TEXASGULF INC.

MOAB, UTAH

CANE CREEK MINE

PLAN FOR ABANDONMENT OF CLASS III WELLS AND MINE SHAFTS

REVISION # 1

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ABANDONMENT PLAN

DETAILS OF EACH WELL AND MATERIALS REQUIRED

WELL #	SURFACE ELEVATION	PIPE SIZE	WALL THICKNESS	INSIDE AREA	TOP DEPTH	BOTTOM DEPTH	PLUG LOCATION	CU FT BENITOITE	REQD CEMENT	
1	3944	10.750	0.350	0.551	0	2960	2400	992	331	NOT INTO MINE
TUBING		5.500	0.258	0.136	0	3033				TO BE PULLED
2	3868	7.625	0.328	0.265	0	3033				PLUGGED
		5.5	0.362		0	3001	2828			
3	4215	10.750	0.350	0.551	0	3057	2550	1074	331	NOT INTO MINE
4	4223	10.750	0.350	0.551	0	2951	2500	1047	331	INJECTION
5	4150	10.750	0.350	0.551	0	3160	2600	1102	331	INJ AND EXT
6	4037	20.000	0.635	1.913	0	1040				EXTRACTION
		16.000	0.625	1.187	937	3198	2700	4336	857	
7	4397	NO CASING		VARIES	(SEE APPENDEX F	FOR DETAILS)			2000	PLUGGED
8	4274	8.625	0.352	0.342	0	1544				PLUGGED
		4.500	0.205	0.091	0	2680	2100	615	55	
9	4289	4.500	0.205	0.091	0	2745	2200	146	55	NOT INTO MINE
10	4254	7.000	0.272	0.227	0	1913				INJECTION
		4.500	0.205	0.091	0	2638	2150	549	55	
11	4367	7.000	0.272	0.227	0	1974				PLUGED
		4.500	0.205	0.091	0	2700	2084	557	55	
12	4591	10.750	0.350	0.551	0	3142	2650	1129	331	INJECTION
13	4339	7.000	0.317	0.221	0	2348				PLUGGED
		4.500	0.205	0.091	0	3022	2711	685	55	
14	4365	8.625	0.400	0.334	0	2727	2200	534	200	PLUGGED
15	4262	9.625	0.395	0.426	0	2285				PLUGGED
TUBING		7.000	0.362	0.215	2127	3038	2550	1282	171	
		7.000	0.362	0.215	0	2127				TO BE PULLED
16	4256	9.625	0.395	0.426	0	2110				INJECTION
		7.000	0.362	0.215	2004	2803	2250	1210	255	
17	3956	9.625	0.395	0.426	0	2711				TEST WELL
		7.000	0.362	0.215	2616	3443	2900	1606	255	
TUBING		5.500	0.275		0	2603				TO BE PULLED
TUBING		4.500	0.205		2603	3508				TO BE PULLED
18	3956	8.625	0.400	0.334	0	3459	2900	768	200	TEST WELL
TUBING		5.000	0.362		0	3956				TO BE PULLED
19	3950	5.500	0.362	0.124	0	4133	2750	267	75	TEST WELL
TUBING		2.875	0.217		0	3330				TO BE PULLED
20	4035	9.625	0.395	0.426	0	2465				EXTRACTION
		7.000	0.362	0.215	2388	3199	2600	1437	255	
21	3996	7.000	0.362	0.215	0	3560	2950	505	129	TEST WELL
TUBING		4.500	0.205		0	3556				TO BE PULLED
22	4010	7.000	0.362	0.215	0	3546	2950	505	129	TEST WELL
TUBING		4.500	0.205		0	3546				TO BE PULLED
23	4011	7.000	0.362	0.215	0	3800	3200	558	129	TEST WELL
TUBING		4.500	0.205		0	3811				TO BE PULLED
						TOTALS		20904	6585	

