HYDROLOGY STUDY FOR
MR PRATT ONE, L.L.C.

PRATT MINE

P-3768

JEFFERSON COUNTY, ALABAMA

BY

PERC ENGINEERING CO., INC.

P.O. BOX 1712

JASPER, ALABAMA 35502

MAY 19, 1997

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P-3768
ASMC PERMIT FILE

RECEIVED
SURFACE MINING
COMMISSION

Taken from P-3768 ASMC Permit File

PERC ENGINEERING CO., INC.
ENGINEERS & SURVEYORS

TELEPHONE (205) 384-5553
FACSIMILE (205) 384-6431

P.O. BOX 1712
JASPER, ALABAMA 35502

May 30, 1997

Mr. Gary Heaton, P.E.
Alabama Surface Mining Commission
Post Office Box 2390
Jasper, Alabama 35502-2390

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RE: M R Pratt One, L.L.C.
Pratt Mine
P-3768

Dear Gary:

I hereby certify the attached detailed design plans for Berm A-A' for the above referenced mine are in accordance with current prudent engineering practices and the Regulations of the Alabama Surface Mining Commission and are true and correct to the best of my knowledge and belief.

If you have any questions or required additional information, please feel free to call.

Sincerely,
PERC Engineering Co., Inc.

Steven R. Ingle, P.E.
Alabama Registration No. 18213

ALABAMA REGISTERED NO. 18213 PROFESSIONAL ENGINEER STEVEN R. INGLE

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Berm Construction Criteria

The berms at the Pratt Mine will be designed and built using the following criteria:

1) Silt fencing will be installed along the outer limits of disturbance in accordance with the attached Silt Fence Design and Construction Specifications. The silt fencing will be installed prior to beginning berm construction operations. The silt fencing will be used to control siltation during construction, use, and removal of the berm.

2) The berm foundation area will be cleared of all organic matter, all surfaces will be sloped to no steeper than 1V:1H, and the entire foundation surface scarified.

3) The material placed within the berm will be free of sod, roots, stones over 6 inches in diameter, and other objectionable materials. The fill material will be placed and spread over the entire area, starting at the lowest point of the foundation in layers not to exceed 12 inches in thickness.

4) Fill material will be compacted as needed to prevent unequal settlement that would cause damage in the completed berm. All berms will be machine compacted.

5) The berm and all disturbed areas will be seeded with both perennial and annual grasses, fertilized, and mulched in order to ensure erosion is minimized.

6) Final graded slopes of the berm will not exceed 2H:1V.

7) All berms will be examined periodically for structural weakness, instability, erosion, or other hazardous conditions and maintenance performed as necessary.

8) When no longer needed, and no sooner than immediately prior to Phase II Bond Release Request, all berms will be removed, regraded, and revegetated in accordance with the reclamation plan.

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Applicant: MR Pratt One, L.L.C.
Mine Name: Pratt Mine
Permit Number: P-3768

Silt Fencing Design and Construction Specifications

1. Fence height - 3' including 6" trench flap.

2. Silt fencing will be secured into place by prefabricated wood or metal posts spaced as necessary.

3. The silt fence will have an equivalent opening size of 30-50 mesh by U.S. Standard Sieve.

4. The maximum particle size passing the silt fence will be .59 millimeter.

5. The flow rate of the silt fence will be 20 gallon per minute per square foot.

6. The silt fence will have a burst strength of 210 pound per square inch.

7. The grab tensile elongation of the silt fence will be 15%.

8. The grab tensile strength of the silt fence will be 100 pounds.

9. The silt fence will be installed by initially excavating a trench approximately 6" wide by 6" deep along the contour for the entire length of the silt fence. Upon completion of the trench, the silt fence will be stretched along the trench with the prefabricated wood or metal posts being driven into the ground approximately 1.5' deep against the upper wall of the trench. The 6" trench flap will then be placed into the trench and covered with compacted fill material.

10. Inspections of the silt fence will be made bi-monthly and repair or replacement will be made promptly as required.

11. Accumulated sediment will be removed from the silt fencing when necessary to ensure the proper function of the silt fencing. Accumulated sediment will be disposed of within Coarse Refuse Area No. 1.

12. Prior to the removal of the silt fence, any silt or sediment retained by the silt fence will be seeded with a mixture of both annual and perennial grasses, fertilized, and mulched to establish a permanent and diverse vegetative cover.

