	Au (OZ/TON)	Pb (%)	Zn (%)	Cu (%)	COMMENTS
C18057	Switchback	L0+00; BL	22.0-23.0m		0.06		0.16	0.22		
C18058	Switchback	L0+00; BL	23.0-24.0m		0.06		0.20	0.16		
C18059	Switchback	L0+00; BL	24.0-25.0m		0.06		0.20	0.16		
C18060	Switchback	L0+00; BL	25.0-26.0m		0.04		0.12	0.22		
C18061	Switchback	L0+00; BL	26.0-27.0m		0.06		0.10	0.18		
C18062	Switchback	L0+00; BL	27.0-28.0m		0.06		0.10	0.28		
C18063	Switchback	L0+00; BL	28.0-29.0m		0.08		0.14	0.22		
C18064	Switchback	L0+00; BL	29.0-30.0m		0.06		0.04	0.06		
C18065	Switchback	L0+00; BL	30.0-31.0m		0.06		0.04	0.12		
C18066	Switchback	L0+00; BL	31.0-32.0m		0.04		0.02	0.02		
C18009	Switchback	350m South of	0-0.5m		0.24		0.70	0.52		- On top of mountain on strike with above outcrops. High grade float adjacent to C18010 sample location.
C18010	Switchback	L0+00; BL	0.5m-1.0m		5.40		6.89	4.35		
C18011	Switchback	L0+00; BL		Composite	22.38		37.10	16.30		
C18001	Chinese Trench	L0+55N; 0+20E	0-0.5m		2.60		0.04	0.02		- *Trench #1: altered section
C18002	Chinese Trench	L0+55N; 0+20E	0.5-1.5m		0.52		0.01	0.01		: weak alteration
C18003	Chinese Trench	L0+55N; 0+20E	1.5-2.0m		0.10		0.02	0.02		: altered section
C18004	Chinese Trench	L0+55N; 0+20E	2.0-3.0m		0.02		0.01	0.10		: weak alteration
C18005	Chinese Trench	L0+55N; 0+20E	3.0-4.0m		0.32		0.18	0.61		: chlorite alteration
C18006	Chinese Trench	L0+55N; 0+20E	4.0-4.15m		1.24		0.36	1.01		: altered section
C18007	Chinese Trench	L0+55N; 0+20E	4.15-5.15m		0.02		0.33	0.25		: altered section
C18008	Chinese Trench	L0+55N; 0+20E	5.15-6.15m		0.06		0.03	0.05		: unaltered granodiorite

* See Trench Profiles. (Appendix)

ASSAY TAG#	PROSPECT	SAMPLE LOC. (GRID CO-ORDINATES)	OUTCROP (SAMPLE INTERVAL)	BOULDER (DIMENSIONS) CM	ASSAY VALUES Ag (OZ/TON)	Au (OZ/TON)	Pb (%)	Zn (%)	Cu (%)	COMMENTS
C18012	Chinese Trench	L1+05N; 0+20E	0-1.0m		0.48		0.87	0.38		- *Trench #2: unaltered granodio-rite
C18013	Chinese Trench	L1+05N; 0+20E	1.0-2.0m		0.12		0.16	0.09		: unaltered granodio-rite
C18014	Chinese Trench	L1+05N; 0+20E	2.0-3.0m		0.02		0.06	0.03		: unaltered granodio-rite
C18015	Chinese Trench	L1+05N; 0+20E	3.0-4.0m		0.01		0.03	0.04		: unaltered granodio-rite
C18016	Chinese Trench	L1+05N; 0+20E	4.0-5.0m		0.08		0.08	0.42		: 0.3m altered granodio-rite
C18017	Chinese Trench	L1+05N; 0+20E	5.0-6.0m		0.18		0.02	0.11		: unaltered granodio-rite
C18018	Chinese Trench	L1+05N; 0+20E	6.0-7.0m		0.02		0.40	0.38		: weak alteration
C18019	Chinese Trench	L1+05N; 0+20E	7.0-8.0m		0.01		0.02	0.08		: unaltered granodio-rite
C18020	Chinese Trench	L1+05N; 0+20E	8.0-9.0m		0.01		0.02	0.06		: unaltered granodio-rite
C18021	Chinese Trench	L1+05N; 0+20E	9.0-10.0m		0.01		0.01	0.01		: unaltered granodio-rite
C18022	Chinese Trench	L1+05N; 0+20E	4.5-4.8m		0.12		0.19	0.43		: altered section

See Trench Profiles

ASSAY TAG#	PROSPECT	SAMPLE LOC. (GRID CO-ORDINATES)	OUTCROP (SAMPLE INTERVAL)	BOULDER (DIMENSIONS) CM	ASSAY VALUES Ag (OZ/TON)	Au (OZ/TON)	Pb (%)	Zn (%)	Cu (%)	COMMENTS
C18023	Chinese Trench	L2+95N; 0+25W	0-1.0m		0.06		0.08	0.09		*Pit 1: sampled perpendicular
C18024	Chinese Trench	L2+80N; 0+25W	0-1.0m		6.38		22.6	1.11		: sampled perpendicular to vein (30cm of massive galena)
C18025	Chinese Trench	L2+75N; 0+25W	0-1.0m		0.14		0.35	0.07		: sampled perpendicular to vein
C18026	Chinese Trench	L2+70N; 0+30W	0-1.0m		0.02		0.20	0.12		: sampled perpendicular to vein
C18027	Chinese Trench	L2+64N 0+30W	0-1.0m		0.02		0.11	0.10		: sampled perpendicular to vein
C18028	Chinese Trench	L2+24N; 0+40W	0-1.0m		0.56		2.31	1.01		*Pit 2: sampled perpendicular to vein
C18629	Chinese Trench	L0+70N; 0+25E		11x7x5cm	6.16		47.4	0.80		- samples from ore pile adjacent to trench. The mineralization is in altered granodiorite and appears to be very narrow
C18630	Chinese Trench	L0+70N; 0+25E		6x5x4cm	40.2		68.0	0.68		
C18631	Chinese Trench	L0+70N; 0+25E		6x5x4cm	40.8		64.8	0.32		
C18632	Chinese Trench	L0+70N; 0+25E		12x10x6cm	36.8		32.0	0.56		
C18633	Chinese Trench	L0+70N; 0+25E		14x8x4cm	60.4		70.0	0.32		
C18075	Saddle #1			8x6x5cm	2.00		40.80	5.08		- high grade sample from blasted pit on top or ridge
C18076	Saddle #1			9x8x6cm	0.88		1.30	9.44		- manganese oxide stained altered granodiorite with trace galena.
C18077	Saddle #2			20x16x14cm	0.28		0.64	0.06		- greywacke boulders with visible galena in narrow fractures. Samples found at base of skier slope to the west of Saddle #1.
C18078	Saddle #2			15x14x12cm	2.70		4.32	0.86		

*See Trench Profiles

ASSAY TAG#	PROSPECT	SAMPLE LOC. (GRID CO-ORDINATES)	OUTCROP (SAMPLE INTERVAL)	BOULDER (DIMENSIONS) CM	ASSAY VALUES Ag (OZ/TON)	Au (OZ/TON)	Pb (%)	Zn (%)	Cu (%)	COMMENTS
C18072	Saddle 3-a			6x5x4cm	36.0		17.6	2.48		- 1 cm wide vein of galena in altered granodiorite boulder. Base of slope.
C18073	Saddle 3-b			6x5x3cm	18.0		2.22	6.96		- disseminated galena in altered granodiorite halfway up slope
C18074	Saddle 3-c		0-0.3m		8.40		0.032	6.72		- zone of very altered granodiorite adjacent to a mafic dyke.
C18080	Lake 1	L0+95S; 0+10W		12x11x8cm	3.56		48.6	6.16		- fine grained galena at top of slope
C18081	Lake 1	L0+80S; 0+10W		10x9x8cm	6.60		48.0	14.6		- coarse grained vuggy galena and sphalerite in altered granodiorite. Mid slope.
C18082	Lake 1	L0+75S; 0+10W		17x14x10cm	35.0		2.38	3.14		- disseminated galena in quartz.
C18083	Lake 2	L0+30S; 1+25E		12x10x6cm	2.26		20.6	2.24		- disseminated galena in quartz.
C18084	Lake 3	L0+80N; 1+10E	0-0.1m		0.32		0.96	0.06		- narrow quartz vein in weakly altered granodiorite.
C18085	Lake 4	L1+00N; 7+50W		10x9x6cm	0.28		0.56	0.44		- disseminated galena in quartz.
C18086	Alan Creek		0-2.0m		0.08	0.001	0.02	0.26		- 2.0m wide white quartz
C18087	Alan Creek		composite		0.03	0.001	0.02	0.06		- unaltered granodiorite 50m from pits.
C18088	Alan Creek			1.0x.9x8.5	0.62	0.001	0.08	0.24		- altered boulders 15m from pits.
C18089	Alan Creek		composite		0.11	0.003	0.02	0.04		- altered outcrop from pits.
C18090	Alan Creek		composite		0.02	0.001	0.02	0.08		- altered outcrop (from blasted pit)
C18091	Alan Creek		0-2.0m		0.02	0.001	0.02	0.02		- raft of greywacke in granodiorite. (in river bed.)

ASSAY TAG#	PROSPECT	SAMPLE LOC. (GRID CO-ORDINATES)	OUTCROP (SAMPLE INTERVAL)	BOULDER (DIMENSION) CM	ASSAY VALUES Ag (OZ/TON)	Au (OZ/TON)	Pb (%)	Zn (%)	Cu (%)	COMMENTS
C18092	Alan Creek		2.0-3.0m		0.02	0.001	0.02	0.02		- altered granodiorite adjacent to raft of greywacke.
C18093	Alan Creek		6.0-7.0m		0.02	0.001	0.02	0.02		- quartz vein in granodiorite.
C18094	Alan Creek		composite		0.04	0.001	0.30	0.06		- large alteration zone on mtn. slope north of Alan Creek. (visible galena).
C18069	Lucky 1	L1+15E; 0+15S		composite	156.0		6.36	1.00		- fine grained galena.
C18070	Lucky 1	L1+15E; 0+15S		composite	380.0		68.0	0.72		- fine grained galena.
C18095	Lucky 1	L1+15E; 0+15S		8x6x4cm	344.0	0.001	67.8	0.40		- fine grained galena.
C18096	Lucky 1	L1+15E 0+15S		8x6x4cm	64.0		75.8	0.38	0.18	- fine grained galena.
C18097	Lucky 1	L1+15E; 0+15S		12x10x6cm	96.0		60.0	0.46	0.20	- fine grained galena.
C18098	Lucky 1	L1+15E; 0+15S		5x4x4cm	506.0		67.8	0.06	0.45	- fine grained galena.
C18099	Lucky 1	L1+15E; 0+15S		6x4x4cm	368.0		60.2	1.00	0.83	- fine grained galena.
C18100	Lucky 1	L1+15E; 0+15S		6x6x3cm	320.0		60.2	1.00	0.83	- fine grained galena.
C18601	Lucky 1	L1+15E; 0+15S		7x6x4cm	270.0		56.6	0.54	0.34	- fine grained galena.
C18602	Lucky 1	L1+15E; 0+15S		8x7x5cm	304.0		74.4	0.60	0.27	- fine grained galena.
C18603	Lucky 1	L1+15E; 0+15S		7x7x6cm	308.0		73.4	0.40	0.32	- fine grained galena.
C18604	Lucky 1	L1+15E; 0+15S		9x8x3cm	388.0		51.4	2.64	0.75	- fine grained galena.
C18605	Lucky 1	L1+15E; 0+15S		12x6x4cm	272.0		53.6	0.54	0.45	- fine grained galena.
C18606	Lucky 1	L1+15E; 0+15S		7x4x4cm	300.0		45.0	0.70	0.43	- fine grained galena.
C18607	Lucky 1	L1+15E; 0+15S		10x9x5cm	230.0		52.8	1.08	0.66	- fine grained galena.
C18608	Lucky 1	L1+15E; 0+15S		7x6x4cm	274.0		50.2	0.30	0.47	- fine grained galena.

ASSAY TAG#	PROSPECT	SAMPLE LOC. (GRID CO-ORDINATES)	OUTCROP (SAMPLE INTERVAL)	BOULDER (DIMENSION) CM	ASSAY VALUES Ag (OZ/TON)	Au (OZ/TON)	Pb (%)	Zn (%)	Cu (%)	COMMENTS
C18609	Lucky 1	L1+15E; 0+15S		8x5x5cm	138.0		6.48	0.36	0.25	- fine grained galena
C18610	Lucky 1	L1+15E; 0+15S		7x5x4cm	360.0		67.4	0.46	0.30	- fine grained galena
C18611	Lucky 1	L1+15E; 0+15S		12x10x7cm	504.0		60.4	3.56	0.94	- fine grained galena
C18612	Lucky 1	L1+15E; 0+15S		12x9x7cm	332.0		52.4	1.56	0.48	- fine grained galena
C18613	Lucky 1	L1+15E; 0+15S		16x12x10	328.0		62.8	0.40	0.66	- fine grained galena
C18614	Lucky 1	L1+15E; 0+15S		5x5x3cm	254.0		59.2	0.80	0.49	- fine grained galena
C18615	Lucky 1	L1+15E; 0+15S		8x7x5cm	264.0		59.4	0.20	0.32	- fine grained galena
C18616	Lucky 1	L1+15E; 0+15S		7x5x3	396.0		61.2	0.54	0.51	- fine grained galena
C18617	Lucky 1	L1+15E; 0+15S		8x7x4	284.0		62.0	0.52	0.46	- fine grained galena
C18618	Lucky 1	L1+15E; 0+15S		6x4x4	394.0	0.001	58.4	0.42	0.57	- fine grained galena
C18619	Lucky 1	L1+15E; 0+15S		10x8x5cm	134.0		76.0	0.40	0.21	- fine grained galena
C18620	Lucky 1	L1+15E; 0+15S		9x7x4cm	398.0		74.4	0.34	0.40	- fine grained galena
C18621	Lucky 1	L1+15E; 0+15S		8x6x4cm	344.0		48.4	0.50	0.46	- fine grained galena
C18622	Lucky 1	L1+15E; 0+15S		13x9x7cm	314.0		67.8	0.34	0.49	- fine grained galena
C18623	Lucky 1	L1+15E; 0+15S		7x6x4cm	312.0		60.0	0.62	0.40	- fine grained galena
C18624	Lucky 1	L1+15E; 0+15S		10x9x5cm	368.0		69.2	0.40	0.41	- fine grained galena
C18628	Lucky 1	L1+15E; 0+15S		25x16x15cm	328.0	0.001	61.2	0.53	0.53	- gine grained galena
C18067	Lucky 2	L3+35E; BL		Composite	108.0		36.4	0.78		- subrounded boulders + slabs. Base of slope
C18068	Lucky 2	L4+15E; 0+25S		Composite	424.0		51.0	1.24		- angular boulders and slabs from top of slope.
C18660	Lucky 3	L5+94E; 0+15S		4x4x3	18.4		71.4	0.22		- rounded boulder

ASSAY TAG#	PROSPECT	SAMPLE LOC. (GRID CO-ORDINATES)	OUTCROP (SAMPLE INTERVAL)	BOULDER (DIMENSIONS) CM	ASSAY VALUES Ag (OZ/TON)	Au (OZ/TON)	Pb (%)	Zn (%)	Cu (%)	COMMENTS
C18079	Lucky 4	L8+90E; 0+05N		Composite	182.0		28.8	0.42		
C18674	Lucky 4	L9+66E; 0+20N		3x3x3cm	31.2		67.2	0.30		
C18675	Lucky 4	L9+23E; 0+80N		12x6x3cm	11.6		74.6	0.42		
C18676	Lucky 4	L9+10E; 1+00N			0.28		0.44	0.04		- Yellow mud from in trench (reported assays of 40-80 oz/ton Ag.)
C18677	Lucky 4	L9+00E; 1+00N			0.30		0.70	0.02		- chlorite altered grano-diorite from in trench.
C18680	Lucky 5	L7+62E; 4+20N		Composite	19.4		61.2	0.52		
C18625	Rock 1	L0+27W; 0+70W		9x8x3cm	104.0		52.8	1.30	0.86	
C18626	Rock 1	L0+25W; 0+65N		9x8x3cm	184.0		64.2	1.14	1.68	
C18627	Rock 1	L0+30W; 0+60N		6x6x4cm	234.0		53.8	1.82	1.56	

APPENDIX 3

GEOCHEMISTRY AND ASSAY RESULTS
OF SAMPLES COLLECTED DURING INITIAL INVESTIGATION
OF THE KLONDIKE PROPERTY

Pages 1,2 & 3 Geochem Results

Page 4 Assay Values of high geochem, samples

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : TERRA MINING & EXPLORATION LTD.
202, 7608 - 103RD ST.
EDMONTON, ALTA.
T6E 4Z8

CERT. # : A8110748-001-A
INVOICE # : I8110748
DATE : 29-APR-81
P.O. # : NONE

ATTN: E. BUHLMANN

Sample description	Prep code	Cu ppm	Mo ppm	Pb ppm	Zn ppm	Ag ppm	Au (AA) ppb
8519	205	126	1	375	>10000	3.2	<10
8520	205	1450	1	>10000	>10000	>100.0	400
8521	205	1150	1	>10000	>10000	>100.0	620
8522	205	1100	1	4500	>10000	>100.0	170
8523	205	32	1	1450	6450	4.5	10
8524	205	950	1	>10000	>10000	>100.0	160
8525	205	270	1	850	>10000	12.0	15
8526	205	56	1	1700	7250	55.0	10
8527	205	50	1	3000	4100	>100.0	80
8528	205	40	1	1150	5850	4.0	<10
8529	205	445	1	2700	>10000	16.0	10
8530	205	94	1	4550	4850	>100.0	220
8531	205	1900	1	>10000	>10000	77.0	780
8532	205	16	1	1000	455	2.4	<10
8533	205	32	1	365	200	0.1	10
8534	205	14	1	165	138	1.0	<10
8535	205	10	1	22	80	0.1	<10
8536	205	4	1	36	54	0.1	<10
8537	205	14	1	4450	1150	1.6	10
8538	205	5350	1	>10000	>10000	71.0	1900
8539	205	30	1	215	370	0.2	10
8540	205	54	1	285	515	0.6	30
8541	205	6	1	46	110	0.1	<10
8542	205	16	1	120	158	0.1	<10
8543	205	10	1	74	160	0.1	<10
8544	205	10	1	32	162	0.1	<10
8545	205	4200	1	8900	>10000	>100.0	1420
8546	205	785	1	>10000	>10000	>100.0	770
8547	205	850	1	>10000	>10000	>100.0	1400
8548	205	1950	1	>10000	>10000	>100.0	930
8549	205	525	1	>10000	>10000	>100.0	230
8550	205	6400	1	5700	>10000	>100.0	1340
8551	205	595	1	>10000	>10000	74.0	100
8552	205	570	1	>10000	>10000	>100.0	160
8553	205	245	3	>10000	9350	>100.0	1740
8554	205	2950	1	>10000	>10000	>100.0	400
8555	205	32	1	2450	3750	5.4	<10
8556	205	20	1	>10000	7600	25.0	<10
8557	205	16	1	925	3150	2.6	<10
8558	205	12	1	1000	1750	4.4	<10
8559	205	290	1	>10000	>10000	>100	160

Certified by .....

