CBC-51

TULAMEEN 92-H-10

Coal Quality Analyses

Part of O.F. 1977. = CAR 20

App

dup #200

This was filed under #20. (I added tag with number in upper right corner) This is Appendix 12 of Report 200 It is a duplicate. QP

200 (4)

Where is main text of this report.

1977

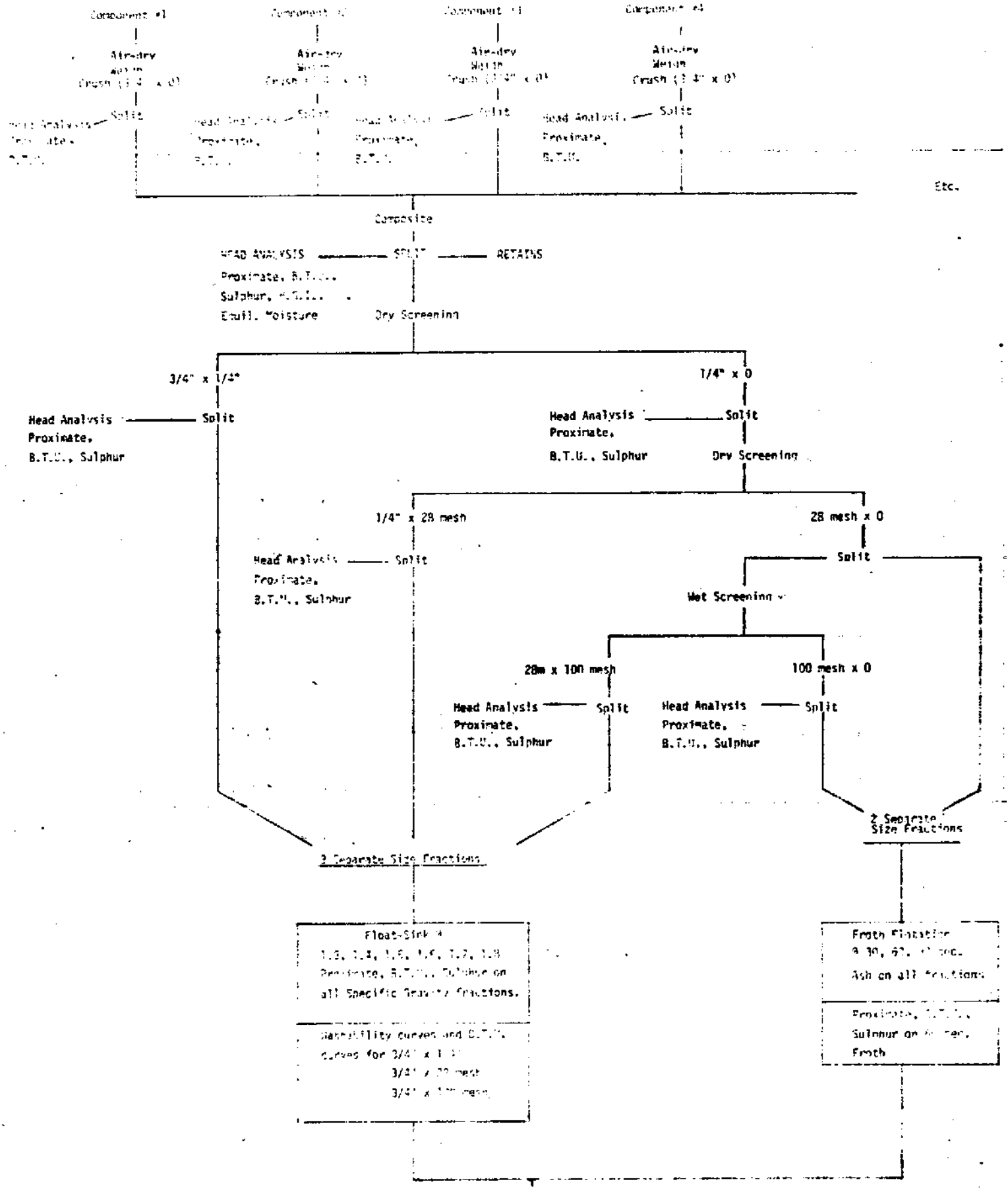
APPENDIX 12

Core Analyses Data

Part of CAR 20

200(A)

CORE ANALYSIS



CYPRUS ANVIL MINING CORPORATION

Analytical Report
for
Core Testing

PROJECT: Tulameen

DRILL HOLE #: T-77-1

AREA:

SEAM: Main

DATE SAMPLED:

LAB COMPOSITE #: T-77-1

DATE ANALYSED:

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:
HOLE NO.: T-77-1
SEAM: Main

TABLE 1 COMPONENTS AND ANALYSIS (a.d.b.)

		Ash%	R.M.%	V.M.%	F.C.%	B.T.U./lb.
Number:	1	44.42	4.80	26.69	24.09	6,550
Footage:	55.17 - 58.37					
Weight:	28.5 lbs.					
Number:	2	43.16	5.85	26.00	24.99	6,750
Footage:	59.37 - 62.03					
Weight:	36.0 lbs.					
Number:	3	47.22	5.13	23.72	23.93	5,920
Footage:	62.03 - 66.14					
Weight:	38.5					
Number:	4	22.42	7.60	29.31	40.67	9,520
Footage:	66.14 - 68.98					
Weight:	24.5 lbs.					
Number:	5	32.81	5.50	26.24	35.45	8,170
Footage:	68.88 - 70.71					
Weight:	10.0 lbs.					

COMPOSITE NO.:
HOLE NO.: T-77-1
SEAM: Main

TABLE 2

ANALYSIS OF COMPOSITE HEAD SAMPLE (a.d.b.)

		EM	a.d.b.
Ash %	38.07	37.31	46.24
R.M.%	5.43		
V.M.%	25.03		
F.C.%	31.47		
S. %	0.41	.40	
B.T.U./lb	7,220	7,076	7,632
H.G.I.	46		
Equilibrium Moisture		7.3	

COMPOSITE NO.:

HOLE NO.: T-77-1

SEAM: Main

TABLE 3 SIZE CONSIST OF COMPOSITE HEAD SAMPLE

Size	Wt% Fractional	Cumulative
3/4" x ¼"	53.55	53.55
¼" x 28m	38.71	92.26
28m x 100m	3.92	96.18
100m x 0	3.82	100.00
TOTAL	100.00	

COMPOSITE NO.:
HOLE NO.: T-77-1
SEAM: Main

TABLE 4 ANALYSIS OF SIZE FRACTIONS

(a)

	3/4" x 1/4"	1/4" x 0	Total
Ash%	41.17	32.56	37.17
R.M.%	5.24	5.69	5.41
V.M.%	23.76	26.35	24.96
F.C.%	29.83	35.40	32.46
S. %	0.37	0.42	0.39
B.T.U./lb.	6,660	7,930	7,250

(b)

	1/4" x 28m	28m x 100m	100m x 0	Reconstituted 1/4" x 0
Ash%	34.41	20.70	44.15	34.08
R.M.%	5.68	1.87	2.63	5.10
V.M.%	25.39	31.14	25.23	25.86
F.C.%	34.52	46.35	27.99	34.96
S.%	0.45	0.60	0.30	0.45
B.T.U./lb.	7,750	10,200	6,630	7,860

COMPOSITE NO.:
HOLE NO.: T-77-1
SEAM: Main

TABLE 5. FLOAT-SINK AND ANALYSIS OF SIZE FRACTIONS
(Fractional Basis)

(a) 3/4" x 1/4"

Sp.Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb
- 1.30	3.24	4.09	6.86	35.92	53.13		12,300
1.30 - 1.40	24.10	8.27	6.41	32.93	52.39		11,650
1.40 - 1.50	12.08	21.83	6.04	30.15	41.98		9,740
1.50 - 1.60	9.25	34.11	5.49	28.96	31.44		8,200
1.60 - 1.70	7.04	43.74	4.82	26.37	25.07		6,710
1.70 - 1.80	6.26	55.06	4.10	22.70	18.14		5,060
+ 1.80	38.03	75.93	3.95	18.23	1.89		1,690
TOTAL	100.00	43.32	5.10	25.63	25.95		6,570

(b) 1/4" x 28m

Sp. Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb
- 1.30	3.82	2.32	4.72	37.94	55.02		12,870
1.30 - 1.40	43.67	6.81	4.53	35.32	53.34		12,000
1.40 - 1.50	6.62	22.26	4.54	30.27	42.93		9,880
1.50 - 1.60	5.73	30.88	4.45	26.92	37.75		8,540
1.60 - 1.70	4.44	39.62	3.08	23.47	33.83		7,170
1.70 - 1.80	3.18	46.86	3.05	22.88	27.21		6,280
+ 1.80	32.54	75.52	3.49	14.67	6.32		1,920
TOTAL	100.00	34.13	4.08	26.96	34.83		8,020

TABLE 5. (cont'd)

(c) 28m x 100 mesh

Sp. Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb
- 1.30	7.24	1.80	4.36	35.46	58.38		13,010
1.30 - 1.40	56.63	3.93	4.98	33.99	57.10		12,430
1.40 - 1.50	8.65	13.33	5.10	29.52	52.05		11,020
1.50 - 1.60	4.61	18.00	5.51	28.97	47.52		10,300
1.60 - 1.70	2.92	34.97	5.00	26.12	33.91		7,930
1.70 - 1.80	2.45	48.31	4.27	21.60	25.82		5,980
+ 1.80	17.50	72.83	2.62	18.41	6.14		2,020
TOTAL	100.00	19.29	4.54	30.22	45.95		10,140

COMPOSITE NO.:
HOLE: T-77-1
SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS

(a) 3/4" x 1/4"

	Fractional			Cumulative Floats			Cumulative Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	3.24	4.09	12,300	3.24	4.09	12,300	100.00	43.32	6,570
1.30 - 1.40	24.10	8.27	11,650	27.34	7.77	11,730	96.76	44.63	6,380
1.40 - 1.50	12.08	21.83	9,740	39.42	12.08	11,120	72.66	56.69	4,630
1.50 - 1.60	9.25	34.11	8,200	48.67	16.27	10,560	60.58	63.65	3,620
1.60 - 1.70	7.04	43.74	6,710	55.71	19.74	10,080	51.33	68.97	2,790
1.70 - 1.80	6.26	55.06	5,060	61.97	23.31	9,570	44.29	72.98	2,170
+ 1.80	38.03	75.93	1,690	100.00	43.32	6,570	38.03	75.93	1,690
TOTAL	100.00	43.32	6,570						

COMPOSITE NO:

HOLE: T-77-1

SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS continued

(b) 3/4" x 28m (Reconstituted data)

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	3.48	3.28	12,560	3.48	3.28	12,560	100.00	39.46	7,180
1.30 - 1.40	32.31	7.44	11,850	35.79	7.04	11,920	96.52	40.77	6,990
1.40 - 1.50	9.79	21.95	9,780	45.58	10.24	11,460	64.21	57.54	4,540
1.50 - 1.60	7.78	33.11	8,300	53.36	13.57	11,000	54.42	63.94	3,600
1.60 - 1.70	5.95	42.45	6,850	59.31	16.47	10,580	46.64	69.08	2,810
1.70 - 1.80	4.96	52.86	5,390	64.27	19.28	10,180	40.69	72.98	2,220
+ 1.80	35.73	75.77	1,780	100.00	39.46	7,180	35.73	75.77	1,780
TOTAL	100.00	39.46	7,180						

COMPOSITE NO.

HOLE: T-77-1

SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS continued

(c) 3/4" x 100 mesh (Reconstituted data)

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	3.64	3.16	12,600	3.64	3.16	12,600	100.00	38.63	7,300
1.30 - 1.40	33.30	7.20	11,890	36.94	6.80	11,960	96.36	39.97	7,100
1.40 - 1.50	9.74	21.64	9,820	46.68	9.90	11,510	63.06	57.28	4,570
1.50 - 1.60	7.65	32.73	8,350	54.33	13.11	11,070	53.32	63.79	3,610
1.60 - 1.70	5.83	42.30	6,870	60.16	15.94	10,660	45.67	69.00	2,810
1.70 - 1.80	4.86	52.70	5,400	65.02	18.69	10,270	39.84	72.90	2,220
+ 1.80	34.98	75.71	1,780	100.00	38.63	7,300	34.98	75.71	1,780
TOTAL	100.00	38.63	7,300						

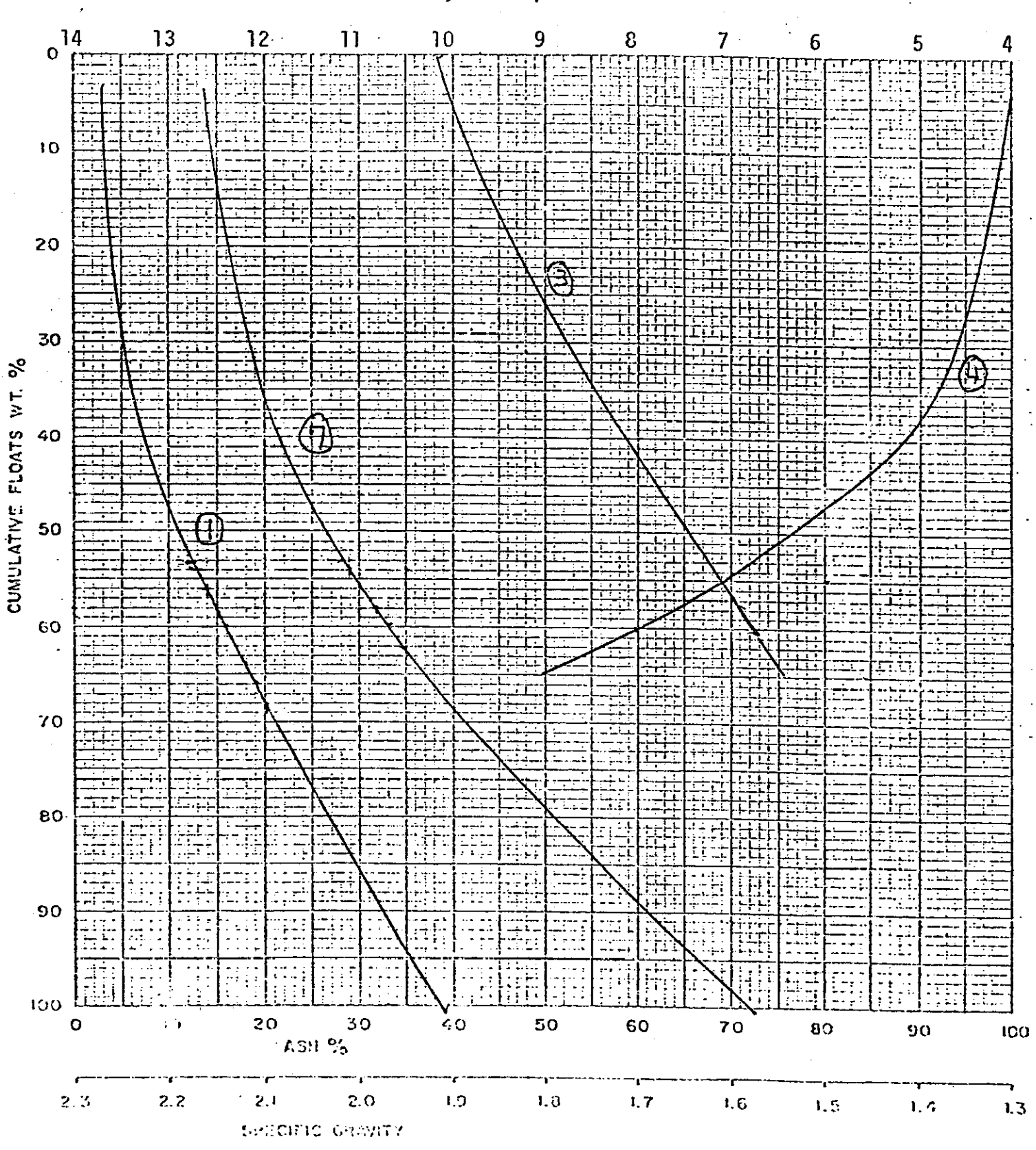
COMPANY CYPRUS ANVIL MINING CORPORATION

SAMPLE T-77-1

Size 3/4" x 100m

WASHABILITY CURVES

2 - [illegible]
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU



DATE

CYCLONE ENGINEERING SALES LTD.
EDMONTON, ALBERTA, CANADA

COMPANY CYPRUS ANVIL MINING CORPORATION

SAMPLE T-77-1

Size 3 1/4" x 28m.

WASHABILITY CURVES

3 - SINKS

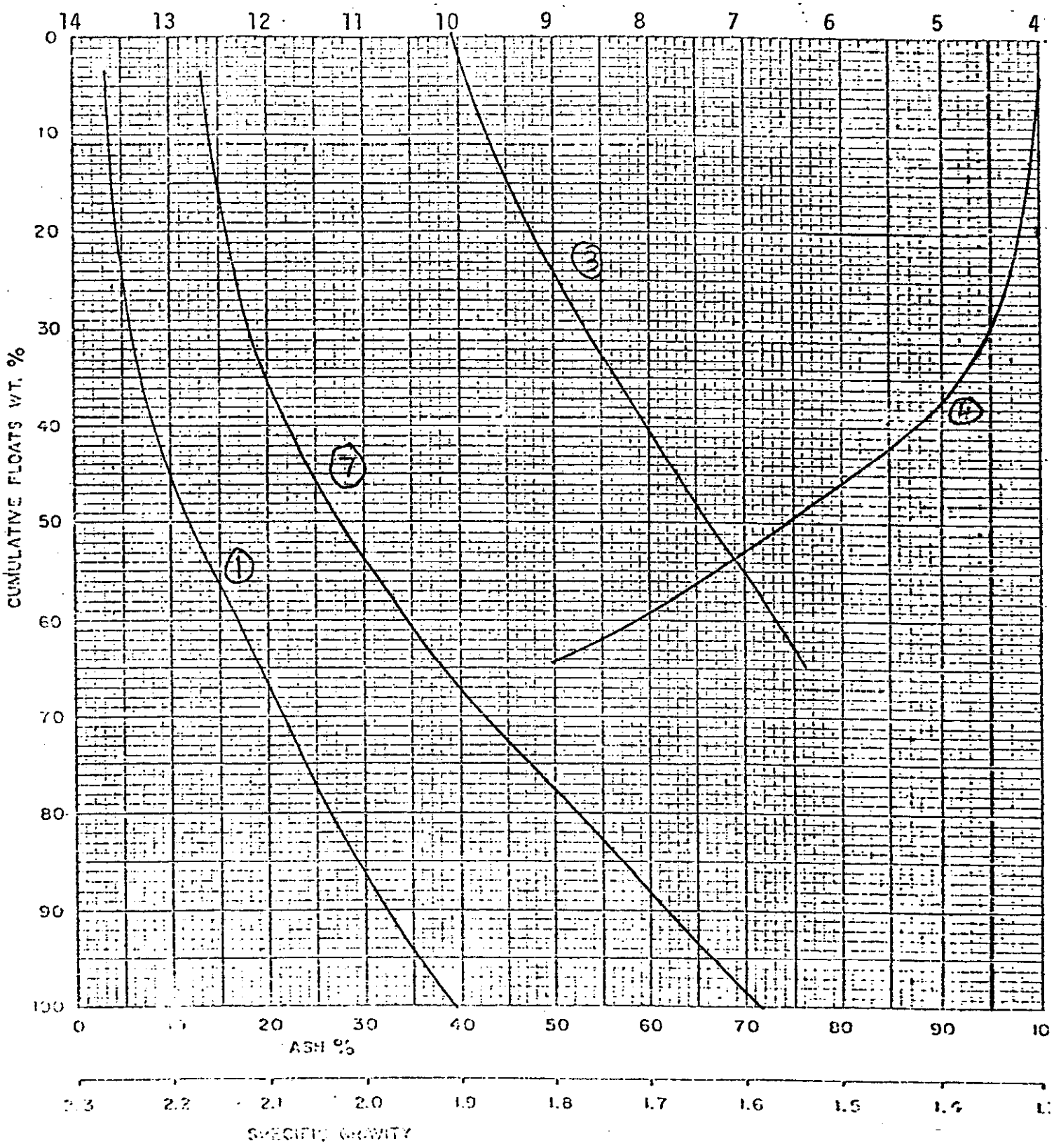
4 - SPECIFIC GRAVITY

5 - ELEMENTARY ASH

6 - NEAR GRAVITY MATERIAL

7 - BTU

1,000 BTU/lb.



CYCLONE ENGINEERING SALES LTD.

EDMONTON ALBERTA CANADA

COMPANY CYPRUS ANVIL MINING CORPORATION.

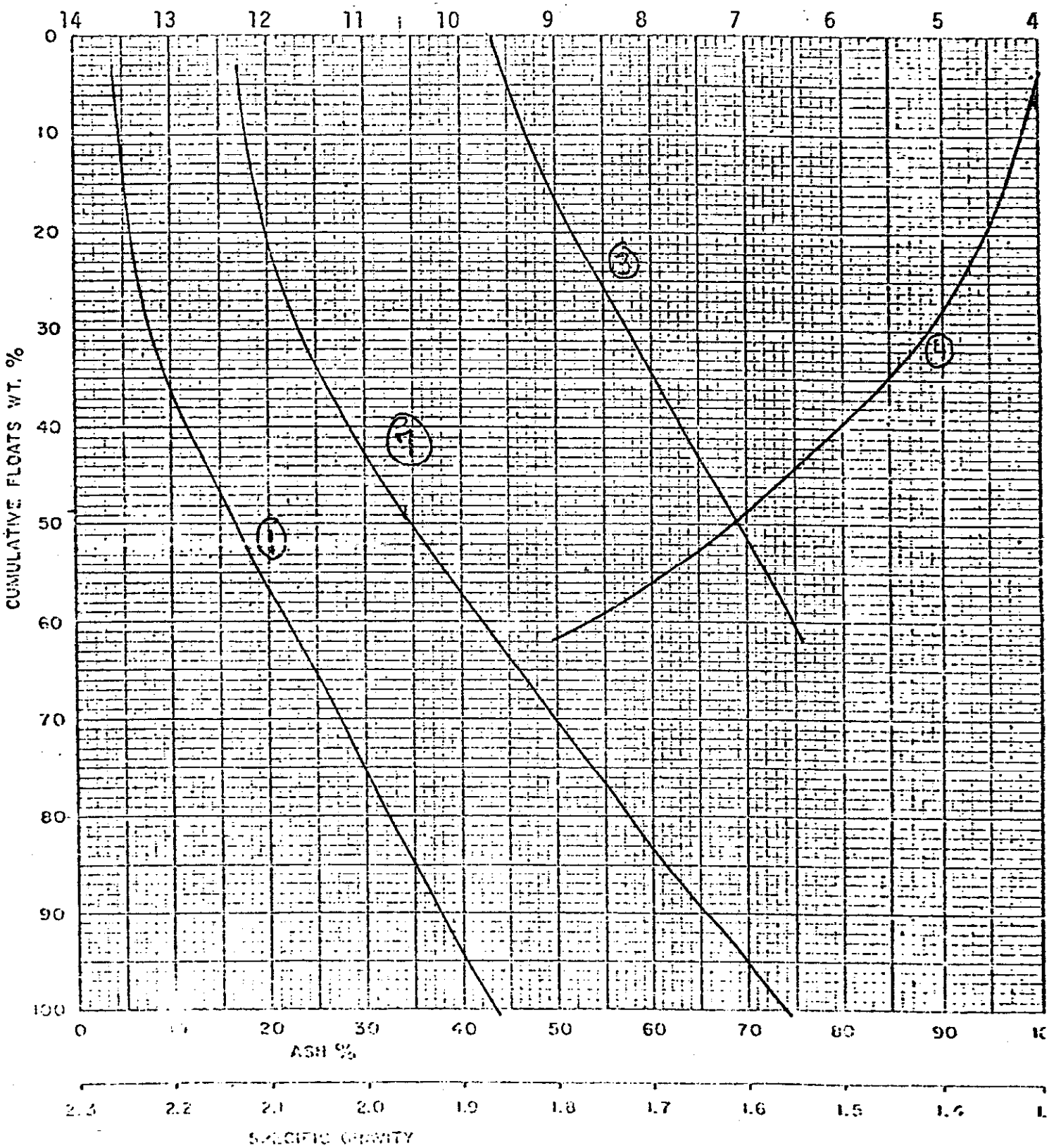
SAMPLE T-77-1

Size 3/4" x 1/4"

WASHABILITY CURVES

2 - [illegible]
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU

1,000 BTU/lb.



CYCLONE ENGINEERING SALES LTD

CYPRUS ANVIL MINING CORPORATION

Analytical Report
for
Core Testing

PROJECT: Tulameen

DRILL HOLE #: T-77-2

AREA:

SEAM:

DATE SAMPLED:

LAB COMPOSITE #: (T-77-2)

DATE ANALYSED:

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:
HOLE NO.: T-77-2
SEAM:

TABLE 1 COMPONENTS AND ANALYSIS (a.d.b.)

	Ash%	R.M.%	V.M.%	F.C.%	B.T.U./lb.
Number: 1 Footage: —— Weight:	46.75	5.93	20.32	27.00	6,050
Number: 2 Footage: Weight:	28.56	6.52	29.07	35.85	8,420
Number: 3 Footage: Weight:	23.84	6.58	29.58	40.00	9,240
Number: 4 Footage: Weight:	46.33	5.71	27.08	20.88	5,650
Number: 5 Footage: Weight:	44.60	6.16	22.07	27.17	6,280
Number: 6 Footage: Weight:	31.41	6.24	28.48	33.87	7,840
Number: 7 Footage: Weight:	43.43	6.76	26.08	23.73	6,020

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:

HOLE NO.: T-77-2

SEAM:

TABLE 2

ANALYSIS OF COMPOSITE HEAD SAMPLE (a.d.b.)

