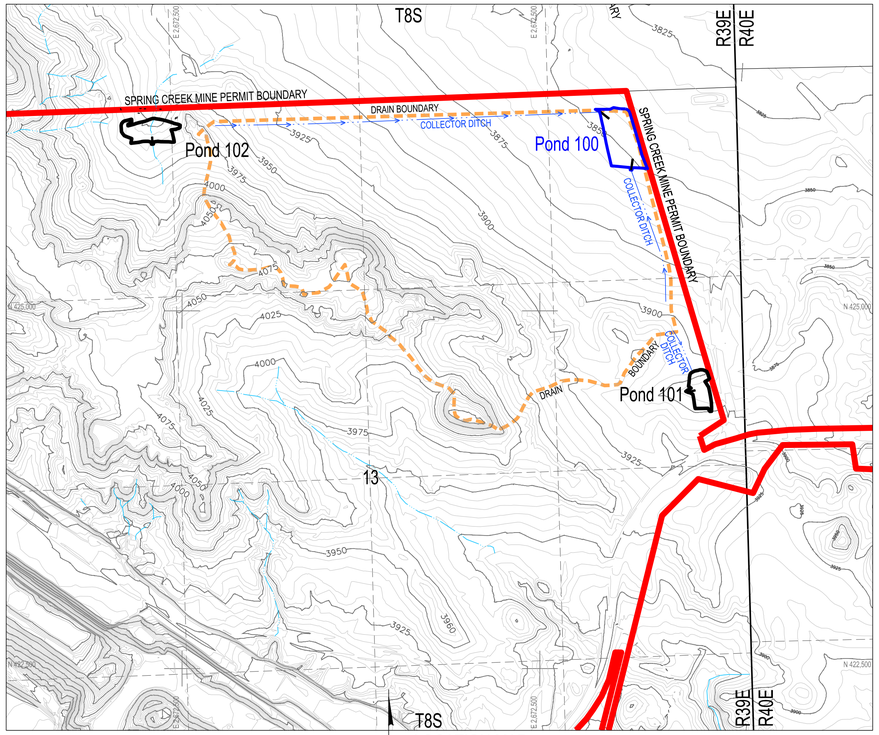


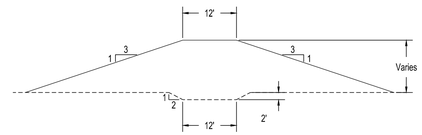
LOCATION MAP
SCALE: 1" = 500, C.I. = 5'

PLAN VIEW
SCALE: 1" = 50', C.I. = 5'

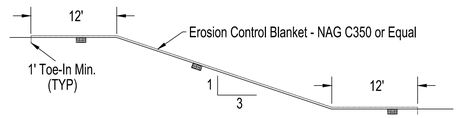
AREA CAPACITY TABLE

Elevation	Area (sf)	Area (ac)	Ave Area (ac)	Incr. Cap (ac-ft)	Cum. Cap (ac-ft)	
3834	34,114	0.78			0.00	Inactive Capacity 1.69 ac-ft
			0.81	0.81		
3835	36,729	0.84			0.81	
			0.87	0.87		
3836	39,442	0.91			1.69	
			0.94	0.94		Normal Operating Pool 9.40 ac-ft
3837	42,194	0.97			2.62	
			1.00	1.00		
3838	45,044	1.03			3.63	
			1.07	1.07		
3839	47,972	1.10			4.69	
			1.14	1.14		
3840	50,978	1.17			5.83	
			1.21	1.21		
3841	54,060	1.24			7.04	
			1.28	1.28		
3842	57,220	1.31			8.31	
			1.35	1.35		
3843	60,456	1.39			9.66	
			1.43	1.43		
3844	63,770	1.46			11.09	HWL

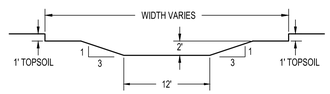
Note: Active capacity to be used for pollution control (dust abatement)
Active capacity will be pump discharged to a water truck



TYPICAL DAM SECTION
SCALE: 1" = 20'

