

680786

SUMMARY REPORT

ROBB LAKE PROJECT, 1974

VOLUME III, PROPERTY DATA

R. G. Gifford  
Texasgulf Inc.

December, 1974

Robb Lake  
56° 123° S.E. NTS 94B  
Liard Mining District  
British Columbia

SUMMARY REPORT

ROBB LAKE PROJECT

1974

VOLUME III

PROPERTY DATA

TEXASGULF INC.

December, 1974

Robb Lake  
56° 123° S.E. NTS 94B  
Liard Mining District  
British Columbia

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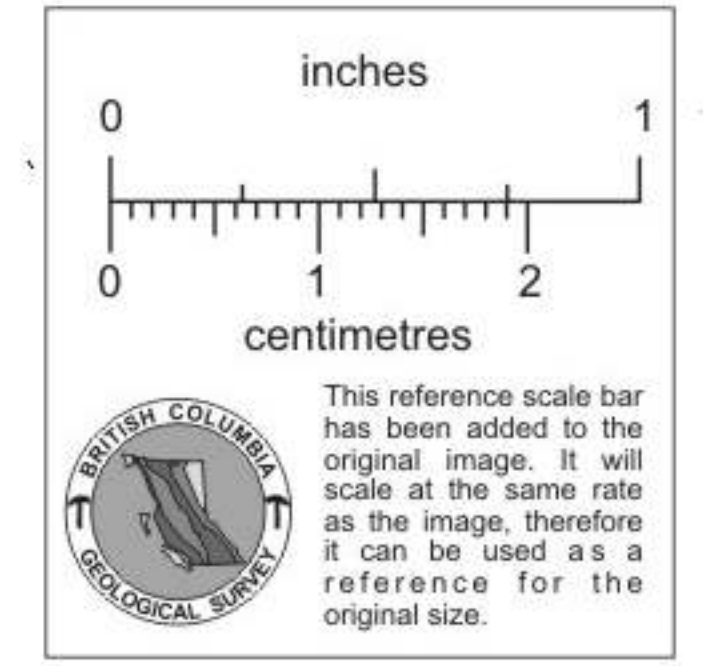
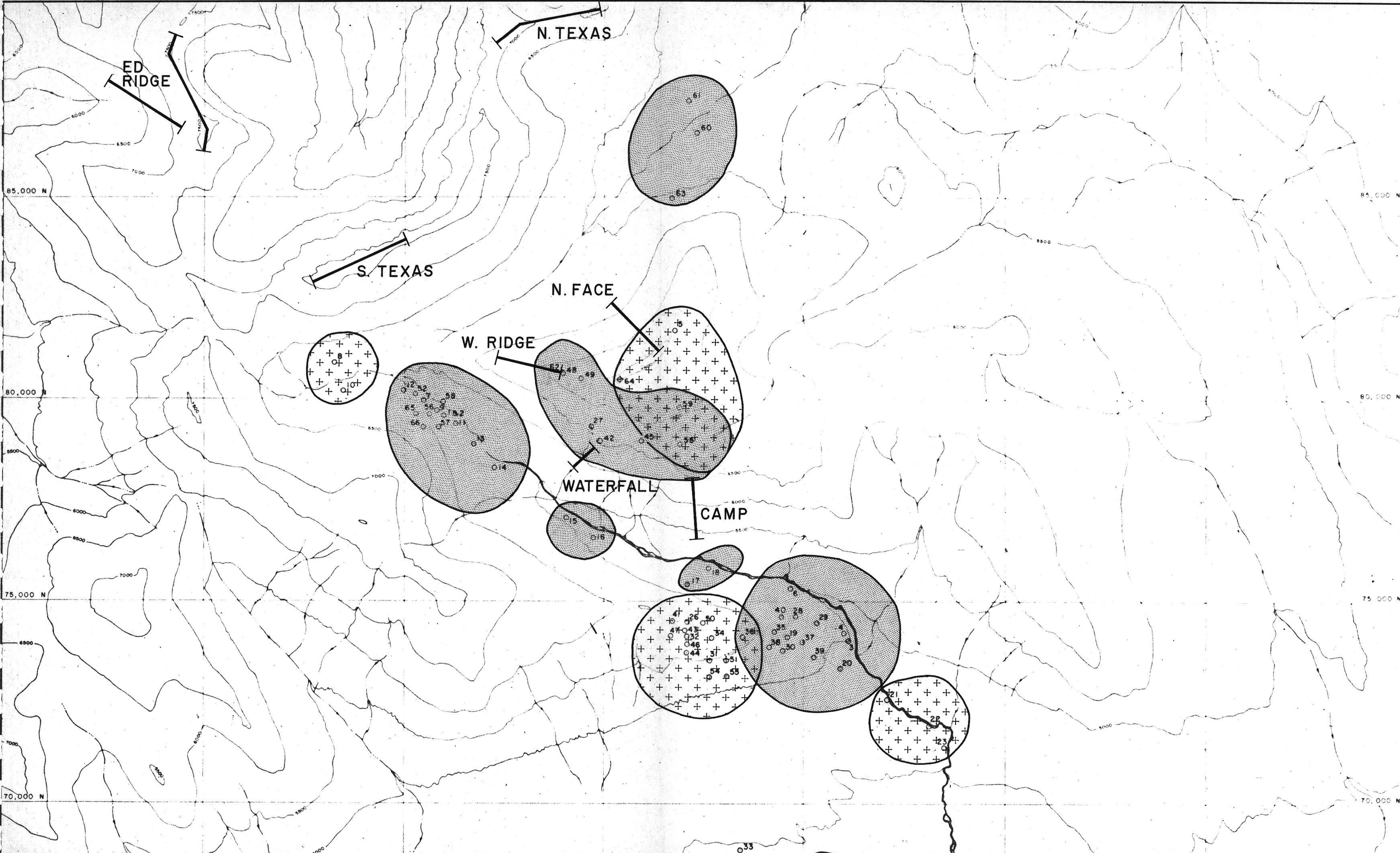
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**LEGEND**


**MEASURED STRATIGRAPHIC SECTION**  
**STRATIGRAPHIC POSITION**


**UNIT B**


**UNIT C**

FIG. E-1

RCBB LAKE JOINT VENTURE

LOCATION PLAN SHOWING STRATIGRAPHIC SECTIONS & STRATIGRAPHIC POSITION OF DRILL INFORMATION



STRATIGRAPHIC SECTIONS

November, 1974

Robb Lake  
56° 123° S.E. NTS 94B  
Liard Mining District  
British Columbia

DESCRIPTION					DESCRIPTION				
1	2	3	4	5	6	7	8	9	10
0				ORDOVICIAN SHALES					
				~ THRUST FAULT CONTACT					
40				MUDSTONE SUPPORTED RUBBLE BRECCIA					
				← SITE OF ED SHOWING.					
80									
120				PELLET MUDSTONE WITH BURROWS					
160									
200									
240				SANDY GRAINSTONE					
				B/C CONTACT					

TEXASGULF INC.  
GEOLOGIC LOG

START 31 August 1974  
FINISH 31 August 1974  
LOG PETER BOYLE

ED RIDGE  
STRATIGRAPHIC SECTION

PROP. ROBB LAKE

SCALE 1" = 40'

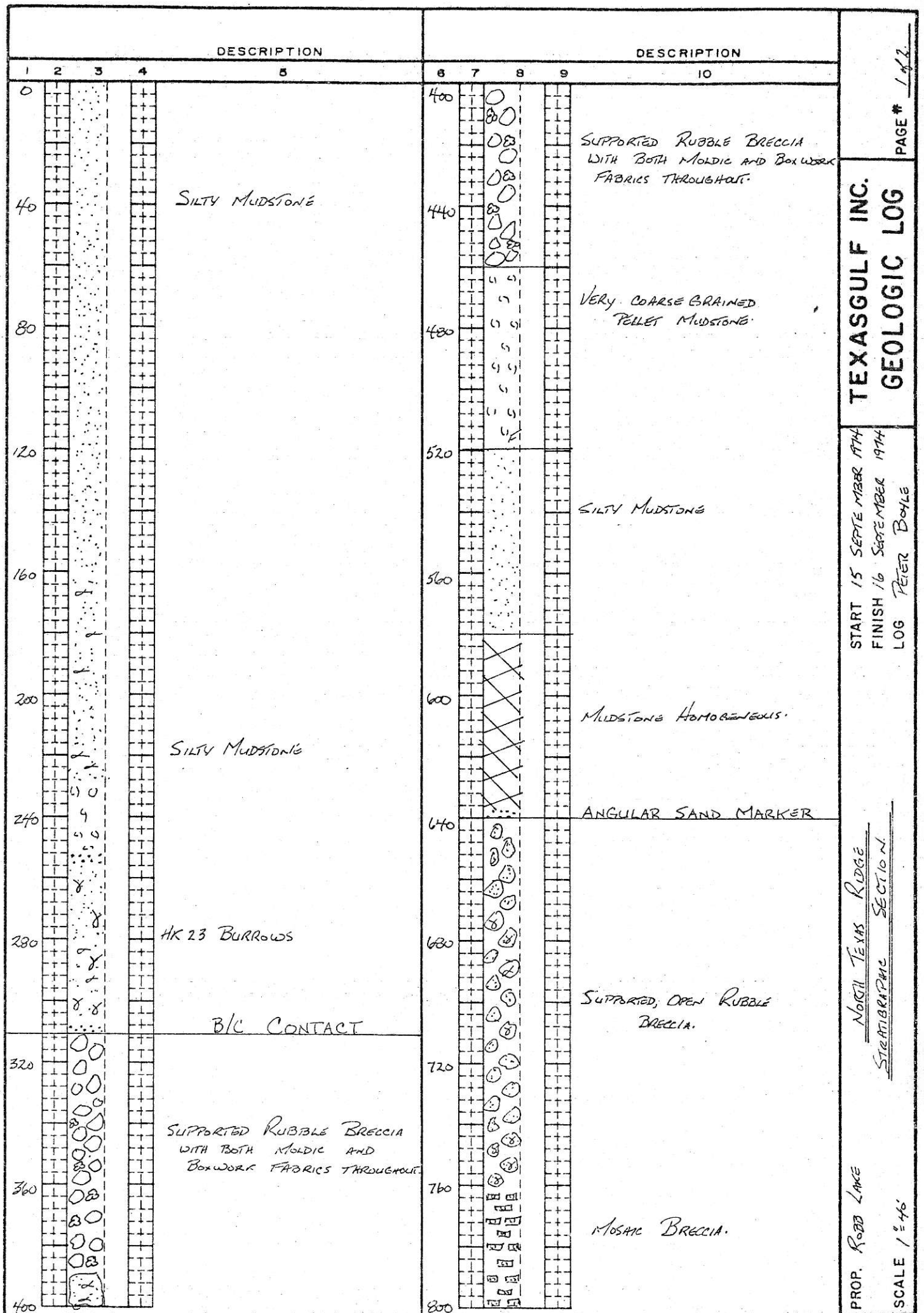
DESCRIPTION					DESCRIPTION				
1	2	3	4	5	6	7	8	9	10
0				B/C CONTACT	400		5 4 3 2 1		
40				PELLET MUDSTONE					
80				RUBBLE AND PSEUDOBRECCIA WITH MOLDIC FABRIC					
120				MUDSTONE HOMOGENEOUS					
160									
200									
240				MUDSTONE HOMOGENEOUS					
280				STRINGO CEPHALUS					
320				? OOLITIC BEDS?					
360				STRINGO CEPHALUS					
400									

TEXASGULF INC.  
GEOLOGIC LOG

START 31 AUGUST 1974  
FINISH 31 AUGUST 1974  
LOG PETER BOYLE

WEST SLOPE - E.D. RIDGE  
STRATIGRAPHIC SECTION.

PROP. REEB LANE  
SCALE 1"=40'



TEXASGULF INC.  
GEOLOGIC LOG

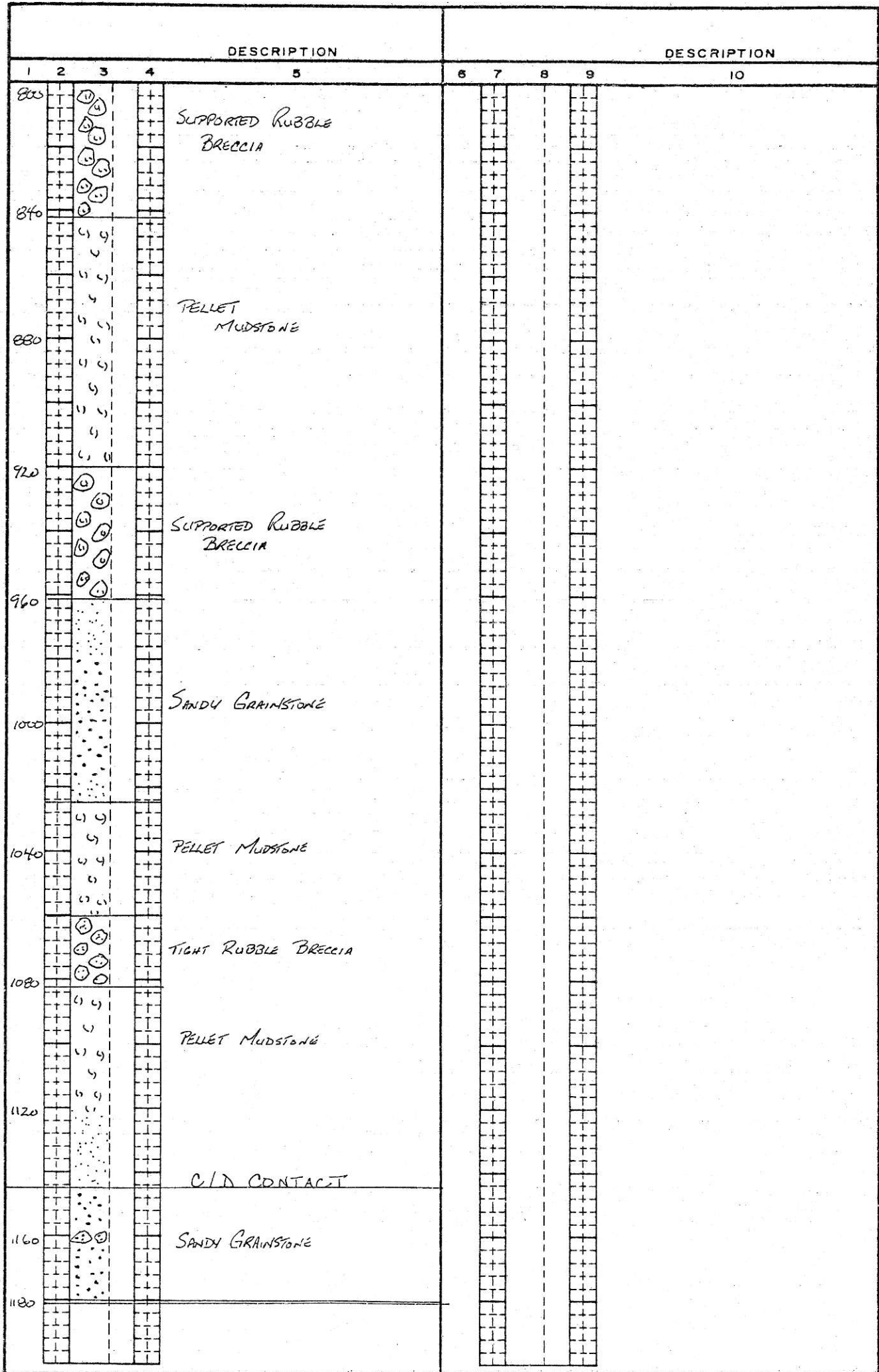
START 15 SEPT. 1974  
FINISH 16 SEPT. 1974  
LOG BY PETER BOYLE

NORTH TEXAS RIDGE  
STRATIGRAPHIC SECTION

PROP. ROBB LAKE

SCALE 1" = 40'