		EM	db
Ash %	36.97	36.73	30.06
R.M.%	5.39		
V.M.%	27.54		
F.C.%	30.10		
S. %	0.44	.43	
B.T.U./lb	7,460	7311	7305
H.G.I.	50		

Equilibrium Moisture 7.4

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:

HOLE NO.: T-7/-2

SEAM:

TABLE 3 SIZE CONSIST OF COMPOSITE HEAD SAMPLE

Size	Wt% Fractional	Cumulative
3/4" x ¼"	50.53	50.53
¼" x 28m	40.52	91.05
28m x 100m	4.05	95.10
100m x 0	4.90	100.00
TOTAL	100.00	

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:

HOLE NO.: T-77-2

SEAM:

TABLE 4 ANALYSIS OF SIZE FRACTIONS

(a)

	3/4" x 1/4"	1/4" x 0	Total
Ash%	39.71	35.00	37.38
R.M.%	5.39	4.80	5.10
V.M.%	26.16	27.54	26.84
F.C.%	28.74	32.66	30.68
S. %	0.39	0.46	0.43
B.T.U./lb.	7,040	7,750	7,390

(b)

	1/4" x 28m	28m x 100m	100m x 0	Reconstitut 1/4" x 0
Ash%	34.34	27.12	45.74	34.88
R.M.%	5.16	2.64	1.95	4.64
V.M.%	27.59	29.25	23.70	27.34
F.C.%	32.91	40.99	28.61	33.14
S.%	0.43	0.56	0.38	0.44
B.T.U./lb.	7,910	8,870	6,600	7,860

COMPOSITE NO.:

HOLE NO.: T-77-2

SEAM:

TABLE 5. FLOAT-SINK AND ANALYSIS OF SIZE FRACTIONS

(Fractional Basis)

(a) 3/4" x 1/4"

Sp.Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./
- 1.30	1.36	2.64	7.27	36.27	53.82	0.49	12,480
1.30 - 1.40	25.14	8.07	7.45	35.64	48.84	0.58	11,640
1.40 - 1.50	14.08	20.48	6.48	29.30	43.74	0.45	9,880
1.50 - 1.60	10.96	32.42	5.81	27.16	34.61	0.46	8,290
1.60 - 1.70	7.82	42.76	4.63	22.51	30.10	0.44	6,900
1.70 - 1.80	6.00	52.77	4.36	20.86	22.01	0.23	5,680
+ 1.80	34.64	73.01	4.07	19.18	3.74	0.13	1,690
TOTAL	100.00	40.30	5.55	26.21	27.94	0.36	6,860

(b) 1/4" x 28m

Sp. Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb
- 1.30	1.51	2.60	4.65	36.55	56.20	0.53	13,170
1.30 - 1.40	42.83	6.75	4.64	35.23	53.38	0.53	12,120
1.40 - 1.50	7.63	21.94	4.51	33.21	40.34	0.51	9,820
1.50 - 1.60	6.48	31.93	3.40	28.92	35.75	0.52	8,590
1.60 - 1.70	5.09	39.54	3.01	24.33	33.02	0.55	7,380
1.70 - 1.80	3.52	47.96	3.17	21.49	27.38	0.56	6,250
+ 1.80	32.94	75.08	3.27	16.31	5.34	0.19	1,680
TOTAL	100.00	35.11	3.96	27.36	33.57	0.42	7,840

TABLE 5. (cont'd)

(c) 28m x 100 mesh

Sp. Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./l
- 1.30	18.49	1.92	5.25	35.70	57.13	0.50	12,510
1.30 - 1.40	18.94	5.21	3.09	34.47	57.23	0.66	12,160
1.40 - 1.50	14.06	16.40	5.10	33.69	44.81	0.54	10,450
1.50 - 1.60	10.86	21.09	3.09	32.95	42.87	0.50	10,130
1.60 - 1.70	14.01	39.41	3.34	32.01	25.24	0.61	7,030
1.70 - 1.80	1.69	45.84	3.08	24.15	26.93	0.60	6,600
+ 1.80	21.95	73.08	1.72	18.81	6.39	0.38	1,550
TOTAL	100.00	28.28	3.51	30.47	37.74	0.53	8,620

COMPOSITE NO.:

HOLE: T-77-2

SEAM:

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS

(a) 3/4" x 1/4"

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	1.36	2.64	12,480	1.36	2.64	12,480	100.00	40.30	6,860
1.30 - 1.40	25.14	8.07	11,640	26.50	7.79	11,680	98.64	40.82	6,790
1.40 - 1.50	14.08	20.48	9,880	40.58	12.19	11,050	73.50	52.02	5,130
1.50 - 1.60	10.96	32.42	8,290	51.54	16.49	10,460	59.42	59.50	4,000
1.60 - 1.70	7.82	42.76	6,900	59.36	19.95	9,990	48.46	65.62	3,030
1.70 - 1.80	6.00	52.77	5,680	65.36	22.96	9,590	40.64	70.02	2,280
+ 1.80	34.64	73.01	1,690	100.00	40.30	6,860	34.64	73.01	1,690
TOTAL	100.00	40.30	6,860						

COMPOSITE NO:

HOLE:. T-77-2

SEAM:

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS continued

(b) 3/4" x 28m (Reconstituted data)

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	1.42	2.62	12,810	1.42	2.62	12,810	100.00	38.00	7,300
1.30 - 1.40	33.01	7.31	11,920	34.43	7.12	11,960	98.58	38.51	7,220
1.40 - 1.50	11.21	20.92	9,860	45.64	10.51	11,440	65.57	54.21	4,850
1.50 - 1.60	8.96	32.26	8,390	54.60	14.08	10,940	54.36	61.08	3,820
1.60 - 1.70	6.61	41.69	7,060	61.21	17.06	10,520	45.40	66.76	2,920
1.70 - 1.80	4.90	51.23	5,860	66.11	19.59	10,170	38.79	71.04	2,220
+ 1.80	33.89	73.90	1,690	100.00	38.00	7,300	33.89	73.90	1,690
TOTAL	100.00	38.00							

COMPOSITE NO.

HOLE: T-77-2

SEAM:

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS continued

(c) 3/4" x 100 mesh (Reconstituted data)

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	2.15	2.36	12,700	2.15	2.36	12,700	100.00	37.46	7,350
1.30 - 1.40	32.41	7.26	11,930	34.56	6.96	11,980	97.85	38.24	7,240
1.40 - 1.50	11.33	19.90	9,890	45.89	10.15	11,460	65.44	53.58	4,920
1.50 - 1.60	9.04	31.69	8,480	54.93	13.70	10,970	54.11	60.63	3,880
1.60 - 1.70	6.93	41.49	7,060	61.86	16.81	10,530	45.07	66.43	2,960
1.70 - 1.80	4.76	50.50	5,870	66.62	19.22	10,200	38.14	70.96	2,220
+ 1.80	33.38	73.88	1,690	100.00	37.46	7,350	33.38	73.88	1,690
TOTAL	100.00	37.46	7,350						

COMPOSITE:

HOLE: T-77-2

SEAM:

TABLE 7 CONTINUOUS FROTH FLOTATION TEST

Test Conditions:

Wt. % Solids in Pulp	10
Reagents	MIBC/Kerosene (Collector/Frother)
Reagent Composition	3/1
Reagent Consumption	1.05 lb./ton
Conditioning Time	

a. 28 mesh x 0

Time, Seconds	Wt.%	Ash%	Cumulative Wt.%	Cumulative Ash %
30	14.17	22.18	14.17	22.18
30 - 60	4.17	31.40	18.34	24.28
60 - 90	2.96	35.27	21.30	25.80
Tails	78.70	40.04	100.00	37.01
TOTAL	100.00	37.01		

Proximate Analysis of Froth for 1 min. Flotation:

Ash %	24.65
RM %	3.51
VM %	25.96
FC %	45.88
S %	0.40
BTU/lb.	9,610

COMPOSITE:

HOLE NO: T-77-2

SEAM:

TABLE 7

b. 100 mesh x 0

Time, Seconds	Wt.%	Ash%	Cumulative Wt.%	Cumulative Ash %
30	18.16	19.01	18.16	19.01
30 - 60	5.85	40.75	24.01	24.31
60 - 90	3.37	47.13	27.38	27.12
Tails	72.62	52.83	100.00	45.79
TOTAL	100.00	45.79		

Proximate Analysis of Froth for 1 min. Flotation:

Ash %	23.31
RM %	3.41
VM %	25.75
FC %	47.53
S %	0.64
BTU/lb.	9,850

COMPOSITE:

HOLE: T-77-2

SEAM:

TABLE 8 CLEAN COAL COMPOSITE CALCULATIONS

A. +1/4" Floats at S.G. 1.4, 1.5, 1.6, 1.7 plus 100% of raw 1/4" x 0

COMPOSITION + 1/4: at 1.4: 21.30% at 1.5: 29.30% at 1.6: 34.49% at 1.7: 37.74%

1/4" x 0 raw: 78.70% 70.70 65.51% 62.26

TOTAL YIELD	62.86 %	69.97 %	75.51 %	79.46 %
PROXIMATE ANALYSIS				
Ash	29.20 %	28.32 %	28.61 %	29.32 %
RM	5.36 %	5.48 %	5.50 %	5.46 %
VM	29.27 %	29.27 %	29.12 %	28.79 %
FC	36.17 %	36.93 %	36.77 %	36.43 %
S	0.49 %	0.48 %	0.48 %	0.48 %
BTU/lb.	8,590	8,720	8,680	8,600

COMPANY CYPRUS ANVIL MINING CORPORATION

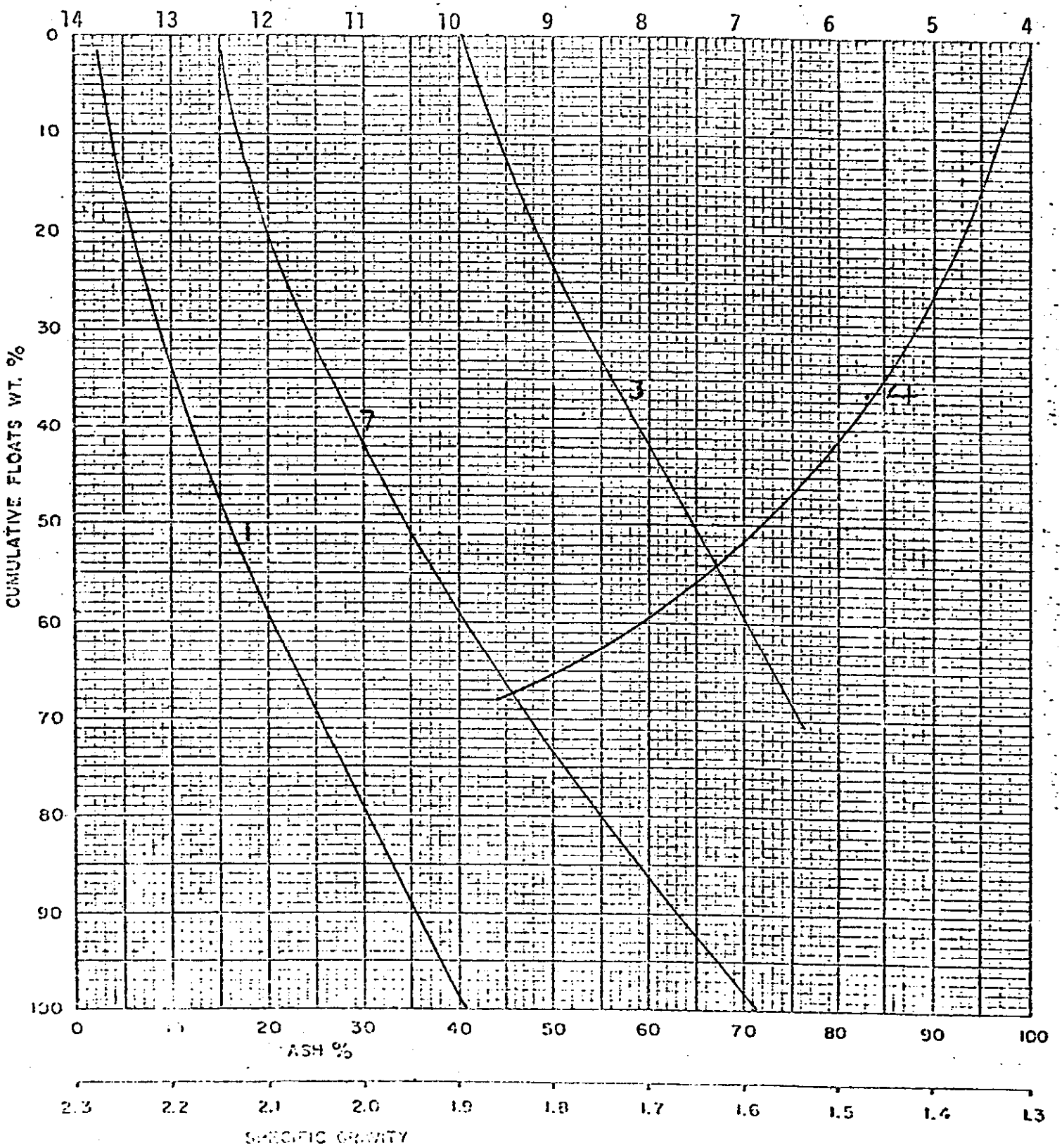
SAMPLE T-77-2

Size 3/4" x 1/4"

1 - FLOATS
2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU

WASHABILITY CURVES

1,000 BTU/lb.



DATE

CYCLONE ENGINEERING SALES LTD.

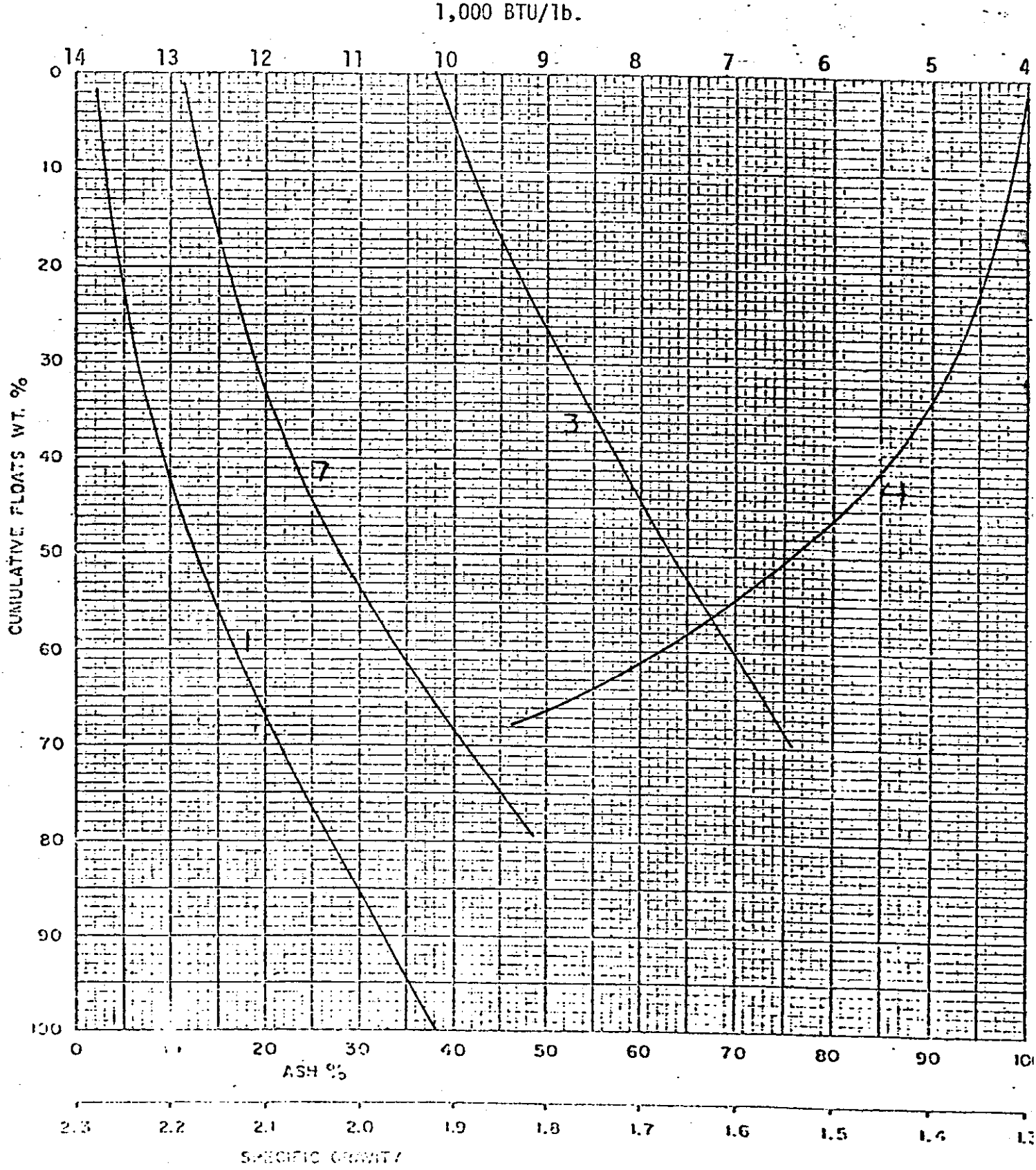
COMPANY CYPRUS ANVIL MINING CORPORATION

SAMPLE T-77-2

Size 3/4" x 28m

1 - FLOATS
2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU

WASHABILITY CURVES



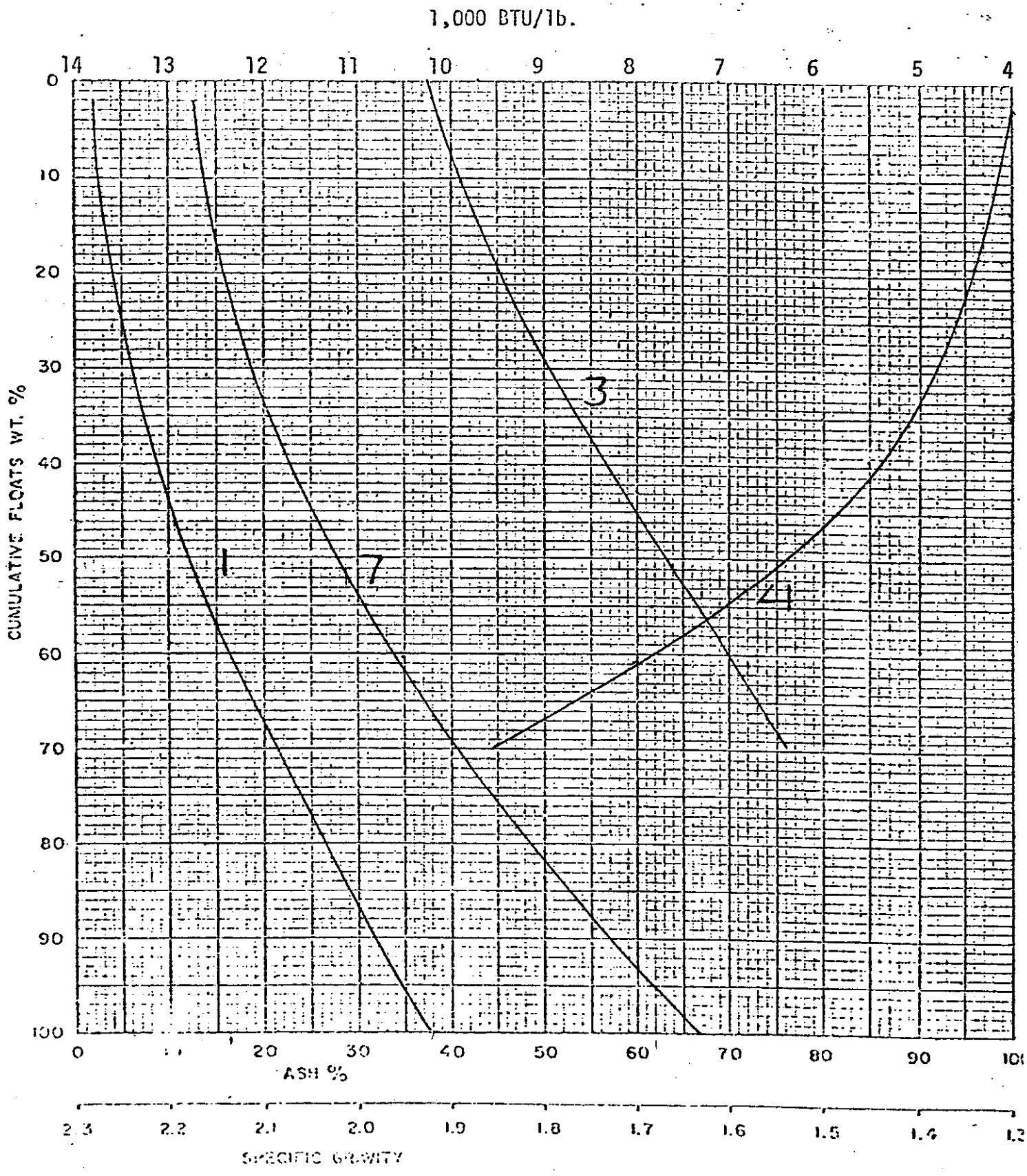
COMPANY CYPRUS ANVIL MINING CORPORATION

SAMPLE T-77-2

Size 3/4" x 100m

2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU

WASHABILITY CURVES



DATE

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:
HOLE NO.: T-77-3
SEAM: Main

TABLE 1 COMPONENTS AND ANALYSIS (a.d.b.)

	Ash%	R.M.%	V.M.%	F.C.%	B.T.U./lb.
Number: 1 Footage: 56.54 - 59.44 Weight: 28.0 lbs.	42.91	6.35	23.31	27.43	6,700
Number: 2 Footage: 59.44 - 64.31 Weight: 38.0 lbs.	35.12	6.49	25.76	32.63	7,600
Number: 3 Footage: 64.31 - 66.45 Weight: 17.0 lbs.	20.61	6.63	31.79	40.97	10,000
Number: 4 Footage: 66.45 - 70.71 Weight: 39.50 lbs.	46.55	6.31	21.54	25.60	6,040
Number: 5. Footage: 70.71 - 73.15 Weight: 23.50 lbs.	42.89	4.62	24.25	28.24	6,720
Number: 6 Footage: 73.15 - 77.42 Weight: 32.50 lbs.	27.29	6.10	29.51	37.10	8,920

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:

HOLE NO.: T-77-3

SEAM: Main

TABLE 2

ANALYSIS OF COMPOSITE HEAD SAMPLE (a.d.b.)

Ash %	36.54	35.61	35.7
R.M.%	5.80		
V.M.%	26.83		
F.C.%	30.83		
S. %	0.42	.41	
B.T.U./lb	7,540	7369	7992
H.G.I.	47		
Equilibrium Moisture		8 o	

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:
HOLE NO.: T-77-3
SEAM: Main

TABLE 3 SIZE CONSIST OF COMPOSITE HEAD SAMPLE

Size	Wt% Fractional	Cumulative
3/4" x ¼"	51.53	51.53
¼" x 28m	40.31	91.84
28m x 100m	3.75	95.59
100m x 0	4.41	100.00
TOTAL	100.00	

COMPOSITE NO.:

HOLE NO.: T-77-3

SEAM: Main

TABLE 4 ANALYSIS OF SIZE FRACTIONS

(a)

	3/4" x 1/4"	1/4" x 0	Total
Ash%	40.75	32.54	36.77
R.M.%	5.37	5.89	5.62
V.M.%	26.15	25.23	25.70
F.C.%	27.73	36.34	31.91
S. %	0.44	0.40	0.42
B.T.U./lb.	7,050	7,930	7,480

(b)

	1/4" x 28m	28m x 100m	100m x 0	Reconstituted 1/4" x 0
Ash%	33.81	21.71	50.71	34.41
R.M.%	6.06	2.36	4.16	5.60
V.M.%	28.03	30.09	21.60	27.60
F.C.%	32.10	45.84	23.53	32.39
S.%	0.37	0.52	0.37	0.38
B.T.U./lb.	7,940	10,000	5,590	7,930

COMPOSITE NO.:
HOLE NO.: T-77-3
SEAM: Main

TABLE 5. FLOAT-SINK AND ANALYSIS OF SIZE FRACTIONS
(Fractional Basis)

(a) 3/4" x 1/4"

Sp.Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./l
- 1.30	2.98	3.37	6.44	37.95	52.24		12,430
1.30 - 1.40	30.04	8.35	6.24	34.83	50.58		11,600
1.40 - 1.50	12.14	23.12	5.71	29.13	42.04		9,690
1.50 - 1.60	8.18	34.39	5.07	25.88	34.66		8,120
1.60 - 1.70	5.96	43.36	4.57	22.91	29.16		6,770
1.70 - 1.80	5.29	55.17	3.73	18.91	22.19		5,190
+ 1.80	35.41	77.05	3.94	14.35	4.66		1,860
TOTAL	100.00	41.01	5.04	24.69	29.26		7,030

(b) 1/4" x 28m

Sp. Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb
- 1.30	3.26	2.18	5.48	37.85	55.49		12,720
1.30 - 1.40	43.26	4.86	6.04	36.51	52.59		12,150
1.40 - 1.50	9.10	20.14	5.04	31.11	43.71		9,920
1.50 - 1.60	4.00	30.06	4.50	29.22	36.22		8,720
1.60 - 1.70	4.27	38.53	4.17	26.32	30.98		7,410
1.70 - 1.80	2.67	46.12	4.14	24.96	24.78		6,390
+ 1.80	33.44	74.79	4.24	15.11	5.86		1,870
TOTAL	100.00	33.10	5.13	27.86	33.91		8,030

TABLE 5. (cont'd)

(c) 28m x 100 mesh

Sp. Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./
- 1.30	12.22	2.19	5.67	35.89	56.25		12,450
1.30 - 1.40	31.13	5.39	5.32	33.52	55.77		11,900
1.40 - 1.50	21.29	12.64	5.37	30.52	51.47		10,920
1.50 - 1.60	6.21	13.85	5.20	31.61	49.34		10,810
1.60 - 1.70	9.29	16.80	5.12	31.70	49.31		10,640
1.70 - 1.80	1.64	44.55	3.79	24.85	26.81		6,590
+ 1.80	18.22	76.62	2.43	14.72	6.73		2,270
TOTAL	100.00	21.75	4.80	29.31	44.42		9,730

COMPOSITE NO.:

HOLE:: T-77-3

SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS

(a) 3/4" x 1/4"

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BT lb
- 1.30	2.98	3.37	12,430	2.98	3.37	12,430	100.00	41.01	7,(
1.30 - 1.40	30.04	8.35	11,600	33.02	7.90	11,670	97.02	42.17	6,8
1.40 - 1.50	12.14	23.12	9,690	45.16	11.99	11,140	66.98	57.34	4,1
1.50 - 1.60	8.18	34.39	8,120	53.34	15.42	10,680	54.84	64.91	3,6
1.60 - 1.70	5.96	43.36	6,770	59.30	18.23	10,290	46.66	70.36	2,8
1.70 - 1.80	5.29	55.17	5,190	64.59	21.26	9,870	40.70	74.21	2,2
+ 1.80	35.41	77.05	1,860	100.00	41.01	7,030	35.41	77.05	1,8
TOTAL	100.00	41.01	7,030						

COMPOSITE NO:

HOLE: T-77-3

SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS continued

(b) 3/4" x 28m (Reconstituted data)

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	3.10	2.82	12,560	3.10	2.82	12,560	100.00	37.54	7,47(
1.30 - 1.40	35.85	6.50	11,890	38.95	6.21	11,940	96.90	38.65	7,31(
1.40 - 1.50	10.81	22.02	9,780	49.76	9.64	11,470	61.05	57.53	4,62(
1.50 - 1.60	6.34	33.19	8,290	56.10	12.30	11,110	50.24	65.17	3,51(
1.60 - 1.70	5.21	41.63	7,000	61.31	14.80	10,760	43.90	69.79	2,82(
1.70 - 1.80	4.14	52.61	5,530	65.45	17.19	10,430	38.69	73.58	2,25(
+ 1.80	34.55	76.09	1,860	100.00	37.54	7,470	34.55	76.09	1,86(
TOTAL	100.00	37.54	7,470						

COMPOSITE NO.