NOTE: ALL TUBING TO BE PULLED BEFORE CEMENTING

ABANDONMENT PLAN

COSTS FOR EACH WELL

WELL #	TUBING REMOVAL COSTS RIG	CASING CREW	COST PLUG	RIG COSTS	COST CEMENT	COST BENITIOTE	PUMPING COSTS	EXTRA COSTS	TOTAL COST PER WELL
1	$1750	$1950	$2989	$2426.00	$3489	$308	$1670		$14581
2			EXISTING						
3			$2989	$2426.00	$3489	$333	$1670		$10907
4			$2989	$2426.00	$3489	$325	$1670		$10898
5			$2989	$2426.00	$3489	$342	$1670	$250	$11165
6			$5500	$2426.00	$9033	$1344	$1670		$19973
7			N.A.	$2426.00	$21080		$1670	$800	$25976
8			$1222	$2426.00	$580	$191	$1670	$40250	$46338
9			$1222	$2426.00	$580	$45	$1670		$5943
10			$1453	$2426.00	$580	$170	$1670		$6299
11			EXISTING						
12			$2989	$2426.00	$3489	$350	$1670		$10924
13			EXISTING	$2426.00	$580	$212	$1670	$250	$5138
14			EXISTING	$2426.00	$2108	$166	$1670		$6370
15	$1750	$1950	$2400	$2426.00	$1802	$397	$1670		$12396
16			$2514	$2426.00	$2688	$375	$1670		$9673
17	$1750	$1950	$2514	$2426.00	$2688	$498	$1670		$13496
18	$1750	$1950	$2009	$2426.00	$2108	$238	$1670		$12151
19	$1750	$1950	$1275	$2426.00	$791	$83	$1670		$9944
20			$1453	$2426.00	$2688	$445	$1670		$8682
21	$1750	$1950	$1453	$2426.00	$1360	$157	$1670		$10765
22	$1750	$1950	$1453	$2426.00	$1360	$157	$1670		$10765
23	$1750	$1950	$1453	$2426.00	$1360	$173	$1670		$10782
	$14000	$15600	$40866	$50946	$68826	$6308	$35070	$41550	

TOTAL INDIVIDUAL COSTS	$273166
MOVE IN FOR HALLIBURTON	$999
MOVE IN FOR RIG	$350
MOVE IN FOR CASING CREW	$396
TOTAL PLUGGING COSTS	$274911

NOTE: SEE APPENDEX D & E FOR DETAILS ON COST

ABANDONMENT PLAN

MISCELLANEOUS NOTES FOR EACH WELL

WELL #	NOTES
1	
2	FILLED AND CAPPED
3	
4	
5	$250 ALLOWED FOR CEMENTING THE CASING ANNULUS
6	
7	SEE PAGE #8 FOR ABANDONMENT PROCEDURE OF WELL #7
8	$40,000 ALLOWED TO REPAIR OFFSET $250 ALLOWED FOR CEMENTING THE CASING ANNULUS
9	
10	
11	FILLED AND CAPPED
12	
13	$250 ALLOWED FOR CEMENTING THE CASING ANNULUS
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	

ABANDONMENT PLAN

COST ESTIMATE TO PLUG #1 SHAFT

PREPARE SHAFT FOR SOLUTION MINING

	HRS	$/HR	
PREPARE HEADFRAME AS DERICK			$10,000.00
MOVE IN WORK OVER RIG	8	$175.00	$1,400.00
PICK UP PIPE	2	$175.00	$350.00
RENT 2000FT 2 7/8" DRILL PIPE @$.06/FT/DAY 2 DAYS			$240.00
DRILL TO 2000FT @ 5FT/MIN EAST SIDE	8	$175.00	$1,400.00
DRILL TO 2000FT @ 5FT/MIN WEST SIDE	8	$175.00	$1,400.00
LAY DOWN DRILL PIPE	2	$175.00	$350.00
RENTAL ON 6" PIPE @$.07/FT/DAY FOR 40DAYS			$11,200.00
PICK UP 6" PIPE	2	$175.00	$350.00
SET 6" PIPE TO 2000FT EAST SIDE	6	$175.00	$1,050.00
PICK UP 6" PIPE	2	$175.00	$350.00
SET 6" PIPE TO 2000FT WEST SIDE	6	$175.00	$1,050.00
TRAVEL COSTS CASING CREW			$396.00
CASING CREW 2 DAYS @$1950/DAY			$3,900.00
VALVES AND FITTINGS FOR SURFACE			$10,000.00
INSTALL VALVES AND FITTINGS			$4,000.00
SUBTOTAL			$47,436.00