PAGE # 1 of 2



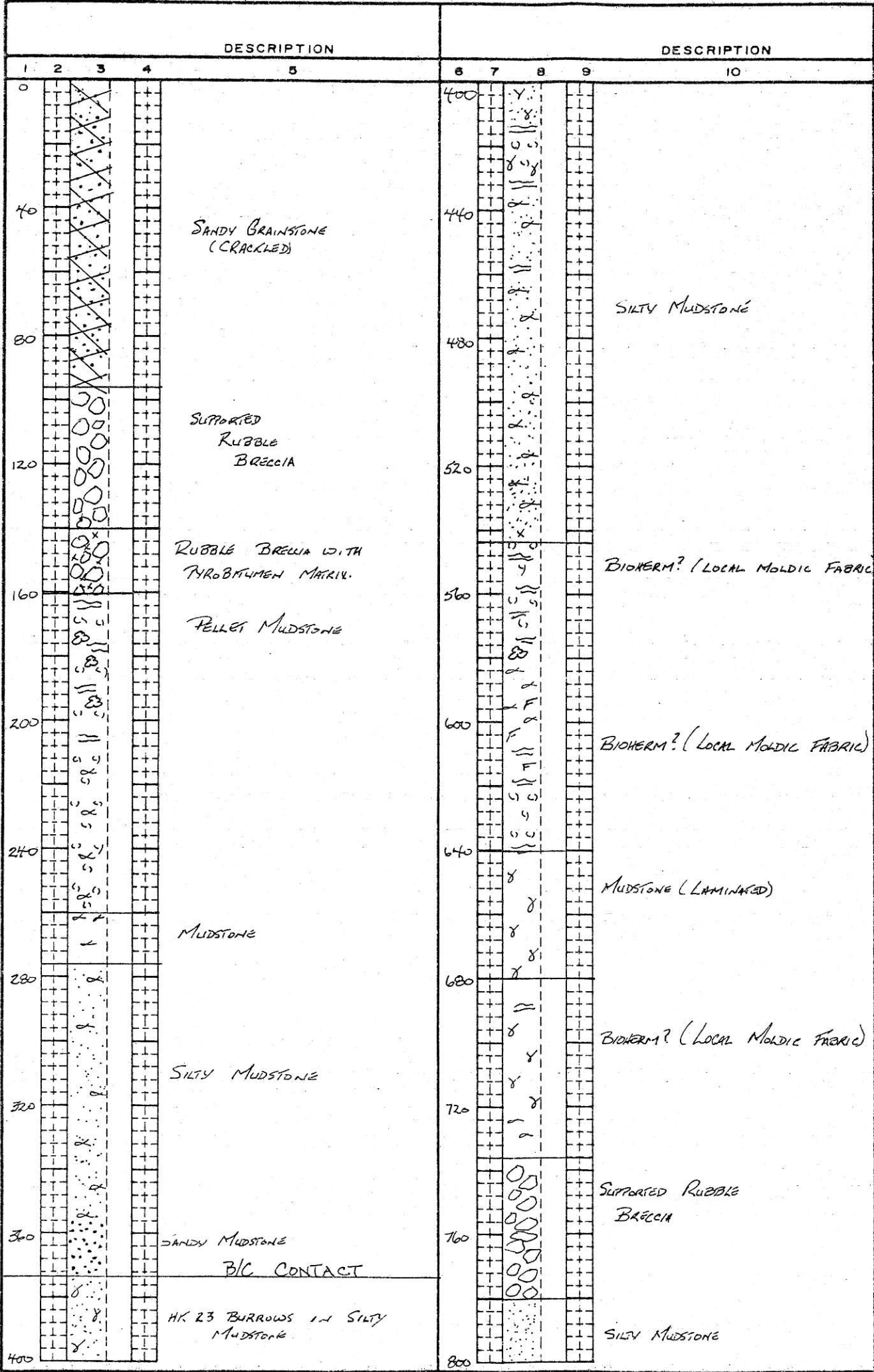
**TEXASGULF INC.  
GEOLOGIC LOG**

START 15 SEPTEMBER 1974  
FINISH 16 SEPTEMBER 1974  
LOG PETER BOYLE

NORTH TEXAS RIDGE  
STRATIGRAPHIC SECTION

PROP. ROBB LAKE  
SCALE 1" = 40'





TEXASGULF INC.  
GEOLOGIC LOG

START 3 SEPTEMBER 1974  
FINISH 3 SEPTEMBER 1974  
LOG PETER DOYLE

SOUTH TEXAS RIDGE  
STRATIGRAPHIC SECTION

PROP. ROBB LANE  
SCALE 1"=40'

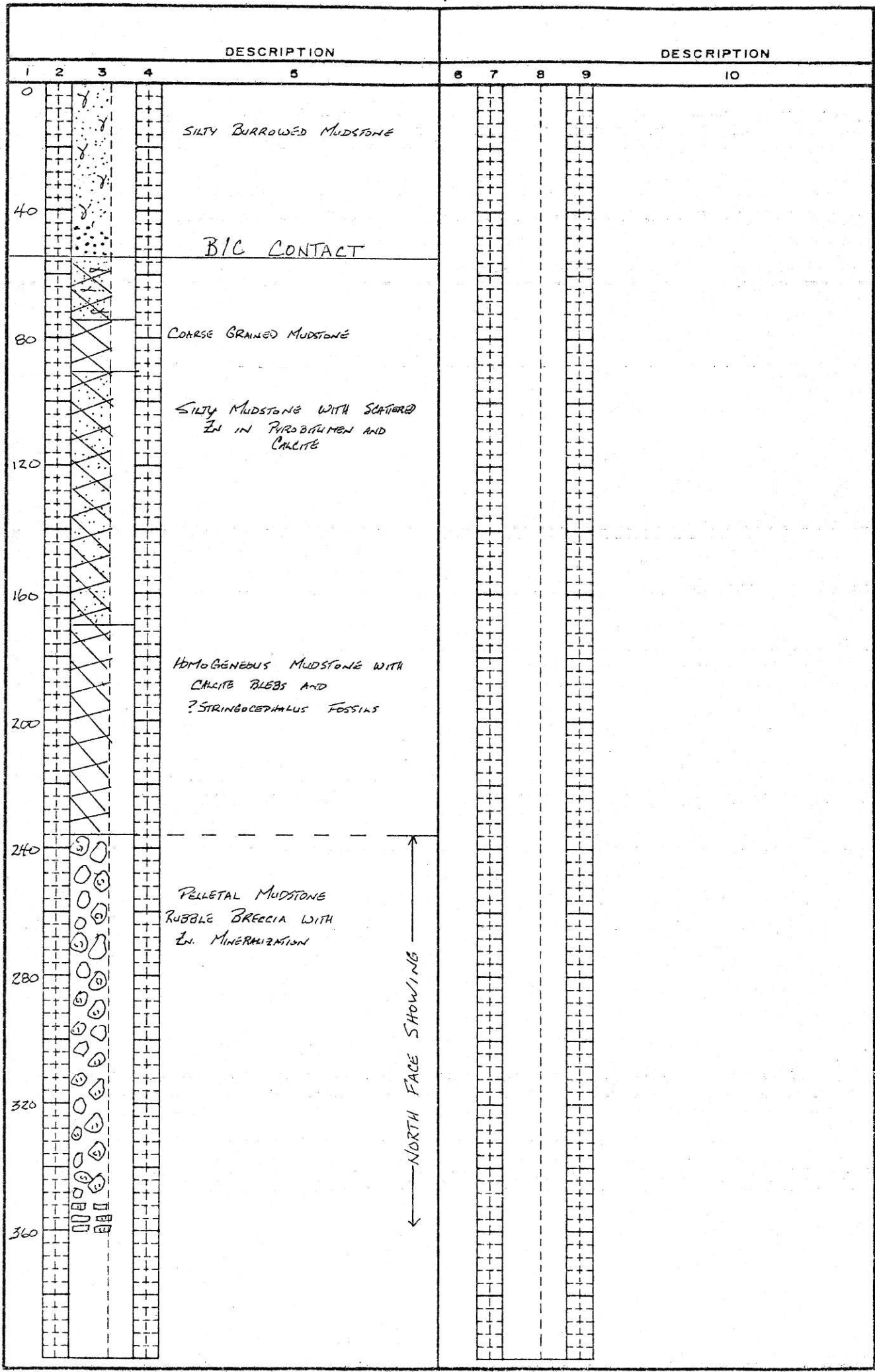
DESCRIPTION					DESCRIPTION				
1	2	3	4	5	6	7	8	9	10
800				ANGULAR SAND MARKER.					
				MICRITE-FILLED BURROWS.					
820									

**TEXASGULF INC.**  
**GEOLOGIC LOG**

START 3 SEPTEMBER 1974  
FINISH 3 SEPTEMBER 1974  
LOG PETER USYLE

SOUTH TEXAS RIDGE  
STRATIGRAPHIC SECTION.

PROP. ROBB LAKE  
SCALE 1" = 40'



DESCRIPTION

DESCRIPTION

1

2

3

4

5

6

7

8

9

10

0

40

80

120

160

200

240

280

320

360

SILTY BURROWED MUDSTONE

B/C CONTACT

COARSE GRAINED MUDSTONE

SILTY MUDSTONE WITH SCATTERED  
Zn IN PIRROBRITMEN AND  
CALCITE

HOMOGENEOUS MUDSTONE WITH  
CALCITE BLEBS AND  
?STRINGOCEPHALUS FOSSILS

PELLETAL MUDSTONE  
RUBBLE BRECCIA WITH  
Zn MINERALIZATION

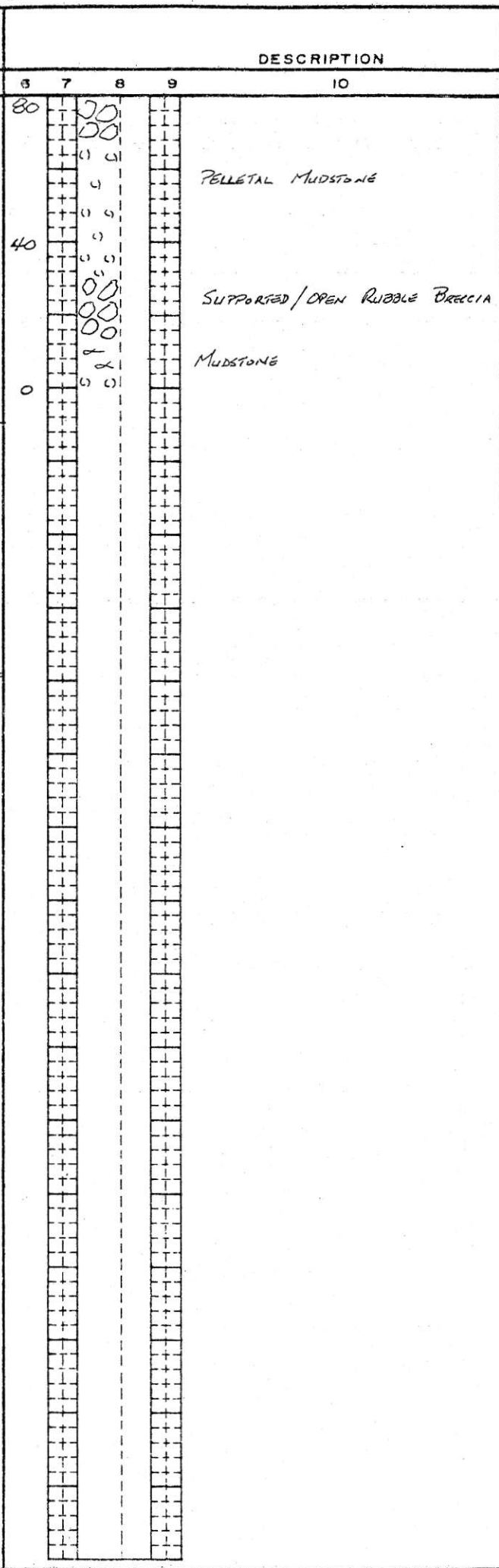
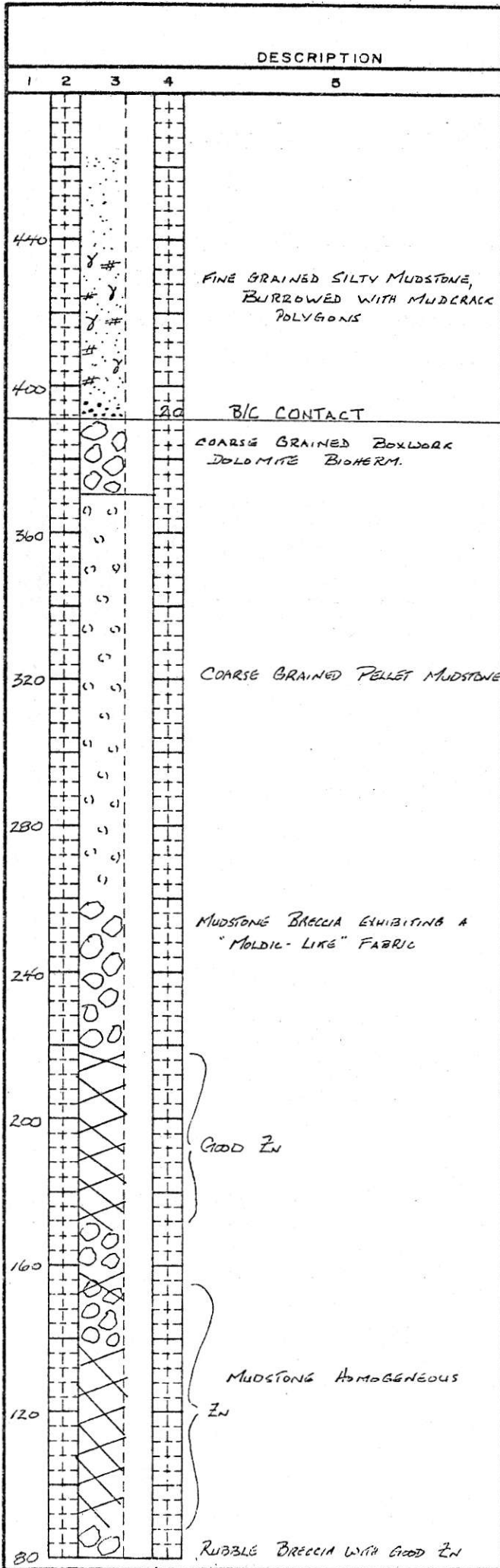
← NORTH FACE SHOWING →

TEXASGULF INC.  
GEOLOGIC LOG

START 2 SEPTEMBER 1974  
FINISH 2 SEPTEMBER 1974  
LOG PETER BOYLE

NORTH FACE SHOWING  
STRATIGRAPHIC SECTION

PROP ROBB LANE  
SCALE 1" = 40'



TEXASGULF INC.  
GEOLOGIC LOG

START 13 SEPTEMBER 1974  
FINISH 13 SEPTEMBER 1974  
LOG PETER BOYLE

CAMP SHOWING  
STRATIGRAPHIC SECTION

PROP. ROBB LAKE  
SCALE 1" = 40'

COORDINATES OF DIAMOND DRILL  
HOLES AND GEOLOGICAL  
STATIONS

December, 1974

Robb Lake  
56° 123° S.E. NTS 94B  
Liard Mining District  
British Columbia

SURVEYED COORDINATES OF ARROW DRILL HOLES

<u>DDH</u>	<u>NORTH</u>	<u>EAST</u>	<u>ELEV.</u>
# 1	79,077	51,743	5687'
# 2	79,906	50,868	5789'
# 3	79,740	51,027	5771'
# 4	79,770	50,992	5765'

ROBB LAKE JOINT VENTURE DIAMOND DRILL HOLE COORDINATES

SURVEYED

<u>DDH</u>	<u>NORTH</u>	<u>EAST</u>	<u>ELEV.</u>
1	79,606	50,974	5792'
2	79,606	50,974	5792'
3	74,034	61,133	5008'
4	74,225	61,023	5039'
5	81,705	56,798	7455'
6	75,311	59,633	5106'
7	79,935	50,470	5881'
8	80,918	48,250	6278'
9	79,715	50,801	5809'
10	80,217	48,454	6247'
11	79,397	51,286	5753'
12	80,217	49,983	5997'
13	78,895	51,726	5720'
14	78,245	52,245	5590'
15	77,090	54,050	5477'
16	76,591	54,742	5438'
17	75,424	57,100	5426'
18	75,817	57,624	5249'
19	74,108	59,611	5261'
20	73,350	60,931	4934'
21	72,585	62,118	4758'
22	71,931	63,142	4690'
23	71,401	63,511	4598'
24	66,461	69,381	4390'
25	66,829	69,835	4362'
26	74,504	57,080	5945'
27	79,332	54,675	6675'



