

HYDROLOGY STUDY FOR  
NORTH PRATT MINING, LLC.

PRATT NO. 1 MINE  
P-3972  
JEFFERSON COUNTY, ALABAMA

BY  
PERC ENGINEERING CO., INC.  
P.O. BOX 1712  
JASPER, ALABAMA 35502

DETAILED MODIFICATION DESIGN PLANS  
BASIN 001  
ATTACHMENT III-B-2(a)

APRIL 17, 2013



Telephone: (205) 384-5553  
Facsimile: (205) 295-3114 - Main Building  
(205) 295-3115 - Water Lab  
Web Address: [www.percengineering.com](http://www.percengineering.com)

April 17, 2013

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

RE: North Pratt Mining, LLC.  
Pratt No. 1 Mine  
P- 3972

Dear Gary:

I hereby certify the attached Detailed Modification Design Plans for Basin 001 for the above referenced mine are in accordance with the Regulations of the Alabama Surface Mining Commission as adopted by Act 81-435 of December 18, 1981 and amended to date, 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.

A handwritten signature in black ink that reads 'Leslie G. Stephens'.

Leslie G. Stephens, P.E. & P.L.S.

AL REG. NO. 14117-E



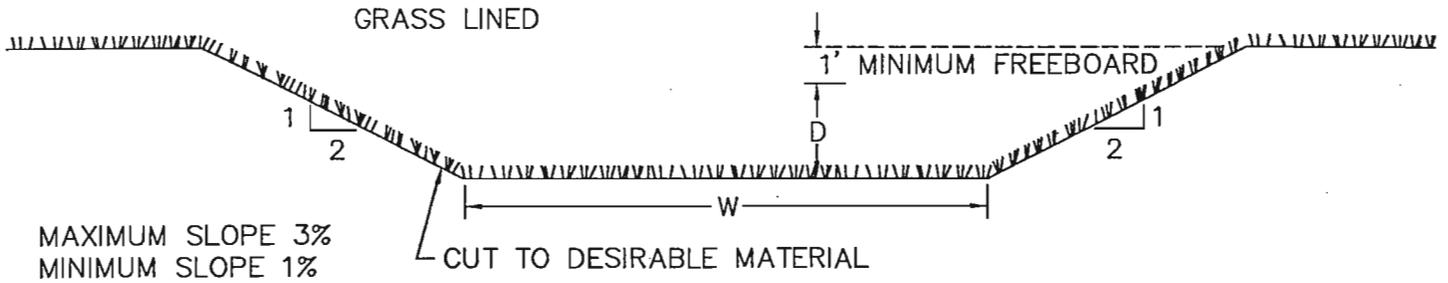
## Pond Construction Criteria

The embankment for sediment basins (temporary and permanent) shall be designed and built using the following as minimum criteria:

1. The top of the dam shall be no less than 12 feet wide.
2. See design sheet for maximum and minimum embankment slopes.
3. The foundation and abutments for the impounding structure shall be designed to be stable under all conditions of construction and operation of the impoundments, with a minimum static safety factor of 1.3 for the normal pool with steady seepage saturation conditions.
4. The dam shall be constructed with a cutoff trench based upon prudent engineering practices for the site. The cutoff shall be located on the dam centerline and be of sufficient depth to extend into a relatively impervious material from which the core of the dam shall also be constructed.
5. The embankment foundation area shall be cleared of all organic matter, all surfaces sloped to no steeper than 1v:1h, and the entire foundation surface scarified.
6. The entire embankment and cutoff trench shall be compacted to 95 percent density, based on standard proctor as outlined in ASTM.
7. The material placed in the embankment shall be free of sod, roots, stones over 6 inches in diameter, and other objectionable materials. The fill material shall be placed and spread over the entire fill area, starting at the lowest point of the foundation, in layers not to exceed 12 inches in thickness. Construction of the fill shall be undertaken only at such times that the moisture content of the fill material will permit satisfactory compaction in accordance with paragraph 5.
8. The pool area of all basins will be cleared of timber and large undergrowth.
9. The primary decant system when consisting of a pipe shall be installed according to Class C pipe installation for embankment bedding.
10. The primary decant system shall be equipped with a device, or constructed, such as to insure that subsurface withdrawal is accomplished to prevent discharge of floating solids. If a channel is used as the primary decant a skimmer shall be installed to prevent floating solids from discharging.
11. A splash pad or riprap may be required under the discharge of the primary decant system where necessary to insure that the discharge does not erode the embankment.