SOLUTION MINE SALT PLUG FROM #1 SHAFT

PREPARE AREA BY RIVER FOR PUMPS	$1,000.00
SET UP 2 200HP 1500GPM DIESEL PUMPS AT RIVER	$2,000.00
RENTAL ON PUMPS FOR 30 DAYS @$100/DAY EA	$6,000.00
INSTALL 2800FT 8" PIPELINE FROM RIVER TO SHAFT	$4,200.00
RENTAL ON PIPE FOR 30 DAYS @$.13/FT/DAY	$10,920.00
INSTALL 50HP 1500GPM PUMP AT SHAFT	$500.00
RENTAL ON PUMP FOR 30 DAYS @$50/DAY	$1,500.00
INSTALL 900FT 8" PIPE FRON SHAFT TO TAILS LAKE	$1,350.00
RENTAL ON 900' 8" PIPE	$3,510.00
FUEL FOR PUMPS	
200HP 11GAL/HR *24*30*$.92	$7,286.40
50HP 4GAL/HR *24*30*$.92	$2,649.60
OPERATOR 30DAYS @ $20/HR	$14,400.00
SUBTOTAL	$55,316.00

REMOVE 6" PIPE FROM SHAFT

	HRS	$/HR	
MOVE IN WORK OVER RIG	8	$175.00	$1,400.00
REMOVE 4000FT 6" PIPE	12	$175.00	$2,100.00
SET DOWN 6" PIPE	4	$175.00	$700.00
TRAVEL COSTS CASING CREW			$396.00
CASING CREW 2 DAYS @$1950/DAY			$3,900.00
SUBTOTAL			$8,496.00

TOTAL FOR REMOVING SALT $111,248.00

ABANDONMENT PLAN

COST ESTIMATE TO PLUG #1 SHAFT

COST OF CEMENT FOR SHAFTS				
QUOTE FROM IDEAL CEMENT @79.75/TON FOB SLC				
$79.75/TON * 25 TON TRUCK CAPACITY =$1993.75				
FREIGHT COST	$360.00			
COST PER 94LB SACK		$4.43	SACK	
HALLIBURTON HANDLING CHARGE		$0.95	SACK	
		$5.38	SACK	
16200 SACKS FOR #1 SHAFT				$87,156.00
CEMENTING COSTS - 16200 SACKS REQUIRED				
ASSUMING 3 DAYS 5400 SACKS PER DAY				
MOVE IN WORKOVER RIG				$350.00
MOVE IN COST FOR HALLIBURTON				
CEMENT PUMP TRUCK 140MILES @$2.15			$301.00	
BULK TRUCK 140MILES @$.90			$126.00	
CREW TRUCK 140MILES @$.90			$126.00	
SUBSISTANCE 3 MEN @ $80			$240.00	
				$793.00
WORKOVER RIG 3 - 8 HR DAYS @$175/HR				$4,200.00
RENT 2000FT 2 7/8" DRILL PIPE @$.06/FT/DAY 3 DAYS				$360.00
HALLIBURTON CEMENT TRUCK 3 DAYS @$1260				$3,780.00
HALLIBURTON SUBSISTANCE 3 MEN 3 DAYS @ $80/DAY				$720.00
1000 SACK CEMENT BINS 6 REQUIRED 5 DAY MIN CHARGE				
MOVE IN COSTS 140MILES @$.9			$756.00	
6 BINS @ $112/DAY * 5DAYS			$3,360.00	
				$4,116.00
TOTAL PUMPING COSTS				$14,319.00
TOTAL CEMENTING COSTS				$101,475.00
PREPARE SHAFT FOR FILLING WITH GRAVEL				
DRILL AND BLAST 4FT DIA HOLE IN CENTER OF SHAFT			ALLOW	$4,000.00
FABRICATE 3FT THICK REMOVABLE COVER WITH 6" INSPECTION PIPE			ALLOW	$3,000.00
FABRICATE CHUTE FOR DUMPING GRAVEL IN SHAFT			ALLOW	$3,000.00
SUBTOTAL				$10,000.00
FILL #1 SHAFT WITH GRAVEL (1900FT DEEP 22FT DIAMETER)				
(SEE APPENDEX 3 FOR AVAILABILITY AND COST OF GRAVEL)				
FILL WITH 26750 CU YDS GRAVEL @$3/CY				$80,250.00
TOTAL COST FOR GRAVEL FILL				$90,250.00
REFILL WITH GRAVEL AFTER 5 YEARS				
GRAVEL REFILL				
ASSUME 10% SETTLING (2675 CU YDS) @ $3/CY				$8,025.00
TOTAL COST FOR PLUGGING #1 SHAFT				$310,998.00