HOLE: T-77-3

SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS continued

(c) 3/4" x 100 mesh (Reconstituted data)

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb
- 1.30	3.46	2.73	12,540	3.46	2.73	12,540	100.00	36.93	7,56
1.30 - 1.40	35.66	6.46	11,890	39.12	6.13	11,950	96.54	38.15	7,38
1.40 - 1.50	11.22	21.32	9,870	50.34	9.52	11,480	60.88	56.71	4,74
1.50 - 1.60	6.33	32.46	8,390	56.67	12.08	11,140	49.66	64.71	3,58
1.60 - 1.70	5.37	39.97	7,240	62.04	14.49	10,800	43.33	69.42	2,87
1.70 - 1.80	4.04	52.49	5,550	66.08	16.82	10,480	37.96	73.59	2,26
+ 1.80	33.92	76.10	1,870	100.00	36.93	7,560	33.92	76.10	1,87
TOTAL	100.00	36.93	7,560						

COMPANY CYPRUS ANVIL MINING CORPORATION

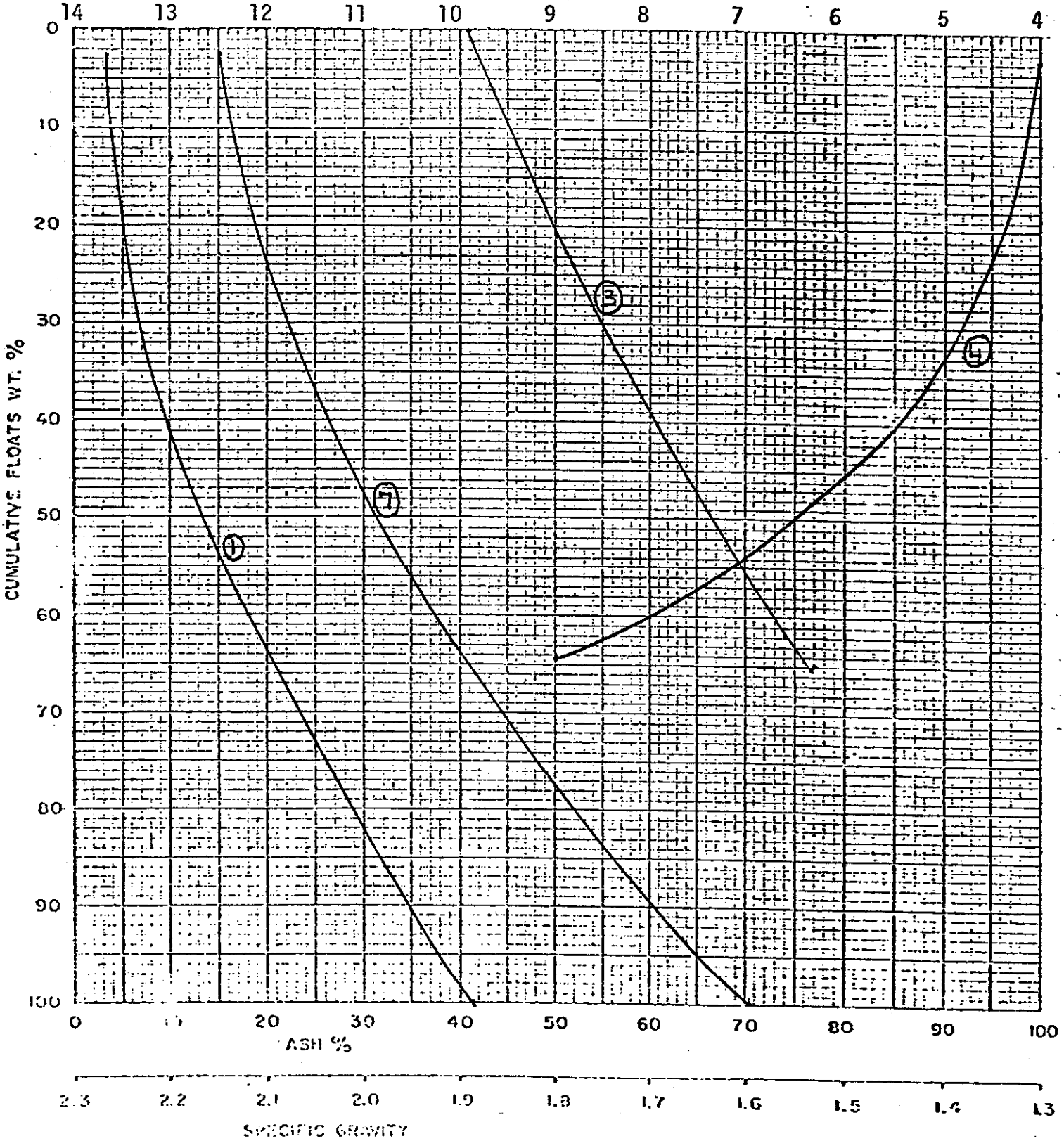
SAMPLE T 97-3

Size 3/4" x 1/4"

WASHABILITY CURVES

2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU

1,000 BTU/lb.



DATE

CYCLONE ENGINEERING SALES LTD.

COMPANY CYPRUS ANVIL MINING CORPORATION

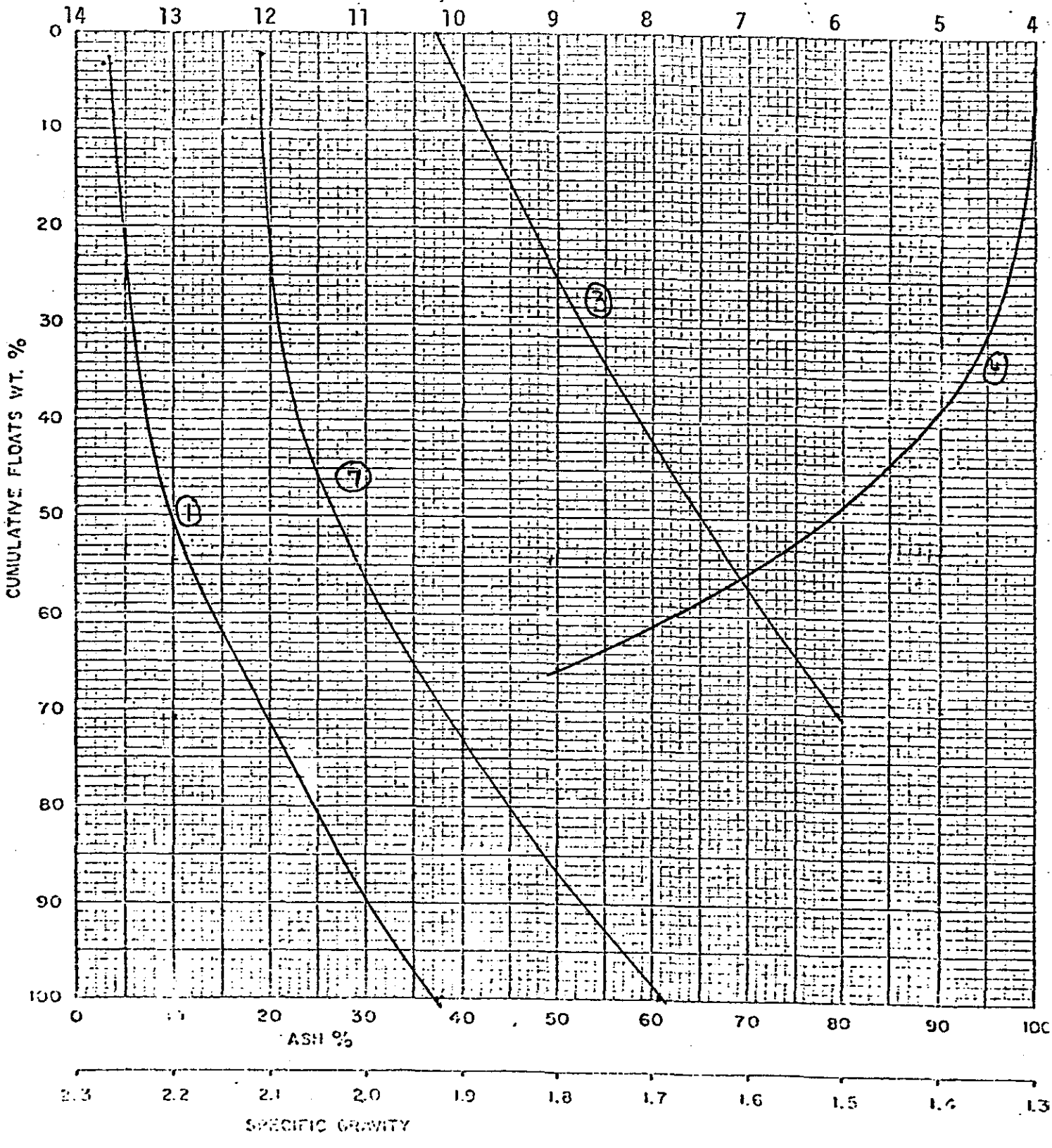
SAMPLE T-77-3

Size 3/4" x 28m.

WASHABILITY CURVES

2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU

1,000 BTU/lb.



DATE

CYCLONE ENGINEERING SALES LTD.
EDMONTON ALBERTA CANADA

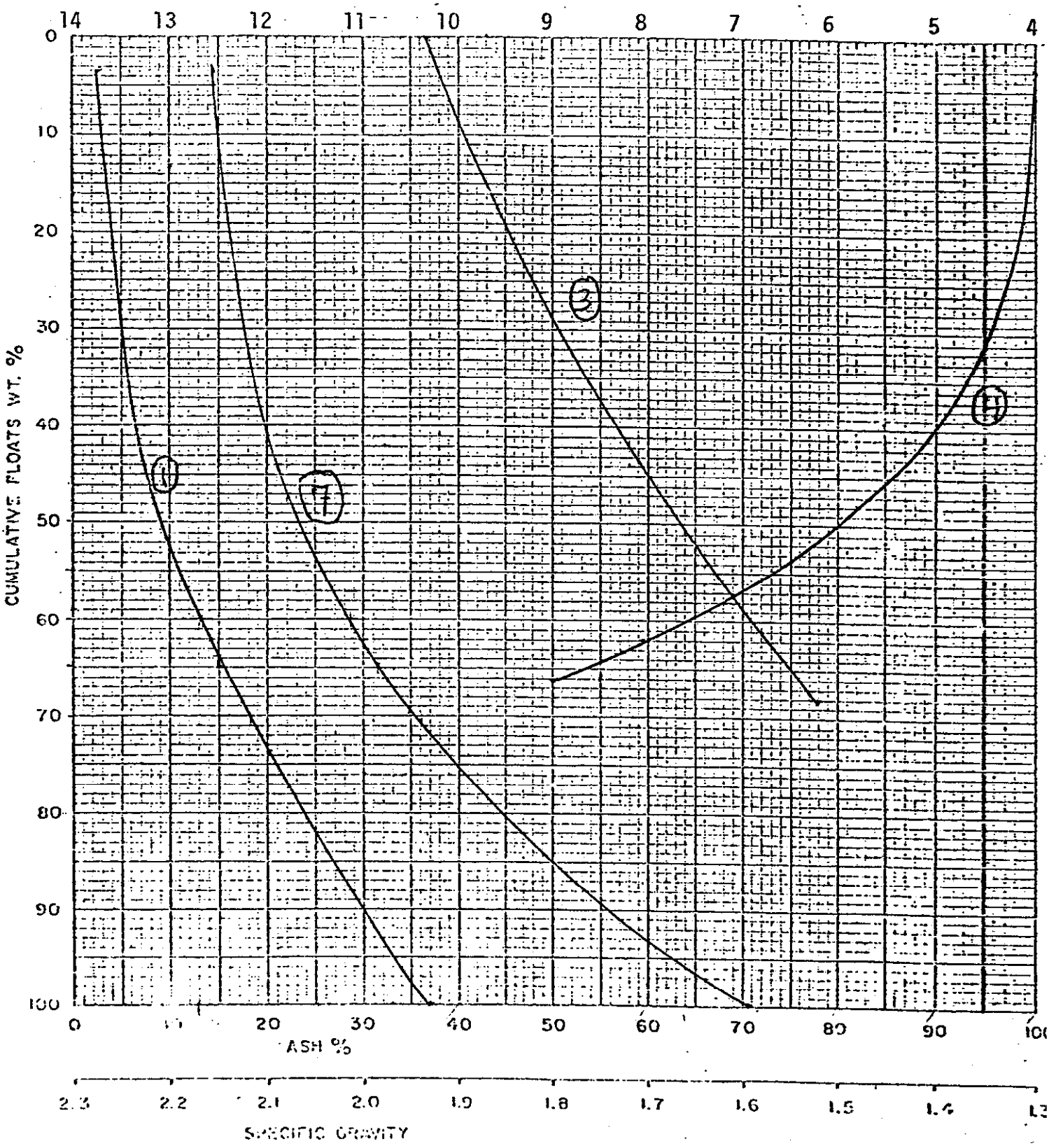
COMPANY CYPRUS ANVIL MINING CORPORATION

SAMPLE T-77-3

Size 3/4" x 100m

WASHABILITY CURVES

2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU



DATE

CYCLONE ENGINEERING SALES LTD.
EDMONTON ALBERTA CANADA

CYCLONE ENGINEERING SALES LTD.

SEPARATION OF BULK MATERIALS

Manufacturing, Engineering, Testing Services

9751 - 51 Avenue
Edmonton, Alberta T6E 4Z5
Telephone: (403) 436-1385
Cable Address:
Cyclone, Edmonton
Telex: 037-3793

Ref: S1-232

October 11, 1977

Mr. Tom Adamson
Cyprus Anvil Mining Corp.
330, 335 Burrard Street
Vancouver, B. C.
V6C 2G8

Dear Sir:

This is to confirm my conversation with Mr. G. Simpson in connection with the size consist data on your samples #4 and #5 from the main seam.

These two samples were actually crushed to a top size of 3/8". The analytical data are therefore for the coal of 3/8" x 0. Judging from the hardness of the coal, these two samples should have similar size consist with slightly higher fines when compared with the other samples from the main seam, if they had been reduced to a top size of 3/4".

I deeply apologize for the wrong treatment of these two samples.

Yours truly,

CYCLONE ENGINEERING SALES LTD.

Per: B. Y. H. Wong

BYHW/ejr

CYPRUS ANVIL MINING CORPORATION

Analytical Report
for
Core Testing

PROJECT: Tulameen

DRILL HOLE #: T77-4

AREA:

SEAM: Main

DATE SAMPLED:

LAB COMPOSITE #: T-77-4

DATE ANALYSED:

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:

HOLE NO.:

SEAM:

TABLE 1 COMPONENTS AND ANALYSIS (a.d.b.)

		Ash%	R.M.%	V.M.%	F.C.%	B.T.U./lb.
Number:	1	43.68	4.95	21.43	29.94	6,670
Footage:	2.59m					
Weight:	22 lbs.					
Number:	2	32.04	8.25	24.64	35.07	8,140
Footage:	3.50m					
Weight:	30 1/2 lbs.					
Number:	3	38.74	6.70	23.84	30.72	7,510
Footage:	2.9m					
Weight:	25 lbs.					
Number:	4	46.68	6.57	20.95	25.80	5,760
Footage:	3.35m					
Weight:	31 lbs.					
Number:	5	33.35	5.36	26.48	34.81	8,120
Footage:	2.29m					
Weight:	16 lbs.					

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:
HOLE NO.: T-77-4
SEAM: Main

TABLE 2

ANALYSIS OF COMPOSITE HEAD SAMPLE (a.d.b.)

Ash %	41.14
R.M.%	6.02
V.M.%	25.41
F.C.%	27.43
S. %	0.41
B.T.U./lb	6,880
H.G.I.	59
Equilibrium Moisture	7.8

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:
HOLE NO.: T-77-4
SEAM: Main

TABLE 3

SIZE CONSIST OF COMPOSITE HEAD SAMPLE

Size	Wt% Fractional	Cumulative
3/4" x ¼"	15.56	15.56
¼" x 28m	65.18	80.74
28m x 100m	7.26	88.00
100m x 0	12.00	100.00
TOTAL	100.00	

N.B. - ACTUALLY CRUSHED TO $\frac{3}{8}$"
TOP SIZE BY MISTAKE. SAME
FOR T77-5

COMPOSITE NO.:

HOLE NO.: T-77-4

SEAM: Main

TABLE 4 ANALYSIS OF SIZE FRACTIONS

(a)

	3/4" x 1/4"	1/4" x 0	Total
Ash%	48.47	38.54	40.08
R.M.%	5.14	6.48	6.27
V.M.%	22.10	25.54	25.00
F.C.%	24.29	29.44	28.65
S. %	0.32	0.42	0.40
B.T.U./lb.	6,020	7,200	7,020

(b)

	1/4" x 28m	28m x 100m	100m x 0	Reconstituted 1/4" x 0
Ash%	40.91	24.17	40.65	39.43
R.M.%	5.99	2.12	2.79	5.20
V.M.%	24.03	30.54	26.01	24.87
F.C.%	29.07	43.17	30.55	30.50
S.%	0.46	0.48	0.32	0.44
B.T.U./lb.	6,880	9,820	7,390	7,200

COMPOSITE NO.:
HOLE NO.: T-77-4
SEAM: Main

TABLE 5. FLOAT-SINK AND ANALYSIS OF SIZE FRACTIONS
(Fractional Basis)

(a) 3/4" x 1/4"

Sp.Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb.
- 1.30	--	--	--	--	--	--	--
1.30 - 1.40	17.37	8-04	7.85	33.87	50.24		11,490
1.40 - 1.50	11.62	-22.73	6.62	28.85	41.80		9,600
1.50 - 1.60	8.45	33.66	5.74	25.94	34.66		8,060
1.60 - 1.70	8.95	42.59	5.17	22.19	30.05		6,750
1.70 - 1.80	7.37	51.57	5.21	20.46	22.76		5,460
+ 1.80	45.74	76.02	3.51	14.34	6.13		2,150
TOTAL	100.00	49.31	5.11	21.65	23.93	--	5,840

(b) 1/4" x 28m

Sp. Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb
- 1.30	--	--	--	--	--	--	--
1.30 - 1.40	31.67	5.88	6.74	33.19	54.19		12,000
1.40 - 1.50	9.66	21.55	5.61	30.53	42.31		9,890
1.50 - 1.60	5.87	31.58	5.26	27.29	35.87		8,480
1.60 - 1.70	4.93	39.89	5.38	23.35	31.38		7,160
1.70 - 1.80	4.52	46.43	5.73	21.17	26.67		6,420
+ 1.80	43.35	73.23	4.27	17.96	4.54		2,300
TOTAL	100.00	41.61	5.36	24.96	28.07	--	6,890

TABLE 5. (cont'd)

(c) 20m x 100 mesh

Sp. Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb
- 1.30	--	--	--	--	--	--	--
1.30 - 1.40	60.19	3.12	4.72	34.10	58.06		12,540
1.40 - 1.50	4.39	11.50	5.61	33.73	49.16		11,160
1.50 - 1.60	6.52	15.63	4.95	32.19	47.23		10,630
1.60 - 1.70	4.82	30.00	5.10	29.76	35.14		8,510
1.70 - 1.80	2.35	45.08	4.42	22.69	27.81		6,140
+ 1.80	21.73	75.69	3.00	13.99	7.32		2,290
TOTAL	100.00	22.35	4.41	29.11	44.13	--	9,730

COMPOSITE NO.:

HOLE: T-77-4

SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS

(a) 3/4" x 1/4"

	Fractional			Cumulative Floats			Cumulative Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	--	--	--	--	--	--	--	--	--
1.30 - 1.40	17.87	8.04	11,490	17.87	8.04	11,490	100.00	49.31	5,84
1.40 - 1.50	11.62	22.73	9,600	29.49	13.83	10,750	82.13	58.29	4,61
1.50 - 1.60	8.45	33.66	8,060	37.94	18.25	10,150	70.51	64.14	3,79
1.60 - 1.70	8.95	42.59	6,750	46.89	22.89	9,500	62.06	68.30	3,21
1.70 - 1.80	7.37	51.57	5,460	54.26	26.79	8,950	53.11	72.63	2,61
+ 1.80	45.74	76.02	2,150	100.00	49.31	5,840	45.74	76.02	2,15
TOTAL	100.00	49.31	5,840						

COMPOSITE NO:

HOLE: T-77-4

SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS continued

(b) 3/4" x 28m (Reconstituted data)

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	--	--	--	--	--	--	--	--	--
1.30 - 1.40	29.0	6.14	11,930	29.0	6.14	11,930	100.00	43.09	6,680
1.40 - 1.50	10.04	21.81	9,830	39.04	10.17	11,390	71.00	58.19	4,530
1.50 - 1.60	6.37	32.11	8,370	45.41	13.25	10,970	60.96	64.18	3,660
1.60 - 1.70	5.71	40.71	7,040	51.12	16.32	10,530	54.59	67.92	3,110
1.70 - 1.80	5.07	47.87	6,150	56.19	19.16	10,130	48.88	71.10	2,650
+ 1.80	43.81	73.79	2,250	100.00	43.09	6,680	43.81	73.79	2,250
TOTAL	100.00	43.09	6,680						

COMPOSITE NO.