<u>DDH</u>	<u>NORTH</u>	<u>EAST</u>	<u>ELEV.</u>
28	74,655	59,816	5099'
29	74,484	60,344	5068'
30	73,779	59,490	5235'
31	73,548	57,658	5481'
32	74,147	57,080	5845'
33*	78,860	58,430	4475'
34	74,107	57,711	5787'
35	74,258	59,284	5332'
36	74,123	58,475	5686'
37	74,012	59,991	5154'
38	73,881	59,151	5308'
39	73,643	60,225	5068'
40	74,630	59,449	5198'
41	74,536	56,735	5955'
42	78,968	54,900	6548'
43	74,309	57,045	5905'
44	73,745	57,084	5591'
45	78,974	55,935	6721'
46	73,950	57,106	5733'
47	74,155	56,687	5856'
48	80,650	53,967	7133'
49	80,508	54,429	5307'
50	74,497	57,490	5875'
51	73,546	58,077	5431'
52	80,130	50,262	5921'

\* Co-ordinates Provisional

PROVISIONAL

53	73,160	58,080	5182'
54	73,147	57,658	5220'
55	78,895	56,900	6810'
56	79,637	50,622	5895'
57	79,300	50,847	5870'
58	79,942	50,958	5814'
59	79,815	56,880	7118'
60	86,596	57,334	5787'
61	87,396	57,130	5810'
62	80,651	53,955	7135'
63	84,996	56,704	6039'
64	80,495	55,398	7474'
65	79,637	50,279	6063'
66	79,300	50,467	6012'

SURVEYED COORDINATES OF GEOLOGICAL STATIONS - 1974

<u>STN.</u>	<u>NORTH</u>	<u>EAST</u>	<u>ELEV.</u>	<u>COMMENTS</u>
HK 2	78,640	54,897	6285'	Location pt. - Waterfall Showing
HK 43	79,626	53,443	6267'	Location pt. - Upper Showing
HK 47	80,156	53,336	6566'	Location pt. - Upper Showing
HK 51	80,796	53,057	6873'	Location pt. - Upper Showing
HK 430	74,641	57,956	5675'	Webb Ridge - North Slope
HK 431	74,799	57,396	5679'	Webb Ridge - North Slope
HK 432	74,831	56,835	5741'	Webb Ridge - North Slope
HK 433	75,045	56,399	5704'	Webb Ridge - North Slope
HK 434	75,240	56,107	5751'	
			or 5647'	Webb Ridge - North Slope
HK 520	88,351	56,941	5959'	Location pt. - Union Creek
HK 521	86,596	57,643	5797'	Location pt. - Union Creek
BE 12	78,828	54,542	6236	Location pt. - Waterfall Showing

GEOCHEMISTRY SURVEY RESULTS

UNION CREEK AREA

December, 1974

Robb Lake  
56° 123° S.E. NTS 94B  
Liard Mining District  
British Columbia

ESTIMATION OF BACKGROUND, THRESHOLD, AND ANOMALOUS VALUES.

A statistical analysis using the standard deviation was employed to interpret the geochemical data. A frequency distribution histogram was plotted with a single population of values chosen with the cutoff at 190 ppm for Pb and 1120 ppm for Zn.

The background value is equivalent to the mean, and the threshold is taken as the mean plus twice the standard deviation. Anomalous is taken as the mean plus three times the standard deviation, and strongly anomalous is taken as the mean plus five times the standard deviation.

# Zn Frequency Distribution Histogram

Zinc in Soil Samples from:

## UNION CREEK GRID

Mean -----  $\bar{x} = 442$  ppm

Standard Deviation-----  $s = 245.4$  ppm

Threshold -----  $\bar{x} + 2s = 933$  ppm

Anomalous -----  $\bar{x} + 3s = 1178$  ppm

Strongly Anomalous --  $\bar{x} + 5s = 1669$  ppm

Note: 472 samples

65 samples ( $>1120$  ppm) not included in statistical calculations.

54 samples ( $>1240$  ppm) not shown on diagram.

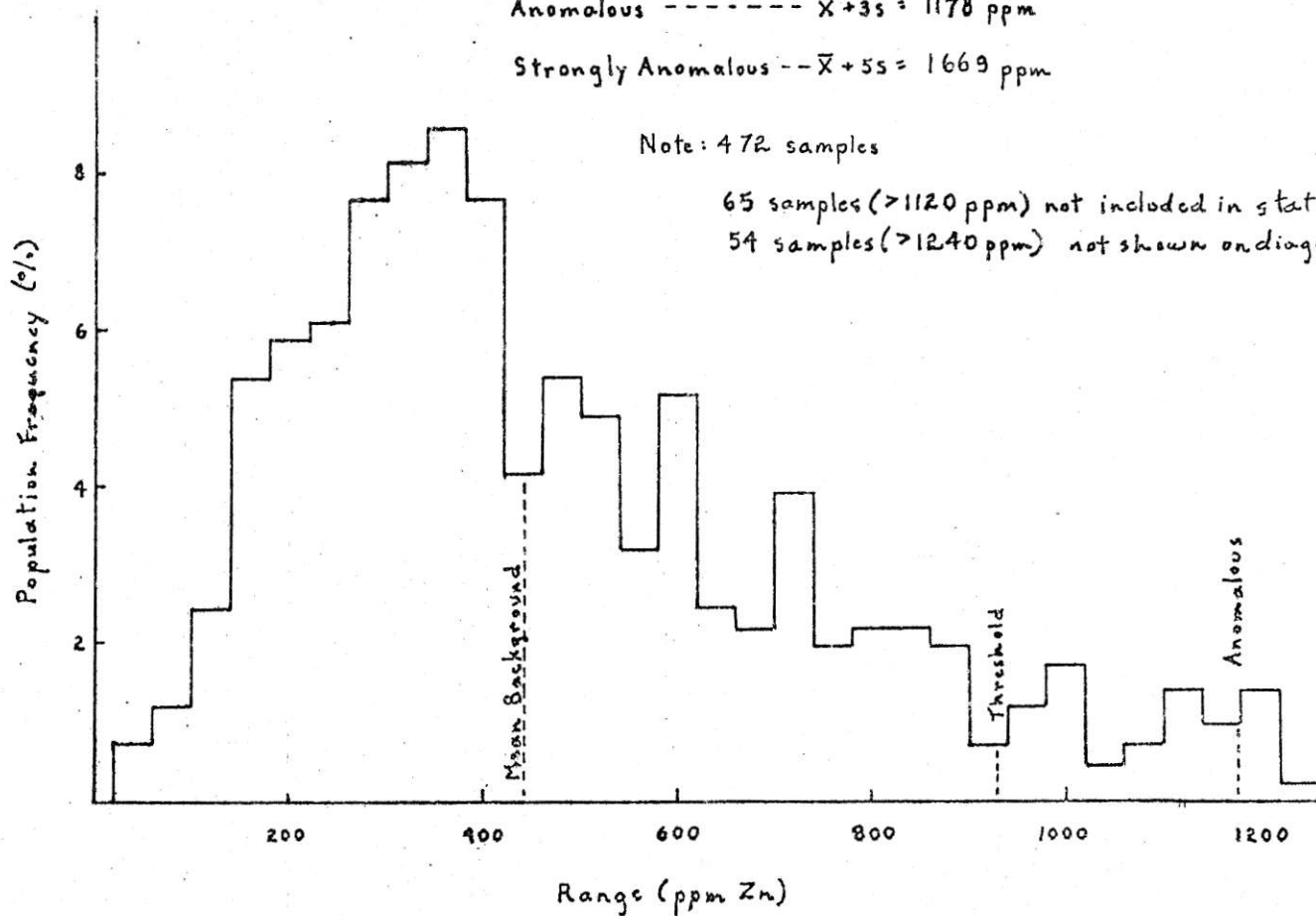


FIG. G-1

Pb Frequency Distribution Histogram

Lead in Soil Samples from:

UNION CREEK GRID

Mean -----  $\bar{X} = 101$  ppm

Standard Deviation -----  $s = 38.6$  ppm

Threshold -----  $\bar{X} + 25 = 170$  ppm

Anomalous -----  $\bar{X} + 35 = 217$  ppm

Strongly Anomalous -----  $\bar{X} + 55 = 294$  ppm

Note: 472 Samples.

82 samples (>190 ppm) not included in statistical calculations.

46 samples (>300 ppm) not shown on diagram.

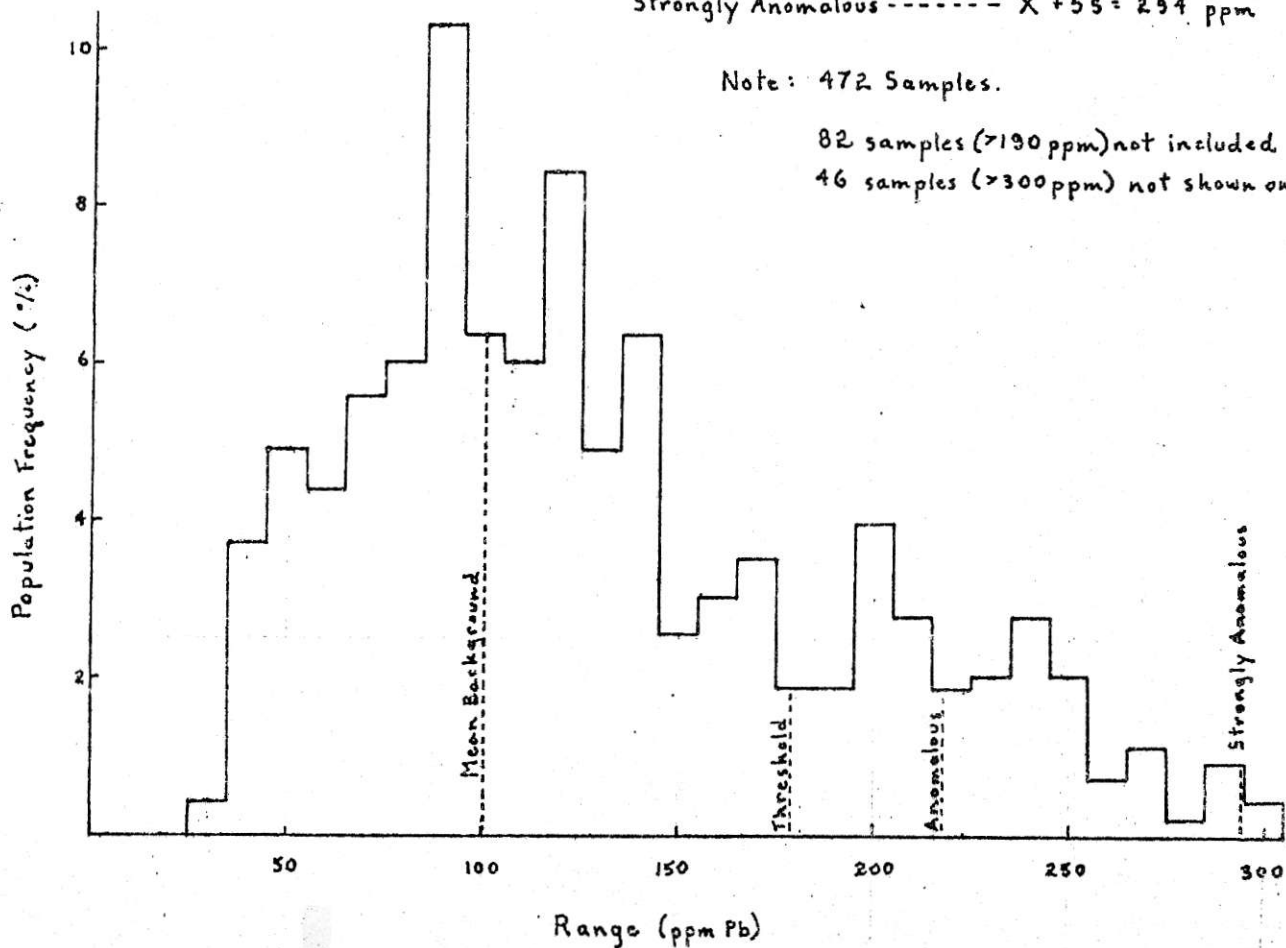


FIG G-2



METALLURGICAL TESTS

October, 1974

Robb Lake  
56° 123° S.E. NTS 94B  
Liard Mining District  
British Columbia

METALLURGICAL TESTS  
ON A SAMPLE OF ZINC ORE  
submitted by  
W. R. GRACE AND COMPANY  
Progress Report No. 1

Project No: B408

Date: October 11, 1974

**BRITTON RESEARCH LIMITED**  
1612 WEST THIRD AVENUE  
VANCOUVER 9, B.C.  
CANADA

## INTRODUCTION

Two bags of zinc ore weighing 81 pounds and marked "Lower showing metallurgical sample" were received from Texasgulf Inc., Vancouver office, on August 16, 1974.

A request was received from Mr Howard Boyce, Metallurgical Consultant, to combine the contents of the bags and to conduct metallurgical tests on the sample.

Authorization for the test work to be carried out was given by Mr Frank C. Pickard, Director of Mining Operations, W.R. Grace and Co., in a letter dated August 14, 1974 (see Appendix).

In addition to sample preparation and assays of the head sample, the following tests were carried out on the sample:

1. Specific gravity determination.
2. Grindability (Work Index) determination.
3. A preliminary flotation test to determine the approximate fineness of grind and flotation conditions required for flotation of the sphalerite in the ore.
4. A final flotation test in which a 4000 gram sample of the ore was ground to 74% minus 200 mesh and floated in two stages; the rougher concentrate was cleaned twice, a scavenger concentrate being removed in each stage. All of the products were assayed for total zinc; in addition, the final concentrate was assayed for cadmium, lead, iron and oxide zinc. The scavenger tailing was also assayed for oxide zinc.

## SUMMARY

1. The head sample had the following assay:

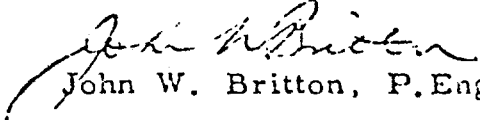
Total zinc	(Zn)	7.28%	Gold	(Au)	0.003 oz/ton
Oxide zinc	(Zn)	0.77%	Silver	(Ag)	0.01 oz/ton
Sulphide zinc	(Zn)	6.51%*	Copper	(Cu)	0.007%
Lead (total)	(Pb)	0.15%			

\* By difference

2. The sample had a specific gravity of 2.94, equivalent to 10.9 cubic feet per short ton; the relatively high specific gravity was due to the presence of a high proportion of dolomite in the sample.
3. The ore was soft, having a work index (Bond) of only 8.5 kw.hr per ton for grinding from minus 10 mesh to flotation feed size.
4. In the first flotation test, in which a 2000 gram sample of minus 10 mesh ore was ground to 75% minus 200 mesh and floated in 5 stages, the concentrates being assayed separately without cleaning, an overall recovery of 92% of the zinc was obtained.
5. In the second test, an overall recovery of 91.1% of the zinc was obtained. The recleaner concentrate assayed 64.75% zinc, 0.30% lead, 0.21% cadmium and 0.60% iron and contained 84.8% of the total zinc in the original ore. The recleaner scavenger concentrate assayed 51.09% zinc and contained 3.5% of the zinc; the combined recleaner concentrates assayed 64.08% Zn, with a recovery of 88.3%.
6. Almost all of the zinc which was lost in the primary scavenger tailing was in the form of oxide, probably smithsonite (zinc carbonate); of a total zinc assay of 0.73%, only 0.02% was present as sulphide, the overall zinc sulphide recovery being 99.7%.
7. Allowing for the recirculation of intermediate products, the results indicate that, when treating similar ore in a full-scale mill, at least 89% of the total zinc would be recovered in a high-grade concentrate, assaying about 64% zinc, with about 0.2% cadmium, 1% iron and 0.3% lead.
8. Since the sample consisted of surface material, it is likely that the oxide zinc present had formed by weathering of the sphalerite and the resulting zinc sulphate had reacted with the carbonate present to form smithsonite. Higher zinc recoveries could therefore be expected if fresh ore is treated.

Respectfully submitted,

BRITTON RESEARCH LIMITED

  
John W. Britton, P.Eng.

Consulting Metallurgist

## SAMPLE PREPARATION

After removing typical specimens for possible mineralogical examination, the remainder of the sample was crushed to minus  $\frac{1}{4}$ " , mixed and riffled. One half was crushed to minus 10 mesh, mixed and riffled to give samples suitable for test-work and assay. The assay sample was ground in a Bleuler pulveriser until only a small proportion (approx. 5%) remained on a 100 mesh screen. The whole of the oversize was assayed separately for gold and silver. Only traces were present, showing that coarse gold and silver were absent. The minus 100 mesh fraction was assayed for gold, silver, total and oxide zinc, lead and copper.