092037

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

TO : TERRA MINING & EXPLORATION LTD.
202, 7608 - 103RD ST.
EDMONTON, ALTA.
T6E 4Z8

CERT. # : A8110748-002-A
INVOICE # : I8110748
DATE : 29-APR-81
P.O. # : NONE

ATTN: E. BUHLMANN

Sample description	Prep code	Cu ppm	Mo ppm	Pb ppm	Zn ppm	Ag ppm	Au (AA) ppb
8559	205	290	1	>10000	>10000	>100.0	160
8560	205	6	1	84	245	0.1	<10
8561	205	6	1	545	192	1.2	<10
8562	205	4	1	74	124	0.1	<10
8563	205	8	1	96	184	0.1	<10
8564	205	6	1	74	42	0.4	<10
8565	205	18	5	48	54	0.2	<10
8566	205	4	2	34	10	0.1	<10
8567	205	12	2	40	10	0.1	<10
8568	205	30	3	20	24	0.2	<10
8569	205	6	1	22	78	0.1	<10
8570	205	6	1	38	182	0.1	<10
8571	205	6	1	12	78	0.1	<10
8572	205	74	1	310	360	2.8	<10
8573	205	20	1	62	1050	0.4	<10
8574	205	*116	1	14	114	0.1	<10
8575	205	30	1	124	300	0.8	<10
8576	205	44	1	106	720	0.2	<10
8577	205	18	1	182	1750	3.4	<10
8578	205	56	1	450	1500	7.8	<10
8579	205	20	1	130	215	0.1	<10
8581	205	*435	1	168	1150	3.4	<10
8582	205	58	1	6	84	0.1	<10
8583	205	32	1	1400	1250	*40.0	<10
8584	205	22	1	22	108	0.4	<10
8585	205	48	1	64	106	1.8	<10
8586	205	14	1	52	585	0.2	<10
8587	205	14	<5	24	70	0.1	<10
8588	205	12	1	70	505	1.0	<10
8589	205	94	2	36	32	1.4	<10
8590	205	34	1	3950	3950	10.0	<10
8591	205	32	1	345	295	3.0	10
8592	205	16	1	48	635	0.6	10
8593	205	34	1	220	350	3.0	<10
8594	205	14	1	48	355	0.2	<10
8595	205	26	1	12	82	0.1	<10
8596	205	38	1	44	20	0.8	<10
8597	205	24	2	64	470	0.6	<10
8598	205	10	1	6	66	0.1	<10
8599	205	8	3	30	16	0.1	<10

Continued

CTA MEMBER

Certified by Hart Richler 092037

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

TO : TERRA MINING & EXPLORATION LTD.
202, 7608 - 103RD ST.
EDMONTON, ALTA.
T6E 4Z8

CERT. # : A8110748-003-
INVOICE # : I8110748
DATE : 29-APR-81
P.O. # : NONE

ATTN: E. BUHLMANN

	Sample description	Prep code	Cu ppm	Mo ppm	Pb ppm	Zn ppm	Ag ppm	Au -(AA) ppb
STOP II CONTIN.	8600	205	80	1	345	720	6.0	<10
	8601	205	18	1	4	76	0.1	<10
	8602	205	92	1	280	790	2.6	<10
	8603	205	44	1	2	64	0.1	<10
	8604	205	18	1	86	168	0.2	<10
	8605	205	18	1	132	200	0.2	<10
	8606	205	6	1	58	82	0.1	<10
	8607	205	6	1	74	56	0.2	<10
STOP V	8608	205	4	1	86	106	0.1	<10
	8609	205	8	1	890	450	1.8	<10
"25"	8610	205	8	1	4	34	0.1	<10
	8611	205	6	1	10	56	0.1	<10
	8612	205	6	1	2	52	0.1	<10
	8613	205	8	1	20	42	0.2	<10
	8614	205	6	1	4	54	0.1	<10
	8615	205	52	1	6300	4200	9.4	<10
	8616	205	16	1	1800	2150	3.4	<10
	8617	205	235	3	>10000	>10000	85.0	420
STOP I	8618	205	36	1	6200	4150	6.4	<10
	8619	205	14	1	96	178	1.0	<10
	8620	205	38	1	5150	4450	6.8	<10
	8621	205	1000	2	8450	>10000	>100.0	700
	8622	205	80	1	8150	8400	12.0	<10
	8623	205	22	1	1750	3750	4.0	<10
	8624	205	4	1	162	215	0.1	<10
	8625	205	2	1	74	122	0.1	<10
	8626	205	6	1	22	164	0.1	<10
STOP II	8627	205	4	1	18	148	0.1	<10
	8628	205	2	1	14	118	0.1	<10

092037

Certified by Hank Richter

CTA MEMBER

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : TERRA MINING & EXPLORATION LTD.
202, 7608 - 103RD ST.
EDMONTON, ALTA.
T6E 4Z8

CERT. # : A8110850-001-A
INVOICE # : I8110850
DATE : 09-JUN-81
P.O. # : NONE

ATTN:E. BUHLMANN

Sample description	Prep code	Pb percent	Zn percent	Ag (FA) oz/t			
8519	214	--	7.71	--	--	--	--
8520	214	57.40	11.60	30.50	--	--	--
8521	214	44.40	13.10	22.34	--	--	--
8522	214	--	37.30	14.66	--	--	--
8524	214	11.10	25.50	10.92	--	--	--
8525	214	--	9.12	--	--	--	--
8527	214	--	--	8.08	--	--	--
8529	214	--	12.10	--	--	--	--
8530	214	--	--	15.92	--	--	--
8531	214	12.60	5.22	--	--	--	--
8538	214	11.10	10.00	--	--	--	--
8545	214	--	18.90	33.00	--	--	--
8546	214	11.10	2.77	11.72	--	--	--
8547	214	19.40	5.11	47.58	--	--	--
8548	214	18.60	12.30	19.84	--	--	--
8549	214	9.67	1.72	16.32	--	--	--
8550	214	--	26.10	33.32	--	--	--
8551	214	1.78	4.92	--	--	--	--
8552	214	2.22	2.86	5.26	--	--	--
8553	214	4.89	1.40	26.00	--	--	--
8554	214	10.80	9.13	11.72	--	--	--
8556	214	4.67	--	--	--	--	--
8559	214	1.89	1.62	5.68	--	--	--
8617	214	3.90	1.87	--	--	--	--
8621	214	--	13.60	19.08	--	--	--

Samples Submitted by Eckart Buhlmann (May, 1981)

B. Stewart 092037

Registered Assayer, Province of British Columbia

APPENDIX 4

DIAMOND DRILL HOLE ASSAYS

ASSAY TAG#	PROSPECT	DIAMOND DRILL HOLE NO.	SAMPLE INTERVAL (M)	ASSAY VALUES (Ag/OZ/TON)	Pb(%)	Zn(%)	COMMENTS
C18634	Switchback	DDH-81-1	41.8 to 42.8	0.14	0.12	0.16	- Chlorite alteration of the granodiorite. Finely disseminated pyrite chlorite alteration.
C18635	Switchback	DDH-81-1	42.8 to 43.3	0.08	0.18	0.26	- Visible pyrite and galena.
C18636	Switchback	DDH-81-1	43.3 to 43.5	1.24	3.24	0.24	- Chlorite alteration. Two millimetres fracture infilled with galena.
C18637	Switchback	DDH-81-1	43.5 to 44.0	0.30	1.04	0.18	- Chlorite alteration. Minor disseminated galena.
C18638	Switchback	DDH-81-1	44.0 to 45.0	0.54	0.10	0.24	- Chlorite alteration. Visible pyrite and galena.
C18639	Switchback	DDH-81-1	45.0 to 46.0	0.04	0.04	0.04	- Chlorite alteration.
C18640	Switchback	DDH-81-1	46.0 to 47.0	0.06	0.06	0.12	- Chlorite alteration.
C18641	Switchback	DDH-81-1	47.0 to 48.0	0.24	0.34	0.12	- Chlorite alteration. Visible galena.
C18642	Switchback	DDH-81-1	48.0 to 49.0	0.04	0.10	0.18	- Chlorite alteration.
C18643	Switchback	DDH-81-1	49.0 to 50.0	0.10	0.04	0.04	- Chlorite alteration.
C18644	Switchback	DDH-81-1	50.0 to 51.0	0.10	0.04	0.06	- Weak alteration to chlorite.
C18647	Switchback	DDH-81-2	33.2 to 34.2	0.08	0.24	0.20	- Weak alteration to chlorite.
C18648	Switchback	DDH-81-2	34.2 to 34.7	0.04	0.06	0.16	- Fine grained granodiorite with finely disseminated pyrite.
C18649	Switchback	DDH-81-2	34.7 to 35.2	0.04	0.10	0.20	- Weak alteration to chlorite.
C18650	Switchback	DDH-81-2	35.2 to 36.2	0.02	0.10	0.20	- Weak alteration to chlorite.
C18651	Switchback	DDH-81-2	40.2 to 41.2	0.02	0.02	0.04	- Weak alteration to chlorite.
C18652	Switchback	DDH-81-2	41.2 to 42.2	0.12	0.16	0.18	- Alteration to chlorite. Visible galena.
C18653	Switchback	DDH-81-2	42.2 to 43.2	0.04	0.10	0.22	- Weak alteration to chlorite.
C18645	Switchback	DDH-81-3	29.3 to 30.3	0.14	0.44	0.28	- Chlorite alteration of fine grained granodiorite with visible galena & pyrite.
C18646	Switchback	DDH-81-3	39.2 to 40.2	0.06	0.10	0.18	- Chlorite alteration. Visible galena.
C18654	Switchback	DDH-81-3	103.6 to 104.6	0.10	0.10	0.08	- Intense alteration to chlorite. Limonite staining.

ASSAY TAG#	PROSPECT	DIAMOND DRILL HOLE NO.	SAMPLE INTERVAL (M)	ASSAY VALUES			COMMENTS
				Ag (OZ/TON)	Pb (%)	Zn (%)	
C18655	Chinese Trench	DDH-81-4	32.7 to 33.7	0.06	0.12	0.22	- Alteration to chlorite.
C18656	Chinese Trench	DDH-81-4	33.7 to 34.7	0.06	0.20	0.38	- Alteration to chlorite. Visible galena.
C18657	Chinese Trench	DDH-81-4	36.6 to 37.1	0.02	0.02	0.04	- Alteration to chlorite.
C18658	Chinese Trench	DDH-81-4	88.4 to 88.9	0.06	0.10	0.14	- Alteration to chlorite.
C18659	Chinese Trench	DDH-81-4	88.9 to 89.2	0.12	0.06	2.16	- Alteration to chlorite. Visible sphalerite.
C18661	Chinese Trench	DDH-81-5	75.1 to 75.6	0.02	0.04	0.04	- Alteration to chlorite. Limonite staining.
C18662	Chinese Trench	DDH-81-5	75.6 to 76.1	0.06	0.22	0.12	- Alteration to chlorite. Limonite staining.
C18663	Chinese Trench	DDH-81-5	76.8 to 77.2	0.08	0.24	0.42	- Alteration to chlorite.
C18664	Chinese Trench	DDH-81-5	77.2 to 77.3	0.72	0.22	7.40	- Alteration to chlorite. Siliceous. Visible pyrite, galena and sphalerite.
C18665	Chinese Trench	DDH-81-5	77.3 to 77.6	0.44	0.50	0.22	- Alteration to chlorite. Visible galena.
C18666	Chinese Trench	DDH-81-6	63.0 to 63.1	0.78	0.14	0.10	- Alteration to chlorite. Visible galena.
C18667	Chinese Trench	DDH-81-6	63.1 to 63.4	0.04	0.04	0.12	- Alteration to chlorite.
C18668	Chinese Trench	DDH-81-6	69.4 to 69.7	0.06	0.16	0.12	- Alteration to chlorite.
C18669	Chinese Trench	DDH-81-6	69.7 to 69.8	4.00	15.4	4.38	- Siliceous section with chlorite and kaolinite alteration. Visible galena, sphalerite and pyrite.
C18670	Chinese Trench	DDH-81-6	69.8 to 70.1	0.04	0.10	0.12	- Alteration to chlorite.

ASSAY TAG#	PROSPECT	DIAMOND DRILL HOLE NO.	SAMPLE INTERVAL (M)	ASSAY VALUES			COMMENTS
				Ag (OZ/TON)	Pb (%)	Zn (%)	
C18671	Pit	DDH-81-7	43.2 to 43.7	0.06	0.02	0.01	- Alteration to chlorite.
C18672	Pit	DDH-81-7	43.7 to 43.9	0.58	3.48	2.94	- Siliceous section with visible galena
C18673	Pit	DDH-81-7	43.9 to 44.2	0.06	0.08	0.08	- Alteration to chlorite.
C18678	Lucky #1	DDH-81-8	23.0 to 24.0	0.16	0.06	0.08	- Alteration to chlorite.
C18679	Lucky #1	DDH-81-8	53.3 to 53.5	0.04	0.06	0.02	- Alteration to chlorite.

APPENDIX 5

RESULTS OF 1979 BULK SAMPLE FROM THE SWITCHBACK, CHINESE TRENCH AND PIT PROSPECTS

LEAD-SETTLEMENT-(PRELIMINARY)
OUR SERIAL NO. 1459

COMINCO LTD
TRAIL B.C.

IN ACCOUNT WITH-KLONDIKE SILVER MINES LTD.
BONK OF MONTREAL BOX 4400
WHITEHORSE, YUKON

11 07 79

FOR LEAD ORE - OPEN770 - LOT 1 CAR NO. 1 TRUCK RECEIVED 10 03 79

WEIGHT OF SHIPMENT - LBS. 0.30% MOISTURE

NET WET WT	NET DRY WT	DRY TONS
28320	28235	14.1175

ASSAYS

GOLD	SILVER	COPPER	LEAD	ZINC	SULPHUR	SILICA
0.0380	15.5500	0.1600	29.1000	13.9000	14.1000	17.1000
OZ / DRY TON		%	%	%	%	%

ALUMINA	IRON	LIME	ANTIMONY	ARSENIC	BISMUTH
0.3000	9.9000	0.2000	0.0300	0.0100	0.0100
%	%	%	%	%	%

QUOTATIONS QUOT DATE 10 26 79 US EXCHANGE 18.10000%

GOLD	375.00000 US $/OZ.	LESS	5.00$/OZ	NET	437.87500	$/OZ CAN
SILVER	16.33500 US $/OZ.	LESS	0.085$/OZ	NET	19.20664	$/OZ CAN
LEAD	59.67800 US C/LB.	LESS	16.62C/LB	NET	53.85970	C/LB CAN
ZINC	35.38100 US C/LB.	LESS	16.50C/LB	NET	25.28500	C/LB CAN

CONTENTS AND VALUE

METAL	CONTENT	DEDUCTIONS	NET	VALUE
GOLD	0.536 OZS	0.424	0.112 OZS $	49.04
SILVER	219.53 OZS	15.37	204.16 OZS $	3921.23
LEAD	8216 LBS	657	7559 LBS $	4071.25
ZINC	3925 LBS	1570	2355 LBS $	595.46

		TOTAL GROSS VALUE	$	8636.98
LESS:	BASIC TREATMENT @	55.00 $/T 776.46		
LESS:	TREATMENT RATE @	15.67 $/T 221.22	$	997.68
		TOTAL NET VALUE	$	7639.30
		ADVANCED (75%)	$	5720.00

TREATMENT RATE

LABOUR RATE ADJ	217.0000 AT $	0.060	$	13.02
TRUCK CHARGE			$	4.00
ARSENIC PENALTY	0.0000 AT $	1.000	$	0.00
ALUMINA PENALTY	0.3000 AT $	0.350	$	0.11
MOISTURE PENALTY	0.0000 AT $	0.000	$	0.00
SILICA CREDIT	17.1000 AT ¢	-8.550	$	-1.46
LIME CREDIT	0.0000 AT $	-0.0[illegible]	$	0.00
TOTAL TREATMENT RATE			$	15.67

ADDITIONAL ARSENIC PENALTY INDICATED
?

092037

APPENDIX 6

DRILL LOGS AND SECTIONS

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-1
SHEET 1 OF 3
PAGE

DIP TEST		
	ANGLE	
FOOTAGE	READING	CORRECTED
collar		-45°
108.2m	-54°	-45°

PROPERTY Klondike (B.C.)
prospect Switchback
claim Denis
DATE STARTED Aug. 24/81
DATE FINISHED Aug. 26/81

COLLAR LAT. L1+30 N.
DEP. 0+40 E.
ELEV. 1656m (5433ft)
INCLN. -45°
BEARING 117°

TOTAL DEPTH 108.2m
CORE SIZE NQ
LOGGED BY W. Darch
PLOTTED ON
DRILLED BY G + D

DEPTH (m)	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
0-10.4	Overburden: consists of 70% sand and gravel and 30% boulders (up to 0.5m in diameter).													
10.4-35.1	Granodiorite: this is a medium to course grained, white/grey, non magnetic rock. Where unaltered it consists of 50-60% subhedral feldspar, 20-30% quartz, 15-20% hornblende and 10-15% biotite. Calcite and epidote occur along randomly oriented fractures. In the altered sections the feldspars and the mafic components have been almost completely altered to epidote, kaolinite, chlorite and sericite. These sections also appear to be slightly more siliceous. There is no foliation evident. The bottom contact is sharp at 85° to core axis (ca). The centre of this section is compotent with the core becoming gradually more blocky and friable at either end													
	10.4m to 13.2m The rock has been frost shattered and as a result is blocky. Ice could be seen in the core along fractures.													
	15.0m to 15.1m Pegmatite: is a course grained, leucocratic, non magnetic rock. It consists of 70% feldspar and 30% quartz. Both contacts are sharp at 35° to ca.													
	27.1m to 27.8m Weakly altered: section. A 1cm wide fracture near the bottom of this section is infilled with clay.													