12. The combination primary and secondary decant system shall be designed to safely carry the expected peak flow from a 25 year - 6 hour storm. The entire emergency overflow spillway channel will be a stabilized channel and will be stabilized upon completion of construction as specified within the detailed design plans using prudent engineering measures. These measures may consist of lining the spillway with concrete or a durable rock riprap, or the spillway being constructed in consolidated non-erodible material and planted with a mixture or both annual and perennial grasses, or a combination of any or all of the above.
13. Sediment basins using a single spillway system shall be an open channel of non-erodible construction consisting of concrete, durable rock riprap or its being constructed in consolidated non-erodible material as specified in the detailed design plans.
14. The settled embankment for temporary impoundments shall be a minimum of 1.0 foot above the maximum water elevation for the runoff from a 25 year - 6 hour, or a 10 year - 24 hour precipitation event (whichever has the greatest runoff). The settled embankment for permanent impoundments shall be a minimum of 1.0 foot above the maximum water elevation for the runoff from a 25 year - 6 hour, or a 10 year - 24 hour precipitation event or greater event as specified by the Regulatory Authority. (whichever has the greatest runoff).
15. If basins are built in series, then the combined decant system for each shall be designed to accommodate the entire contributing drainage area.
16. The dam and all disturbed areas shall be seeded with both perennial and annual grasses, fertilized and mulched in order to insure erosion is minimized. Hay bales or riprap may be placed at the toe of the dam immediately upon completion of construction.
17. The constructed height of the dam shall be increased a minimum of 5 percent over the design height to allow for settlement over the life of the embankment.
18. Final graded slopes of the entire permanent water impoundment area shall not exceed 2.5H-1.0V to provide for adequate safety and access for proposed water users.
19. Prior to Phase II bond release, additional data concerning water quality, water quantity, depth, size, configuration, postmining land use, etc., for each proposed permanent water impoundment, shall be submitted to the Regulatory Authority for permanent water impoundment approval.
20. All sediment basins will be inspected for stability, erosion, etc. two (2) times a month until removal of the structure or release of the reclamation bond.

21. The embankment and spillway will be maintained by repairing any damage such as erosion, slope failure or spillway damage until removal of the structure or release of the performance bond.
22. All ponds shall be examined quarterly for structural weakness, instability, erosion, or other hazardous conditions and maintenance performed as necessary. Formal inspections shall be made on an annual basis, including any reports or modifications, in accordance with 880-X-10C-.20[1(j)] of the Alabama Surface Mining Commission Regulations.
23. Sediment will be removed from each pond when the accumulated sediment reaches the sediment storage volume as shown on the detailed design sheet.
24. Upon completion of mining, successful reclamation and effluent standards being met, each sediment basin not remaining as a permanent water impoundment will be dewatered in an environmentally safe manner (such as siphoning, pumping, etc.) and reclaimed to approximate original contours by the following procedure: A permanent diversion channel (designed for a 10 year - 24 hour precipitation event) shall be cut along the outer edge of the basin to re-route drainage around the basin and back through the stabilized spillway to allow reclamation of the sediment basin. The diversion channel shall be designed and grassed as per enclosed information. (See permanent diversion for basin disposal). Upon completion of the diversion channel the back slope of the dam shall be graded to a minimum 3H to 1V slope. The dewatered sediment basin area shall be seeded with some combination of the following: Fescue, Bermuda, rye grass, canary grass and willows. After seeding the area shall be mulched. Any additional sediment or embankment material not used to meet original contour, if non-toxic, shall be spread in thin layers within the permit area and vegetated as stated in the approved reclamation plan. All toxic material encountered in the basin disposal shall be buried and covered with 4 feet of non-toxic material and vegetated as stated in the approved reclamation plan.
25. A qualified registered professional engineer or other qualified professional specialist, under the direction of the professional engineer shall conduct regular inspections during construction and upon completion shall inspect each basin for certification purposes.
26. Point source discharge embankments shall be constructed and abutments keyed into desirable material if at all possible. In the event that undesirable material is encountered, addition design and construction criteria shall be submitted prior to certification.



$$Q = \frac{1.49}{N} A R^{2/3} S^{1/2}$$

$N(\text{loose stone or grass lined}) = 0.035$   
 $A = \text{area}$   
 $R = \text{area/wetted perimeter}$   
 $S = \text{slope}$

\* Grass lining: fescue, bermuda, rye grass

DIVERSION CHANNEL DEPTH (D) FOR WIDTH (W) 8.0 Ft.	
PEAK FLOW Q (CFS)	DEPTH D (Ft.)
0-15	0.5
15-50	1.0
50-100	1.5
100-180	2.0
180-270	2.5

DIVERSION CHANNEL DEPTH (D) FOR WIDTH (W) 10.0 Ft.	
PEAK FLOW Q (CFS)	DEPTH D (Ft.)
0-15	0.5
15-60	1.0
60-120	1.5
120-210	2.0
210-320	2.5

DIVERSION CHANNEL DEPTH (D) FOR WIDTH (W) 12.0 Ft.	
PEAK FLOW Q (CFS)	DEPTH D (Ft.)
0-20	0.5
20-70	1.0
70-150	1.5
150-250	2.0
250-383	2.5

DIVERSION CHANNEL DEPTH (D) FOR WIDTH (W) 15.0 Ft.	
PEAK FLOW Q (CFS)	DEPTH D (Ft.)
0-25	0.5
25-90	1.0
90-180	1.5
180-300	2.0
300-450	2.5



**PERMANENT DIVERSION CHANNEL  
FOR BASIN DISPOSAL**

DRAWN BY:

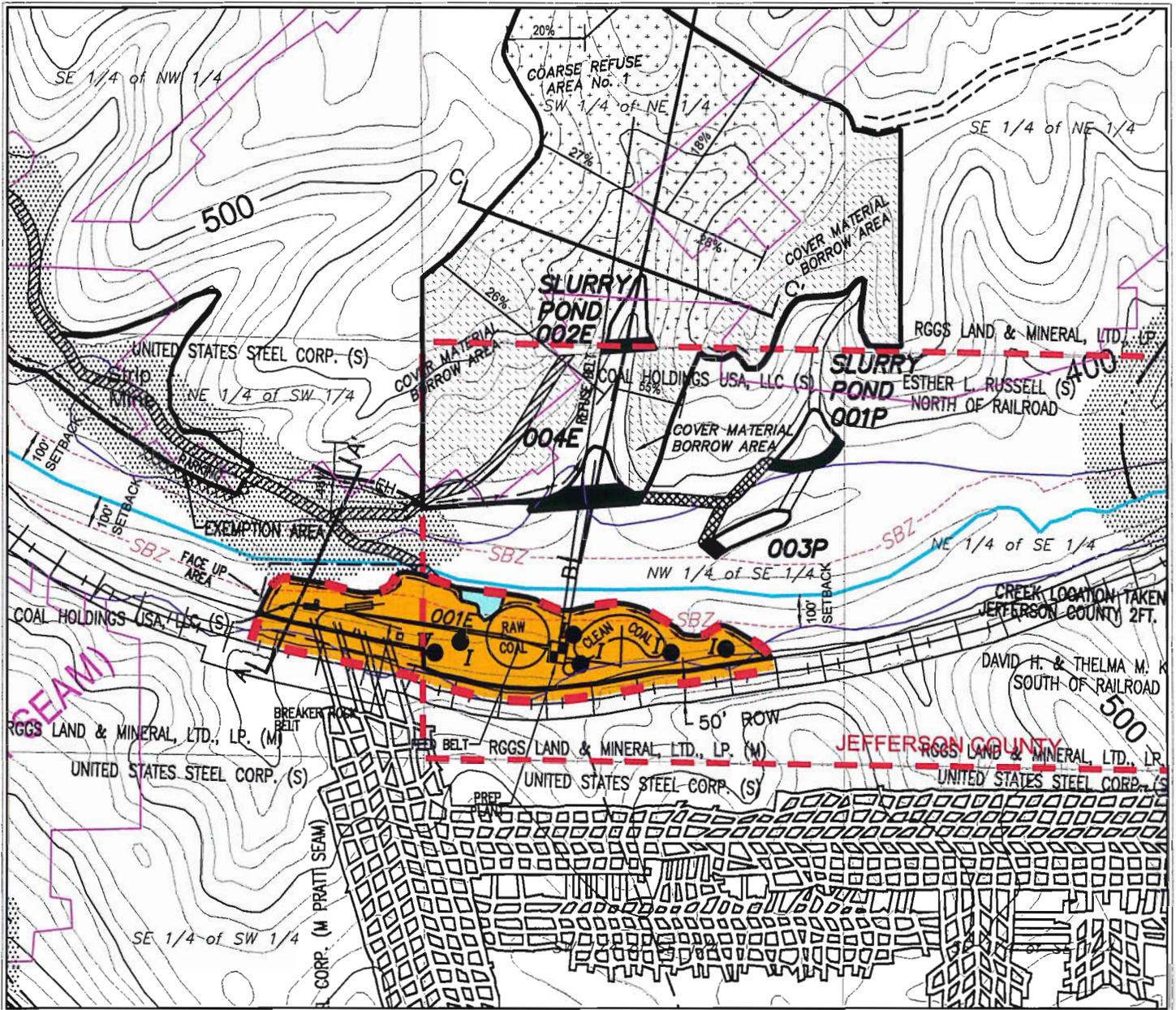
DATE:

APPROVED BY:

SCALE: NONE

## NOTES

- 1) The top of the existing embankment of Basin 001 (P-3768) will be raised 1.4' from elevation 361.6 to elevation 363.0 The interior of the basin will be excavated according to the lines and grades shown within these plans.
- 2) The primary spillway of Basin 001, consisting of an existing 18" diameter corrugated metal pipe, extends through the embankment back to the original drainage course.
- 3) A splash pad consisting of durable, non-erodible sandstone or limestone riprap, concrete pad, or consolidated non-erodible bedrock is located at the discharge point of the primary spillway of Basin 001 to prevent erosion.
- 4) The existing rip rap lined emergency spillway will be removed, raised 0.6' from elevation 360.6 to elevation 361.2 and replaced with a concrete spillway. The emergency spillway channel of Basin 001 will consist of a 10 foot wide open channel lined with 4 inches of concrete reinforced with 6X6 – W2.9 X W2.9 wire. The channel lining will extend back to the existing drainage course.
- 5) Due to Basin 001 being incised no stability analysis is required.