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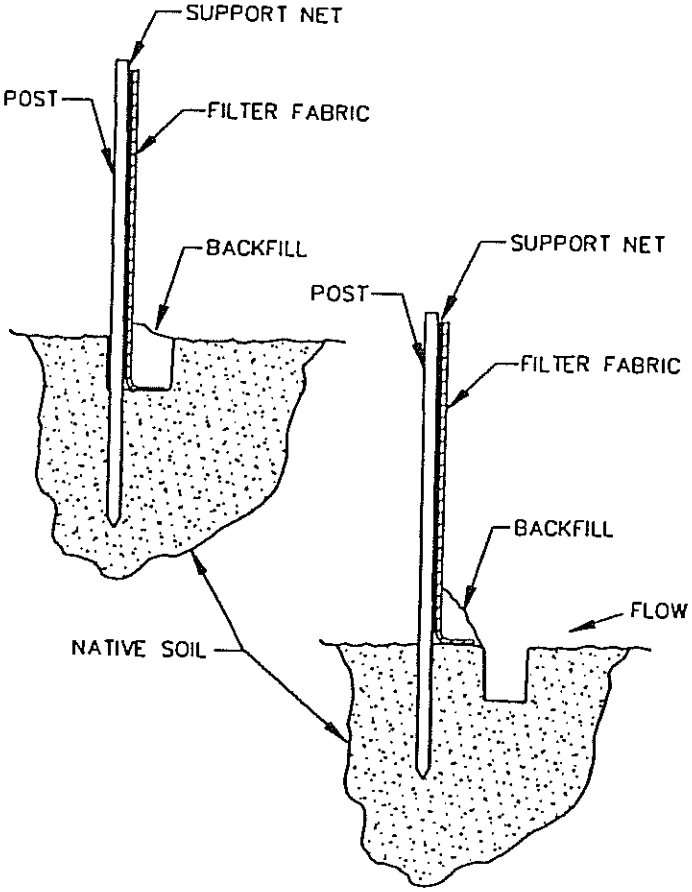
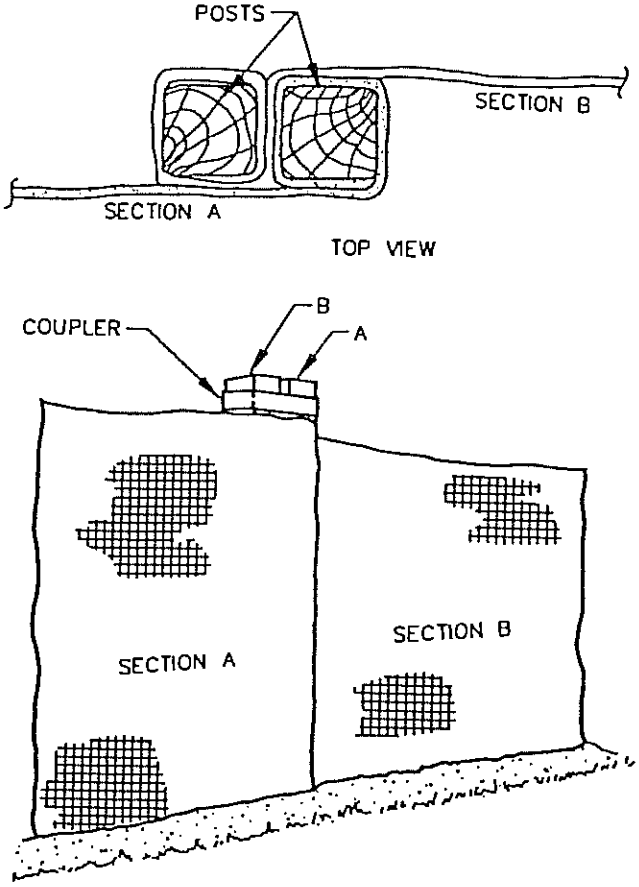


TOE-IN METHOD



JOINING SECTIONS OF SILT FENCE

CONSTRUCTION SPECIFICATIONS

1.) SILT FENCING SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY FITTING THE ADJACENT FENCE SECTION.
2.) EACH SECTION OF FENCING SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 6".
3.) FENCING SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS AT A SPACING NOT TO EXCEED 6'.
4.) INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

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SILT FENCE TYPICAL

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DRAWN BY: G.B.C. DWG. NAME: SILTFENC	DATE: 5-11-93
APPROVED BY: S.R.I.	SCALE: NONE

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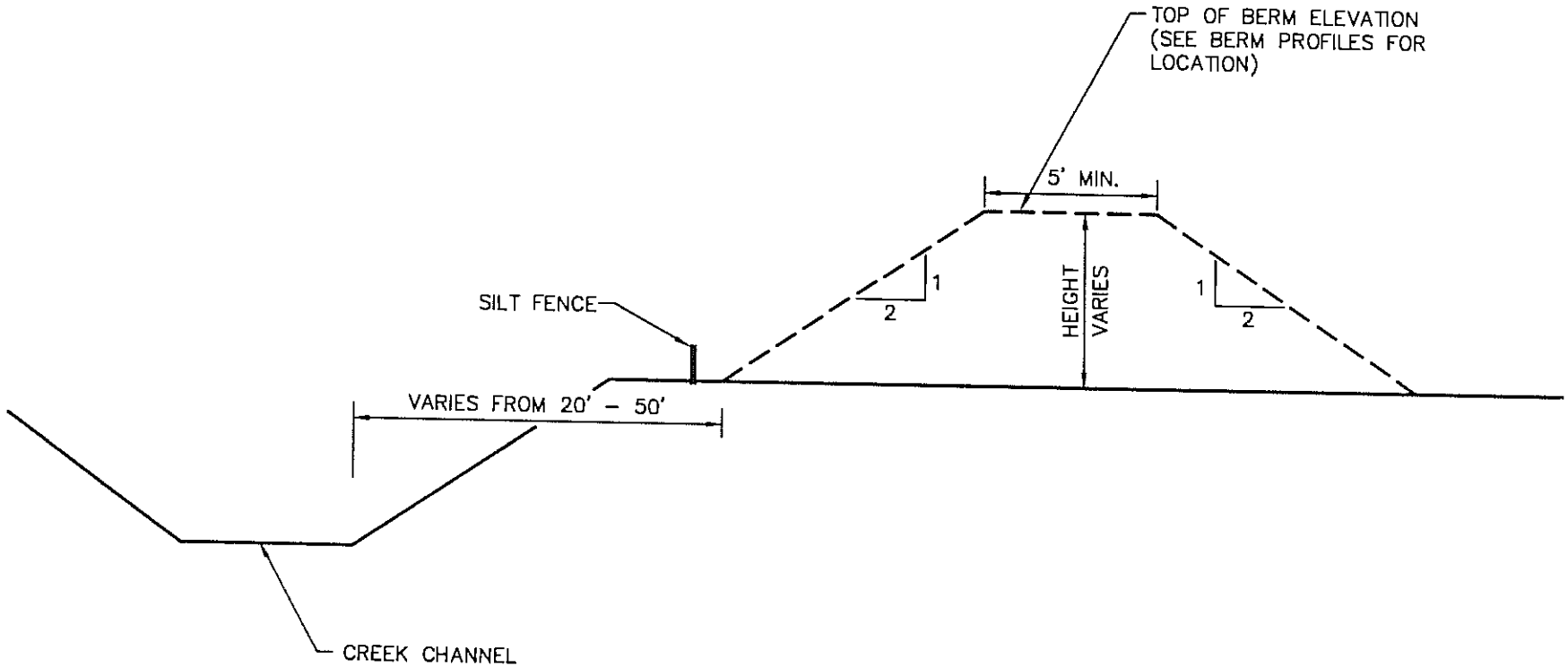

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MR Pratt One, L.L.C.
Pratt Mine
P-3768
Berm A-A' Design
Typical Section

DRAWN BY:	M.W.K.	DATE:	5-21-97
APPROVED BY:	S.R.I.	SCALE:	NONE

Taken from P-3768 ASMC Permit File

MR Pratt One, L.L.C.
Pratt Mine
P- 3768

ROUTING BERM DESIGN

METHODOLOGY

The routing berm, located along the south side of the unnamed tributary of Coal Creek at the Pratt Mine, was designed prevent a 25 year - 24 hour precipitation event of 6.8 inches of rainfall from flooding the permit area to the south. The computer program SEDCAD+ Version 3 was used to predict the runoff from the unnamed tributary during the above referenced storm. From the output a runoff of 1383 cfs was obtained.

