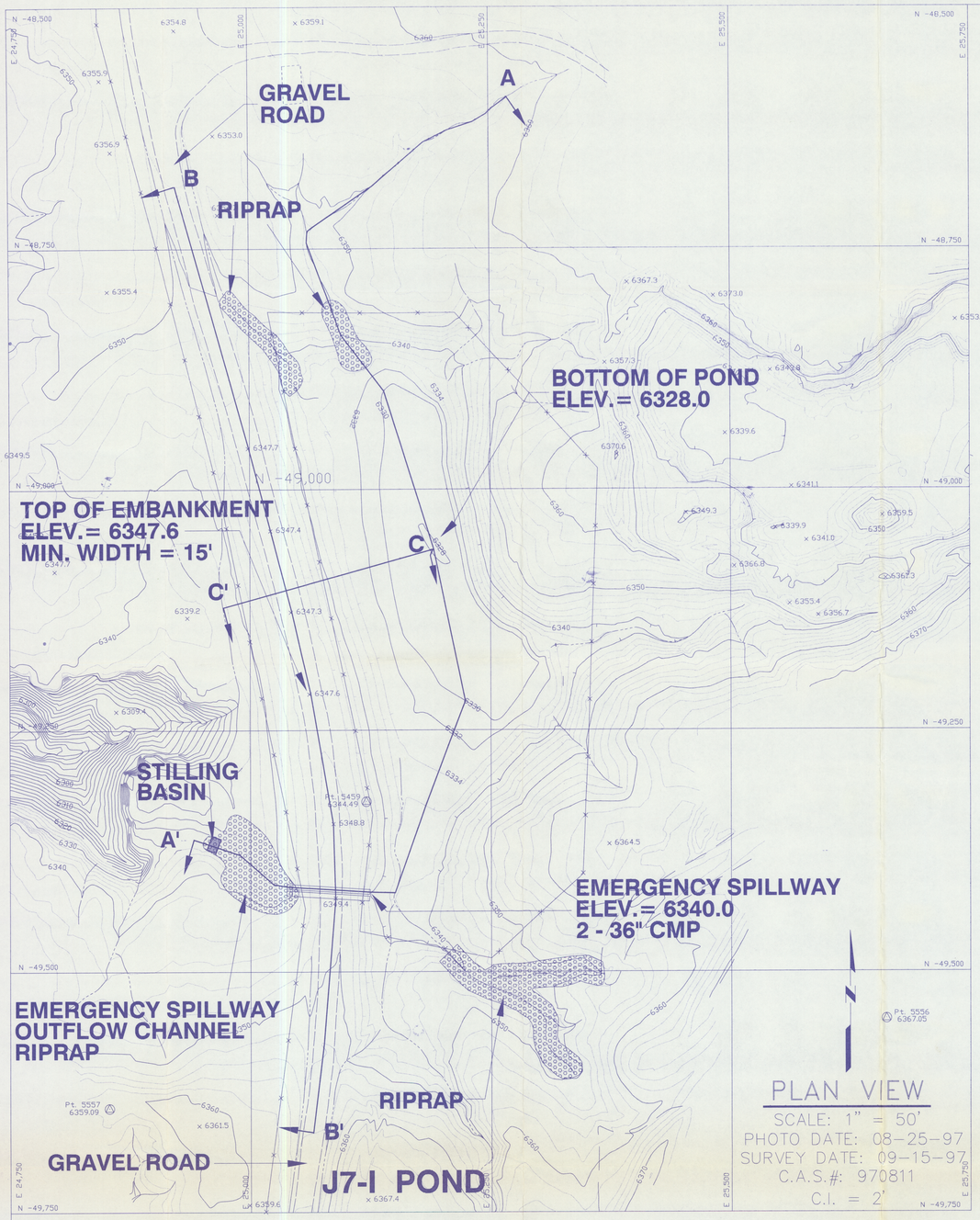
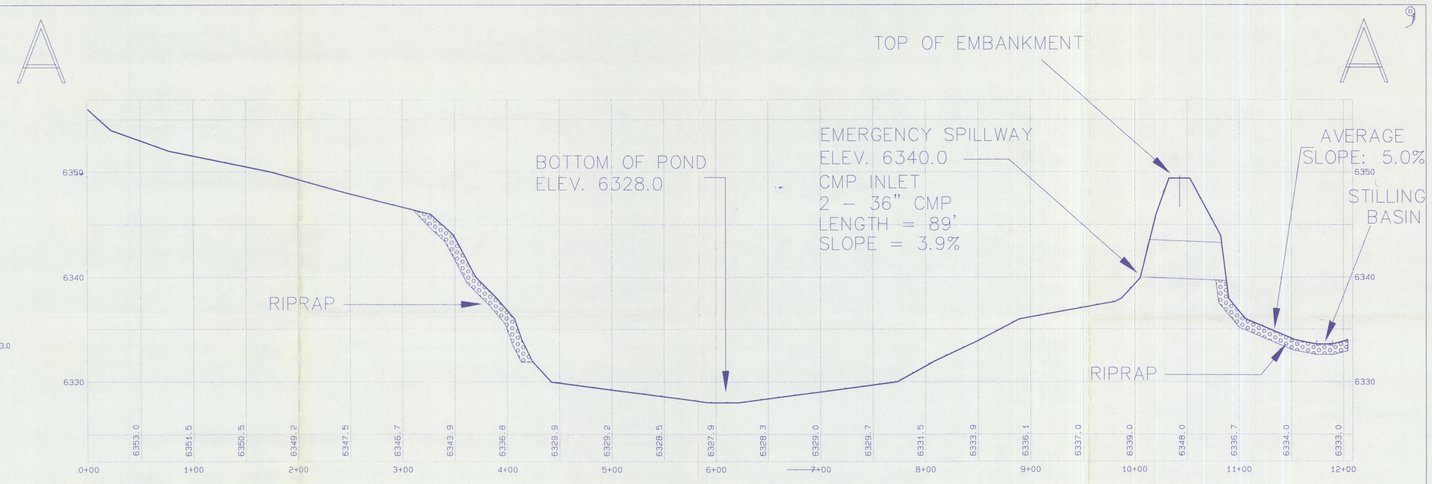


PLAN VIEW

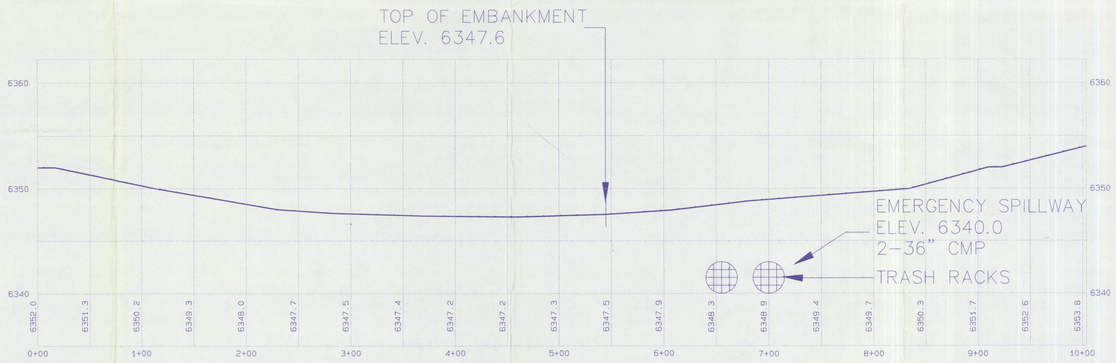
SCALE: 1" = 50'
PHOTO DATE: 08-25-97
SURVEY DATE: 09-15-97
C.A.S.#: 970811
C.I. = 2'