**LEGEND**

- PERMIT BOUNDARY
- DRAINAGE DIVIDE
- DIVERSIONS/BERM
- SEDIMENT BASIN
- SILT FENCING

**LANDUSE & CURVE NUMBER INFORMATION**

- GRADED & BARE, NUMBER, 81
- SEDIMENT BASIN, CURVE NUMBER, 100



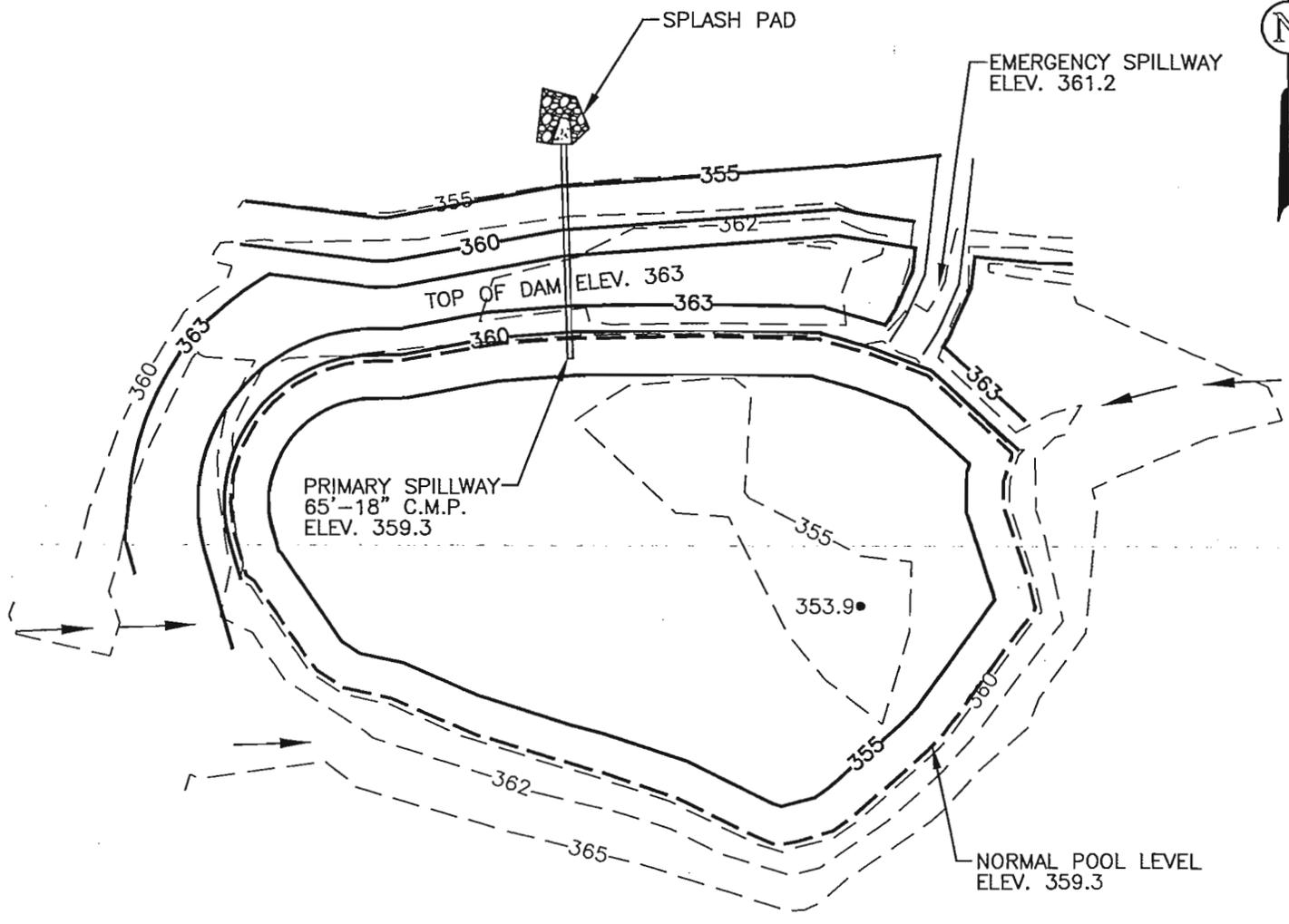
**BASIN 001 WATERSHED MAP  
NORTH PRATT MINING, LLC.  
PRATT NO. 1 MINE  
P-3972**

DRAWN BY: C.M.O.  
DWG. NAME: NPMPM1WS

DATE: 3-29-13

APPROVED BY: W.P.G.

SCALE: 1" = 500'



**LEGEND**

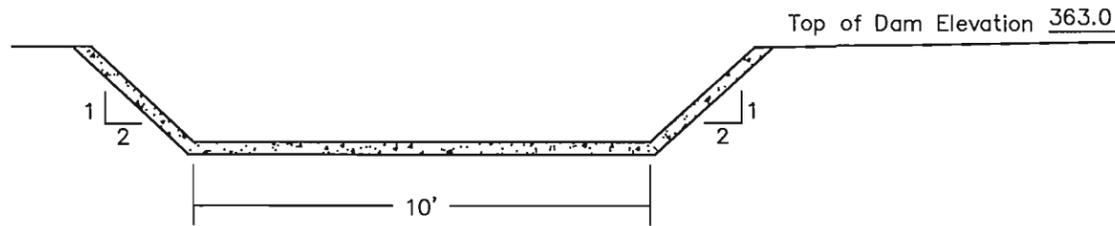
- 330 --- EXISTING CONTOUR
- 330 — FINISH CONTOUR
- ▶ —▶ MAJOR INFLOW
- - - - - NORMAL POOL LEVEL  
ELEV. 359.3