The computer program HEC-2 was used to predict the maximum water surface elevations at cross-sections shown on the attached location map. HEC-2 was ran for two conditions of the area. The first condition, Pre-Mining Natural Condition, consisted of routing the above referenced storm through the project area while the area is undisturbed. The second condition, Mining Condition, consisted of routing the above referenced storm through the project area after the construction of the routing berm. From the output of HEC-2 the following water surface elevation table was obtained.

WATER SURFACE ELEVATION - TOP OF BERM ELEVATION TABLE

Cross-Section Number	Water Surface Elevation, MSL, Pre-Mining Natural Condition	Water Surface Elevation, MSL, Mining Condition	Top of Berm Elevation	Freeboard
1-1'	352.21	352.24	357.0	4.76 feet
2-2'	358.77	359.05	362.0	2.95 feet
3-3'	362.00	361.99	370.0	8.01 feet

From the computer outputs and above table, the berm as designed will prevent flooding of the permit area during a 25 year- 24 hour precipitation event.

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M R Pratt One, L.L.C.
Pratt Mine
P-3768
Routing Berm
Hydrology
25 Yr. - 24 Hr. Event

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CIVIL SOFTWARE DESIGN

SEDCAD+ Version 3

JUL 1997
RECEIVED
SURFACE MINING
COMMISSION

M R PRATT ONE, LLC PRATT MINE BERM DESIGN

by

Name: sri

Company Name: PERC ENGINEERING COMPANY
File Name: C:\SEDCAD3\MRPRTBM

Date: 05-30-1997

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ASMC PERMIT FILE

Taken from P-3768 ASMC Permit File

Civil Software Design -- SEDCAD+ Version 3.1
Copyright (C) 1987-1992. Pamela J. Schwab. All rights reserved.

Company Name: PERC ENGINEERING COMPANY
Filename: C:\SEDCAD3\MRPRTBM User: sri
Date: 05-30-1997 Time: 04:17:03
M R Pratt One, LLC Pratt Mine Berm Design
Storm: 6.80 inches, 25 year-24 hour, SCS Type II
Hydrograph Convolution Interval: 0.1hr

JUL 1997 RECEIVED SURFACE MINING COMMISSION

SUBWATERSHED/STRUCTURE INPUT/OUTPUT TABLE

-Hydrology-

JBS	SWS	Area (ac)	CN	UHS	Tc (hrs)	K (hrs)	X	Base-Flow (cfs)	Runoff Volume (ac-ft)	Peak Discharge (cfs)
111	1	240.00	75	M	0.215	1.019	0.319	0.0	79.47	755.19
111	2	140.00	75	M	0.215	0.679	0.319	0.0	46.36	440.53
111	3	83.00	68	M	0.135	0.232	0.319	0.0	22.47	232.23
111	4	7.00	81	F	0.065	0.015	0.319	0.0	2.69	31.11
111	5	40.00	81	F	0.140	0.015	0.319	0.0	15.40	173.59
111	6	710.00	70	S	1.019	0.000	0.000	0.0	204.29	498.12
		Type: Null			Label: Pratt One Berm					
111 Structure		1220.00							370.69	
111 Total IN/OUT		1220.00							370.69	1382.41

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M R Pratt One, L.L.C.
Pratt Mine
P-3768
Routing Berm
HEC-2 Hydrologic Analysis
Pre-Mining Natural Conditions
25 Yr. - 24 Hr. Event

TAKEN FROM
P-3768
ASMC PERMIT FILE

Taken from P-3768 ASMC Permit File

HEC2 S/N: 1356000078 HMVersion: 6.60 Data File: mrprat.nat

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*****************************************
*  HEC-2 WATER SURFACE PROFILES          *
*                                        *
*  Version   4.6.2;  May 1991            *
*                                        *
*  RUN DATE    30MAY97    TIME   14:51:08 *
*****************************************
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****************************************
*  U.S. ARMY CORPS OF ENGINEERS        *
*  HYDROLOGIC ENGINEERING CENTER       *
*  609 SECOND STREET, SUITE D          *
*  DAVIS, CALIFORNIA 95616-4687        *
*          (916) 756-1104              *
****************************************
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X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
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:::                                       :::
:::   FULL MICRO-COMPUTER IMPLEMENTATION   :::
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H A E S T A D   M E T H O D S
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37 Brookside Road * Waterbury, Connecticut 06708 * (203) 755-1666

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P-3768
ASMC PERMIT FILE

Taken from P-3768 ASMC Permit File

THIS RUN EXECUTED 30MAY97 14:51:08

****
HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

T1 MR PRATT ONE, L.L.C. PRATT MINE
T2 25 YEAR / 24 HOUR FLOOD
T3 NATURAL CONDITIONS

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	2							348	

NC	.075	.075	.045	.1	.3					
QT	1	1383								
X1	01	16	1350	1381	0	0	0			
GR	380.0	1000	375.0	1020	370.0	1052	365.0	1117	360.0	1150
GR	355.0	1178	350.0	1350	347.8	1357	347.8	1376	350.0	1381
GR	355.0	1393	360.0	1406	365.0	1413	370.0	1420	375.0	1428
GR	380.0	1445								
X1	02	18	1286	1313	680	680	680			
GR	380.0	1000	375.0	1008	370.0	1017	365.0	1026	360.0	1034
GR	358.0	1065	360.0	1096	362.0	1180	360.0	1276	355.0	1286
GR	353.0	1290	353.0	1304	355.0	1313	360.0	1371	365.0	1426
GR	370.0	1458	375.0	1470	380.0	1480				
X1	03	12	1105	1182	500	480	440			
GR	380.0	1000	375.0	1009	370.0	1018	365.0	1027	360.0	1105
GR	358.4	1110	358.4	1130	360.0	1182	365.0	1425	370.0	1495
GR	375.0	1525	380.0	1540						

