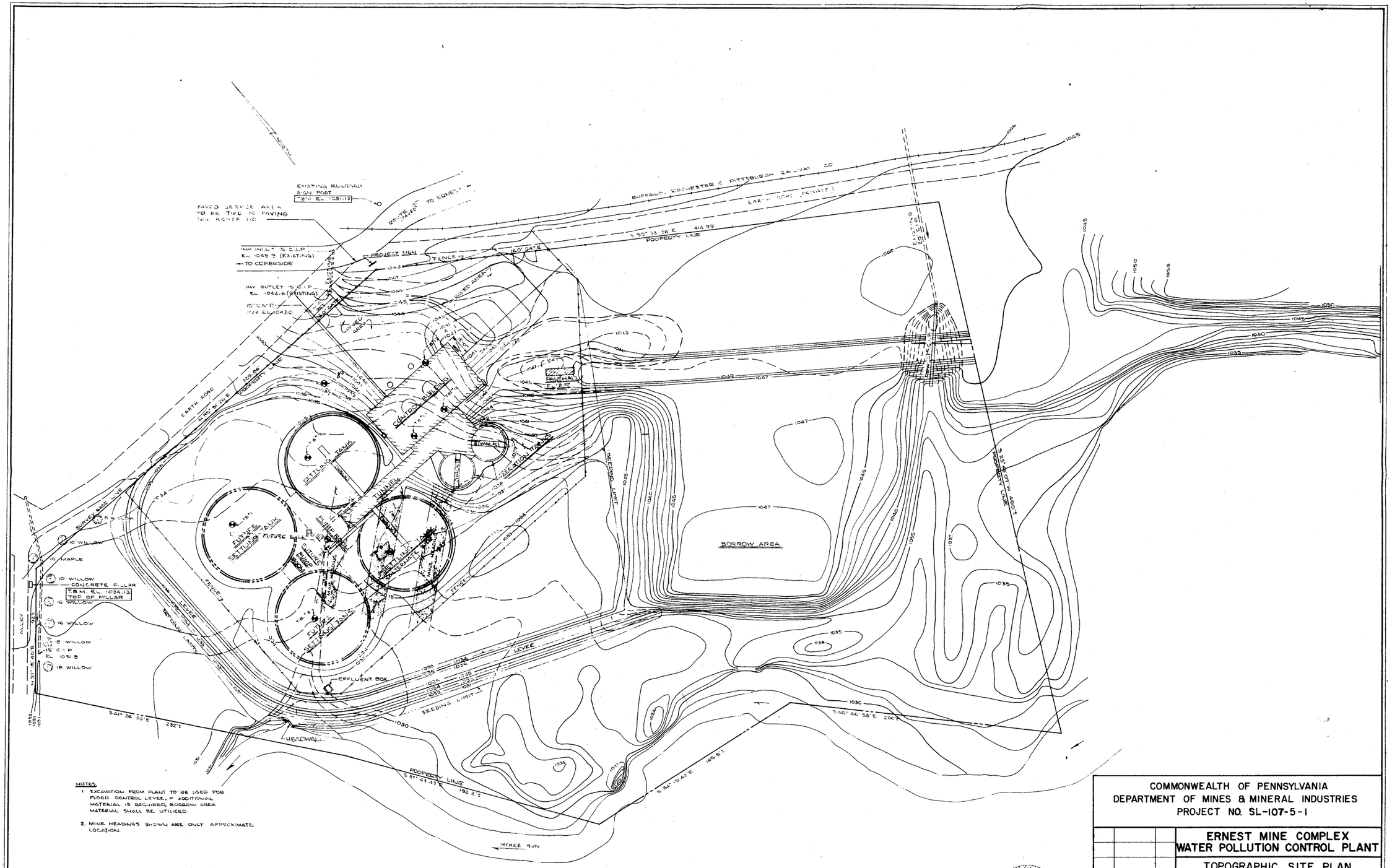
APPENDIX A

TREATMENT PLANT BORINGS



NOTES:

1. EXCAVATION FROM PLANT TO BE USED FOR FLOOD CONTROL LEVEE, IF ADDITIONAL MATERIAL IS REQUIRED, BORROW AREA MATERIAL SHALL BE UTILIZED.
2. MINE HEADINGS SHOWN ARE ONLY APPROXIMATE LOCATION.