J7-I POND

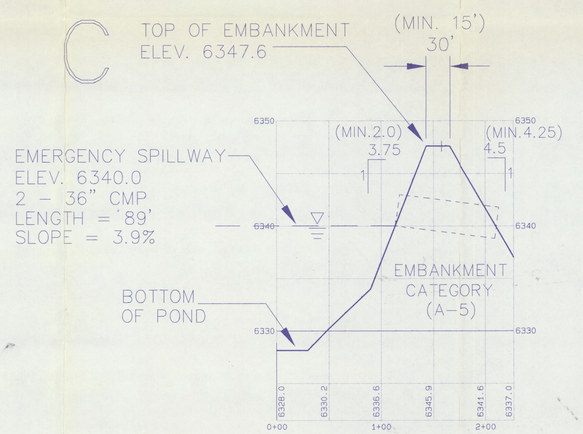
SECTION A - A'

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



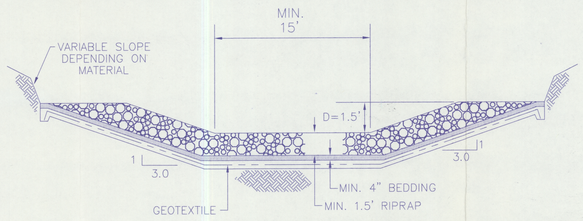
SECTION B - B'

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



SECTION C - C'

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



J7-I POND
OUTFLOW CHANNEL CROSS-SECTION
NOT TO SCALE

J7-I POND STAGE-CAPACITY TABLE

Elevation (ft-msl)	Stage (ft)	Area (Acres)	Capacity (ac-ft)	Total Capacity (ac-ft)	Description
6328.0	0.0	0.01	0.00	0.00	BOTTOM OF POND
6330.0	2.0	0.58	0.59	0.59	
6332.0	4.0	0.96	1.54	2.13	
6334.0	6.0	1.27	2.23	4.36	
6336.0	8.0	1.59	2.86	7.22	
6338.0	10.0	1.90	3.49	10.71	
6340.0	12.0	2.26	4.16	14.87	EMERGENCY SPILLWAY
6342.0	14.0	2.63	4.89	19.76	
6344.0	16.0	3.03	5.66	25.42	
6346.0	18.0	3.51	6.54	31.96	
6347.6	19.6	4.04	6.04	38.00	TOP OF EMBANKMENT

I CERTIFY THAT THIS SILTATION STRUCTURE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED MINING PERMIT AND THAT THE INFORMATION CONTAINED HEREIN ACCURATELY DESCRIBES THE CONSTRUCTED STRUCTURE TO THE BEST OF MY KNOWLEDGE AND BELIEF