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ASMC PERMIT FILE

Taken from P-3768 ASMC Permit File

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 1

CCHV= .100 CEHV= .300

*SECNO 1.000

3720 CRITICAL DEPTH ASSUMED

1.000	4.41	352.21	352.21	348.00	353.39	1.18	.00	.00	350.00
1383.0	204.8	1164.7	13.5	83.6	123.4	5.8	.0	.0	350.00
.D0	2.45	9.44	2.32	.075	.045	.075	.000	347.80	1274.14
.013409	0.	0.	0.	0	37	0	.00	112.15	1386.29

*SECNO 2.000

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.43

2.000	5.77	358.77	.00	.00	359.61	.83	6.19	.03	355.00
1383.0	40.2	1141.2	201.6	23.4	142.8	82.5	3.6	1.7	355.00
.03	1.72	7.99	2.45	.075	.045	.075	.000	353.00	1053.06
.D06572	680.	680.	680.	4	0	0	.00	102.17	1356.74

*SECNO 3.000

3.D00	3.60	362.00	.00	.00	362.36	.36	2.71	.05	360.00
1383.0	46.4	1192.0	144.6	31.3	231.8	97.4	6.8	3.3	360.00
.05	1.48	5.14	1.48	.075	.045	.075	.000	358.40	1073.76
.005606	500.	440.	480.	3	0	0	.00	205.55	1279.32

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THIS RUN EXECUTED 30MAY97 14:51:08

****
HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

NATURAL CONDITIONS

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
*	1.000	.00	.00	.00	347.80	1383.00	352.21	352.21	353.39	134.09	9.44	212.84	119.43
*	2.000	680.00	.00	.00	353.00	1383.00	358.77	.00	359.61	65.72	7.99	248.68	170.59
	3.000	440.00	.00	.00	358.40	1383.00	362.00	.00	362.36	56.06	5.14	360.49	184.71

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Taken from P-3768 ASMC Permit File

NATURAL CONDITIONS

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	1.000	1383.00	352.21	.00	.00	4.21	112.15	.00
*	2.000	1383.00	358.77	.00	6.57	.00	102.17	680.00
	3.000	1383.00	362.00	.00	3.23	.00	205.55	440.00

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SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 1.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

WARNING SECNO= 2.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

Normal program termination

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M R Pratt One, L.L.C.
Pratt Mine
P-3768
Routing Berm
HEC-2 Hydrologic Analysis
Mining Conditions
25 Yr. - 24 Hr. Event

Taken from P-3768 ASMC Permit File

HEC2 S/N: 1356000078 HMVersion: 6.60 Data File: mrprat.pst

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*****************************************
* HEC-2 WATER SURFACE PROFILES          *
*                                       *
* Version   4.6.2;  May 1991            *
*                                       *
* RUN DATE    30MAY97    TIME   14:49:33 *
*****************************************
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****************************************
* U.S. ARMY CORPS OF ENGINEERS         *
* HYDROLOGIC ENGINEERING CENTER        *
* 609 SECOND STREET, SUITE D           *
* DAVIS, CALIFORNIA 95616-4687         *
*          (916) 756-1104              *
****************************************
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X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
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:::                                       :::
:::   FULL MICRO-COMPUTER IMPLEMENTATION   :::
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:::::::::::::::::::::::::::::::::::::::::::::
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HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

T1 MR PRATT ONE, L.L.C. PRATT MINE
T2 25 YEAR / 24 HOUR FLOOD
T3 MINING CONDITIONS

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ	
	0	2							348		
NC	.075	.075	.045	.1	.3						
QT	1	1383									
X1	01	12	1350	1381	0	0	0				
GR	357.0	1293	355.0	1297	350.0	1350	347.8	1357	347.8	1376	
GR	350.0	1381	355.0	1393	360.0	1406	365.0	1413	370.0	1420	
GR	375.0	1428	380.0	1445							
	02	11	1286	1313	680	680	680				
GR	361.0	1230	360.0	1276	355.0	1286	353.0	1290	353.0	1304	
GR	355.0	1313	360.0	1371	365.0	1426	370.0	1458	375.0	1470	
GR	380.0	1480									
X1	03	10	1105	1182	500	480	440				
GR	380.0	1000	375.0	1009	370.0	1018	365.0	1027	360.0	1105	
GR	358.4	1110	358.4	1130	360.0	1182	365.0	1275	366.8	1280	

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENOST

*PROF 1

CCHV= .100 CEHV= .300

*SECNO 1.000

3720 CRITICAL DEPTH ASSUMED

1.000	4.44	352.24	352.24	348.00	353.82	1.58	.00	.00	350.00
1383.0	72.0	1295.5	15.5	26.6	124.5	6.0	.0	.0	350.00
.00	2.70	10.41	2.57	.075	.045	.075	.000	347.80	1326.25
.016103	0.	0.	0.	0	37	0	.00	60.13	1386.38

*SECNO 2.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.73

2.000	6.05	359.05	.00	.00	359.78	.72	5.87	.09	355.00
1383.0	35.5	1125.9	221.5	16.5	150.5	95.5	3.3	1.1	355.00
.03	2.16	7.48	2.32	.075	.045	.075	.000	353.00	1277.89
.005365	680.	680.	680.	3	0	0	.00	82.18	1360.07