TOPOGRAPHIC SITE PLAN

SCALE: 1" = 30'

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF MINES & MINERAL INDUSTRIES
PROJECT NO. SL-107-5-1

DATE	REVISED	BY

ERNEST MINE COMPLEX
WATER POLLUTION CONTROL PLANT

TOPOGRAPHIC SITE PLAN

L. ROBERT KIMBALL
CONSULTING ENGINEERS
EBENSBURG PENNSYLVANIA PITTSBURGH

DRAWN BY W.S.	DATE 2-6-70	CODE NO. 67-112 121-00-	SHEET NO. 7
TRACED BY	DATE		
CHECKED BY G.J.L.	DATE 3/30/70	SCALE 1"=30'	OF 42
APPROVED BY	DATE		

BORING NO. 1

A	B	C	
			1032.40
7		2	2.0' BROWN FINE SAND AND WEATHERED SANDSTONE FRAGMENTS 1030.40
32	1.5	4-6	
19	2.0		
42	3.0	9	6.5' BROWN SAND AND ROCK FRAGMENTS MIXED WITH SANDSTONE BOULDERS VERY STIFF - MOIST
50	4.5	8-9	
62			
71			
80	8.0		1203.90
82	8.2	15	4.5' GRAY AND BROWN SAND AND ROCK FRAGMENTS TRACE OF SILT STIFF - MOIST
87	9.7	19-16	
71			
69			
80			1019.40
87		5	4.0' GRAY SILT WITH WEATHERED GRAY SHALE FRAGMENTS
92	14.5	10-22	
109			
111			1015.40
182		18	3.6' GRAY SILT AND SAND MIXED WITH SHALE AND SANDSTONE FRAGMENTS
192	19.5	26-25	
	20.6		1011.80
			0.7' GRAY BADLY WEATHERED SILTY SHALE 1011.10
			3.7' VERY MEDIUM HARD SANDY SHALE 1007.40
	25.0	85*	

NOTE: WATER LEVEL 1 HOUR 13.9'
24 HOURS 4.0'
* INDICATES SHELBY TUBE
RECOVERY 1.0'

BORING NO. 2

A	B	C	
			1031.44
6	1.5	2 2	0.2' SLATE FILL 1031.24
7			2.0' BROWN WET FINE SAND AND SILT 1029.24
11	4.0		
26	4.5		1.8' BROWN SAND AND ROCK FRAGEMENTS - MOIST 1027.44
34		14	
47	6.0	18-20	3.0' VERY WET SAND MIXED WITH WEATHERED SANDSTONE AND ROCK FRAGMENTS 1024.44
42			
49			
52		27	
122	10.5	25-32	5.1' BROWN SOME GRAY SAND WITH ROCK FRAGEMENTS AND WEATHERED SAND-STONE 1019.34
114			
130			
117			
137		14	
154	15.0	13-33	11.1' GRAY SOME BROWN COMPACT SAND AND ROCK FRAGMENTS SOME WEATHERED SANDSTONE 1008.24
160			
203			
187		36	
199	19.5	26-18	0.3' WEATHERED GRAY CLAY SHALE
197			
201		12	
200		100 .5	
190	23.5		
			1007.94
			5.5' GRAY MEDIUM HARD SANDY SHALE SMALL STREAKS SANDSTONE
			1002.44
	29.0	100*	

NOTE : WATER LEVEL 1 HOUR 11.7'
24 HOURS
* INDICATES SHELBY TUBE
NO RECOVERY

BORING NO. 5

A	B	C	
			1033.06
		4	0.5' TOP SOIL 1032.56
	1.5	6-10	2.5' BROWN DAMP MEDIUM GRAIN SAND 1030.06
		9	6.0' BROWN SAND AND SHALE FRAGMENTS-MOIST MEDIUM DENSE
	6.0	8-10	
			1024.06
		16	
	10.5	19-15	13.5' GRAY AND BROWN SAND AND ROCK FRAGMENTS SOME SANDSTONE FRAGEMENTS - MOIST DENSE
		50-53	
		100 .4	
	14.9		
		7	
	19.5	9-9	
	22.5		1010.56
	25.0	100*	6.5' GRAY SANDY MEDIUM HARD SHALE
			1004.06
			0.7' SOFT CLAY SEAMS 1003.36
	32.0	87*	19.3' GRAY MEDIUM HARD SANDY SHALE WITH SMALL SANDSTONE LAYERS
	47.0	100*	
			984.06
			4.2' OPEN MINE
			979.86
			1.6' GRAY MEDIUM HARD BROKEN CLAY SHALE 978.26
	54.8	67*	

