

REPORT ON HAND TRENCHING,  
BULLDOZER TRENCHING, ENGINEERING EVALUATION  
AND DIAMOND DRILLING

on

PAY MINERAL CLAIMS  
Watson Lake Mining Division  
Yukon Territory

Claim Sheets 105-J-1, 105-J-2  
105-G-15, 105-G-16

Latitude 62 deg. 00' N.

Longitude 130 deg. 35' W.

Atlas Explorations Limited

by

Robert J. Darney

November 8, 1967

PAY MINERAL CLAIMS

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# ATLAS EXPLORATIONS LIMITED

(N. P. L.)

330 MARINE BUILDING  
355 BURRARD STREET  
VANCOUVER 1, B. C.

## INTRODUCTION

The Pay Mineral Claims 1 - 16, were optioned from R. McBean of Vancouver, B. C. on August 13, 1966. During October, 1966, Pay 17 - 86 were added to the original group for protective measures. As a result of reconnaissance prospecting and geochemical soil sampling during September and October of 1966, Pay 87 - 166 were staked in November of the same year. Further claims, Pay 167 - 203 were added in June, 1967 when geologic, geochemical and geophysical surveys proved encouraging.

In August, 1967, Pay 204 - 221 were staked for protective measures. In August 1968, Zn. Mineral Claims 1 - 2 were optioned from Gunter Lishy of Cassier, B. C. The Phil Mineral Claims 1 - 42 were staked in late August, 1967 for protective measures.

During the 1967 field season, a grid was cut on the Pay Mineral Claims. This grid consists of 496,900 feet of cut line with a 14,800 foot base line, bearing 312 deg. Cross lines at 400 foot spacing with 100 foot station intervals have been cut. A second base line at 50+00S was cut. Using grid stakes for location, geologic, geochemical and geophysical surveys were done. As a result of these surveys, broad areas of anomalous geochemistry and electromagnetics were discovered. An outcrop of Line 48+00W., 51+00S disclosed veined and disseminated zinc mineralization in a silicified dolomite. It was in this area that hand trenching and Winkie Drilling was initiated.

PAY MINERAL CLAIMS

PAY 87 - 166      Y16981 - 17060      Recorded November 6, 1966

PAY 168 - 203      Y17793 - 17829      Recorded June 23, 1967

PELLY RIVER

ATLAS EXPLORATIONS LIMITED

ROSS RIVER (Y.T.)

PAY MINERAL CLAIMS

KEY MAP OF CLAIMS AND GRID

CLAIM SHEETS: 105-G-16  
 " " 105-G-15  
 " " 105-J-1  
 " " 105-J-2

62° 00'

FORTIN

LAKE



## LOCATION AND ACCESS

The center of the Pay group is located about 4-1/2 miles east of Fortin Lake and approximately eight miles southwest of the Pelly Lakes post, at latitude 62 deg. 00' North and longitude 130 deg. 35' West. Fortin and Pelly Lakes are suitable for all types of float-equipped aircraft. For much of the 1967 field season, the Pay base camp was situated north of the Pay grid on a small unnamed lake (Pay Lake). In early August, 1967, this base camp was moved to a new location on the east shore of Fortin Lake where access by float aircraft was much easier.

During April, 1967, Atlas Explorations constructed a winter tote-trail from the Ross River - Watson Lake Highway at a point northwest of Finlayson Lake to Pelly Lakes via the Pay group. This 40 mile tote-trail can be travelled in summer by wide-tracked vehicles and tractors, and most wheeled vehicles during winter months.

## GEOLOGY

Geologic mapping on the Pay grid was done on 1:1000 (photo overlay) and 1:400 (grid plan).

Geology consists of a sequence of folded and faulted metasediments that have a general northwesterly attitude. The structure consists of three structural blocks separated by two southwesterly-dipping normal faults. The northeasterly block (north of base line 0) consists of banded chert, phyllite and dolomite in an open anticlinal structure plunging 20 deg. to the northwest.

The center block, to the southeast is composed of younger phyllites, spotted phyllites and dolomite which have an isoclinal syncline structure also plunging to the northwest.

The third block, southeast of the Boundary Fault, an upward extension of the center block is composed of carbonaceous dolomite and phyllite. The isoclinal style of folding is retained within this block, but to a lesser amplitude than in the center block. It is in this carbonaceous dolomite of the third block that the host dolomite appears as an interbedded member.

#### GEOCHEMISTRY

A broad zone of anomalous geochemistry occurs in the southwestern section of the grid area. The extent of the anomaly is 13,200 feet in length and averages about 800 feet wide. The zone consists of at least five elongate highs of over 1,000 ppm. Zn. with peak values up to 9,000 ppm.

#### TRENCHING

On July 1, 1967, a hand trenching program was initiated by T. Skonseng at L48W, 51S where a mineralized outcrop was coincident with a broad zone of anomalous geochemistry. Between this time and August 1st, a total of three hand trenches and 24 pits were dug. These pits and trenches were concentrated in an area between Line 40W and 60W from 48S to 59S.