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TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-1
SHEET 2 OF 3
PAGE

DIP TEST		
	ANGLE	
FOOTAGE	READING	CORRECTED

PROPERTY
LEVEL
SECTION
DATE STARTED
DATE FINISHED

COLLAR LAT. N.
DEP. E.
ELEV.
INCLN.
BEARING

TOTAL DEPTH
CORE SIZE
LOGGED BY
PLOTTED ON
DRILLED BY

DEPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
	27.8m to 28.4m Pegmatite													
	28.4m to 35.1m Alteration, gradually increasing towards the bottom of this section. Feldspars are kaolinitized.													
.1-37.3	Mafic dyke: This is an aphanitic, dark grey, moderately magnetic, diabase dyke. Randomly oriented fractures are infilled with calcite. The bottom contact is sharp at 45° to ca.													
.3-102.6	Granodiorite: As above. The bottom contact is sharp at 40° to ca.													
	41.5m to 51.5m Alteration Zone: Alteration increases towards centre of section.		Chlorite	C18634	41.8m	42.8m	0.14					0.12	0.16	
	42.4m to 42.5m Breccia: (fault gouge) Angular fragments up to 1cm in diameter in finely ground matrix.													
	42.5m to 43.1m Narrow, randomly oriented fractures infilled with visible galena and pyrite. The mineralization along these fractures is spotty and discontinuous.		Chlorite	C18635	42.8m	43.3m	0.08					0.18	0.26	
			Chlorite	C18636	43.3m	43.5m	1.24					3.24	0.24	
			Chlorite	C18637	43.5m	44.0m	0.30					1.04	0.18	
			Chlorite	C18638	44.0m	45.0m	0.54					0.10	0.24	
	44.1m to 44.6m Mineralized fracture as above.													

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-1
SHEET 3 OF 3
PAGE

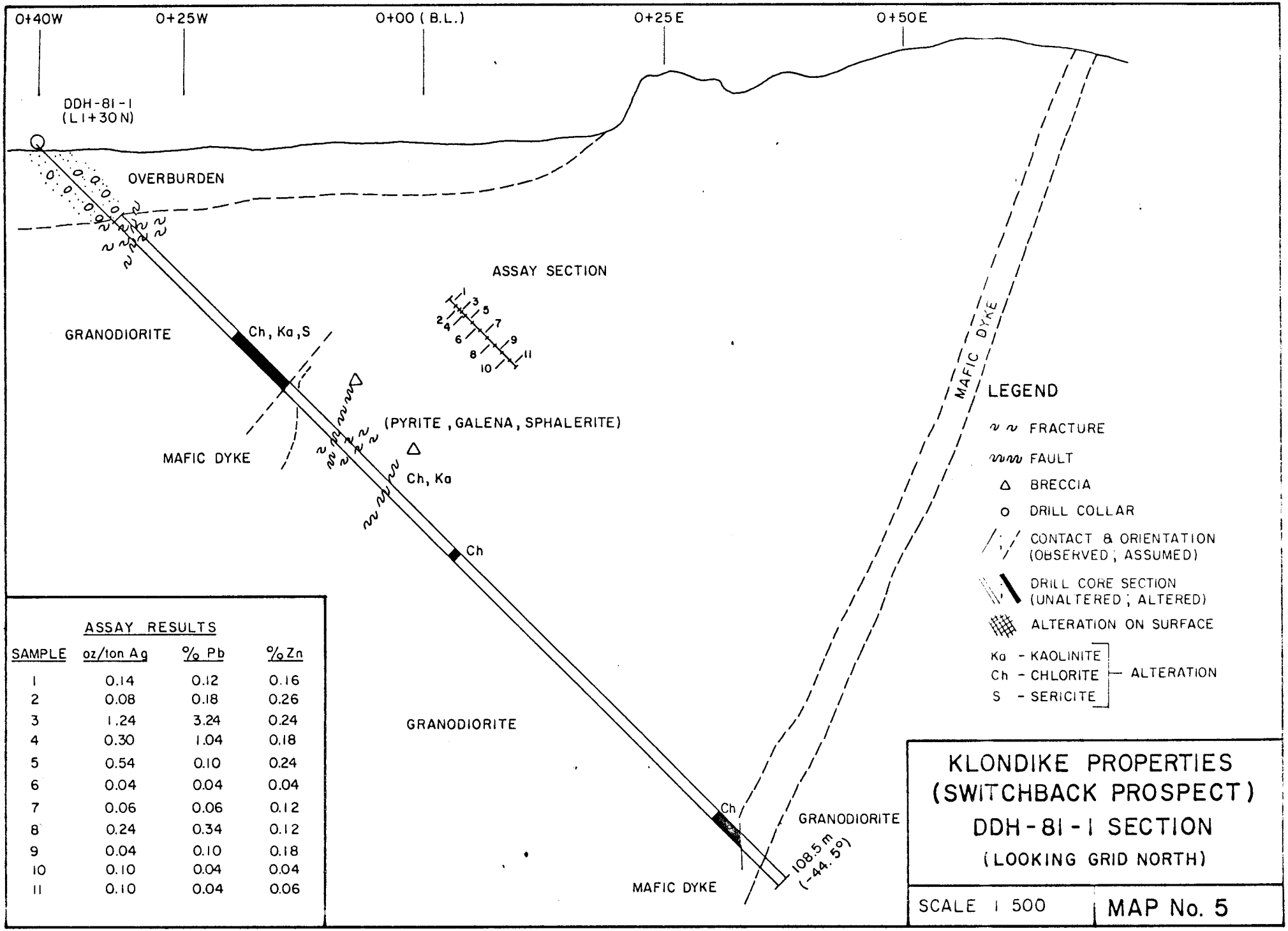
DIP TEST		
	ANGLE	
FOOTAGE	READING	CORRECTED

PROPERTY .....
LEVEL .....
SECTION .....
DATE STARTED .....
DATE FINISHED .....

COLLAR LAT. .....N..
DEP. .....E..
ELEV. .....
INCLN. .....
BEARING .....

TOTAL DEPTH .....
CORE SIZE .....
LOGGED BY .....
PLOTTED ON .....
DRILLED BY .....

DEPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
	50.0m to 50.1m Breccia: (fault gouge) as 42.4m to		Chlorite	C18639	45.0m	46.0m	0.04					0.04	0.04	
	42.5m. At the centre of this section there is a 1cm		Chlorite	C18640	46.0m	47.0m	0.06					0.06	0.12	
	wide band of blue/grey clay composed primarily of		Chlorite	C18641	47.0m	48.0m	0.24					0.34	0.12	
	chlorite. This section is oriented at 70° to ca.		Chlorite	C18642	48.0m	49.0m	0.04					0.10	0.18	
			Chlorite	C18643	49.0m	50.0m	0.10					0.04	0.04	
	59.0m to 60.5m Weak alteration		Chlorite	C18644	50.0m	51.0m	0.10					0.04	0.06	
	84.6m to 84.7m Pegmatite													
	88.2m to 88.4m Pegmatite: Finely disseminated pyrite													
	along the bottom contact. Both contacts are at 75°													
	to ca.													
	98.1m to 102.6m Weak alteration: with feldspars													
	strongly kaolinitized.													
02.6-105.3	Mafic Dyke: As above. The bottom contact													
	is at 70° to ca.													
05.3-108.2	Granodiorite: As above. Unaltered													
08.2	End of hole: (Estimated 99% core recovery)													



ASSAY RESULTS

SAMPLE	oz/ton Ag	% Pb	% Zn
1	0.14	0.12	0.16
2	0.08	0.18	0.26
3	1.24	3.24	0.24
4	0.30	1.04	0.18
5	0.54	0.10	0.24
6	0.04	0.04	0.04
7	0.06	0.06	0.12
8	0.24	0.34	0.12
9	0.04	0.10	0.18
10	0.10	0.04	0.04
11	0.10	0.04	0.06

KLONDIKE PROPERTIES
(SWITCHBACK PROSPECT)
DDH-81-1 SECTION
(LOOKING GRID NORTH)

SCALE 1 500 | MAP No. 5

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-2
SHEET 1 OF 4
PAGE

DIP TEST		
FOOTAGE	ANGLE READING	CORRECTED
collar		-45°
108.5m	53°	-44.5°

PROPERTY Klondike (B.C.)
Prospect Switchback
Claim Denis
DATE STARTED 31/9/81
DATE FINISHED 2/9/81

COLLAR LAT. L0+80 N.
DEP. 0+40W E.
ELEV. 1696m (5565 ft)
INCLN. -45°
BEARING 117°

TOTAL DEPTH 108.5m
CORE SIZE NQ
LOGGED BY W. Darch
PLOTTED ON
DRILLED BY G.+D.

DEPTH(m)	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
-9.1	Overburden: Consists of 50% sand and gravel and 50% boulders (up to 1.0m in diameter). Three attempts were made at casing the overburden. The first two attempts were not successful due to the casing breaking from hitting a large boulder at an oblique angle. The drill was moved back 0.5m for the third run.													
.1-15.4	Granodiorite: This is a medium to course grained, white/grey, non magnetic rock. Where unaltered it consists of 50-60% subhedral feldspar, 20-30% quartz, 15-20% hornblende and 10-15% biotite. Calcite, epidote, chlorite and occational pyrite occur along narrow randomly oriented fractures. In the altered sections the feldspars and the mafic components have been almost completely altered to epidote, chlorite, kaolinite and sericite. These sections also appear to be slightly more siliceous. There is no evident foliation in the core. This section is slightly blocky due to fracturing.													
	9.1m to 12.2m Frost shattering resulting in this section being very blocky with ice and gravel seams.													
	11.1m to 11.5m Pegmatite: is a course grained, leucocratic, non magnetic rock. It consists of 70% feldspar and 30% quartz. Both contacts are sharp at 40° to core axis (ca).													
	12.9m to 13.0m Pegmatite: as above. Both contacts are at 60° to ca.													
	13.8m to 13.9m Weakly altered section. Is slightly more siliceous. The mafic component is altered to chlorite and muscovite is found intestitial to the quartz and feldspars.													

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-2
SHEET 2 OF
PAGE

DIP TEST		
	ANGLE	
FOOTAGE	READING	CORRECTED

PROPERTY
LEVEL
SECTION
DATE STARTED
DATE FINISHED

COLLAR LAT. N.
DEP. E.
ELEV.
INCLN.
BEARING

TOTAL DEPTH
CORE SIZE
LOGGED BY
PLOTTED ON
DRILLED BY

DEPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
15.4-16.4	Pegmatite: As above. There are fine grained more siliceous bands within this section. These bands contain finely disseminated pyrite. Calcite occurs along narrow, randomly oriented fractures. Both contacts are slightly irregular and are oriented at 30° to ca.													
16.4-28.0	Grandiorite: As above. Calcite, kaolinite and epidote infill narrow randomly oriented fractures. 18.9m to 19.0m Pegmatite: both contacts are at 40° to ca. 21.6m to 21.7m Pegmatite: both contacts are at 80° to ca. 24.7m to 25.2m Strongly altered section. Kaolinite and chlorite are the main alteration minerals 25.5m to 25.7m Strongly altered section same as 24.7m to 25.2m. 25.7m to 26.1m Pegmatite: both contacts are sharp at 10° to ca.													
28.0-29.9	Mafic Dyke: This is an aphanitic, dark grey, moderately magnetic, diabase dyke. At 29.0m there is a 1cm wide vein of white calcite. Both contacts of the dyke are at 90° to ca.													
29.9-71.8	Granodiorite: As before. 29.9m to 43.3m Alteration: for the most part this section is very siliceous. Chlorite, muscovite, sericite, and kaolinite are also abundant in this section. Limonite staining & pyrite are common along and adjacent to fractures.													

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH
SHEET 3 OF 4
PAGE

DIP TEST		
	ANGLE	
FOOTAGE	READING	CORRECTED

PROPERTY
LEVEL
SECTION
DATE STARTED
DATE FINISHED

COLLAR LAT. N.
DEP. E.
ELEV.
INCLN.
BEARING

TOTAL DEPTH
CORE SIZE
LOGGED BY
PLOTTED ON
DRILLED BY

DEPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
	31.2m to 31.6m Pegmatite: both contacts are at 60° to ca.													
	@ 33.4m there is a 1cm wide quartz vein containing minor amounts of sphalerite. This section, although narrower, is similar to the surface mineralization. The quartz vein is at 90° to ca.		Chlorite	C18647	33.2m	34.2m	0.08					0.24	0.20	
	33.5m to 33.6m: visible sphalerite mineralization in quartz. As above			C18648	34.2m	34.7m	0.04					0.06	0.16	
	37.9 to 38.0m Pegmatite: both contacts are at 90° to ca.		Chlorite	C18649	34.7	35.2m	0.04					0.10	0.20	
	40.6m to 40.8 Quartz vein intruding an intensly altered section. Both contacts are at 90° to ca.		Chlorite	C18650	35.2m	36.2m	0.02					0.10	0.20	
			Chlorite	C18651	40.2m	41.2m	0.02					0.02	0.04	
			Chlorite	C18652	41.2m	42.2m	0.12					0.16	0.18	
				C18653	42.2m	43.2m	0.04					0.10	0.22	
	43.3m to 45.8m Fine grained granodiorite. Has the same composition as the coarser grained rock but contains up to 5% muscovite.													
	47.0m to 47.4m Feldspars altered to kaolinite.													
	49.7m to 49.8m Pegmatite: oriented @ 80° to ca.													
	49.9m to 50.0m Pegmatite: both contacts are at 80° to ca.													
	51.2m to 51.3m Pegmatite: both contacts are at 80° to ca.													
60	57.7m to 58.3m Alteration zone with chlorite as the main alteration mineral. At 57.8m there is a 1cm wide mafic dyklet containing disseminated pyrite. This dyklet is oriented at 40° to ca.													
20														
30	59.0m to 59.5m Alteration of the feldspars to kaolinite.													
64.2-65.5	Pegmatite: As before. The top contact is very irregular while the bottom contact is sharp at 45° to ca.													
65.5-71.8	Granodiorite: As before.													
	70.2m to 70.4m: mafic dyke: both contacts are at 80° to ca.													

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-2
SHEET 4 OF 4
PAGE

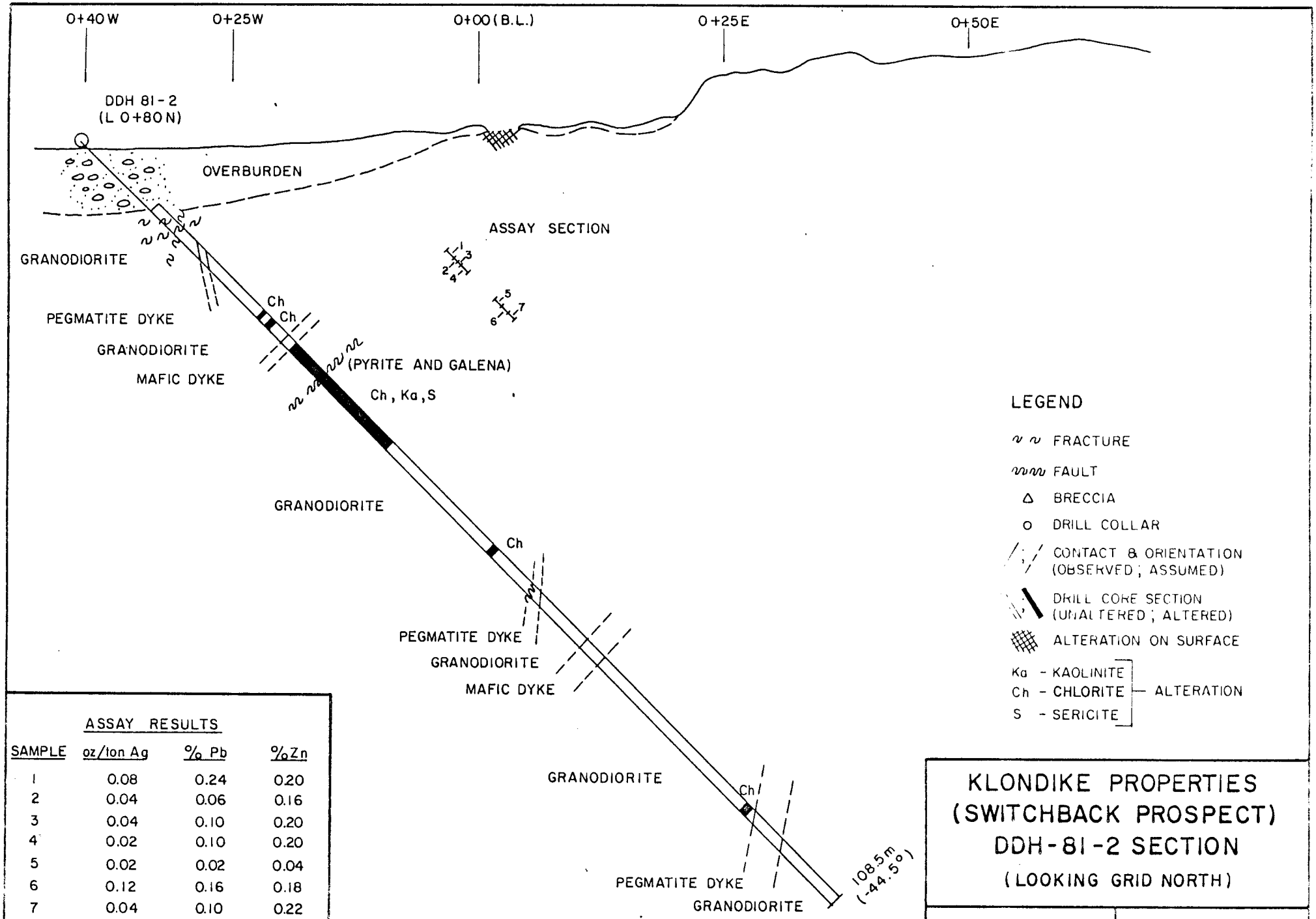
DIP TEST		
	ANGLE	
FOOTAGE	READING	CORRECTED

PROPERTY .....
LEVEL .....
SECTION .....
DATE STARTED .....
DATE FINISHED .....

COLLAR LAT. ..... N.
DEP. ..... E.
ELEV. .....
INCLN. .....
BEARING .....

TOTAL DEPTH .....
CORE SIZE .....
LOGGED BY .....
PLOTTED ON .....
DRILLED BY .....

DEPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
1.8-74.1	Mafic dyke: As before. Both contacts are at 80° to ca.													
4.1-98.6	Granodiorite: As before.													
	74.5m to 74.6m Pegmatite. Both contacts are at 35° to ca.													
	82.1m to 82.2m Alteration to chlorite.													
	83.2m to 85.0m Fine grained granodiorite. Pyrite along fractures.													
	92.2m to 92.7m Pegmatite. The top contact is at 90° to ca and the bottom contact is at 45° to ca.													
	95.2m to 95.9m Pegmatite: the tys contact is irregular and the bottom contact is at 70° to ca.													
	97.1m to 97.5m Weak alteration. With chlorite and muscovite present.													
8.6-100.0	Pegmatite: As before. Is fine grained near contacts and gradually becomes coarse grained towards the centre of the section.													
00.0-108.5	Granodiorite: As before. Chlorite and muscovite along narrow fractures.													
	105.3m to 105.7m Pegmatite.													
08.5	END OF HOLE. (99% CORE RECOVERY)													



ASSAY RESULTS

SAMPLE	oz/ton Ag	% Pb	% Zn
1	0.08	0.24	0.20
2	0.04	0.06	0.16
3	0.04	0.10	0.20
4	0.02	0.10	0.20
5	0.02	0.02	0.04
6	0.12	0.16	0.18
7	0.04	0.10	0.22

KLONDIKE PROPERTIES
(SWITCHBACK PROSPECT)
DDH-81-2 SECTION
(LOOKING GRID NORTH)

SCALE 1 5000 | MAP No. 6

TERRA MINING AND EXPLORATION LTD.

DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-3

SHEET 1 OF 4

PAGE

DIP TEST		
FOOTAGE	ANGLE READING	CORRECTED
collar		-45°
129.0m	54°	-45°

PROPERTY Klondike (B.C.)
prospect ~~area~~ Switchback
claim ~~section~~ Denis
DATE STARTED 3/9/81
DATE FINISHED 5/9/81

COLLAR LAT. L0+80 N.
DEP. 0+40W E.
ELEV. 1696m (5565 ft)
INCLN. -45°
BEARING 167°

TOTAL DEPTH 129.9m (426ft)
CORE SIZE NQ
LOGGED BY W.Darch
PLOTTED ON
DRILLED BY G+O

DEPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Pb %	Ni %	Pb %	Zn %	REMARKS
0-6.1	Overburden: consists of 70% sand and gravel and 30% boulders (up to 0.5m in diameter)													
6.1-28.3	Granodiorite: This is a medium to course grained, white/grey, non magnetic rock. Where unaltered it consists of 50-60% subhedral feldspar, 20-30% quartz, 15-20% hornblende and 10-15% biotite. Calcite, epidote, chlorite, kaolinite and occational pyrite all occur along narrow randomly oriented fractures. In the altered sections the rock has been almost totally altered to chlorite, epidote, kaolinite and sericite, often leaving the quartz grains in a fine green clay. Most altered sections appear to be slightly more siliceous. 6.1m to 10.8m Frost shattering: results in this section being very blocky with ice and gravel seams. 7.9m to 80.m Pegmatite. 8.8m to 9.0m Pegmatite. Both contacts are at 80° to the core axis (ca.) 10.8m to 11.0m Pegmatite: Both contacts are at 70° to ca. 12.2m to 12.3m Pegmatite: Both contacts are at 60° to ca. 13.6m to 13.9m Pegmatite: Both contacts are at 70° to ca. 14.4m to 15.0m Pegmatite: Both contacts are at 55° to ca. 19.2m to 19.4m Alteration of mafic components to chlorite and sericite. Quartz infilling of narrow randomly oriented fractures in this section. 22.7m to 25.0m Intense alteration: This section is almost totally altered to kaolinite, chlorite and sericite. The core is soft and often is a fine grained, dark green clay with ubiguitons quartz grains.													

2360
2362
2363

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-3
SHEET 2 OF 4
PAGE

DIP TEST		
	ANGLE	
FOOTAGE	READING	CORRECTED

PROPERTY
LEVEL
SECTION
DATE STARTED
DATE FINISHED

COLLAR LAT. N.
DEP. E.
ELEV.
INCLN.
BEARING

TOTAL DEPTH
CORE SIZE
LOGGED BY
PLOTTED ON
DRILLED BY

DEPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
	24.2m to 24.3m fault gouge (?)													
	25.4m to 25.5m Pegmatite. Both contacts are at 70° to ca.													
	27.7m to 28.3m Intense alteration. As above.													
28.3-29.3	Mafic Dyke: This is an aphanitic, dark grey, moderately													
	magnetic, diabase dyke. Both contacts are sharp at 85°													
	to ca.													
29.3-50.4	Granodiorite: As before.		Chlorite	C18645	29.3m	30.3m	0.14					0.44	0.28	
	29.3m to 30.9m Section is siliceous and contains													
	several bands of "dog tooth quartz" which hosts the													
	surface mineralization. There is, however, no visible													
	mineralization in the core. Limonite staining is													
	prominent along fractures.													
	30.9m to 31.2m Pegmatite: both contacts are at 50° to ca.													
	31.5m to 31.6m Alteration: mafic minerals altered to													
	chlorite and sericite with the feldspars in part													
	kaolinized. Limonite staining along fractures.													
	33.2m to 33.4m Pegmatite													
	34.7m to 37.9m Altertaion: the core in this section is													
	partially altered to chlorite, sericite and kaolinite													
	and is more siliceous than the unaltered granodiorite.													
	Bands of quartz up to 3cm wide with finely disseminat-													
	ed pyrite along the margins are common throughout this													
	section. Limonite staining along fractures.													
	39.4m to 40.0m Alteration zone: same as from 34.7m to													
	37.9m. The quartz bands are oriented at 70° to ca.													
	The pyrite is courser in this section with patches													
	up to 1cm in diameter.													

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-3
SHEET 3 OF 4
PAGE

DIP TEST		
	ANGLE	
FOOTAGE	READING	CORRECTED

PROPERTY ..... COLLAR LAT. ..... N.
LEVEL ..... DEP. ..... E.
SECTION ..... ELEV. .....
DATE STARTED ..... INCLN. .....
DATE FINISHED ..... BEARING .....

TOTAL DEPTH .....
CORE SIZE .....
LOGGED BY .....
PLOTTED ON .....
DRILLED BY .....

DEPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	U %	Ni %	Pb %	Zn %	REMARKS
	40.0m to 42.0m Intense Alteration: Same as from 22.7m to 25.0m. The granodiorite has been completely altered with the exception of the quartz content. The quartz grains are scattered throughout a chlorite, kaolinite, sericite rich clay. There is a weak foliation at 55° to ca.													
50.4-51.4	Pegmatite: This is a course grained leucocratic, non magnetic rock. It consists of 70% feldspar and 30% quartz. The grain size gradually decreases towards the margins. Both contacts are at 60° to ca.													
51.4-65.7	Granodiorite: As before.													
	52.6m to 54.2m Alteration: feldspar kaolinitized. Mafic component unaltered. White kaolinite infilling fractures up to 1cm wide.													
	57.3m to 57.5m Pegmatite													
	62.0m to 62.2m Alteration: feldspars altered to kaolinite. A 1cm wide fracture infilled with white kaolinite runs through this section at 10° to ca.													
	64.3m Mafic dyklet: 2cm wide & oriented at 55° to ca.													
65.7-67.8	Mafic dyke: As before. Both contacts are at 85° to ca.													
67.8-129.4	Granodiorite: As before.													
	67.8m to 70.1m Alteration: feldspars partially kaolinitized.													
	71.8m to 72.0m Pegmatite: the top contact is irregular while the bottom contact is sharp at 70° to ca.													
	85.0m to 85.1m Pegmatite:													

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DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-3
SHEET 4 OF 4
PAGE

DIP TEST		
	ANGLE	
FOOTAGE	READING	CORRECTED

PROPERTY
LEVEL
SECTION
DATE STARTED
DATE FINISHED

COLLAR LAT. N.
DEP. E.
ELEV.
INCLN.
BEARING

TOTAL DEPTH
CORE SIZE
LOGGED BY
PLOTTED ON
DRILLED BY

DEPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
	85.8m to 86.0m Pegmatite: both contacts are at 70°to ca.													
	86.1m to 86.2m Pegmatite: both contacts are at 70°to ca.													
	86.6m to 86.8m Pegmatite: both contacts are at 70°to ca.													
	86.9m to 87.4m Pegmatite: both contacts are at 45°to ca.													
	92.3m to 92.5m Pegmatite: both contacts are at 70°to ca.													
	100.2m to 100.4m Pegmatite: contacts are at 45° to ca.													
	101.9m to 102.3m Pegmatite: both contacts are at 45°to ca.													
	102.7m to 104.9m Alteration: mafics partially altered to chlorite.		Chlorite	C18654	103.6	104.6	0.10					0.10	0.08	
	104.9m to 105.1m Pegmatite: both contacts are at 70°to ca.													
	105.3m to 106.4m Weak alteration: both chlorite and kaolinite are present.													
	107.6m to 108.4m Pegmatite: both contacts are at 55°to ca.													
	111.6m to 112.1m Pegmatite: both contacts are at 70°to ca.													
	113.1m to 113.6m Pegmatite: both contacts are at 70°to ca. Muscovite comprises 5-10% of this section.													
	113.7m to 114.5m Pegmatite: both contacts are at 70°to ca. Again muscovite is present in this section.													
	116.4m to 116.6m Pegmatite: both contacts are at 60°to ca.													
	117.5m to 117.7m Alteration: altered to a chlorite/ kaolinite clay													
	119.1m to 119.3m Pegmatite: both contacts are at 70°to ca.													
	123.4m to 124.1m Pegmatite: both contacts are at 40°to ca.													
	128.0m to 128.3m Pegmatite: both contacts are at 85°to ca.													
129.4-129.8	Mafic Dyke: As before. The top contact is slightly irregular at 45° to ca.													
29.8	END OF HOLE													

0260
0263

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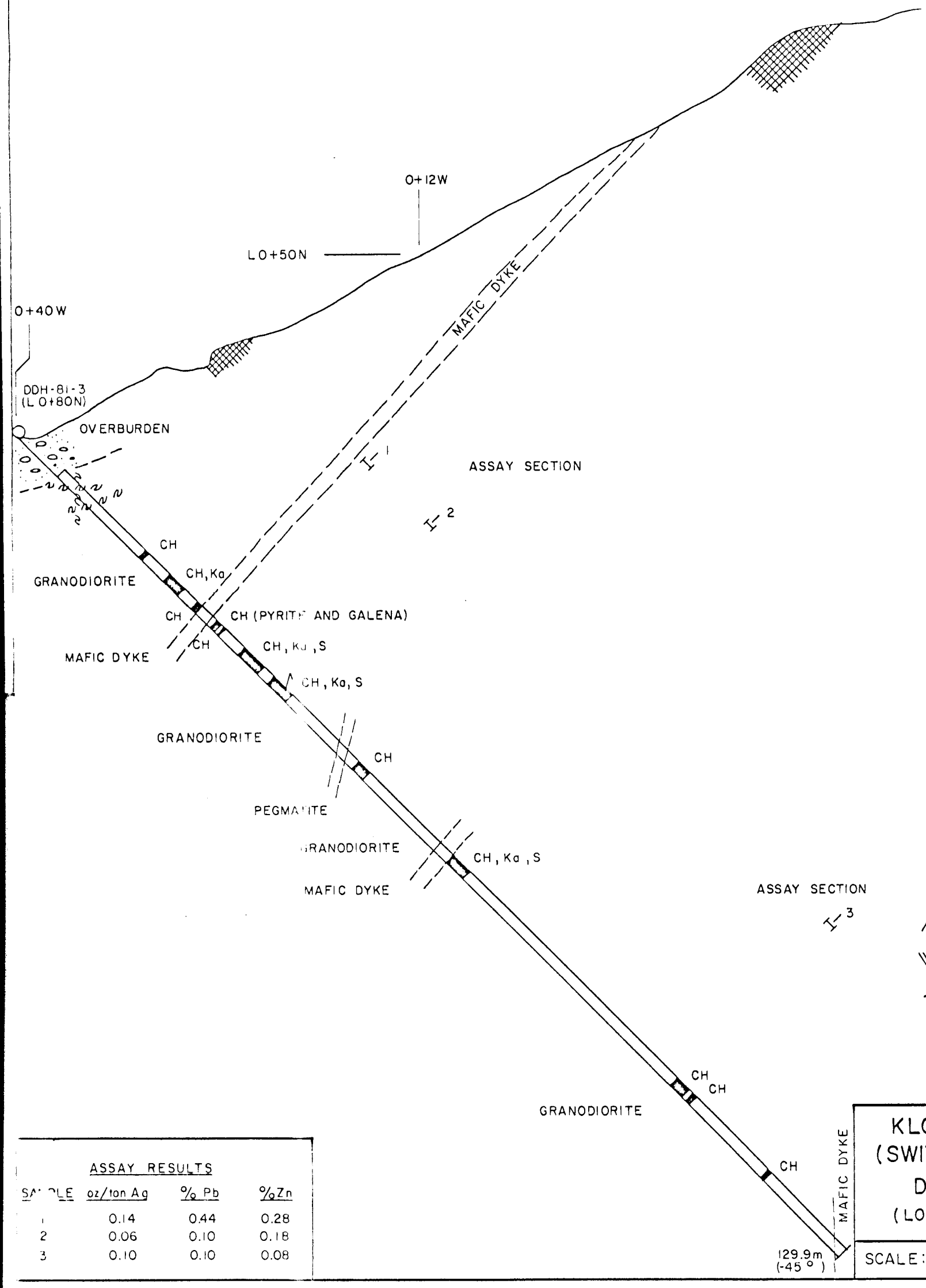

LEGEND

- FOLIATION
- FRACTURE
- FAULT
- BRECCIA
- DRILL COLLAR
- CONTACT & ORIENTATION (OBSERVED; ASSUMED)
- DRILL CORE SECTION (UNALTERED; ALTERED)
- ALTERATION ON SURFACE

ALTERATION:
- Ka - KAOLINITE
- Ch - CHLORITE
- S - SERICITE

ASSAY RESULTS

SAMPLE	oz/ton Ag	% Pb	% Zn
1	0.14	0.44	0.28
2	0.06	0.10	0.18
3	0.10	0.10	0.08

KLONDIKE PROPERTIES (SWITCHBACK PROSPECT)

DDH-81-3 SECTION

(LOOKING GRID NORTH EAST)

SCALE: 1 500

MAP No. 7

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-4
SHEET 1 OF 3
PAGE

DIP TEST		
TAGE	ANGLE READING	CORRECTED
lar		-45°
	54°	-45°

PROPERTY Klondike (B.C.)
prospect Chinese Trench
claim
group Denis
DATE STARTED 6/9/81
DATE FINISHED 9/9/81

COLLAR LAT. 10+13 N
DEP. 0+50 E
ELEV. 1646m(5400ft.)
INCLN. -45
BEARING 325°

TOTAL DEPTH 122.2m(401 ft.)
CORE SIZE NQ
LOGGED BY Wayne Darch
PLOTTED ON
DRILLED BY G + D

PTH (m)	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
0	Overburden: consists of fine gravel and sand.													
122.2	Granodiorite: This is a medium to course grained, white/													
	grey, non magnetic rock. Where unaltered it consists													
	of 50-60% subhedral feldspar, 20-30% quartz, 15-20%													
	hornblende and 10-15% biotite. Calcite and chlorite													
	infill narrow randomly oriented fractures. Kaolinite,													
	chlorite and sericite are the primary alteration													
	minerals. The altered sections often have a higher													
	quartz content. The core is moderately competent to													
	slightly blocky due to numerous fractures and altera-													
	tion zones.													
	11.4m to 11.9m Weak alteration of feldspars to kaolinite.													
	The core is soft and friable.													
	15.5m to 16.1m Pegmatite: The upper contact is at 45°													
	to the core axis (ca) while the bottom contact is at													
	30° to ca. This is a course grained leucocratic													
	rock comprised mainly of feldspar and quartz.													
	16.5m to 16.9m Alteration to chlorite and kaolinite,													
	with degree of alteration increasing towards centre													
	of section:16.7m to 16.8m chlorite and kaolinite													
	rich clay. Likely fault gouge.													
	17.6m to 18.0m Pegmatite: both contacts at 90° to ca.													
	19.1m to 19.2m Weak alteration to chlorite and kaolinite.													
	24.2m to 25.3m Alteration to chlorite and kaolinite with													
	intensity of alteration increasing towards the centre													
	of the section.													
	24.8m to 24.9m Siliceous section with finely disseminat-													
	ed pyrite. There is a 3cm wide seam of kaolinite													
	rich clay(oriented at 45° to ca.)													

48260

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-4
SHEET 2 OF 3
PAGE

DIP TEST		
	ANGLE	
OOTAGE	READING	CORRECTED

PROPERTY
LEVEL
SECTION
DATE STARTED
DATE FINISHED

COLLAR LAT. N.
DEP. E.
ELEV.
INCLN.
BEARING

TOTAL DEPTH
CORE SIZE
LOGGED BY
PLOTTED ON
DRILLED BY

EPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
	32.7m to 34.5m Alteration to chlorite and minor amounts		Chlorite	C18655	32.7m	33.7m	0.06					0.12	0.22	
	of kaolinite.		Chlorite	C18656	33.7m	34.7m	0.06					0.20	0.38	
	33.3m to 33.4m clay (fault gouge or infilling). Either													
	side of clay is o.1m of siliceous rock with finely													
	disseminated pyrite.													
	36.6m to 36.8m Alteration to chlorite and kaolinite.		Chlorite	C18657	36.6m	37.1m	0.02					0.02	0.04	
	Portions, particularly along fractures are limonite													
	stained.													
	39.5m to 39.6m Pegmatite: both contacts are at 70° to ca.													
	There is finely disseminated pyrite near the contacts.													
	41.1m to 41.5m Weak alteration to chlorite.													
	43.0m to 43.1m Pegmatite: the top contact is at 90° to													
	ca and the bottom contact is at 40° to ca.													
	44.6m to 44.7m Alteration to chlorite.													
	46.2m to 46.3m Pegmatite: both contacts are at 45° to ca.													
	46.6m to 46.7m Pegmatite: both contacts are at 45° to ca.													
	46.7m to 47.0m Weak Alteration to chlorite.													
	47.0m: 1cm wide band of calcite at 40° to ca.													
	51.4m to 51.7m Pegmatite: both contacts are at 80° to ca.													
	51.7m to 52.6m Weak kaolinite alteration.													
	52.9m to 53.0m Pegmatite: both contacts are at 50° to ca.													
	53.3m to 53.6m Pegmatite: both contacts are at 50° to ca.													
	53.9m to 54.0m Pegmatite: both contacts are at 50° to ca.													
	54.5m to 54.6m Pegmatite: both contacts are at 50° to ca.													
	54.9m to 55.5m Pegmatite: both contacts are at 50° to ca.													
	63.5m to 64.8m Pegmatite: chlorite along the bottom													
	contact. Both contacts are at 60° to ca.													
	65.5m to 65.6m Pegmatite: both contacts are at 60° to ca.													
	66.6m to 66.9m Pegmatite: both contacts are at 80° to ca.													
	75.0m to 76.6m Weak alteration to chlorite and Kaolinite.													