**NORTH PRATT MINING, LLC.  
PRATT NO. 1 MINE  
P-3972  
BASIN 001 PLANVIEW**

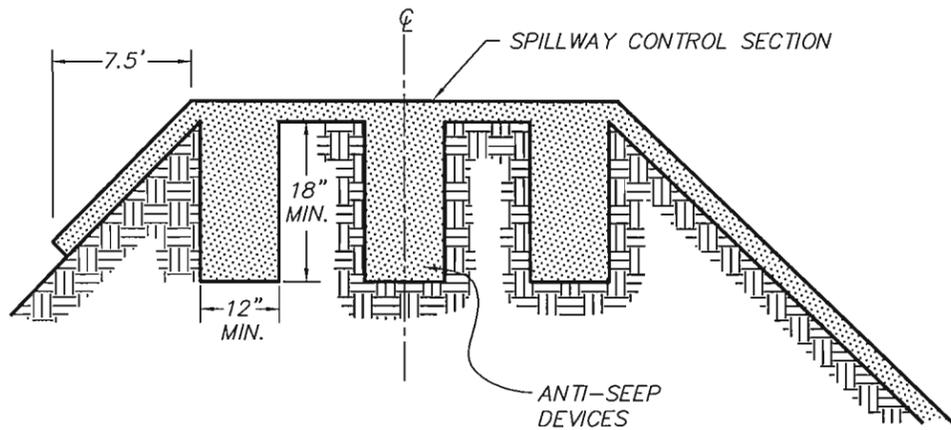
DRAWN BY: C.M.O.	DATE: 1-30-13
DWG. NAME: NPMPMB1PV	
APPROVED BY: W.P.G.	SCALE: 1"=50'

Channel Lining to consist of 4" Reinforced Concrete

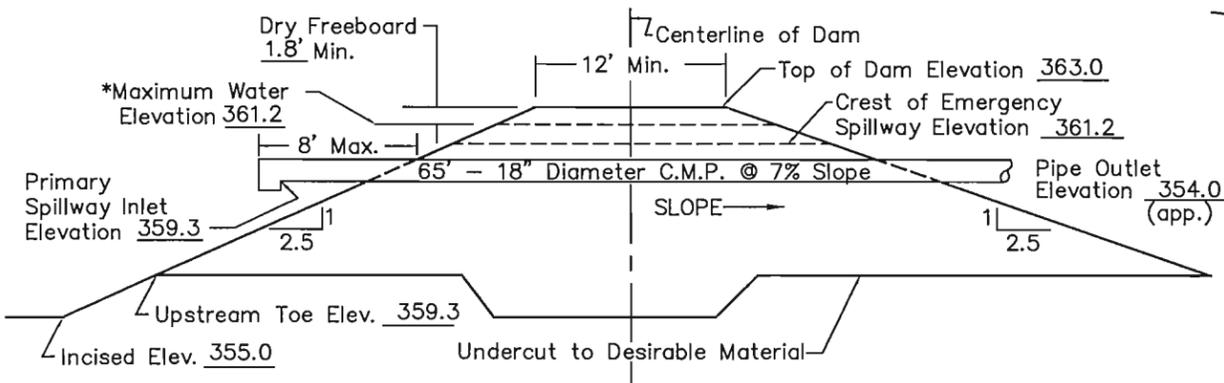


Spillway Gradient shall be Approximately 3%  
 Crest of Emergency Spillway Elevation 361.2  
 Pipe Inlet Elevation 359.3  
 Q out 7.8 C.F.S.

### Emergency Spillway



### ANTI-SEEP DEVICE TYPICAL



\*Storm with largest peak flow  
 Either 10 year - 24 hour event  
 or 25 year - 6 hour event.

### Typical Cross Section Along Primary Spillway

### Notes:

1. The sediment shall be removed from the basin when the accumulated sediment reaches the sediment storage volume.
2. Sediment control structures are required on pond inlets.
3. Outer slopes of embankment shall be grassed.
4. Fill material shall be placed in 12" lifts and compacted to 95% of standard proctor.
5. The surface beneath the embankment shall be stripped of undesirable material.
6. Upon completion of mining, reclamation and maintenance of water quality standards the pond will be de-watered and reclaimed.
7. See the attached pond construction criteria.
8. See the attached drawings and specifications for diversions.
9. Elevations are based on assumed datum.