The following is a tabulation of the hand trenches and pits:

<u>Trench</u>	<u>Dimensions</u> (in feet)	<u>Volume</u> (in cubic feet)
1	110 x 3.5 x 4.0	1540
2	25 x 2.5 x 3.5	218.75
3	17 x 3.5 x 5.5	327.25

<u>Pit</u>	<u>Dimensions (in feet)</u>	<u>Volume (in cubic feet)</u>
1	7 x 4.5 x 8	252
2	5 x 4.5 x 6	135
3	5 x 3 x 2.5	37.5
4	4 x 4 x 4	64
5	2 x 2 x 1.6	6.4
6	8 x 4 x 6	192
7	4 x 4 x 2	32
8	6 x 3 x 7	126
9	17 x 3.5 x 2	119
10	7 x 3.5 x 5	122.5
11	9 x 3.5 x 4	126
12	10 x 3.5 x 5	175
13	10 x 3.5 x 4	140
14	6 x 3.5 x 5	105
15	5 x 3 x 3.5	52.5
16	4 x 3 x 3.5	42
17	4 x 3 x 3	36
18	5 x 3.5 x 2	35
19	6 x 3 x 3.5	63
20	6 x 4 x 3	72
21	8 x 4 x 4.5	144
22	7 x 4 x 5	140
23	7 x 4 x 8	224
24	6 x 3 x 4	72
	TOTAL	4,599 cubic feet
		170.3 cubic yards

Depth of overburden in this general area made hand trenching highly impractical therefore in early August, a D-7E Cat was used for further trenching. A total of three trenches were dug on the Pay,

The following is a tabulation of bulldozer trenching done:

<u>Number</u>	<u>Dimensions</u> (in feet)	<u>Volume</u> (in cubic feet)
Pay		
1	110 x 25 x 8	22,000
2	180 x 25 x 15	67,500
3	110 x 35 x 6	<u>23,100</u>
		112,600 cubic feet
		4,170 cubic yards

Total Volume Removed in hand and bulldozer trenches - 4,340 cubic yards.

Work was under contract by Liard Construction. One shift of 10 hours per day was run during the first two weeks in August of 1967.

During the same period, a tote-trail was constructed from the area of the main showing (Line 48W, 51S) to the east shore of Fortin Lake.

#### Methods of Sampling and Assaying

All sampling of hand and bulldozer trenches was done by R. Darney and W. Roberts. "Overall chip" samples, bagged in five-foot sections, were taken in hand trenches 1 and 2. The "continuous chip" method, bagged in five-foot sections was used in Cat Trench #2

Samples from hand trenches were sent to Atlas Explorations Geochemical Laboratory, Ross River, Y. T. and run for Pb., Zn., Cu., Ag., then forwarded to Whitehorse Assay Office to be run for Cd. All bulldozer trench samples were sent directly to Whitehorse Assay Office and run for Pb., Zn., Cu., Ag., Cd.

Tabulated Results of Assays

The following are lists of assay results from trench samples as well as average results for Zn. across potential sections:

Hand Trench #1

	<u>Ag.</u>	<u>Pb.</u>	<u>Zn.</u>	<u>Cu.</u>	<u>Cd.</u>
0 - 5	ND	ND	2.20	ND	TR
5 - 10	ND	.08	.8	.01	.01
10 - 15	ND	.01	1.45	.01	.01
15 - 20	.13	.45	2.15	.01	TR
20 - 25	ND	ND	1.05	.01	.03
25 - 30	ND	.01	2.75	.01	.02
30 - 35	.29	.03	4.30	.01	.01
35 - 40	.28	.01	1.50	ND	.01
40 - 45	ND	ND	1.40	.01	.01
45 - 50	ND	ND	1.95	.01	.01
50 - 55	ND	.05	1.40	.01	.01
55 - 60	ND	.06	1.65	.01	.01
60 - 65	ND	.01	1.55	.01	TR
65 - 70	ND	.16	.89	.01	TR
70 - 75	ND	.04	1.40	.00	TR
75 - 80	ND	.01	2.80	.01	.01
80 - 85	ND	ND	.83	.01	.02
85 - 90	ND	.01	4.20	.01	.01

from 0 -90 i.e. 90 feet

Avg. Zn. = 1.95%

Hand Trench #2

	<u>Cu.</u>	<u>Pb.</u>	<u>Zn.</u>
0 - 10	.017	.13	8.4
10 - 15	.01	ND	1.6
15 - 20	ND	.18	3.85
20 - 25	ND	.01	1.35

from 0 - 25 i.e. length 90 feet

Avg. Zn. 3.82%

Cat Trench #2

	<u>South Side</u>					<u>North Side</u>				
	<u>Ag.</u>	<u>Pb.</u>	<u>Zn.</u>	<u>Cu.</u>	<u>Cd.</u>	<u>Ag.</u>	<u>Pb.</u>	<u>Zn.</u>	<u>Cu.</u>	<u>Cd.</u>
0 - 5	TR	.1	.6	TR	TR	TR	TR	TR	TR	TR
5 - 10	.02	TR	2.6	TR	.2	TR	TR	.4	.01	TR
10 - 15	TR	TR	TR	TR	TR	TR	TR	1.0	TR	TR
15 - 20	TR	TR	.1	TR	TR	TR	TR	TR	TR	TR
20 - 25	TR	TR	TR	TR	TR	TR	TR	.7	TR	TR
25 - 30	TR	TR	TR	TR	TR	TR	TR	1.3	TR	TR
30 - 35	TR	TR	TR	TR	TR	TR	TR	.7	TR	TR
35 - 40	TR	TR	TR	TR	TR	TR	TR	1.6	TR	TR
40 - 45	TR	TR	TR	TR	TR	TR	TR	2.9	TR	.013
50 - 55	TR	TR	TR	TR	TR	TR	TR	2.3	TR	.01
55 - 60	TR	TR	TR	TR	TR	TR	TR	.6	TR	TR
60 - 65	TR	TR	TR	TR	TR	TR	TR	1.6	TR	TR
65 - 70	TR	TR	TR	TR	TR	TR	TR	5.9	TR	.035
70 - 75	TR	TR	TR	TR	TR	TR	TR	.5	TR	TR
75 - 80						TR	TR	.5	TR	TR
80 - 85						TR	TR	.7	TR	TR
85 - 90						TR	.1	1.9	TR	TR
90 - 95						TR	TR	1.3	TR	TR
95 - 100						TR	TR	.5	TR	TR
100 - 105										
105 - 110										

from 5 - 100, i.e. length 95'

Avg. Zn. 1.42%

Diamond Drilling

A Winkie Drill, purchased by Atlas in October, 1966, was used in an attempt to find the extension of the main showing. However, the extreme depth of overburden and highly fractured nature of the rock units made drilling difficult and core recovery low. Several holes were abandoned at only a few feet. The driller was B. Morrisson, and he was assisted by C. Boiteau.

