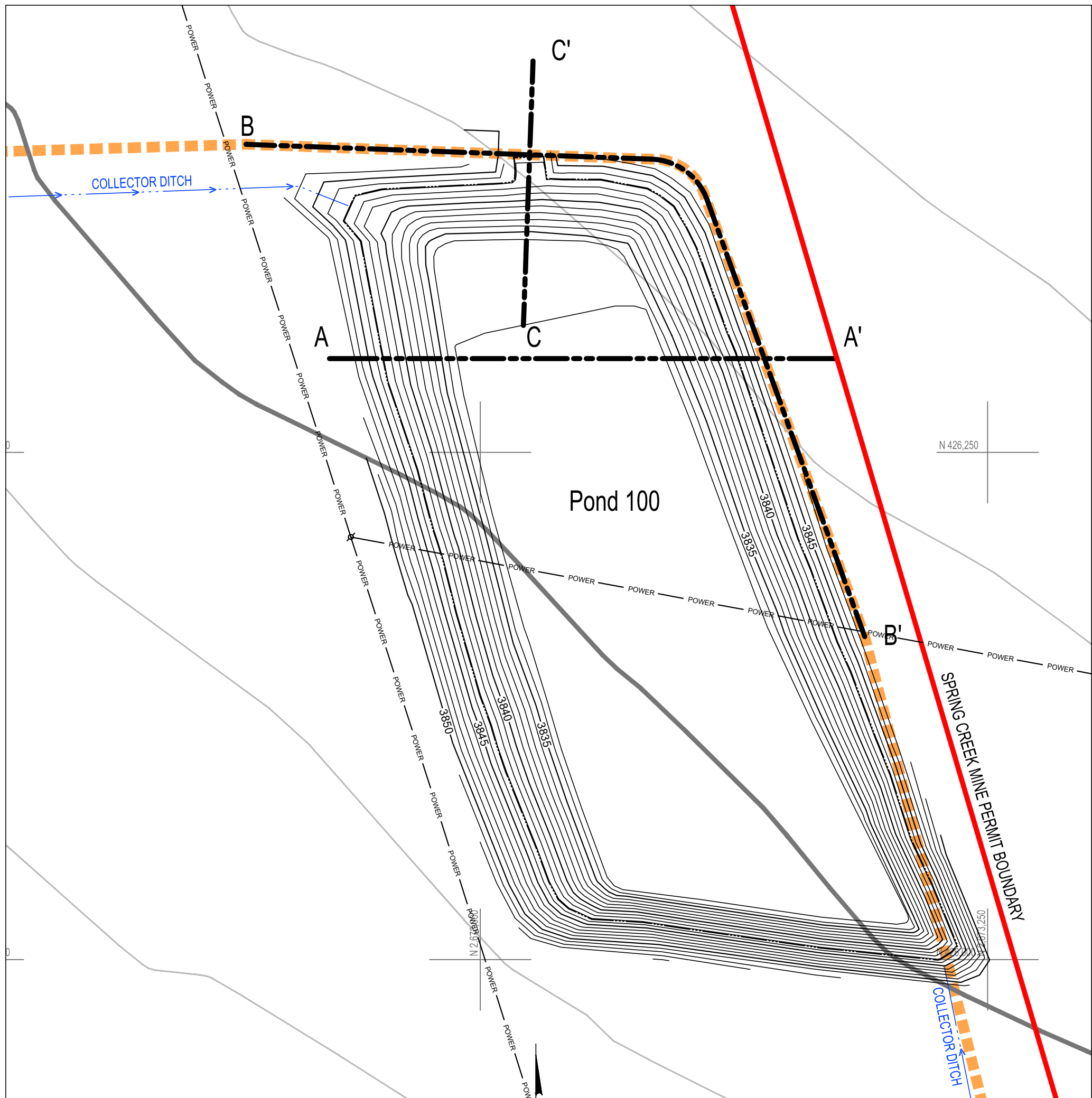
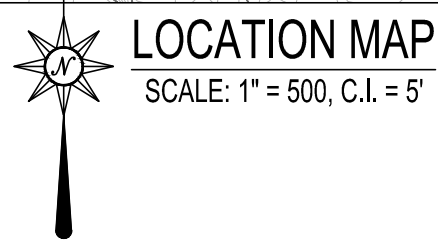