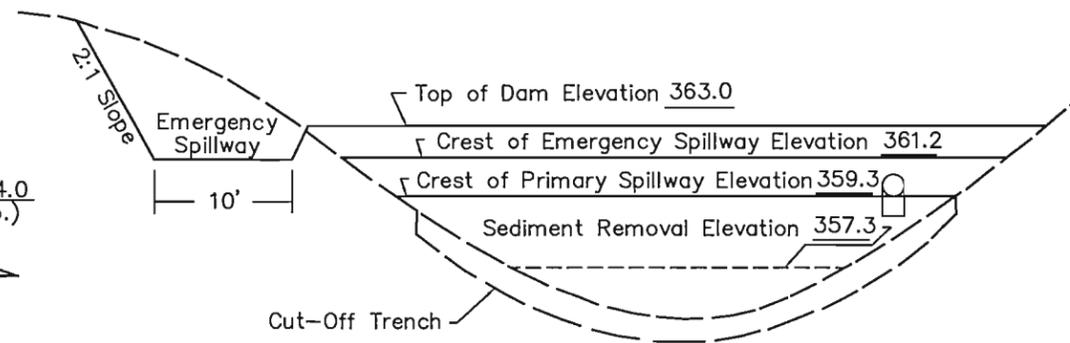
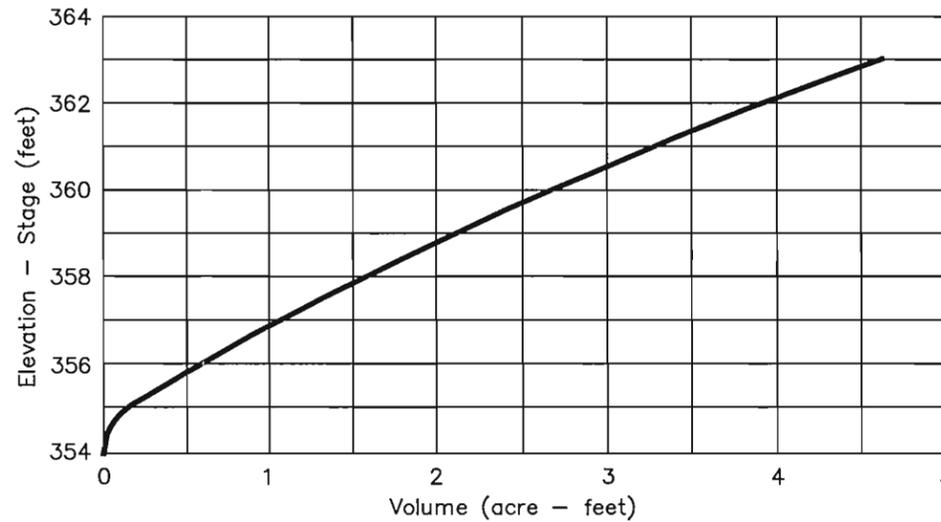
### Storage Computation

Elevation (feet)	Area (acres)	Avg. Area (acres)	Interval (feet)	Storage (ac.-ft.)	Acc. Storage (ac.-ft.)
353.9	0.000	0.212	1.1	0.155	0.000
355	0.423	0.506	5	2.516	0.155
360	0.588	0.658	3	1.971	2.671
363	0.728				4.642

### Key Basin Parameters

Drainage Area \_\_\_\_\_ 11 Acres  
 Disturbed Area \_\_\_\_\_ 10 Acres  
 Sediment Storage \_\_\_\_\_ 1.2 Ac. Ft.  
 Detention Storage \_\_\_\_\_ 1.0 Ac. Ft.  
 Permanent Pool Capacity \_\_\_\_\_ 2.2 Ac. Ft.  
 Total Basin Capacity \_\_\_\_\_ 3.4 Ac. Ft.  
 Peak Inflow \_\_\_\_\_ 30.4 C.F.S.  
 Peak Outflow \_\_\_\_\_ 7.8 C.F.S.

### Stage vs. Storage Curve



### Typical Profile Looking Downstream



*Leslie G. Stephens* 04/01/2013  
 Leslie G. Stephens, P.E., P.L.S. Date  
 AL Registration. #14117-E



**NORTH PRATT MINING, LLC.**  
**PRATT NO. 1 MINE**  
**P-3972**  
**BASIN 001**

DRAWN BY: C.M.O. DATE: 1-30-13  
 DWG. NAME: NPMPMB1DT  
 APPROVED BY: W.P.G. SCALE: NONE

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**NORTH PRATT MINING, LLC.**  
**PRATT NO. 1 MINE**  
**P-3972**  
**BASIN 001**

***6.0 INCHES, 10 YEAR - 24 HOUR, DRN 58***

WPG

PERC ENGINEERING CO., INC.  
P. O. BOX 1712  
JASPER, ALABAMA 35502

## ***General Information***

### ***Storm Information:***

Storm Type:	DRN58
Design Storm:	10 yr - 24 hr
Rainfall Depth:	6.000 inches

### ***Particle Size Distribution:***

Size (mm)	TOPSOIL
3.0000	100.000%
2.0000	96.000%
1.0000	89.000%
0.5000	79.000%
0.3000	68.000%
0.2000	59.000%
0.1000	50.000%
0.0500	42.000%
0.0300	31.000%
0.0200	22.000%
0.0100	18.000%
0.0050	14.000%
0.0030	7.000%
0.0010	2.000%

***Structure Networking:***

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Pond	#1	==>	End	0.000	0.000	BASIN 001

#1  
Pond

***Structure Summary:***

		Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)	Sediment (tons)	Peak Sediment Conc. (mg/l)	Peak Settleable Conc. (ml/l)	24VW (ml/l)
#1	In	11.000	11.000	14.56	3.74	64.0	22,687	14.71	8.12
	Out			7.82	3.73	6.7	1,855	0.00	0.00