ENGINEER'S CERTIFICATION

COMPLIANCE ENGINEERING MANAGER
PEABODY WESTERN COAL COMPANY

ARIZONA P.E. 18782
DATE: OCT 0 1 1997

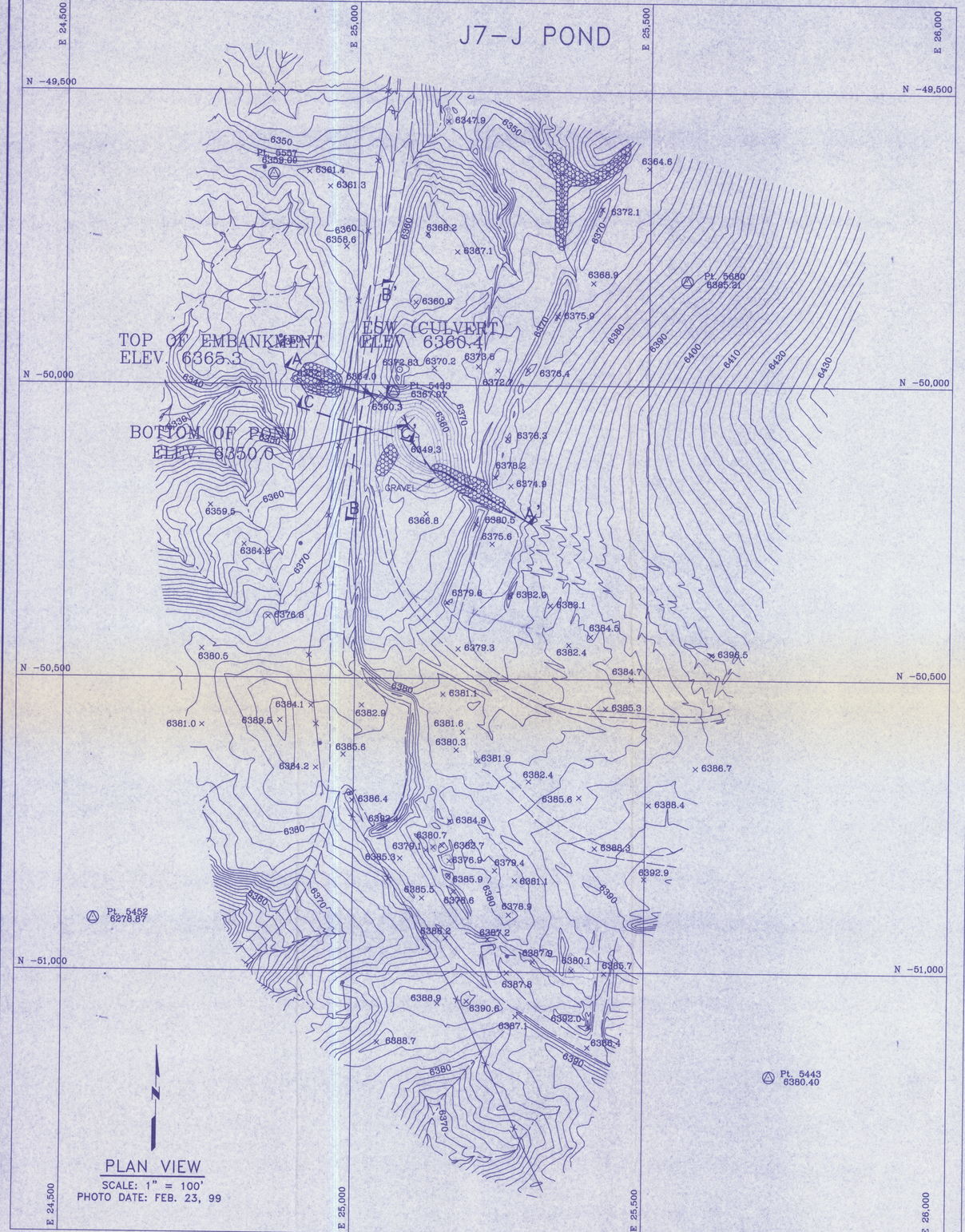
REVISIONS		
DATE	CHK'D	DESCRIPTION

J7-I POND
AS-BUILT

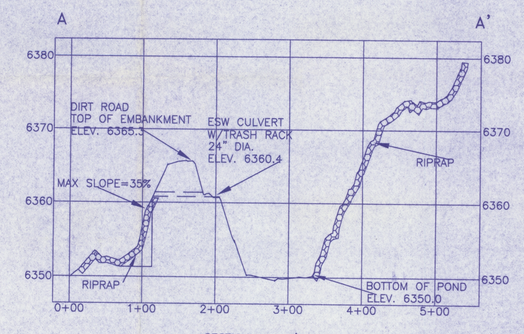
BLACK MESA MINE
PEABODY WESTERN COAL COMPANY
1300 SOUTH YALE ST, FLAGSTAFF, ARIZONA 86001

DESIGNED BY: PWCC	SCALE: AS SHOWN
DRAWN BY: AB	DRAWING DATE: 10-01-97
CHECKED BY: JGS	PHOTO DATE: 08-25-97
CONTOUR INT.: 2'	DWG FILE: J7-I~1.DWG

J7-J POND



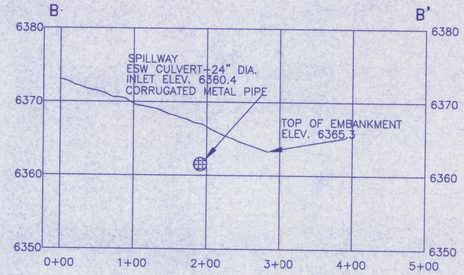
PLAN VIEW
SCALE: 1" = 100'
PHOTO DATE: FEB. 23, 99



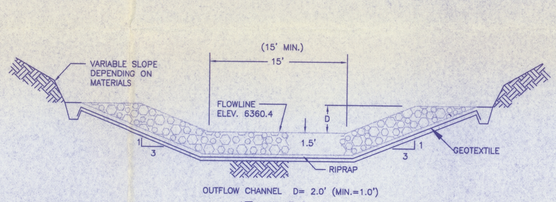
SECTION A – A'
VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 100'

J7-J POND STAGE CAPACITY TABLE

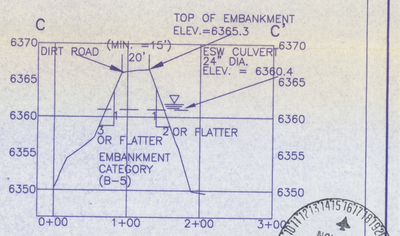
ELEVATION (ft-msl)	STAGE (ft)	AREA (acres)	CAPACITY (ac-ft)	TOTAL CAPACITY (ac-ft)	DESCRIPTION
6350.0	0.0	0.00	0.00	0.00	BOTTOM OF POND
6352.0	2.0	0.09	0.09	0.09	
6354.0	4.0	0.13	0.22	0.32	
6356.0	6.0	0.17	0.30	0.62	
6358.0	8.0	0.23	0.40	1.02	
6360.0	10.0	0.29	0.52	1.54	
6360.4	10.4	0.31	0.12	1.72	EMERGENCY SPILLWAY
6362.0	12.0	0.37	0.54	2.26	
6364.0	14.0	0.46	0.83	3.09	
6365.3	15.3	0.51	0.63	3.72	TOP OF EMBANKMENT



SECTION B – B'
VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 100'



J7-J POND
TYPICAL CROSS SECTION OF SPILLWAY OUTFLOW CHANNEL
(NOT DRAWN TO SCALE)



SECTION C – C'
VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 100'

NOV 1999
APPROVED

I certify that this Siltation Structure was constructed in accordance with the approved mining permit and that the information contained herein accurately describes the constructed structure to the best of my knowledge and belief.

Registered Professional Engineer
CERTIFICATE NO. 18782
JAMES GARY SCHLENVOGT

JAMES G. SCHLENVOGT
ENGINEERING & RECLAMATION MANAGER
PEABODY WESTERN COAL COMPANY

ARIZONA P.E. 18782

JUN 01 1999
DATE

REVISIONS		
CHK'D	DATE	DESCRIPTION

J7-J POND
AS-BUILT

BLACK MESA MINE

PEABODY WESTERN P.O. BOX 605 KAYENTA AZ, 86033

DESIGNED BY: PWCC	SCALE: 1"=100'
DRAWN BY: E.D.	DRAWING DATE: 03-26-99
CHECKED BY: PWCC	PHOTO DATE: FEB. 23, 99
CONTOUR INTERVAL: 2 FT	

PEABODY COAL " J7-J " 1"= 100' C.I. 2' 2-23-99 C.A.S. 990218

E 47,000 E 47,500 E 48,000 E 48,500 E 49,000 E 49,500 E 50,000 E 50,500 E 51,000 E 51,500 E 52,000 E 52,500 E 53,000

N −38,000 N −38,500 N −39,000 N −39,500 N −40,000 N −40,500 N −41,000 N −41,500 N −42,000

SPILLWAY OUTFLOW CHANNEL

Top of Dam
Elev. 6720.0

Emergency Spillway
Min. Width=70 ft Elev. 6709.00

Outlet
30" Corrugated HDPE Decant Pipe
Inlet Elev. 6668.5
Outlet Elev. 6665.1

Bottom of Pond
Elev. 6668.22 W.L. 6673.3

Piezometer #1 Piezometer #2 Piezometer #3 Settlement Monument #2

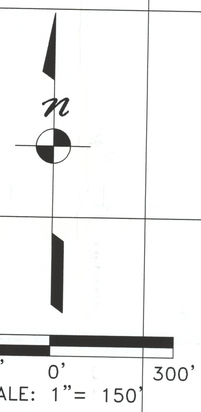
Settlement Monument #3

Piezometer #4

H.V.76
6684.01

H.V.79
6696.32

H.V.80
6755.64



300' 150' 0' 300'
SCALE: 1"= 150'