*SECNO 3.000

3.000	3.59	361.99	.00	.00	362.43	.44	2.62	.03	360.00
1383.0	49.3	1275.0	58.8	31.0	231.1	37.0	6.2	2.3	360.00
.05	1.59	5.52	1.59	.075	.045	.075	.000	358.40	1073.89
.006474	500.	440.	480.	3	0	0	.00	145.19	1219.09

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HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

MINING CONDITIONS

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
*	1.000	.00	.00	.00	347.80	1383.00	352.24	352.24	353.82	161.03	10.41	157.11	108.98
*	2.000	680.00	.00	.00	353.00	1383.00	359.05	.00	359.78	53.65	7.48	262.49	188.81
	3.000	440.00	.00	.00	358.40	1383.00	361.99	.00	362.43	64.74	5.52	299.12	171.88

TAKEN FROM
P-3768
ASMC PERMIT FILE

Taken from P-3768 ASMC Permit File

...ING CONDITIONS

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	1.000	1383.00	352.24	.00	.00	4.24	60.13	.00
*	2.000	1383.00	359.05	.00	6.81	.00	82.18	680.00
	3.000	1383.00	361.99	.00	2.93	.00	145.19	440.00

TAKEN FROM
P-3768
ASMC PERMIT FILE

Taken from P-3768 ASMC Permit File

SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 1.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

WARNING SECNO= 2.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

Normal program termination

TAKEN FROM
P-3768
ASMC PERMIT FILE

Taken from P-3768 ASMC Permit File

CIVIL SOFTWARE DESIGN

SEDCAD+ Version 3

MR PRATT ONE, LLC PRATT MINE DRAINAGE STRUCTURE EXTENSION NO. 1

by

Name: sri

Company Name: PERC ENGINEERING COMPANY
File Name: C:\SEDCAD3\DIVERS

Date: 06-02-1997

TAKEN FROM
P-3768
ASMC PERMIT FILE

Taken from P-3768 ASMC Permit File

Civil Software Design -- SEDCAD+ Version 3.1
Copyright (C) 1987-1992. Pamela J. Schwab. All rights reserved.

Company Name: PERC ENGINEERING COMPANY
Filename: C:\SEDCAD3\DIVERS User: sri
Date: 06-02-1997 Time: 12:16:06
MR Pratt One, LLC Pratt Mine Drainage Structure Extension No. 1
Storm: 4.30 inches, 10 year- 6 hour, SCS 6 Hour
Hydrograph Convolution Interval: 0.1 hr

SUBWATERSHED/STRUCTURE INPUT/OUTPUT TABLE

-Hydrology-

JBS	SWS	Area (ac)	CN	UHS	Tc (hrs)	K (hrs)	X	Base-Flow (cfs)	Runoff Volume (ac-ft)	Peak Discharge (cfs)
111	1	24.00	70	S	0.110	0.000	0.000	0.0	3.07	35.73
		Type: Null			Label: Extension No. 1					
111	Structure	24.00							3.07	
111	Total IN/OUT	24.00							3.07	35.73

TAKEN FROM
P-3768
ASMC PERMIT FILE

SEDCAD+ BASIN DISCHARGE UTILITY

MR Pratt Pratt Mine Drainage Structure Extension No. 1

TRICKLE TUBE INPUTS:

Barrel Diameter	41.000 inches
Barrel Length	300.000 feet
Barrel Slope	13.000 %
Manning's n of Pipe	0.016
Pipe Spillway Elevation	397.01
Entrance Loss Coefficient	0.900
Tailwater Depth	0.000 feet

Elevation	Trickle Tube (cfs)	Total Discharge (cfs)
397.00	0.0	0.0
397.01	0.0	0.0
397.50	2.5>(3)	2.5
398.00	7.0>(3)	7.0
398.50	13.0>(3)	13.0
399.00	20.1>(3)	20.1
399.50	28.1>(3)	28.1
400.00	37.0>(3)	37.0
400.50	46.7>(3)	46.7
401.00	56.3>(4)	56.3
401.50	64.8>(5)	64.8
402.00	72.4>(5)	72.4
402.50	79.4>(5)	79.4
403.00	85.6>(5)	85.6
403.50	91.5>(5)	91.5
404.00	97.0>(5)	97.0
404.50	102.2>(5)	102.2
405.00	107.2>(5)	107.2

TAKEN FROM
P-3768
ASMC PERMIT FILE

Taken from P-3768 ASMC Permit File

SEDCAD+ BASIN DISCHARGE UTILITY

MR Pratt Pratt Mine Drainage Structure Extension No. 1

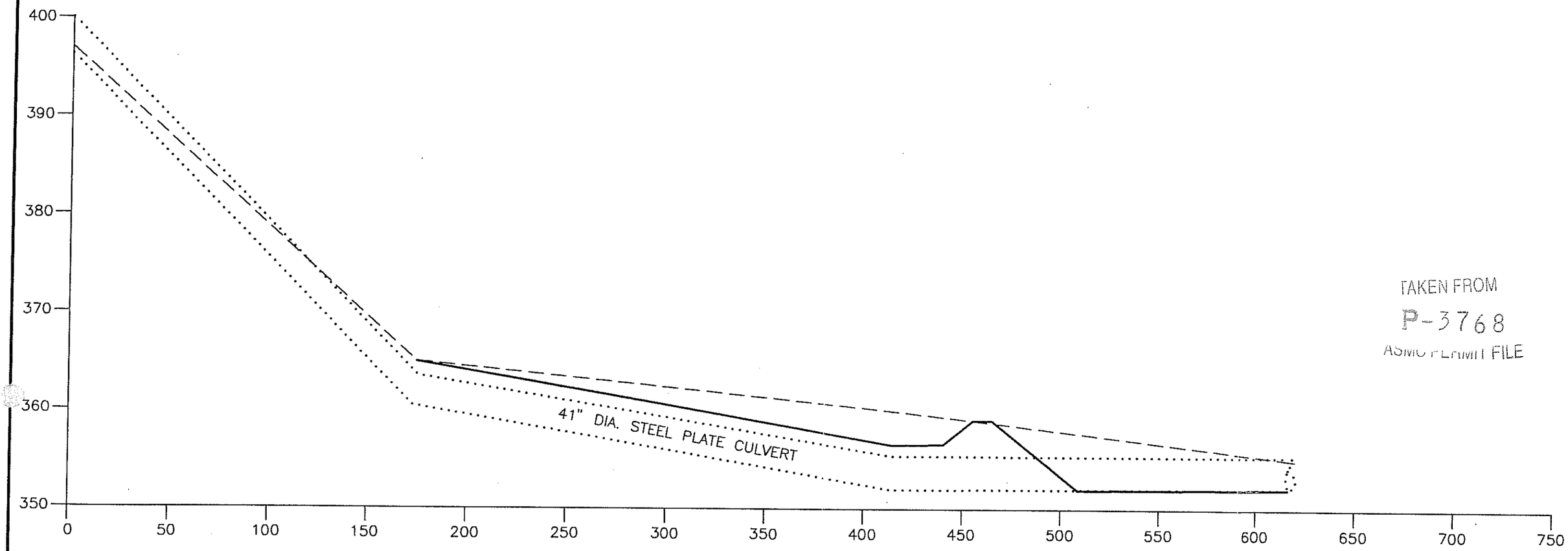
TRICKLE TUBE INPUTS:

Barrel Diameter	41.000 inches
Barrel Length	300.000 feet
Barrel Slope	0.500 %
Manning's n of Pipe	0.016
Pipe Spillway Elevation	397.01
Entrance Loss Coefficient	0.900
Tailwater Depth	0.000 feet

Elevation	Trickle Tube (cfs)	Total Discharge (cfs)
397.00	0.0	0.0
397.01	0.0	0.0
397.50	40.4>(1)	40.4
398.00	50.7>(1)	50.7
398.50	52.0>(2)	52.0
399.00	53.3>(3)	53.3
399.50	54.7>(3)	54.7
400.00	56.0>(4)	56.0
400.50	57.3>(5)	57.3
401.00	58.6>(5)	58.6
401.50	60.0>(6)	60.0
402.00	64.3>(6)	64.3
402.50	68.8>(6)	68.8
403.00	72.8>(6)	72.8
403.50	76.7>(6)	76.7
404.00	80.5>(6)	80.5
404.50	83.9>(6)	83.9
405.00	87.3>(6)	87.3

TAKEN FROM
P-3768
ASMC PERMIT FILE

Taken from P-3768 ASMC Permit File



TAKEN FROM
P-3768
ASMC PERMIT FILE

Hydraulics Information

Drainage Area = 24 Acres
10 YR.–6 HR., Q = 35.7 C.F.S.
Wall Thickness = 0.25"
Minimum Freeboard = 1'

Legend

- - - - - *Existing Grade*

——— *Proposed Finish Grade*

PERC ENGINEERING CO., INC.

MR Pratt One, L.L.C.
Pratt Mine
P-3768
Drainage Structure Extension No. 1

DRAWN BY: J.J.H. DWG. NAME: MR–DSE2	DATE: 6/2//97
APPROVED BY: S.R.I.	SCALE: AS NOTED

Taken from P-3768 ASMC Permit File

CIVIL SOFTWARE DESIGN

SEDCAD+ Version 3

MR PRATT ONE, LLC PRATT MINE DRAINAGE STRUCTURE EXTENSION NO. 2

by

Name: sri

Company Name: PERC ENGINEERING COMPANY
File Name: C:\SEDCAD3\DIVERS

Date: 06-02-1997

TAKEN FROM
P-3768
ASMC PERMIT FILE

Taken from P-3768 ASMC Permit File

Copyright (C) 1987-1992. Pamela J. Schwab. All rights reserved.

Company Name: PERC ENGINEERING COMPANY
Filename: C:\SEDCAD3\DIVERS User: sri
Date: 06-02-1997 Time: 12:17:04
MR Pratt One, LLC Pratt Mine Drainage Structure Extension No. 2
Storm: 4.30 inches, 10 year- 6 hour, SCS 6 Hour
Hydrograph Convolution Interval: 0.1 hr

SUBWATERSHED/STRUCTURE INPUT/OUTPUT TABLE

-Hydrology-

JBS	SWS	Area (ac)	CN	UHS	Tc (hrs)	K (hrs)	X	Base-Flow (cfs)	Runoff Volume (ac-ft)	Peak Discharge (cfs)
111	1	8.00	70	S	0.065	0.000	0.000	0.0	1.02	11.91
		Type: Null			Label: Extension No. 2					
111	Structure	8.00							1.02	
111	Total IN/OUT	8.00							1.02	11.91

TAKEN FROM
P-3768
ASMC PERMIT FILE

Taken from P-3768 ASMC Permit File

MR Pratt Pratt Mine Drainage Structure Extension No 2

TRICKLE TUBE INPUTS:

Barrel Diameter	41.000 inches
Barrel Length	300.000 feet
Barrel Slope	11.000 %
Manning's n of Pipe	0.016
Pipe Spillway Elevation	380.01
Entrance Loss Coefficient	0.900
Tailwater Depth	0.000 feet

Elevation	Trickle Tube (cfs)	Total Discharge (cfs)
380.00	0.0	0.0
380.01	0.0	0.0
380.50	2.5>(3)	2.5
381.00	7.0>(3)	7.0
381.50	13.0>(3)	13.0
382.00	20.1>(3)	20.1
382.50	28.1>(3)	28.1
383.00	37.0>(3)	37.0
383.50	46.7>(3)	46.7
384.00	56.3>(4)	56.3
384.50	64.8>(5)	64.8
385.00	72.4>(5)	72.4