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TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-4
SHEET 3 OF 3
PAGE

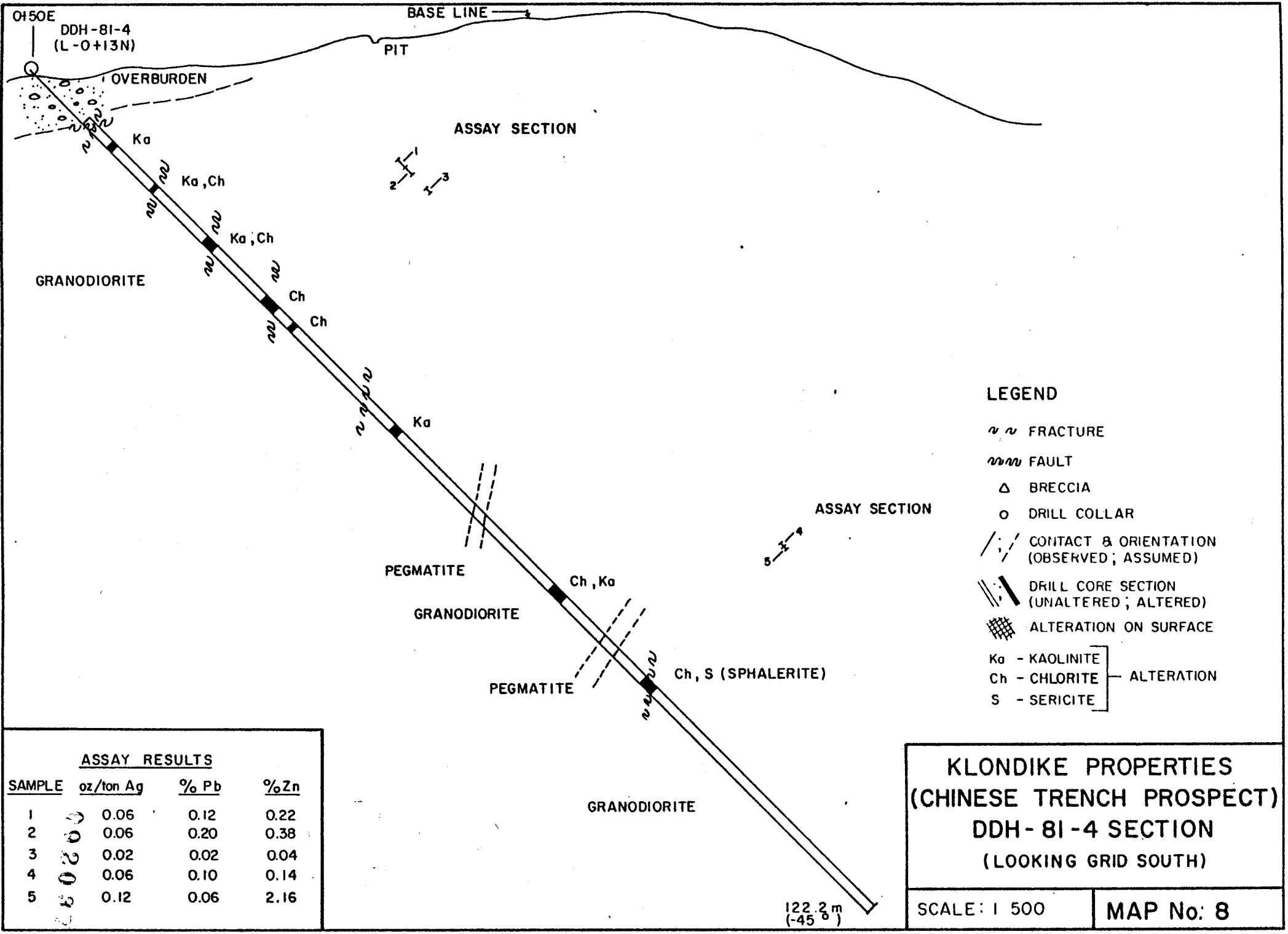
DIP TEST		
	ANGLE	
OOTAGE	READING	CORRECTED

PROPERTY .....
LEVEL .....
SECTION .....
DATE STARTED .....
DATE FINISHED .....

COLLAR LAT. .....N..
DEP. .....E..
ELEV. .....
INCLN. .....
BEARING .....

TOTAL DEPTH .....
CORE SIZE .....
LOGGED BY .....
PLOTTED ON .....
DRILLED BY .....

EPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
	82.5m to 84.1m Pegmatite: both contacts are at 80° to ca													
	84.8m to 85.5m Weak alteration to chlorite.													
	88.5m to 89.7m Strong altertaion to chlorite.		Chlorite	C18658	88.4m	88.9m	0.06					0.10	0.14	
	89.1m to 89.2m Quartz with disseminated pyrite and a 1cm		Chlorite	C18659	88.9m	89.2m	0.12					0.06	2.16	
	wide band of grey sphalerite at 45° to ca.													
	96.6m to 96.7m Pegmatite: both contacts are at 40° to ca.													
	98.9m to 99.0m Weak alteration to chlorite. Limonite													
	staining along fractures.													
	100.1m to 100.2m Pegmatite: both contacts are at 45°to ca.													
	102.3m to 102.4m Pegmatite: both contacts are at 45°to ca.													
	112.2m to 112.5m Weak alteration to chlorite.													
	120.0m to 121.0m Pegmatite: both contacts are at 30°to ca.													
222	END OF HOLE													



LEGEND

- FRACTURE
- FAULT
- BRECCIA
- DRILL COLLAR
- CONTACT & ORIENTATION (OBSERVED; ASSUMED)
- DRILL CORE SECTION (UNALTERED; ALTERED)
- ALTERATION ON SURFACE

ALTERATION:
- Ka - KAOLINITE
- Ch - CHLORITE
- S - SERICITE

ASSAY RESULTS

SAMPLE	oz/ton Ag	% Pb	% Zn
1	0.06	0.12	0.22
2	0.06	0.20	0.38
3	0.02	0.02	0.04
4	0.06	0.10	0.14
5	0.12	0.06	2.16

KLONDIKE PROPERTIES
(CHINESE TRENCH PROSPECT)
DDH-81-4 SECTION
(LOOKING GRID SOUTH)

SCALE: 1 500

MAP No: 8

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-5
SHEET 1 OF 2
PAGE

DIP TEST		
OOTAGE	ANGLE READING	CORRECTED
llar		-45°
4.3m	49.5°	-41°

PROPERTY Klondike (B.C.)
prospect Chinese Trench
claim
SECTION Denis
DATE STARTED 13/9/81
DATE FINISHED 15/9/81

COLLAR LAT. L0+63 N
DEP. 0+58 E
ELEV. 5350ft (1630m)
INCLN. -45°
BEARING 325°

TOTAL DEPTH 114.3m (375 ft)
CORE SIZE NQ
LOGGED BY W. Darch
PLOTTED ON
DRILLED BY G+D

EPTH(m)	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
.1	Overburden: consists of fine gravel and sand.													
-9.8	Granodiorite: This is a medium to course grained, white/grey, non magnetic rock. Where unaltered it consists ot 50-60% subhedral feldspar, 20-30% quartz, 15-20% hornblende and 10-15% biotite. The mafics are often segregated and concentrated in small patches. Calcite and chlorite occur along narrow randomly oriented fractures. In the altered sections the feldspars and the mafic minerals alter to kaolinite chlorite and sericite. These sections are also more siliceous. This section is slightly blocky.													
-14.6	Pegmatite: This is a course grained leucocratic, non magnetic rock. It consists of 70% feldspar and 30% quartz. The upper contact is at 30° to core axis(ca) and the bottom contact is at 45° to ca.													
6-114.3	Granodiorite: As before. This section is moderately competent.													
	14.6m to 17.1m This section is fine grained. The composition is the same.													
	17.1m to 18.4m Pegmatite: The contacts are irregular.													
	18.4m to 21.7m Weak alteration to chlorite.													
	21.7m to 22.6m Pegmatite: Both contacts are at 45° to ca.													
	47.5m to 48.4m Alteration to chlorite													
	47.8m to 48.0m Mud seam. The mud is dark green and is composed primarily of chlorite.													
	50.8m to 50.9m Pegmatite. Both contacts are at 50° to ca.													

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-5
SHEET 2 OF 2
PAGE

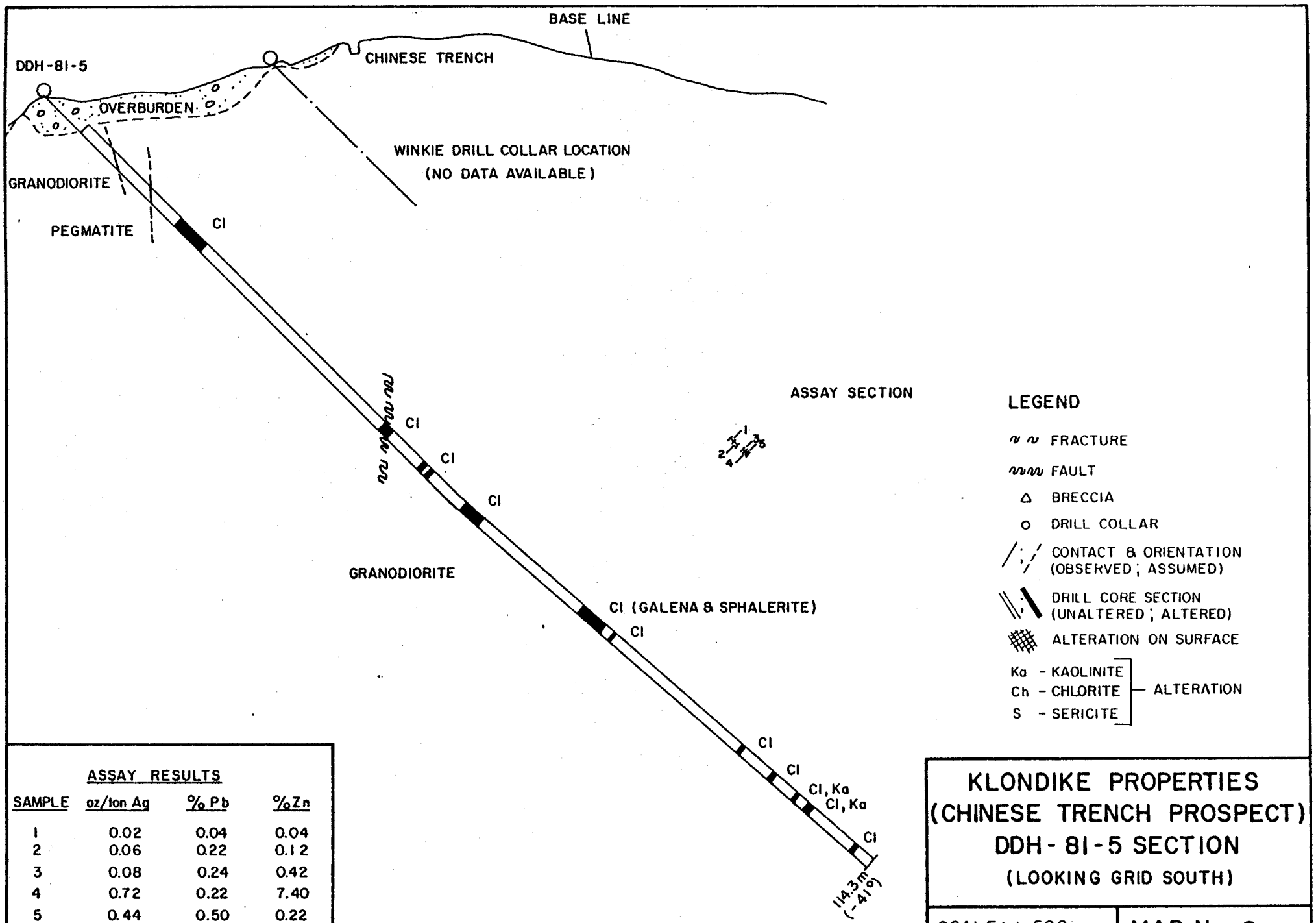
DIP TEST		
	ANGLE	
OOTAGE	READING	CORRECTED

PROPERTY .....
LEVEL .....
SECTION .....
DATE STARTED .....
DATE FINISHED .....

COLLAR LAT. .....N.
DEP. .....E.
ELEV. .....
INCLN. .....
BEARING .....

TOTAL DEPTH .....
CORE SIZE .....
LOGGED BY .....
PLOTTED ON .....
DRILLED BY .....

EPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
	52.9m to 53.0m Alteration to chlorite. Limonite staining is present along and adjacent to fractures.													
	53.5m to 53.6m Pegmatite. Both contacts are at 45° to ca.													
	53.6m to 53.7m Alteration to chlorite. Limonite staining is present along and adjacent to fractures.													
	54.5m to 56.0m Alteration to chlorite.													
	59.1m to 61.3m Altertaion to chlorite.													
	69.8m to 69.9m Pegmatite: Both contacts are at 45°.													
	70.6m to 70.8m Pegmatite: Both contacts are at 45°.													
	71.6m to 72.1m Weak chlorite alteration.													
	71.8m A 2cm wide quartz vein which is stained a turquoise colour due to chlorite.													
	74.5m to 74.6m Pegmatite: Both contacts are at 70° to ca.													
	75.0m to 77.7m Intense alteration to chlorite. Disseminated galena is present in this section.		Chlorite	75.1m	75.6m	0.02						0.04	0.04	
			Chlorite	75.6m	76.1m	0.06						0.22	0.12	
	77.3m to 77.4m Siliceous band (dog tooth quartz) with visible galena and sphalerite.		Chlorite	76.8m	77.2m	0.08						0.24	0.42	
			Chlorite	77.2m	77.3m	0.72						0.22	7.40	
	79.2m to 79.3m Alteration to chlorite with limonite staining along and adjacent to fracture.		Chlorite	77.3m	77.6m	0.44						0.50	0.22	
	87.0m to 87.1m Pegmatite: Both contacts are at 30° to ca.													
	96.6m to 96.7m Alteration to chlorite													
0	97.1m to 97.2m Pegmatite: Both contacts are at 50° to ca.													
60	100.6m to 101.3m Alteration to chlorite.													
20	104.1m to 104.3m Alteration to chlorite.													
0	105.6m to 106.9m Alteration to chlorite.													
3	111.9m to 112.5m Alteration to chlorite.													
2														
.3	END OF HOLE													



ASSAY RESULTS

SAMPLE	oz/ton Ag	% Pb	% Zn
1	0.02	0.04	0.04
2	0.06	0.22	0.12
3	0.08	0.24	0.42
4	0.72	0.22	7.40
5	0.44	0.50	0.22

KLONDIKE PROPERTIES
(CHINESE TRENCH PROSPECT)
DDH-81-5 SECTION
(LOOKING GRID SOUTH)

SCALE: 1 500

MAP No. 9

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-6
SHEET 1 OF 2
PAGE

DIP TEST		
	ANGLE	
OTAGE	READING	CORRECTED
lar		-45°
3	48°	-39°

PROPERTY Klondike (B.C.)
prospect ~~work~~ Chinese Trench
claim ~~section~~ Denis
DATE STARTED 16/9/81
DATE FINISHED 17/8/81

COLLAR LAT. L1+13 N.
DEP. 0+66 E.
ELEV. 1620m(5315 ft)
INCLN. -45°
BEARING 325°

TOTAL DEPTH 84.8m (278 ft)
CORE SIZE NQ
LOGGED BY W. Darch
PLOTTED ON
DRILLED BY G + D

PTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
9	Overburden: consists of fine gravel and sand.													
-25.9	Granodiorite: This is a medium to course grained, white/ grey, non magnetic rock. Where unaltered it consists of 50-60% subhedral feldspar, 20-30% quartz, 15-20% hornblende and 10-15% biotite. The mafic component is often segregated and concentrated in small patches and bands. Calcite and chlorite infill narrow randomly oriented fractures. In the altered sections the feldspars and the mafic minerals alter to kaolinite, chlorite and sericite. The altered sections are slightly more siliceous.													
9-46.0	Leucocratic Granite (Pegmatite?): This is a fine, grained, buff coloured, non magnetic rock. Its composition is the same as the pegmatites only has a higher mafic content (approx. 5% hornblende) and is most likely a fine grained phase of the pegmatite. The core is blocky and both contacts have been ground. 32.3m to 38.7m Weak alteration to chlorite. 36.2m to 36.3m mud seam													
9-56.7	Granodiorite: As before. 46.0m to 47.0m Alteration to chlorite and kaolinite. 54.6m to 56.7m Alteration to chlorite and kaolinite.													
7-58.8	Leucocratic Granite (Pegmatite): As before. The upper contact has been ground but the bottom contact is intact and is sharp at 25° to ca.													
	092037													

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-6
SHEET 2 OF 2
PAGE

DIP TEST		
OOTAGE	ANGLE READING	CORRECTED

PROPERTY
LEVEL
SECTION
DATE STARTED
DATE FINISHED

COLLAR LAT. N
DEP. E
ELEV.
INCLN.
BEARING

TOTAL DEPTH
CORE SIZE
LOGGED BY
PLOTTED ON
DRILLED BY

EPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
0-56.7	Granodiorite: As before													
	46.0m to 47.0m Alteration to chlorite and kaolinite.													
	54.6m to 56.7m Altertaion to chlorite and kaolinite.													
7-58.8	Leucocratic Granite (Pegmatite) As before. The upper													
	contact has been ground but the bottom contact is intact													
	and is sharp at 25° to ca.													
8-84.8	Granodiorite: As before.													
	63.0m to 63.4m Alteration to chlorite and kaolinite.		Chlorite	C18666	63.0m	63.1m	0.78					0.14	0.10	
	Galena is finely disseminated throughout this section		Chlorite	C18667	63.1m	63.4m	0.04					0.04	0.12	
	69.4m to 70.2m Alteration to chlorite		Chlorite	C18668	69.4m	69.7m	0.06					0.16	0.12	
	69.7m to 69.8m Mineralized section containing fine		Chlorite	C18669	69.7m	69.8m	4.00					15.4	4.38	
	grained galena and pyrite and sphalerite		Chlorite	C18670	69.8m	70.1m	0.04					0.10	0.12	
	71.3m to 71.5m Pegmatite. Both contacts are at 45° to													
	ca.													
	82.5m to 83.0m Pegmatite. Both contacts are at 45° to													
	ca.													
8	END OF HOLE													