J7-JR DAM STAGE CAPACITY TABLE

ELEVATION (ft-msl)	STAGE (ft)	AREA (acres)	CAPACITY (ac-ft)	TOTAL CAPACITY (ac-ft)	DESCRIPTION
6668.2	0.0	0.00	0.00	0.00	BOTTOM OF POND
6670.0	1.8	0.17	0.15	0.15	
6672.0	3.8	0.79	0.96	1.11	
6674.0	5.8	4.17	4.96	6.06	
6676.0	7.8	5.32	9.49	15.55	
6678.0	9.8	7.06	12.38	27.93	
6680.0	11.8	10.00	17.06	44.99	
6682.0	13.8	11.73	21.73	66.72	
6684.0	15.8	13.11	24.84	91.56	
6686.0	17.8	14.53	27.64	119.20	
6688.0	19.8	15.94	30.48	149.67	
6690.0	21.8	17.57	33.51	183.18	
6692.0	23.8	19.40	36.98	220.15	
6694.0	25.8	21.39	40.78	260.93	
6696.0	27.8	23.38	44.76	305.70	
6698.0	29.8	25.55	48.93	354.63	
6700.0	31.8	27.59	53.15	407.77	
6702.0	33.8	29.67	57.26	465.04	
6704.0	35.8	31.94	61.61	526.64	
6706.0	37.8	34.39	66.32	592.97	
6708.0	39.8	37.16	71.55	664.51	
6709.6	41.4	39.72	59.95	724.46	EMERGENCY SPILLWAY
6710.0	41.8	40.26	16.59	741.05	
6712.0	43.8	43.95	84.23	825.28	
6714.0	45.8	47.44	91.40	916.67	
6716.0	47.8	51.12	98.57	1015.24	
6718.0	49.8	54.86	105.98	1121.22	
6720.0	51.8	58.88	113.74	1234.96	TOP OF EMBANKMENT

DEC 2001 APPROVED

ENGINEER'S CERTIFICATION

JAMES G. SCHLENVOGT — OCT 31 2001

JAMES G. SCHLENVOGT — **DATE**

ENGINEERING/RECLAMATION MANAGER
PEABODY WESTERN COAL COMPANY

PEABODY WESTERN

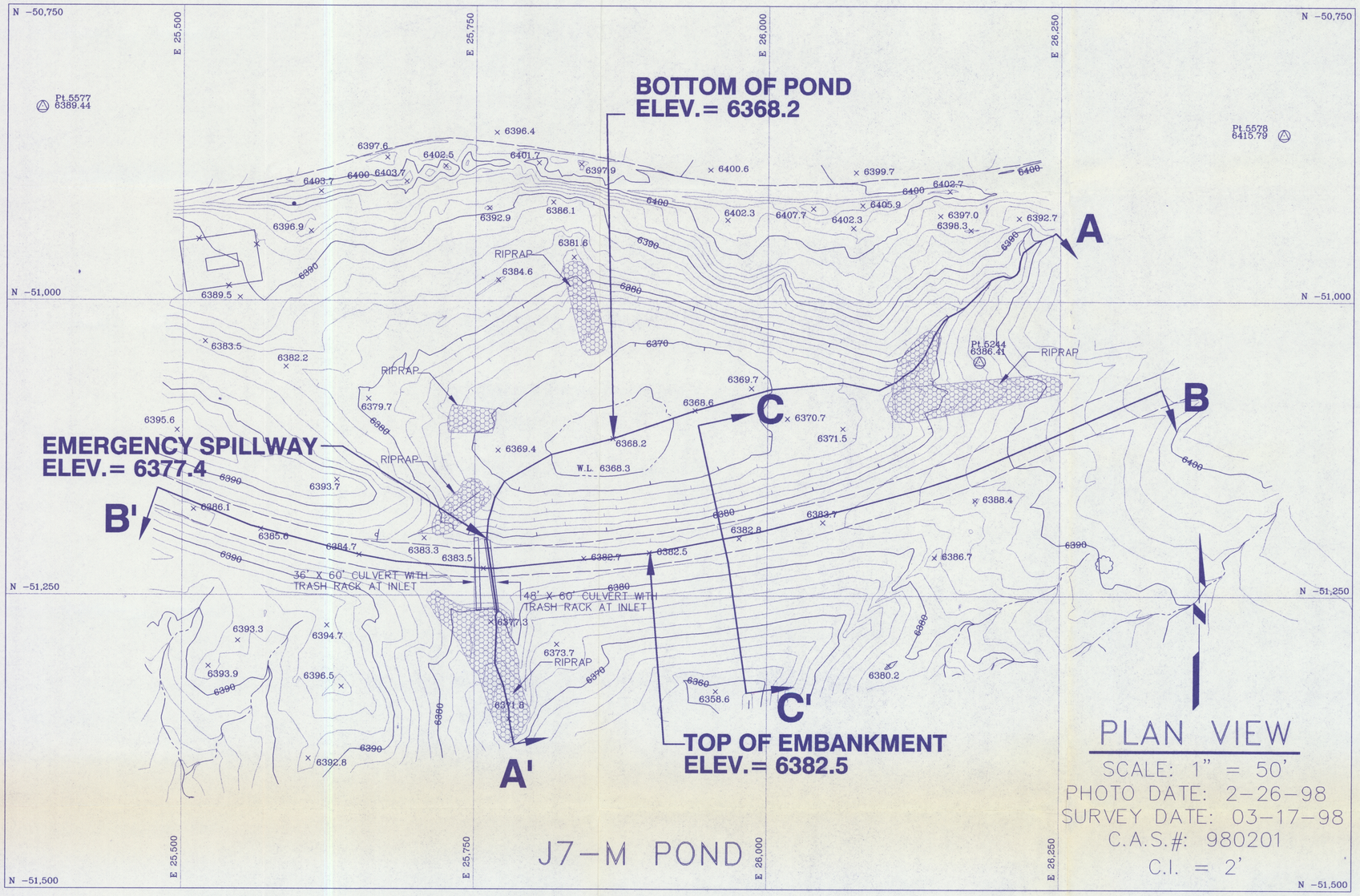
DRAWN BY: G. Altsisi	DATE 10/31/01
SURVEYED BY: G. Altsisi	
DESIGN BY: MONTGOMERY WATSON	

KAYENTA MINE

J7-JR MSHA DAM AS-BUILT
I.D. NO. 1211-AZ-09-01195-09

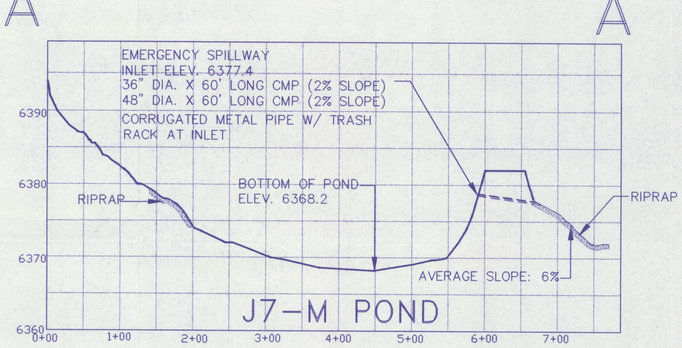
SIZE	JOB NO.:	DWG FILENAME: J7JR_ASBUILT_2001.dwg	REV

Photo Date : 08-25-01 — SHEET 1 OF 1



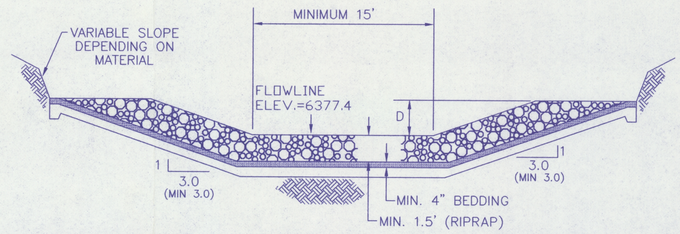
PLAN VIEW

SCALE: 1" = 50'
PHOTO DATE: 2-26-98
SURVEY DATE: 03-17-98
C.A.S.#: 980201
C.I. = 2'