The following is a list of drill holes and locations:

<u>No. of Hole</u>	<u>Latitude</u>	<u>Departure</u>	<u>Depth</u>	<u>Remarks</u>
WDH # 1	50' NE of L48W, 8N		97'	Overburden
WDH # 2	20' NE of L48W, 52S	70' SE of L48, 52S	10'	No log
WDH # 3	25' NE of L48W, 52S	50' SE of L48, 52S	8'	No log
WDH # 4	15' NE of L48W, 52S	40' SE of L48, 52S	8'	No log
WDH # 5	40' NE of L48W, 53S	70' SE of L48, 53S	6'	No log
WDH # 6	L32W, 45S		49'	
WDH # 7	25' NE of L32, 48S	140' NW of L32, 48S	58'	Overburden, No log
WDH # 8	15' SW of L32, 47S	160' NW of L32, 47S	98'	
WDH # 9	50' NE of L32, 44S		28'	No log
WDH #10	70' NE of L32, 44S		51'	
WDH #11	50' SW of L88, 71S		94'	
WDH #12				
(a)	50' SW of L88, 70S		22'	Dip 90 deg. No log
(b)	50' SW of L88, 70S			Dip 60 deg. NE - No log
WDH #13	L124, 71S		72'	Overburden
WDH #14	50'S of L88, 69S		88'	
WDH #15	30' NE of L48, 52S	120' SE of L48, 52S		No log
WDH #16	28' NE of L48, 52S	120' SE of L48, 52S		No log
WDH #17	35' NE of L48, 52S	120' SE of L48, 52S		No log

Logs of drill holes attached.

CONCLUSIONS

Through Winkie drilling and bulldozer trenching, it has been found that overburden depths in the main area of interest are much deeper than previously expected. At points where the bulldozer trenches succeeded in reaching bedrock, the mineralized zones were highly oxidized. As a result, these areas were unreliable for detailed sampling.

Although trenching has given an explanation of the anomalous geochemistry in the Line 48, 52S region, the major portion of the broad anomalous zone is unexplained.

Further trenching or Winkie drilling would be impractical due to depth of overburden. Therefore, further drilling on a larger scale would be warranted.



# DIAMOND DRILL RECORD,

HOLE NO. WDH #8

PROPERTY ATLAS-SHELDON-PAY

SHEET NUMBER 1 SECTION FROM 0 Feet TO 61 Feet STARTED July 14, 1967  
 LATITUDE 15' SW of L32, 47S DATUM \_\_\_\_\_ COMPLETED July 17, 1967  
 DEPARTURE 160' NW of L32, 47S BEARING \_\_\_\_\_ ULTIMATE DEPTH \_\_\_\_\_  
 ELEVATION \_\_\_\_\_ DIP 90 deg. PROPOSED DEPTH \_\_\_\_\_

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
0-41	O.B.					PPM	PPM	PPM						
41-42	30%	Light-grey-black, laminated argillaceous dolomite. Finely disseminated pyrite 1-10%. Core angle 55 deg. Moderately reactive with HCL. Slightly conductive.	1	41'		23	136	30						
42-61	55%	Black, finely laminated carbonaceous dolomite. Slowly reactive with HCL.	2	42'		41	90	3500						
		Between 5-10% carbon. Pyrite is	3	45'		18	102	70						
		disseminated throughout, but is mostly concentrated parallel to laminations.	4	50'		24	76	160						
		Pyrite 5%. Core angle 52 deg. Rock highly conductive.	5	55'		50	60	260						
61-65	85%	Light grey-black, laminated argillaceous dolomite. Finely diss. pyrite 1-10% Core Angle 50 deg.	6	61'		18	80	35						



# DIAMOND DRILL RECORD,

HOLE NO. WDH #8

PROPERTY ATLAS-SHELDON-PAY

SHEET NUMBER 3 SECTION FROM 73 TO 79 STARTED July 14, 1967  
 LATITUDE 15' SW of L32, 47S DATUM \_\_\_\_\_ COMPLETED July 17, 1967  
 DEPARTURE 160' NW of L32, 47S BEARING \_\_\_\_\_ ULTIMATE DEPTH \_\_\_\_\_  
 ELEVATION \_\_\_\_\_ DIP 90 deg. PROPOSED DEPTH \_\_\_\_\_

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS			
					AG.	CU. PPM	PB. PPM	ZN. PPM			AG.	CU.	PB.	ZN.
73-76	Con't.	Moderately reactive with HCL. Cut by carbonate stringers 1/16" in width. Core angle 35 deg. Several of the carbonate stringers are vertical. Not conductive and contains only very minor pyrite.												
76-79	85%	Dark grey-black carbonaceous dolomite. Has lighter coloured appearance due to extremely irregular interlayering with segregated carbonate (calcite) Moderately conductive and reactive with HCL. Minor diss. pyrite. Core angle 60 deg.	12	77'		24	68	30						
79-90	20%	Dark grey, laminated carbonaceous dolomite. Slowly reactive	13	80		18	48	30						