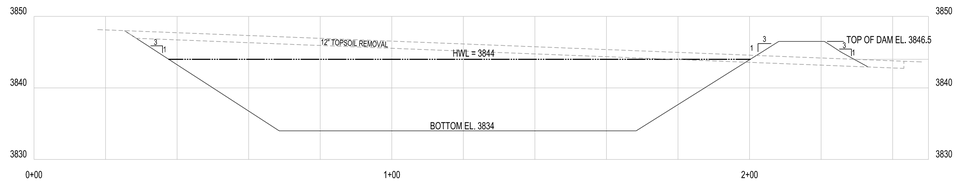


TYPICAL INLET CHANNEL PROFILE
NO SCALE

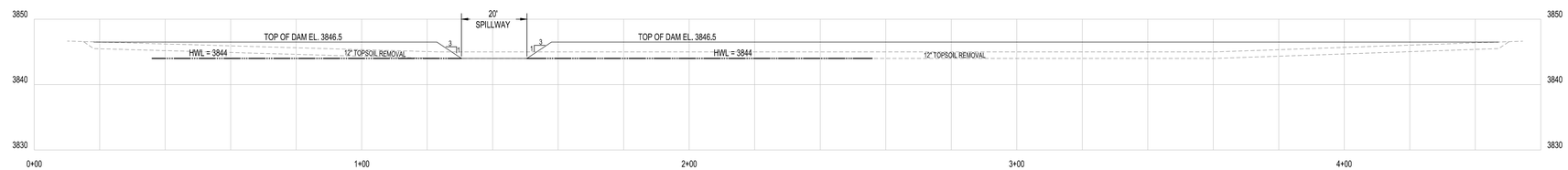


TYPICAL COLLECTOR DITCH
SCALE: 1" = 10'

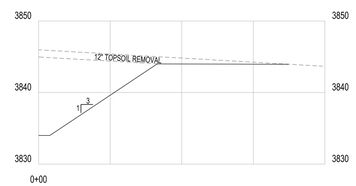
TYPICAL INLET CHANNEL SECTION
NO SCALE



SECTION A-A'
SCALE: H: 1"=20', V: 1"=10'



SECTION B-B'
SCALE: H: 1"=20', V: 1"=10'



SECTION C-C'
SCALE: H: 1"=20', V: 1"=10'

SEDIMENT YIELD CALCULATIONS

DISTURBED AREA (ac)	SEDIMENT VOL/AC (ac-ft)	REQUIRED STORAGE (ac-ft)
67.40	0.02	1.35

HYDROLOGIC DESIGN CALCULATIONS

HYDROLOGIC DESIGN PARAMETERS					100-YR, 24-HR STORM			25-YR, 24-HR STORM		
SOURCE AREA (sq mi)	WATERCOURSE LENGTH (mi)	ELEVATION DIFFERENCE (ft)	INFILTRATION RATE (in/hr)	CURVE NUMBER (CN)	100-YR, 24-HR PRECIPITATION (in)	PEAK INFLOW (cfs)	RUNOFF VOLUME (ac-ft)	25-YR, 24-HR PRECIPITATION (in)	PEAK INFLOW (cfs)	RUNOFF VOLUME (ac-ft)
0.177	0.617	245	0.27	84.00	3.35	252.92	8.78	2.65	173.79	5.61

EMERGENCY SPILLWAY CONTROL SECTION HYDRAULICS

Q =CLH3/2

$Q_{25\text{-}24}$ = 173.79 cfs
C = 2.98
L = 20 ft
H = 2.04 ft
V = 4.26 fps

NOTARY PUBLIC

SUBSCRIBED AND SWORN BEFORE ME THIS
_____ DAY OF _____, _____
NOTARY PUBLIC _____
RESIDING IN _____
MY COMMISSION EXPIRES _____

CERTIFICATE OF ENGINEER

I, Owen Lindblom of Gillette, Wyoming, hereby certify that this map and drawings were prepared by myself or under my direct supervision using topographic maps prepared for Spring Creek Coal LLC dated 09/17 and that they correctly represent the facilities and conditions described in the accompanying application.

MONTANA
OWEN D. LINDBLOM
36748PE
LICENSED PROFESSIONAL ENGINEER

OWEN D. LINDBLOM, P.E. No. 36748PE

Legend

- Permit Boundary
- Drainage Boundary
- Collector Ditch
- POWER — Overhead Powerline

SPRING CREEK MINE

P.O.BOX 67
DECKER, MT 59025
(406) 757-2581

CLOUD PEAK ENERGY®
GILLETTE, WYOMING

DATE	BY	REVISION
8/28/18	ODL	Increase Capacity to Hold 100-YR, 24-HR Runoff

Sediment Control

Spring Creek Mine Pond # 100

DRAWN BY RWC SHEET 1 OF 1 DATE 12/04/17
SCALE as shown FILE NUMBER NE P4 Sediment Ponds.dwg