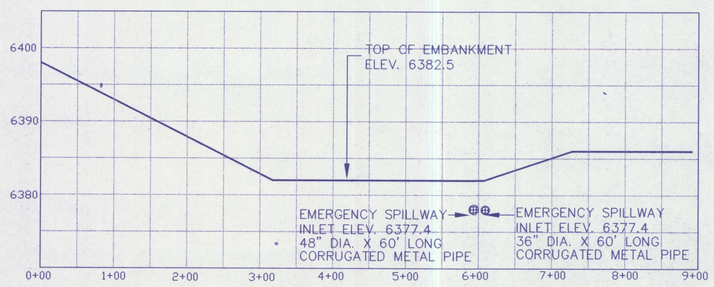
SECTION A - A'

VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 100'



OUTFLOW CHANNEL D=1.5' (MINIMUM=1.5')

J7-M POND
TYPICAL CROSS-SECTION OF SPILLWAY OUTFLOW CHANNEL
NOT TO SCALE

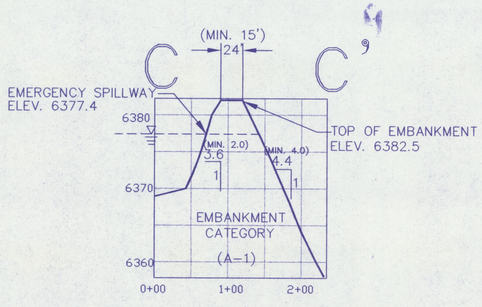


SECTION B - B'

VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 100'

J7-M POND STAGE-CAPACITY TABLE

Elevation (ft-msl)	Stage (ft)	Area (Acres)	Capacity (ac-ft)	Total Capacity (ac-ft)	Description
6368.2	0.0	0.00	0.00	0.00	BOTTOM OF POND
6370.0	1.8	0.55	0.58	0.58	
6372.0	3.8	0.88	1.43	2.01	
6374.0	5.8	1.11	1.99	4.00	
6376.0	7.8	1.28	2.39	6.39	
6377.4	9.2	1.41	1.88	8.28	EMERGENCY SPILLWAY
6378.0	9.8	1.47	0.86	9.14	
6380.0	11.8	1.68	3.15	12.29	
6382.0	13.8	2.01	3.69	15.98	
6382.5	14.3	2.03	1.01	16.99	TOP OF EMBANKMENT



SECTION C - C'

VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 100'

I CERTIFY THAT THIS SILTATION STRUCTURE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED MINING PERMIT AND THAT THE INFORMATION CONTAINED HEREIN ACCURATELY DESCRIBES THE CONSTRUCTED STRUCTURE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

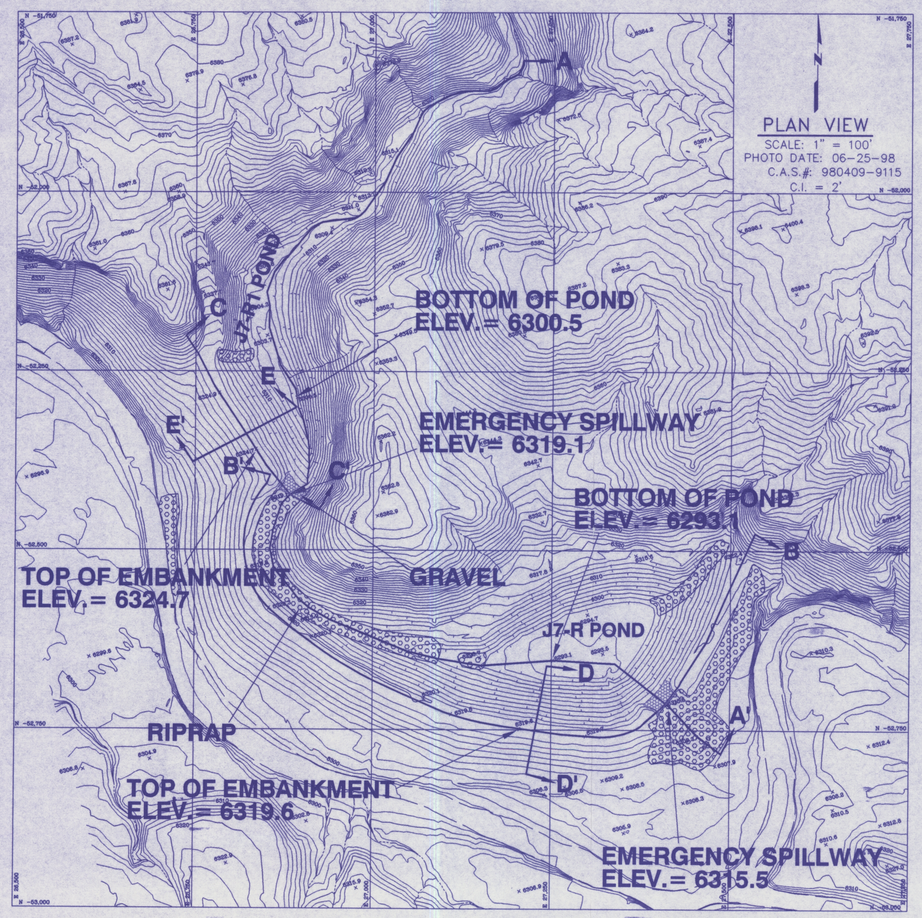
REGISTERED PROFESSIONAL ENGINEER'S CERTIFICATION
CERTIFICATE NO. 18782
JAMES G. SCHULTZ
COMPLIANCE ENGINEERING MANAGER
PEABODY WESTERN COAL COMPANY
ARIZONA P.E. 18782
DATE: MAR 30 1998