ABANDONMENT PLAN

COST OF CEMENT FOR SHAFTS				
QUOTE FROM IDEAL CEMENT @79.75/TON FOB SLC				
$79.75/TON * 25 TON TRUCK CAPACITY =$1993.75				
FREIGHT COST	$360.00			
COST PER 94LB SACK		$4.43	SACK	
HALLIBURTON HANDLING CHARGE		$0.95	SACK	
		$5.38	SACK	
1065 SACKS FOR #2 SHAFT				$5,729.70
CEMENTING COSTS - 1065 SACKS REQUIRED				
MOVE IN WORKOVER RIG				$350.00
MOVE IN COST FOR HALLIBURTON				
CEMENT PUMP TRUCK 140MILES @$2.15			$301.00	
BULK TRUCK 140MILES @$.90			$126.00	
CREW TRUCK 140MILES @$.90			$126.00	
SUBSISTANCE 3 MEN @ $80			$240.00	
				$793.00
WORKOVER RIG 1 - 8 HR DAY @$175/HR				$1,400.00
RENT 2000FT 2 7/8" DRILL PIPE @$.06/FT/DAY 1 DAY				$120.00
HALLIBURTON CEMENT TRUCK 1 DAYS @$1260				$1,260.00
HALLIBURTON SUBSISTANCE 3 MEN 1 DAYS @ $80/DAY				$240.00
1000 SACK CEMENT BINS 1 REQUIRED 5 DAYS MIN CHARGE				
MOVE IN COSTS 140MILES @$.9			$126.00	
1 BINS @ $112/DAY * 5DAYS			$560.00	
				$686.00
TOTAL PUMPING COSTS				$4,849.00
TOTAL CEMENTING COSTS				$10,578.70
PREPARE SHAFT FOR FILLING WITH GRAVEL				
REMOVE STEEL CAP			ALLOW	$500.00
FABRICATE 3FT THICK REMOVABLE COVER				
WITH 6" INSPECTION PIPE			ALLOW	$1,500.00
USE CHUTE FROM #1 SHAFT FOR DUMPING GRAVEL				
SUBTOTAL				$2,000.00
FILL #1 SHAFT WITH GRAVEL (2550FT DEEP 4FT DIAMETER)				
(SEE APPENDEX 3 FOR AVAILABILITY AND COST OF GRAVEL)				
FILL WITH 1187 CU YDS GRAVEL @$3/CY				$3,561.00
TOTAL COST FOR GRAVEL FILL				$5,561.00
REFILL WITH GRAVEL AFTER 5 YEARS				
GRAVEL REFILL				
ASSUME 10% SETTLING (119 CU YDS) @ $3/CY				$357.00
TOTAL COST FOR PLUGGING #2 SHAFT				$18,496.70

