

REPORT ON THE GEOLOGY OF THE
AINE CLAIMS
LOCATED AT MIKE LAKE
DAWSON MINING DIVISION
YUKON TERRITORY



Co-ordinates: LAT. 64° 15' N LONG. 137° 55' W

Report Prepared for S. Young

Vancouver, B.C.
June 2, 1982

D.P. Taylor, P. Eng.

091446



examined by

1961

1961

1961

1961

1961

Regional

Geological

of Yukon Territory.

Commissioner

This report has been examined by
the Geological Evaluation Unit
under Section 85 (4) of the Quartz
Mining Act and is deemed as
representative of the amount
of \$ 4,800

Perkins

to Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

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INTRODUCTION

This report is based on a personal examination and sampling of the Aine claims on July 16th, 1981 by the writer in conjunction with the report of F. Holcapek, P.Eng. of November, 1975 of work performed on this ground by Canalta Resources Ltd. The Canalta Resources Ltd. work as reported by F. Holcapek, P. Eng. provides the foundation of this report and its findings were confirmed by the writer's inspection. Between 1975 and the present the ground has been acquired, by staking, by Mr. S. Young.

PROPERTY

The property is comprised of 24 claims staked and recorded in the Yukon Territories namely:-

Claims	Recording Date	Grant Numbers
AINE 1 - 24	July 7, 1981	YA 55689 - YA 55712

Mr. Seamus Young, who staked AINE 1-8 holds unregistered Bills of Sale for AINE 9-24.

Tags have been issued for the claims and the claims are free of any dispute.

LOCATION & ACCESS

The property is located approximately 75 km. ENE of Dawson City, Y.T. and is 26 km. east of the Dempster Highway. Topography between the Dempster Highway and the property is clear and open for road-building.

For current purposes access is best achieved by helicopter from Dawson City. It has been proven possible to land a float plane on Mike Lake but it is now considered too small a lake to be used for such purposes.

Coordinates of the property are:

Lat. 64° 15' N Long. 137° 55' W

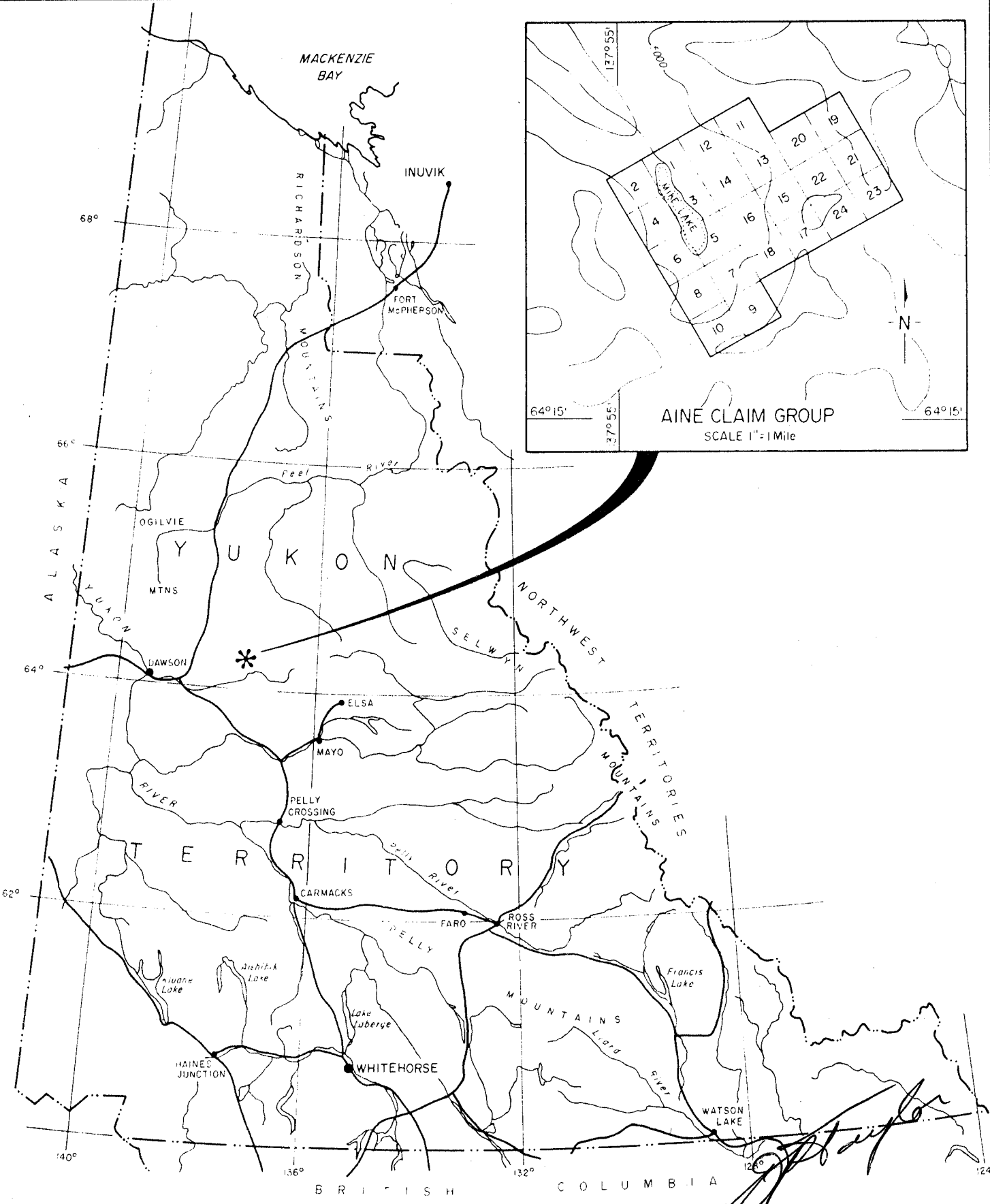
TOPOGRAPHY AND CLIMATE

The claims are located in a rugged but open area. About half of the property is in meadow, above timberline, and the other half is steep to precipitous mountain outcrop. Elevations on the property vary between 1600 and 2200 metres A.S.L. which is all above timberline at these latitudes. Lower elevations are covered by glacial debris and higher elevations are generally rock outcrop.

Vegetation cover is very light, generally of moss and lichen.

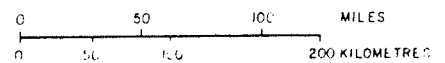
The climate is typical of the central Yukon with severe winters and short summers. The active exploration working season is from early July to late September.

Water for exploration and mining purposes is readily available from Mike Lake.



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AINE CLAIM GROUP

PROPERTY LOCATION MAP



HISTORY

The claims are in an area that has attracted considerable interest over the years for both precious and base metals.

Companies active in the immediate claim area have been Belmoral Mines Ltd., Hart River Mines Ltd., Canwest Mines Ltd., and Canalta Resources Ltd.

The primary economic attraction for mining companies in the Mike Lake areas has been the significant gold values found on the Aine Claims and in adjacent areas over the last 20 years.

The Aine claims themselves cover much of the area originally held by Hart River Mines.

During the middle 1970's Canalta Resources Ltd., held this ground and some trenching and minor diamond drilling was performed. The report of F. Holcapek, P. Eng., reports their findings. The program of Canalta seems to have been an attempt to develop a high grade core to the property (which failed) larger and lower grade, or other potential high grade, potentials of the property were not investigated by previous programmes.

GEOLOGY

The regional geology of the area is covered by the Geological Survey of Canada, Paper 62-7 with the accompanying map 14-1962.

This shows the region to be largely underlain by a northwest trending belt of Precambrian and/or Cambrian sedimentary and metamorphic rocks intruded by small granitic to

basic sills. The older rocks (unit 3) consist of quartzite, sandstone, conglomerate, shales, slates, phyllites, various schists and limestone.

Intrusives occupy the southern-central portion of the claim group. These consist of variously textured syenitic rocks with lesser diorite.

The sedimentary units are strongly contorted and generally contain appreciable amount of pyrrhotite and pyrite giving them a rusty appearance. Several large dykes, up to 50 feet wide, cut the intrusives and sediments.

STRUCTURAL GEOLOGY

Structurally the area has been intensively folded as indicated by a series of tight overturned folds along a steep hillside along the eastern boundary of the claim group.

The isolated quartzite peaks at the mountain peaks surrounding Mile Lake are part of a tightly folded anticline bisected by deep glacial valleys or cirques.

Sheeting observed in the syenite, causing mass wasting by large blocks and boulders, is essentially parallel to the bedding of the sediments. North and east of the south veins the syenite, feldspar porphyry is overlaying the sediments. A zone of up to 5 feet wide of thermal metasomatism associated with a chilled contact is exposed in this area. Jointing within the syenite is parallel to fracturing within the sediments.