***Particle Size Distribution(s) at Each Structure***

***Structure #1:***

Size (mm)	In	Out
3.0000	100.000%	100.000%
2.0000	96.000%	100.000%
1.0000	89.000%	100.000%
0.5000	79.000%	100.000%
0.3000	68.000%	100.000%
0.2000	59.000%	100.000%
0.1000	50.000%	100.000%
0.0500	42.000%	100.000%
0.0300	31.000%	100.000%
0.0200	22.000%	100.000%
0.0100	18.000%	100.000%
0.0050	14.000%	100.000%
0.0030	7.000%	66.632%
0.0010	2.000%	19.038%

***Structure Detail:***

Structure #1 (Pond)

*BASIN 001*

Pond Inputs:

Initial Pool Elev:	359.30
Initial Pool:	1.07 ac-ft
*Sediment Storage:	1.20 ac-ft
Dead Space:	20.00 %

*\*Sediment capacity was entered by user*

Straight Pipe

Barrel Diameter (in)	Barrel Length (ft)	Barrel Slope (%)	Manning's n	Spillway Elev	Entrance Loss Coefficient	Tailwater Depth (ft)
18.00	100.00	7.00	0.0240	359.30	0.90	0.00

Pond Results:

Peak Elevation:	361.19
H'graph Detention Time:	2.42 hrs
Pond Model:	CSTRS
Dewater Time:	1.03 days
Trap Efficiency:	89.49 %

*Dewatering time is calculated from peak stage to lowest spillway*

Elevation-Capacity-Discharge Table

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)
357.28	0.495	0.000	0.000	Top of Sed. Storage
357.40	0.499	0.061	0.000	
357.90	0.515	0.315	0.000	
358.40	0.532	0.577	0.000	
358.90	0.549	0.847	0.000	
359.30	0.563	1.069	0.000	Spillway #1
359.40	0.567	1.126	0.100	6.87*
359.90	0.584	1.414	1.466	9.75
360.00	0.588	1.472	1.845	1.70
360.40	0.606	1.711	3.624	3.90

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)
360.90	0.628	2.020	6.361	1.75
361.19	0.642	2.206	7.822	0.85 Peak Stage
361.40	0.651	2.340	8.869	
361.90	0.675	2.671	10.832	
362.40	0.699	3.015	12.493	
362.90	0.723	3.370	13.949	
363.00	0.728	3.443	14.223	

*\*Designates time(s) to dewater have been extrapolated beyond the 50 hour hydrograph limit.*

### Detailed Discharge Table

Elevation	Straight Pipe (cfs)	Combined Total Discharge (cfs)
357.28	0.000	0.000
357.40	0.000	0.000
357.90	0.000	0.000
358.40	0.000	0.000
358.90	0.000	0.000
359.30	0.000	0.000
359.40	(3)>0.100	0.100
359.90	(3)>1.466	1.466
360.00	(3)>1.845	1.845
360.40	(3)>3.624	3.624
360.90	(3)>6.361	6.361
361.40	(5)>8.869	8.869
361.90	(5)>10.832	10.832
362.40	(5)>12.493	12.493
362.90	(5)>13.949	13.949
363.00	(5)>14.223	14.223

***Subwatershed Hydrology Detail:***

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#1	1	10.000	0.085	0.000	0.000	81.000	F	12.98	3.236
	2	1.000	0.000	0.000	0.000	100.000	F	1.57	0.500
	$\Sigma$	<b>11.000</b>						<b>14.56</b>	<b>3.736</b>

***Subwatershed Sedimentology Detail:***

Stru #	SWS #	Soil K	L (ft)	S (%)	C	P	PS #	Sediment (tons)	Peak Sediment Conc. (mg/l)	Peak Settleable Conc (ml/l)	24VW (ml/l)
#1	1	0.300	200.00	2.00	0.9000	1.0000	1	64.0	25,407	16.47	9.37
	2	0.001	200.00	0.01	0.0010	1.0000	1	0.0	0	0.00	0.00
	$\Sigma$							<b>64.0</b>	<b>22,687</b>	<b>14.71</b>	<b>8.12</b>

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**NORTH PRATT MINING, LLC.**  
**PRATT NO. 1 MINE**  
**P-3972**  
**BASIN 001**

***4.8 INCHES, 25 YEAR - 6 HOUR, SCS 6 HOUR***

WPG

PERC ENGINEERING CO., INC.  
P. O. BOX 1712  
JASPER, ALABAMA 35502

***General Information***

***Storm Information:***

Storm Type:	Rainfall Event
-------------	----------------

Accumulated Time (hrs)	Accumulated Depth (in)
0.00	0.0000
0.50	0.1680
1.00	0.3840
1.50	0.6480
2.00	1.1040
2.50	2.8800
3.00	3.3600
3.50	3.7440
4.00	4.0080
4.50	4.2480
5.00	4.4400
5.50	4.6320
6.00	4.8000

*Peak 30-minute Intensity: 3.552 in/hr*

***Particle Size Distribution:***

Size (mm)	TOPSOIL
3.0000	100.000%
2.0000	96.000%
1.0000	89.000%
0.5000	79.000%
0.3000	68.000%
0.2000	59.000%
0.1000	50.000%
0.0500	42.000%
0.0300	31.000%
0.0200	22.000%
0.0100	18.000%
0.0050	14.000%