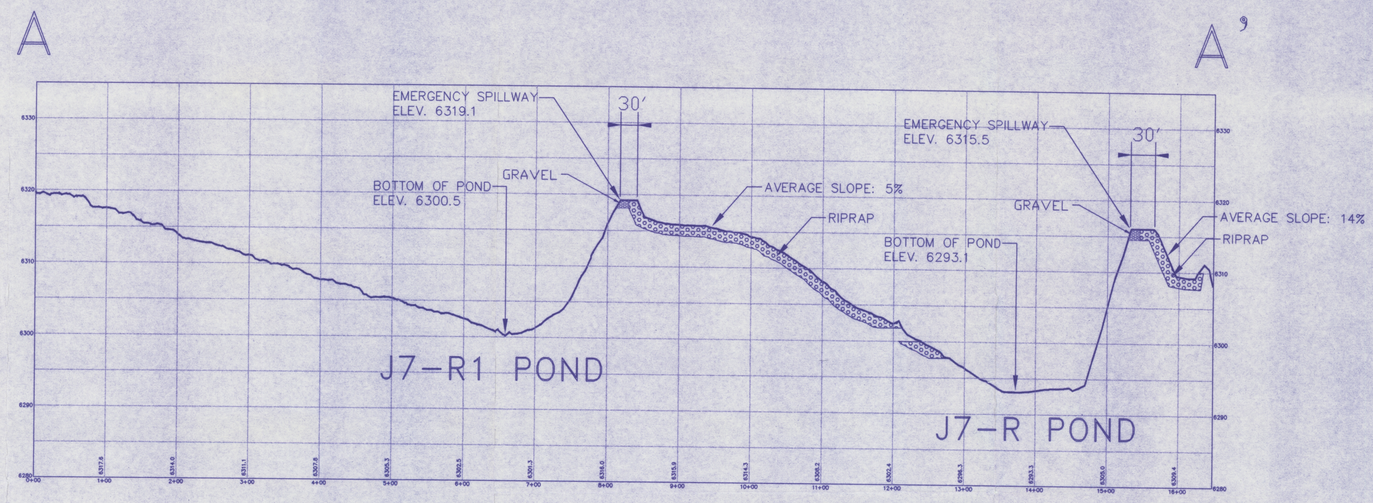
REVISIONS		
DATE	CHK'D	DESCRIPTION

J7-M POND
AS-BUILT

BLACK MESA MINE
PEABODY WESTERN COAL COMPANY
1300 SOUTH YALE ST. FLAGSTAFF, ARIZONA 86001

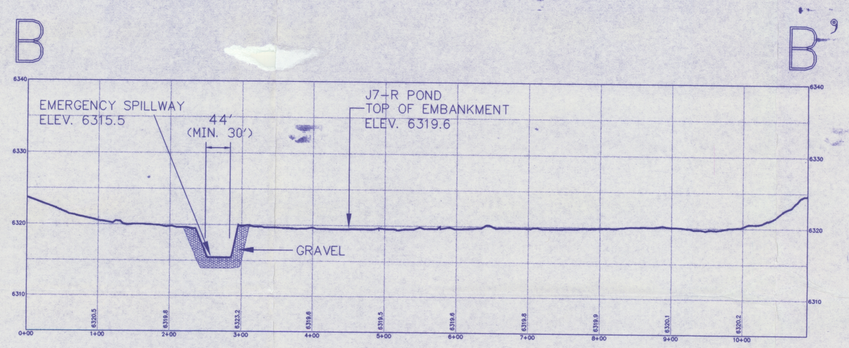
DESIGNED BY: PWCC	SCALE: AS SHOWN
DRAWN BY: J. EDISON	DRAWING DATE: 03-27-98
CHECKED BY: JGS	PHOTO DATE: 02-26-98
CONTOUR INT.: 2'	
DWG FILE: J7-M AS-BUILT 3-98.DWG	





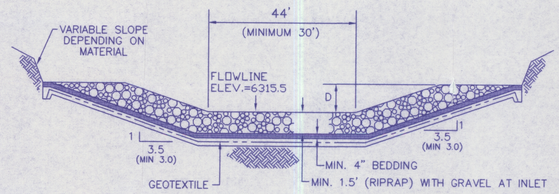
SECTION A – A'

VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 100'



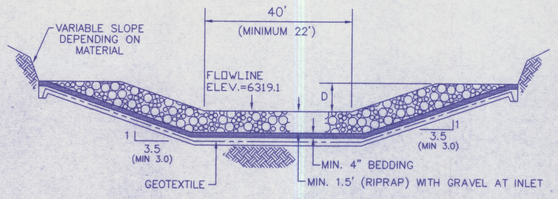
SECTION B – B'

VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 100'



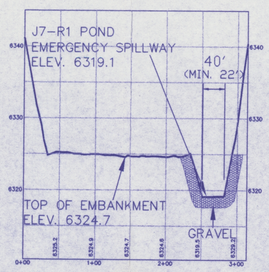
SPILLWAY D=4.1' (MINIMUM=3.0')
OUTFLOW CHANNEL D=2.5' (MINIMUM=2.0')

J7-R POND
TYPICAL CROSS-SECTION OF EMERGENCY SPILLWAY
NOT TO SCALE



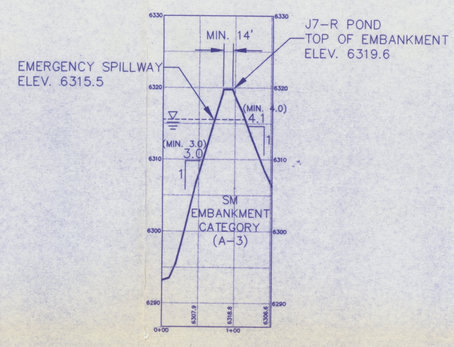
SPILLWAY D=5.6' (MINIMUM=3.5')
OUTFLOW CHANNEL D=3.0' (MINIMUM=2.5')

J7-R1 POND
TYPICAL CROSS-SECTION OF EMERGENCY SPILLWAY
NOT TO SCALE



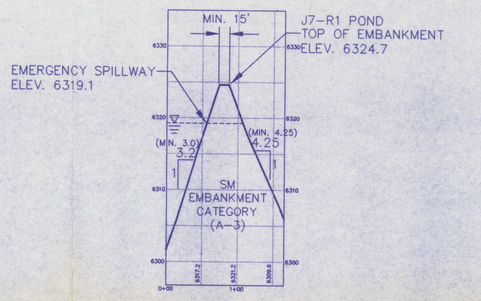
SECTION C – C'

VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 100'



SECTION D – D'

VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 100'



SECTION E – E'

VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 100'

J7-R POND STAGE CAPACITY TABLE

ELEVATION (ft-msl)	STAGE (ft)	AREA (acres)	CAPACITY (ac-ft)	TOTAL CAPACITY (ac-ft)	DESCRIPTION
6293.1	0.0	0.00	0.00	0.00	BOTTOM OF POND
6294.0	0.9	0.15	0.07	0.07	
6296.0	2.9	0.37	0.52	0.59	
6298.0	4.9	0.47	0.84	1.43	
6300.0	6.9	0.56	1.03	2.46	
6302.0	8.9	0.67	1.23	3.69	
6304.0	10.9	0.79	1.46	5.15	
6306.0	12.9	0.94	1.73	6.88	
6308.0	14.9	1.10	2.04	8.92	INCISED ELEVATION
6310.0	16.9	1.29	2.39	11.31	
6312.0	18.9	1.48	2.77	14.08	
6314.0	20.9	1.68	3.16	17.24	
6315.5	22.4	1.88	2.67	19.91	EMERGENCY SPILLWAY
6316.0	22.9	1.95	0.96	20.87	
6318.0	24.9	2.23	4.18	25.05	
6319.6	26.5	2.46	3.75	28.80	TOP OF EMBANKMENT