HOLE: T-77-4

SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS continued

(c) 3/4" x 100 mesh (Reconstituted data)

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	B
- 1.30	--	--	--	--	--	--	--	--	--
1.30 - 1.40	31.58	5.66	12,030	31.58	5.66	12,030	100.00	41.38	6,94
1.40 - 1.50	9.57	21.42	9,880	41.15	9.33	11,530	68.42	57.87	4,59
1.50 - 1.60	6.38	30.72	8,570	47.53	12.20	11,130	58.85	63.79	3,72
1.60 - 1.70	5.64	39.95	7,140	53.17	15.14	10,710	52.47	67.82	3,14
1.70 - 1.80	4.84	47.76	6,150	58.01	17.86	10,330	46.83	71.17	2,65
+ 1.80	41.99	73.87	2,250	100.00	41.38	6,940	41.99	73.87	2,25
TOTAL	100.00	41.38	6,940						

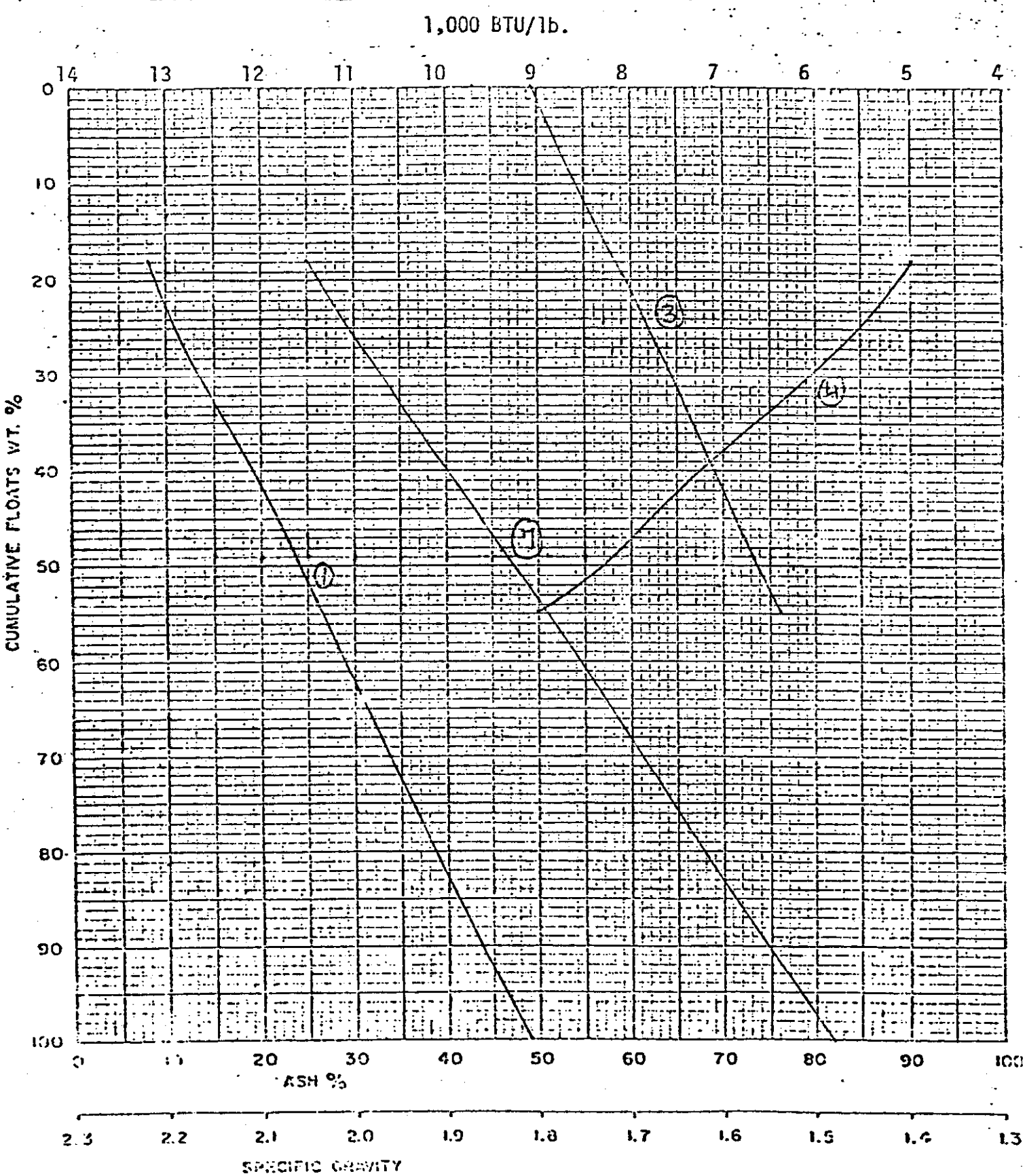
COMPANY CYPRUS ANVIL MINING CORPORATION

SAMPLE T 77-4 MAIN SEAM

Size $3/4" \times 1/4"$

WASHABILITY CURVES

2 EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU



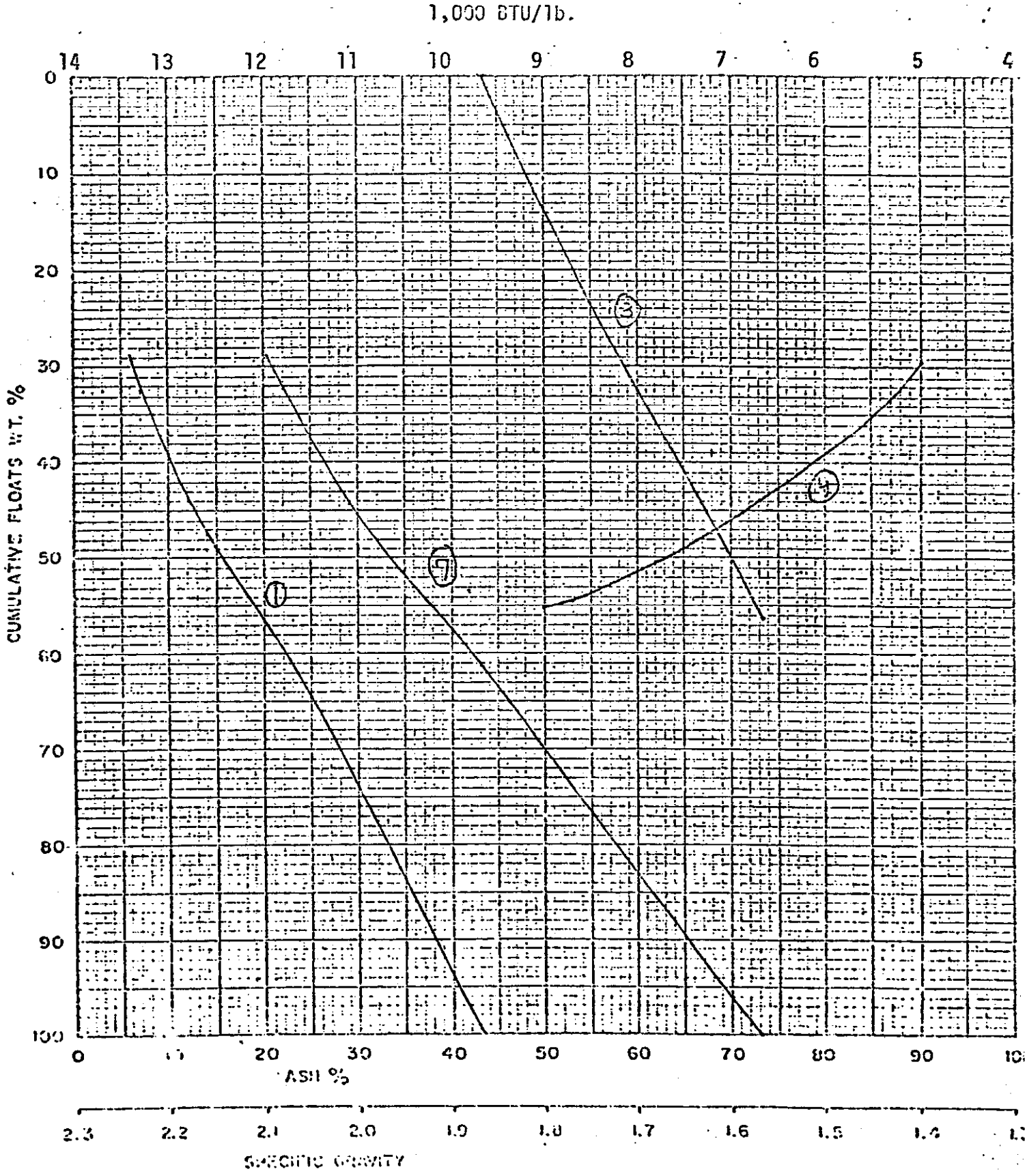
COMPANY CYPRUS ANVIL MINING CORPORATION

SAMPLE T 77 – 4 MAIN SEAM

Size 3/4" x 28m.

WASHABILITY CURVES

3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU



DATE

CYCLONE ENGINEERING SALES LTD.

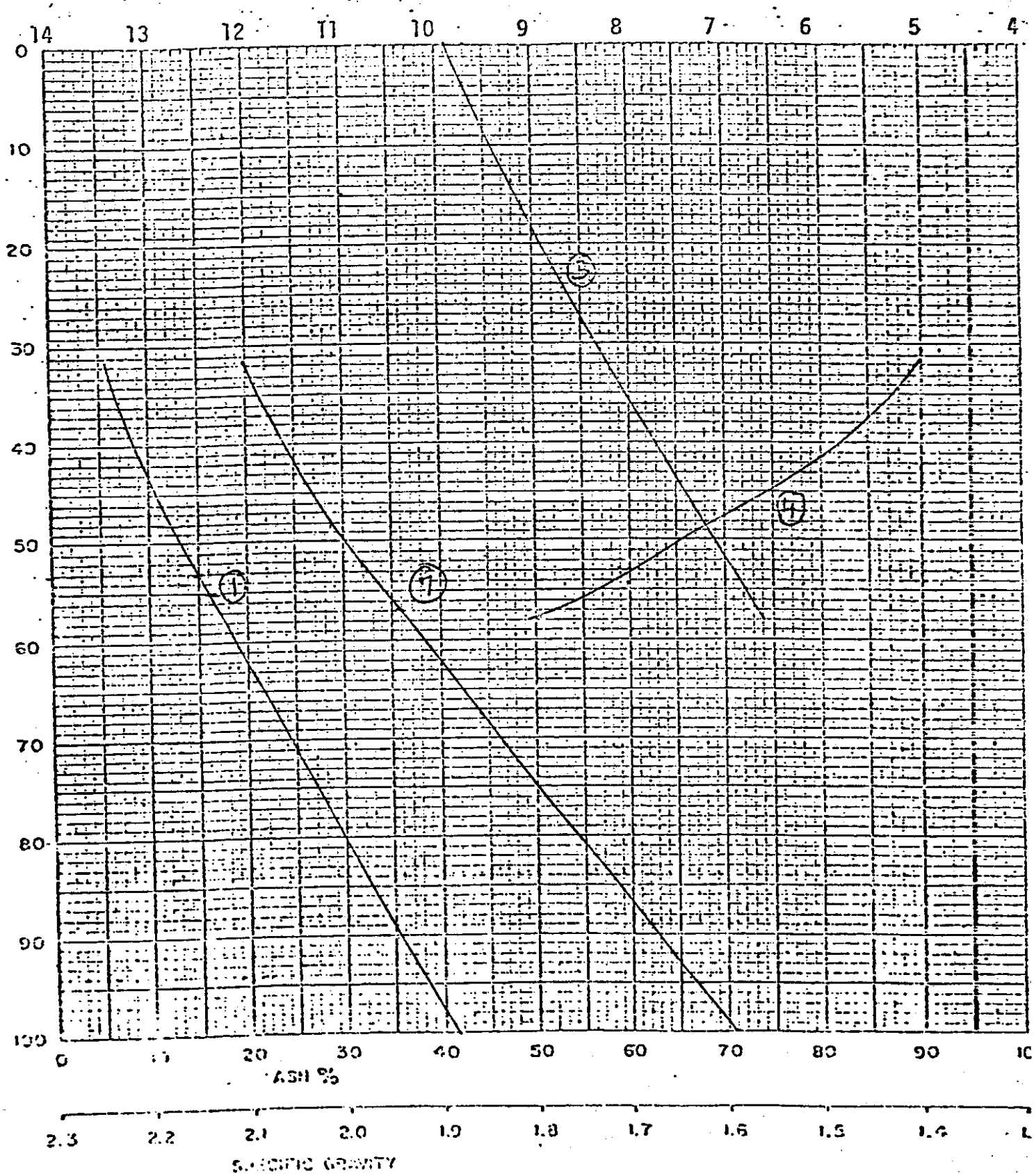
COMPANY CYPRUS ANVIL MINING CORPORATION

SAMPLE T 77-4 MAIN SEAM.

Size 3 1/4" X 100m

WASHABILITY CURVES

2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU



CYPRUS ANVIL MINING CORPORATION

Analytical Report
for
Core Testing

PROJECT: Tulameen

DRILL HOLE #: T-77-5

AREA:

SEAM: Main

DATE SAMPLED:

LAB COMPOSITE #: T-77-5

DATE ANALYSED: October 5, 1977

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:
HOLE NO.: T-77-5
SEAM: Main

TABLE 1 COMPONENTS AND ANALYSIS (a.d.b.)

	Ash%	R.M.%	V.M.%	F.C.%	B.T.U./lb.
Number: 1 Footage: 2.59m Weight: 18 lbs.	32.50	6.10	29.33	32.07	8,010
Number: 2 Footage: 2.13m Weight: 19 lbs.	56.34	3.05	31.10	9.51	4,680
Number: 3 Footage: 2.74m Weight: 21 lbs.	31.49	7.70	26.16	34.65	8,020
Number: 4 Footage: 3.51m Weight: 30 lbs.	39.20	8.11	24.54	28.15	6,890
Number: 5 Footage: 2.90m Weight: 28 1/2 lbs.	48.21	6.97	24.52	20.30	5,410
Number: 6 Footage: 3.04m Weight: 31 lbs.	45.95	6.62	22.30	25.13	6,110
Number: 7 Footage: 3.51m Weight: 28 lbs.	32.67	6.47	29.24	31.62	8,020

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:
HOLE NO.: T-77-5
SEAM: Main

TABLE 2

ANALYSIS OF COMPOSITE HEAD SAMPLE (a.d.b.)

Ash %	41.17	40.35
R.M.%	6.41	
V.M.%	24.81	
F.C.%	27.61	
S. %	0.42	.41
B.T.U./lb	6,640	6507
H.G.I.	62	

Equilibrium Moisture 8.3

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:
HOLE NO.: T-77-5
SEAM: Main

TABLE 3 SIZE CONSIST OF COMPOSITE HEAD SAMPLE

Size	Wt% Fractional	Cumulative
3/4" x ¼"	28.27	28.27
¼" x 28m	56.55	84.82
28m x 100m	6.88	91.70
100m x 0	8.30	100.00
TOTAL	100.00	

COMPOSITE NO.:

HOLE NO.: T-77-5

SEAM: Main

TABLE 4 ANALYSIS OF SIZE FRACTIONS

(a)

	3/4" x 1/4"	1/4" x 0	Total
Ash%	44.90	37.35	39.48
R.M.%	5.85	6.73	6.48
V.M.%	23.99	26.03	25.45
F.C.%	25.26	29.89	28.59
S. %	0.37	0.42	0.41
B.T.U./lb.	6,300	7,070	6,850

(b)

	1/4" x 28m	28m x 100m	100m x 0	Reconstituted 1/4" x 0
Ash%	38.61	27.76	40.37	37.77
R.M.%	6.80	2.32	2.61	5.89
V.M.%	25.95	29.78	27.56	26.50
F.C.%	28.64	40.14	29.46	29.84
S.%	0.40	0.54	0.32	0.40
B.T.U./lb.	6,930	9,080	7,270	7,170

COMPOSITE NO.:

HOLE NO.: T-77-5

SEAM: Main

TABLE 5. FLOAT-SINK AND ANALYSIS OF SIZE FRACTIONS

(Fractional Basis)

(a) 3/4" x 1/4"

Sp.Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb
- 1.30	--	--	--	--	--	--	--
1.30 - 1.40	22.02	7.65	8.14	35.20	49.01	--	11,460
1.40 - 1.50	10.85	20.02	6.77	32.44	40.77	--	9,680
1.50 - 1.60	8.94	29.87	6.37	30.89	32.87	--	8,320
1.60 - 1.70	7.73	40.74	5.85	23.89	29.52	--	6,840
1.70 - 1.80	5.88	49.13	4.89	22.01	23.97	--	5,590
+ 1.80	44.58	73.39	4.50	18.16	3.95	--	1,860
TOTAL	100.00	45.28	5.84	25.27	23.61	--	6,000

(b) 1/4" x 28m

Sp. Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb
- 1.30	--	--	--	--	--	--	--
1.30 - 1.40	35.77	5.18	7.72	34.63	52.47	--	11,790
1.40 - 1.50	7.97	20.16	5.41	32.62	41.81	--	9,990
1.50 - 1.60	6.45	30.05	5.31	27.31	37.33	--	8,600
1.60 - 1.70	4.06	38.30	5.47	24.72	31.51	--	7,230
1.70 - 1.80	3.48	46.17	5.92	21.95	25.96	--	6,100
+ 1.80	42.27	73.78	4.62	17.41	4.19	--	2,180
TOTAL	100.00	39.75	5.92	25.87	28.46	--	6,700

TABLE 5. (cont'd)

(c) 28m x 100 mesh

Sp. Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./
- 1.30	--	--	--	--	--	--	--
1.30 - 1.40	38.56	5.78	5.81	34.23	54.81	--	11,820
1.40 - 1.50	15.78	10.01	5.64	32.95	51.40	--	11,310
1.50 - 1.60	14.25	11.15	5.24	32.58	51.03	--	11,040
1.60 - 1.70	3.21	19.11	5.07	30.95	44.87	--	9,990
1.70 - 1.80	1.77	40.29	3.96	27.31	28.44	--	7,170
+ 1.80	26.43	76.24	1.85	19.58	2.33	--	1,920
TOTAL	100.00	28.87	4.60	29.85	36.68	--	8,870

COMPOSITE NO.:

HOLE: T-77-5

SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS

(a) 3/4" x 1/4"

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	--	--	--	--	--	--	--	--	--
1.30 - 1.40	22.02	7.65	11,460	22.02	7.65	11,460	100.00	45.28	6,0
1.40 - 1.50	10.85	20.02	9,680	32.87	11.73	10,870	77.98	55.91	4,4
1.50 - 1.60	8.94	29.87	8,320	41.81	15.61	10,330	67.13	61.71	3,6
1.60 - 1.70	7.73	40.74	6,840	49.54	19.53	9,780	58.19	66.60	2,9
1.70 - 1.80	5.88	49.13	5,590	55.42	22.67	9,340	50.46	70.56	2,2
+ 1.80	44.58	73.39	1,860	100.00	45.28	6,000	44.58	73.39	1,8
TOTAL	100.00	45.28	6,000						

COMPOSITE NO:
HOLE: T-77-5
SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS continued

(b) 3/4" x 28m (Reconstituted data)

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	--	--	--	--	--	--	--	--	--
1.30 - 1.40	31.19	5.76	11,710	31.19	5.76	11,710	100.00	41.57	6,66(
1.40 - 1.50	8.93	20.10	9,860	40.12	8.95	11,300	68.81	57.81	4,38(
1.50 - 1.60	7.28	30.00	8,480	47.40	12.18	10,860	59.88	63.43	3,56(
1.60 - 1.70	5.29	39.49	7,040	52.69	14.93	10,480	52.60	68.06	2,88(
1.70 - 1.80	4.28	47.53	5,860	56.97	17.37	10,130	47.31	71.25	2,41(
+ 1.80	43.03	73.61	2,070	100.00	41.57	6,660	43.03	73.61	2,07(
TOTAL	100.00	41.57	6,660						

COMPOSITE NO.

HOLE: T-77-5

SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS continued

(c) 3/4" x 100 mesh (Reconstituted data)

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU lb
- 1.30	--	--	--	--	--	--	--	--	--
1.30 - 1.40	31.74	5.76	11,720	31.74	5.76	11,720	100.00	40.47	6,790
1.40 - 1.50	9.45	18.83	10,040	41.19	8.76	11,330	68.26	56.60	4,500
1.50 - 1.60	7.81	27.42	8,830	49.00	11.73	10,930	58.81	62.67	3,600
1.60 - 1.70	5.13	38.54	7,180	54.13	14.27	10,580	51.00	68.07	2,800
1.70 - 1.80	4.09	47.30	4,930	58.22	16.59	10,180	45.87	71.37	2,310
+ 1.80	41.78	73.73	2,060	100.00	40.47	6,790	41.78	73.73	2,060
TOTAL	100.00	40.47	6,790						

COMPOSITE:

HOLE: T-77-5

SEAM: Main

TABLE 7 CONTINUOUS FROTH FLOTATION TEST

Test Conditions:

Wt. % Solids in Pulp	10
Reagents	MIBC/Kerosene (Collector/Frother)
Reagent Composition	3/1
Reagent Consumption	1.05 lb./ton
Conditioning Time	

a. 28 mesh x 0

Time, Seconds	Wt.%	Ash%	Cumulative Wt.%	Cumulative Ash %
30	24.85	19.44	24.85	19.44
30 - 60	5.37	28.21	30.22	21.00
60 - 90	5.55	30.48	35.77	22.47
Tails	64.23	37.52	100.00	32.14
TOTAL	100.00	32.14		

Proximate Analysis of Froth for 1 min. Flotation:

Ash %	21.40
RM %	5.93
VM %	30.00
FC %	42.67
S %	0.45
BTU/lb.	9,740

COMPOSITE:
HOLE NO: T-77-5
SEAM: Main

TABLE 7

b. 100 mesh x 0

Time, Seconds	Wt.%	Ash%	Cumulative Wt.%	Cumulative Ash %
30	13.65	12.40	13.65	12.40
30 - 60	4.48	14.81	18.13	13.00
60 - 90	1.43	30.35	19.56	14.26
Tails	80.44	44.50	100.00	38.59
TOTAL	100.00	38.59		

Proximate Analysis of Froth for 1 min. Flotation:

Ash %	13.04
RM %	4.44
VM %	32.10
FC %	50.42
S %	0.49
BTU/lb.	10,950

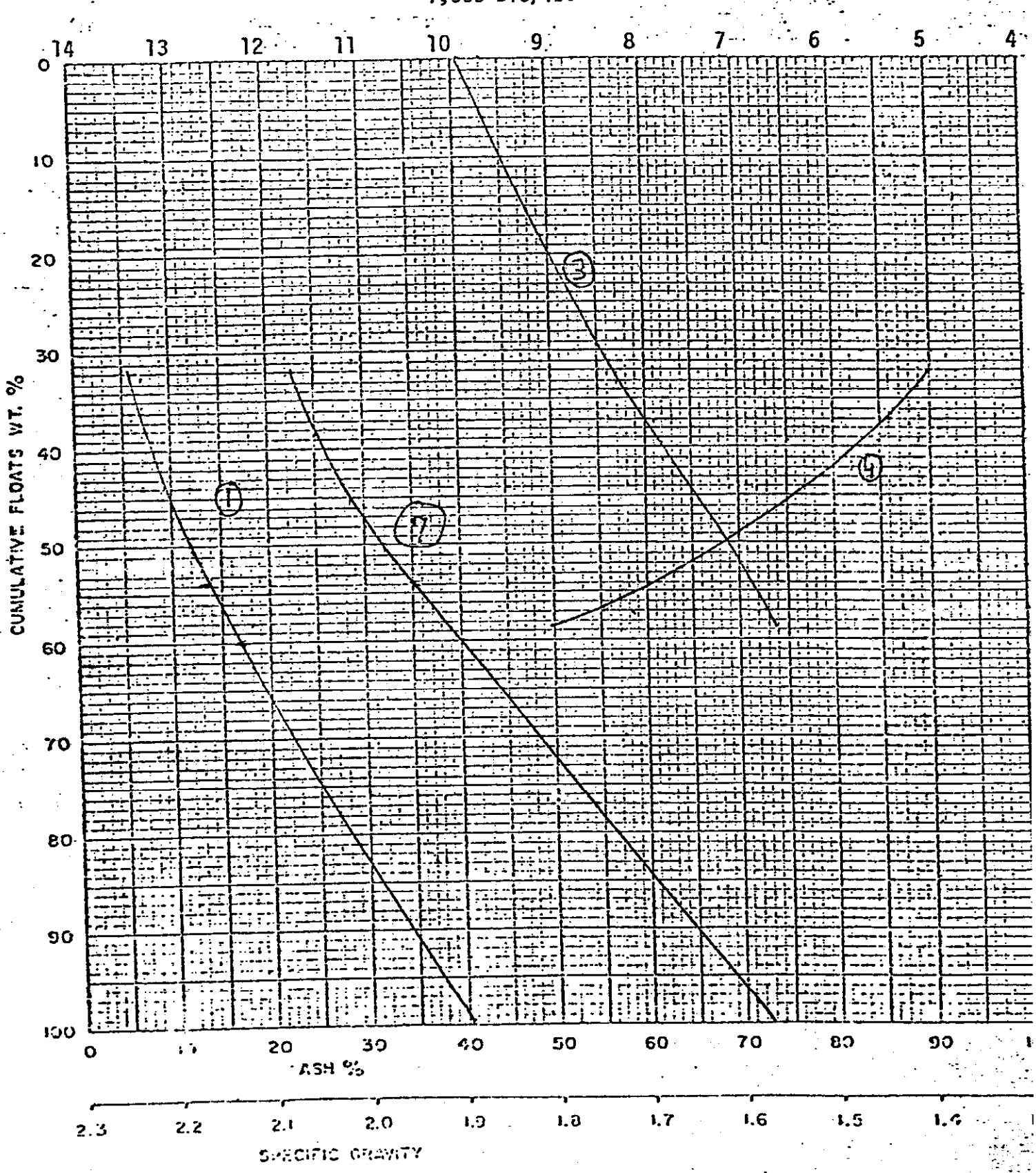
COMPANY CYPRUS ANVIL MINING CORPORATION

SAMPLE T-77-5

Size 3" x 100m

WASHABILITY CURVES

2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU



DATE

CYCLONE ENGINEERING SALES LT

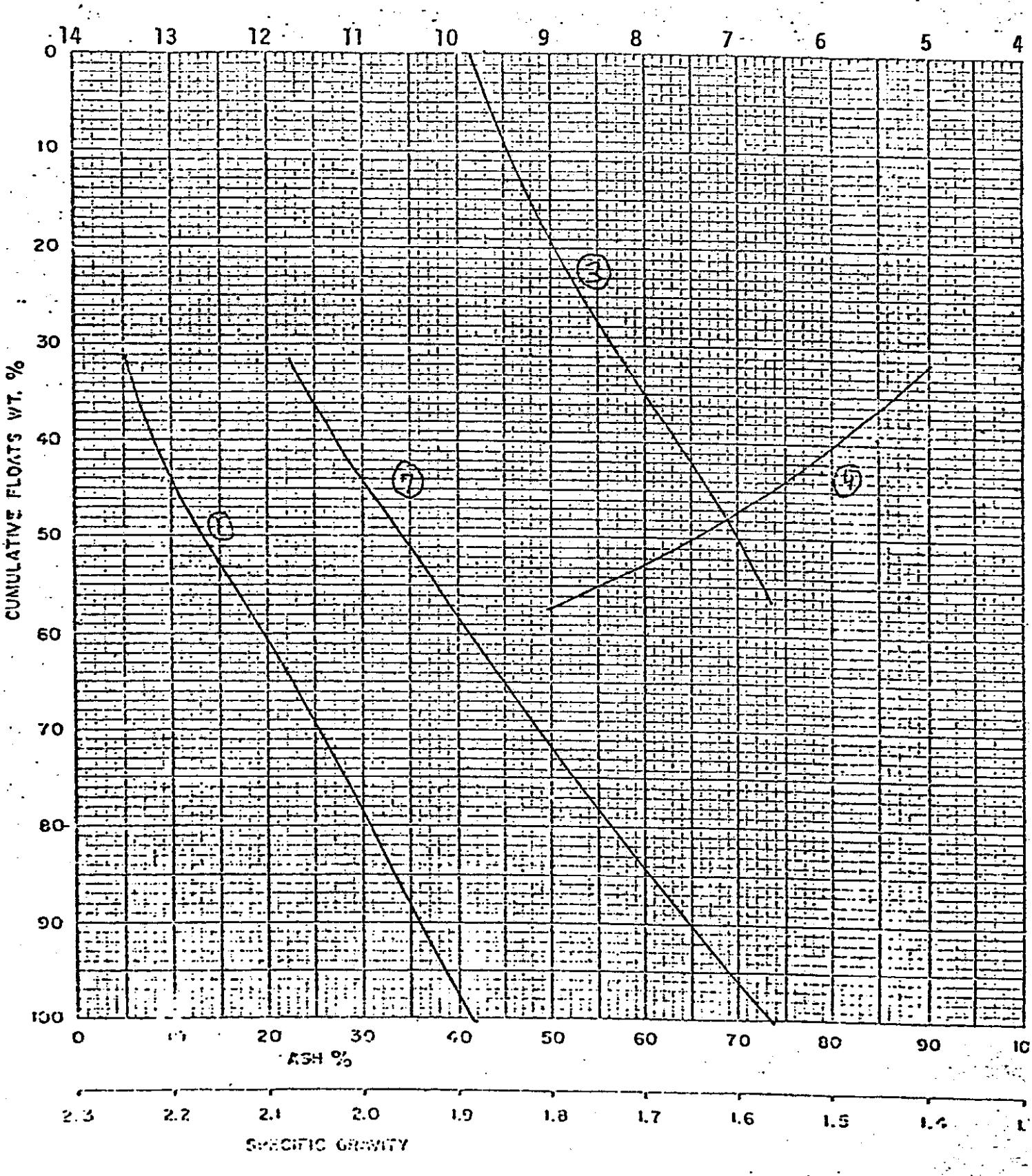
COMPANY CYPRUS ANVIL MINING CORPORATION

SAMPLE T-77-5 Main Seam

Size 3/4" X 28m

WASHABILITY CURVES

2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU



DATE

CYCLONE ENGINEERING SALES LTD

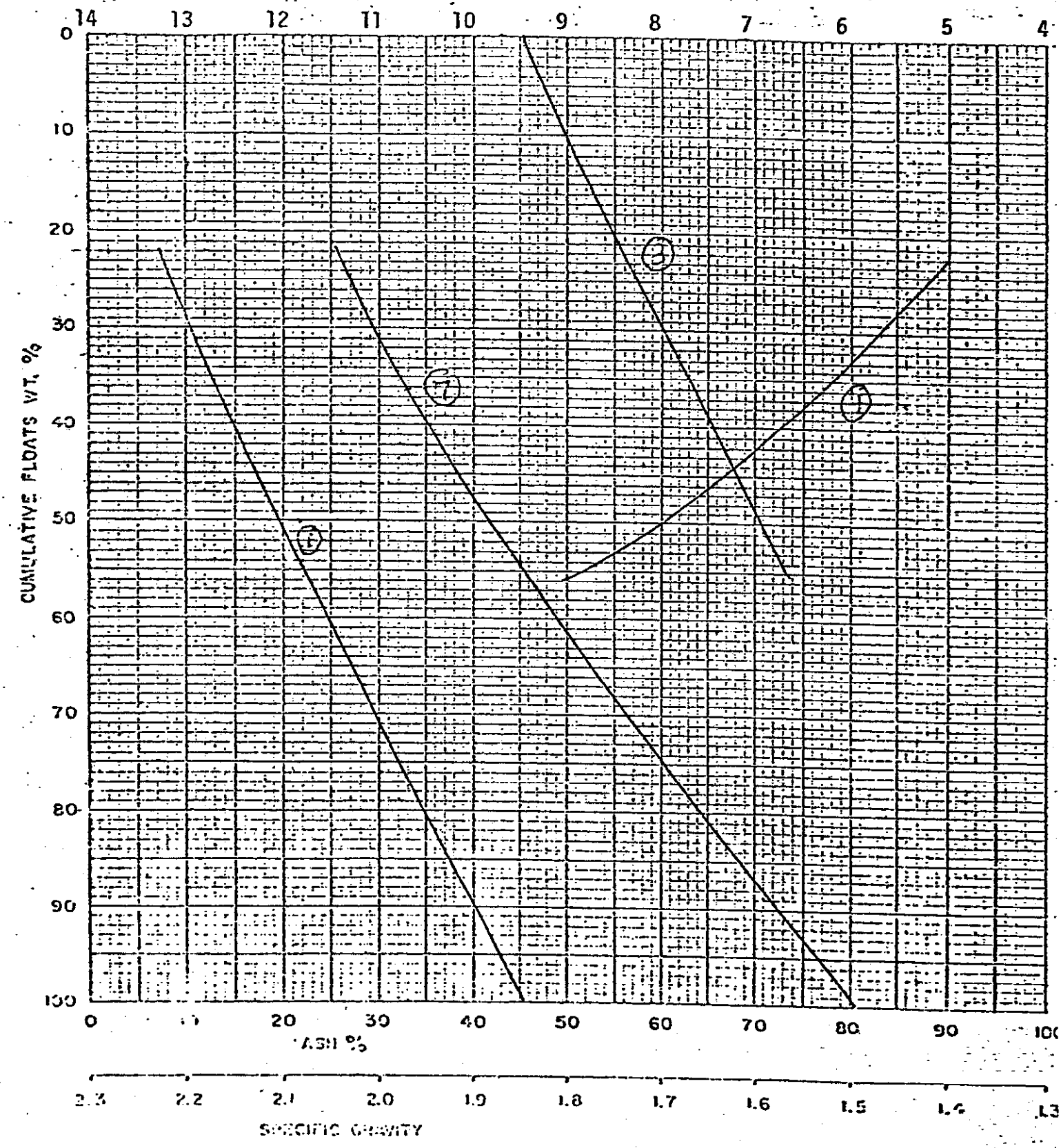
COMPANY CYPRUS ANVIL MINING CORPORATION

SAMPLE T-77-5 MAIN SEAM

Size 3¼" x ½"

WASHABILITY CURVES

5 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU



DATE

CYCLONE ENGINEERING SALES LTD.
EDMONTON ALBERTA CANADA

CYPRUS ANVIL MINING CORPORATION

Analytical Report
for
Core Testing

PROJECT: Tulameen

DRILL HOLE #: T-77-6

AREA:

SEAM: Main

DATE SAMPLED:

LAB COMPOSITE #: T-77-6

DATE ANALYSED: October 15, 1977

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.: T-77-6
HOLE NO.: T-77-6
SEAM: Main

TABLE 1 COMPONENTS AND ANALYSIS (a.d.b.)

		Ash%	R.M.%	V.M.%	F.C.%	B.T.U./lb.
Number:	1	53.02	8.53	18.47	19.98	4,740
Footage:						
Weight:	9.19 kg.					
Number:	2	42.43	6.66	25.90	25.01	6,320
Footage:						
Weight:	8.21 kg.					
Number:	3	66.86	4.34	18.65	10.15	2,580
Footage:						
Weight:	20.51 kg.					
Number:	4	42.69	7.19	21.80	28.32	6,050
Footage:						
Weight:	15.41 kg.					
Number:	5	39.17	5.35	26.93	28.55	7,010
Footage:						
Weight:	12.69 kg.					
Number:	6	32.01	5.94	27.84	34.21	8,410
Footage:						
Weight:	11.63 kg.					

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:

HOLE NO.: T-77-6

SEAM: Main

TABLE 2 ANALYSIS OF COMPOSITE HEAD SAMPLE (a.d.b.)

Ash %	49.17
R.M.%	5.85
V.M.%	23.56
F.C.%	21.42
S. %	0.55
B.T.U./lb	5,420
H.G.I.	61
Equilibrium Moisture	7.40

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:

HOLE NO.: T-77-6

SEAM: Main

TABLE 3 SIZE CONSIST OF COMPOSITE HEAD SAMPLE

Size	Wt% Fractional	Cumulative
3/4" x ¼"	40.41	40.41
¼" x 28m	51.30	91.71
28m x 100m	3.42	95.13
100m x 0	4.87	100.00
TOTAL	100.00	

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:

HOLE NO.: T-77-6

SEAM: Main

TABLE 4 ANALYSIS OF SIZE FRACTIONS

(a)

	3/4" x 1/4"	1/4" x 0	Total
Ash%	56.38	44.93	49.56
R.M.%	4.65	4.93	4.82
V.M.%	21.98	24.94	23.74
F.C.%	16.99	25.20	21.88
S. %	0.49	0.57	0.54
B.T.U./lb.	4,620	6,200	5,560

(b)

	1/4" x 28m	28m x 100m	100m x 0	Reconstituted 1/4" x 0
Ash%	45.02	29.83	48.96	44.47
R.M.%	6.00	2.50	2.80	5.54
V.M.%	25.49	27.36	21.63	25.34
F.C.%	23.49	39.31	26.61	24.65
S.%	0.60	0.60	0.45	0.59
B.T.U./lb.	6,050	8,710	6,200	6,210

COMPOSITE NO.:
HOLE NO.: T-77-6
SEAM: Main

TABLE 5. FLOAT-SINK AND ANALYSIS OF SIZE FRACTIONS
(Fractional Basis)

(a) 3/4" x 1/4"

Sp.Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb.
- 1.30	-	-	-	-	-	-	-
1.30 - 1.40	12.74	8.33	5.10	34.26	52.31	-	11,680
1.40 - 1.50	10.79	21.07	4.90	32.90	41.13	-	9,870
1.50 - 1.60	7.92	32.50	4.55	27.07	35.88	-	8,330
1.60 - 1.70	6.07	43.46	3.83	24.23	28.48	-	6,930
1.70 - 1.80	3.76	49.77	3.61	20.89	25.73	-	6,040
+ 1.80	58.72	77.16	2.66	14.58	5.60	-	1,450
TOTAL	100.00	55.73	3.47	20.88	19.92	-	4,710

(b) 1/4" x 28m

Sp. Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb
- 1.30	-	-	-	-	-	-	-
1.30 - 1.40	27.68	5.28	5.20	35.40	54.12	-	11,940
1.40 - 1.50	10.46	18.68	4.80	32.52	44.00	-	10,190
1.50 - 1.60	6.29	27.72	4.60	27.41	40.27	-	8,900
1.60 - 1.70	4.53	39.17	4.58	23.94	32.31	-	7,280
1.70 - 1.80	3.22	46.45	2.93	23.00	27.62	-	6,480
+ 1.80	47.82	77.68	2.62	16.76	4.94	-	1,400
TOTAL	100.00	45.58	3.79	24.76	25.87	-	6,140

HOLE NO.: T-77-6

SEAM: Main

TABLE 5. (cont'd)

(c) 28m x 100 mesh

Sp. Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb
- 1.30	-	-	-	-	-	-	-
1.30 - 1.40	51.33	3.80	3.35	32.35	60.50	-	12,320
1.40 - 1.50	6.77	16.64	3.26	31.94	48.16	-	10,760
1.50 - 1.60	5.74	20.39	3.33	30.70	45.58	-	9,910
1.60 - 1.70	2.85	31.51	3.22	27.42	37.85	-	8,440
1.70 - 1.80	2.33	41.50	3.36	25.05	30.09	-	6,960
+ 1.80	30.98	77.95	1.03	15.12	5.90	-	1,780
TOTAL	100.00	30.26	2.62	26.58	40.54	-	8,580

COMPOSITE NO.:

HOLE: T-77-6

SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS

(a) 3/4" x 1/4"

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	-	-	-	-	-	-	-	-	-
1.30 - 1.40	12.74	8.33	11,680	12.74	8.33	11,680	100.00	55.73	4,710
1.40 - 1.50	10.79	21.07	9,870	23.53	14.17	10,850	87.26	62.65	3,690
1.50 - 1.60	7.92	32.50	8,330	31.45	18.79	10,220	76.47	68.51	2,820
1.60 - 1.70	6.07	43.46	6,930	37.52	22.78	9,680	68.55	72.67	2,190
1.70 - 1.80	3.76	49.77	6,040	41.28	25.24	9,350	62.48	75.51	1,730
+ 1.80	58.72	77.16	1,450	100.00	55.73	4,710	58.72	77.16	1,450
TOTAL	100.00	55.73	4,710						

COMPOSITE NO:
HOLE: T-77-6
SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS continued

(b) 3/4" x 28m (Reconstituted data)

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	-	-	-	-	-	-	-	-	-
1.30 - 1.40	21.10	6.09	11,870	21.10	6.09	11,870	100.00	50.04	5,510
1.40 - 1.50	10.60	19.75	10,050	31.70	10.66	11,260	78.90	61.80	3,810
1.50 - 1.60	7.01	30.10	8,620	38.71	14.18	10,780	68.30	68.33	2,850
1.60 - 1.70	5.21	41.38	7,100	43.92	17.41	10,350	61.29	72.70	2,190
1.70 - 1.80	3.46	48.04	6,270	47.38	19.64	10,050	56.08	75.61	1,730
+ 1.80	52.62	77.42	1,430	100.00	50.04	5,510	52.62	77.42	1,430
TOTAL	100.00	50.04	5,510						

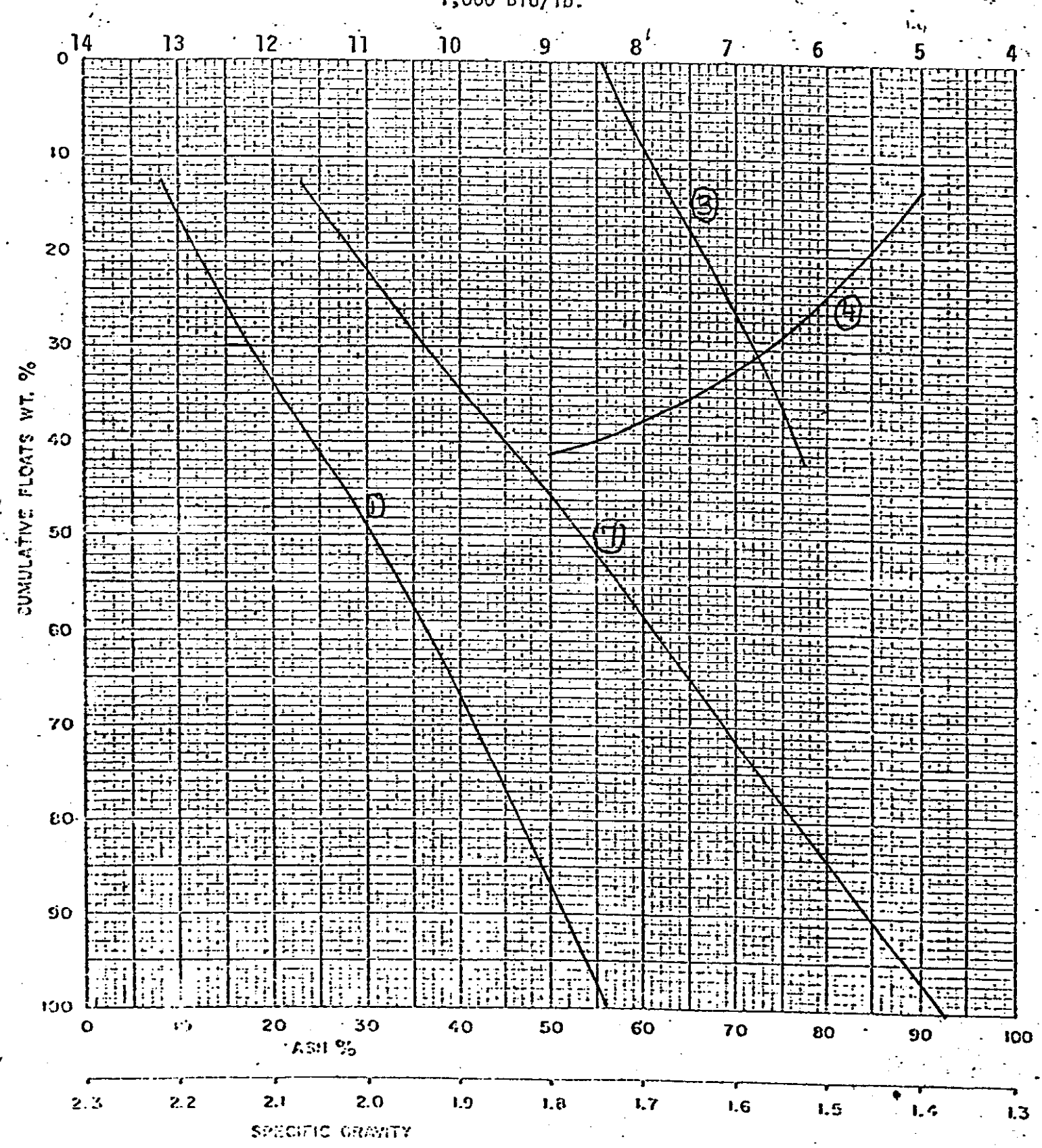
COMPANY Cyprus Anvil Mining Corporation

SAMPLE T-77-6 Main

Size 3/4" x 1/4"

2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU

WASHABILITY CURVES



DATE Oct.15/77

CYCLONE ENGINEERING LABS LTD.

COMPOSITE NO.
HOLE: T-77-6
SEAM: Main

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS continued

(c) 3/4" x 100 mesh (Reconstituted data)

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	-	-	-	-	-	-	-	-	-
1.30 - 1.40	22.19	5.90	11,910	22.19	5.90	11,910	100.00	49.33	5,630
1.40 - 1.50	10.46	19.68	10,070	32.65	10.31	11,320	77.81	61.72	4,830
1.50 - 1.60	6.97	29.81	8,660	39.62	13.74	10,850	67.35	68.25	2,870
1.60 - 1.70	5.12	41.19	7,130	44.74	16.89	10,430	60.38	72.68	2,200
1.70 - 1.80	3.42	47.89	6,290	48.16	19.09	10,130	55.26	75.60	1,740
+ 1.80	51.84	77.43	1,440	100.00	49.33	5,630	51.84	77.43	1,440
TOTAL	100.00	49.33	5,630						

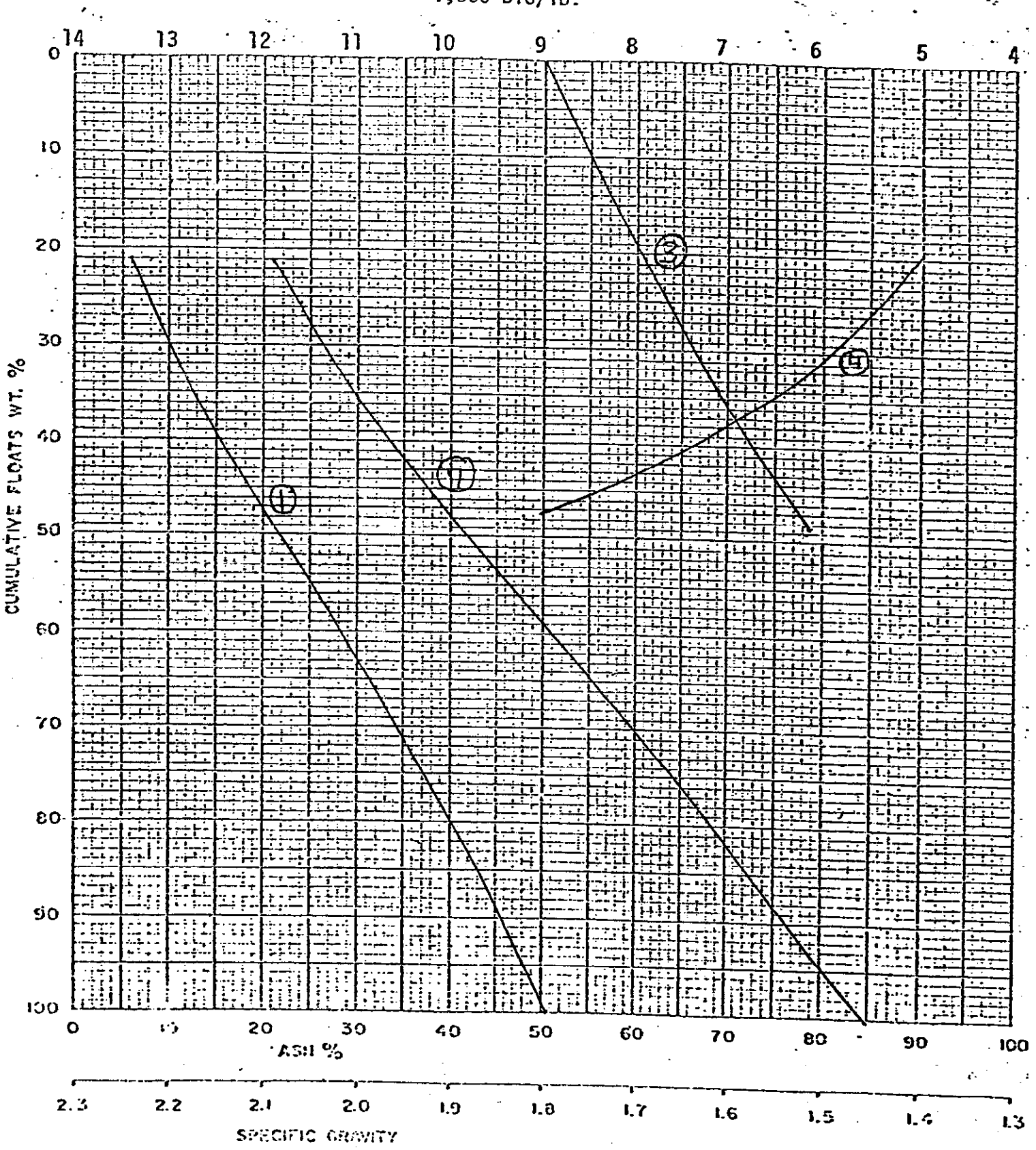
COMPANY Cyprus Anvil Mining Corporation

SAMPLE T-77-6 Main

Size 3/4"x 28 mesh

WASHABILITY CURVES

2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU



DATE Oct. 15/77

CYCLONE EXPERIMENTAL SAMPLE

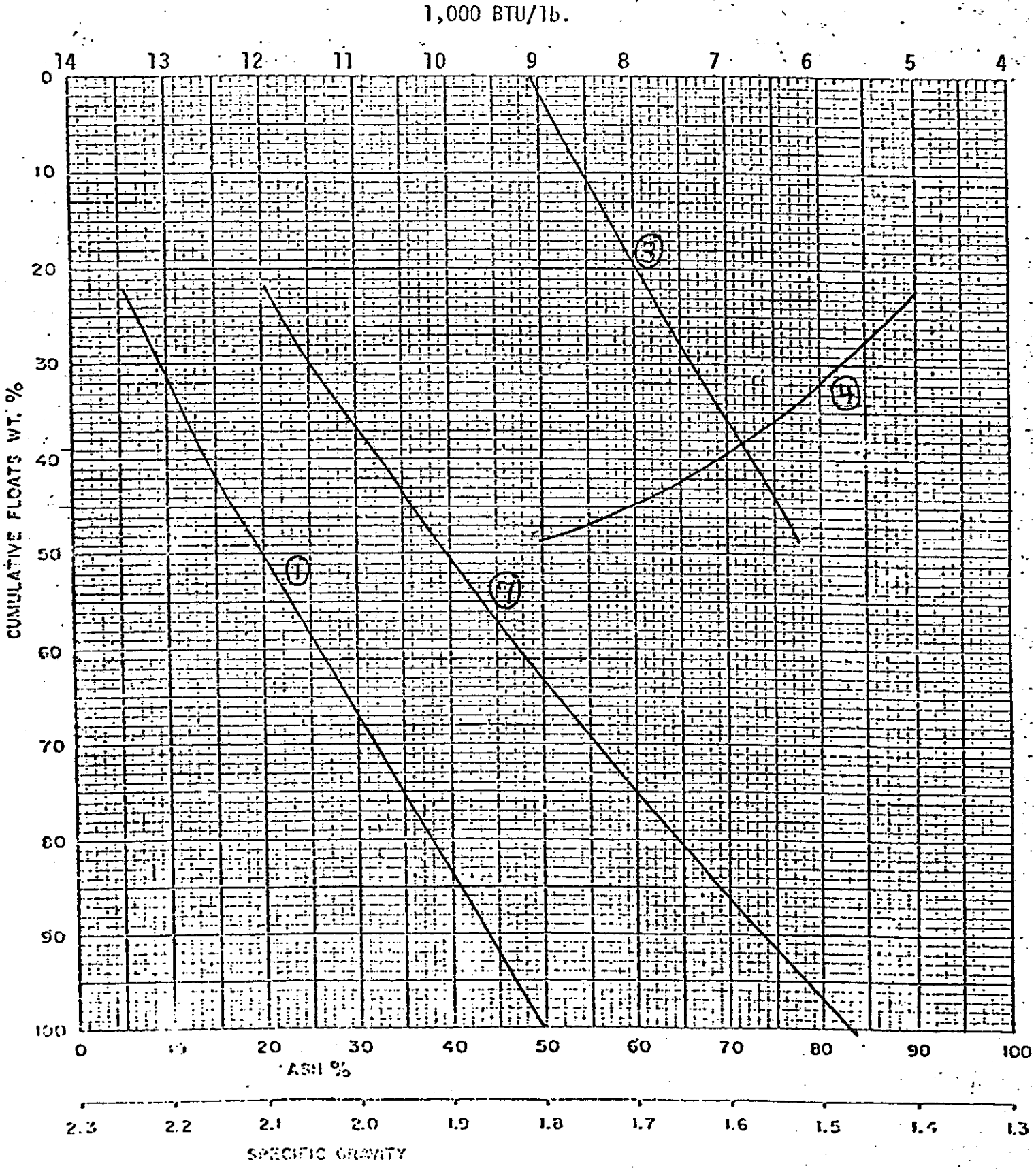
COMPANY Cyprus Anvil Mining Corporation

SAMPLE T-77-6 Main

Size 3/4" x 100 Mesh

2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU

WASHABILITY CURVES



DATE Oct 15/77

CYCLONE ENGINEERING SALES LTD

CYPRUS ANVIL MINING CORPORATION

Analytical Report
for
Core Testing

PROJECT: Tulameen

DRILL HOLE #: T-77-3

AREA:

SEAM: Lower Seam

DATE SAMPLED:

LAB COMPOSITE #: T-77-3L

DATE ANALYSED: August 31, 1977

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:

HOLE NO.: T-77-3

SEAM: Lower Seam

TABLE 1 COMPONENTS AND ANALYSIS (a.d.b.)

	Ash%	R.M.%	V.M.%	F.C.%	B.T.U./lb.
Number: 1	42.89	5.94	19.68	31.49	6,690 *
Footage: 102.26m - 104.70m					
Weight: 23.5 lbs.					
Number: 2	49.05	4.26	18.85	27.84	6,160 *
Footage: 104.70 - 107.14m					
Weight: 32 lbs.					
Number: 3	47.39	4.78	21.21	26.62	6,430 *
Footage: 107.14 - 109.56					
Weight: 16 lbs.					
Number:					
Footage:					
Weight:					
Number:					
Footage:					
Weight:					

* Revised values.