# DIAMOND DRILL RECORD,

HOLE NO. WDH #11

PROPERTY ATLAS-SHELDON-PAY

SHEET NUMBER 1 SECTION FROM 0 TO 68' STARTED July 23, 1967  
 LATITUDE 50' SW of L88, 71S DATUM \_\_\_\_\_ COMPLETED \_\_\_\_\_  
 DEPARTURE \_\_\_\_\_ BEARING \_\_\_\_\_ ULTIMATE DEPTH \_\_\_\_\_  
 ELEVATION \_\_\_\_\_ DIP 90 deg. PROPOSED DEPTH \_\_\_\_\_

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS			
					AG.	CU. PPM	PB. PPM	ZN. PPM			AG.	CU.	PB.	ZN.
0-20'	O.B.													
0-30'	15%	dark grey carbonaceous dolomite with discordant quartz stringers up to 1/2" in dia. with minor disseminated pyrite in dolomite (2%). weakly conductive; moderately reactive with conc. HCL; core angle 60deg.	1	20-25'		33	70	200						
0-68'	20%	Dark grey to black finely laminated very carbonaceous dolomite, moderately to good conductivity, slow reaction with HCL. Discordant calcite stringers with or without small lenses and pods of pyrite; also disseminated grains of pyrite in dolomite 1%. Graphite very lustrous on bedding planes. Core angle -20 deg.	2	30'		70	100	90						
			3	35'		15	50	40						
			4	40'		61	90	1,640						
			5	45'		36	65	200						
			6	50'		25	65	70						
			7	55'		36	65	126						
			8	60'		28	70	150						
			9	65'		28	70	200						







SUMMARY OF COSTS

Bulldozer Trenching, Pay Mineral Claims

Total volume material moved - 4,170 cubic yards

Value for trenching in accordance with "Schedule of Representation Work" \$ .75 per cu yd

Total Value 4,170 cu yds @ \$ .75 per cu yd \$3,127.50

Hand Trenching, Pay Mineral Claims

Total volume material moved - 170.3 cubic yards

- Pick and shovel, through gravel 113.3 cu yds

- Frozen material and rock requiring the use of drill and explosives 57. cu yds

Value for hand trenching in accordance with Schedule of Representation Work,

113.3 cu yds @ \$5.00 cu yd \$ 566.50

57. cu yds @ \$25.00 cu yd \$1,425.00

Diamond Drilling

Costs supported by Vouchers and Invoices, copies of which are attached.

689 feet at a total cost of \$17,521.42

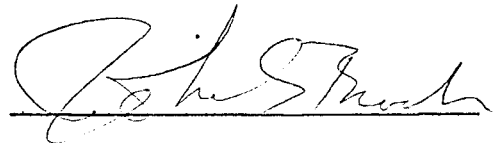
The value for this submission is averaged at \$25.00 per foot.

**ATLAS EXPLORATIONS LIMITED**  
(N. P. L.)

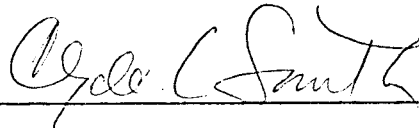
330 MARINE BUILDING  
355 BURRARD STREET  
VANCOUVER 1, B.C.

AFFIDAVIT SUPPORTING SUMMARY OF COSTS:

I, John S. Brock, Operations Manager, Atlas Explorations Limited of Vancouver, B.C., do hereby state that, to the best of my knowledge and belief, the statement of costs as presented in Appendix I of this Report "Hand Trenching, Bulldozer Trenching, Engineering Evaluation, and Diamond Drilling on Pay Mineral Claims" is both true and correct.