## ASSAYS OF HEAD SAMPLE

(a) <u>Fire assays:</u>	Gold	(Au)	0.003 oz/ton
	Silver	(Ag)	0.01 oz/ton

(Assays by General Testing Laboratories, Vancouver)

(b) <u>Chemical analyses:</u>	Total zinc	(Zn)	7.28%
	Oxide zinc	(Zn)	0.77%*
	Sulphide zinc	(Zn)	6.51% (by difference)
	Total lead	(Pb)	0.15%
	" copper	(Cu)	0.007%

\* 10.6% of total zinc.

(Analyses by Britton Research Limited)

Specific gravity of head sample: 2.94, equivalent to 10.9 cubic feet per ton (2000 pounds).

## GRINDABILITY DETERMINATION

A 2000 gram sample of minus 10 mesh ore was ground for 20 minutes in a Denver laboratory ball mill at 65% solids; the mill had previously been standardised, using ores of known grindability. The ground ore was used for the preliminary flotation test (408-1).

A weighted composite sample of test products was repulped and screened on 325 mesh. The oversize was dried and rescreened on 48, 65, 100, 150, 200 and 325 mesh screens and the overall screen analysis was calculated; the screen analysis of the mill feed was also determined. (see table 5).

(b) Final test (403-2)

In this test, 4000 grams of minus 10 mesh ore were ground to 74% minus 200 mesh and the zinc was floated in two main stages. The first (rougher) concentrate was cleaned twice, a rougher and a scavenger concentrate being taken off in each stage in order to determine more accurately the results which could be expected in a full-scale mill. Test conditions and results are shown in tables 3 and 4 and in figure 1; a screen analysis of the flotation feed is given in table 5.

Comments: 90.5% of the total zinc was recovered in the primary rougher concentrate, which assayed 50.58% zinc. The scavenger concentrate assayed 10.41% Zn and contained 0.6% of the zinc, giving an overall recovery of 91.1%. The scavenger tailing assayed 0.73% total zinc but only 0.02% sulphide zinc, the overall sulphide zinc recovery being 99.7%.

The final (recleaner) concentrate assayed 64.75% total Zn, 0.30% Pb, 0.60% Fe, 0.21% Cd and 0.22% oxide zinc; 84.8% of the total zinc and 94.8% of the sulphide zinc were recovered. A further 3.5% of the total zinc was recovered in the recleaner scavenger concentrate, which assayed 51.09% Zn; the combined concentrates assayed 64.08% Zn and contained 88.3% of the total zinc, equivalent to more than 98% of the sphalerite. The cleaner scavenger concentrate assayed 21.98% Zn and contained 1.4% of the total zinc.

Allowing for recirculation of intermediate products, it is anticipated that at least 89% of the total zinc would be recovered in a concentrate assaying about 64% Zn if similar ore is treated in a full-scale mill; the concentrate would contain about 0.2% Cd, 1% Fe and 0.3% Pb.

It is likely that the oxide mineral (probably smithsonite) in the ore was produced by surface weathering, in which case higher zinc recoveries can be expected if fresh ore is treated.

It should be noted that no attempt was made to determine the fineness of grind required to give the most profitable results. It is possible that appreciably coarser grinding could be used without seriously reducing the concentrate grade or zinc recovery. Similarly, the exact optimum types and quantities of reagents and contact periods have not been determined. (We would be happy to conduct further tests along these lines if required).



W. R. Grace and Company

Test 408-1 conditions

Table 1

	STAGE								Total
	1	2	3	4	5	6	7	8	
Reagents (a)									
CaO	0.5	-	-	-	-	-	-	-	0.5
Ca(OH) <sub>2</sub>	-	0.5	-	-	0.5	-	-	-	1.0
CuSO <sub>4</sub> ·5H <sub>2</sub> O	-	0.5	-	-	0.3	-	-	-	0.8
H <sub>2</sub> SO <sub>4</sub>	-	-	-	-	-	-	2.0	-	2.0
Pot. amyl xanthate	-	-	-	-	-	-	0.05	0.05	0.10
Z200 (Dow)	-	-	0.04	0.04	0.04	0.04	-	-	0.16
Pulp volume - Ml (b)									
	-	4800	4800	4800	4800	4800	4800	4800	-
% solids (initial)									
	65	33	33	30	30	29	29	-	-
Grinding time - Minutes									
	20	-	-	-	-	-	-	-	-
Conditioning - "									
	-	5	2	(2)	(2)	(2)	2	(2)	-
Frothing - "									
	-	-	4	3	3	3	1	2	-
pH									
	-	-	10.2	9.9	9.6	10.5	7.7	8.0	-
Temperature - °C									
	-	22	23	25	26	28	29	29	-

Notes: (a) Lb/ton of original ore; (b) Per 2000 grams of original ore

- Stages:
1. Grinding (75% -200 mesh)
  2. Conditioning
  3. Zn roughing - 1st concentrate
  4. " " - 2nd "
  5. " " - 3rd "
  6. " " - 4th "
  7. Zn roughing - 5th concentrate - 1st stage
  8. " " - " " - 2nd "

Table 2

W. R. Grace and Company - Test 408-1

Individual results

#	Product	Weight %	Assays % Zn*	Distribution % Zn
1	1st concentrate	9.89	56.81	78.4
2	2nd "	2.29	38.25	12.2
3	3rd "	0.93	5.30	0.7
4	4th "	0.97	2.54	0.3
5	5th "	1.09	2.81	0.4
6	Tailing	84.83	0.67	8.0
7	Head (calculated)	100.00	7.17	100.0
7	Head (direct assays)		7.28	

\* Total Zn                      Additional assays: #7 (head): 0.007% Cu,  
 0.15% Pb, 0.003 oz/ton Au, 0.01 oz/ton Ag,  
 6.51% sulphide Zn , 0.77% oxide Zn

Cumulative results

1	1st concentrate	9.89	56.81	78.4
1 + 2	1st + 2nd concentrates	12.18	53.32	90.6
1 to 3	1st to 3rd "	13.11	49.91	91.3
1 to 4	1st to 4th "	14.08	46.65	91.6
1 to 5	Total "	15.17	43.50	92.0

W. R. Grace and Company

Test 408-2 conditions

Table 3

	STAGE								Total
	1	2	3	4	5	6	7	8	
Reagents (a)									
CaO	1.0	-	-	-	-	-	-	-	1.0
Ca(OH) <sub>2</sub>	-	-	-	-	0.2	-	0.15	-	0.35
CuSO <sub>4</sub> ·5H <sub>2</sub> O	-	0.5	-	-	-	-	-	-	0.5
Z200 (Dow)	-	-	0.08	0.04	0.01	0.01	0.01	0.01	0.16
MIBC	-	-	0.015	-	-	-	-	0.008	0.023
Pulp volume - Ml (b)	-	9000	9000	9000	2600	2600	2600	2600	-
% solids (initial)	65	34	34	31	17	4	14	1	-
Grinding time - Minutes	45	-	-	-	-	-	-	-	-
Conditioning - "	-	5	2	(2)	(2)	(2)	(2)	(2)	-
Frothing - "	-	-	8	2	4	2	4	2	-
pH	-	9.8	9.6	9.4	11.2	10.7	11.0	10.6	-
Temperature °C	-	20	21	23	21	22	19	20	-

Notes: (a) Lb/ton of original ore; (b) Per 4000 grams of original ore

- Stages:
1. Grinding (74% -200 mesh)
  2. Conditioning
  3. Roughing
  4. Scavenging
  5. Cleaning
  6. Cleaner scavenging
  7. Recleaning
  8. Recleaner scavenging

Table 4

W. R. Grace and Company - Test 400-2

## Individual results

#	Product	Weight %	Assays %					Distribution %			F	
			Zn (T)	Zn (O)	Zn (S)	Pb	Fe	Cd	Zn (T)	Zn (O)		Zn (S)
1	Recleaner concentrate	9.25	64.75	0.22	64.53	0.30	0.60	0.21	84.8	2.7	94.6	18
2	Recleaner scav. conc.	0.48	51.09	)					3.5	)		
3	" " tailing	0.27	6.43	)					0.2	)		
4	Cleaner scavenger conc.	0.44	21.98	)	2.98*	8.61*			1.4	)	14.9	5.1
5	" " tailing	2.19	1.80	)					0.6	)		
6	Scavenger concentrate	0.38	10.41	)					0.6	)		
7	" tailing	86.99	0.73	0.71	0.02				8.9	82.4	0.3	
8	Head (calculated)	100.00	7.06	(0.75)	(6.31)				100.0	100.0	100.0	100
8	Head (direct assays)		7.28	0.77	6.51	0.15	N.A.	N.A.				

Additional assays: #8 (head): 0.007% Cu, 0.003 oz/ton Au, 0.01 oz/ton Ag

## Cumulative results

1	Recleaner concentrate	9.25	64.75	0.22	64.53	0.30	0.60	0.21	84.8	2.7	94.6	18
1 + 2	Ditto + recleaner scav. conc.	9.73	64.08						88.3			
1 to 3	Cleaner concentrate	10.00	62.52						88.5			
1 to 4	Ditto + cleaner scav. conc.	10.44	60.81						89.9			
1 to 5	Rougher concentrate	12.63	50.58						90.5			
1 to 6	Combined concentrates	13.01	49.41	1.02	48.39				91.1	17.6	99.7	
2 to 6	Combined "middlings"	3.76	11.66	2.98	8.68				6.3	14.9	5.1	
1+2+4	Combined recleaner concs. + cleaner scavenger conc.	10.17	62.25						89.7			

Note: Zn (T) = Total Zn; Zn (O) = Oxide Zn; Zn (S) = Sulphide Zn

\* By difference. N.A. = Not assayed

Table 5

Screen analyses

Mesh (Tyler)	<u>Ball mill feed</u>			<u>Flotation feed</u>					
	<u>Tests 408-1 and 408-2</u>			<u>Test 408-1</u>			<u>Test 408-2</u>		
	% retained Ind.	% passing Cum.	% passing Cum.	% retained Ind.	% passing Cum.	% passing Cum.	% retained Ind.	% passing Cum.	% passing Cum.
10	-	-	100.0	-	-	100.0	-	-	100.0
14	17.0	17.0	83.0	-	-	100.0	-	-	100.0
20	13.9	30.9	69.1	-	-	100.0	-	-	100.0
28	10.0	40.9	59.1	-	-	100.0	-	-	100.0
35	7.9	48.8	51.2	-	-	100.0	-	-	100.0
48	6.5	55.3	44.7	-	-	100.0	-	-	100.0
65	6.8	62.1	37.9	0.3	0.3	99.7	0.3	0.3	99.7
100	5.6	67.7	32.3	2.7	3.0	97.0	2.6	2.9	97.1
150	5.7	73.4	26.6	9.8	12.8	87.2	9.7	12.6	87.4
200	4.1	77.5	22.5	12.6	25.4	74.6	13.1	25.7	74.3
+325	5.8	83.3	16.7	20.5	45.9	54.1	21.0	46.7	53.3
-325	16.7	100.0	-	54.1	100.0	-	53.3	100.0	-
Total	100.0	-	-	100.0	-	-	100.0	-	-

80% passing size: 1100 microns

85 microns

85 microns

Grinding test data:

<u>Weight of sample used</u> - grams	(M)	2000
<u>Grinding time</u> - Minutes	(T)	20
<u>% solids</u>		65
<u>Feed size:</u> % -10 mesh		100
% -200 "		22.5
80% passing size - Microns	(F)	1100
<u>Product size:</u> % -200 mesh		74.6
80% passing size - Microns	(P)	85
<u>Mill factor</u> (constant)	(C)	0.015
<u>Work index (Bond)</u> =	$\frac{T \times \sqrt{F} \times \sqrt{P}}{10 M \times C \times (\sqrt{F} - \sqrt{P})}$	= <u>8.5 kw hr/ton</u>

FLOTATION TESTS

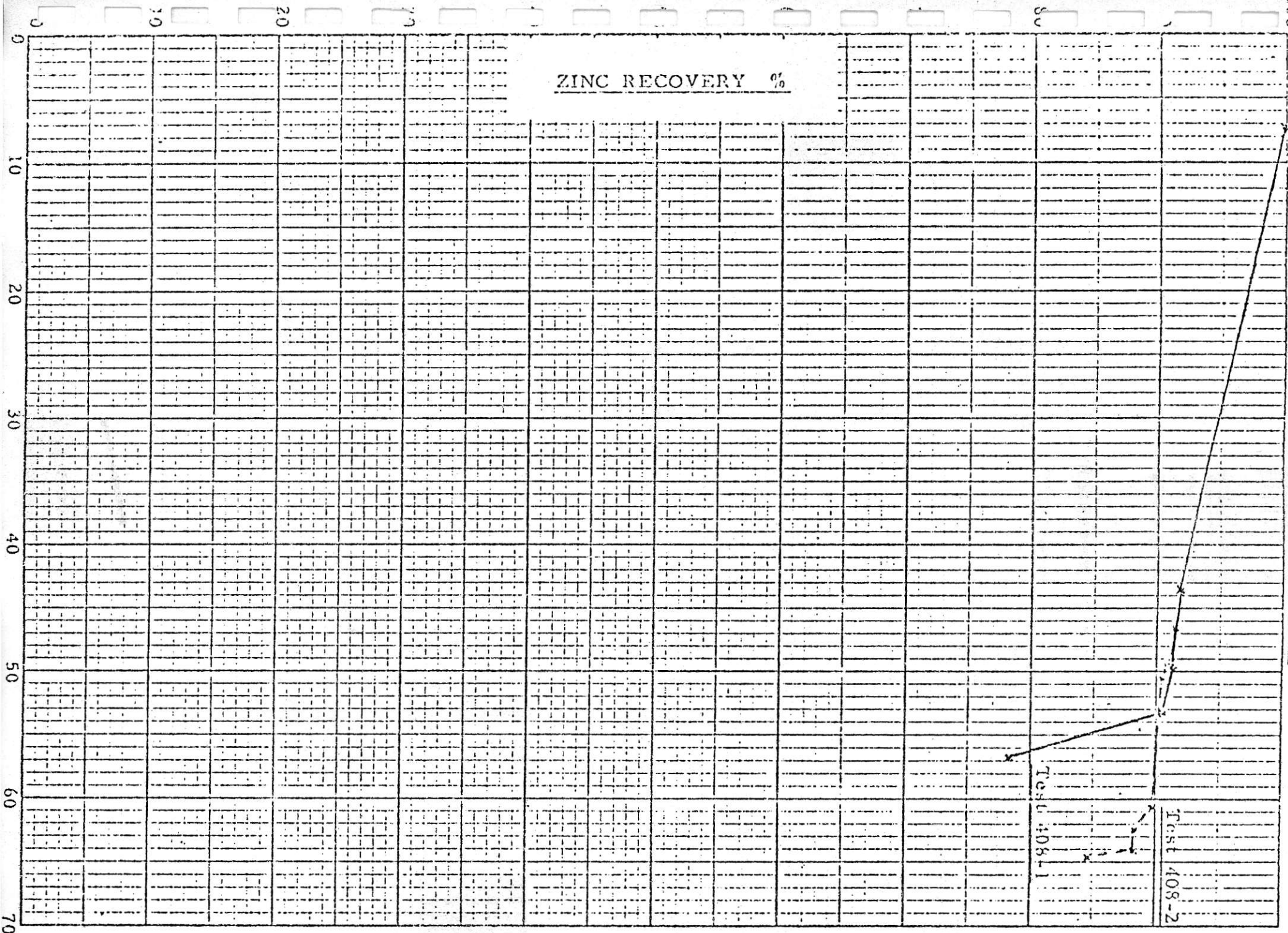
(a) Preliminary test (408-1)

The purpose of this test was to determine the type and approximate amounts of reagents required for concentrating the sphalerite and to observe the general behaviour of the pulp. (In view of the low lead content of the ore, no attempt was made to produce a separate lead concentrate).

Flotation was carried out in 5 stages using various types and quantities of reagents; the five concentrates and the final tailing were assayed separately for zinc (no attempt was made to upgrade the concentrates). Test conditions and results are shown in tables 1 and 2 and in figure 1.

Comments: The sphalerite floated rapidly, 78.4% of the zinc being recovered in the first four minutes (1st concentrate) and a further 12.2% floating in the next three minutes (2nd concentrate); only 1.4% of the zinc floated in the last three concentrates. The addition of extra copper sulphate (4th concentrate) had no significant effect. The addition of sulphuric acid and amyl xanthate (5th concentrate) caused more pyrite and galena to float but recovered only 0.4% of the zinc.