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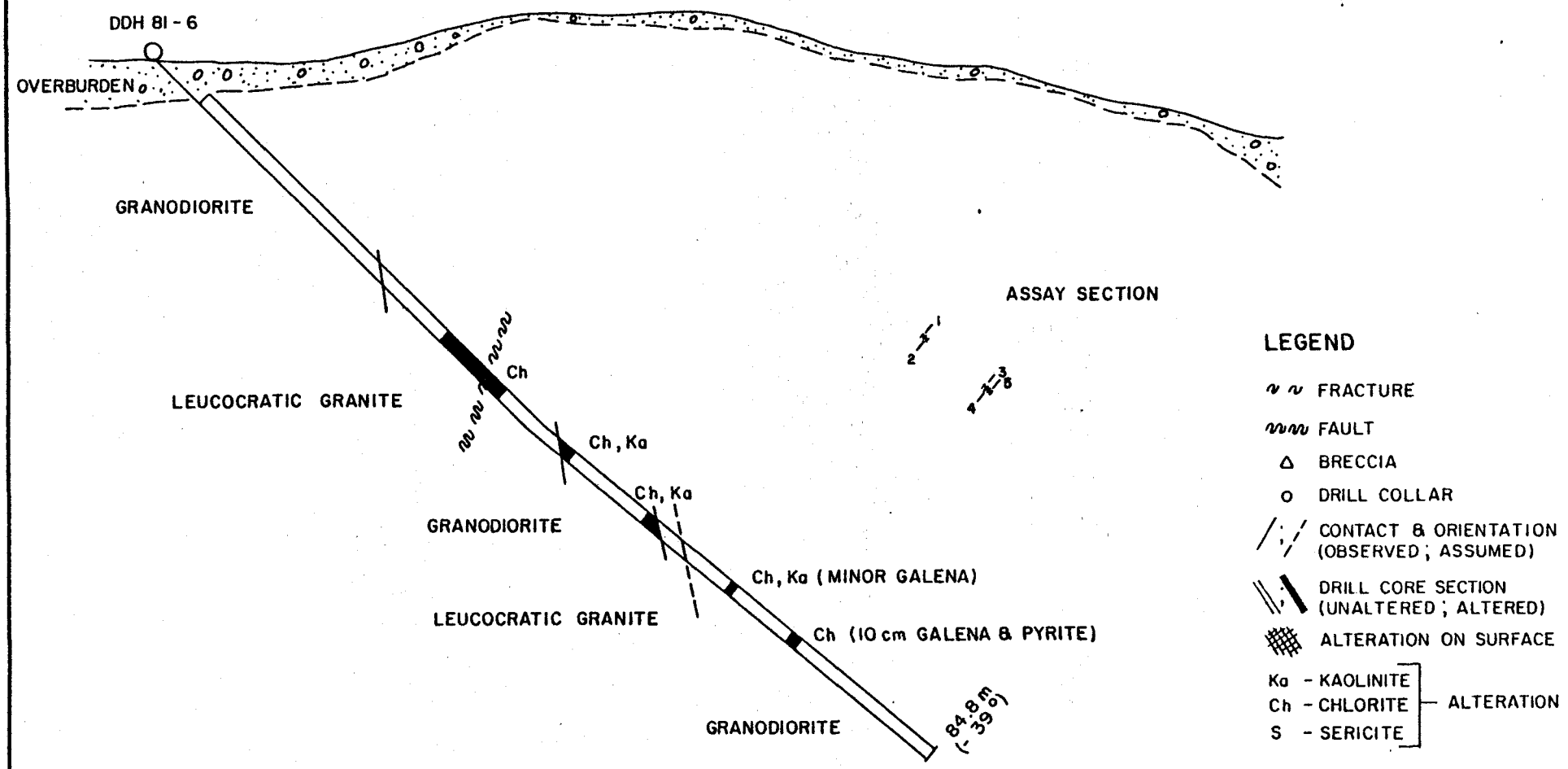

LEGEND

- FRACTURE
- FAULT
- Δ BRECCIA
- o DRILL COLLAR
- CONTACT & ORIENTATION (OBSERVED ; ASSUMED)
- DRILL CORE SECTION (UNALTERED ; ALTERED)
- ALTERATION ON SURFACE

ALTERATION
- Ka - KAOLINITE
- Ch - CHLORITE
- S - SERICITE

ASSAY RESULTS

SAMPLE	oz/ton Ag	% Pb	% Zn
1	0.78	0.14	0.10
2	0.04	0.04	0.12
3	0.06	0.16	0.12
4	4.00	15.40	4.30
5	0.12	0.10	0.12

KLONDIKE PROPERTIES
(CHINESE TRENCH PROSPECT)
DDH-81-6 SECTION
(LOOKING GRID WEST)

SCALE: 1 500'

MAP No. 10

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-7
SHEET 1 OF 2
PAGE

DIP TEST		
FOOTAGE	ANGLE READING	ANGLE CORRECTED
collar		-45°
68.5m	47°	-38°

PROPERTY Klondike (B.C.)
LEVEL Chinese Trench (Pit)
SECTION Denis
DATE STARTED 18/9/81
DATE FINISHED 19/9/81

COLLAR LAT. L2+90 N.
DEP. 0+63W E.
ELEV. 5075ft.
INCLN. -45°
BEARING 165°

TOTAL DEPTH 68.6m(225 ft)
CORE SIZE NQ
LOGGED BY W. Darch
PLOTTED ON
DRILLED BY G+D

DEPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
-4.0	Overburden: consists of 50% sand and gravel and 50% large angular boulders (up to 0.5m in diameter)													
.0-54.9	Granodiorite: This is a medium to course grained, white/grey, non magnetic rock. Where unaltered it consists of 50% - 60% subhedral to anhedral feldspar, 20-30% quartz, 15-20% hornblende and 10-15% biotite. The mafic component is often segregated and concentrated in large patches and bands. These mafic rich patches constitute approximately 60% of the core in this hole. Calcite, chlorite and kaolinite infill narrow randomly oriented fractures. In the altered sections the feldspars and the mafic minerals alter to kaolinite chlorite and sericite. The altered sections are generally more siliceous. Galena and sphalerite occur in quartz bands or veins located in sections of intense chlorite alteration.													
	4.0m to 8.2m frost shattered resulting in very blocky core.													
	6.3m to 6.7m Pegmatite. Both contacts are at 50° to core axis (ca).													
	7.1m to 7.4m Alteration to chlorite and sericite. Limonite staining occurs along and immediately adjacent to narrow fractures.													
	7.9m to 8.2m Pegmatite.													
	8.5m to 8.6m Pegmatite. Both contacts are at 45° to ca.													
	9.4m to 9.5m Alteration to chlorite and sericite.													
	14.9m to 15.2m Pegmatite. Both Contacts are at 35° to ca.													
	19.6m to 19.8m Pegmatite. Both Contacts are at 80° to ca.													
	26.6m to 26.8m Alteration to chlorite.													
	28.3m to 28.4m Pegmatite. Both contacts are at 40° to ca.													

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TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: ~~DDH-81-7~~
SHEET 2 OF 2
PAGE

DIP TEST		
OOTAGE	ANGLE READING	ANGLE CORRECTED

PROPERTY
LEVEL
SECTION
DATE STARTED
DATE FINISHED

COLLAR LAT. N.
DEP. E.
ELEV.
INCLN.
BEARING

TOTAL DEPTH
CORE SIZE
LOGGED BY
PLOTTED ON
DRILLED BY

DEPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
	29.2m to 29.5m Alteration to chlorite.													
	29.7m to 29.8m Pegmatite. Both contacts are at 45° to ca.													
	32.2m to 32.6m Alteration to chlorite and sericite.													
	34.7m to 35.0m Pegmatite. Both contacts are at 45° to ca.													
	36.0m to 36.2m Pegmatite. Both contacts are at 30° to ca.													
	36.6m to 36.7m Alteration to chlorite.													
	38.4m to 40.7m Alteration to chlorite and sericite.													
	39.7m to 39.9m Pegmatite. Both contacts are at 60° to ca.													
	43.3m to 44.1m Alteration to chlorite and sericite.													
	Limonite staining along fractures.													
	43.7m to 43.75m Quartz vein at 30° to ca. Within the		Chlorite	C18671	43.2m	43.7m	0.06					0.02	0.02	
	quartz are bands of course grained galena, pyrite &		Chlorite	C18672	43.7m	43.9m	0.58					34.8	2.94	
	sphalarite. These bands are also at 30° to ca. This		Chlorite	C18673	43.9m	44.2m	0.06					0.08	0.08	
	mineralization, although less extensive, is the same													
	as is exposed in the "pit".													
	47.7m to 47.9m Pegmatite. Both contacts are at 40° to ca.													
	48.2m to 51.0m Alteration to kaolinite.													
	53.2m 1cm wide fracture infilled with kaolinite at 25° to ca.													
.9-57.4	Pegmatite: This unit is fine grained near its margins													
	becoming course grained towards the centre. It is a													
	leucocratic non magnetic rock which consists of 70%													
	feldspar and 30% quartz. Both contacts are at 70° to ca.													
.9-68.6	Granodiorite: As before.													
	57.4m to 57.9m Alteration to chlorite. Pyrite is diss-													
	eminated through this section.													
	60.1m to 60.2m Pegmatite. Both contacts are at 85° to ca.													
.6	END OF HOLE													

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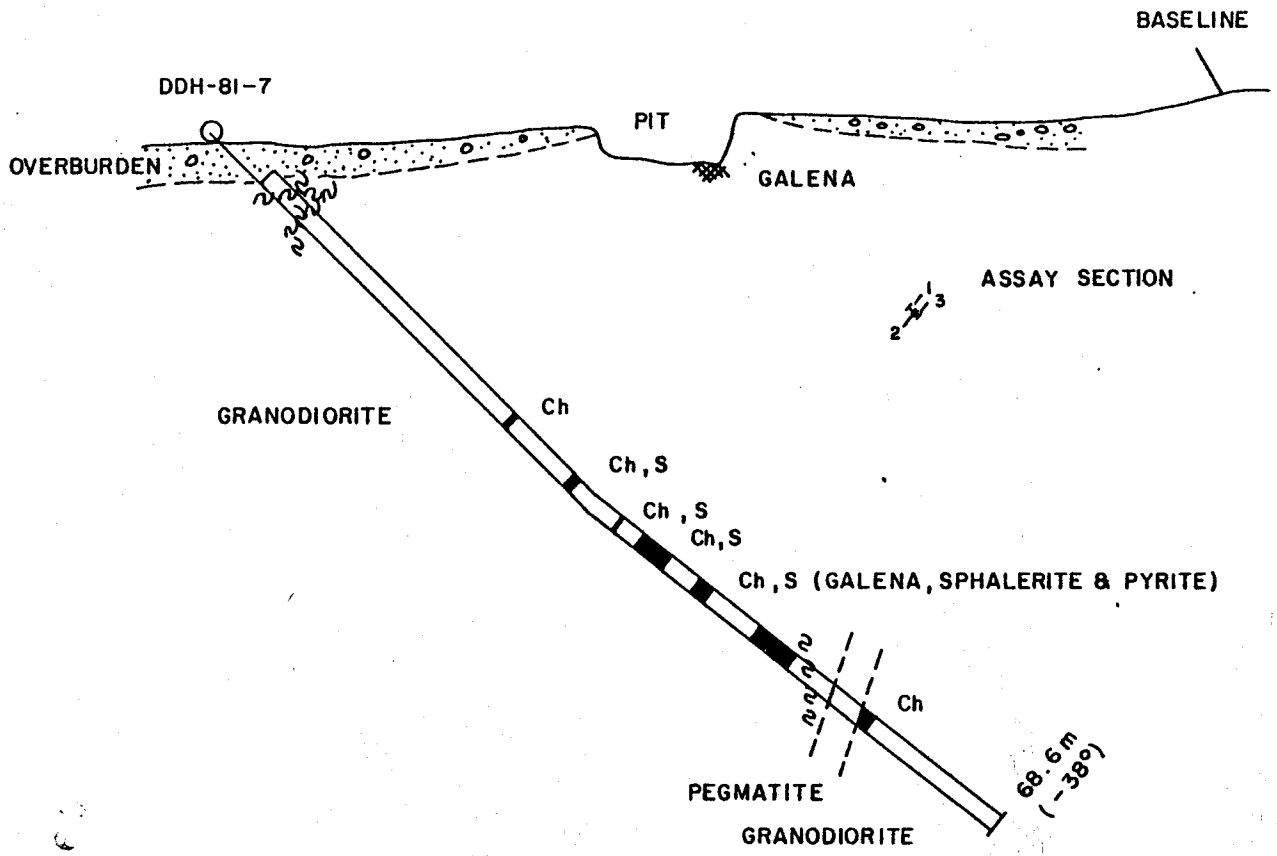


LEGEND

- FRACTURE
- FAULT
- BRECCIA
- DRILL COLLAR
- CONTACT & ORIENTATION (OBSERVED; ASSUMED)
- DRILL CORE SECTION (UNALTERED; ALTERED)
- ALTERATION ON SURFACE

ALTERATION:
- Ka - KAOLINITE
- Ch - CHLORITE
- S - SERICITE

ASSAY RESULTS

SAMPLE	oz/ton Ag	% Pb	%Zn
1	0.06	0.02	0.01
2	0.58	3.48	2.94
3	0.06	0.08	0.08

KLONDIKE PROPERTIES
(PIT PROSPECT)
DDH - 81 - 7 SECTION
(LOOKING GRID WEST)

SCALE: 1 500 | MAP No. 11

TERRA MINING AND EXPLORATION LTD.
DIAMOND DRILL HOLE LOG

D.D.H. No.: DDH-81-8
SHEET 1 OF 2
PAGE

DIP TEST		
OTAGE	ANGLE READING	CORRECTED
lar		-45°
m		-45°

PROPERTY Klondike (B.C.)
LEVEL Lucky Target 1
SECTION Lucky
DATE STARTED 20/9/81
DATE FINISHED 23/9/81

COLLAR LAT. L1+15 N.E
DEP. 0+45 X N
ELEV. 6100ft (1860m)
INCLN. -45°
BEARING 150°

TOTAL DEPTH 91.4m(330 ft)
CORE SIZE NQ
LOGGED BY W. Darch
PLOTTED ON
DRILLED BY G+D

EPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
.4	Overburden: consists of 50% sand and gravel and 50% angular boulders (up to 0.5m in diameter)													
-91.4	Granodiorite. This is a medium to course grained, white/grey, non magnetic rock. Where unaltered it consists of 50-60% subhedral to anhedral feldspar, 20-30% quartz, 15-20% hornblende and 10-15% biotite. The mafic component is of ten segregated and concentrated in small patches. In the altered sections the mafic minerals alter to chlorite and sericite giving the core a green/yellow colour.													
	13.4m to 13.8m Weak chlorite alteration.													
	16.6m to 17.2m Weak chlorite alteration.													
	20.8m to 21.0m Weak chlorite alteration.													
	23.0m to 23.3m Weak chlorite alteration.													
	23.05m to 23.10m Siliceous band with disseminated pyrite		Chlorite	C18678	23.0m	24.0m	0.16					0.06	0.02	
	23.4m to 26.1m Alteration to chlorite.													
	23.50m to 23.55m Clay seam. Fine grey/green chlorite rich clay.													
	28.7m to 28.9m Weak chlorite alteration.													
	31.6m to 31.9m Pegmatite. Both contacts are at 90° to the core axis (ca).													
	35.1m to 35.2m Pegmatite. Both contacts are at 45° to ca.													
	35.2m to 36.2m Alteration to chlorite.													
	37.7m to 38.1m Pegmatite. Both contacts are at 85° to ca.													
	41.8m to 42.0m Alteration to chlorite. Core is very soft.													
	47.9m to 48.0m Alteration to chlorite.													
	50.4m to 50.8m Alteration to chlorite. 50.6m Fractures at 90° to ca. Limonite staining along and immediately adjacent to the fractures.													

TERRA MINING AND EXPLORATION LTD.

DIAMOND DRILL HOLE LOG

D.D.H. No.: .....DDH-81-8.....
SHEET .....2... OF .....2....
PAGE .....

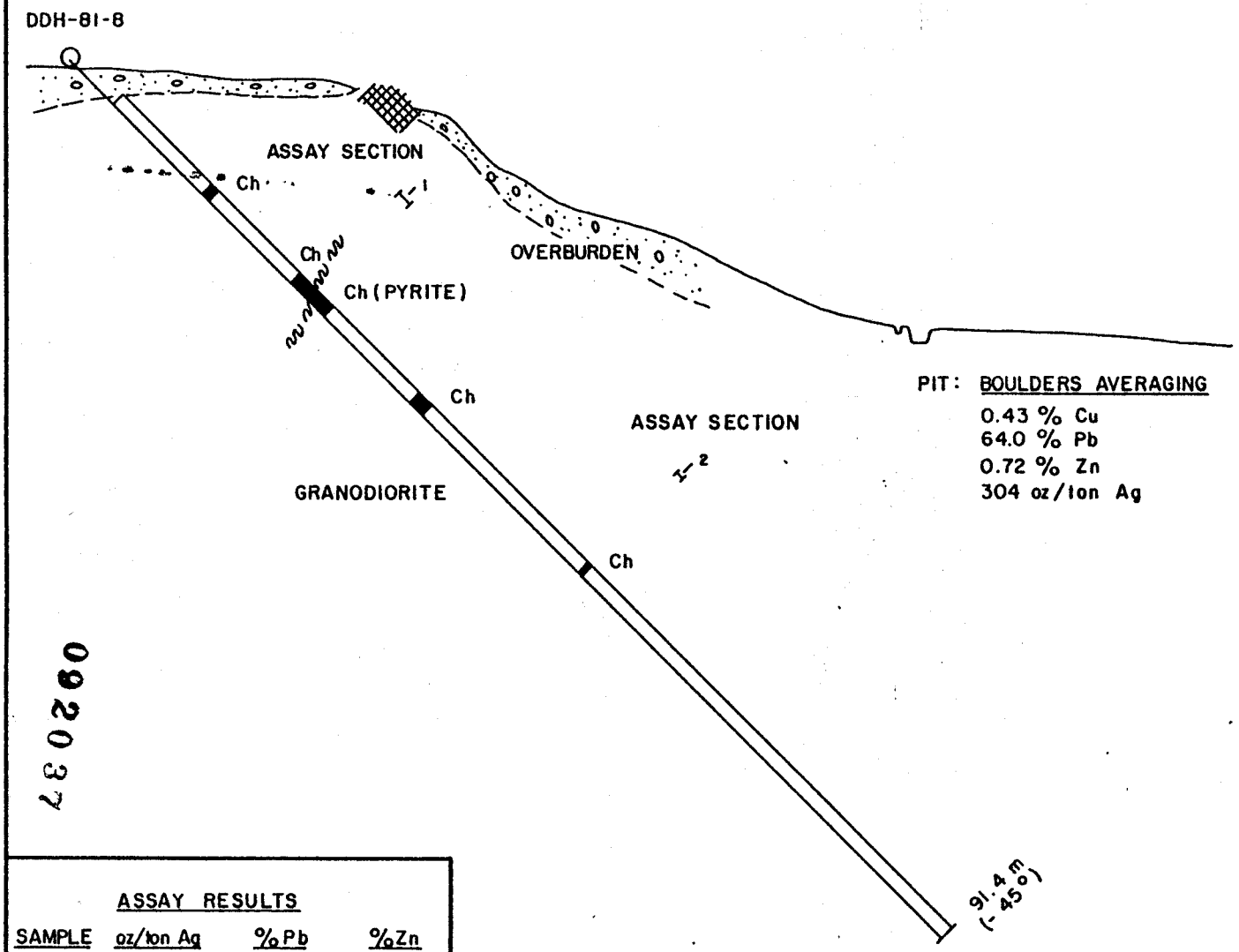
DIP TEST		
	ANGLE	
OOTAGE	READING	CORRECTED

PROPERTY .....
LEVEL .....
SECTION .....
DATE STARTED .....
DATE FINISHED .....