The sulfide content of the sediments, expressed

by intensively rusty areas decreases with the distance from the intrusive contact.

Two areas of strong easterly trending fractures are indicated by the south vein and north vein.

The first is confined to the syenite outcrop area and appears to be a continuation of the fracture zone investigated on the AS claims to the west. Heavy rubble cover precludes more detailed surface investigation.

The second, in vicinity of the north zone, lies within an area of quartz outcrops.

PROPERTY GEOLOGY

The north zone of the property has been trenched, and sampled by Canalta Resources Ltd. Check sampling was performed by the writer on three of the trenches. Samples were, in each case, taken from oxidized material and are, therefore, subject to some interpretation. Values in gold and arsenic are consistent in each sampling, confirming the presence of economically interesting mineralization. Check sampling covered a strike length of about 1000 feet.

The mineralization system in the North zone has been assumed by previous examiners to be a straight forward vein system. F. Holcapek, however, noted in his report that "en echelon" and "horsetailing" exist on this structure. Mr. Holcapek also noted that he saw little evidence of mineralization on the ridge above the showings due to weather conditions at the time of his inspection. The writer's inspection

of the ridge also showed no significant mineralization, but, inspection of the three trenches indicates the mineral bearing structures develop toward the overburden covered valley.

The occurrence of quartz veining and of gossanous arsenopyrite zones is more predominant toward the valley bottom. The area of exploration interest on the north zone is overburden covered but should be amenable to quite definitive location by simple geophysical techniques. This area is considered to be of prime importance for exploration by the writer.

Mr. Holcapek's samples in this area ranged from 0.003 to 0.438 oz Au/ton over seven exposures. The writer had three relatively large trenches remaining exposed on the inspection of Aug. 1981 and check sampling of badly exposed and sloughed material yielded assays of 0.001 to 0.047 oz. Au/ton. The proportionately lower assays are believed to be a function of the severely weathered sample condition. There does not appear to be a direct relationship between gold and arsenic assay values on this showing, however, their co-occurrence in the area is obviously related.

The North showing has received the most attention to date and has been tested by both trenching and short hole diamond drilling.

Gold values obtained from trench sampling and diamond drilling are higher on the north than on the south showings. Outcrop exposure on the north showings are much more extensive than on the south. Holcapek's values from trenches on the north zone range from .003 to 1.548 oz Au/ton;

his most interesting assay was from Trench 1 (sample 32003) which ran 1.012 oz. Au/ton across 3 feet of width. A grab sample taken from this location by the writer ran 2.12 oz. Au/ton and 0.27% Cobalt in a matrix containing 17.25% arsenic.

Diamond drilling conducted by Canalta Resources Ltd. consisted of three short holes at -60 to -70° dip between 187 and 240 feet of depth. Two of the holes intersected mineralization of economic importance; DDH 1 hit 4-6 feet of 0.128 oz. Au/ton at 120 feet of depth and DDH3 hit 4.2 feet of 0.715 oz. Au/ton at 155 feet of depth. Values encountered in drilling were on down dip extensions of surface vein showings. The diamond drilling confirmed the downward extension of mineral bearing structures and determined some continuity if not consistency in economically important mineral content. Sections of the drill holes are appended to this report.

CONCLUSIONS

The Aine claims are underlain by Precambrian to Cambrian sedimentary and metamorphic rocks intruded by later dykes and sills of granitic to basic intrusives.

Two systems of arsenopyrite containing gold values have been partially explored in outcrop areas of the property. Exploration potential for further mineralization of possible economic significance is considered good in overburden covered areas.

A programme of EM surveying is considered the best tool to search for structures containing massive arsenopyrite such as has been found in exposures discovered to date. Such structures found by EM should be further explored by short hole diamond drilling and, where overburden is shallow, by trenching.

A simple EM programme utilizing a VLF EM-16 should be used over the overburden covered areas. Horizontal loop EM of the MAX-MIN II type is expected to be the best tool for defining VLF anomalies to depth and for dip attitudes.

RECOMMENDATIONS

The overburden covered area of the claims should be traversed in a north-south direction by a VLF EM-16 machine. This should be done on a north-south oriented grid with grid lines 30 meters apart and stations every 15 meters. Anomalies found in this survey should be tested with a MAX MIN II EM machine and the anomalies profiled and defined.