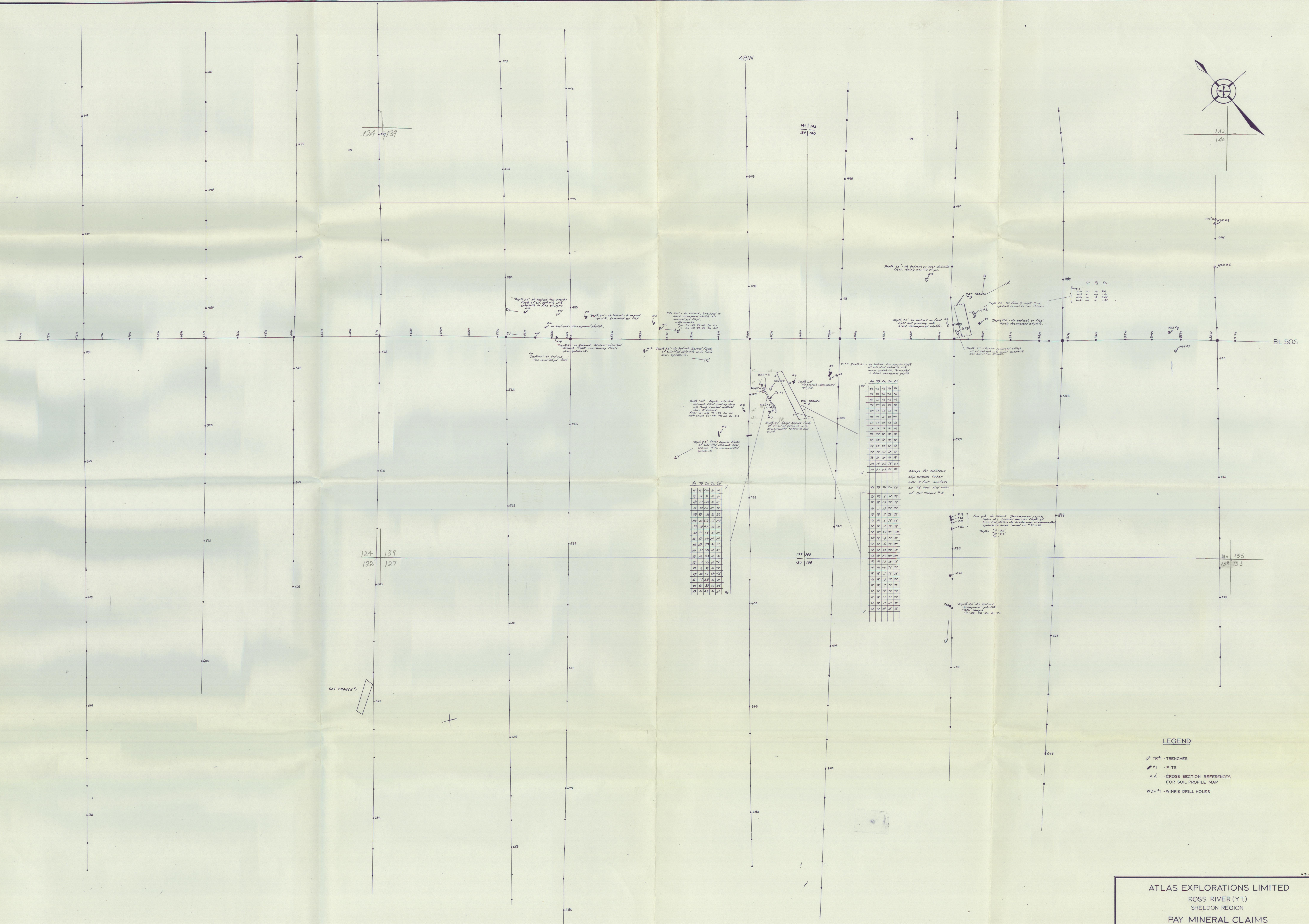
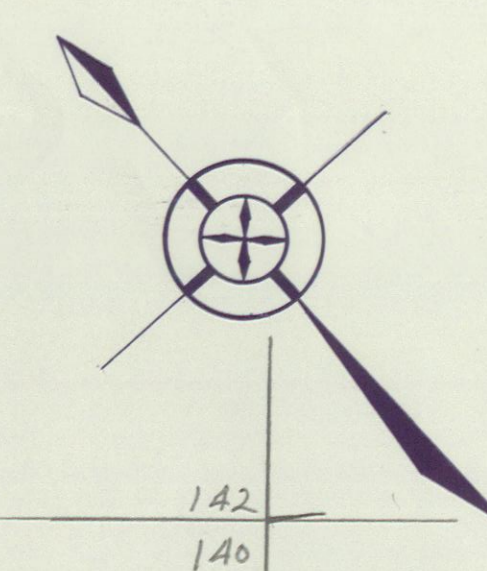


John S. Brock



A Commissioner for taking  
Affidavits in the  
Yukon Territory

November 14, 1967.



**LEGEND**

- TR# - TRENCHES
- P# - PITS
- A A - CROSS SECTION REFERENCES FOR SOIL PROFILE MAP
- WDH# - WINKIE DRILL HOLES

**ATLAS EXPLORATIONS LIMITED**  
 ROSS RIVER (Y.T.)  
 SHELDON REGION  
**PAY MINERAL CLAIMS**  
**TRENCH & PIT LOCATION MAP**