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:

HOLE NO.: T-77-3

SEAM: Lower

TABLE 2 ANALYSIS OF COMPOSITE HEAD SAMPLE (a.d.b.)

Ash %	46.72
R.M.%	4.84
V.M.%	19.98
F.C.%	28.46
S. %	0.66
B.T.U./lb	6,360 *
H.G.I.	49
Equilibrium Moisture	

* Revised value.

CYCLONE ENGINEERING SALES LTD.

CYPRUS ANVIL MINING CORPORATION

Analytical Report
for
Core Testing

PROJECT: Tulameen

DRILL HOLE #: T-77-4

AREA:

SEAM: Lower

DATE SAMPLED:

LAB COMPOSITE #: T-77-4L

DATE ANALYSED: October 15, 1977

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.: T-77-4L
HOLE NO.: T-77-4
SEAM: Lower

TABLE 1 COMPONENTS AND ANALYSIS (a.d.b.)

		Ash%	R.M.%	V.M.%	F.C.%	B.T.U./lb.
Number:	1	48.88	5.30	17.28	28.54	5,720
Footage:						
Weight:	10.05 kg.					
Number:	2	57.50	5.38	14.84	22.28	4,550
Footage:						
Weight:	12.40 kg.					
Number:	3	44.44	5.71	21.15	28.70	6,540
Footage:						
Weight:	10.03 kg.					
Number:						
Footage:						
Weight:						
Number:						
Footage:						
Weight:						

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.: T-77-4L
HOLE NO.: T-77-4
SEAM: Lower

TABLE 2 ANALYSIS OF COMPOSITE HEAD SAMPLE (a.d.b.)

Ash %	50.97
R.M.%	5.43
V.M.%	17.93
F.C.%	25.67
S. %	0.59
B.T.U./lb	5,620
H.G.I.	50
Equilibrium Moisture	7.90

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.: T-77-4L
HOLE NO.: T-77-4
SEAM: Lower

TABLE 3 SIZE CONSIST OF COMPOSITE HEAD SAMPLE

Size	Wt% Fractional	Cumulative
3/4" x ¼"	58.26	58.26
¼" x 28m	34.22	92.48
28m x 100m	3.76	96.24
100m x 0	3.76	100.00
TOTAL	100.00	

COMPOSITE NO.: T-77-4L
HOLE NO.: T-77-4
SEAM: Lower

TABLE 4 ANALYSIS OF SIZE FRACTIONS

(a)

	3/4" x 1/4"	1/4" x 0	Total
Ash%	57.42	44.20	51.90
R.M.%	4.94	5.61	5.22
V.M.%	17.06	21.39	18.86
F.C.%	20.58	28.80	24.02
S. %	0.54	0.67	0.59
B.T.U./lb.	4,760	6,540	5,500

(b)

	1/4" x 28m	28m x 100m	100m x 0	Reconstituted 1/4" x 0
Ash%	44.69	27.20	54.99	44.00
R.M.%	5.67	5.07	1.85	5.27
V.M.%	20.47	26.62	19.80	20.96
F.C.%	29.17	41.11	23.36	29.77
S.%	0.72	0.78	0.56	0.71
B.T.U./lb.	6,530	9,110	5,200	6,640

COMPOSITE NO.: T-77-4L
HOLE NO.: T-77-4
SEAM: Lower

TABLE 5. FLOAT-SINK AND ANALYSIS OF SIZE FRACTIONS
(Fractional Basis)

(a) 3/4" x 1/4"

Sp.Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb.
- 1.30	-	-	-	-	-	-	-
1.30 - 1.40	15.25	9.75	5.35	32.95	51.95	-	11,690
1.40 - 1.50	9.39	22.34	4.83	28.31	44.52	-	9,830
1.50 - 1.60	7.02	32.93	4.15	25.95	36.97	-	8,460
1.60 - 1.70	6.43	44.04	3.74	22.01	30.21	-	6,760
1.70 - 1.80	4.82	53.88	3.28	19.19	23.65	-	5,510
+ 1.80	57.09	80.12	3.67	9.68	6.53	-	1,500
TOTAL	100.00	57.07	4.05	17.37	21.51	-	4,860

(b) 1/4" x 28m

Sp. Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb
- 1.30	-	-	-	-	-	-	-
1.30 - 1.40	32.68	6.08	6.05	32.48	55.39	-	12,050
1.40 - 1.50	7.75	19.58	5.25	28.65	46.52	-	10,090
1.50 - 1.60	4.53	29.99	4.50	26.38	39.13	-	8,860
1.60 - 1.70	4.31	38.73	4.78	23.09	33.40	-	7,290
1.70 - 1.80	2.63	46.44	4.61	22.16	26.79	-	6,280
+ 1.80	48.10	76.47	5.43	10.86	7.24	-	1,800
TOTAL	100.00	44.54	5.53	20.83	29.10	-	6,470

COMPOSITE NO.: T-77-4L
HOLE: T-77-4
SEAM: Lower

TABLE 5. (cont'd)

(c) 28m x 100 mesh

Sp. Gr.	Wt.%	Ash%	R.M.%	V.M.%	F.C.%	S.%	B.T.U./lb
- 1.30	-	-	-	-	-	-	-
1.30 - 1.40	49.61	4.33	4.59	33.01	58.07	-	12,320
1.40 - 1.50	9.03	12.60	4.52	31.64	51.24	-	11,150
1.50 - 1.60	6.51	16.58	4.62	30.96	47.84	-	10,600
1.60 - 1.70	4.56	32.09	4.58	26.11	37.22	-	8,360
1.70 - 1.80	1.84	43.62	4.97	23.55	27.86	-	6,690
+ 1.80	28.45	76.36	1.89	14.31	7.44	-	2,350
TOTAL	100.00	28.36	3.82	26.94	40.88	-	8,980

COMPOSITE NO.: T-77-4L

HOLE:: T-77-4

SEAM: Lower

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS

(a) 3/4" x 1/4"

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	-	-	-	-	-	-	-	-	-
1.30 - 1.40	15.25	9.75	11,690	15.25	9.75	11,690	100.00	57.07	4,8
1.40 - 1.50	9.39	22.34	9,830	24.64	14.55	10,980	84.75	65.58	3,6
1.50 - 1.60	7.02	32.93	8,460	31.66	18.62	10,420	75.36	70.97	2,8
1.60 - 1.70	6.43	44.04	6,760	38.09	22.91	9,800	68.34	74.87	2,2
1.70 - 1.80	4.82	53.88	5,510	42.91	26.39	9,320	61.91	78.08	1,8
+ 1.80	57.09	80.12	1,500	100.00	57.07	4,860	57.09	80.12	1,5
TOTAL	100.00	57.07	4,860						

COMPOSITE NO: T-77-4L
HOLE: T-77-4
SEAM: Lower

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS continued

(b) 3/4" x 28m (Reconstituted data)

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	-	-	-	-	-	-	-	-	-
1.30 - 1.40	21.70	7.71	11,890	21.70	7.71	11,890	100.00	52.43	5,450
1.40 - 1.50	8.79	21.44	9,910	30.49	11.67	11,320	78.30	64.82	3,670
1.50 - 1.60	6.10	32.12	8,570	36.59	15.08	10,860	69.51	70.31	2,880
1.60 - 1.70	5.64	42.54	6,910	42.23	18.75	10,330	63.41	73.98	2,330
1.70 - 1.80	4.01	52.08	5,700	46.24	21.64	9,930	57.77	77.05	1,880
+ 1.80	53.76	78.91	1,600	100.00	52.43	5,450	53.76	78.91	1,600
TOTAL	100.00	52.43	5,450						

COMPOSITE NO. T-77-4L
HOLE: T-77-4
SEAM: Lower

TABLE 6 WASHABILITY AND B.T.U. DATA FOR SIZE FRACTIONS continued

(c) 3/4" x 100 mesh (Reconstituted data)

	Fractional			Cumulative					
				Floats			Sinks		
	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.	Wt.%	Ash%	BTU/lb.
- 1.30	-	-	-	-	-	-	-	-	-
1.30 - 1.40	22.79	7.42	11,930	22.79	7.42	11,930	100.00	51.49	5,590
1.40 - 1.50	8.80	21.09	9,960	31.59	11.23	11,380	77.21	64.49	3,720
1.50 - 1.60	6.12	31.46	8,660	37.71	14.51	10,940	68.41	70.08	2,920
1.60 - 1.70	5.60	42.20	6,960	43.31	18.09	10,430	62.29	73.87	2,36
1.70 - 1.80	3.92	51.93	5,720	47.23	20.90	10,030	56.69	77.00	1,900
+ 1.80	52.77	78.86	1,620	100.00	51.49	5,590	52.77	78.86	1,620
TOTAL	100.00	51.49	5,590						

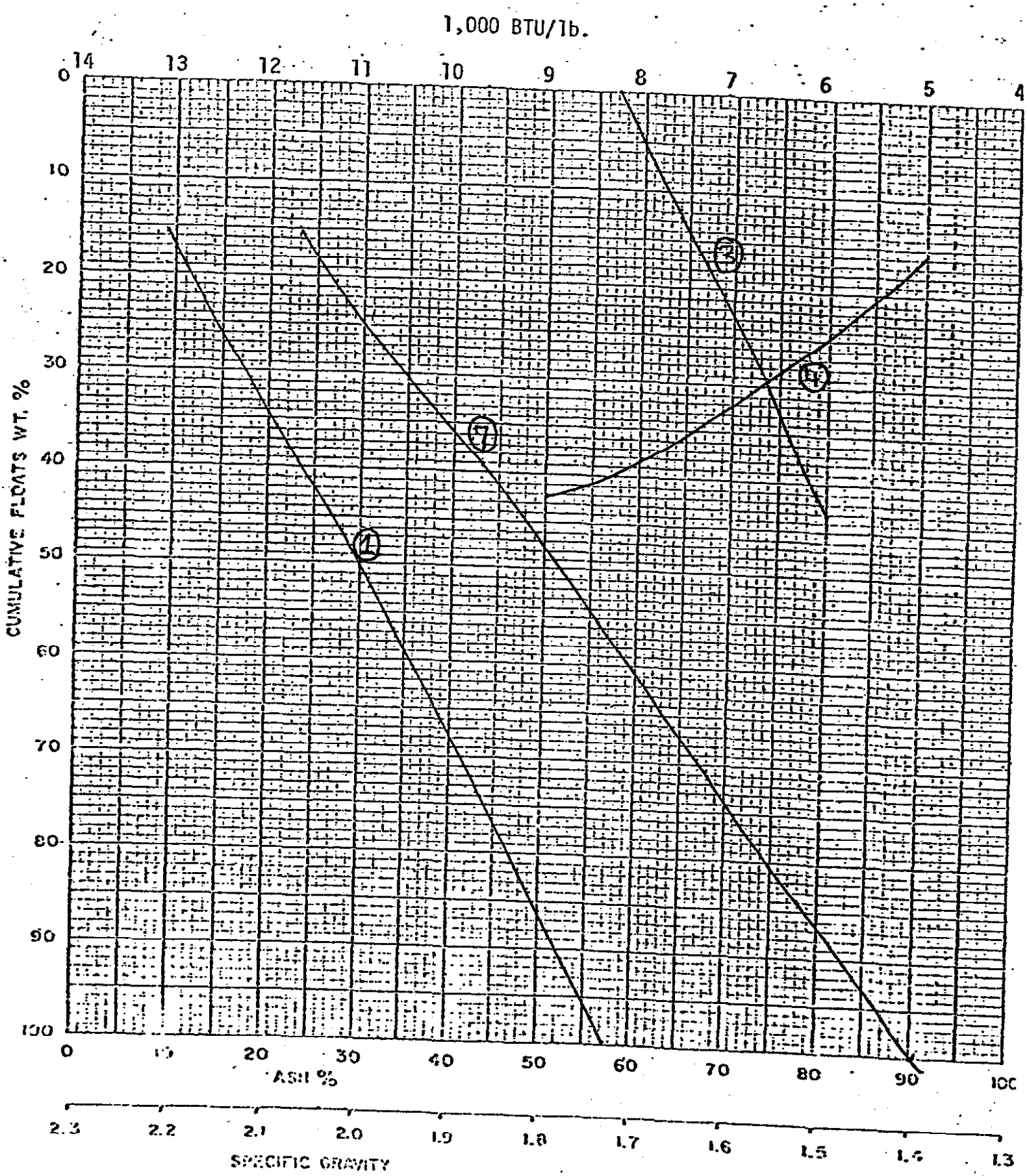
COMPANY Cyprus Anvil Mining Corporation

SAMPLE T-77-4 Lower

Size 3/4" x 1/4"

2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU

WASHABILITY CURVES



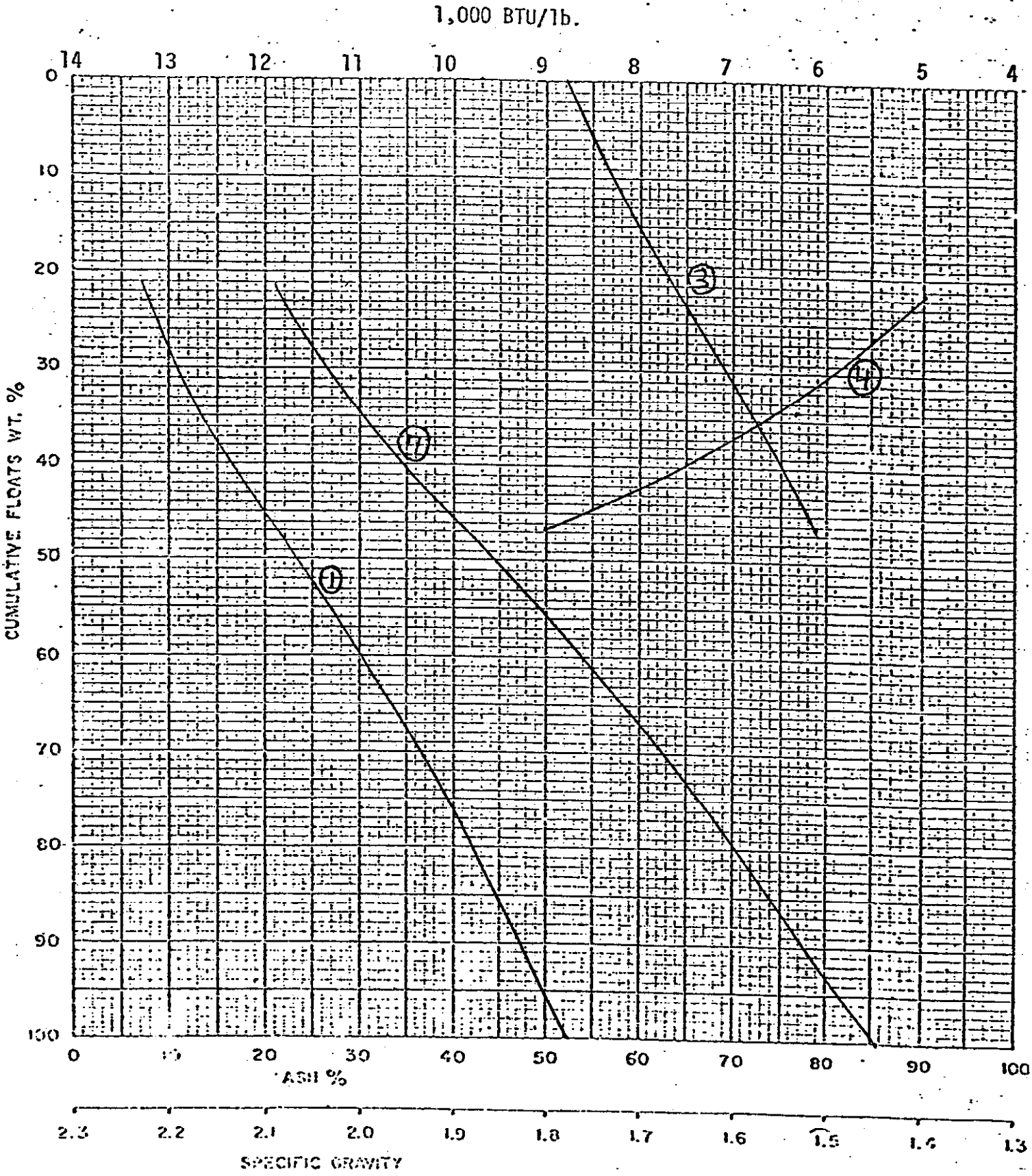
COMPANY Cyprus Anvil Mining Corporation

SAMPLE T-77-4 Lower

Size 3/4" x 28 Mesh

2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU

WASHABILITY CURVES



DATE Oct.15/77

CYCLONE ENGINEERING SALES LTD.

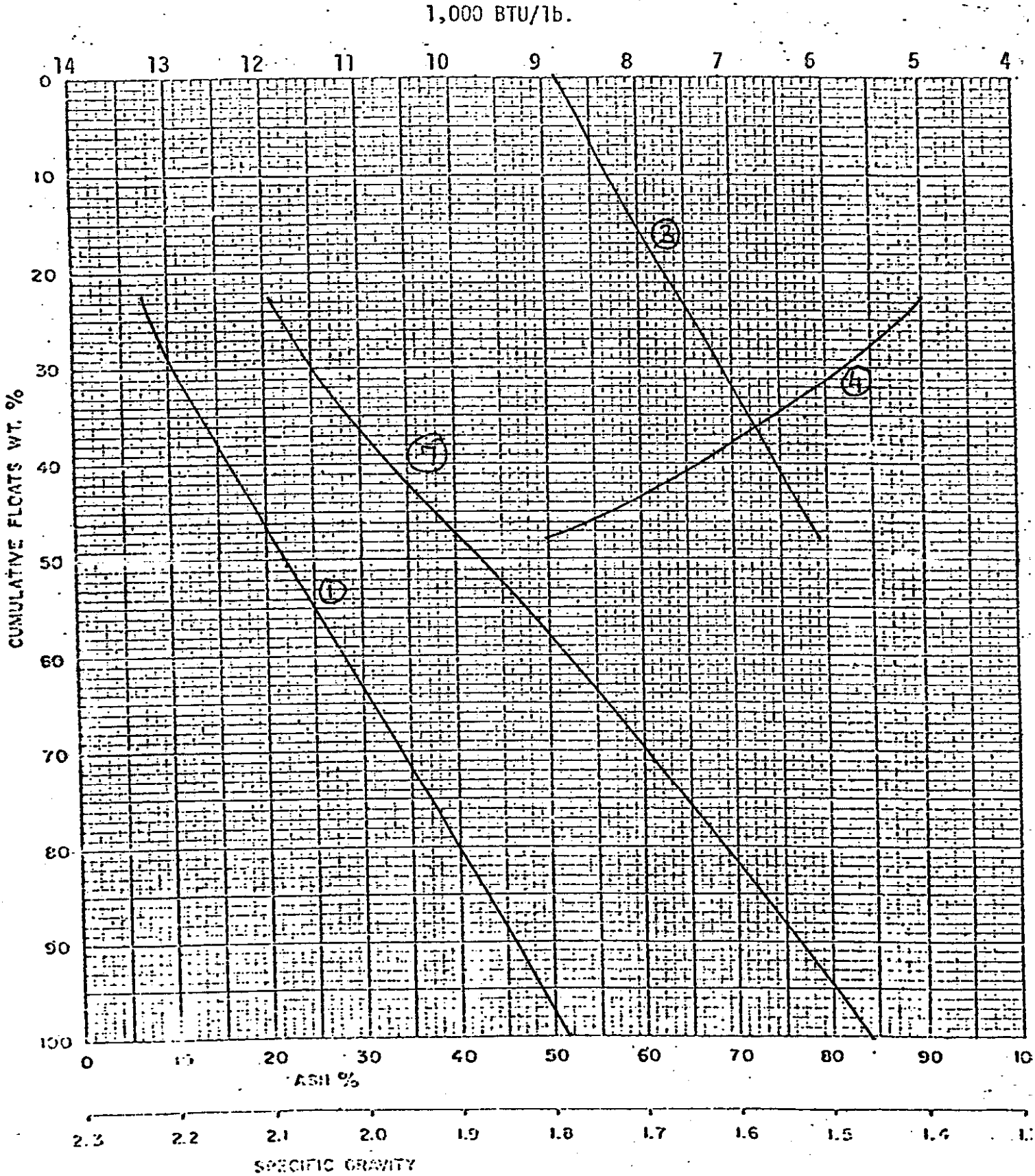
COMPANY Cyprus Anvil Mining Corporation

SAMPLE T-77-4 Lower

Size 3/4" x 100 Mesh

2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL
7 - BTU

WASHABILITY CURVES



Oct.15/77

CYCLONE ENGINEERING SALES LTD

CYPRUS ANVIL MINING CORPORATION. S1-232

RESULTS OF FROTH-FLOTATION TEST
ON LOWER SEAM SAMPLE (4L)
FROM TULAMEEN DRILL CORE

1. 28m x 0 Size Fraction

	Fractional		Cumulative	
Time (Sec.)	Wt. %	Ash %	Wt. %	Ash %
- 30	29.24	24.04	29.24	24.04
30 - 60	6.82	42.26	36.06	27.49
60 - 90	4.57	43.53	40.63	29.29
Tails	59.37	48.27	100.00	40.56
TOTAL	100.00	40.56		

2. 100m x 0 Size Fractions

	Fractional		Cumulative	
Time (Sec.)	Wt. %	Ash %	Wt. %	Ash %
- 30	32.82	34.99	32.82	34.99
30 - 60	11.75	57.18	44.57	40.84
60 - 90	8.95	62.69	53.52	44.49
Tails	46.48	63.45	100.00	53.30
TOTAL	100.00	53.30		

CYCLONE ENGINEERING SALES LTD.
EDMONTON, ALBERTA, CANADA.

RESULTS OF FROTH-FLOTATION TEST ON LOWER SEAM SAMPLE (4L) FROM TULAMEEN DRILL CORE

1. 28m x 0 Size Fraction

	Fractional		Cumulative	
Time (Sec.)	Wt. %	Ash %	Wt. %	Ash %
- 30	29.24	24.04	29.24	24.04
30 - 60	6.82	42.26	36.06	27.49
60 - 90	4.57	43.53	40.63	29.29
Tails	59.37	48.27	100.00	40.56
TOTAL	100.00	40.56		

2. 100m x 0 Size Fractions

	Fractional		Cumulative	
Time (Sec.)	Wt. %	Ash %	Wt. %	Ash %
- 30	32.82	34.99	32.82	34.99
30 - 60	11.75	57.18	44.57	40.84
60 - 90	8.95	62.69	53.52	44.49
Tails	46.48	63.45	100.00	53.30
TOTAL	100.00	53.30		

CYCLONE ENGINEERING SALES LTD.
EDMONTON, ALBERTA, CANADA.

CYPRUS ANVIL MINING CORPORATION

Analytical Report
for
Core Testing

PROJECT: Tulameen

DRILL HOLE #: T-77-5

AREA:

SEAM: Lower

DATE SAMPLED:

LAB COMPOSITE #: T-77-5L

DATE ANALYSED:

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:
HOLE NO.: T-77-5L
SEAM: Lower

TABLE 1 COMPONENTS AND ANALYSIS (a.d.b.)

		Ash%	R.M.%	V.M.%	F.C.%	B.T.U./lb.
Number: 1 Footage: Weight: 10.75 Kg.		52.15	6.76	18.30	24.44	5,330
Number: 2 Footage: Weight: 10.45 Kg.		53.07	6.24	17.55	23.14	5,200
Number: 3 Footage: Weight: 10.92 Kg.		47.92	5.73	21.47	24.88	6,100
Number: Footage: Weight:						
Number: Footage: Weight:						

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:

HOLE NO.: T-77-5L

SEAM: Lower

TABLE 2

ANALYSIS OF COMPOSITE HEAD SAMPLE (a.d.b.)

Ash %	51.13	50.57
R.M.%	6.23	
V.M.%	19.02	
F.C.%	23.62	
S. %	0.62	.61
B.T.U./lb	5,600	5538
H.G.I.	58	
Equilibrium Moisture		7.3

CYCLONE ENGINEERING SALES LTD.

CYPRUS ANVIL MINING CORPORATION

Analytical Report
for
Core Testing

PROJECT: Tulameen

DRILL HOLE #: T-77-6

AREA:

SEAM: Lower

DATE SAMPLED:

LAB COMPOSITE #: T-77-GL

DATE ANALYSED:

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:
HOLE NO.: T-77-6L
SEAM: Lower

TABLE 1 COMPONENTS AND ANALYSIS (a.d.b.)

	Ash%	R.M.%	V.M.%	F.C.%	B.T.U./lb.
Number: 1	55.81	6.26	17.31	20.62	4,770
Footage:					
Weight: 15.625					
Number: 2	47.06	4.99	21.68	26.27	6,210
Footage:					
Weight: 15.355					
Number:					
Footage:					
Weight:					
Number:					
Footage:					
Weight:					
Number:					
Footage:					
Weight:					

CYCLONE ENGINEERING SALES LTD.

COMPOSITE NO.:
HOLE NO.: T-77-6L
SEAM: Lower

TABLE 2

ANALYSIS OF COMPOSITE HEAD SAMPLE (a.d.b.)

Ash %	52.08	51.03
R.M.%	4.92	
V.M.%	19.46	
F.C.%	23.54	
S. %	0.78	.76
B.T.U./lb	5,570	5459
H.G.I.	50	
Equilibrium Moisture	6.1	

CYCLONE ENGINEERING SALES LTD.

CYCLONE ENGINEERING SALES LTD.

SEPARATION OF BULK MATERIALS

Manufacturing, Engineering, Testing Services

9751 - 51 Avenue
Edmonton, Alberta T6E 4Z5
Telephone: (403) 436-1385
Cable Address:
Cyclone, Edmonton
Telex: 037-3793

Ref: S1-232

October 31, 1977

Cyprus Anvil Mining Corp.
330, 355 Burrard Street
Vancouver, B. C.