COLLAR LAT. .....N..
DEP. .....E..
ELEV. .....
INCLN. .....
BEARING .....

TOTAL DEPTH .....
CORE SIZE .....
LOGGED BY .....
PLOTTED ON .....
DRILLED BY .....

DEPTH	DESCRIPTION	DIP	ALTERATION	SAMPLE NO.	FROM	TO	ASSAYS Ag oz/t	Cu %	Co %	Bi %	Ni %	Pb %	Zn %	REMARKS
	53.3m to 53.6 Alteration to chlorite. 53.5m A 4cm wide													
	band of grey/green chlorite rich clay.													
	54.8m to 55.2m Weak chlorite alteration.													
	57.5m to 58.8m Weak chlorite alteration.													
	57.9m to 58.0m: 3cm of grey/green clay.													
	60.4m to 62.3m Weak chlorite alterations.													
	70.8m to 70.9m Weak chlorite alterations.													
.4	END OF HOLE													



PIT: BOULDERS AVERAGING
0.43 % Cu
64.0 % Pb
0.72 % Zn
304 oz/ton Ag

LEGEND

- FRACTURE
- FAULT
- Δ BRECCIA
- o DRILL COLLAR
- CONTACT & ORIENTATION (OBSERVED ; ASSUMED)
- DRILL CORE SECTION (UNALTERED ; ALTERED)
- ALTERATION ON SURFACE
- Ka - KAOLINITE
- Ch - CHLORITE
- S - SERICITE
- — ALTERATION

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ASSAY RESULTS

SAMPLE	oz/ton Ag	%Pb	%Zn
1	0.16	0.06	0.08
2	0.06	0.06	0.02

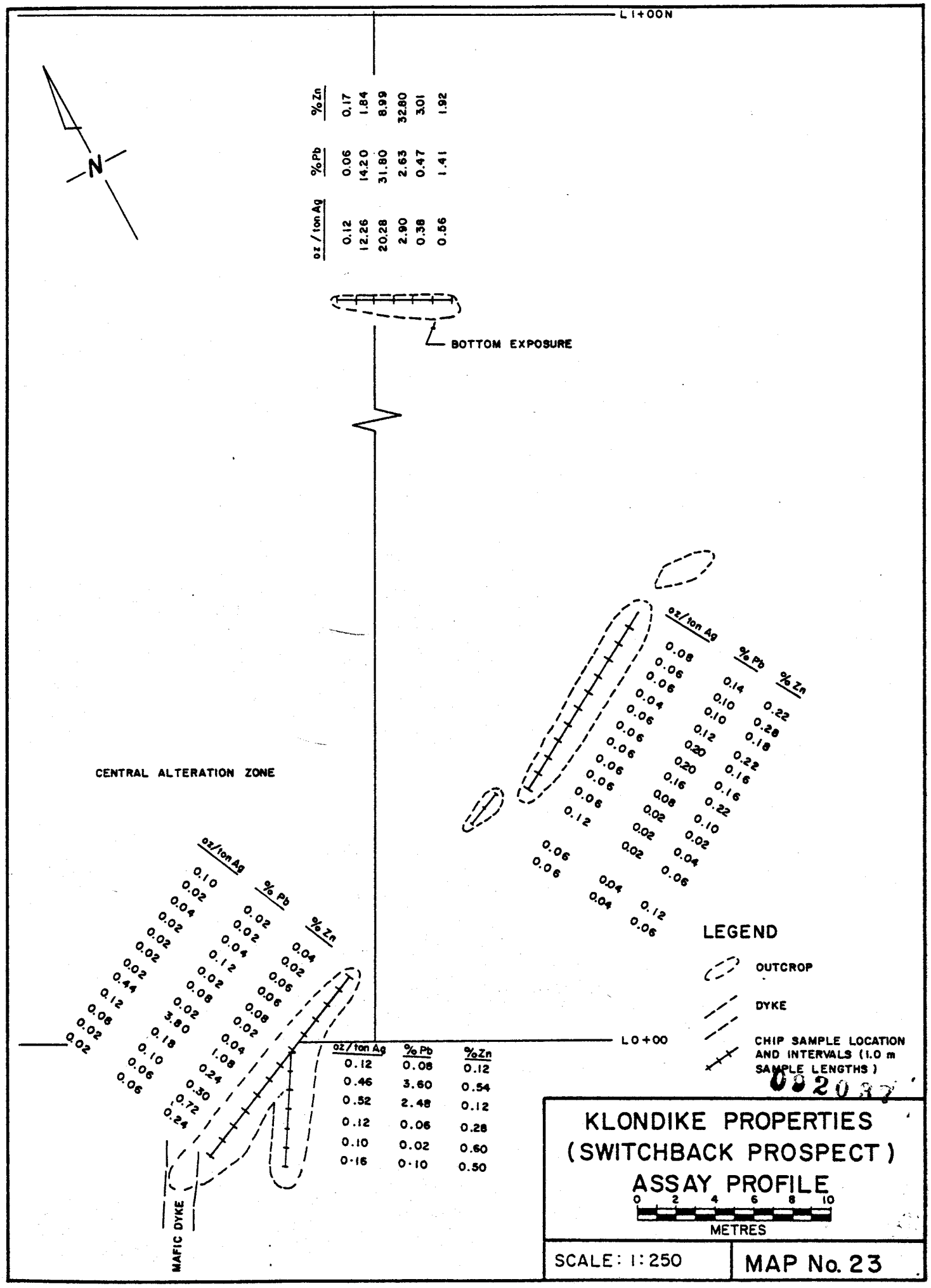
KLONDIKE PROPERTIES (LUCKY PROSPECT) DDH-81-8 SECTION (LOOKING GRID EAST)

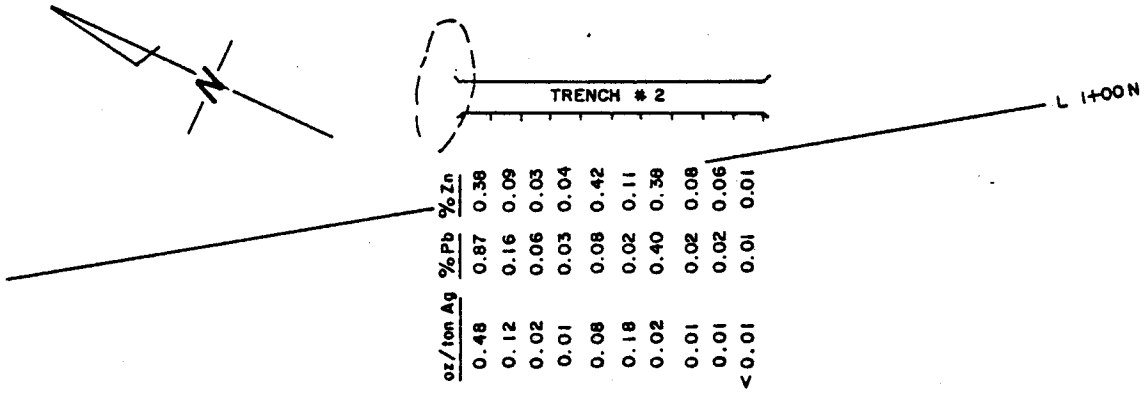
SCALE: 1 500

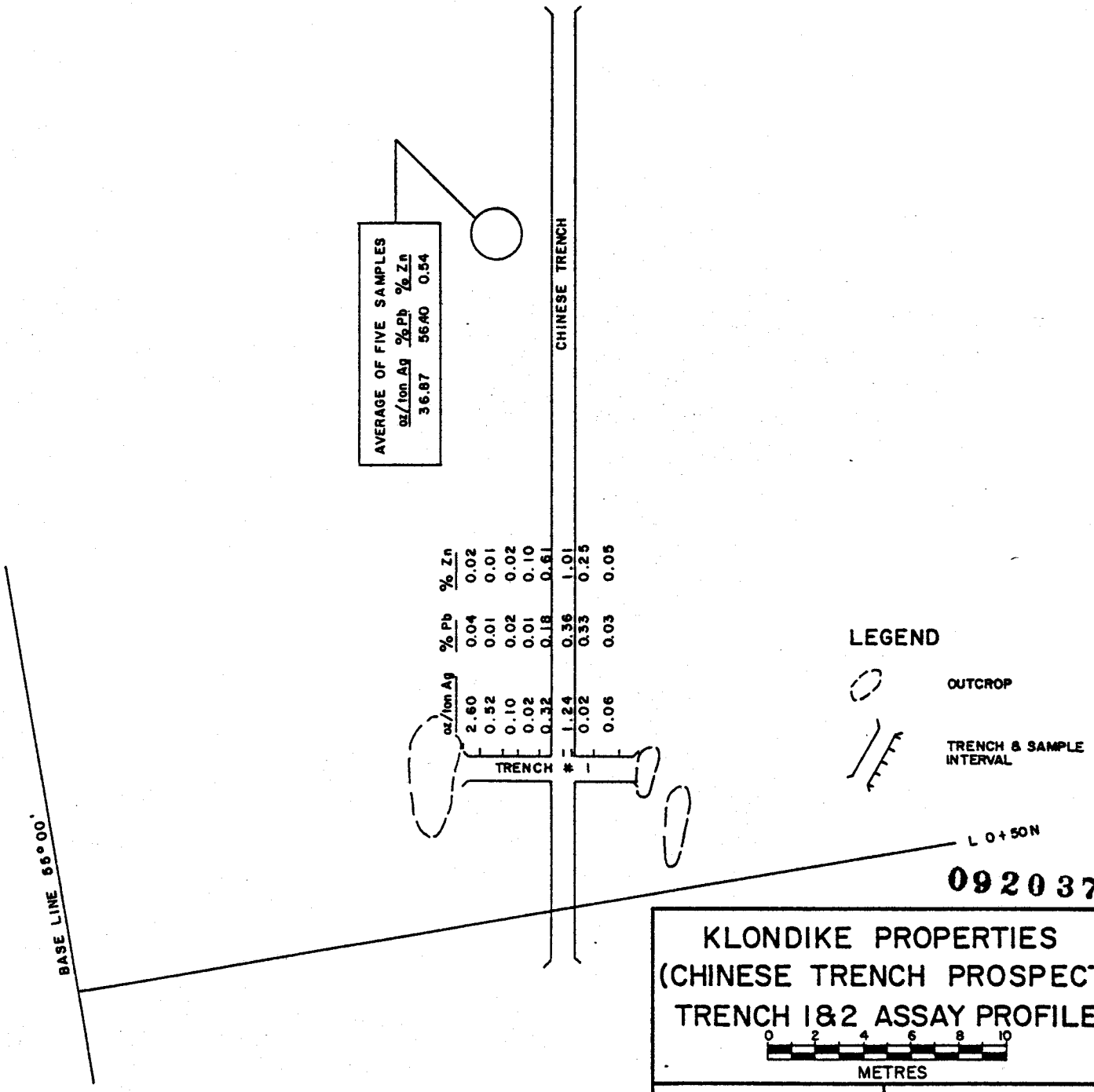
MAP No. 12

APPENDIX 7

TRENCH PROFILES


L1+00N
N
oz/ton Ag
% Pb
% Zn
0.12 0.06 0.17
12.26 14.20 1.84
20.28 31.80 8.99
2.90 2.63 32.80
0.38 0.47 3.01
0.56 1.41 1.92
BOTTOM EXPOSURE
CENTRAL ALTERATION ZONE
oz/ton Ag
% Pb
% Zn
0.08 0.14 0.22
0.06 0.10 0.28
0.06 0.10 0.18
0.04 0.12 0.22
0.06 0.20 0.16
0.06 0.20 0.16
0.06 0.16 0.16
0.06 0.08 0.22
0.06 0.02 0.10
0.12 0.02 0.02
0.02 0.04
0.02 0.06
0.06 0.04
0.06 0.04 0.12
0.06
oz/ton Ag
% Pb
% Zn
0.10 0.02 0.04
0.02 0.02 0.02
0.04 0.04 0.06
0.02 0.12 0.06
0.02 0.02 0.08
0.02 0.04 0.06
0.44 0.02 0.08
0.12 0.06 0.02
0.08 0.08 0.04
0.02 0.02 1.08
3.80 0.24
0.18 0.30
0.10 0.72
0.06 0.24
0.06
oz/ton Ag % Pb % Zn
0.12 0.08 0.12
0.46 3.60 0.54
0.52 2.48 0.12
0.12 0.06 0.28
0.10 0.02 0.60
0·16 0·10 0.50
L0+00
MAFIC DYKE
LEGEND
OUTCROP
DYKE
CHIP SAMPLE LOCATION AND INTERVALS (1.0 m SAMPLE LENGTHS)
KLONDIKE PROPERTIES
(SWITCHBACK PROSPECT)
ASSAY PROFILE
0 2 4 6 8 10
METRES
SCALE: 1:250
MAP No. 23





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KLONDIKE PROPERTIES (CHINESE TRENCH PROSPECT) TRENCH 1&2 ASSAY PROFILE

0 2 4 6 8 10
METRES

SCALE: 1:250

MAP No. 24

APPENDIX 8

PERSONNEL AND WORK DISTRIBUTION

PERSONNEL AND WORK DISTRIBUTION

PROSPECT EVALUATION (MAN DAYS M.D.)

NAME	ADDRESS	TITLE	SWITCHBACK PROSPECT	CHINESE TR. PROSPECT	PIT PROSPECT	LAKE PROSPECT	ALAN CR. PROSPECT	LUCKY PROSPECT	OTHER	TOTAL
*W. Darch	Edm. AB.	Geologist	33	23	6	9	3	23	1	98md
D. Darch	Edm. AB.	Geologist	5	1	1	6	3	3	1	20md
B. Poulin	Whitehorse, Alberta	Prospector	15	12	5	3	2	2	1	40md
J. Bisson	Montreal, Quebec	Assistant	9	9	2	5	3	3	1	32md
C. Poulin	Whitehorse, Yt.	Cook								37md
DIAMOND DRILLING			16 days	12 days	2 days			7 days		37 days

DIAMOND DRILL CREW	TITLE	DATE
A. Jean	Driller/Foreman	August 21 to September 15
J. Beaupre	Driller	August 21 to September 15
D. Rysstad	Helper	August 21 to September 7
M. Beaudoin	Helper	August 21 to September 15
S. Oleksiuk	Driller	September 15 to September 26
G. Delorme	Driller/Owner	September 15 to September 26
W. McDougall	Helper	September 7 to September 26
M. StJean	Helper	September 15 to September 26
-	Cook	August 21 to September 20

* Drill geologist: August 21 to September 26

09203

APPENDIX 9

COST STATEMENT

TABLE OF CONTENTS

1) SUMMARY

	YUKON	B.C.	TOTAL
Wages	1,522.50	20,629.00	22,151.50
Food & Accomodation	425.00	5,009.00	5,434.00
Transportation	200.00	8,281.48	8,481.48
Analytical	585.00	4,513.32	5,098.52
Diamond Drilling & Support	-	140,971.75	140,971.75
Report Preparation	1,000.00	8,428.00	9,428.00
Others	454.00	1,500.00	1,954.00
SUB-TOTAL	4,186.50	189,332.55	193,519.25
15% Terra Administration Overhead	630.00	28,399.88	29,027.88
TOTAL	4,816.50	217,732.43	222,548.93

2) ITEMIZED COSTS

2.a) Wages

Employee	No. of Days Yukon/B.C.	Rate/Day	Dates	Total Wages
Wayne Darch	3/95	$ 118.00	June 1-Aug. 1 Aug. 21-Sept. 26	11,564.00
Dianne Darch	3/17	$ 118.00	June 8-June 11 July 15-Aug. 1	2,360.00
Jacelyn Bisson	3/29	$ 50.00	June 29-July 30	1,600.00
Bruno Poulin	5/35	$ 90.90	June 1-July 25	3,677.50
Carmen Poulin	3/34	$ 70.00	June 16-July 30	2,550.00
Peter Pearsall	0/8	$ 50.00	June 1-June 9	400.00
			TOTAL	22,151.50
			YUKON:	1,522.50
			B.C. :	20,629.00

2.b) Food and Accomodation

Employee	No. of Days Yukon/B.C.	Rate/Day	Dates	Total
Wayne Darch	3/59	$ 26.00	June 1 - Aug. 1	1,612.00
Dianne Darch	3/17	$ 26.00	June 8 - June 11 July 15- Aug. 1	520.00
Jacelyne Bisson	3/29	$ 26.00	June 29- July 30	832.00
Bruno Poulin	5/35	$ 26.00	June 1 - July 25	1,040.00
Carmen Poulin	3/34	$ 26.00	June 16- July 30	962.00
Peter Pearsall	0/8	$ 26.00	June 1 - June 9	208.00
Helicopter Pilot	0/10	$ 26.00	Sept.16- Sept. 25	260.00
			TOTAL	$ 5,434.00
			YUKON:	$ 425.00
			B.C. :	$ 5,009.00

2.c) Transportation

June 8-11:	Air fare for W. & D. Darch (Edmonton - Watson Lk. - Edmonton)	$ 647.50
June 8-11:	Truck rental and gas	573.65
June 10 :	Helicopter @ $450/hour (plus fuel)	2,133.33
May 28 to June 26 :	Truck rental	1,325.00
June 29 to July 30 :	Airfare for J. Bisson (Edmonton - Watson Lk. - Edmonton).	325.00
June 29 to Aug 1 :	Airfare for W. Darch (Edmonton - Watson Lk. - Edmonton)	325.00
July 1-15:	Truck Rental	480.00
July 15 to Aug. 1 :	Airfare for D. Darch (Edmonton - Watson Lk. - Edmonton)	325.00
July 15 to Aug. 1 :	Truck Rental (plus fuel)	1,404.00
Aug. 21 to Sept. 26 :	Airfare for W. Darch (Yellowknife - Watson Lk-Edmonton)	647.50
Aug. 21 to Sept. 26 :	Gas	294.50
	TOTAL	8,481.48

2.d) Analytical

Chemex Lab

April 29/81	:	109 rock chip samples - Geochem for Cu, Mo, Pb, Zn, Ag, and Au @ $12.00/sample	$1,308.00
May 14/81	:	16 rock samples - assayed for Pb @ $5.00/sample	80.00
May 14/81	:	22 rock samples - assayed for Zn @ $5.00/sample	110.00
May 14/81	:	17 rock samples - assayed for Ag @ $6.00/sample	102.00
June 17/81	:	4 rock samples - 20 element spectrographics @ $21.00/sample	84.00
July 29/81	:	28 rock samples - assayed for Ag, Pb and Zn @ $19.50/sample	546.00
July 29/81	:	6 rock samples - assayed for Au, Ag, Pb and Zn @ $22.00/sample	132.00

Rossbacker Lab

July 24/81	:	32 rock samples - assayed for Ag, Pb and Zn @ $15.50/sample	496.00
Aug. 4/81	:	19 rock samples - assayed for Ag, Pb and Zn @ $15.50/sample	294.50
Sept. 17/81	:	43 rock samples - assayed for Ag, Pb and Zn @ $15.50/sample	666.50
	:	34 rock samples - assayed for Cu @ $5.00/ sample	170.00
	:	12 rock samples - assayed for Au @ $5.50/ sample	66.00
Sept. 30/81	:	42 rock samples - assayed for Ag, Pb and Zn @ $15.50/sample	651.10
Oct. 27/81	:	10 rock samples - assayed for Ag, Pb and Zn @ $15.50/sample	135.00

Loring Lab

Nov. 5/81	:	1 rock sample - assayed for Ag, Pb and Zn @ $15.50	15.50
		SUB-TOTAL	$4,856.60

SHIPPING OF SAMPLES

July 9	Watson Lake to Vancouver	35.30
July 19		23.50
July 26		29.72
July 31		19.00
Aug.		43.30
Sept. 5		23.50
Sept. 19		44.10
Sept. 25		23.50
	SUB-TOTAL	241.92
	TOTAL	5,098.52
	B.C. :	4,513.52
	YUKON :	585.00

2.e) DIAMOND DRILLING (AUGUST 21 TO SEPTEMBER 26)

Core Drilling	68,742.00
Overburden	4,509.00
Mobilization	5,000.00
Moving	26,075.00
Mixing Mud	475.00
Others	1,650.00
Delays and Standby	3,175.00
Materials	10,068.33
TOTAL	118,044.33
Helicopter Support (drill moves and crew transportation)	19,543.57
Fuel	3,383.85
TOTAL	140,971.75

Note: The following pages outline the cost breakdown of the above categories.