COMPILED BY: R. DARNEY      DRAWN BY: R. DARNEY  
 W. ROBERTS                      DATE: OCT. 1967

Scale in feet  
 0      100      200

FIG. A

L48W

51S

# ATLAS EXPLORATIONS LIMITED

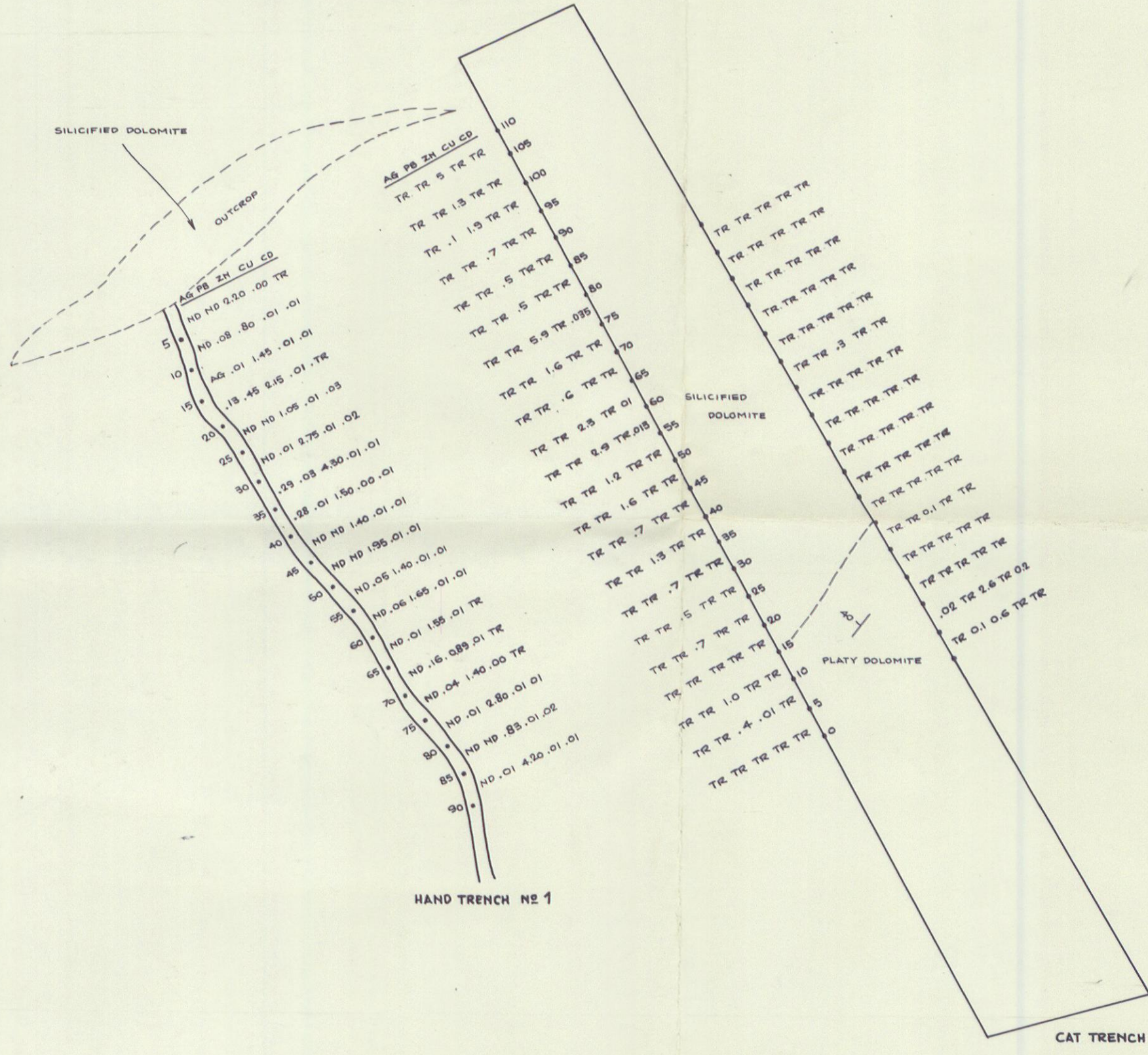
ROSS RIVER (Y.T.)

## PAY MINERAL CLAIMS

MAP OF CAT TRENCH NO 2

" " HAND TRENCH NO 1

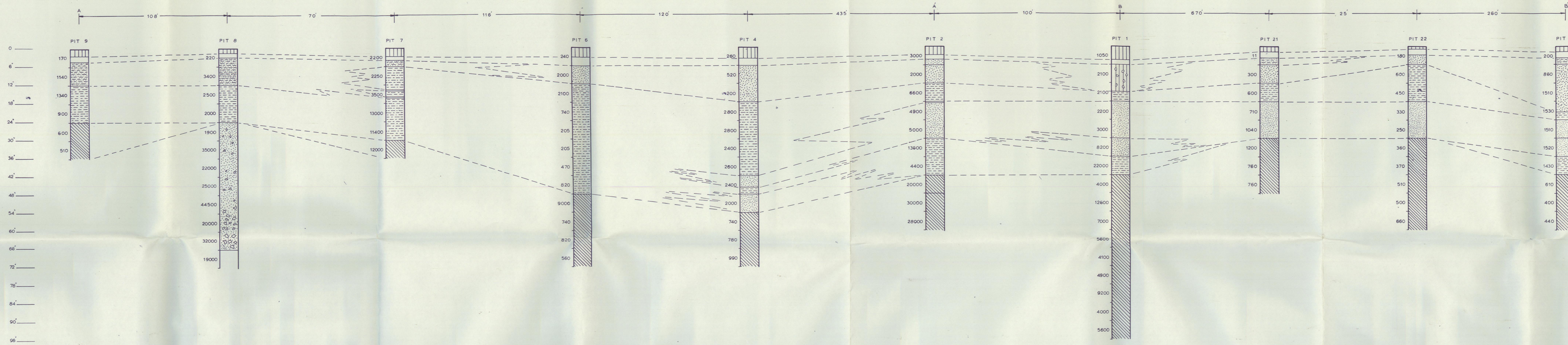
scale 1" = 20'