ABANDONMENT PLAN
TOTAL COST ESTIMATE

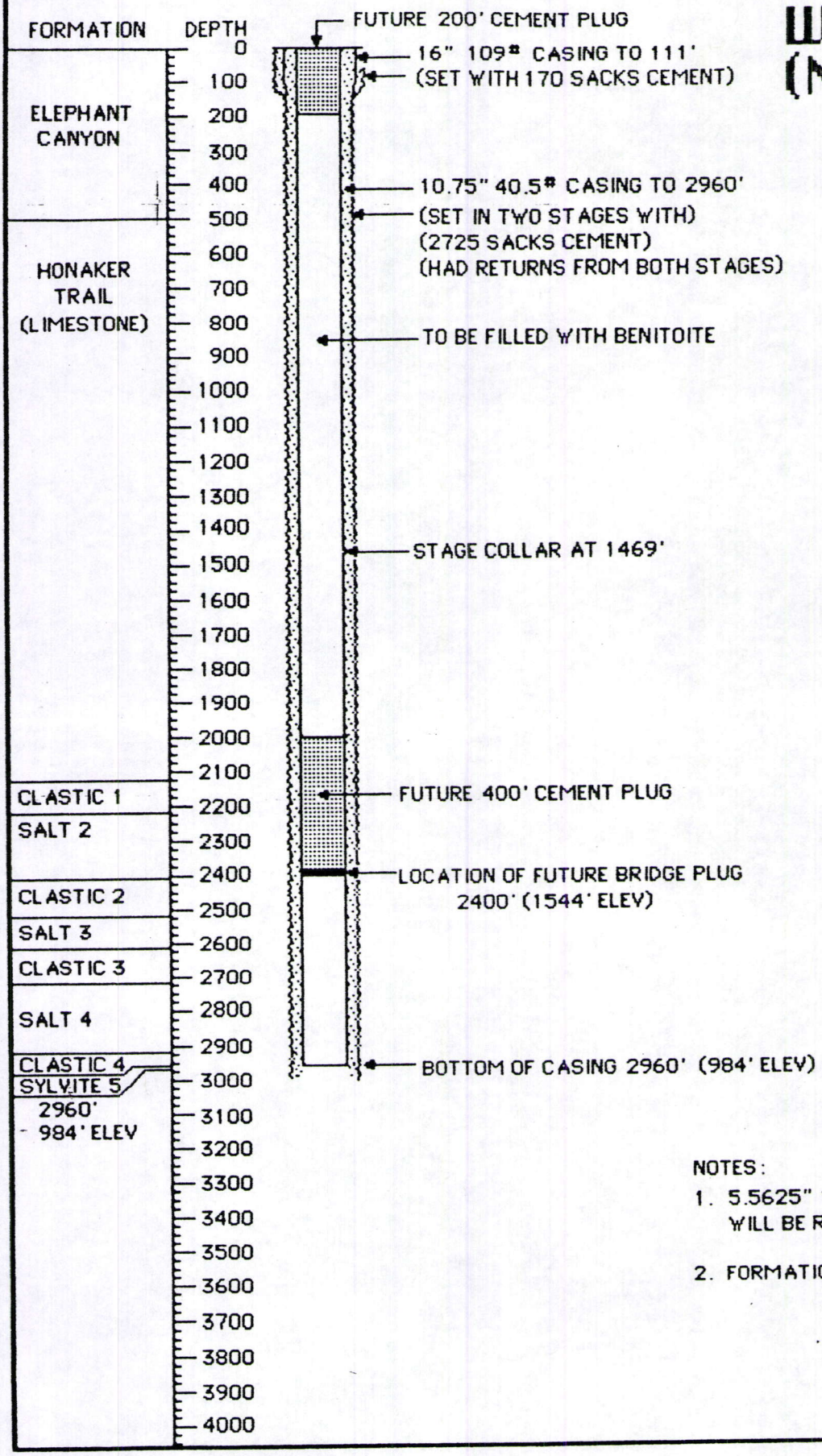
I.	Plug wells 1 thru 23		$275,000
II.	Plug #1 shaft		$311,000
III.	Plug #2 shaft		$18,500
IV.	Engineering supervision	$535/day - 60 days	$32,100
	Sub total		$636,600
	10% Contingency		$63,660
	Total		$700,260

Adjusted to 1990 @3.75% interest (rounded to ,000) $842,000

APPENDEX A

Graphic Representation
of each
Solution Mining Well

WELL ABANDONMENT PLAN



WELL #1
(NOT INTO MINE)

LOCATION
2,528,262 E
676,292 N

ELEV.
SURFACE 3944'
BOTTOM 984'

