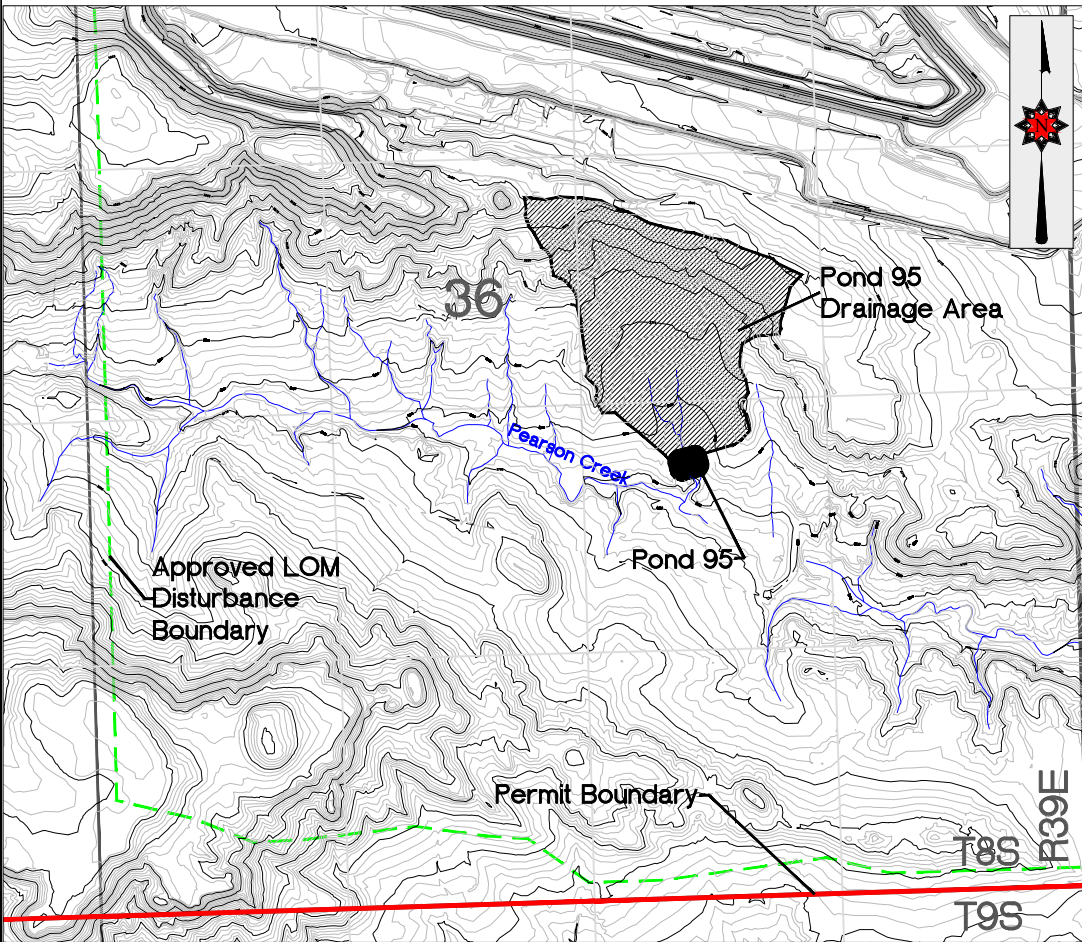