53S

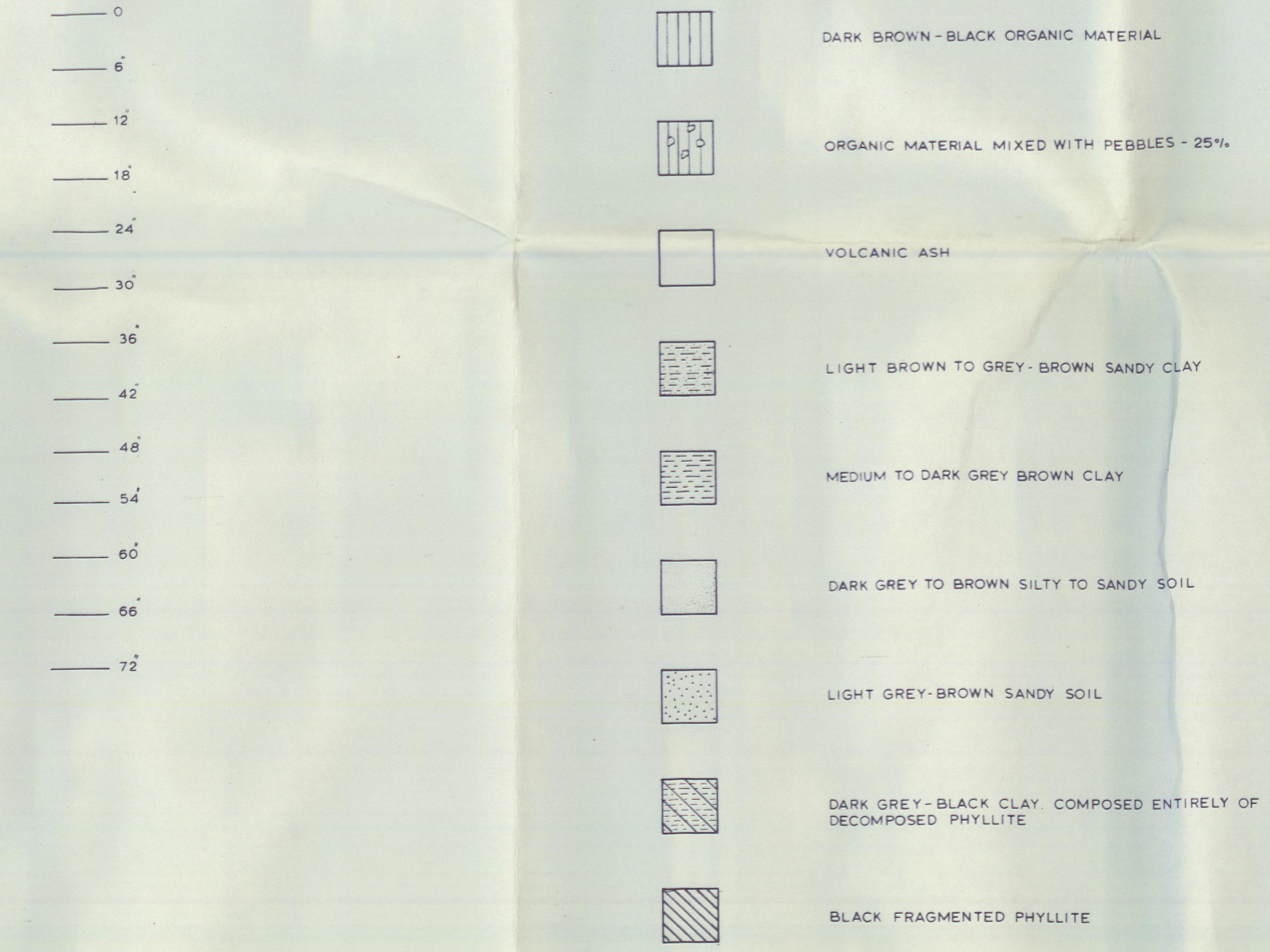
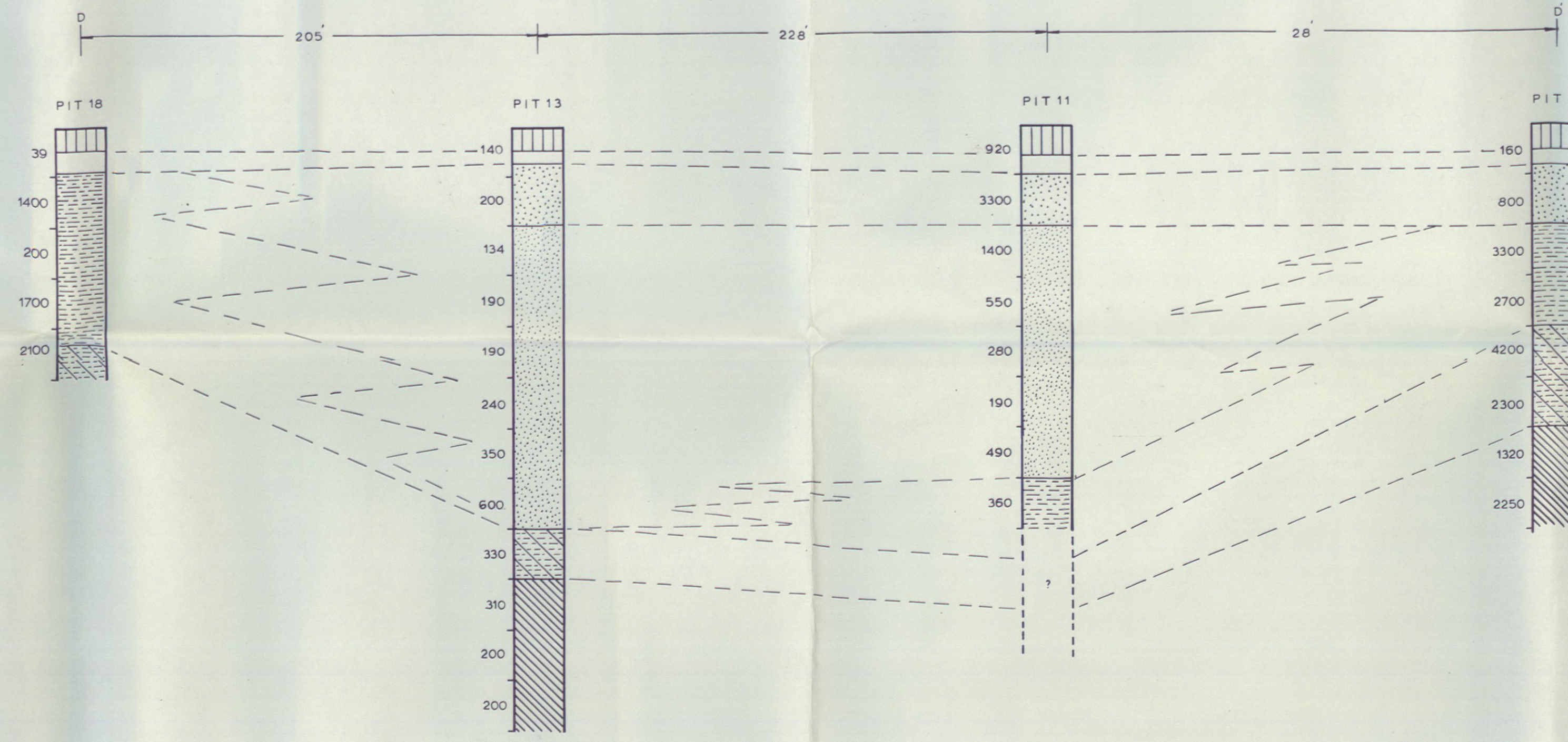
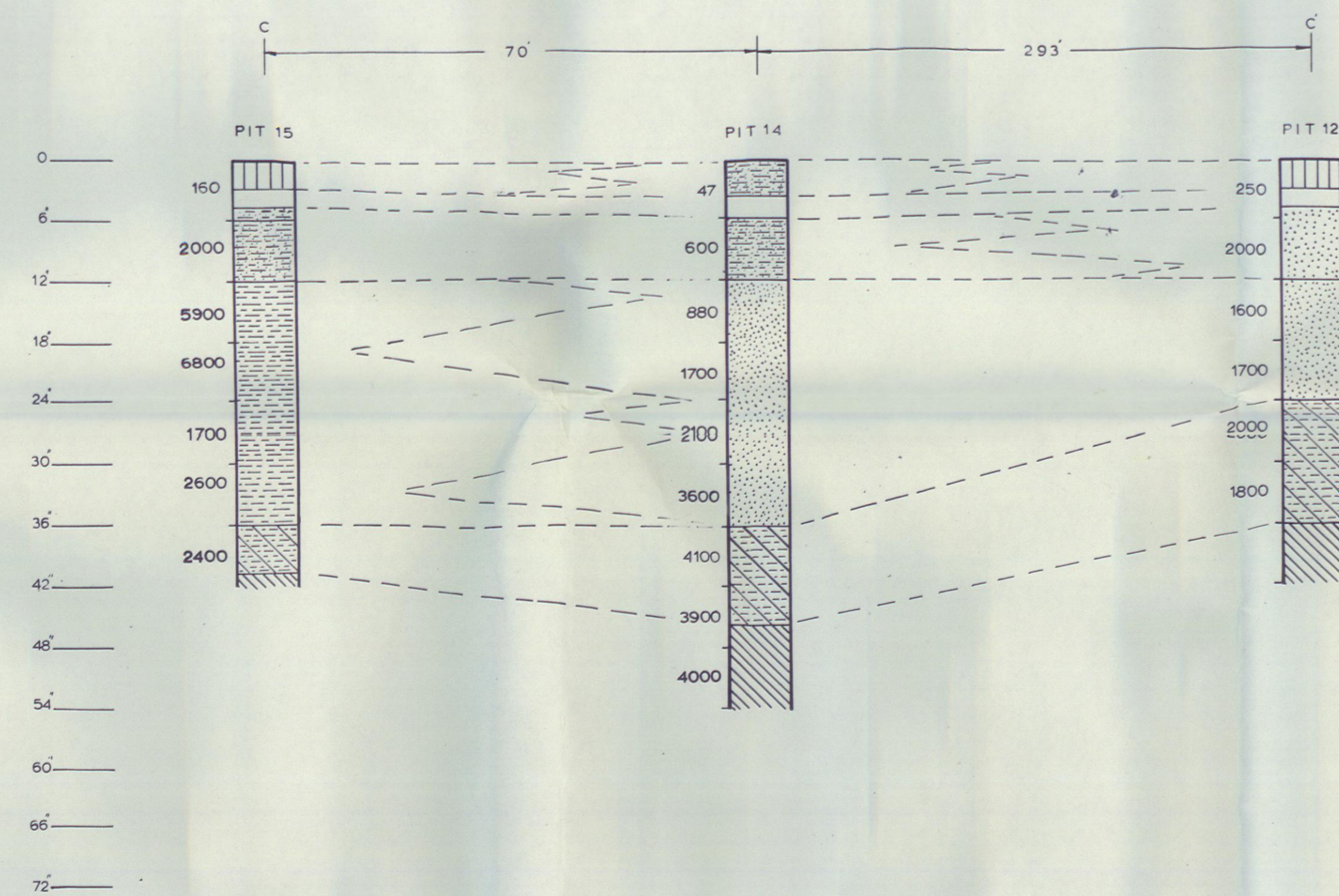
SOIL PROFILES AA

SOIL PROFILES BB



SOIL PROFILES CC

SOIL PROFILES DD



PAY MINERAL CLAIMSGround Development Personnel: May - September 1967

Party Chief	P. Nielsen, 1600 Beach, Vancouver, B.C.
Geologist	R. Darney, 304-908 6th Ave., N. Westminster
Magnetometer Operator	P. Dean, North Vancouver, B.C.
Crone EM Operators	M. Simpson, Tofino, B.C. J. Galeski, Calgary, Alberta
EM 16 Operator	V. Pratico, Vancouver, B.C.
Soil Sampler	C. Wicks, Antagowish, N.S.
Linecutters	J. Acklack ) M. Shorty ) F. Charlie ) Ross River, Y.T. R. Etzel ) W. Etzel )
Hand Trenching	T. Skonseng, Ross River, Y.T.
Helper	S. McLeod, Ross River, Y.T.
Driller	B. Morrison, Ottawa, Ont.
Driller's Helper	J. Boiteau, Quebec, P.Q.
Bombardier Driver	P. Lundt, Watson Lake, Y.T.
Cook	G. Gray, Whitehorse, Y.T.
Flunky	
Senior Geologist	C. Smith, Vancouver, B.C.
Geophysicist	J. Brock, Ross River, Y.T.