J7-R1 POND STAGE CAPACITY TABLE

ELEVATION (ft-msl)	STAGE (ft)	AREA (acres)	CAPACITY (ac-ft)	TOTAL CAPACITY (ac-ft)	DESCRIPTION
6300.5	0.0	0.00	0.00	0.00	BOTTOM OF POND
6302.0	1.5	0.02	0.02	0.02	
6304.0	3.5	0.08	0.10	0.12	
6306.0	5.5	0.19	0.27	0.39	
6308.0	7.5	0.32	0.51	0.90	
6310.0	9.5	0.45	0.77	1.67	
6312.0	11.5	0.58	1.03	2.70	
6314.0	13.5	0.72	1.30	4.00	
6316.0	15.5	0.88	1.60	5.60	
6318.0	17.5	1.02	1.90	7.50	
6319.1	18.6	1.11	1.17	8.67	EMERGENCY SPILLWAY
6320.0	19.5	1.19	1.03	9.70	
6322.0	21.5	1.36	2.55	12.25	
6324.0	23.5	1.55	2.91	15.16	
6324.7	24.2	1.63	1.11	16.27	TOP OF EMBANKMENT

I CERTIFY THAT THIS SILTATION STRUCTURE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED MINING PERMIT AND THAT THE INFORMATION CONTAINED HEREIN ACCURATELY DESCRIBES THE CONSTRUCTED STRUCTURE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

ENGINEER'S CERTIFICATION

JAMES G. SCHLEN, JR.
COMMUNITY ENGINEERING MANAGER
PEABODY WESTERN COAL COMPANY

Registered Professional Engineer CERTIFICATE NO. 18782 JAMES GARY SCHLEN, JR. STATE OF ARIZONA, U.S.A.

ARIZONA P.E. 18782
DATE: JUL 29 1998

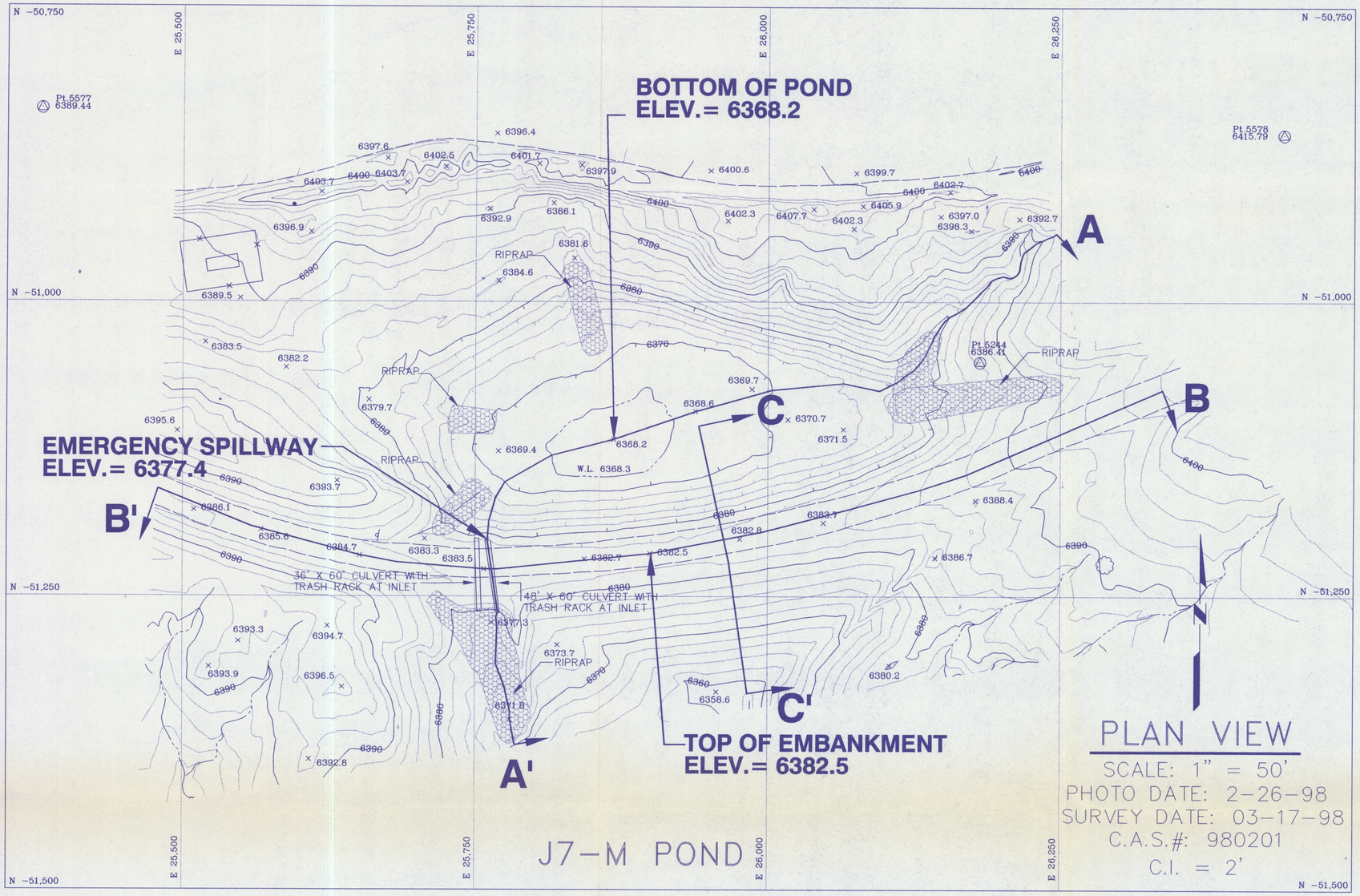
DEC 1998 APPROVED

REVISIONS		
DATE	CHK'D	DESCRIPTION

J7-R & J7-R1 POND AS-BUILT

BLACK MESA MINE
PEABODY WESTERN COAL COMPANY
PO BOX 625 KAYENTA, ARIZONA 86033

DESIGNED BY: PWCC	SCALE: AS SHOWN
DRAWN BY: SMM	DRAWING DATE: 07-29-98
CHECKED BY: JGS	PHOTO DATE: 06-25-98
CONTOUR INT.: 2'	DWG FILE: J7-R&R~1.DWG

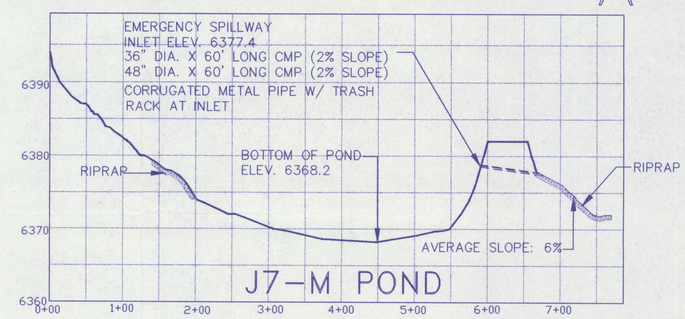


J7-M POND

PLAN VIEW

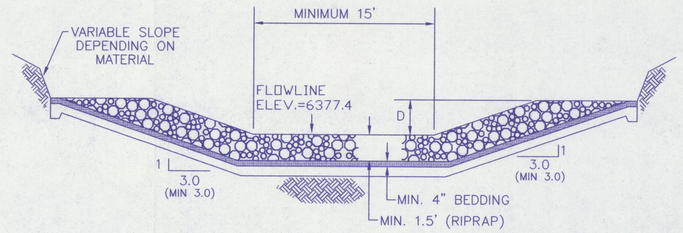
SCALE: 1" = 50'
PHOTO DATE: 2-26-98
SURVEY DATE: 03-17-98
C.A.S.#: 980201
C.I. = 2'