TAKEN FROM
P-3768
ASMC PERMIT FILE

Taken from P-3768 ASMC Permit File

SEDCAD+ BASIN DISCHARGE UTILITY

MR Pratt Pratt Mine Drainage Structure Extension No. 2

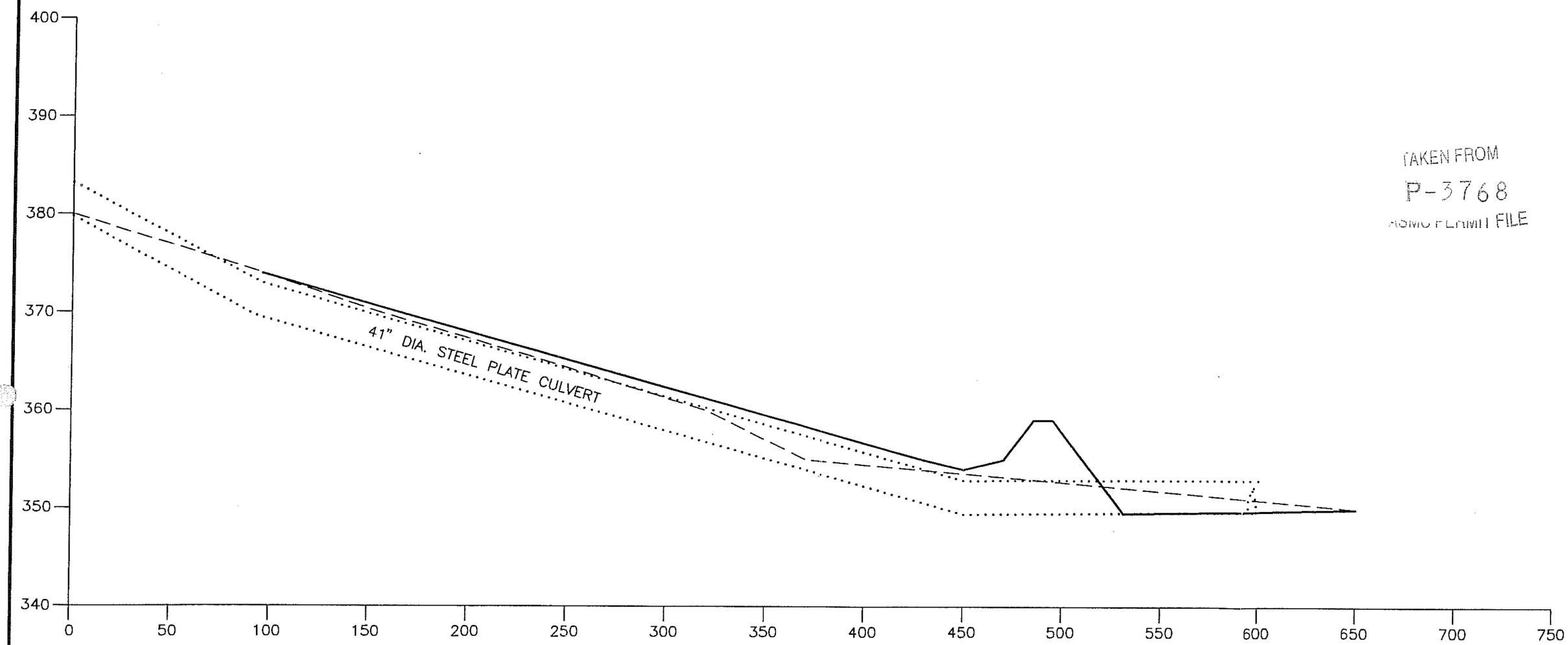
TRICKLE TUBE INPUTS:

Barrel Diameter	41.000 inches
Barrel Length	300.000 feet
Barrel Slope	0.500 %
Manning's n of Pipe	0.016
Pipe Spillway Elevation	380.01
Entrance Loss Coefficient	0.900
Tailwater Depth	0.000 feet

Elevation	Trickle Tube (cfs)	Total Discharge (cfs)
380.00	0.0	0.0
380.01	0.0	0.0
380.50	40.4>(1)	40.4
381.00	50.7>(1)	50.7
381.50	52.0>(2)	52.0
382.00	53.3>(3)	53.3
382.50	54.7>(3)	54.7
383.00	56.0>(4)	56.0
383.50	57.3>(5)	57.3
384.00	58.6>(5)	58.6
384.50	60.0>(6)	60.0
385.00	64.3>(6)	64.3

TAKEN FROM
P-3768
ASMC PERMIT FILE

Taken from P-3768 ASMC Permit File



TAKEN FROM
P-3768
ASMC PERMIT FILE

Hydraulics Information

Drainage Area = 8 Acres
10 YR.–6 HR., Q = 11.9 C.F.S.
Wall Thickness = 0.25"
Minimum Freeboard = 1'