Test pits should be dug on anomalies to determine overburden depth and where possible surface trenching is recommended.

Anomalies too deeply covered for surface trenching should be tested by diamond drilling. Short hole drilling should be amenable to use of a small light machine however a minimum BQ core size is recommended.

Cost Estimates for the above programme are as follows:

Phase I

Camp	\$ 1,500
Helicopter	10,000
EM-surveys - 2men - 5 days	2,000
Transport (Air fares)	5,500
Supplies	2,500
Supervision	1,000
Trenching-2 men - 10 days	<u>4,000</u>
	26,500
Contingencies @ 20%	<u>5,300</u>
	<u>\$ 31,800</u>

Phase II programme costs will be dependent on the number of anomalies encountered and a separate cost estimate for that programme should be dependent on Phase I results.

Respectfully submitted,



D. P. Taylor, P. Eng.

Vancouver, B.C.
June 2, 1982

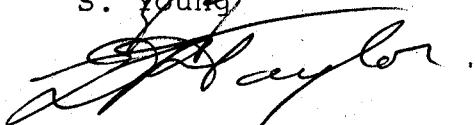
Statement of Expenditures

AINE 1-24 Claims (YA 55689-YA 55712)
Dawson Mining District
Yukon Territory

Aircraft Charter	\$ 1,097
Helicopter	1,881
Assays	189
Accommodation 3 men x 4 nights	720
Salaries	500
Professional fees & Report	<u>1,500</u>
	\$ 5,887

Verified by receipt check


S. Young


July 16-1982
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ACME ANALYTICAL LABORATORIES LTD.

Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B.C. V6A 1R6

Telephone: 253 - 3158

To: Donegal Development
725 - 475 Howe St.,
Vancouver, B.C.

Attn.: Mr. S. Young

File No. 81-0935

Type of Samples Rocks

Disposition _____

ASSAY CERTIFICATE

No.	Sample	Ag oz/ton	Au oz/ton	Co%	As%			No.
1	AINE # 1	.01	.001	.01	.13	✓		1
2	2	.03	.047	.01	18.56	✓		2
3	3	.05	.027	.01	18.56	✓		3
4	4	.08	.101	.02	.39	✓		4
5	5	.10	2.120	.27	17.25	✓		5
6	AINE # 6	.27	.011	.01	1.82	✓		6
7								7
8	YR # 1	1.10	3.780	.13	17.25			8
9	2	.07	.188	.03	7.81			9
10	YR # 3	.69	1.710	.10	17.25			10
11								11
12								12
13								13
14								14
15								15
16								16
17								17
18								18
19								19
20								20

All reports are the confidential property of clients.

DATE SAMPLES RECEIVED Aug. 4, 1981

DATE REPORTS MAILED Aug. 8, 1981

ASSAYER Dean Toye

DEAN TOYE, B.Sc.
CHIEF CHEMIST
CERTIFIED B.C. ASSAYER

CERTIFICATION

I, D.P. Taylor, P. Eng. of 1884 West 7th Avenue,
Vancouver, British Columbia, do hereby certify that:

1. I am a consulting geologist residing at the above address.
2. I have practised as an exploration geologist for the last thirteen years.
3. I am a graduate of the Royal School of Mines, Imperial College, London University, M. Sc. D.I.C., 1971.
4. I am a registered member, in good standing, of the Association of Professional Engineers of the Province of British Columbia.
5. I neither hold nor expect to receive any interest in the Aine claims, subject of this report, or in any lands in adjacent areas.

Vancouver, B.C.
June 2, 1982



D.P. Taylor, P. Eng.

TRENCH I
0.95Ag, 0.675Au, 4.5'