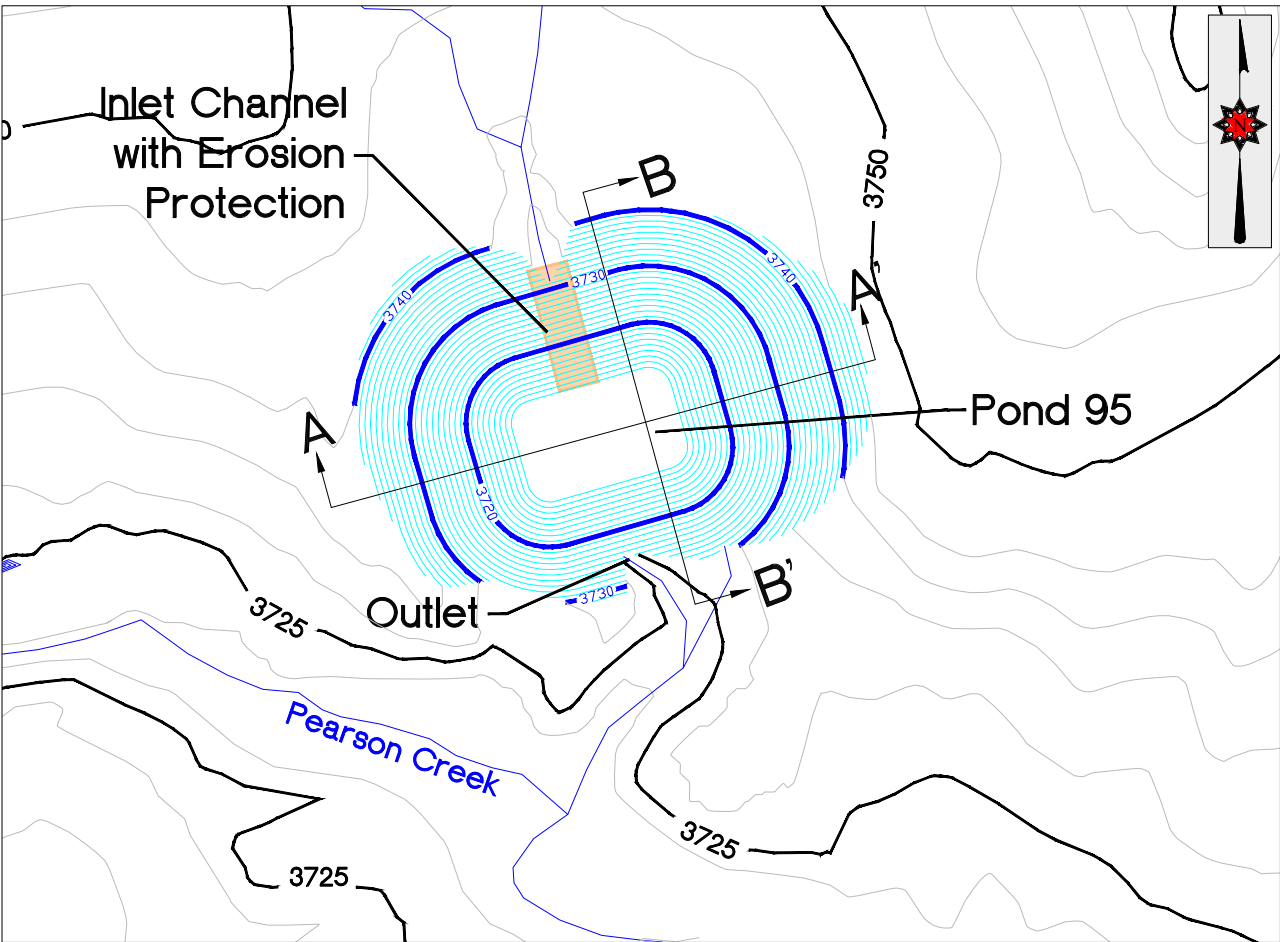