NOTE : WATER LEVEL 1 HOUR NONE
24 HOURS 5.5'
NOTE : LOST DRILL WATER AT 29.0
NOTE : 11-22-69 WATER LEVEL 14.0'

BORING NO. 7

A	B	C	
			1033.35
	1.5	7 1/9	0.5' TOP SOIL 1032.85
		9	7.5' BROWN SAND AND WEATHERED SAND-STONE
	4.0	12-11	
	5.0		
	6.0		
	7.0	11	
	8.5	9-11	1025.35
			9.1' BROWN FINE SAND TRACE SILT MIXED WITH WEATHERED SANDSTONE
		8	
	13.0	19-29	
		33	
	17.5	25-18	1016.25
			2.6' GRAY SILTY SAND WITH SHALE FRAGEMENTS 1013.65
	19.7		
			5.3' GRAY MEDIUM HARD SANDY SHALE - MODERATE BREAKAGE
	25.0	94*	1008.35

NOTE : WATER LEVEL 1 HOUR 13.7'
24 HOURS 3.9'
* INDICATES SHELBY TUBE
RECOVERY 1.0' FROM 4.0' TO 5.0'
1.0' FROM 6.0' TO 7.0'

BORING NO. 8

A	B	C	
			1033.52
10	1.5	3	0.5' TOP SOIL 1033.02
20		6-6	5.5' BROWN SAND AND ROCK FRAGMENTS SOME WEATHERED SANDSTONE MOIST 1027.52
42			
16		17	
75	4.3		
68	6.0	22-28	
98			7.0' BROWN TRACE GRAY SAND AND ROCK FRAGMENTS SOME WEATHERED SANDSTONE
119			
121		33	
110	10.5	37-42	
137			
148			1020.52
152			
164		18	9.3' GRAY SOME BROWN SAND IN SILT AND ROCK FRAGMENTS MOIST
179	15.0	22-37	
250			
311			
193		46	
209	19.5	30-58	
206			
199			1011.22
280	22.3		
	25.8	63*	
			24.8' GRAY MEDIUM HARD SANDY SHALE FEW SMALL SANDSTONE STREAKS BROKEN AND FRACTURED SMALL CLAY SEAMS
	32.0	98*	
	37.0	86*	
	42.0	96*	
			986.42
			5.5' OPEN MINE
			980.92
			9.5' MUCK ON MINE FLOOR 930.42
	54.0	54*	0.9' GRAY MEDIUM HARD SHALE 979.52

NOTE : WATER LEVEL 1 HOUR 52.0' MINE FLOOR
24 HOURS 54'
NOTE : 11-22-69 WATER LEVEL 15.1'

BORING NO. 9

A	B	C	
			1038.69
	1.5	2 2-4	0.5' TOP SOIL 1038.19
			1.5' BROWN SAND AND SANDSTONE FRAGMENTS 1036.69
	4.3		10.7' BROWN SAND MIXED WITH WEATHERED SAND-STONE - MOIST
	5.0	6-14	
			1025.99
		13	
	10.0	13-17	5.3' GRAY SOFT WEATHERED CLAY SHALE DRY
		6	
	14.5	9-13	1020.69
	18.2	35 50-02	0.2' GRAY WEATHERED CLAY SHALE 1020.49
			1.5' GRAY BADLY BROKEN AND FRAGMENTS WEATHERED SHALE 1018.99
	23.2	100*	3.3' GRAY MEDIUM HARD BROKEN SANDY SHALE 1015.69

NOTE : WATER LEVEL 1 HOUR 4.2'
24 HOURS 5.8'