Legend

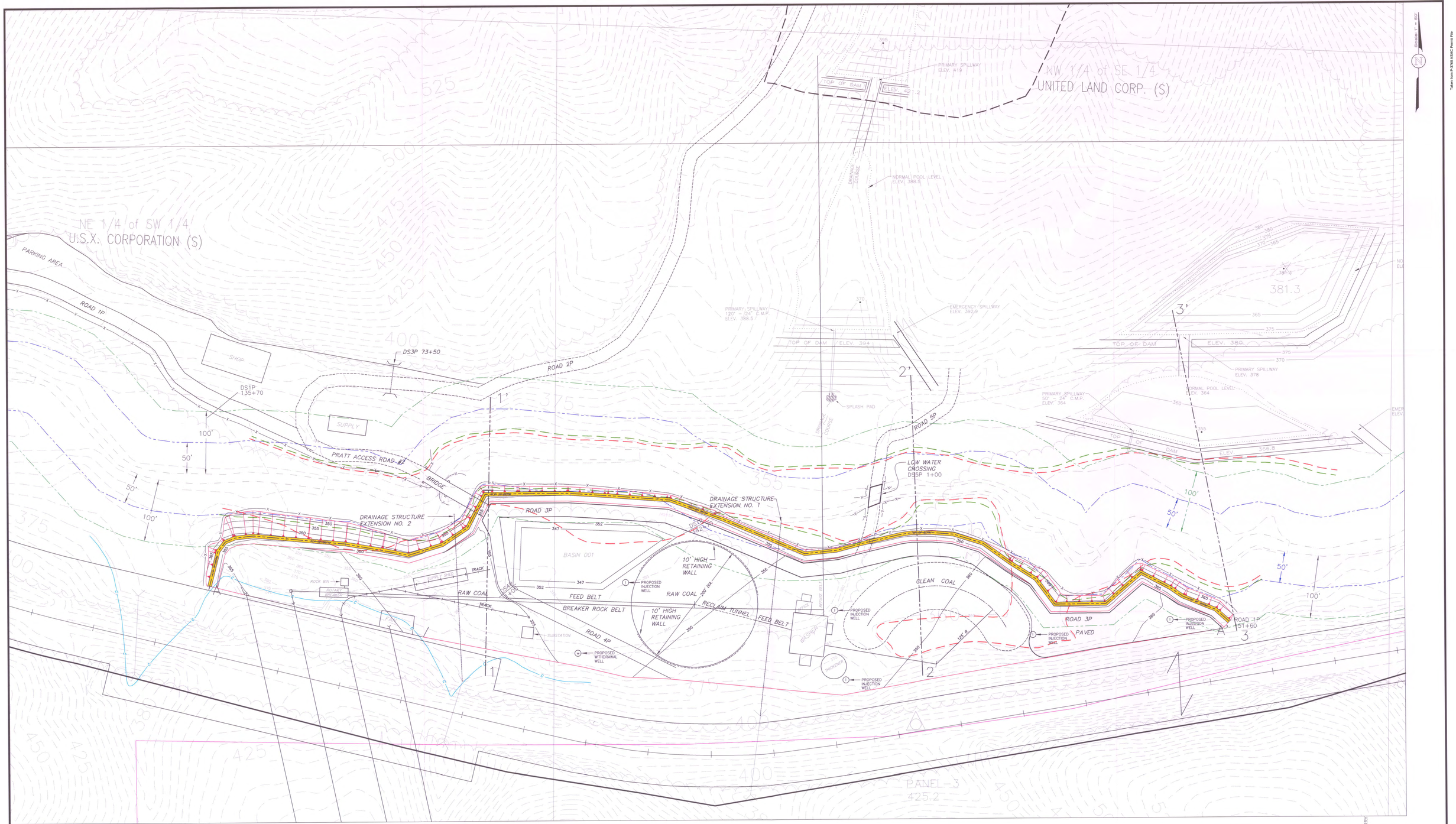
- - - - - Existing Grade
——— Proposed Finish Grade

PERC ENGINEERING CO., INC.

MR Pratt One, L.L.C.
Pratt Mine
P-3768
Drainage Structure Extension No. 2

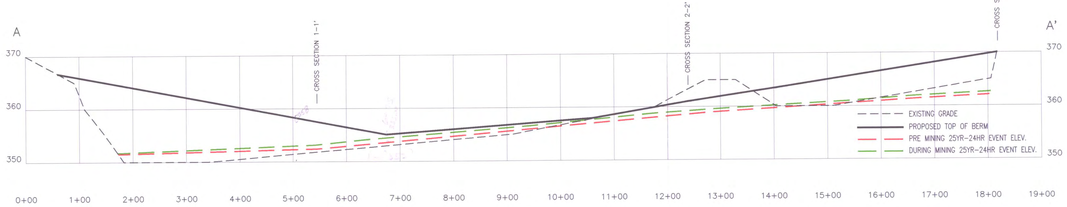
DRAWN BY: J.J.H. DWG. NAME: MR–DSE2	DATE: 6/2/97
APPROVED BY: S.R.I.	SCALE: AS NOTED

Taken from P-3768 ASMC Permit File

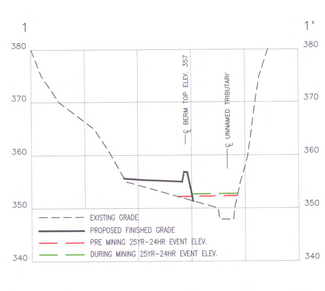


MAP LEGEND

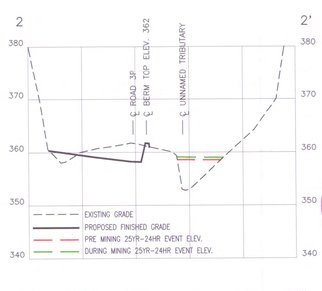
- SILT FENCE
- PRE MINING 25YR-24HR EVENT ELEV.
- DURING MINING 25YR-24HR EVENT ELEV.



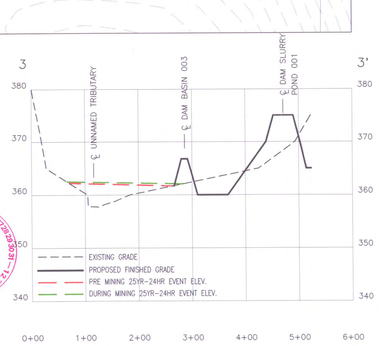
SECTION A-A'
VERTICAL SCALE 1" = 10'
HORIZONTAL SCALE 1" = 100'



SECTION 1-1'
VERTICAL SCALE 1" = 10'
HORIZONTAL SCALE 1" = 100'



SECTION 2-2'
VERTICAL SCALE 1" = 10'
HORIZONTAL SCALE 1" = 100'



SECTION 3-3'
VERTICAL SCALE 1" = 10'
HORIZONTAL SCALE 1" = 100'

7 JUL 1997
RECEIVED
ALABAMA SURFACE MINING COMMISSION

PERC ENGINEERING CO., INC.
1606 Highway 78 West Jasper, Alabama 35501
P.O. Box 1712 Jasper, Alabama 35502
(205) 384-5553 Office (205) 384-9491 Fax

drawn by:	J.J.H.	job number:	
checked by:	S.R.I.	initial date:	
scale:	1" = 50'	f.b./page:	
diskette no:		dwg name:	MR-FACE
rev no./date:		rev no./date:	

MR PRATT ONE, L.L.C.
Pratt Mine
P-3768
Attachment III-B-3

Taken from P-3768.ASMC Permit File