Attention: Mr. T. J. Adamson

Dear Sir:

This is to confirm the values of Specific Gravity determinations performed on the following head samples.

Sample	Sp. Gr.
T-77-1 Main Seam	1.63
T-77-2 Main Seam	1.61
T-77-6 Main Seam	1.77

I trust this is satisfactory.

Yours truly,

CYCLONE ENGINEERING SALES LTD.

Per: B. Y. H. Wong

BYHW/ejr

CYCLONE ENGINEERING SALES LTD.

SEPARATION OF BULK MATERIALS

Manufacturing, Engineering, Testing Services

9751 - 51 Avenue
Edmonton, Alberta T6E 4Z5
Telephone: (403) 436-1385
Cable Address:
Cyclone, Edmonton
Telex: 037-3793

Ref: S1-232

October 13, 1977

Cyprus Anvil Mining Corporation
330, 355 Burrard Street
Vancouver, B. C.

Attention: Mr. T. J. Adamson

Dear Sir:

This is to confirm all the Equilibrium Moisture Determinations on the Tulameen Drill Core Samples.

Main Seam Samples		Lower Seam Samples	
No. 1	7.3		
No. 2	7.4		
No. 3	8.0	No. 3L	7.2
No. 4	7.8	No. 4L	7.9
No. 5	8.3	No. 5L	7.3
No. 6	7.4	No. 6L	6.1

Yours truly,

CYCLONE ENGINEERING SALES LTD.

Per: B. Y. H. Wong

B. Y. H. Wong

BYHW/ejr

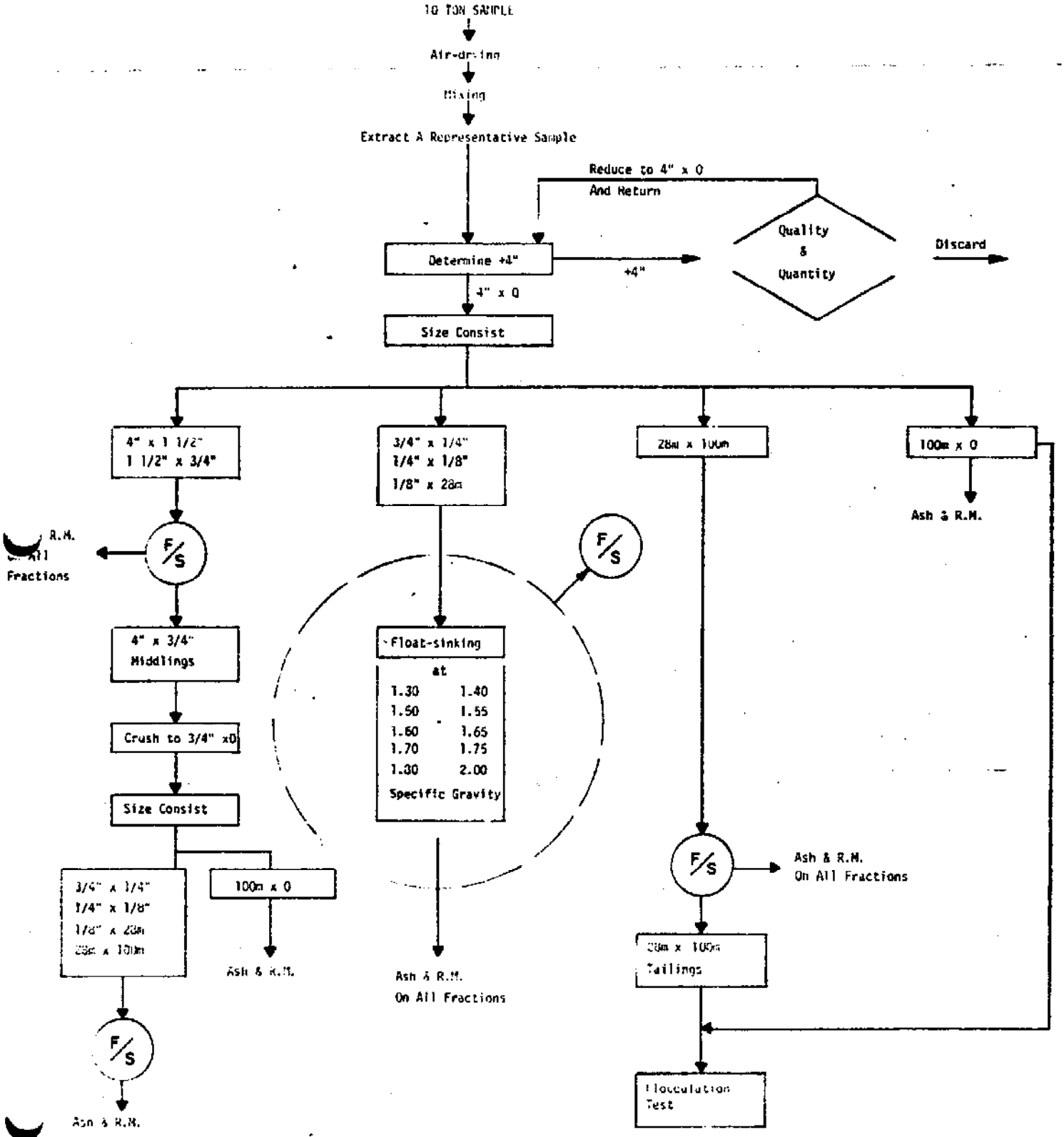
APPENDIX 13

Bulk Sample Analyses Data

CYPRUS ANVIL MINING CORPORATION

BULK SAMPLE ANALYSIS - TULAMEEN PROJECT

SAMPLE NO. 38



Composite Clean Coal Analyses

- Proximate
- S
- B.T.U.
- H.G.I.
- Ash Fusion Temp.
- Mineral Analyses of Ash
- Ultimate Analyses

BULK SAMPLE NO. 1

CYPRUS ANVIL MINING CORPORATION S1-232

TULAMEEN PROJECT

Date: July 26, 1977

TABLE 1: ANALYSES OF HEAD SAMPLES

	Air-Dry Basis	Dry Basis
PROXIMATE ANALYSIS:		
Ash %	33.83	36.04
R.M. %	5.99	--
V.M. %	27.15	28.88
F.C. %	32.98	35.08
CALORIFIC VALUE (BTU/lb.):	7,730	8,220
SULPHUR %	0.54	0.57

HARDGROVE GRINDABILITY INDEX: 50

SIZING TO 1 1/2" MAXIMUM:

OVERSIZE: 47.6%

CYCLONE ENGINEERING SALES LTD.
EDMONTON, ALBERTA, CANADA.

TABLE 2a: SIZE CONSIST BY DRY SCREENING

Size	Weight %
1 1/2" x 3/4"	34.70
3/4" x 1/4"	31.62
1/4" x 28m	23.26
28m x 100m	6.62
100m x 0	3.80
Total	100.00

TABLE 2b: SIZE CONSIST BY WET SCREENING

Size	Wt. %	Wt. % of Total
28m x 60 m	39.79	4.15
60m x 100m	13.36	1.39
100m x 200m	15.73	1.64
200m x 325m	8.03	0.84
325m x 0	23.09	2.40
Total	100.00	10.42

TABLE 3: ANALYSES OF SIZE FRACTIONS

Size	Ash %	R.M. %	V.M. %	F.C. %	BTU/lb.	S. %
1 1/2" x 3/4"	39.56	5.54	25.95	28.95	7,080	0.50
3/4" x 1/4"	34.48	6.24	27.96	31.32	7,750	0.54
1/4" x 28m	28.65	6.46	26.82	38.07	8,350	0.51
28m x 100m	30.32	6.18	27.02	36.48	8,180	0.54
100m x 0	44.69	4.73	22.61	27.97	6,080	0.47
Total	35.00	5.99	26.73	32.28	7,620	0.52

CYPRUS ANVIL MINING CORPORATION SI-232

TULAMEEN PROJECT

TABLE 4a: FLOAT-SINK AND FRACTIONAL ANALYSES OF SIZE FRACTION 1 1/2" x 3/4"

Sp. Gr.	Wt. %	Ash %	R.M. %	V.M. %	F.C. %	BTU/lb.
- 1.30						
1.30 - 1.35	7.38	5.04	8.21	35.71	51.04	11,640
1.35 - 1.40	14.29	10.51	7.85	33.25	48.39	11,150
1.40 - 1.45	10.09	17.86	7.49	31.21	43.44	9,990
1.45 - 1.50	7.94	22.84	7.15	29.52	40.49	9,250
1.50 - 1.55	6.57	28.37	6.66	28.30	36.67	8,610
1.55 - 1.60	4.10	33.67	6.51	25.34	34.48	7,860
1.60 - 1.65	4.46	38.41	5.63	22.98	32.98	7,340
1.65 - 1.70	4.05	45.68	5.50	21.37	27.45	6,240
1.70 - 1.80	7.98	55.27	5.37	19.45	19.91	5,360
1.80 - 2.00	15.21	64.84	4.51	14.63	16.02	3,690
+ 2.00	17.93	77.09	1.48	21.40	0.03	1,620
Total	100.00	40.39	5.61	25.28	28.72	6,940

CYCLONE ENGINEERING SALES LTD.
EDMONTON, ALBERTA, CANADA

TABLE 4b: FLOAT-SINK AND FRACTIONAL ANALYSES OF SIZE FRACTION 3/4" x 1/4"

Sp. Gr.	Wt. %	Ash %	R.M. %	V.M. %	F.C. %	BTU/lb.
- 1.30	1.11	3.01	7.60	37.29	52.10	12,270
1.30 - 1.35	24.21	4.13	7.97	36.48	51.42	11,860
1.35 - 1.40	14.38	10.42	7.76	33.35	48.47	10,920
1.40 - 1.45	7.14	17.07	6.73	33.24	42.96	10,210
1.45 - 1.50	5.78	22.03	6.42	30.31	41.24	9,580
1.50 - 1.55	4.68	28.66	6.22	28.69	36.43	8,570
1.55 - 1.60	3.14	34.93	5.82	26.44	32.81	7,830
1.60 - 1.65	2.93	38.81	5.57	25.53	30.09	7,070
1.65 - 1.70	2.22	44.17	4.99	22.95	27.89	6,550
1.70 - 1.80	5.30	53.36	5.03	19.81	21.80	4,930
1.80 - 2.00	13.93	67.38	5.90	14.09	12.63	3,350
+ 2.00	15.18	79.33	2.24	17.08	1.35	1,630
Total	100.00	33.84	6.16	27.20	32.80	7,840

TABLE 4c: FLOAT-SINK AND FRACTIONAL ANALYSES OF SIZE FRACTION 1/4" x 28 MESH

Sp. Gr.	Wt. %	Ash %	R.M. %	V.M. %	F.C. %	BTU/lb.
- 1.30	26.63	2.25	6.46	35.16	56.13	12,160
1.30 - 1.35	17.32	4.34	6.29	34.52	54.85	11,900
1.35 - 1.40	5.98	10.59	6.02	34.16	49.23	10,990
1.40 - 1.45	5.78	16.10	5.79	32.94	45.17	10,330
1.45 - 1.50	3.93	23.15	5.47	30.83	40.55	9,280
1.50 - 1.55	1.05	25.43	5.49	29.40	39.68	9,010
1.55 - 1.60	2.22	30.34	5.26	27.75	36.65	8,250
1.60 - 1.65	2.01	33.50	5.24	27.61	33.65	7,900
1.65 - 1.70	1.40	38.07	5.41	24.64	31.88	7,210
1.70 - 1.80	5.27	46.27	5.20	22.85	25.68	5,950
1.80 - 2.00	7.50	61.43	4.45	16.26	17.86	3,990
+ 2.00	20.91	77.89	4.14	13.35	4.62	1,940
Total	100.00	29.30	5.55	27.54	37.61	8,470

TABLE 4d: FLOAT-SINK AND FRACTIONAL ANALYSES OF SIZE FRACTION 28 MESH x 100 MESH

Sp. Gr.	Wt. %	Ash %	R.M. %	V.M. %	F.C. %	BTU/lb
- 1.30	22.79	1.37	6.32	35.69	56.62	12,280
1.30 - 1.35	17.64	3.47	6.38	34.62	55.53	11,810
1.35 - 1.40	4.62	8.36	6.24	34.11	51.29	11,210
1.40 - 1.45	6.85	13.19	5.85	33.91	47.05	10,630
1.45 - 1.50	3.38	17.82	5.55	32.37	44.26	9,920
1.50 - 1.55	2.16	20.74	5.43	31.04	42.79	9,520
1.55 - 1.60	2.07	25.90	5.36	30.17	38.57	8,740
1.60 - 1.65	1.74	29.85	4.93	28.36	36.86	8,230
1.65 - 1.70	1.61	33.74	4.54	27.80	33.92	7,670
1.70 - 1.80	4.17	41.99	4.89	24.98	28.14	6,490
1.80 - 2.00	4.17	51.70	4.33	20.51	23.46	4,690
+ 2.00	28.80	78.03	3.35	13.61	5.01	2,490
Total	100.00	31.24	5.18	27.29	36.29	8,300

TABLE 5a: FLOAT-SINK AND CUMULATIVE ANALYSES OF SIZE FRACTION 1 1/2" x 3/4"

Sp. Gr.	Wt. %	Ash %	R.M. %	V.M. %	F.C. %	BTU/lb.
- 1.30						
- 1.35	7.38	5.04	8.21	35.71	51.04	11,640
- 1.40	21.67	8.65	7.97	34.09	49.29	11,320
- 1.45	31.76	11.57	7.82	33.17	47.44	10,900
- 1.50	39.70	13.83	7.69	32.44	46.04	10,570
- 1.55	46.27	15.89	7.54	31.85	44.72	10,290
- 1.60	50.37	17.34	7.46	31.32	43.88	10,090
- 1.65	54.83	19.05	7.31	30.65	42.99	9,870
- 1.70	58.88	20.88	7.18	30.01	41.93	9,620
- 1.80	66.86	24.99	6.97	28.75	39.29	9,110
- 2.00	82.07	32.37	6.51	26.13	34.99	8,110

TABLE 5b: FLOAT-SINK AND CUMULULATIVE ANALYSES OF SIZE FRACTION 3/4" x 1/4"

Sp. Gr.	Wt. %	Ash %	R.M. %	V.M. %	F.C. %	BTU/lb.
- 1.30	1.11	3.01	7.60	37.29	52.10	12,270
- 1.35	25.32	4.08	7.95	36.52	51.45	11,880
- 1.40	39.70	6.38	7.88	35.37	50.37	11,530
- 1.45	46.84	8.01	7.71	35.04	49.24	11,330
- 1.50	52.62	9.55	7.57	34.52	48.36	11,140
- 1.55	57.30	11.11	7.46	34.05	47.38	10,930
- 1.60	60.44	12.35	7.37	33.65	46.63	10,770
- 1.65	63.37	13.57	7.29	33.28	45.86	10,600
- 1.70	65.59	14.61	7.21	32.93	45.25	10,460
- 1.80	70.89	17.50	7.05	31.95	43.50	10,050
- 2.00	84.82	25.69	6.86	29.01	38.44	8,950

TABLE 5c: FLOAT-SINK AND CUMULATIVE ANALYSES OF SIZE FRACTION 1/4" x 28 MESH

Sp. Gr.	Wt. %	Ash %	R.M. %	V.M. %	F.C. %	BTU/lb.
- 1.30	26.63	2.25	6.46	35.16	56.13	12,160
- 1.35	43.95	3.07	6.39	34.91	55.63	12,060
- 1.40	49.93	3.97	6.35	34.82	54.86	11,930
- 1.45	55.71	5.23	6.29	34.62	53.86	11,760
- 1.50	59.64	6.41	6.24	34.37	52.98	11,600
- 1.55	60.69	6.74	6.22	34.29	52.75	11,560
- 1.60	62.91	7.57	6.19	34.06	52.18	11,440
- 1.65	64.92	8.38	6.16	33.86	51.60	11,330
- 1.70	66.32	9.00	6.14	33.66	51.20	11,240
- 1.80	71.59	11.75	6.07	32.87	49.31	10,850
- 2.00	79.09	16.46	5.92	31.29	46.33	10,200

TABLE 5d: FLOAT-SINK AND CUMULATIVE ANALYSES OF SIZE FRACTION 28 MESH x 100 MESH

Sp. Gr.	Wt. %	Ash %	R.M. %	V.M. %	F.C. %	BTU/lb.
- 1.30	22.79	1.37	6.32	35.69	56.62	12,280
- 1.35	40.43	2.29	6.35	35.22	56.14	12,070
- 1.40	45.05	2.91	6.34	35.11	55.64	11,990
- 1.45	51.90	4.27	6.27	34.95	54.51	11,810
- 1.50	55.28	5.09	6.23	34.79	53.89	11,690
- 1.55	57.44	5.68	6.20	34.65	53.47	11,610
- 1.60	59.51	6.39	6.17	34.50	52.94	11,510
- 1.65	61.25	7.05	6.13	34.32	52.50	11,420
- 1.70	62.86	7.74	6.09	34.15	52.02	11,320
- 1.80	67.03	9.87	6.02	33.58	50.53	11,020
- 2.00	71.20	12.32	5.92	32.82	48.94	10,650

CYPRUS ANVIL MINING CORPORATION S1-232

TULAMEEN PROJECT

TABLE 6a: WASHABILITY FOR SIZE FRACTION 1 1/2" x 3/4"

	Fractional		Cumulative			
			Floats		Sinks	
Sp. Gr.	Wt. %	Ash %	Wt. %	Ash %	Wt. %	Ash %
- 1.30	--	--	--	--	--	--
1.30 - 1.35	7.38	5.04	7.38	5.04	100.00	40.39
1.35 - 1.40	14.29	10.51	21.67	8.65	92.62	43.21
1.40 - 1.45	10.09	17.86	31.76	11.57	78.33	49.17
1.45 - 1.50	7.94	22.84	39.70	13.83	68.24	53.80
1.50 - 1.55	6.57	28.37	46.27	15.89	60.30	57.88
1.55 - 1.60	4.10	33.67	50.37	17.34	53.73	61.49
1.60 - 1.65	4.46	38.41	54.83	19.05	49.63	63.79
1.65 - 1.70	4.05	45.68	58.88	20.88	45.17	66.29
1.70 - 1.80	7.98	55.27	66.86	24.99	41.12	68.32
1.80 - 2.00	15.21	64.84	82.07	32.37	33.14	71.47
+ 2.00	17.93	77.09	100.00	40.39	17.93	77.09
Total	100.00	40.39				

CYPRUS ANVIL MINING CORPORATION S1-232

TULAMEEN PROJECT

TABLE 6b: WASHABILITY FOR SIZE FRACTION 3/4" x 1/4"

	Fractional		Cumulative Floats		Cumulative Sinks	
Sp. Gr.	Wt. %	Ash %	Wt. %	Ash %	Wt. %	Ash %
- 1.30	1.11	3.01	1.11	3.01	100.00	33.84
1.30 - 1.35	24.21	4.13	25.32	4.08	98.89	34.18
1.35 - 1.40	14.38	10.42	39.70	6.38	74.68	43.92
1.40 - 1.45	7.14	17.07	46.84	8.01	60.30	51.91
1.45 - 1.50	5.78	22.03	52.62	9.55	53.16	56.59
1.50 - 1.55	4.68	28.66	57.30	11.11	47.38	60.81
1.55 - 1.60	3.14	34.93	60.44	12.35	42.70	64.33
1.60 - 1.65	2.93	38.81	63.37	13.57	39.56	66.67
1.65 - 1.70	2.22	44.17	65.59	14.61	36.63	68.90
1.70 - 1.80	5.30	53.36	70.89	17.50	34.41	70.49
1.80 - 2.00	13.93	67.38	84.82	25.69	29.11	73.61
+ 2.00	15.18	79.33	100.00	33.84	15.18	79.33
Total	100.00	33.84				

CYCLONE ENGINEERING SALES LTD.
EDMONTON, ALBERTA, CANADA.

CYPRUS ANVIL MINING CORPORATION S1-232

TULAMEEN PROJECT

TABLE 6c: WASHABILITY FOR SIZE FRACTION 1/4" x 28 MESH

	Fractional		Cumulative Floats		Cumulative Sinks	
Sp. Gr.	Wt. %	Ash %	Wt. %	Ash %	Wt. %	Ash %
- 1.30	26.63	2.25	26.63	2.25	100.00	29.30
1.30 - 1.35	17.32	4.34	43.95	3.07	73.37	39.12
1.35 - 1.40	5.98	10.59	49.93	3.97	56.05	49.87
1.40 - 1.45	5.78	16.10	55.71	5.23	50.07	54.56
1.45 - 1.50	3.93	23.15	59.64	6.41	44.29	59.58
1.50 - 1.55	1.05	25.43	60.69	6.74	40.36	63.13
1.55 - 1.60	2.22	30.34	62.91	7.57	39.31	64.14
1.60 - 1.65	2.01	33.50	64.92	8.38	37.09	66.16
1.65 - 1.70	1.40	38.07	66.32	9.00	35.08	68.03
1.70 - 1.80	5.27	46.27	71.59	11.75	33.68	69.28
1.80 - 2.00	7.50	61.43	79.09	16.46	28.41	73.54
+ 2.00	20.91	77.89	100.00	29.30	20.91	77.89
Total	100.00	29.30				

CYCLONE ENGINEERING SALES LTD.
EDMONTON, ALBERTA, CANADA.

CYPRUS ANVIL MINING CORPORATION S1-232

TULAMEEN PROJECT

TABLE 6d: WASHABILITY FOR SIZE FRACTION 28 MESH x 100 MESH

	Fractional		Cumulative			
			Floats		Sinks	
Sp. Gr.	Wt. %	Ash %	Wt. %	Ash %	Wt. %	Ash %
- 1.30	22.79	1.37	22.79	1.37	100.00	31.24
1.30 - 1.35	17.64	3.47	40.43	2.29	77.21	40.06
1.35 - 1.40	4.62	8.36	45.05	2.91	59.57	50.90
1.40 - 1.45	6.85	13.19	51.90	4.27	54.95	54.47
1.45 - 1.50	3.38	17.82	55.28	5.09	48.10	60.35
1.50 - 1.55	2.16	20.74	57.44	5.68	44.72	63.56
1.55 - 1.60	2.07	25.90	59.51	6.39	42.56	65.74
1.60 - 1.65	1.74	29.85	61.25	7.05	40.49	67.78
1.65 - 1.70	1.61	33.74	62.86	7.74	38.75	69.48
1.70 - 1.80	4.17	41.99	67.03	9.87	37.14	71.03
1.80 - 2.00	4.17	51.70	71.20	12.32	32.97	74.70
+ 2.00	28.80	78.03	100.00	31.24	28.80	78.03
Total	100.00	31.24				

CYCLONE ENGINEERING SALES LTD.
EDMONTON, ALBERTA, CANADA.

CYPRUS ANVIL MINING CORPORATION S1-232

TULAMEEN PROJECT

TABLE 6e: WASHABILITY FOR SIZE FRACTION 1 1/2" x 100 MESH
(Reconstituted)

	Fractional		Cumulative			
			Floats		Sinks	
Sp. Gr.	Wt. %	Ash %	Wt. %	Ash %	Wt. %	Ash %
- 1.30	8.37	2.12	8.37	2.12	100.00	34.93
1.30 - 1.35	16.02	4.29	24.39	3.55	91.63	37.92
1.35 - 1.40	11.64	10.43	36.03	5.77	75.61	45.05
1.40 - 1.45	7.86	17.02	43.89	7.78	63.97	51.35
1.45 - 1.50	5.95	22.42	49.84	9.53	56.11	56.16
1.50 - 1.55	4.31	28.04	54.15	11.00	50.16	60.16
1.55 - 1.60	3.19	33.17	57.34	12.24	45.85	63.18
1.60 - 1.65	3.18	37.43	60.52	13.56	42.66	65.42
1.65 - 1.70	2.64	43.78	63.16	14.82	39.48	67.68
1.70 - 1.80	6.18	52.27	69.34	18.16	36.84	69.39
1.80 - 2.00	12.17	64.95	81.51	25.15	30.66	72.84
+ 2.00	18.49	78.03	100.00	34.93	18.49	78.04
Total	100.00	34.93				

CYCLONE ENGINEERING SALES LTD.
EDMONTON, ALBERTA, CANADA.

TABLE 7: FROTH-FLOTATION AND ANALYSES OF FINE SIZE FRACTIONS

Test Conditions:

Reagent	Fuel Oil & MIBC
Reagent Composition	4:1
Reagent Consumption	1.13 lb./ton
Solids % of Pulp	10

7a: SIZE FRACTION 28 MESH x 0

Time (sec.)	Wt. %	Ash %	R.M. %	V.M. %	F.C. %	BTU/lb.
30	9.42	34.39	4.44	27.11	34.06	7,770
30 - 60	--	--	--	--	--	--
60 - 90	--	--	--	--	--	--
Tailings	90.58	36.96	4.40	26.43	32.21	7,350
Total	100.00	36.72	4.40	26.49	32.39	7,390

7b: SIZE FRACTION 100 MESH x 0

Time (sec.)	Wt. %	Ash %	R.M. %	V.M. %	F.C. %	BTU/lb.
30	8.19	39.31	4.38	25.50	30.81	7,150
30 - 60	--	--	--	--	--	--
60 - 90	--	--	--	--	--	--
Tailings	91.81	46.46	4.30	21.96	27.28	6,070
Total	100.00	45.87	4.31	22.25	27.56	6,160

CYCLONE ENGINEERING SALES LTD.
EDMONTON, ALBERTA, CANADA.