LOCATION MAP

SCALE: 1" = 1,000', C.I. = 5'

POND IS LOCATED PRIMARILY IN NWSE OF SECTION 36, T8S, R39E.



PLAN MAP

SCALE: 1" = 100', POND C.I. = 1', OUTER C.I. = 5'

AREA-ELEVATION-CAPACITY TABLE				
ELEVATION (FT AMSL)	AREA (ACRES)	INCREMENTAL CAPACITY (ACRE-FEET)	CUMULATIVE CAPACITY (ACRE-FEET)	USE
3,711.98	0.00		0.00	INACTIVE CAPACITY VOLUME = 0.56 AC-FT.
3,712.98	0.13	0.07	0.07	
3,713.98	0.15	0.14	0.21	
3,714.98	0.17	0.16	0.37	sediment storage
3,715.98	0.20	0.19	0.56	
3,716.98	0.22	0.21	0.76	
3,717.98	0.25	0.23	1.00	ACTIVE CAPACITY VOLUME = 2.4 AC-FT.
3,718.98	0.27	0.26	1.26	
3,719.98	0.30	0.29	1.55	
3,720.98	0.33	0.32	1.86	10-YEAR / 24-HOUR RUNOFF VOLUME = 2.4 AC-FT.
3,721.98	0.36	0.35	2.21	
3,722.98	0.40	0.38	2.59	
3,723.98	0.42	0.41	3.00	
HIGH WATER LINE = 3,723.98 FT. AMSL, TOTAL CAPACITY = 3.0 AC-FT.				

POND 95 DRAINAGE AREA DATA

TOTAL DRAINAGE AREA = 27.2 acres
LONGEST WATERCOURSE = 1,800 ft
AVERAGE LAND SLOPE = 15.75%
CURVE NUMBER = 87 (Disturbed Mine Land)
SOILS = Hydrologic Soils Group C
TIME OF CONCENTRATION = 0.168 Hours

RUNOFF ESTIMATE TO POND 95

RAINFALL DISTRIBUTION = SCS TYPE II
PRECIPITATION (10YR-24HR) = 2.19 in
PEAK Q (10YR-24HR) = 37.3 cfs
VOLUME (10YR-24HR) = 2.4 ac-ft
DESIGN METHOD = SCS RUNOFF CURVE NUMBER
METHOD AND SCS GRAPHICAL
PEAK DISCHARGE METHOD
(NRCS TR-55 METHOD)

POND 95 DESIGN CAPACITY

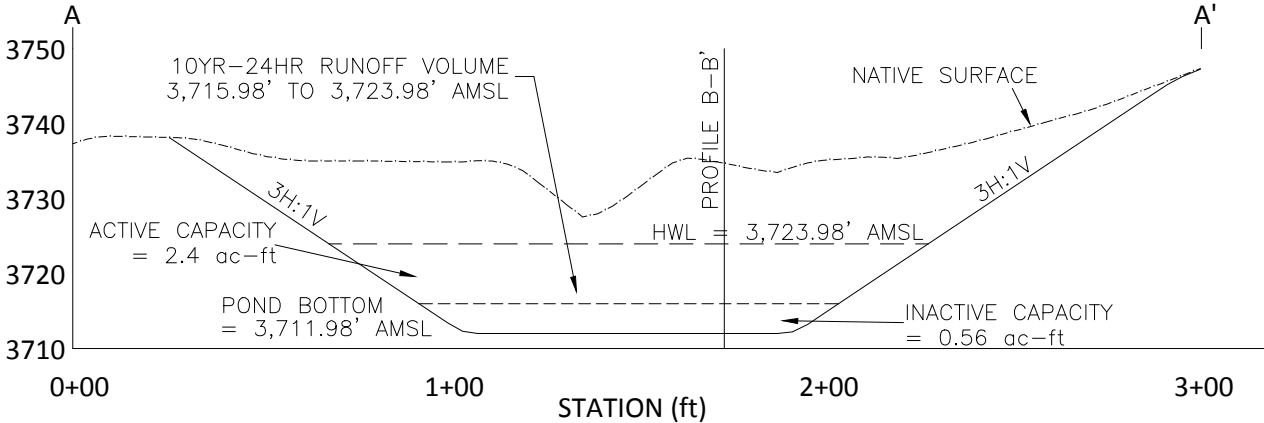
SEDIMENT CAPACITY (0.02 ac-ft per acre) = 0.56 ac-ft
10YR-24HR RUNOFF VOLUME = 2.4 ac-ft
TOTAL DESIGN (MINIMUM) CAPACITY = 3.0 ac-ft

CERTIFICATE OF ENGINEER

I, Eric M. Detmer, hereby certify that this map and drawings were prepared by myself or under my direct supervision and that they correctly represent the facilities and conditions described in the accompanying application.