DDH-1

TALUS OVERBURDEN

SYENITE
PORPHYRY

0.22 Ag, 0.012 Au, 0.05'

0.03 Ag, 0.010 Au, 0.08'

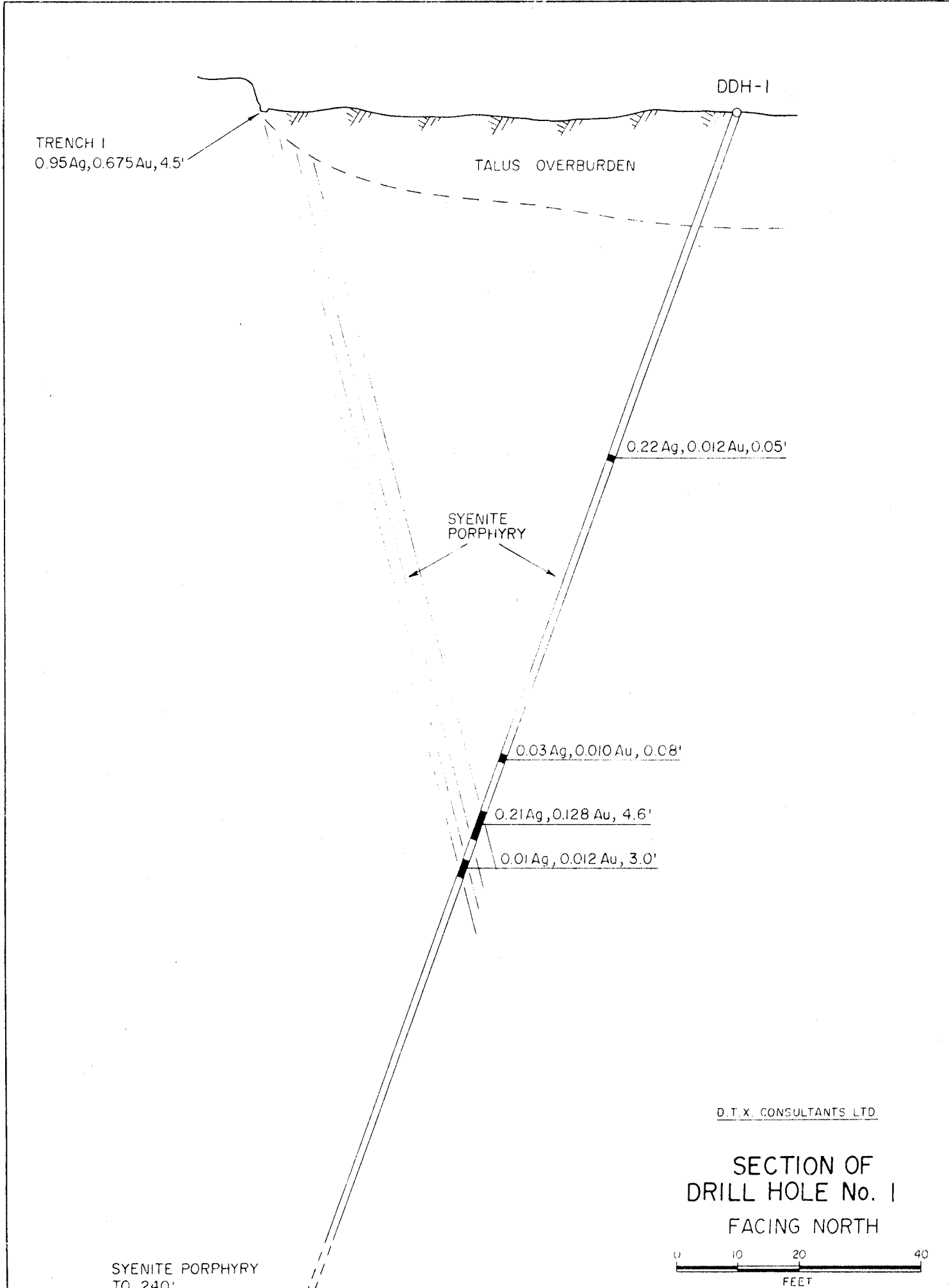
0.21 Ag, 0.128 Au, 4.6'