BORING NO. 10

A	B	C	
			1034.69
	1.5	4 2-4	0.5' TOP SOIL 1034.19
			2.5' BROWN MOIST SAND IN SILT SOME ROCK FRAGMENTS- MOIST 1031.69
		10	14.0' BROWN SOME GRAY MOIST SAND AND ROCK FRAGMENTS
	6.0	15-10	
		46	
	10.5	64-82	
		12	
	15.0	19-22	
		22	
	18.0	50 .3	1017.69
			1.0' GRAY WEATHERED SILTY SHALE 1016.69
	20.0	45*	5.0' GRAY MEDIUM HARD SILTY SHALE BADLY BROKEN
	23.0	80*	1011.69

NOTE : WATER LEVEL 1 HOUR 13.7'
24 HOURS 3.9'

BORING NO. 11

A	B	C	
			1030.40
4	1.5	2 2-4	2.0' ASH FILL 1028.40
13			
27			10.0' BROWN MOIST SAND WITH WEATHERED SAND-STONE FRAGMENTS
32		0	
49	6.0	12-17	
51			
92			
111			
40		41	
58	10.5	19-22	
48			
56			1026.40
47			6.0' GRAY AND BROWN SAND AND WEATHERED SANDSTONE FRAGMENTS-MOIST
60		17	
72	15.0	16-12	
70			
82			
97		14	
113		21-29	
123	19.5		
196	21.7		
			1020.40
			3.7' GRAY SOFT WEATHERED SHALE-DRY 1016.70
			1.0' WEATHERED GRAY SHALE BADLY BROKEN AND FRACTURED 1015.70
			4.3' GRAY MEDIUM HARD SANDY SHALE 1011.40
	27.0	75*	

NOTE : WATER LEVEL 1 HOUR 15.9'
24 HOURS 6.3'

BORING NO. 12

A	B	C	
			1039.71
9	1.5	4 2-5	0.3' TOP SOIL AND ASH FILL 1039.41
25	2.0		
20	3.5		4.7' BROWN DAMP COMPACT SAND AND SANDSTONE FRAGMENTS 1034.71
25		37	
77	5.0	28-30	3.0' BROWN WEATHERED SANDSTONE AND DAMP SAND 1031.71
105			
122			
136	8.4	100 .4	
141			7.5' BROWN SAND AND WEATHERED SANDSTONE FRAGMENTS - MOIST
172			
92			
87		10	
103	13.5	19-15	
132			
215			1024.21
208			
206		11	
497	18.0	13-12	6.0' GRAY WEATHERED CLAY SHALE
399			
320			
	21.5	100 .5	1018.21
			5.5' GRAY MEDIUM HARD BROKEN SHALE
	27.0	87*	1012.71

NOTE : WATER LEVEL 1 HOUR 16.2'
24 HOURS 6.5'
* INDICATES SHELBY TUBE SAMPLE
RECOVERY 1.5

GENERAL NOTES :

COLUMN A - BLOWS PER FOOT ON 4" O.D. FLUSH JOINT CASING USING 380 LB. HAMMER DROPPING 18"

B - BOTTOM DEPT OF SAMPLE OR CORE RUN

C - BLOWS PER FOOT ON 2" O.D. SPLIT SPOON SAMPLER USING 140 LB. HAMMER DROPPING 18"

VERTICAL CROSS SECTION
OF
TEST BORING LOGS
COMMONWEALTH OF PENNA.
DEPARTMENT OF MINES & MINERAL
INDIANA CO. PENNA.

DRAWN BY: JH	PENNSYLVANIA DRILLING COMPANY PITTSBURGH, PENNA.	DATE: 9-18-69
SCALE: 1" = 5'.0		SHEET: 1 OF: 1

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF MINES & MINERAL INDUSTRIES
PROJECT NO. SL-107-5-1

DATE	REVISED	BY

ERNEST MINE COMPLEX
WATER POLLUTION CONTROL PLANT

TEST BORINGS

L. ROBERT KIMBALL
CONSULTING ENGINEERS
EBENSBURG PENNSYLVANIA PITTSBURGH

DRAWN BY JH	DATE 9/18/69	CODE NO. 67-112 121-00	SHEET NO. 9
TRACED BY	DATE		
CHECKED BY	DATE	SCALE NONE	OF 42
APPROVED BY	DATE		