ZINC RECOVERY %



Test 408-2

Tensile 408-1

SUMMARY OF CLAIM

STATUS

October, 1974

Robb Lake  
56° 123° S.E. NTS 94B  
Liard Mining District  
British Columbia



CLAIMS RECORDS

(458 Claims)

CLAIM STATUS FOLLOWING SEPTEMBER 23, 1974  
ASSESSMENT WORK FILING

<u>CLAIM NAME AND NO.</u>	<u>GROUPING NO.</u>	<u>RECORD NO.</u>	<u>ANIVERSARY DATE</u>	<u>RENT DUE YEAR</u>	<u>WOPK DUE</u>
Bell 7	10	56877	October 1	1975	1979
Bell 8	10	56878	October 1	1975	1979
Bell 9	10	56879	October 1	1975	1979
Bell 10	10	56880	October 1	1975	1979
Bell 11	12	56881	October 1	1975	1987
Bell 12	12	56882	October 1	1975	1987
Bell 13	12	56883	October 1	1975	1987
Bell 14	13	56884	October 1	1975	1993
Bell 15	13	56885	October 1	1975	1993
Bell 16	13	56886	October 1	1975	1993
BM 1	15	56773	October 1	1975	1983
BM 2	7	56774	October 1	1981	1982
BM 3	15	56775	October 1	1975	1983
BM 4	7	56776	October 1	1982	1982
BM 5	15	56777	October 1	1975	1983
BM 6	7	56778	October 1	1982	1982
BM 8	7	56780	October 1	1982	1982
Cleo 1	9	55889	Sept. 22	1975	1984
Cleo 2	11	55890	Sept. 22	1975	1982
Cleo 3	9	55891	Sept. 22	1976	1979
Cleo 4	9	55892	Sept. 22	1977	1979
Cleo 5	8	55893	Sept. 22	1979	1980
Cleo 6	9	55894	Sept. 22	1978	1979
Cleo 7	8	55895	Sept. 22	1979	1980
Cleo 8	9	55896	Sept. 22	1978	1979
Cleo 9	8	55897	Sept. 22	1979	1980
Cleo 10	9	55898	Sept. 22	1978	1979
Cleo 11	5	55899	Sept. 22	1976	1977
Cleo 12	5	55900	Sept. 22	1976	1977
Cleo 13	4	55901	Sept. 22	1978	1979

CLAIMS RECORDS

CLAIM STATUS FOLLOWING SEPTEMBER 23, 1974

ASSESSMENT WORK FILING (Cont.)

<u>CLAIM NAME AND NO.</u>	<u>GROUPING NO.</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY DATE</u>	<u>RENT DUE YEAR</u>	<u>WORK DUE</u>
Cleo 14	4	55902	Sept. 22	1978	1979
Cleo 15	4	55903	Sept. 22	1978	1979
Cleo 16	4	55904	Sept. 22	1978	1979
Cleo 17	4	55905	Sept. 22	1977	1978
Cleo 18	4	55906	Sept. 22	1977	1978
Cleo 19	4	55907	Sept. 22	1977	1978
Cleo 20	4	55908	Sept. 22	1977	1978
Cleo 21	4	55909	Sept. 22	1978	1979
Cleo 22	4	55910	Sept. 22	1978	1979
Cleo 23	4	55911	Sept. 22	1978	1979
Cleo 24	4	55912	Sept. 22	1978	1979
Cleo 25	5	55913	Sept. 22	1976	1977
Cleo 26	5	55914	Sept. 22	1976	1977
Cleo 27	5	55915	Sept. 22	1976	1977
Cleo 28	5	55916	Sept. 22	1976	1977
Cleo 31	2	55919	Sept. 22	1980	1981
Cleo 32	2	55920	Sept. 22	1979	1980
Cleo 33	2	55921	Sept. 22	1980	1981
Cleo 41	2	55929	Sept. 22	1979	1980
Cleo 42	2	55930	Sept. 22	1979	1980
Cleo 43	3	55931	Sept. 22	1979	1980
Cleo 69	1	55957	Sept. 22	1983	1984
Cleo 70	2	55958	Sept. 22	1980	1981
Cleo 71	1	55959	Sept. 22	1983	1984
Cleo 72	2	55960	Sept. 22	1979	1980
Cleo 79	4	56478	Sept. 30	1978	1979
Cleo 81	5	56480	Sept. 30	1977	1978
Cleo 83	6	55961	Sept. 22	1983	1984
Cleo 85	6	55963	Sept. 22	1982	1984
Cleo 87	7	55965	Sept. 22	1977	1982
Cleo 89	7	55967	Sept. 22	1978	1982
Cleo 90	8	55968	Sept. 22	1975	1983
Cleo 91	7	55969	Sept. 22	1975	1983
Cleo 92	8	55970	Sept. 22	1975	1983
Cleo 93	2	55971	Sept. 22	1980	1981
Cleo 94	2	55972	Sept. 22	1980	1981
Cleo 95	2	55973	Sept. 22	1980	1981

## CLAIMS RECORDS

CLAIM STATUS FOLLOWING SEPTEMBER 23, 1974

ASSESSMENT WORK FILING (cont'd.)

<u>CLAIM NAME AND NO.</u>	<u>GROUPING NO.</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY DATE</u>	<u>RENT DUE YEAR</u>	<u>WORK DUE</u>
Cleo 96	4	55974	Sept. 22	1977	1978
Cleo 98	4	55976	Sept. 22	1977	1978
Cleo 100	4	55978	Sept. 22	1977	1978
Cleo 105	10	55983	Sept. 22	1975	1989
Cleo 106	10	55984	Sept. 22	1975	1989
Cleo 107	10	55985	Sept. 22	1975	1989
Cleo 108	11	55986	Sept. 22	1975	1981
Cleo 110	4	55987	Sept. 22	1978	1979
Cleo 112	4	55988	Sept. 22	1978	1979
Cleo 113	2	55989	Sept. 22	1980	1981
Cleo 114	4	55990	Sept. 22	1978	1979
Cleo 115	2	55991	Sept. 22	1980	1981
Cleo 116	4	55992	Sept. 22	1977	1978
Cleo 117	4	55993	Sept. 22	1978	1979
Cleo 119	5	55994	Sept. 22	1976	1977
Cleo 120	5	55995	Sept. 22	1977	1978
Cleo 121	4	55996	Sept. 22	1978	1979
Cleo 122	4	55997	Sept. 22	1978	1979
Cleo 123	4	55998	Sept. 22	1978	1979
Cleo 124	4	55999	Sept. 22	1978	1979
Cleo 125	4	56000	Sept. 22	1978	1979
Cleo 126	4	56001	Sept. 22	1978	1979
Cleo 127	4	56002	Sept. 22	1977	1978
Cleo 128	4	56003	Sept. 22	1977	1978
Cleo 129	4	56004	Sept. 22	1978	1979
Cleo 130	4	56005	Sept. 22	1976	1977
Cleo 131	5	56006	Sept. 22	1976	1977
Cleo 132	5	56007	Sept. 22	1976	1977
Cleo 133	5	56008	Sept. 22	1976	1977
Cleo 134	5	56009	Sept. 22	1976	1977
Cleo 135	11	56010	Sept. 22	1975	1981
Cleo 136	11	56011	Sept. 22	1975	1981
Cleo 137	11	56012	Sept. 22	1979	1980
Cleo 138	11	56013	Sept. 22	1979	1980
Cleo 139	11	56014	Sept. 22	1980	1980
Cleo 140	11	56015	Sept. 22	1980	1980
Cleo 141	10	56016	Sept. 22	1975	1994
Cleo 142	10	56017	Sept. 22	1975	1994
Cleo 143	10	56018	Sept. 22	1975	1989

CLAIMS RECORDS  
CLAIM STATUS FOLLOWING SEPTEMBER 23, 1974  
ASSESSMENT WORK FILING (Cont.)

<u>CLAIM NAME AND NO.</u>	<u>GROUPING NO.</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY DATE</u>	<u>RENT DUE YEAR</u>	<u>WORK DUE</u>
Cleo 144	10	56019	Sept. 22	1975	1989
Cleo 145	11	56020	Sept. 22	1975	1980
Cleo 146	11	56021	Sept. 22	1975	1981
Cleo 147	11	56022	Sept. 22	1975	1980
Cleo 148	11	56023	Sept. 22	1975	1980
Cleo 151	1	56026	Sept. 22	1983	1984
Cleo 152	2	56027	Sept. 22	1979	1980
Cleo 153	1	56028	Sept. 22	1983	1984
Cleo 154	2	56029	Sept. 22	1979	1980
Cleo 155	1	56030	Sept. 22	1983	1984
Cleo 156	1	56031	Sept. 22	1983	1984
Cleo 157	1	56032	Sept. 22	1983	1984
Cleo 158	1	56033	Sept. 22	1983	1984
Cleo 159	1	56034	Sept. 22	1983	1984
Cleo 160	1	56035	Sept. 22	1983	1984
Cleo 161	5	56036	Sept. 22	1976	1977
Cleo 162	5	56037	Sept. 22	1976	1977
Cleo 163	5	56038	Sept. 22	1976	1977
Cleo 164	5	56039	Sept. 22	1976	1977
Cleo 165	5	56040	Sept. 22	1976	1977
Cleo 166	5	56041	Sept. 22	1976	1977
Cleo 167	5	56042	Sept. 22	1976	1977
Cleo 168	5	56043	Sept. 22	1976	1977
Cleo 169	6	56044	Sept. 22	1983	1984
Cleo 170	6	56045	Sept. 22	1983	1984
Cleo 171	5	56046	Sept. 22	1976	1977
Cleo 172	5	56047	Sept. 22	1976	1977
Cleo 173	5	56048	Sept. 22	1976	1977
Cleo 174	5	56049	Sept. 22	1976	1977
Cleo 175	5	56050	Sept. 22	1976	1977
Cleo 176	5	56051	Sept. 22	1976	1977
Cleo 187	11	56062	Sept. 22	1975	1981
Cleo 188	11	56063	Sept. 22	1975	1981
Cleo 189	11	56064	Sept. 22	1980	1981
Cleo 190	11	56065	Sept. 22	1980	1981
Cleo 191	11	56066	Sept. 22	1979	1980
Cleo 192	11	56067	Sept. 22	1979	1980

CLAIMS RECORDS

CLAIM STATUS FOLLOWING SEPTEMBER 23, 1974

ASSESSMENT WORK FILING (Cont.)

<u>CLAIM NAME AND NO.</u>	<u>GROUPING NO.</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY DATE</u>	<u>RENT DUE YEAR</u>	<u>WORK DUE</u>
Cleo 193	11	56068	Sept. 22	1980	1980
Cleo 194	11	56069	Sept. 22	1980	1980
Cleo 197	11	56072	Sept. 22	1980	1981
Cleo 198	11	56073	Sept. 22	1980	1981
Cleo 199	11	56074	Sept. 22	1980	1981
Cleo 200	11	56075	Sept. 22	1980	1981
Cleo 207	1	57658	Oct. 21	1983	1984
Cleo 208	1	57659	Oct. 21	1983	1984
Cleo 209	1	57660	Oct. 21	1983	1984
Cleo 210	2	57661	Oct. 21	1980	1981
Cleo 211	2	57662	Oct. 21	1980	1981
Cleo 221	11	56076	Sept. 22	1980	1980
Cleo 222	11	56077	Sept. 22	1980	1980
Cleo 223	11	56078	Sept. 22	1980	1980
Cleo 224	11	56079	Sept. 22	1980	1980
Cleo 225	5	56080	Sept. 22	1976	1977
Cleo 226	5	56081	Sept. 22	1976	1977
Cleo 227	5	56082	Sept. 22	1976	1977
Cleo 228	5	56083	Sept. 22	1976	1977
Cleo 229	5	56084	Sept. 22	1976	1977
Cleo 230	5	56085	Sept. 22	1976	1977
Cleo 231	6	56086	Sept. 22	1983	1984
Cleo 232	6	56087	Sept. 22	1982	1984
Cleo 233	6	56088	Sept. 22	1983	1984
Cleo 234	6	56089	Sept. 22	1979	1984
Cleo 235	6	56090	Sept. 22	1983	1984
Cleo 236	6	56091	Sept. 22	1979	1984
Cleo Fr 2	2	57651	Oct. 21	1980	1981
Cleo Fr 8	4	56268	Sept. 22	1978	1979
Cleo Fr 9	5	56269	Sept. 22	1976	1977
Cleo Fr 10	6	56270	Sept. 22	1982	1984
Cleo Fr 11	6	56271	Sept. 22	1979	1984
Cleo Fr 16	1	56277	Sept. 22	1983	1984
Cleo Fr 17	1	56278	Sept. 22	1983	1984

CLAIMS RECORDS  
CLAIM STATUS FOLLOWING SEPTEMBER 23, 1974  
ASSESSMENT WORK FILING (Cont.)

<u>CLAIM NAME AND NO.</u>	<u>GROUPING NO.</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY DATE</u>	<u>RENT DUE YEAR</u>	<u>WORK DUE</u>
FBW 6	9	56808	Oct. 4	1977	1978
FBW 9	8	56809	Oct. 4	1979	1980
FBW 10	9	56810	Oct. 5	1979	1979
FBW 11	8	56811	Oct. 4	1979	1979
FBW 12	8	56812	Oct. 4	1979	1980
FBW 13	8	56813	Oct. 4	1978	1979
FBW 14	8	56814	Oct. 4	1979	1979
FBW 15	8	56815	Oct. 4	1979	1979
FBW 16	8	56816	Oct. 4	1979	1979
FBW 17	8	57133	Oct. 15	1978	1979
FBW 18	8	57134	Oct. 15	1978	1979
FBW 19	8	57135	Oct. 15	1978	1979
FBW 20	8	57136	Oct. 15	1978	1979
FBW 21	8	57137	Oct. 15	1979	1979
FBW 22	8	57138	Oct. 15	1979	1979
FBW 23	8	57139	Oct. 15	1979	1979
FBW 24	8	57140	Oct. 15	1979	1979
FBW 25	7	57141	Oct. 15	1981	1982
FBW 26	8	57142	Oct. 15	1979	1979
FBW 27	7	57143	Oct. 15	1982	1982
FBW 28	7	57144	Oct. 15	1981	1981
FBW 39	10	57153	Oct. 15	1975	1981
FBW 40	10	57154	Oct. 15	1975	1981
FBW 41	9	57155	Oct. 15	1978	1978
FBW 42	9	57156	Oct. 15	1978	1978
FBW 43	9	57157	Oct. 15	1978	1978
FBW 44	9	57158	Oct. 15	1978	1978
FBW 45	9	57159	Oct. 15	1978	1978
FBW 46	9	57160	Oct. 15	1978	1978
FG 1	9	56893	Oct. 12	1979	1979
FG 2	9	56894	Oct. 12	1978	1978
FG 3	7	56895	Oct. 12	1981	1981
FG 4	7	56896	Oct. 12	1981	1981
FG 25	6	56903	Oct. 12	1983	1984
FG 26	6	56904	Oct. 12	1979	1984
FG 27	6	56905	Oct. 12	1982	1983
FG 28	6	56906	Oct. 12	1978	1983
FG 29	6	56907	Oct. 12	1982	1983

CLAIMS RECORDS

CLAIM STATUS FOLLOWING SEPTEMBER 23, 1974

ASSESSMENT WORK FILING (Cont.)

<u>CLAIM NAME AND NO.</u>	<u>GROUPING NO.</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY DATE</u>	<u>RENT DUE YEAR</u>	<u>WORK DUE</u>
FG 30	6	56908	Oct. 12	1978	1983
FG 31	6	56909	Oct. 12	1978	1983
FG 32	6	56910	Oct. 12	1978	1983
FG 33	6	56911	Oct. 12	1979	1983
FG 34	6	56912	Oct. 12	1979	1983
FG FR 1	8	57285	Oct. 15	1978	1980
JOSH 8	14	57218	Oct. 18	1976	1985
JOSH 10	14	57220	Oct. 18	1976	1985
JOSH 12	11	57222	Oct. 18	1981	1981
KIM 9	6	57764	Nov. 17	1979	1984
KIM 10	6	57765	Nov. 17	1979	1984
KIM 11	6	57766	Nov. 17	1979	1984
KIM 12	6	57767	Nov. 17	1979	1984
KIM Fr 5	9	57773	Nov. 17	1978	1978
KIM Fr 51	7	57745	Nov. 2	1980	1982
KIM Fr 52	8	57746	Nov. 2	1979	1980
MART 75	10	57298	Oct. 14	1975	1979
MART 77	10	57300	Oct. 14	1975	1979
MART 79	12	57302	Oct. 14	1975	1986
MART 81	12	57304	Oct. 14	1975	1986
MART 83	13	57306	Oct. 14	1975	1993
MART 85	10	57308	Oct. 14	1975	1981
MART 87	9	57310	Oct. 14	1978	1978
MV 3	1	56097	Sept. 27	1983	1984
MV 4	1	56098	Sept. 27	1983	1984
MV 5	2	56099	Sept. 27	1980	1981
MV 6	1	56100	Sept. 27	1983	1984
MV 23	11	56117	Sept. 27	1975	1982
MV 25	10	56119	Sept. 27	1975	1981

CLAIMS RECORDS  
CLAIM STATUS FOLLOWING SEPTEMBER 23, 1974  
ASSESSMENT WORK FILING (Cont.)