TABLE 8: ANALYSES OF RECONSTITUTED CLEAN COAL PRODUCT

COMPOSITION:

Size	Yield	Cut (a)	Process
1 1/2" x 100m	60.52	1.65	Float
100m x 0	--	--	Froth
Total	58.22		

	Air-Dry Basis	Dry Basis
PROXIMATE ANALYSIS:		
Ash %	13.65	14.47
R.M. %	5.66	--
V.M. %	31.82	33.73
F.C. %	48.87	51.80
CALORIFIC VALUE (BTU/lb.)	10,720	11,363

HARDGROVE GRINDABILITY INDEX: 57

TABLE 8: ANALYSES OF RECONSTITUTED CLEAN COAL PRODUCT continued

ULTIMATE ANALYSIS:

Ash %	13.65
Carbon %	62.27
Hydrogen %	4.93
Oxygen %	17.23
Nitrogen %	1.30
Sulphur %	0.62

MINERAL ANALYSIS OF ASH:

SiO_2 %	69.51
Al_2O_3 %	13.54
Fe_2O_3 %	6.55
CaO %	1.17
MgO %	0.44
Na_2O %	0.67
K_2O %	0.64
TiO_2 %	0.04
P_2O_5 %	0.17
SO_3 %	0.51

ASH FUSHION TEMPERATURES:

	Oxidizing Atmosphere	Reducing Atmosphere
Initial Deformation	2400° F.	2260° F.
Softening (Spherical)	2580° F.	2480° F.
Softening (Hemispherical)	2660° F.	2580° F.
Fluid	2800° F.	2760° F.

FIGURE

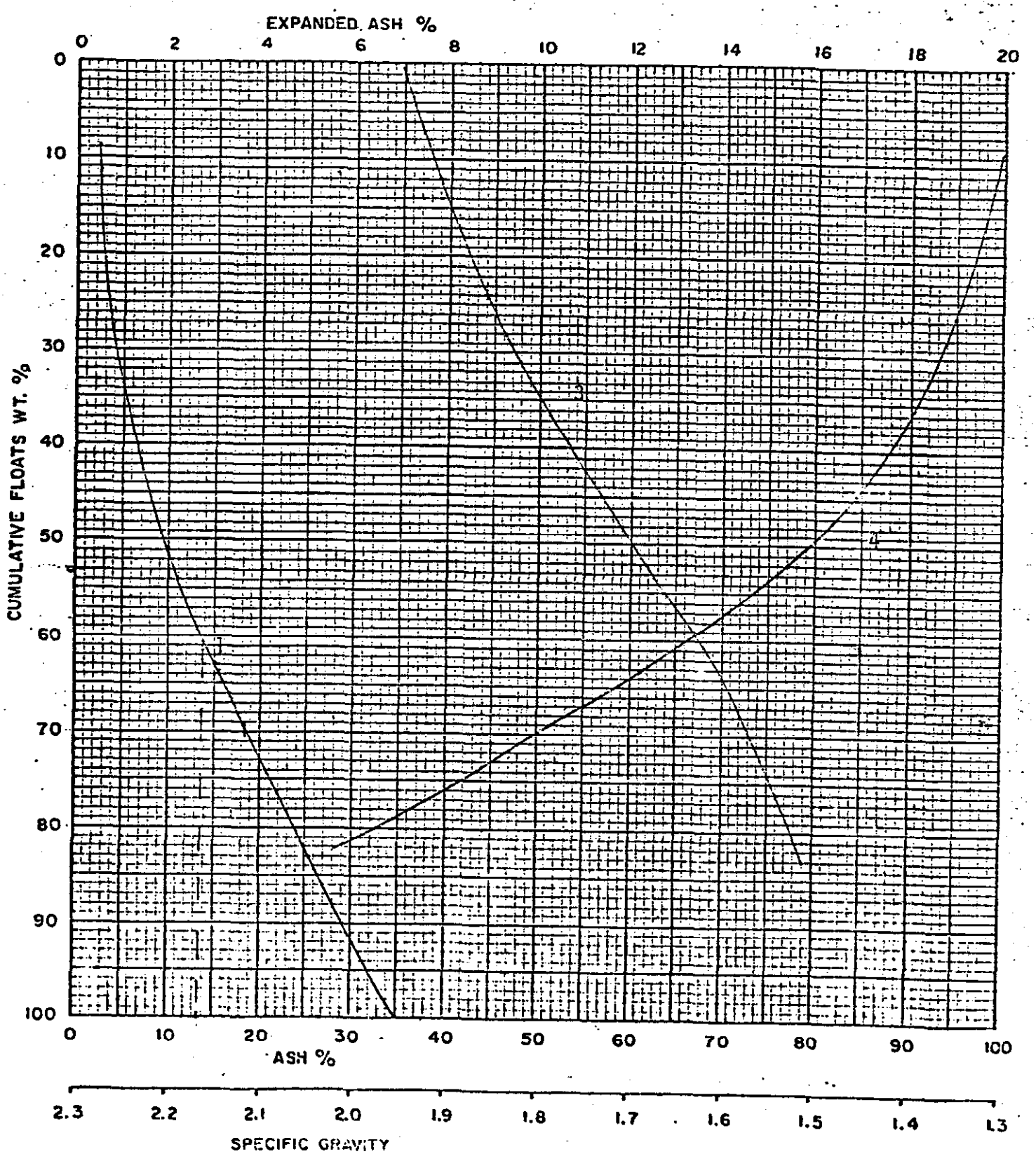
COMPANY CYPRUS ANVIL MINING CORPORATION

SAMPLE TULAMEEN BULK #1

Size 1 1/2" x 100 Mesh

WASHABILITY CURVES

1 - FLOATS
2 - EXPANDED FLOATS
3 - SINKS
4 - SPECIFIC GRAVITY
5 - ELEMENTARY ASH
6 - NEAR GRAVITY MATERIAL



DATE

CYCLONE ENGINEERING SALES LTD

BULK SAMPLE NO. 3B

Birtley Coal & Minerals Testing

A DIVISION OF GREAT WEST STEEL INDUSTRIES LTD.

February 24, 1978

Mr. T. Adamson
Cyprus Anvil Mining Corporation
330 - 355 Burrard Street
Vancouver, B.C.
V6C 2G8

Dear Tom:

Enclosed is a summary of the results to date of analyses performed on samples from your Tulameen project.

Yours truly,

BIRTLEY COAL & MINERALS TESTING

Frank J. Horvat

Frank J. Horvat
Manager

cas
Encl.

505 - 50th Avenue S.E., P.O. Box 5488, Station "A", Calgary, Alberta T2H 1X9 Telephone (403) 253-8273

BULK SAMPLE NO. 3B

CLIENT: CYPRUS ANVIL MINING CORPORATION

PROJECT: TULAMEEN PROJECT

LAB. NO.: 239 December 15, 1977

SIZE AND RAW ANALYSIS						
				CUMULATIVE		
SIZE FRACTION	WT.%	RM.%	ASH%	WT.%	ASH%	REMARKS
4" x 1 1/2"	26.0	7.5	33.0	26.0	33.0	air dried basis
	26.1		35.7	26.1	35.7	dry basis
1 1/2" x 3/4"	14.2	7.5	33.3	40.2	33.1	a.d.b.
	14.3		36.0	40.4	35.8	d.b.
3/4" x 1/4"	17.6	8.9	30.1	57.8	32.2	a.d.b.
	17.4		33.0	57.8	35.0	d.b.
1/4" x 1/8"	10.3	7.5	27.8	68.1	31.5	a.d.b.
	10.4		30.1	68.2	34.2	d.b.
1/4" x 28M	23.7	8.5	28.1	91.8	30.6	a.d.b.
	23.6		30.7	91.8	33.3	d.b.
28M x 100M	6.0	8.5	37.0	97.8	31.0	a.d.b.
	6.0		40.4	97.8	33.7	d.b.
100M x 0	2.2	8.0	45.1	100.0	31.3	a.d.b.
	2.2		49.0	100.0	34.1	d.b.
HEAD RAW	100.0	8.0	32.2			a.d.b.
	100.0		35.0			d.b.

+4" Rock = 4.3%, discarded

+4" Coal = 13.9%, crushed to -4" and included in above size analysis.

TOTAL +4" = 18.2%

Head Raw analysis does include +4" rock.

CLIENT: CYPRUS ANVIL MINING CORPORATION

PROJECT: TULAMEEN PROJECT

LAB. NO.: 239

December 15, 1977

SINK-FLOAT ANALYSES

S.G. FRACTION	4" x 1 1/2" (WT.%= 26.0)					1 1/2" x 3/4" (WT.%= 14.2)					REMARKS
				CUMULATIVE					CUMULATIVE		
	WT.%	RM.%	ASH%	WT.%	ASH%	WT.%	RM.%	ASH%	WT.%	ASH%	
-1.30	nil					nil					a.d.b.
	nil					nil					d.b.
1.30-1.40	18.4	8.7	10.5	18.4	10.5	25.0	9.3	9.6	25.0	9.6	a.d.b.
	18.1		11.5	18.1	11.5	24.4		10.6	24.4	10.6	d.b.
1.40-1.50	25.3	7.9	20.8	43.7	16.5	25.7	8.6	21.4	50.7	15.6	a.d.b.
	25.0		22.6	43.1	17.9	25.4		23.4	49.8	17.1	d.b.
1.50-1.55	6.4	5.3	29.8	50.1	18.2	6.5	6.9	29.9	57.2	17.2	a.d.b.
	6.5		31.5	49.6	19.7	6.5		32.1	56.3	18.9	d.b.
1.55-1.60	11.1	6.9	34.1	61.2	21.1	6.2	7.0	34.7	63.4	18.9	a.d.b.
	11.1		36.6	60.7	22.8	6.2		37.3	62.5	20.7	d.b.
1.60-1.65	10.1	6.0	39.9	71.3	23.7	4.6	7.0	39.5	68.0	20.3	a.d.b.
	10.2		42.4	70.9	25.6	4.6		42.5	67.1	22.2	d.b.
1.65-1.70	4.4	6.3	42.8	75.7	24.8	5.4	6.1	44.7	73.4	22.1	a.d.b.
	4.4		45.7	75.3	26.8	5.5		47.6	72.6	24.1	d.b.
1.70-1.75	3.3	5.5	48.5	79.0	25.8	3.2	5.2	48.7	76.6	23.2	a.d.b.
	3.3		51.3	78.6	27.8	3.3		50.8	75.9	25.3	d.b.
1.75-1.80	5.7	5.3	53.0	84.7	27.7	3.7	4.9	56.5	80.3	24.7	a.d.b.
	5.8		56.0	84.4	29.8	3.8		59.4	79.7	26.9	d.b.
1.80-2.00	7.8	5.4	59.5	92.5	30.3	8.9	5.7	64.3	89.2	28.7	a.d.b.
	7.9		62.9	92.3	32.6	9.1		68.2	88.8	31.1	d.b.
+ 2.00	7.5	3.0	70.2	100.0	33.3	10.8	2.8	72.9	100.0	33.5	a.d.b.
	7.7		72.4	100.0	35.7	11.2		75.0	100.0	36.0	d.b.

CLIENT: CYPRUS ANVIL MINING CORPORATION

PROJECT: TULAMEEN PROJECT

LAB. NO.: 289 - LIBERATION TESTS

December 21, 1977

SINK-FLOAT ANALYSES

FRACTION	1/8" x 28M (WT.% = 25.3)					28M x 100M (WT.% = 7.6)					REMARKS
				CUMULATIVE					CUMULATIVE		
	WT.%	RM.%	ASH%	WT.%	ASH%	WT.%	RM.%	ASH%	WT.%	ASH%	
-1.30	1.1	1.6	3.0	1.1	3.0	0.8	1.3	2.0	0.8	2.0	a.d.b.
	1.1		3.0	1.1	3.0	0.8		2.0	0.8	2.0	d.b.
1.30-1.40	24.5	1.7	4.4	25.6	4.3	39.1	2.6	2.6	39.9	2.7	a.d.b.
	24.5		4.5	25.6	4.4	39.1		2.7	39.9	2.7	d.b.
1.40-1.50	7.9	1.8	16.5	33.5	7.2	7.8	2.9	10.6	47.7	3.9	a.d.b.
	7.9		16.8	33.5	7.4	7.8		10.9	47.7	4.0	d.b.
1.50-1.55	4.8	2.2	24.5	38.3	9.4	5.4	2.9	17.6	53.1	5.3	a.d.b.
	4.8		25.1	38.3	9.6	5.4		18.1	53.1	5.5	d.b.
1.55-1.60	3.7	2.2	29.4	42.0	11.1	3.5	2.0	23.2	56.6	6.4	a.d.b.
	3.7		30.1	42.0	11.4	3.5		23.7	56.6	6.6	d.b.
1.60-1.65	4.2	2.5	32.8	46.2	13.1	3.3	2.3	28.7	59.9	7.6	a.d.b.
	4.2		33.6	46.2	13.4	3.3		29.4	59.9	7.8	d.b.
1.65-1.70	6.3	2.5	38.9	52.5	16.2	2.1	2.2	33.4	62.0	8.5	a.d.b.
	6.3		39.9	52.5	16.6	2.1		34.2	62.0	8.7	d.b.
1.70-1.75	7.7	2.2	45.2	60.2	19.9	2.8	2.3	38.1	64.8	9.8	a.d.b.
	7.7		46.2	60.2	20.4	2.8		39.0	64.8	10.0	d.b.
1.75-1.80	6.1	1.9	49.9	66.3	22.7	4.2	1.9	43.8	69.0	11.9	a.d.b.
	6.1		50.9	66.3	23.2	4.2		44.6	69.0	12.1	d.b.
1.80-2.00	18.7	2.4	58.1	85.0	30.5	11.4	2.5	53.5	80.4	17.8	a.d.b.
	18.7		59.5	85.0	31.2	11.4		54.9	80.4	18.2	d.b.
+ 2.00	15.0	1.3	74.3	100.0	37.0	19.6	1.4	75.4	100.0	29.1	a.d.b.
	15.0		75.3	100.0	37.8	19.6		76.5	100.0	29.6	d.b.

CLIENT: CYPRUS ANVIL MINING CORPORATION

PROJECT: TULAMEEN PROJECT

LAB. NO.: 239

December 15, 1977

SINK-FLOAT ANALYSES

S.G. FRACTION	3/4" x 1/4" (WT.%=17.6) WT.%	RM.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%	1/4" x 1/8" (WT.%=10.3) WT.%	RM.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%	REMARKS
-1.30	14.1	5.3	5.0	14.1	5.0	4.1	3.4	4.4	4.1	4.4	a.d.b.
	13.9		5.3	13.9	5.3	4.0		4.6	4.0	4.6	d.b.
1.30-1.40	19.4	5.3	10.9	33.5	8.4	38.7	4.7	7.9	42.8	7.6	a.d.b.
	19.1		11.5	33.0	8.9	38.4		8.3	42.4	8.0	d.b.
1.40-1.50	21.8	4.6	21.5	55.3	13.6	14.6	3.3	19.9	57.4	10.7	a.d.b.
	21.7		22.5	54.7	14.3	14.6		20.6	57.0	11.2	d.b.
1.50-1.55	5.7	3.6	30.9	61.0	15.2	7.1	3.3	27.5	64.5	12.6	a.d.b.
	5.7		32.1	60.4	16.0	7.1		28.4	64.1	13.1	d.b.
1.55-1.60	6.9	3.2	37.7	67.9	17.5	4.5	3.4	34.7	69.0	14.0	a.d.b.
	7.0		38.9	67.4	18.4	4.5		35.9	68.6	14.6	d.b.
1.60-1.65	5.6	3.3	40.7	73.5	19.2	3.6	3.6	39.3	72.6	15.3	a.d.b.
	5.7		42.1	73.1	20.2	3.6		40.8	72.2	15.9	d.b.
1.65-1.70	1.1	3.0	44.8	74.6	19.6	2.7	3.4	43.7	75.3	16.3	a.d.b.
	1.1		46.2	74.2	20.6	2.9		45.2	75.1	17.0	d.b.
1.70-1.75	2.4	3.2	51.6	77.0	20.6	1.9	3.3	47.9	77.2	17.0	a.d.b.
	2.4		53.3	76.6	21.6	1.9		49.5	77.0	17.8	d.b.
1.75-1.80	2.9	2.6	58.2	79.9	22.0	2.4	3.2	51.2	79.6	18.1	a.d.b.
	2.8		59.8	79.4	23.0	2.4		52.9	79.4	18.9	d.b.
1.80-2.00	8.8	2.7	68.1	88.7	26.6	6.8	3.0	61.5	86.4	21.5	a.d.b.
	8.9		70.0	88.3	27.7	6.9		63.4	86.3	22.5	d.b.
+ 2.00	11.3	1.6	75.9	100.0	32.1	13.6	3.4	76.6	100.0	29.0	a.d.b.
	11.7		77.1	100.0	33.5	13.7		79.3	100.0	30.2	d.b.

CLIENT: CYPRUS ANVIL MINING CORPORATION

PROJECT: TULAMEEN PROJECT

LAB. NO.: 239

December 15, 1977

SINK-FLOAT ANALYSIS

S.G. FRACTION	1/8" x 28M (WT.%=23.7) WT.%	RM.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%	28M x 100M (WT.%=6.0) WT.%	RM.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%	REMARKS
-1.30	6.4	4.3	4.9	6.4	4.9	0.4	2.5	5.6	0.4	5.6	a.d.b.
	6.4		5.1	6.4	5.1	0.4		5.7	0.4	5.7	d.b.
1.30-1.40	30.1	3.9	6.7	36.5	6.4	11.9	3.2	7.6	12.3	7.5	a.d.b.
	30.2		7.0	36.6	6.7	12.1		7.9	12.5	7.8	d.b.
1.40-1.50	17.6	3.8	17.0	54.1	9.8	18.7	3.4	13.1	31.0	10.9	a.d.b.
	17.7		17.7	54.3	10.3	18.9		13.6	31.4	11.3	d.b.
1.50-1.55	6.2	3.6	24.1	60.3	11.3	6.6	4.0	19.0	37.6	12.3	a.d.b.
	6.3		25.0	60.6	11.8	6.6		19.8	38.0	12.8	d.b.
1.55-1.60	3.6	4.1	30.3	63.9	12.4	6.5	4.3	25.4	44.1	14.2	a.d.b.
	3.5		31.6	64.1	12.9	6.5		26.5	44.5	14.8	d.b.
1.60-1.65	3.6	4.2	34.9	67.5	13.6	4.5	4.4	30.0	48.6	15.7	a.d.b.
	3.6		36.4	67.7	14.1	4.5		31.4	49.0	16.3	d.b.
1.65-1.70	3.0	3.8	40.4	70.5	14.7	3.8	5.0	32.9	52.4	16.9	a.d.b.
	3.0		42.0	70.7	15.3	3.8		34.6	52.8	17.6	d.b.
1.70-1.75	3.0	4.2	43.2	73.5	15.9	3.6	4.9	38.1	56.0	18.3	a.d.b.
	3.0		45.1	73.7	16.5	3.6		40.1	56.4	19.1	d.b.
1.75-1.80	3.0	4.0	47.0	76.5	17.1	3.8	4.9	42.5	59.8	19.8	a.d.b.
	3.0		49.0	76.7	17.8	3.8		44.7	60.2	20.7	d.b.
1.80-2.00	8.8	4.7	56.5	85.3	21.2	15.5	4.7	54.5	75.3	27.0	a.d.b.
	8.8		59.3	85.4	22.0	15.4		57.2	75.6	28.1	d.b.
+ 2.00	14.7	4.4	74.9	100.0	29.1	24.7	5.4	72.3	100.0	38.2	a.d.b.
	14.6		78.3	100.0	30.2	24.4		76.4	100.0	39.9	d.b.

CLIENT: CYPRUS ANVIL MINING CORPORATION

PROJECT: TULAMEEN PROJECT

LAB. NO.: 289 - LIBERATION TESTS

December 21, 1977

COMPOSITE 4" x 3/4" SINK AT 1.55: FLOAT AT 1.80 CRUSHED TO PASS 3/4".

SIZE & RAW ANALYSIS						
				CUMULATIVE		
FRACTION	WT.%	RM.%	ASH%	WT.%	ASH%	REMARKS
3/4"x1/4"	45.7	6.0	46.2	45.7	46.2	a.d.b.
	45.7		49.1	45.7	49.1	d.b.
1/4"x1/8"	16.1	5.7	45.4	61.8	46.0	a.d.b.
	16.1		47.6	61.8	48.7	d.b.
1/8"x28M	25.3	5.8	35.6	87.1	43.0	a.d.b.
	25.3		37.8	87.1	45.5	d.b.
28Mx100M	7.6	6.0	28.0	94.7	41.8	a.d.b.
	7.6		29.8	94.7	44.3	d.b.
100Mx0	5.3	6.9	32.5	100.0	41.3	a.d.b.
	5.3		34.9	100.0	43.8	d.b.

CLIENT: CYPRUS ANVIL MINING CORPORATION

PROJECT: TULAMEEN PROJECT

LAB. NO.: 289 - LIBERATION TESTS

December 21, 1977

SINK-FLOAT ANALYSES

	3/4" x 1/4" (WT.% = 45.7)					1/4" x 1/8" (WT.% = 16.1)					
				CUMULATIVE					CUMULATIVE		
FRACTION	WT.%	RM.%	ASH%	WT.%	ASH%	WT.%	RM.%	ASH%	WT.%	ASH%	REMARKS
-1.30	--	--	--	--	--	0.1	1.4	6.2	0.1	6.2	a.d.b.
						0.1		6.3	0.1	6.3	d.b.
1.30-1.40	0.7	3.2	8.2	0.7	8.2	4.6	2.6	8.3	4.7	8.3	a.d.b.
	0.7		8.5	0.7	8.5	4.5		8.5	4.6	8.5	d.b.
1.40-1.50	3.6	1.8	20.5	4.3	18.5	6.5	2.6	19.0	11.2	14.5	a.d.b.
	3.6		20.9	4.3	18.9	6.5		19.5	11.1	14.9	d.b.
1.50-1.55	6.1	2.2	28.3	10.4	24.2	7.0	2.6	27.4	18.2	19.5	a.d.b.
	6.1		28.9	10.4	24.8	6.9		28.1	18.0	20.0	d.b.
1.55-1.60	11.9	2.4	35.2	22.3	30.1	6.5	2.5	32.8	24.7	23.0	a.d.b.
	11.9		36.1	22.3	30.8	6.5		33.6	24.5	23.6	d.b.
1.60-1.65	8.5	2.3	39.3	30.8	32.6	8.5	2.3	36.8	33.2	26.5	a.d.b.
	8.5		40.2	30.8	33.4	8.6		37.7	33.1	27.3	d.b.
1.65-1.70	12.4	2.8	42.8	43.2	35.6	10.1	2.6	41.7	43.3	30.1	a.d.b.
	12.3		44.0	43.1	36.4	10.1		42.8	43.2	30.9	d.b.
1.70-1.75	9.4	1.7	47.5	52.6	37.7	9.4	2.2	46.8	52.7	33.0	a.d.b.
	9.4		48.3	52.5	38.6	9.4		47.9	52.6	33.9	d.b.
1.75-1.80	15.3	1.7	51.1	67.9	40.7	9.6	2.0	50.7	62.3	35.8	a.d.b.
	15.4		52.0	67.9	41.6	9.6		51.7	62.2	36.7	d.b.
1.80-2.00	23.6	2.1	60.2	91.5	45.7	25.5	2.5	59.3	87.8	42.6	a.d.b.
	23.6		61.5	91.5	46.7	25.4		60.8	87.6	43.7	d.b.
+ 2.00	8.5	1.4	73.8	100.0	48.1	12.2	1.2	74.8	100.0	46.5	a.d.b.
	8.5		74.8	100.0	49.1	12.4		75.7	100.0	47.6	d.b.

CLIENT: CYPRUS ANVIL MINING CORPORATION

PROJECT: TULAMEEN PROJECT

LAB. NO.: 239 - COMPOSITE CLEAN COAL (4" x 100M/-1.55)

YIELD = 54.8% of 4" x 100M							
MOISTURE	ASH%	VM.%	FC.%	S%	B.T.U.	H.G.I.	CALC. FACTORS
5.5	14.7	31.2	48.6	0.58	10738	61	a.d.b.
	15.6	33.0	51.4	0.61	11363	--	d.b.

ASH FUSION TEMPS. (°F)				
ATMOSPHERE	I.D.T.	S.T.	H.T.	F.T.
OXIDIZING	2540	2650+		
REDUCING	2440	2620	2650	2650+

MINERAL ANALYSIS OF ASH										
SiO_2	Al_2O_3	TiO_2	Fe_2O_3	CaO	MgO	Na_2O	K_2O	P_2O_5	SO_3	Undeter.
71.50	18.78	1.27	3.57	0.14	0.54	0.47	2.17	0.27	0.29	-1.00

ULTIMATE ANALYSIS						
H2O%	C%	H%	N%	S%	ASH%	O%
5.54	61.71	4.75	0.90	0.58	14.72	17.34

CLIENT: CYPRUS ANVIL MINING CORPORATION

SAMPLE: TULAMEEN (6" x 4" Raw Size Fraction)

LAB. NO.: 238

DROP - SHATTER TEST

SCREEN SIZE INCH (MM.)		WEIGHT	AVERAGE OF SCREEN OPENINGS		PRODUCT OF
RETAINED ON %	PASSING %	%	INCHES	FACTOR	WT.% X FACTOR
SAMPLE					
4" (101.6)	6" (-----)	100.0	5.000	1	100.0 = S
DROPPED COAL					
4" (101.6)	6" (-----)	43.3	5.000	1	43.3000
3" (76.2)	4" (101.6)	19.0	3.500	0.7	13.3000
2" (50.8)	3" (76.2)	10.3	2.500	0.5	5.1500
1 1/2"(38.1)	2" (50.8)	5.9	1.750	0.35	2.0650
1" (25.4)	1 1/2"(38.1)	5.1	1.250	0.25	1.2750
3/4"(19.1)	1" (25.4)	2.3	0.875	0.175	0.4025
1/2"(12.7)	3/4"(19.1)	2.6	0.625	0.125	0.3250
1/4"(6.4)	1/2"(12.7)	3.5	0.375	0.075	0.2625
1/8"(3.2)	1/4"(6.4)	2.4	0.1875	0.0375	0.0900
	1/8"(3.2)	5.6	0.0625	0.0125	0.0700
TOTAL (Sum of Products (WT.% X FACTOR) for dropped coal) =					66.2400 = S

SIZE STABILITY, % = (100 x S)/S = 66.2 rounded off as 66

FRIABILITY, % = 38