Core Drilling

Hole #	Size	From	To	Footage	Rate	Amount
81-1	NQ	32	355	323	$27.00	$ 8,721.00

Overburden

Hole #	Size	From	To	Footage	Rate	Amount
81-1	NQ	0	32	32	$27.00	$ 864.00

Mobilization

As per contract
One half due on first invoice $ 2,500.00

Moving

Date	Memo	Tractor Hours	Hours	Extra Man Hours
Aug 22	Unload truck and move to first hole	-	12	24
Aug 23	Complete move to first hole	-	12	24
Aug 24	Set up drill	-	12	24
Aug 27	Tear down on hole 81-1	-	6	-
Aug 31	Prepare site, move drill, set up	7	12	24
Aug 31	Tractor guarantee Aug 22-29, 5 days @ 3 hrs per day	15	-	-
		22	54	96

Hourly rate charge	54 hours @ $75 per hour	$ 4,050.00
Tractor charge	22 hours @ $50 per hour	1,100.00
Extra man charge	96 hours @ $25 per hour	2,400.00
		$ 7,550.00

Mixing Mud

Date	Hours
Aug 25	1
Aug 26	1
	2

2 hours @ $25.00 per hour $ 50.00

Delays and Standby

Date	Memo	Hours	
Aug 26	Reaming through cave	3	
Aug 27	Standby for tractor	5	
Aug 27	Standby for tractor	8	
		16	
	16 hours @ $75.00 per hour		$ 1,200.00

3 hours overnight hours

Materials

2 pails of alcomer @ $160 each	$	320.00
2 pails of liquid mud @ 165.each		330.00
		650.00
Add: 6% sales tax		39.00
		689.00
Add: 15% overhead charge		103.35
	$	792.35

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Core Drilling

Hole #	Size	From	To	Footage	Rate	Amount
81-2	NQ	33	356	323	$27.00	$ 8,721.00
81-3	NQ	20	426	406	27.00	10,962.00
81-4	NQ	22	401	379	27.00	10,233.00
81-5	NQ	20	375	355	27.00	9,585.00
81-6	NQ	16	275	259	27.00	6,993.00
81-7	NQ	14	225	211	27.00	5,697.00
81-8	NQ	10	300	290	27.00	7,830.00
				2223		$ 60,021.00

Overburden

Hole #	Size	From	To	Footage	Rate	Amount
81-2	NQ	0	33	33	$27.00	$ 891.00
81-3	NQ	0	20	20	27.00	540.00
81-4	NQ	0	22	22	27.00	594.00
81-5	NQ	0	20	20	27.00	540.00
81-6	NQ	0	16	16	27.00	432.00
81-7	NQ	0	14	14	27.00	378.00
81-8	NQ	0	10	10	27.00	270.00
				135		$ 3,645.00

Mobilization

As per contract
One half due on last invoice $ 2,500.00

Moving

Date		Tractor Hours	Hours	Extra Man Hours
Sept 1	Moving to Hole 81-2	-	7	-
Sept 3	Moving to Hole 81-3	2	12	-
Sept 5	Moving to Hole 81-4	5	8	16
Sept 6	Moving to Hole 81-4	3	3	6
Sept 7	Set-up hole #81-4	-	12	17
Sept 9	Tear down hole #81-4	-	8	-
Sept 10	Set up hole #81-5	4	4	-
Sept 13	Set up hole #81-5	-	10	20
Sept 16	Move to Hole #81-6	3	3	8
Sept 17	Move to Hole 81-7	4	5	14
Sept 20	Move to Hole 81-8	-	11	22
Sept 21	Move to hole 81-8	-	9	18
Sept 22	Setting up on hole #81-8	-	8	10
Sept 24	Tear down hole #81-8	-	12	24
Sept 25	Ready for loading	-	10	20
Sept 26	Moving to truck load point	-	10	20

Moving continued....

Hourly rate charge	132 hours @ $75 per hour	$ 9,900.00
Tractor charge	75 hours @ $50 per hour	3,750.00
Extra man charge	195 hours @ $25 per hour	4,875.00
		$ 18,525.00

Others

Date	Description	Hours
Sept 1	Reaming casing	2
Sept 3	Acid Test	1
Sept 5	Acid Test	1
Sept 9	Acid Test	1
Sept 15	Reaming casing	1
Sept 16	Reaming casing	1
Sept 16	Acid Test	1
Sept 16	Stabilize hole	2
Sept 17	Reaming cave	1
Sept 18	Acid Test	1
Sept 18	Reaming casing	2
Sept 18	Stabilize hole	1
Sept 19	Reaming cave	1
Sept 19	Drain water lines	2
Sept 20	Acid Test	1
Sept 23	Reaming casing	1
Sept 23	Water line	1
Sept 23	Acid Test	1
		22

22 hours @ $75.00 per hour $ 1,650.00

Mixing Mud

Date	Hours
Sept 1	1
Sept 2	1
Sept 3	1
Sept 4	1
Sept 15	1
Sept 15	1
Sept 16	2
Sept 16	1
Sept 17	1
Sept 18	1
Sept 18	2
Sept 22	2
Sept 23	2
	17

17 hours @ $25.00 per hour $ 425.00

Standby

Date	Memo	Hours	Extra Man Hours	
Sept 6	Standby because of rain	5	10	
Sept 15	Waiting to move	5	-	
Sept 17	Waiting to move	5	-	
Sept 19	Waiting for chopper	8	-	
		23	10	
	23 hours @ $75.00 per hour			$ 1,725.00
	10 hours @ $25.00 per hour			250.00
				$ 1,975.00

Materials

15 pails of alcomer @ $160 each	$ 2,400.00
15 pails of liquid mud @ $165 each	2,475.00
5 10' NW casing @ $126.75 per 10 ft.	633.75
4 NW casing shoes @ $140.00 each	560.00
3 2' NW casing @ $36.75 per 2 ft.	110.25
3 NW tricone bits @ $189.95 each	569.85
1 NQ bit	450.00
45 Gals cutting oil	310.00
45 Gals gas @ 1.61	72.45
20 Quarts oil @ 1.41	28.20
	7,609.50
Add: 6% sales tax	456.57
	8,066.07
Add: 15% overhead charge	1,209.91
	$ 9,275.98

Frontier Helicopters Ltd.
Abbotsford International Airport
Box 220, Abbotsford, B.C. Canada V2S 4N9
Telephone: Abbotsford 604-853-5887
Vancouver 604-526-0400
Watson Lake 403-536-7766

In Account With

Terra Mining and Exploration
#202, 7608 - 103 Street
EDMONTON, Alberta

INVOICE № 3381

Date: September 25, 1981

Reference Number:

TERMS: *Due when rendered. An interest charge of 2% per month will be charged on all past due accounts.*

ITEM	SERVICES PERFORMED					AMOUNT
	TICKET NO.	REGISTRATION	HOURS		FUEL	
/9/81	11048	LKL	3.0	1395.00	31.57	1426.57
/9/81	11050	LKL	3.0	1395.00		1395.00
/9/81	12101	LKL	3.0	1395.00		1395.00
/9/81	12102	LKL	3.0	1395.00		1395.00
/9/81	12103	LKL	5.8	2697.00		2697.00
			17.8	8277.00	31.57	

Wayne Daroch.
#107096.

092

TOTAL AMOUNT OF INVOICE 8308.57

Frontier Helicopters Ltd.
Abbotsford International Airport
Box 220, Abbotsford, B.C. Canada V2S 4N9
Telephone: Abbotsford 604-853-5887
Vancouver 604-526-0400
Watson Lake 403-536-7766

NOV 09 1981

In Account With

Terra Mining & Exploration
#242, 7608 - 103 Street
EDMONTON, Alberta

INVOICE [illegible]

Date: September 15, 1981

Reference Number: _____

TERMS: *Due when rendered. An interest charge of 2% per month will be charged on all past due accounts.*

ATTENTION: LINDA

ITEM	SERVICES PERFORMED				AMOUNT
	TICKET NO.	REGISTRATION	HOURS	[illegible]	
[illegible]	10516	FHP	2.2	[illegible]	[illegible]
[illegible]	10517	FHP	4.2	[illegible]	[illegible]
[illegible]	10518	FHP	3.9	[illegible]	[illegible]
			10.3	[illegible]	

09 20 37

TOTAL AMOUNT OF INVOICE 5407.50

Phoned Carol (1...) ... invoice
... – 21 + 22 of Sept.

Frontier

Frontier Helicopters Ltd.
Abbotsford International Airport
Box 220, Abbotsford, B.C. Canada V2S 4N9
Telephone: Abbotsford 604-853-5887
Vancouver 604-526-0400
Watson Lake 403-536-7766

In Account With

Terra Mining & Exploration
@202, 7608 - 103 Street
EDMONTON, Alberta

INVOICE № 3434

Date: October 8, 1981

Reference Number: ____________

TERMS: *Due when rendered. An interest charge of 2% per month will be charged on all past due accounts.*

ITEM	SERVICES PERFORMED				AMOUNT
	TICKET NO.	REGISTRATION	HOURS		
/9/81	10519	FHP/FHS	3.0	1575.00	1575.00
/9/81	9939	FHS	4.7	2467.50	2467.50
/9/81	9940	FHS	3.4	1785.00	1785.00
			11.1	5827.50	

Wayne Darch. (Rec. Oct. 19/81)
#107096 Klondike

0920

TOTAL AMOUNT OF INVOICE 5827.50

2.e) Others

Rental of front end loader:	June 4 to 12	
	30 hours @ $50.00/hr.	$ 1,500.00
Lumber for camp repair		295.00
Fuel oil for generator		159.00
		$ 1,954.00

2.f.) Report Preparation

Wages: Sept. 28 to Dec. 1 - 46 days @ $118.00/day (geologist)	$ 5,428.00
Drafting: Maps	4,000.00
	$ 9,428.00

3. DESIGNATION OF COSTS TO CLAIM GROUPS FOR ASSESSMENT

3.1) Yukon (Total $4,816.50)

Alan Creek Prospect (90% of total):	Bru 1-36	(30%):	1,444.95
	S 1-6	(30%):	1,444.95
	Reg 1-4	(30%):	1,444.95
Ant 5 Prospect (10% of total) :	Ant 1-6	:	481.65

3.2) B.C. (Total $217,732.43)

	Denis	Mar	Rock	Lucky
Wages	16,380.50	439.00	464.50	3,345.00
Food & Accomodation	3,580.00	109.00	84.00	618.00
Transportation	6,742.00	170.00	195.00	1,374.00
Analytical	3,463.50	67.00	118.00	865.00
Diamond Drilling and Support	100,785.00	-	-	39,936.83
Report	4,214.00	1,053.50	1,053.50	2,107.00
Others	1,500.00	-	-	-
15% Overhead Charge	20,357.05	257.78	287.25	7,694.02
TOTAL	157,476.05	2,114.28	2,202.25	55,939.85

APPENDIX 10

POLISHED SECTIONS

(boulder samples from Lucky #1 and Lucky #4)

Vancouver Petrographics Ltd.

JAMES VINNELL, Manager
JOHN G. PAYNE, Ph. D. Geologist

P.O. BOX 39
8887 NASH STREET
FORT LANGLEY, B.C.
VOX 1JO

PHONE (604) 888-1323

Invoice 3038

Report for: Wayne Darch,
Terra Mining & Exploration Ltd.,
202, 7608 103rd Street,
EDMONTON, Alberta, T6E 4Z8

Samples: LUCKY 1, LUCKY 4

Summary:

The samples are of a massive sulfide vein? dominated by galena, with moderately abundant tetrahedrite and sphalerite, and lesser chalcopyrite. The sulfides are intimately intergrown with quartz patches and crystals.

Locally galena forms coarser grained patches with relatively few inclusions. Tetrahedrite occurs in patches from 0.03 to 2 mm in size; some of these are relatively pure, others are intimately intergrown with lesser galena. Sphalerite occurs in irregular to rounded patches relatively free of inclusions. Chalcopyrite forms patches in galena, and is most common along borders of the sulfide patch.

The rocks have been slightly to moderately replaced by secondary minerals. Covellite is common in LUCKY 1 along prominent fracture networks in tetrahedrite, and also occurs with secondary Pb minerals in replacements of galena. Chalcopyrite is altered to hematite and lesser covellite.

Silver in the sample would probably be mainly concentrated in tetrahedrite, with a lesser amount probable in galena.

John Payne

John Payne,
November 1981

LUCKY 1 Galena-Tetrahedrite-Sphalerite-Chalcopyrite-Quartz Vein?

The rock is dominated by galena with patches of other minerals scattered throughout the rock. Tetrahedrite in particular is strongly to moderately fractured and replaced along fractures by non-reflective minerals and covellite.

galena	60-65%	
tetrahedrite	12-15	
sphalerite	2- 3	
chalcopyrite	1	
covellite	1½-2	
pyrite	trace	
quartz	15-20	(may include other silicates)

Galena forms a few coarser grained patches without inclusions or with only minor very fine grained inclusions of tetrahedrite and lesser chalcopyrite. More commonly, galena contains moderately abundant to abundant inclusions of sulfides and quartz, ranging in grain size from very fine to coarse. Galena is replaced slightly along grain borders by secondary Pb-minerals, possibly cerusite.

Tetrahedrite occurs in rounded to subrounded patches from 0.05 to 2 mm in size. Generally it is not intimately intergrown with galena. A few patches up to 1.5 mm in size consist of very fine grained intergrowths of rounded grains of tetrahedrite, sphalerite, and quartz, with locally chalcopyrite in a groundmass of galena. Tetrahedrite commonly is strongly fractured, with fractures filled by secondary minerals, some non-reflective, and commonly moderately abundant covellite in extremely fine grained aggregates.

Sphalerite forms subrounded patches with irregular borders averaging 0.05-0.3 mm in size, generally surrounded by galena.

Chalcopyrite forms irregular patches averaging 0.05-0.1 mm in size as scattered inclusions in galena, and locally forms a few patches up to 0.7 mm in size associated with galena and tetrahedrite.

Pyrite forms one anhedral grain 0.02 mm across associated with galena and tetrahedrite.

Quartz occurs in subrounded patches from 0.03 to 0.2 mm in size, and in scattered coarser patches up to a few mm across.

Lucky 4 Galena-Tetrahedrite-Sphalerite-(Chalcopyrite)-Quartz Vein?

The sample is dominated by galena, with patches up to 4* mm across containing abundant tetrahedrite, and others up to 1.5 mm across of sphalerite. Chalcopyrite occurs mainly on borders of sulfide patches with quartz, and is moderately to strongly replaced by hematite and minor covellite. Quartz forms a variety of textures, from euhedral crystals surrounded by galena to very fine grained aggregates. Minor plagioclase strongly altered to sericite and biotite are associated with some patches of quartz.

galena	65-70%
quartz	17-20
tetrahedrite	3-5
chalcopyrite	1-1½
sphalerite	2-4
plagioclase	2-3 (mainly replaced by sericite)
biotite	minor

Galena occurs in a variety of intergrowths. In places it forms coarse grained aggregates relatively free of inclusions of other sulfides or quartz. More commonly it contains abundant very fine to fine grained inclusions of quartz, and elsewhere it contains moderately abundant patches of other sulfides.

Quartz forms some euhedral grains up to 1 mm in size, and anhedral grains of similar size, commonly in aggregates of a few grains, and with smoothly curved borders against galena. Quartz also forms a variety of very fine to fine grained aggregates, some of which are intergrown with plagioclase; the latter mineral generally is destroyed and replaced by extremely fine to very fine grained patches of sericite. In places galena occupies irregular to veinlike interstitial patches up to 0.5 mm across between euhedral quartz grains.

Tetrahedrite occurs in patches in galena. Commonly these patches consist dominantly of tetrahedrite with 10-20% galena in an interstitial network around fine grained tetrahedrite. Elsewhere, the minerals are in an intergrowth somewhat resembling myrmekite. Locally tetrahedrite forms coarser grains with minor galena. Patches of tetrahedrite range from about 0.5 to 4 mm in size.

Sphalerite forms anhedral, commonly subrounded patches from 0.3 to 1 mm in size.

Chalcopyrite forms irregular patches up to 1 mm across along the border of the sulfide zone. These are strongly replaced by hematite? and locally secondary covellite is present.

Secondary alteration of sulfides has occurred along the borders of the patch. As described above, chalcopyrite commonly is strongly replaced. Some secondary covellite occurs as replacement of galena and less commonly of tetrahedrite. Secondary Pb minerals (cerusite) and opaque oxide? replace galena along borders of the sulfide patch. In places galena is slightly replaced along abundant closely spaced cleavage planes.

* 4 mm in hand sample, 2 mm in polished block