<u>CLAIM NAME AND NO.</u>	<u>GROUPING NO.</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY DATE</u>	<u>RENT DUE YEAR</u>	<u>WORK DUE</u>
MV 26	13	56120	Sept. 27	1975	1993
MV 27	6	56121	Sept. 27	1979	1984
MV 28	7	56122	Sept. 27	1975	1983
MV 29	6	56123	Sept. 27	1978	1983
MV 30	7	56124	Sept. 27	1975	1983
MV 31	6	56125	Sept. 27	1978	1983
MV 32	7	56126	Sept. 27	1975	1983
MV 33	6	56127	Sept. 27	1978	1983
MV 34	7	56128	Sept. 27	1975	1983
MV 35	6	56129	Sept. 27	1978	1983
MV 36	6	56130	Sept. 27	1975	1983
MV 49	2	56143	Sept. 27	1980	1981
MV 50	2	56144	Sept. 27	1980	1981
MV 51	2	56145	Sept. 27	1980	1981
MV 52	2	56146	Sept. 27	1980	1981
MV 53	4	56147	Sept. 27	1978	1979
MV 54	4	56148	Sept. 27	1978	1979
MV 55	4	56149	Sept. 27	1978	1979
MV 56	4	56150	Sept. 27	1978	1979
MV 60	6	56154	Sept. 27	1983	1984
MV 73	11	56167	Sept. 27	1975	1995
MV 74	10	56168	Sept. 27	1975	1995
MV 75	10	56169	Sept. 27	1975	1982
MV 76	10	56170	Sept. 27	1975	1995
MV 77	10	56171	Sept. 27	1975	1982
MV 78	10	56172	Sept. 27	1975	1995
MV 79	10	56173	Sept. 27	1975	1982
MV 80	10	56174	Sept. 27	1975	1995
MV 81	9	56175	Sept. 27	1975	1982
MV 82	9	56176	Sept. 27	1975	1994
MV 83	9	56177	Sept. 27	1975	1982
MV 84	9	56178	Sept. 27	1975	1995
MV 85	9	56179	Sept. 27	1975	1982
MV 86	9	56180	Sept. 27	1975	1995
MV 87	9	56181	Sept. 27	1975	1981
MV 88	9	56182	Sept. 27	1975	1981
MV 89	9	56183	Sept. 27	1979	1979



CLAIMS RECORDS

CLAIM STATUS FOLLOWING SEPTEMBER 23, 1974

ASSESSMENT WORK FILING (Cont.)

<u>CLAIM NAME</u> <u>AND NO.</u>	<u>GROUPING</u> <u>NO.</u>	<u>RECORD</u> <u>NO.</u>	<u>ANNIVERSARY</u> <u>DATE</u>	<u>RENT DUE</u> <u>YEAR</u>	<u>WORK</u> <u>DUE</u>
MV 90	9	56184	Sept. 27	1979	1979
MV 91	9	56185	Sept. 27	1978	1979
MV 92	9	56186	Sept. 27	1979	1979
MV 93	9	56187	Sept. 27	1979	1979
MV 94	9	56188	Sept. 27	1979	1979
MV 95	9	56189	Sept. 27	1979	1979
MV 96	9	56190	Sept. 27	1979	1979
MV 97	10	56191	Sept. 27	1975	1982
MV 98	10	56192	Sept. 27	1975	1981
MV 99	10	56193	Sept. 27	1975	1982
MV 100	13	56194	Sept. 27	1975	1993
MV 101	10	56195	Sept. 27	1975	1981
MV 102	10	56196	Sept. 27	1975	1994
MV 103	13	56197	Sept. 27	1975	1994
MV 104	13	56198	Sept. 27	1975	1994
MV 105	10	56199	Sept. 27	1975	1988
MV 106	10	56200	Sept. 27	1975	1988
MV 107	12	56201	Sept. 27	1975	1988
MV 108	10	56202	Sept. 27	1975	1988
MV 109	6	56203	Sept. 27	1978	1983
MV 110	6	56204	Sept. 27	1975	1983
MV 111	6	56205	Sept. 27	1978	1983
MV 112	6	56206	Sept. 27	1975	1983
MV 113	6	56207	Sept. 27	1978	1983
MV 114	6	56208	Sept. 27	1975	1983
MV 116	6	56210	Sept. 27	1975	1983
MV 117	8	56211	Sept. 27	1979	1979
MV 118	8	56212	Sept. 27	1978	1979
MV 119	7	56213	Sept. 27	1975	1983
MV 120	8	56214	Sept. 27	1979	1980
MV 121	7	56215	Sept. 27	1981	1982
MV 122	7	56216	Sept. 27	1980	1982
MV 123	7	56217	Sept. 27	1981	1982
MV 124	7	56218	Sept. 27	1980	1982
MV 125	7	56219	Sept. 27	1981	1982
MV 126	7	56220	Sept. 27	1980	1982
MV 127	7	56221	Sept. 27	1981	1982
MV 128	7	56222	Sept. 27	1981	1982

## CLAIMS RECORDS

CLAIM STATUS FOLLOWING SEPTEMBER 23, 1974

ASSESSMENT WORK FILING (CONT.)

<u>CLAIM NAME AND NO.</u>	<u>GROUPING NO.</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY DATE</u>	<u>RENT DUE YEAR</u>	<u>WORK DUE</u>
MV	129	7	56223	Sept. 27	9181 1982
MV	130	7	56224	Sept. 27	1981 1982
MV	131	7	56225	Sept. 27	1981 1982
MV	132	7	56226	Sept. 27	1981 1982
MV	133	7	56227	Sept. 27	1981 1982
MV	134	7	56228	Sept. 27	1981 1982
MV	135	15	56229	Sept. 27	1975 1983
MV	136	7	56230	Sept. 27	1981 1982
MV	137	8	56231	Sept. 27	1979 1979
MV	138	8	56232	Sept. 27	1978 1979
MV	139	7	56233	Sept. 27	1982 1982
MV	140	8	56234	Sept. 27	1979 1979
MV	141	7	56235	Sept. 27	1981 1982
MV	142	8	56236	Sept. 27	1979 1979
NMW	1	1	57984	Feb. 23	1981 1983
NMW	2	1	57985	Feb. 23	1982 1984
NMW	3	1	57986	Feb. 23	1981 1983
NMW	4	1	57987	Feb. 23	1981 1983
NMW	5	1	57988	Feb. 23	1981 1983
NMW	6	1	57989	Feb. 23	1981 1983
NMW	77	1	58060	Feb. 23	1981 1983
NMW	78	1	58061	Feb. 23	1981 1983
NMW	79	1	58062	Feb. 23	1981 1983
NMW	80	2	58063	Feb. 23	1978 1980
NORM	5	11	56821	Oct. 1	1975 1980
NORM	6	10	56822	Oct. 1	1975 1979
NORM	7	10	56823	Oct. 1	1975 1979
NORM	8	10	56824	Oct. 1	1975 1979
NORM	9	12	56825	Oct. 1	1975 1987
NORM	10	12	56826	Oct. 1	1975 1987
NORM	11	12	56827	Oct. 1	1975 1987
NORM	12	12	56828	Oct. 1	1975 1987
REX FR	1	10	63810	July 10	1975 1982
REX FR	2	9	63811	July 10	1975 1982
REX FR	3	9	63812	July 10	1975 1993
REX FR	4	8	63813	July 10	1980 1980
REX FR	5	5	63814	July 10	1977 1977

CLAIMS RECORDS  
CLAIM STATUS FOLLOWING SEPTEMBER 23, 1974  
ASSESSMENT WORK FILING

<u>CLAIM NAME AND NO.</u>	<u>GROUPING NO.</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY DATE</u>	<u>RENT DUE YEAR</u>	<u>WORK DUE</u>
REX FR 6	2	66359	Aug. 14	1980	1981
REX FR 7	2	66360	Aug. 14	1980	1981
REX FR 12	1	66365	Aug. 14	1975	1985
REX FR 13	1	66366	Aug. 14	1982	1983
REX FR 14	1	66367	Aug. 14	1982	1983
REX FR 15	2	66368	Aug. 14	1979	1980
REX FR 16	1	66369	Aug. 14	1982	1983
REX FR 17	1	66370	Aug. 14	1982	1983
REX FR 20	7	66373	Aug. 14	1981	1982
REX FR 21	8	66374	Aug. 14	1975	1980
REX FR 22	8	66375	Aug. 14	1979	1979
REX FR 29	4	67990	Sept. 7	1977	1979
REX FR 30	9	68761	Sept. 29	1975	1994
ROB 1	2	66892	Aug. 14	1977	1981
ROB 2	1	66893	Aug. 14	1975	1985
ROB 3	3	66894	Aug. 14	1981	1984
ROB 4	1	66895	Aug. 14	1979	1984
ROB 5	3	66896	Aug. 14	1975	1985
ROB 6	3	66897	Aug. 14	1975	1985
ROB 7	3	66898	Aug. 14	1980	1984
ROB 8	3	66899	Aug. 14	1980	1984
ROB 9	8	66900	Aug. 14	1975	1980
ROB 10	3	66901	Aug. 14	1977	1984
ROB 11	8	66902	Aug. 14	1975	1980
ROB 12	3	66903	Aug. 14	1979	1984
ROB 13	8	66904	Aug. 14	1975	1985
ROB 14	9	66905	Aug. 14	1975	1989
ROB 15	9	66906	Aug. 14	1975	1985
ROB 16	11	66907	Aug. 14	1975	1990
ROB 17	14	66908	Aug. 14	1975	1990
ROB 18	8	66909	Aug. 14	1975	1985
ROB 19	7	66910	Aug. 14	1975	1985
ROB 20	4	66911	Aug. 14	1975	1985
ROB 21	2	66912	Aug. 14	1979	1981
ROB 22	1	66913	Aug. 14	1975	1985
ROB 23	2	66914	Aug. 14	1977	1981
ROB 24	2	66915	Aug. 14	1977	1981
ROB 25	2	66916	Aug. 14	1978	1981

CLAIMS RECORDS  
 CLAIM STATUS FOLLOWING SEPTEMBER 23, 1974  
ASSESSMENT WORK FILING

<u>CLAIM NAME</u> <u>AND NO.</u>	<u>GROUPING</u> <u>NO.</u>	<u>RECORD</u> <u>NO.</u>	<u>ANNIVERSARY</u> <u>DATE</u>	<u>RENT DUE</u> <u>YEAR</u>	<u>WORK</u> <u>DUE</u>
ROB 26	2	66917	Aug. 14	1978	1981
ROB 27	2	66918	Aug. 14	1980	1981
ROB 28	2	66919	Aug. 14	1978	1981
ROB 29	2	66920	Aug. 14	1975	1985
ROB 30	2	66921	Aug. 14	1975	1985
ROB 31	4	66922	Aug. 14	1975	1979
ROB 32	2	66923	Aug. 14	1977	1981
ROB 33	3	66924	Aug. 14	1975	1984
ROB 34	3	66925	Aug. 14	1975	1984
ROB 35	3	66926	Aug. 14	1977	1984
ROB 36	14	66927	Aug. 14	1977	1985
ROB 37	3	66928	Aug. 14	1977	1984
ROB 38	14	66929	Aug. 14	1977	1985
ROB 39	14	66930	Aug. 14	1980	1985
ROB 40	14	66931	Aug. 14	1980	1985
ROB 41	14	66932	Aug. 14	1975	1989
ROB 42	11	66933	Aug. 14	1975	1989
ROB 43	14	66934	Aug. 14	1975	1989
ROB 44	11	66935	Aug. 14	1975	1989
ROB 45	11	66936	Aug. 14	1976	1981
ROB 46	11	66937	Aug. 14	1975	1981
ROB 47	10	66938	Aug. 14	1975	1989
ROB 48	11	66939	Aug. 14	1975	1985
ROB 50	1	66941	Aug. 14	1975	1985
ROB 51	7	66942	Aug. 14	1975	1985
ROB 52	8	66943	Aug. 14	1975	1989
ROB FR 53	3	66944	Aug. 14	1975	1985
ROB FR 54	3	66945	Aug. 14	1980	1984
ROB FR 55	7	66946	Aug. 14	1975	1985
ROB FR 56	8	66947	Aug. 14	1975	1989
ROB FR 57	9	66948	Aug. 14	1975	1985
ROB FR 58	8	66949	Aug. 14	1975	1985
ROB 63	14	68762	Sept. 29	1976	1985
ROB 64	14	68763	Sept. 29	1976	1985
ROB 65	14	68764	Sept. 29	1976	1985
ROB 66	14	68765	Sept. 29	1976	1985
ROB 67	14	68766	Sept. 29	1976	1985
ROB 69	14	68768	Sept. 29	1976	1985
ROB 70	14	68769	Sept. 29	1976	1985

## CLAIMS RECORDS

CLAIM STATUS FOLLOWING SEPTEMBER 23, 1974

ASSESSMENT WORK FILING

<u>CLAIM NAME</u> <u>AND NO.</u>	<u>GROUPING</u> <u>NO.</u>	<u>RECORD</u> <u>NO.</u>	<u>ANNIVERSARY</u> <u>DATE</u>	<u>RENT DUE</u> <u>YEAR</u>	<u>WORK</u> <u>DUE</u>
ROB 71	14	68770	Sept. 29	1976	1985
ROB 72	14	68771	Sept. 29	1976	1985
ROB 75	14	68774	Sept. 29	1976	1985
ROB 76	14	68775	Sept. 29	1976	1985
ROB 77	14	68776	Sept. 29	1976	1985
ROB 78	14	68777	Sept. 29	1976	1985
ROB 80	14	68791	Sept. 29	1976	1985
ROB 81	14	68792	Sept. 29	1976	1985
ROB 81	14	68793	Sept. 29	1976	1985
ROB 83	14	68794	Sept. 29	1976	1985
ROB 84	14	68795	Sept. 29	1976	1985
ROB 85	14	68796	Sept. 29	1976	1985
ROB 86	2	68787	Sept. 22	1980	1980
ROB 87	2	68788	Sept. 22	1980	1980
ROB FR 88	14	68778	Sept. 29	1976	1985
ROB FR 89	14	68779	Sept. 29	1976	1985
ROB FR 90	14	68789	Sept. 22	1976	1985
ROB FR 91	14	68780	Sept. 29	1976	1985
ROB FR 92	14	68781	Sept. 29	1976	1985
ROB FR 93	14	68782	Sept. 29	1976	1985
ROB FR 94	14	68783	Sept. 29	1976	1985
ROB FR 96	14	68785	Sept. 29	1976	1985
ROB FR 99	14	68798	Sept. 29	1976	1985
ROB FR 100	14	68799	Sept. 29	1976	1985
ROB FR 101	14	68800	Sept. 29	1976	1985

STATEMENT OF EXPENDITURES

ROBB LAKE JOINT VENTURE

1974

December, 1974

Robb Lake  
56° 123° S.E. NTS 94B  
Liard Mining District  
British Columbia

## STATEMENT OF EXPENDITURES

Work on the Robb Lake Project during 1974 was managed on behalf of the Joint Venture (Ecstall Mining Limited, Arrow Inter-America Corporation and Barrier Reef Resources Ltd. N.P.L.) initially by Cordilleran Engineering Ltd. and later by Texasgulf Inc.

The following expenditure summary, which has been derived from figures provided by Texasgulf Inc. Accounting department, includes consulting fees charged by the Project Managers. The costs represent disbursements charged to the project during the period 1st January - 30th November, 1974.