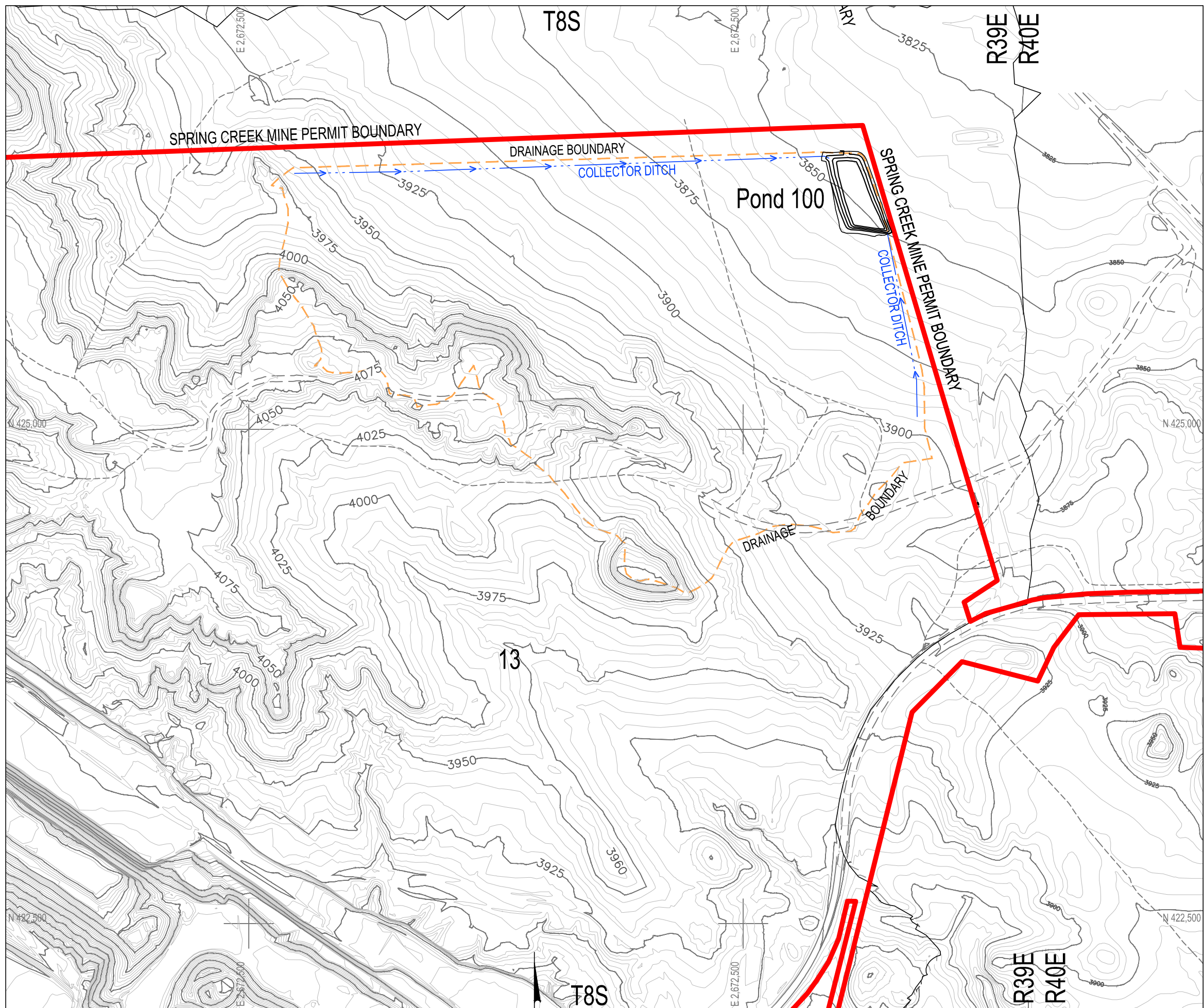