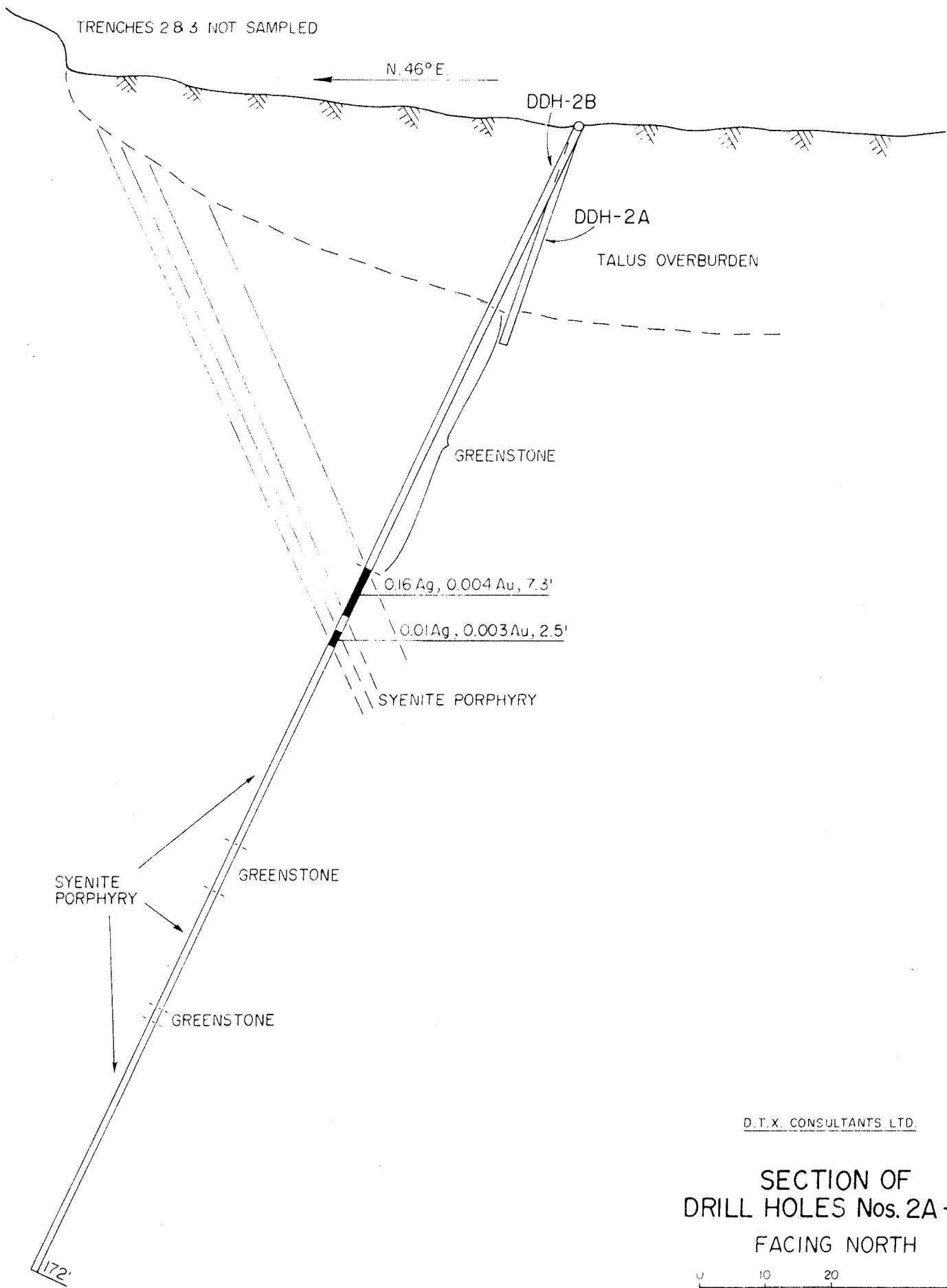
0.01 Ag, 0.012 Au, 3.0'

SYENITE PORPHYRY
TO 240'

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SECTION OF
DRILL HOLE No. 1
FACING NORTH





TRENCHES 2 & 3 NOT SAMPLED

N. 46° E.

DDH-2B

DDH-2A

TALUS OVERBURDEN

GREENSTONE

0.16 Ag, 0.004 Au, 7.3'

0.01 Ag, 0.003 Au, 2.5'

SYENITE PORPHYRY

SYENITE PORPHYRY

GREENSTONE

GREENSTONE

172'

D.T.X. CONSULTANTS LTD.

SECTION OF
DRILL HOLES Nos. 2A + 2B
FACING NORTH



TRENCH 4 100' W
0.03 Ag, 0.329 Au, 4'

DDH-3

TALUS

OVERBURDEN

SYENITE
PORPHYRY

ORE ZONES

0.18 Ag, 0.060 Au, 2.8'

0.04 Ag, 0.005 Au, 13.3'

0.25 Ag, 0.715 Au, 4.2'

SYENITE
PORPHYRY

D.T.X. CONSULTANTS LTD.