Salaries, Fringe Benefits and Texasgulf Management fees	\$ 88,857.20
Camp Expense (supplies, hardware, fuel, etc.)	44,076.92
Shipping and Storage	1,915.36
Travel Expense	6,668.22
Office and Technical Supplies	7,782.86
Communications (radio rental, etc.)	2,044.32
Insurance	2,241.40
Management Fees, etc. (Cordilleran Eng. Ltd.)	9,548.88
Geophysical Costs	1,689.98
Geochemical Surveys and Analysis	2,115.36
Assaying	3,359.86

Auto Operation and Maintenance	\$ 4,059.46
Fixed Wing Charter	77,710.24
Helicopter Charter	85,585.28
Equipment Purchase and Maintenance	8,620.18
Equipment Contracting	827.88
Surveying	2,698.28
Diamond Drilling	215,376.28
Government Fees	30,435.00
	<hr/>
	596,612.96
	<hr/> <hr/>

Applications for Certificates of Work have been filed, reporting expenditures for diamond drilling and related support totalling \$ 362,150.55 i.e. 60.8% of total expenditures. Reasons for this short fall in costs reported and total costs listed above are summarized as follows:

1. Inability to record more than ten years excess work.
2. Confining assessment work application to diamond drilling and directly related costs.
3. Non-applicability of certain costs listed above.
4. Confidentiality of assay data.



Texasgulf personnel engaged on the project to whom the above salaries, fringe benefits and fees apply are listed below:

<u>Name</u>	<u>Capacity</u>	<u>Dates</u>	<u>Daily Rate of Compensation</u>
R.G.Gifford P. Eng.	Project Geologist	Feb.5-Nov.30 147 Days	Daily fee \$100.00
F.T.Manns M. Sc.	Geologist	May 13-Nov.16 161 Days	\$ 40.00
P.J.S.Boyle B. Sc.	Geologist	Apr.15-Nov.30 192 Days	\$ 40.00
H.S.Mosher B. Sc.	Geologist	May 13-Nov.30 171 Days	\$ 36.00
W.T.Millward	Camp Manager	Apr.29-Oct.11 142 Days	\$ 65.00
R. Oakley	Drill Site Prep.	May 14-June 4 22 Days	\$ 35.00
R.R.Marvin	Drill Site Prep.	May 13-Oct.15 151 Days	\$ 35.00
B.W.Jacobson	Drill Site Prep.	May 13-Sept.4 113 Days	\$ 28.00
P.C.Hubachek	Field Assistant	May 14-Oct.14 148 Days	\$ 30.00
I.K.Raminsh	Field Assistant	May 13-Sept.2 97 Days	\$ 25.00
D.A.Donnelly	Field Assistant	May 13-17 5 Days	\$ 25.00
M.S.Mosher	Field Assistant	June 27-Sept.7 64 Days	\$ 22.00

<u>Name</u>	<u>Capacity</u>	<u>Dates</u>	<u>Daily Rate of Compensation</u>
G.P.Arnould	Field Assistant	June 24-Sept.4 36 Days	\$ 18.00
I. Malcolm	Cook	May 7-Sept.30 139 Days	\$ 45.00
K.A.Hovden	Assistant Cook	May 15-Sept.24 126 Days	\$ 28.00
S. Sale	First Aid Attendant	June 24-Sept.9 66 Days	\$ 30.00
L. Bell	Draftsman	June 3-Nov.30 76 Days	\$ 55.00
J.M.Newell P. Eng	District Manager	Feb. 14-Oct.22 24 Days	Daily Fee \$150.00

In addition to the above Texasgulf Inc. personnel,  
contractors were engaged on the property as follows:

Canadian Longyear Ltd.	9 - 11 men	May 28 - Sept. 15 '74
Northern Mountain Helicopters Ltd.	2 - 3 men	May 16 - Sept. 21 '74
McElhanney Surveying & Engineering Ltd.	2 men	July 17 - 24 '74

PERSONNEL, MAJOR CONTRACTORS  
AND  
SUPPLIERS

December, 1974

Robb Lake  
56° 123° S.E. NTS 94B  
Liard Mining District  
British Columbia

PERSONNEL, MAJOR CONTRACTORS AND SUPPLIERS

PERSONNEL

TEXASGULF INC.

R. G. Gifford	Project Manager	
W. T. Millward	Camp Manager	
F. T. Manns	Geologist	
P. J. Boyle	Geologist	
H. S. Mosher	Geologist	
L. Bell	Draftsman	
P. Hubachek	Field Assistant	Surveying, grid
I. Raminsh	Field Assistant	layouts, prospecting, general duties.
R. Marvin	Field Assistant	Drill site preparat-
B. Jacobson	Field Assistant	ion, packsack drill-
M. Mosher	Field Assistant	ing, soil sampling,
G. Arnould	Field Assistant	general duties.
S. Sale	First Aid Attendant	Core shack duties.
I. Malcolm	Cook	
K. Hovden	Assistant Cook	

MAJOR CONTRACTORS AND SUPPLIERS

DIAMOND DRILLING

Canadian Longyear Limited. 721 Aldford, Annacis Isld. New Westminster, B.C.	R. E. Swayne - Branch Manager J. Cashaback - Foreman R. Schultz - Foreman E. Russell - Foreman
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HELICOPTER SUPPORT

Northern Mountain Helicopters Ltd. Prince George & Mackenzie, B.C.	E. MacPherson - Gen. Manager J. Lory - Pilot W. Carr-Hilton - Pilot L. Graham - Pilot D. Wiebe - Relief Pilot D. Buchanan - Relief Pilot N. Graham - Engineer
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FIXED WING SUPPORT

Northern Thunderbird  
Air Ltd.  
Prince George &  
Mackenzie, B.C.

L. Ritchey - Gen. Manager  
D. Whelan - Base Man. Mackenzie  
E. Dyck - Pilot  
B. Holmquist - Pilot  
D. Davie - Pilot  
L. Bowers - Pilot  
J. Ulrich - Pilot

ASSAYS & ANALYSIS

Bondar Clegg & Company Ltd.,  
1500 Pemberton,  
North Vancouver, B.C.

METALLURGICAL TESTS

Britton Research Limited,  
1612 West 3rd Avenue,  
Vancouver, B.C.

SURVEYING

McElhanney Surveying  
& Engineering,  
1200 West Pender St.,  
Vancouver, B.C.

J. Smith - Surveyor

FOOD SUPPLIER

Westland Co-op.  
Mackenzie, B.C.

TRUCKING

Fred's Trucking  
Mackenzie, B.C.

F. Ackeral - Owner

FUEL SUPPLIER

Imperial Esso Dealer,  
Mackenzie, B.C.

E. Bodin - Agent

CAMP SUPPLIER

Deakin Equipment Ltd.,  
833 Powell St.,  
Vancouver, B.C.

CERTIFICATES OF ASSAY

December, 1974

Robb Lake  
56° 123° S.E. NTS 94B  
Liard Mining District  
British Columbia

701 - 1281 West Georgia Street  
 Vancouver, B. C.  
 Attn: Mr. J. N. Newell

CERTIFICATE OF ANALYSIS

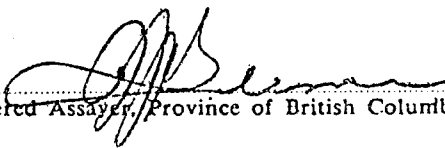
Samples submitted: June 25, 1974  
 Results completed: July 4, 1974

Project: 02

I hereby certify that the following are the results of assays made by us upon the herein described                      core                      samples.

MARKED	GOLD		SILVER	Pb	Zn						TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent		
5001				4.60	0.15						
5002				0.90	0.10						
5003				0.75	10.05						
5004				0.25	1.15						
5005				8.20	0.90						
5006				5.50	0.95						
5007				22.05	2.90						
5008				1.85	9.80						
5009				2.15	21.80						
5010				2.45	23.00						
5011				0.05	0.35						
5012				1.10	1.35						
5014				0.05	0.45						
5015				10.05	0.60						
5016				10.05	1.00						
5017				0.60	1.40						
5018				0.60	0.55						
5019				10.05	10.05						
5020				4.25	14.90						
5021				2.80	21.00						
5022				0.65	1.20						
5025				0.65	3.00						
5026				0.05	0.65						
5027				10.05	0.70						
5028				0.15	2.85						

L denotes 'less than'  
 cc Mr. R. G. Gifford  
 Dr. G. W. Mannard  
 Mr. A. F. Reeve  
 Mr. G. K. Ealy  
 Mr. F. C. Pickard

  
 Registered Assayer, Province of British Columbia





RECEIVED  
AUG - 1 1974

# Certificate of Analysis

TO Texasgulf, Inc.  
701 - 1281 West Georgia Street  
Vancouver, B. C.

Report No: A24 - 432

July 30, 1974

Project: 02

I hereby certify that the following are the results of assays made by us upon the herein described core samples.

MARKED	PERCENT		MARKED	PERCENT		MARKED	PERCENT	
	Pb	Zn		Pb	Zn		Pb	Zn
5029	0.05	1.35	5047	0.05	10.05	5065	10.05	0.05
5030	0.25	0.65	5048	0.25	10.05	5066	10.05	0.30
5031	0.40	0.80	5049	0.20	0.90	5067	0.10	1.10
5032	0.20	0.70	5050	10.05	0.90	5068	0.10	0.70
5033	10.05	1.50	5051	10.05	0.50	5069	10.05	0.65
5034	2.55	3.90	5052	10.05	0.05	5070	10.05	0.15
5035	2.60	12.30	5053	10.05	1.40	5071	10.05	0.75
5036	0.05	1.70	5054	10.05	0.65	5072	10.05	0.30
5037	0.05	0.65	5055	10.05	0.45	5073	10.05	0.70
5038	0.40	1.75	5056	10.05	0.20	5074	0.05	0.70
5039	0.15	0.10	5057	10.05	0.30	5075	10.05	0.05
5040	0.10	10.05	5058	10.05	0.25	5076	10.05	0.05
5041	0.05	10.05	5059	0.85	0.70	5077	0.05	0.20
5042	0.40	0.15	5060	0.05	0.70	5078	0.95	1.60
5043	0.05	0.05	5061	10.05	0.65	5079	0.05	1.05
5044	0.10	0.15	5062	10.05	0.80	5080	0.95	0.80
5045	0.35	0.25	5063	10.05	0.35	5081	0.05	0.35
5046	0.60	0.20	5064	10.05	0.55	5082	10.05	0.55

NOTE:  
Rejects retained two weeks.  
Pulps retained three months  
unless otherwise arranged.

BONDAR-CLEGG & COMPANY LTD.  
Registered Assayer, Province of British Columbia



# Certificate of Analysis

TO Texasgulf, Inc.  
\_\_\_\_\_  
\_\_\_\_\_

Report No: A24 - 432

July 30, 1974

PAGE 2

I hereby certify that the following are the results of assays made by us upon the herein described \_\_\_\_\_ core \_\_\_\_\_ samples.

MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT
	Pb	Zn						
5083	L0.05	0.40						
5084	0.10	0.90						
5085	0.10	0.30						
5086	0.20	0.45						
5087	0.10	0.45						
5088	0.25	1.15						
5089	0.15	0.45						
5090	L0.05	0.40						
5091	0.30	1.05						
5092	0.10	0.65						
5093	0.25	1.40						

L denotes 'less than'  
cc Mr. R. Gifford; Mr. A. Reeve; Dr. Mannard, Dr. MacDougall, Mr. Ealy, Mr. F. Pickard

BONDAR-CLEGG & COMPANY LTD.  
Registered Assayer, Province of British Columbia

**NOTE:**

Rejects retained two weeks  
Pulps retained three months  
unless otherwise arranged.

BONDAR-CLEGG & COMPANY LTD.

DATE: Aug. 12, 1974

701 - 1281 West Georgia Street  
Vancouver, B. C.

CERTIFICATE OF ASSAY

Samples submitted: Aug. 1, 1974  
Results completed: Aug. 12, 1974

PROJECT: 02

I hereby certify that the following are the results of assays made by us upon the herein described core samples.

MARKED	GOLD		SILVER	Pb	Zn						TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent		
5094				L0.05	0.10						<i>Robb L. assays.</i>
5095				L0.05	0.10						
5096				L0.05	0.30						
5097				L0.05	0.05						
5098				L0.05	0.10						
5099				L0.05	0.25						
5100				L0.05	0.20						
5101				L0.05	0.25						
5102				0.25	0.25						
5103				0.20	0.35						
5104				0.15	0.15						
5105				L0.05	0.20						
5106				0.05	0.50						
5107				L0.05	0.45						
5108				L0.05	0.30						
5109				L0.05	0.20						
5110				0.05	1.50						
5111				L0.05	0.20						
5112				L0.05	0.70						
5113				L0.05	0.30						
5114				0.05	0.60						
5115				0.10	0.30						

L denotes 'less than'

cc Mr. R. Gifford; Dr. Mannard; Dr. MacDougall; Mr. Reeve; Mr. Ealy, & Mr. Pickard

*[Signature]*  
Registered Assayer, Province of British Columbia



BONDAR-CLEGG & COMPANY LTD.

1500 PEMBERTON AVE., NORTH VANCOUVER, B.C. PHONE: 985-0681 TELEX: 04-54554

*Robb L  
assays*

RECEIVED  
AUG 22 1974  
NEGATIVE

# Certificate of Analysis

TO Texasgulf, Inc.  
701 - 1281 West Georgia Street  
Vancouver, B. C.

Report No: A24 - 544

Aug. 20, 1974

PROJECT: 02

I hereby certify that the following are the results of assays made by us upon the herein described core samples.

MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT
	Pb	Zn		Pb	Zn		Pb	Zn
5116	L0.05	0.60	5134	0.30	1.75	5152	0.10	1.00
5117	0.05	0.20	5135	0.20	4.05	5153	L0.05	0.20
5118	L0.05	0.15	5136	L0.05	1.20	5154	L0.05	0.20
5119	L0.05	0.25	5137	0.25	4.90	5155	L0.05	0.60
5120	L0.05	L0.05	5138	0.15	1.70	5156	L0.05	0.65
5121	L0.05	0.05	5139	0.20	2.75	5157	L0.05	0.75
5122	0.75	3.30	5140	1.20	4.20	5158	L0.05	0.60
5123	L0.05	0.05	5141	0.05	0.70	5159	L0.05	2.25
5124	0.45	3.05	5142	L0.05	0.35	5160	L0.05	1.90
5125	1.90	3.15	5143	1.10	5.20	5161	L0.05	0.25
5126	0.05	0.10	5144	L0.05	0.45	5162	L0.05	3.20
5127	L0.05	0.05	5145	L0.05	0.60	5163	L0.05	1.65
5128	0.35	1.50	5146	L0.05	0.05	5164	L0.05	0.80
5129	1.40	6.55	5147	L0.05	0.45	5165	L0.05	0.50
5130	0.20	1.45	5148	0.60	1.25	5166	L0.05	0.35
5131	0.35	2.80	5149	L0.05	1.40			
5132	L0.05	0.45	5150	L0.05	0.60			
5133	L0.05	0.20	5151	0.05	0.85			

L denotes 'less than'  
cc Mr. Gifford; Mr. Reeve,  
Dr. Mannard; Dr. MacDougall;

BONDAR-CLEGG & COMPANY LTD.  
REGISTERED ASSAYER, PROVINCE OF B.C.

Mr. Ealy &  
Mr. Pickard

NOTE:

Rejects retained two weeks  
Pulps retained three months  
unless otherwise arranged.



## Certificate of Analysis

TO Texasgulf, Inc.  
701 - 1281 West Georgia Street  
Vancouver, B. C.

Report No: A24 - 573

August 26, 1974

PROJECT: 02

I hereby certify that the following are the results of assays made by us upon the herein described core samples.

MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT
	Pb	Zn		Pb	Zn		Pb	Zn
5167	L0.05	L0.05	5185	L0.05	0.10			
5168	L0.05	L0.05	5186	L0.05	1.10			
5169	L0.05	L0.05	5187	L0.05	0.70			
5170	0.05	0.30	5188	L0.05	1.50			
5171	L0.05	L0.05	5189	L0.05	0.95			
5172	L0.05	0.50	5190	L0.05	1.50			
5173	0.10	1.20	5191	L0.05	0.95			
5174	0.85	5.00	5192	0.05	3.95			
5175	0.40	3.90	5193	0.70	0.75			
5176	0.45	2.00	5194	0.15	0.45			
5177	2.00	2.35	5195	0.50	0.75			
5178	0.20	1.25	5196	0.15	0.90			
5179	0.05	0.80	5197	L0.05	L0.05			
5180	L0.05	0.10	5198	0.05	0.05			
5181	L0.05	0.50	5199	L0.05	L0.05			
5182	L0.05	0.25	5200	L0.05	L0.05			
5183	L0.05	0.95						
5184	L0.05	0.20						

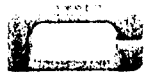
L denotes 'less than'  
cc Mr. R. Gifford

BONDAR-CLEGG & COMPANY LTD.  
REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

**NOTE:**

Rejects retained two weeks  
Pulps retained three months  
unless otherwise arranged.