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Size (mm)	TOPSOIL
0.0030	7.000%
0.0010	2.000%

***Structure Networking:***

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Pond	#1	==>	End	0.000	0.000	BASIN 001

#1  
Pond

***Structure Summary:***

		Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)	Sediment (tons)	Peak Sediment Conc. (mg/l)	Peak Settleable Conc. (ml/l)	24VW (ml/l)
#1	In	11.000	11.000	30.35	2.74	80.1	35,820	23.22	13.85
	Out			7.78	2.74	8.5	2,570	0.00	0.00

***Particle Size Distribution(s) at Each Structure******Structure #1:***

Size (mm)	In	Out
3.0000	100.000%	100.000%
2.0000	96.000%	100.000%
1.0000	89.000%	100.000%
0.5000	79.000%	100.000%
0.3000	68.000%	100.000%
0.2000	59.000%	100.000%
0.1000	50.000%	100.000%
0.0500	42.000%	100.000%
0.0300	31.000%	100.000%
0.0200	22.000%	100.000%
0.0100	18.000%	100.000%
0.0050	14.000%	100.000%
0.0030	7.000%	66.105%
0.0010	2.000%	18.887%

***Structure Detail:***

Structure #1 (Pond)

*BASIN 001*

Pond Inputs:

Initial Pool Elev:	359.30
Initial Pool:	1.07 ac-ft
*Sediment Storage:	1.20 ac-ft
Dead Space:	20.00 %

*\*Sediment capacity was entered by user*

Straight Pipe

Barrel Diameter (in)	Barrel Length (ft)	Barrel Slope (%)	Manning's n	Spillway Elev	Entrance Loss Coefficient	Tailwater Depth (ft)
18.00	100.00	7.00	0.0240	359.30	0.90	0.00

Emergency Spillway

Spillway Elev	Crest Length (ft)	Left Sideslope	Right Sideslope	Bottom Width (ft)
361.20	10.00	2.00:1	2.00:1	10.00

Pond Results:

Peak Elevation:	361.17
H'graph Detention Time:	2.19 hrs
Pond Model:	CSTRS
Dewater Time:	1.34 days
Trap Efficiency:	89.41 %

*Dewatering time is calculated from peak stage to lowest spillway*

Elevation-Capacity-Discharge Table

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)
357.28	0.495	0.000	0.000	Top of Sed. Storage
357.40	0.499	0.061	0.000	
357.90	0.515	0.315	0.000	
358.40	0.532	0.577	0.000	

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)
358.90	0.549	0.847	0.000	
359.30	0.563	1.069	0.000	Spillway #1
359.40	0.567	1.126	0.100	20.55
359.90	0.584	1.414	1.466	6.85
360.00	0.588	1.472	1.845	0.40
360.40	0.606	1.711	3.624	1.10
360.90	0.628	2.020	6.361	1.90
361.17	0.641	2.190	7.780	1.30 Peak Stage
361.20	0.642	2.210	7.948	Spillway #2
361.40	0.652	2.340	13.186	
361.90	0.675	2.671	25.944	
362.40	0.699	3.015	52.734	
362.90	0.723	3.370	90.167	
363.00	0.728	3.443	98.655	

Detailed Discharge Table

Elevation	Straight Pipe (cfs)	Emergency Spillway (cfs)	Combined Total Discharge (cfs)
357.28	0.000	0.000	0.000
357.40	0.000	0.000	0.000
357.90	0.000	0.000	0.000
358.40	0.000	0.000	0.000
358.90	0.000	0.000	0.000
359.30	0.000	0.000	0.000
359.40	(3)>0.100	0.000	0.100
359.90	(3)>1.466	0.000	1.466
360.00	(3)>1.845	0.000	1.845
360.40	(3)>3.624	0.000	3.624
360.90	(3)>6.361	0.000	6.361
361.20	(5)>7.948	0.000	7.948
361.40	(5)>8.869	4.318	13.186
361.90	(5)>10.832	15.112	25.944
362.40	(5)>12.493	40.242	52.734
362.90	(5)>13.949	76.217	90.167
363.00	(5)>14.224	84.431	98.655

***Subwatershed Hydrology Detail:***

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#1	1	10.000	0.085	0.000	0.000	81.000	F	26.77	2.341
	2	1.000	0.000	0.000	0.000	100.000	F	3.58	0.400
	<b>Σ</b>	<b>11.000</b>						<b>30.35</b>	<b>2.741</b>

***Subwatershed Sedimentology Detail:***

Stru #	SWS #	Soil K	L (ft)	S (%)	C	P	PS #	Sediment (tons)	Peak Sediment Conc. (mg/l)	Peak Settleable Conc (ml/l)	24VW (ml/l)
#1	1	0.300	200.00	2.00	0.9000	1.0000	1	80.1	40,535	26.28	16.19
	2	0.001	200.00	0.01	0.0010	1.0000	1	0.0	0	0.00	0.00
	<b>Σ</b>							<b>80.1</b>	<b>35,820</b>	<b>23.22</b>	<b>13.85</b>