SECTION OF
DRILL HOLE No. 3
FACING NORTH





AREA OF SPRINGS AND WATER SEEPAGE

QUARTZITE TALUS

ARSENOPYRITE AS FLOAT

QUARTZITE RUBBLE AND MINOR OUTCROP
TREND EAST - DIP 75° - 80° SOUTH

CREEK

DRAW - Heavy boulders

DRAW - Boulders

TR-6

GOOD ARSENOPYRITE
APPARENT WIDTH 4'
23510 .02Ag, .124 Au

TR-7

PYRITE COMPLETELY
OXIDIZED
23509A .02Ag, .02Au, 4'

HYDROTHERMAL WALL ALTERNATION
ARSENOPYRITE MASSIVE OVER 7 FEET
HANGING WALL CONTACT STRONGLY WEATHERED

23506 A .01Ag, .102 Au, 2.5'
23507A .02 Ag, .118 Au, 7'

VEIN EXPOSED - HIGHLY WEATHERED
ARSENOPYRITE PEBBLES AND BOULDERS IN PLACE

23503A .02Ag, .09Au, Grab
RUBBLE OXIDIZED SOME ARSENOPYRITE

TR-5

TR-4

TR-3

TR-2

TR-1

DTX-AINE # 1
.01 Ag, .001 Au, .01 Co, .13
.01 Co, .13 As

23503A .02 Ag, .003 Au, Grab
MASSIVE ARSENOPYRITE ALONG
FOOT WALL - REST OF TRENCH OXIDIZED

23504A .04Ag, .438Au, Grab
VEIN MATERIAL COMPLETELY
OXIDIZED - TRENCH DOES NOT
SHOW VEIN OUTLINE

DTX-AINE # 2
.03Ag, .047 Au,
.01 Co, 18.56 As

23501<.01Ag, .014 Au, 1'
QUARTZITE HYDROTHERMAL
ALTERATION ALONG WALL ROCK
23502 .4 Ag, .032 Au, 1'
OXIDIZED PYRRHOTITE BOULDER
TR PARTLY IN RUBBLE VEIN,
PYRRHOTITE AND ARSENOPYRITE

DTX-AINE # 3
.05Ag, .027 Au,
.01 Co, 18.56 As

AREA OF QUARTZITE AND
INTERMITTENT VEIN RUBBLE
HEAVY OVERBURDEN

23511A .45Ag, .128 Au, 5'
STRONGLY OXIDIZED - PYRRHOTITE - 5 FEET WIDE
HANGING WALL NOT EXPOSED

STRONGLY
WEATHERED
VEIN MATERIAL
6X6 FEET

23512 .01Ag, .03 Au, Grab

23513 .05 Ag, .02 Au, Grab

VEIN MATERIAL
OXIDIZED 10X5 FEET

DTX-AINE # 4
.08 Ag, .101 Au, .02 Co, .39As

23514 <.01Ag, .01Au, 3'
HORSETAILING TO SOUTHWEST ARSENOPYRITE
IN DARK GREEN MATRIX HYDROTHERMAL ZONE
AMPHIBOLITE POSSIBLY ALTERED BASIC
DYKE TRENCH STRONGLY WEATHERED

TR-9

LEGEND

- Vein exposed
- Vein trace
- Faults and slips
- Outcrop limit
- Jointing
- Slip strike
- Trench
- DDH - Diamond drill hole
- Creek
- Elevation contour
- Claim post

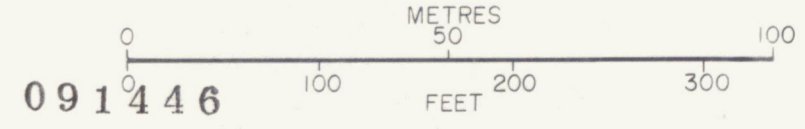
Ag - oz / ton, Au - oz / ton, Co - %, As - %