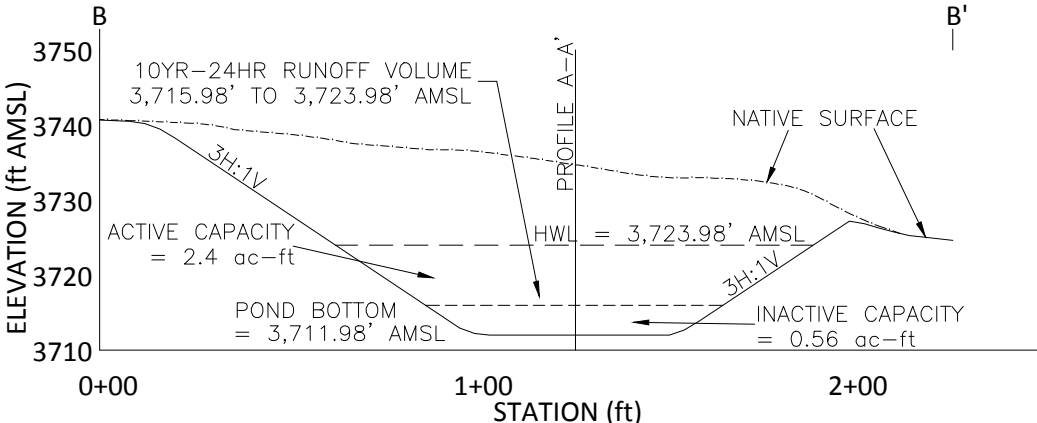


ERIC M. DETMER, P.E. No. 11396



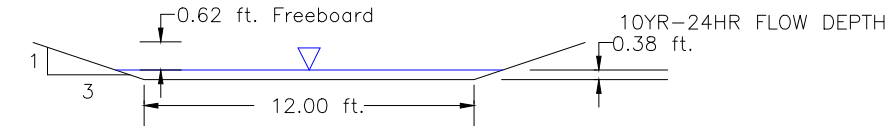
POND PROFILE A-A'

SCALE: H: 1" = 50', V: 1" = 25'



POND PROFILE B-B'

SCALE: H: 1" = 50', V: 1" = 25'



INLET CHANNEL AND EROSION PROTECTION

SCALE: AS SHOWN

INLET CHANNEL HYDRAULICS

CHANNEL TYPE	=	TRAPEZOIDAL, EQUAL SIDE SLOPES	RETARDANCE CLASS	=	C
BOTTOM WIDTH	=	12 ft	VEGETATION TYPE	=	BUNCH TYPE
SIDE SLOPES	=	3H:1V	VEGETATION DENSITY	=	FAIR (50-75%)
MAXIMUM SLOPE	=	33% (POND FACE SLOPE)	SOIL TYPE	=	SILT LOAM
10YR-24HR PEAK FLOW	=	37.3 cfs	VELOCITY	=	7.6 ft/s
CHANNEL LINING	=	N.A.G. P300 EROSION CONTROL BLANKET (PERMANENT) WITH VEGETATION	NORMAL DEPTH	=	0.38 ft
			MANNING'S N	=	0.056
			PERMISSIBLE SHEAR STRESS	=	8 lbs/ft ²
			CALCULATED SHEAR STRESS	=	7.76 lbs/ft ²



 CLOUD PEAK ENERGY®				<i>SPRING CREEK MINE</i> P.O. BOX 67, DECKER, MT 59025 PHONE: (406) 757-2581			
DATE		REVISION		Sediment Control Pond 95 Design			
BY							