AREA CAPACITY TABLE

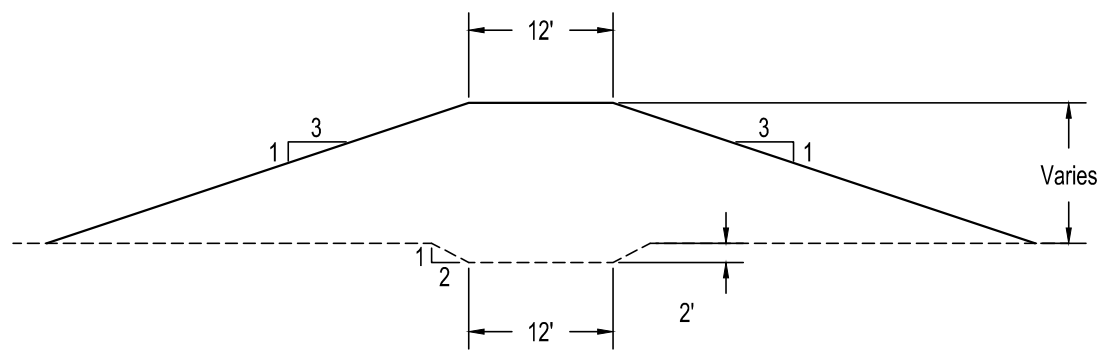
Elevation	Area (sf)	Area (ac)	Ave Area	Incr. Cap	Cum. Cap
3833	34913	0.80			0
3834	41010	0.94	0.87	0.87	0.87
3835	43682	1.00	0.97	0.97	1.84
3836	46236	1.06	1.03	1.03	2.88
3837	48985	1.12	1.09	1.09	3.97
3838	51685	1.19	1.16	1.16	5.12
3839	54488	1.25	1.22	1.22	6.34
3840	57331	1.32	1.28	1.28	7.63
3841	60286	1.38	1.35	1.35	8.98
3842	63237	1.45	1.42	1.42	10.39
3843	66366	1.52	1.49	1.49	11.88
3843.1	66746	1.53	1.53	0.15	12.03

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

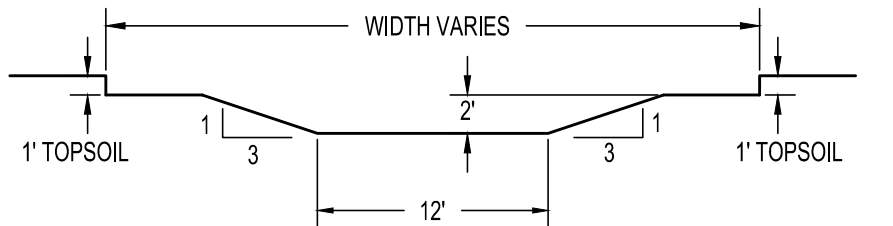
Inactive Capacity = 1.84 ac-ft

Normal Operating Pool = 10.19 ac-ft

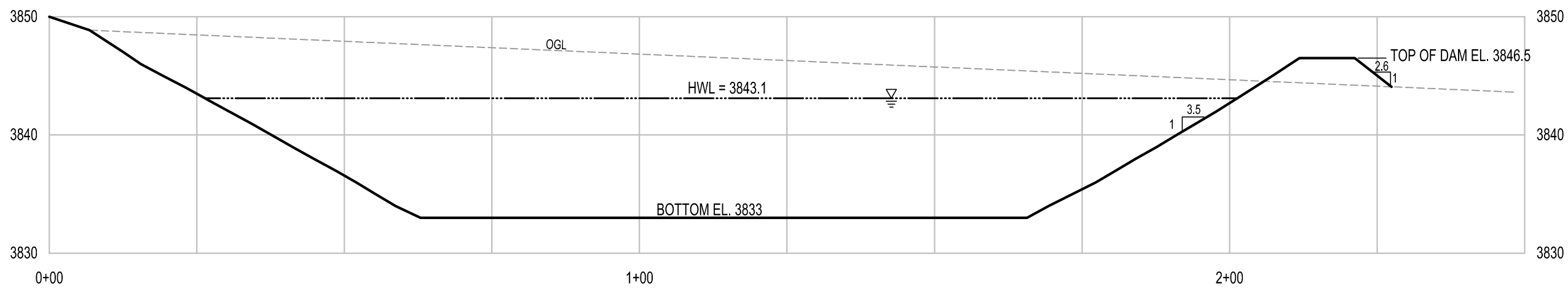
HWL



TYPICAL DAM SECTION
SCALE: 1" = 20'



TYPICAL COLLECTOR DITCH
SCALE: 1" = 10'



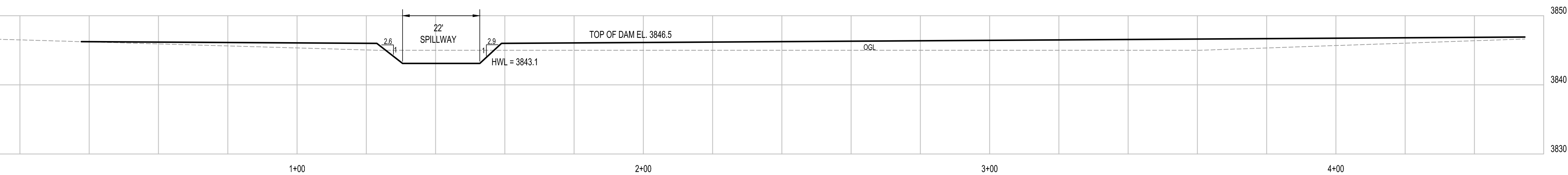
SECTION A-A'
SCALE: H: 1"=20', V: 1"=10'