DDH - PROPOSED

QUARTZITE OUTCROP
STRIKE EAST 80° SOUTH

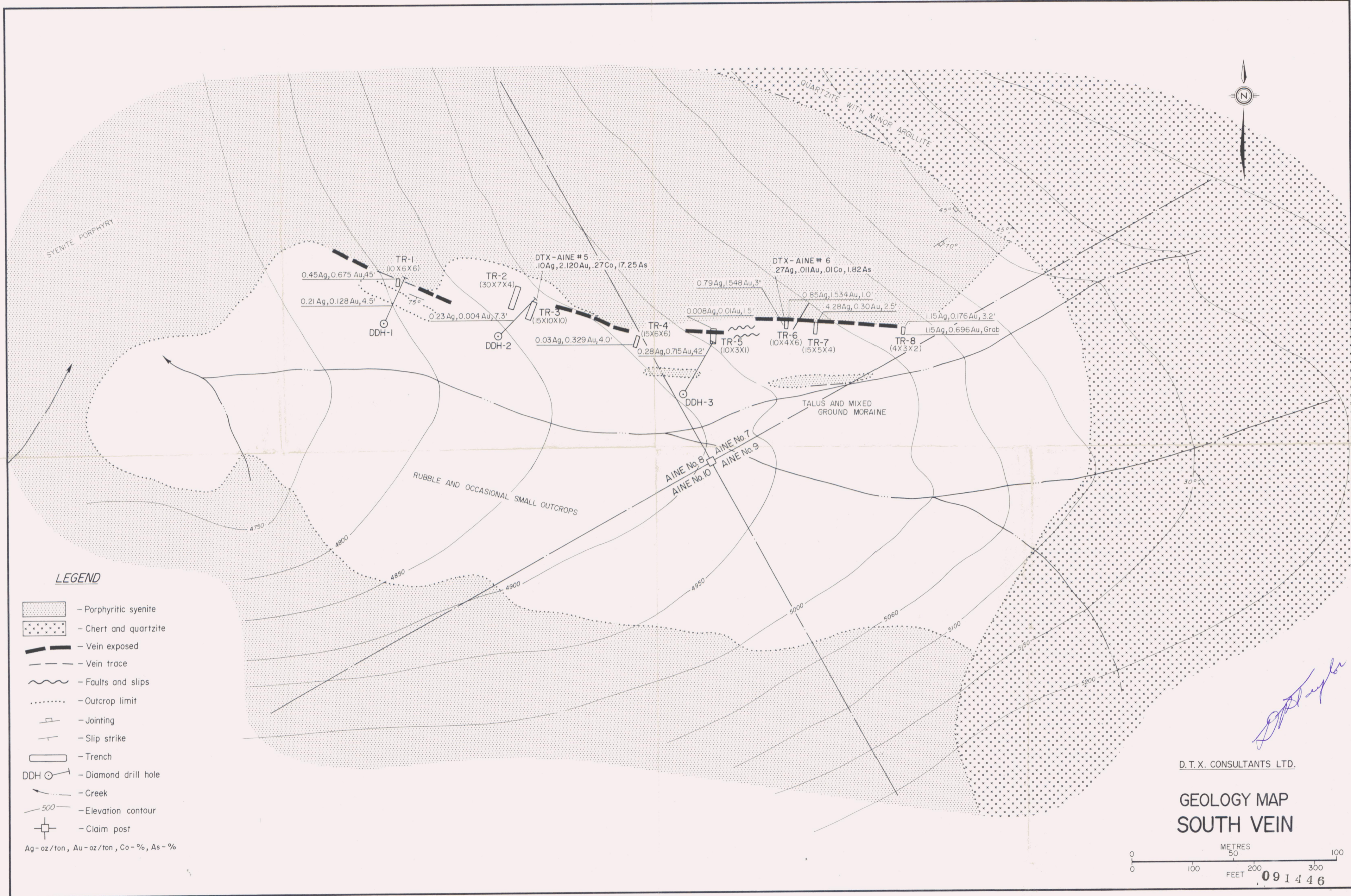
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**GEOLOGY MAP
NORTH VEIN**



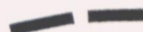

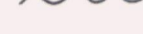
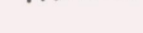

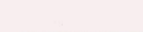
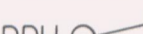

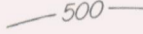

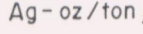


091446

D.P. Taylor



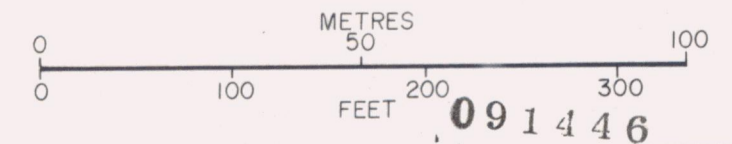
LEGEND

-  - Porphyritic syenite
-  - Chert and quartzite
-  - Vein exposed
-  - Vein trace
-  - Faults and slips
-  - Outcrop limit
-  - Jointing
-  - Slip strike
-  - Trench
-  - Diamond drill hole
-  - Creek
-  - Elevation contour
-  - Claim post

Ag - oz/ton, Au - oz/ton, Co - %, As - %

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**GEOLOGY MAP
SOUTH VEIN**



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