A — A'



SECTION A - A'

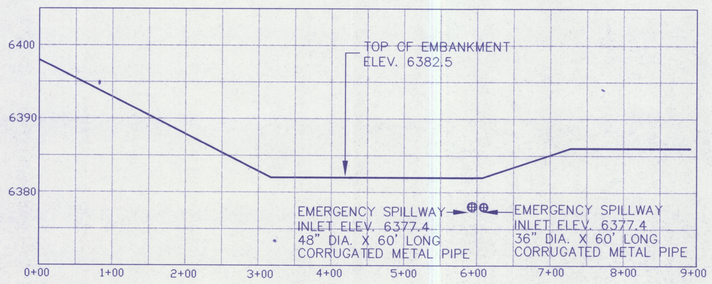
VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 100'



OUTFLOW CHANNEL D=1.5' (MINIMUM=1.5')

J7-M POND
TYPICAL CROSS-SECTION OF SPILLWAY OUTFLOW CHANNEL
NOT TO SCALE

B — B'



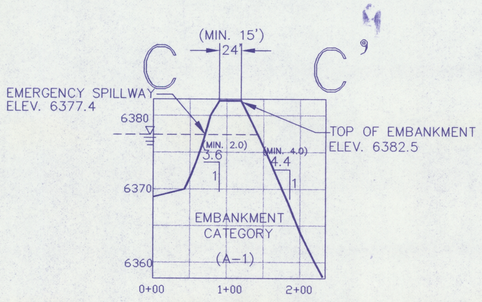
SECTION B - B'

VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 100'

J7-M POND STAGE-CAPACITY TABLE

Elevation (ft-msl)	Stage (ft)	Area (Acres)	Capacity (ac-ft)	Total Capacity (ac-ft)	Description
6368.2	0.0	0.00	0.00	0.00	BOTTOM OF POND
6370.0	1.8	0.55	0.58	0.58	
6372.0	3.8	0.88	1.43	2.01	
6374.0	5.8	1.11	1.99	4.00	
6376.0	7.8	1.28	2.39	6.39	
6377.4	9.2	1.41	1.88	8.28	EMERGENCY SPILLWAY
6378.0	9.8	1.47	0.86	9.14	
6380.0	11.8	1.68	3.15	12.29	
6382.0	13.8	2.01	3.69	15.98	
6382.5	14.3	2.03	1.01	16.99	TOP OF EMBANKMENT

C — C'



SECTION C - C'

VERTICAL SCALE: 1" = 10'
HORIZONTAL SCALE: 1" = 100'

I CERTIFY THAT THIS SILTATION STRUCTURE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED MINING PERMIT AND THAT THE INFORMATION CONTAINED HEREIN ACCURATELY DESCRIBES THE CONSTRUCTED STRUCTURE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

ENGINEER'S CERTIFICATION

JAMES G. SOUTHERLAND
COMPLIANCE ENGINEERING MANAGER
PEABODY WESTERN COAL COMPANY

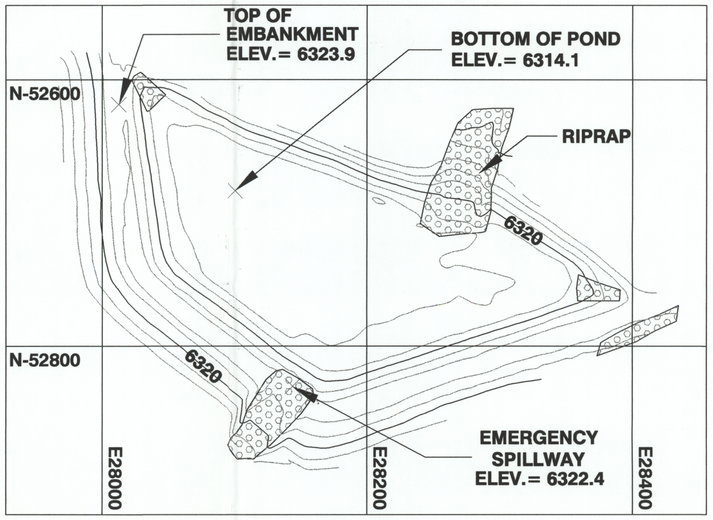
ARIZONA P.E. 18782
DATE: MAR 30 1998

REVISIONS		
DATE	CHK'D	DESCRIPTION

J7-M POND
AS-BUILT

BLACK MESA MINE
PEABODY WESTERN COAL COMPANY
1300 SOUTH YALE ST. FLAGSTAFF, ARIZONA 86001

DESIGNED BY: PWCC	SCALE: AS SHOWN
DRAWN BY: J. EDISON	DRAWING DATE: 03-27-98
CHECKED BY: JGS	PHOTO DATE: 02-26-98
CONTOUR INT.: 2'	
DWG FILE: J7-M AS-BUILT 3-98.DWG	



PLAN VIEW

SCALE: 1" = 60'
SURVEY DATE: 11-03-99

C.I. = 2'

J7-S POND STAGE CAPACITY TABLE

ELEVATION (ft-msl)	STAGE (ft)	AREA (acres)	CAPACITY (ac-ft)	TOTAL CAPACITY (ac-ft)	DESCRIPTION
6314.1	0.0	0.00	0.00	0.00	BOTTOM OF POND
6316.0	1.9	0.53	0.50	0.50	
6318.0	3.9	0.78	1.31	1.81	
6320.0	5.9	0.92	1.70	3.51	
6322.0	7.9	1.05	1.97	5.48	
6322.4	8.3	1.08	0.43	5.91	EMERGENCY SPILLWAY
6323.9	9.8	1.17	1.69	7.60	TOP OF EMBANKMENT

I CERTIFY THAT THIS SILTATION STRUCTURE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED MINING PERMIT AND THAT THE INFORMATION CONTAINED HEREIN ACCURATELY DESCRIBES THE CONSTRUCTED STRUCTURE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

ENGINEER'S CERTIFICATION

RANDOLPH E. LEHN — ARIZONA P.E. 26858
PEABODY WESTERN COAL COMPANY — DATE: NOV 5 1999

NOV 1999 APPROVED

REVISIONS			J7-S POND AS-BUILT	
DATE	CHK'D	DESCRIPTION		
			BLACK MESA MINE PEABODY WESTERN COAL COMPANY PO BOX 605 KAYENTA, ARIZONA 86033	
			DESIGNED BY: PWCC	SCALE: AS SHOWN
			DRAWN BY: CI	DRAWING DATE: 11-04-99
			CHECKED BY: RL	SURVEY DATE: 11-03-99
			CONTOUR INT.: 2'	DWG FILE: J7-S A..9.DWG