EMERGENCY SPILLWAY CONTROL
SECTION HYDRAULICS

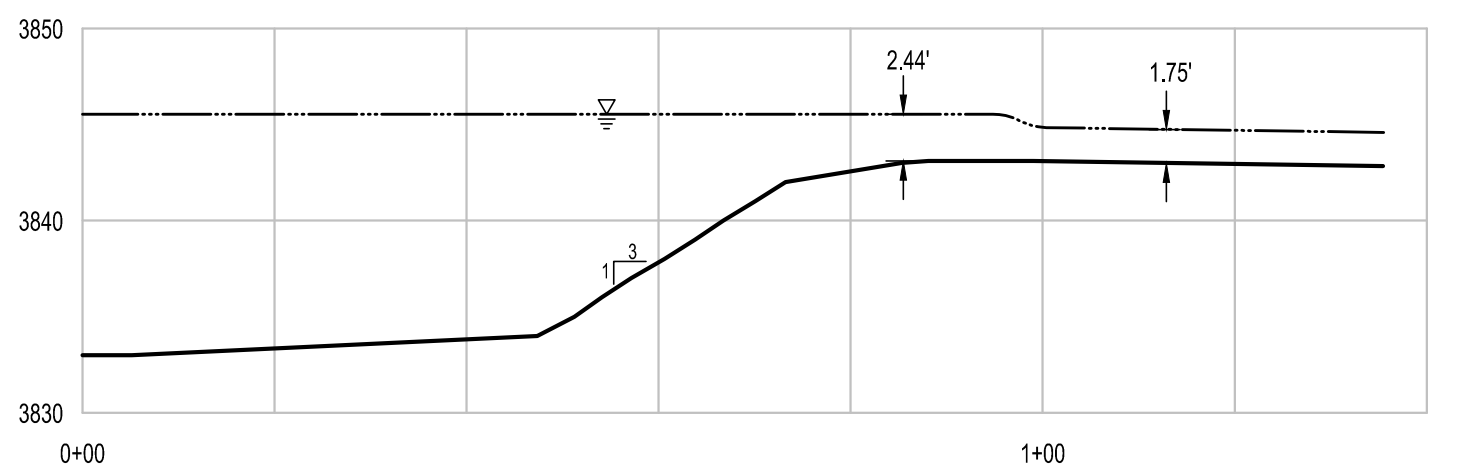
$$Q = CLH^{3/2}$$
$$Q_{100-24} = 252.92 \text{ cfs}$$
$$C = 3.01$$
$$L = 22 \text{ ft}$$
$$H = 2.44 \text{ ft}$$
$$V = 4.70 \text{ fps}$$

EMERGENCY SPILLWAY TRANSPORT
SECTION HYDRAULICS

$$Q = \frac{1.49}{n} AR^{2/3} S^{1/2}$$
$$Q_{100-24} = 252.92 \text{ cfs}$$
$$n = 0.030$$
$$S = 0.007 \text{ ft/ft}$$
$$Z = 3$$
$$b = 22 \text{ ft}$$
$$A = 47.8 \text{ ft}^2$$
$$WP = 33.1 \text{ ft}$$
$$R = 17.3 \text{ ft}$$
$$V = 5.29 \text{ fps}$$
$$Y_n = 1.75 \text{ ft}$$



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



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

SEDIMENT YEILD 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		
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)
0.177	0.617	245	0.27	84.00	3.35	252.92

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



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

CERTIFICATE OF ENGINEER

I, Owen Lindblom of Gillette, Wyoming, hereby certify that this map and drawing was prepared by myself or under my direct supervision using topographic maps prepared for Spring Creek Coal LLC dated 03/2020 and that they correctly represent the facilities and conditions described in the accompanying application.

Legend

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

SPRING CREEK MINE



Sediment Control
Spring Creek Mine Pond # 100

As-Built

DRAWN BY: RWC SHEET 1 OF 1 DATE: 12/04/17
SCALE: as shown FILE NUMBER: App'd: Pond 100, 20200410, MR254.dwg