*D.S. Mac Math*



## Certificate of Analysis

TO Texasgulf, Inc.  
701 - 1281 West Georgia Street  
Vancouver, B. C.      ATTN: MR. J. NEWELL

Report No: A24 - 626

Sept: 5, 1974

PROJECT: 02

I hereby certify that the following are the results of assays made by us upon the herein described core samples.

MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT
	Pb	Zn		Pb	Zn		Pb	Zn
5201	L0.05	L0.05	5219	L0.05	1.60	5237	L0.05	1.20
5202	0.05	L0.05	5220	L0.05	0.30	5238	L0.05	3.25
5203	L0.05	L0.05	5221	L0.05	0.10	5239	L0.05	0.20
5204	L0.05	0.10	5222	L0.05	0.30	5240	L0.05	0.45
5205	L0.05	L0.05	5223	L0.05	0.55	5241	L0.05	L0.05
5206	L0.05	0.05	5224	L0.05	1.15	5242	L0.05	L0.05
5207	L0.05	0.40	5225	L0.05	0.25	5278	36.25	0.70
5208	L0.05	L0.05	5226	L0.05	0.20	5279	0.20	0.65
5209	L0.05	L0.05	5227	L0.05	2.05	5280	0.30	2.05
5210	L0.05	0.10	5228	0.15	0.95	5281	L0.05	2.65
5211	L0.05	0.35	5229	L0.05	0.55	5282	L0.05	0.55
5212	0.35	3.15	5230	L0.05	0.30	5283	L0.05	0.10
5213	0.05	2.10	5231	L0.05	0.10	5284	L0.05	0.50
5214	0.25	1.80	5232	L0.05	0.45	5285	L0.05	0.25
5215	0.10	2.25	5233	0.25	0.90	5286	L0.05	0.55
5216	L0.05	1.60	5234	L0.05	0.80	5287	0.20	0.45
5217	0.90	7.80	5235	L0.05	0.60	5288	1.55	0.80
5218	0.40	1.35	5236	L0.05	0.70			

NOTE: cc Mr. Gifford, Mr. Mannard, Mr. MacDougall, Mr. Reeves,  
Mr. Ealy, Mr. Pickard L denotes 'less than'  
Rejects retained two weeks  
Pulps retained three months  
unless otherwise arranged

BONDAR-CLEGG & COMPANY LTD.  
Registered Assayer, Province of British Columbia



BONDAR-CLEGG & COMPANY LTD.

1500 PEMBERTON AVE., NORTH VANCOUVER, B.C. PHONE: 985-0681 TELEX: 04-54554

*lib l.  
assays.*

RECEIVED  
SEP 16 1974  
RECEIVED

# Certificate of Analysis

TO Texasgulf, Inc.  
701 - 1281 West Georgia Street  
Vancouver, B. C.

Report No: A24 - 640

Sept. 10, 1974

PROJECT: ~~02~~

I hereby certify that the following are the results of assays made by us upon the herein described core samples.

MARKED	PERCENT		MARKED	PERCENT		MARKED	PERCENT	
	Pb	Zn		Pb	Zn		PERCENT	PERCENT
5243	L0.05	5.20	5261	L0.05	0.40			
5244	L0.05	0.95	5262	L0.05	0.15			
5245	L0.05	0.40	5263	L0.05	0.35			
5246	L0.05	0.75	5264	L0.05	1.00			
5247	L0.05	0.80	5265	L0.05	0.40			
5248	L0.05	0.50	5266	L0.05	0.40			
5249	L0.05	0.20	5267	L0.05	0.40			
5250	L0.05	0.15	5268	L0.05	0.30			
5251	L0.05	0.50	5269	L0.05	0.35			
5252	L0.05	0.45	5270	L0.05	1.25			
5253	L0.05	0.10	5271	L0.05	1.70			
5254	L0.05	0.70	5272	L0.05	3.05			
5255	L0.05	0.10	5273	L0.05	4.20			
5256	L0.05	0.20	5274	L0.05	3.30			
5257	L0.05	0.10	5275	L0.05	5.90			
5258	L0.05	0.40	5276	L0.05	0.10			
5259	L0.05	2.15	5277	L0.05	0.10			
5260	L0.05	0.35						

L denotes 'less than'  
cc Mr. R. Gifford  
Dr. G. Mannard  
Dr. J. MacDougall  
Mr. A. Reeve  
Mr. G. Ealy  
Mr. F. Pickard

NOTE:  
Rejects retained two weeks  
Pulps retained three months  
unless otherwise arranged.

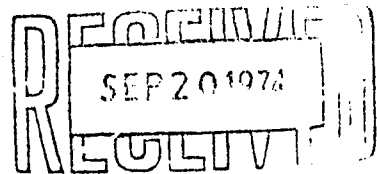
BONDAR-CLEGG & COMPANY LTD.  
REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

*[Signature]*



**BONDAR-CLEGG & COMPANY LTD.**

1500 PEMBERTON AVE., NORTH VANCOUVER, B.C. PHONE: 985-0681 TELEX: 04-54554



# Certificate of Analysis

TO Texasgulf, Inc.  
701 - 1281 West Georgia Street  
Vancouver, B. C.                      J1T 3N2

Report No: A24 - 679

September 17, 1974

PROJECT: 02

I hereby certify that the following are the results of assays made by us upon the herein described core samples.

MARKED	PERCENT		MARKED	PERCENT		MARKED	PERCENT	
	Pb	Zn		Pb	Zn		Pb	Zn
5289	0.05	10.05	5307	0.55	2.40	5325	10.05	10.05
5290	10.05	10.05	5308	0.40	1.30	5326	0.20	0.10
5291	0.90	0.30	5309	0.15	0.80	5327	0.25	0.05
5292	0.25	0.15	5310	0.10	0.75	5328	0.05	1.05
5293	0.05	0.20	5311	0.25	1.15	5329	10.05	0.40
5294	0.20	1.35	5312	10.05	0.30	5330	0.30	0.35
5295	10.05	0.25	5313	10.05	0.10	5331	10.05	10.05
5296	10.05	10.05	5314	10.05	10.05	5332	10.05	0.05
5297	0.05	0.80	5315	0.40	0.95	5333	10.05	0.05
5298	10.05	10.05	5316	0.05	0.20	5334	10.05	0.05
5299	0.05	0.25	5317	10.05	0.50	5335	10.05	0.25
5300	10.05	10.05	5318	10.05	0.35	5336	10.05	0.80
5301	10.05	0.30	5319	10.05	0.15	5337	10.05	10.05
5302	10.05	0.15	5320	10.05	0.05	5338	10.05	0.05
5303	10.05	1.35	5321	10.05	1.00	5339	10.05	0.50
5304	0.20	2.90	5322	0.15	0.45	5340	10.05	0.45
5305	0.25	2.35	5323	10.05	0.15	5341	10.05	10.05
5306	0.20	2.60	5324	10.05	0.05	5342	10.05	10.05

**NOTE:**

Rejects retained two weeks  
Pulps retained three months  
unless otherwise arranged

BONDAR-CLEGG & COMPANY LTD.

BONDAR-CLEGG & COMPANY LTD. , REGISTERED ASSAYER, PROVING  
OF BRITISH COLUMBIA





# Certificate of Analysis

TO Texasgulf, Inc.

Report No: A24 - 679

Sept. 17, 1974

PROJECT: 02

PAGE 2

I hereby certify that the following are the results of assays made by us upon the herein described core samples.

MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT
	Pb	Zn		Pb	Zn		Pb	Zn
5343	L0.05	0.05	5361	L0.05	L0.05			
5344	L0.05	0.10	5362	L0.05	0.05			
5345	L0.05	L0.05	5363	L0.05	L0.05			
5346	L0.05	L0.05	5364	0.05	0.15			
5347	L0.05	L0.05	5365	0.05	0.80			
5348	0.20	2.55	5366	0.15	1.05			
5349	0.50	5.60	5367	L0.05	0.30			
5350	0.20	2.00	5368	L0.05	0.15			
5351	0.05	1.40	5369	L0.05	0.05			
5352	0.20	4.85	5370	L0.05	L0.05			
5353	0.05	0.10	5371	L0.05	0.50			
5354	L0.05	0.25	5372	0.20	0.40			
5355	L0.05	0.10	5373	0.05	0.30			
5356	L0.05	L0.05						
5357	L0.05	0.10						
5358	L0.05	0.05						
5359	L0.05	L0.05						
5360	L0.05	0.05						

L denotes 'less than'  
cc Mr. R. Gifford  
Dr. G. Mannard  
Dr. J. MacDougall  
Mr. A. Reeve  
Mr. G. Ealy  
Mr. F. Pickard

**NOTE:**

Rejects retained two weeks  
Pulps retained three months  
unless otherwise arranged.

BONDAR-CLEGG & COMPANY LTD.

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

*Call in assay*

RECEIVED  
SEP 24 1974

# Certificate of Analysis

TO Texasgulf, Inc.  
701 - 1281 West Georgia Street  
Vancouver, B. C. V6E 3J7

Report No: A24 - 700  
Sept. 23, 1974  
PROJECT: 02

I hereby certify that the following are the results of assays made by us upon the herein described ore samples.

MARKED	PERCENT		MARKED	PERCENT		MARKED	PERCENT	
	Pb	Zn		Pb	Zn		Pb	Zn
5374	0.25	0.80	5392	0.05	5.80			
5375	3.00	12.40	5393	0.05	2.40			
5376	3.05	11.00	5394	0.60	5.05			
5377	2.60	10.40	5395	0.05	3.75			
5378	0.75	2.90	5396	0.05	2.00			
5379	6.70	8.00	5397	3.50	4.75			
5380	2.20	8.60	5398	4.75	5.45			
5381	1.15	13.80	5399	1.10	18.00			
5382	0.60	10.00	5400	0.35	9.30			
5383	1.90	12.50	5401	0.75	8.10			
5384	1.05	9.30	5402	0.45	12.4			
5385	2.75	10.25	5403	2.75	17.25			
5386	0.30	5.35	5404	1.50	13.40			
5387	0.20	7.40	5405	0.80	16.50			
5388	0.45	1.90	5406	0.05	7.70			
5389	0.65	7.80	5407	0.05	5.55			
5390	0.15	2.80	5408	0.30	8.60			
5391	0.20	5.05						

cc Mr. R. G. Gifford

NOTE:  
Rejects retained two weeks  
Pulps retained three months  
unless otherwise arranged.

BONDAR-CLEGG & COMPANY LTD.  
REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

*[Signature]*



**BONDAR-CLEGG & COMPANY, LTD.**

1500 PEMBERTON AVE., NORTH VANCOUVER, B.C. PHONE: 985-0681 TELEX: 04-54554

*Robb L. Ascey*

# Certificate of Analysis

TO Texasgulf, Inc.  
701 - 1281 West Georgia Street  
Vancouver, B. C. V6E 3J7

Report No: A24 - 709

Sept. 24, 1974

PROJECT: 02

I hereby certify that the following are the results of assays made by us upon the herein described core samples.

MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT
	Pb	Zn		Pb	Zn		Pb	Zn
5409	0.05	3.70	5428	10.05	1.65	5447	10.05	1.15
5410	10.05	0.75	5429	0.40	8.45	5448	0.10	1.75
5411	0.25	1.55	5430	0.10	6.80	5449	10.05	1.70
5412	0.10	0.70	5431	0.10	2.15	5450	10.05	3.75
5413	10.05	0.20	5432	0.10	5.80	5451	10.05	0.30
5414	0.10	0.45	5433	10.05	0.40	5452	10.05	0.50
5415	0.15	0.25	5434	0.50	6.90	5453	10.05	0.20
5416	10.05	1.40	5435	0.15	2.35	5454	10.05	1.20
5417	10.05	1.35	5436	0.20	4.20	5455	10.05	0.10
5418	10.05	1.15	5437	0.05	0.80	5456	10.05	1.00
5419	10.05	2.55	5438	10.05	0.65	5457	10.05	0.60
5420	10.05	0.85	5439	10.05	1.05	5458	10.05	0.50
5421	10.05	1.05	5440	10.05	0.20	5459	0.05	2.25
5422	10.05	0.20	5441	10.05	0.20	5460	10.05	1.80
5423	10.05	6.70	5442	0.05	0.60	5461	10.05	1.10
5424	0.65	5.50	5443	0.25	1.45	5462	10.05	1.40
5425	0.05	0.60	5444	10.05	1.20	5463	10.05	0.10
5426	10.05	1.55	5445	10.05	0.45	5464	10.05	0.40
5427	0.25	2.50	5446	10.05	0.15	5465	2.00	0.75

BONDAR-CLEGG & COMPANY LTD.  
REGISTERED ASSAYER, PROVINCE OF B. C.

**NOTE:**

Rejects retained two weeks  
Pulps retained three months  
unless otherwise arranged.



# Certificate of Analysis

TO Texasgulf, Inc.

REPORT No: A24 - 709

PAGE 2

I hereby certify that the following are the results of assays made by us upon the herein described core samples.

MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT
	Pb	Zn						
5466 5467	0.10 L0.05	0.10 0.25						
<p>L denotes 'less than'</p> <p>cc Dr. Mannard  Dr. MacDougall  Mr. A. Reeve  Mr. G. Ealy  Mr. F. Pickard</p>								

**NOTE:**

Rejects retained two weeks  
Pulps retained three months  
unless otherwise arranged.

**BONDAR-CLEGG & COMPANY LTD.**  
REGISTERED ASSAYER, PROVINCE OF B. C.



**BONDAR-CLEGG & COMPANY LTD.**

1500 PEMBERTON AVE., NORTH VANCOUVER, B.C. PHONE: 985-0681 TELEX: 04-54554

# Certificate of Analysis

TO Texasgulf, Inc.  
701 - 1281 West Georgia Street  
Vancouver, B. C. V6E 3J7

Report No: A24 - 743

Sept. 30, 1974

PROJECT: 02

I hereby certify that the following are the results of assays made by us upon the herein described core samples.

MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT
	Pb	Zn		Pb				
5463	L0.05	0.15						
5469	L0.05	0.05						
5470	L0.05	L0.05						
5471	L0.05	0.05						
5472	L0.05	0.15						
5473	L0.05	0.30						
<p>L denotes 'less than'</p> <p>cc Mr. G. Mannard          Dr. J. MacDougall          Mr. Reeve          Mr. Ealy          Mr. F. Pickard</p>								

**NOTE:**

Rejects retained two weeks  
 Pulp retained three months  
 unless otherwise arranged

**BONDAR-CLEGG & COMPANY LTD.**

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

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# BONDAR-CLEGG & COMPANY LTD.

1500 PEMBERTON AVE., NORTH VANCOUVER, B.C. PHONE: 985-0681 TELEX: 04-54554

## Certificate of Analysis

TO Texasgulf, Inc.  
701 - 1281 West Georgia Street  
Vancouver, B. C. V6E 3J7

Report No: A24 - 744

Sept. 30, 1974

PROJECT: 02

I hereby certify that the following are the results of assays made by us upon the herein described ore & core samples.

MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT	MARKED	PERCENT	PERCENT
	Pb	Zn		Pb	Zn		Pb	Zn
5474	L0.05	0.70	5493	L0.05	L0.05	L denotes 'less than'		
5475	0.80	9.00	5494	0.05	0.05			
5476	0.40	8.50						
5477	0.40	5.70						
5478	0.45	7.50						
5479	3.65	6.80						
5480	0.60	3.65						
5481	0.20	0.65						
5482	0.15	5.35						
5483	L0.05	1.45						
5484	0.05	3.30						
5485	L0.05	3.30						
5486	L0.05	0.20						
5487	L0.05	0.10						
5488	0.65	0.75						
5489	0.15	0.65						
5490	0.50	1.00						
5491	L0.05	0.15						
5492	L0.05	L0.05						

BONDAR-CLEGG & COMPANY LTD.

Registered Assayer, Province of British Columbia

NOTE:

Rejects retained two weeks

Pulps retained three months