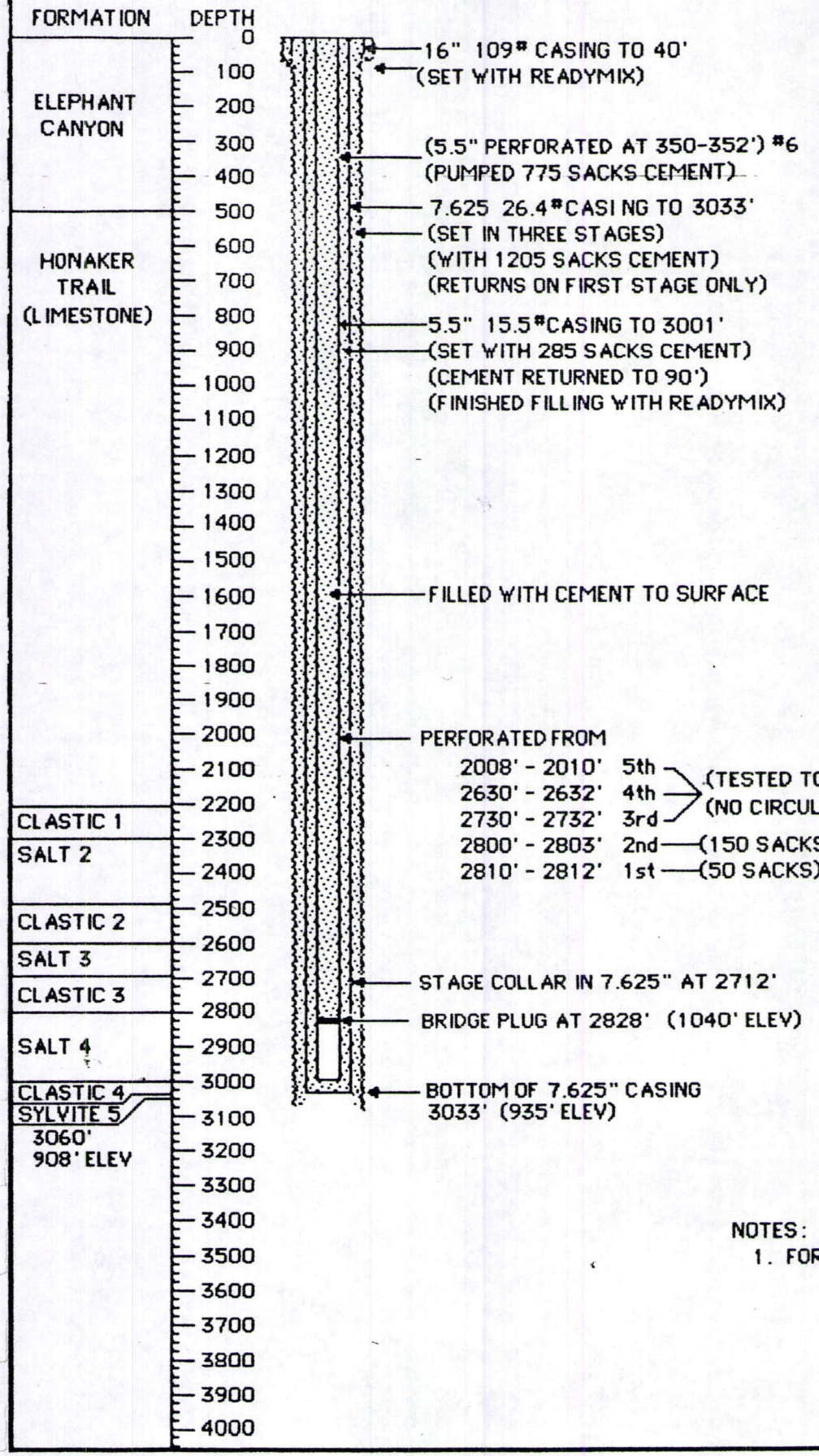
SPUD DATE
4 OCT 1970

COMPLETION DATE
23 NOV 1970

NOTES:

1. 5.5625" 14.62# TUBING FROM 0 TO 3033' WILL BE REMOVED BEFORE CEMENTING
2. FORMATION LOCATIONS ARE APPROXIMATE

WELL ABANDONMENT PLAN

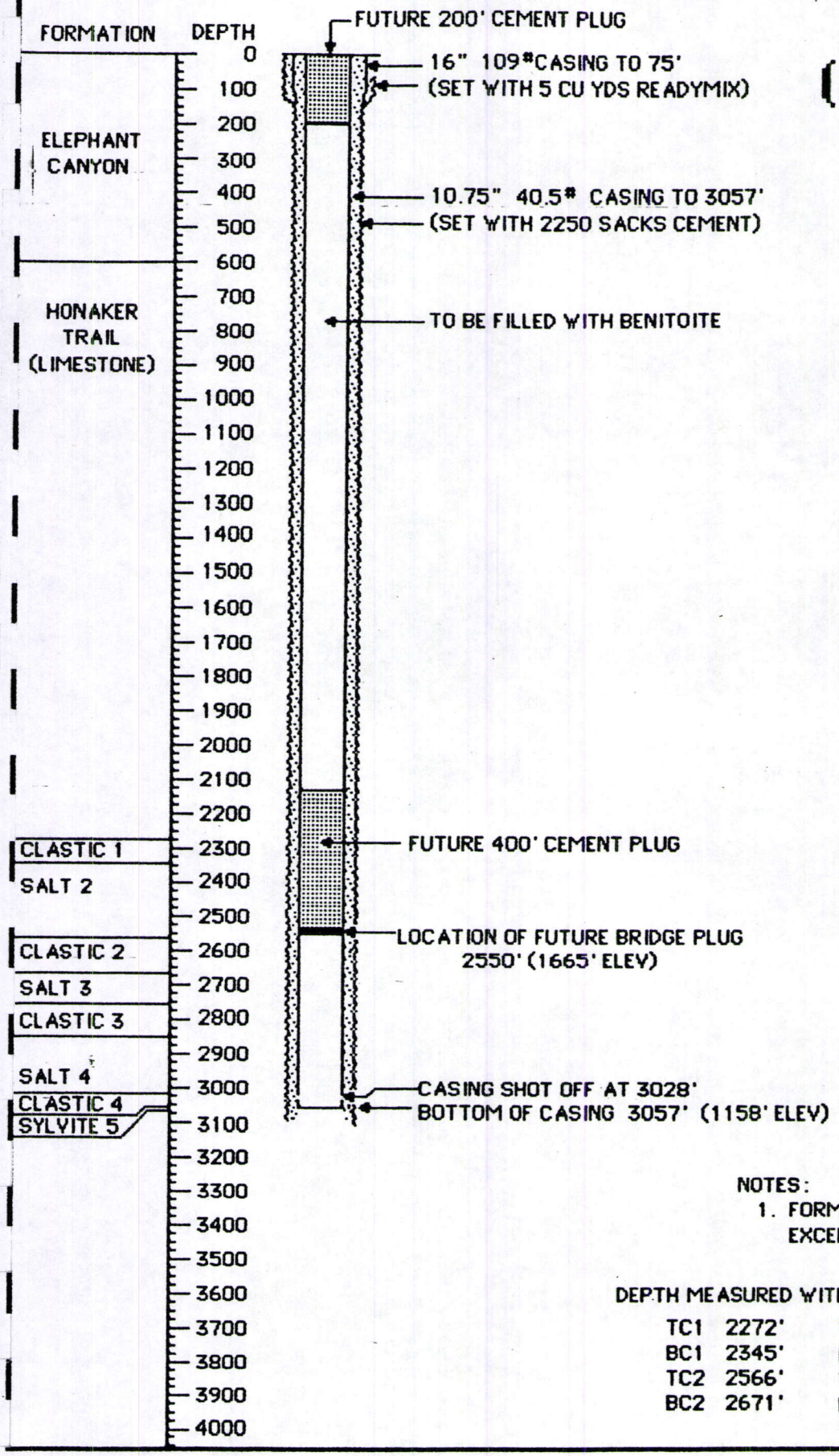


WELL # 2
LOCATION
2,527,714 E
676,682 N
ELEV.
SURFACE 3868'
BOTTOM 935'

SPUD DATE
28 NOV 1970
COMPLETION DATE
14 DEC 1970
INSTALL 5.5 INCH CASING
20 AUG 1975
PLUG WELL
28 OCT 1975

NOTES:
1. FORMATION LOCATIONS ARE APPROXIMATE

WELL ABANDONMENT PLAN



WELL # 3
(NOT INTO MINE)

LOCATION
2,519,509 E
678,904 N

ELEV.
SURFACE 4215'
BOTTOM 1158'

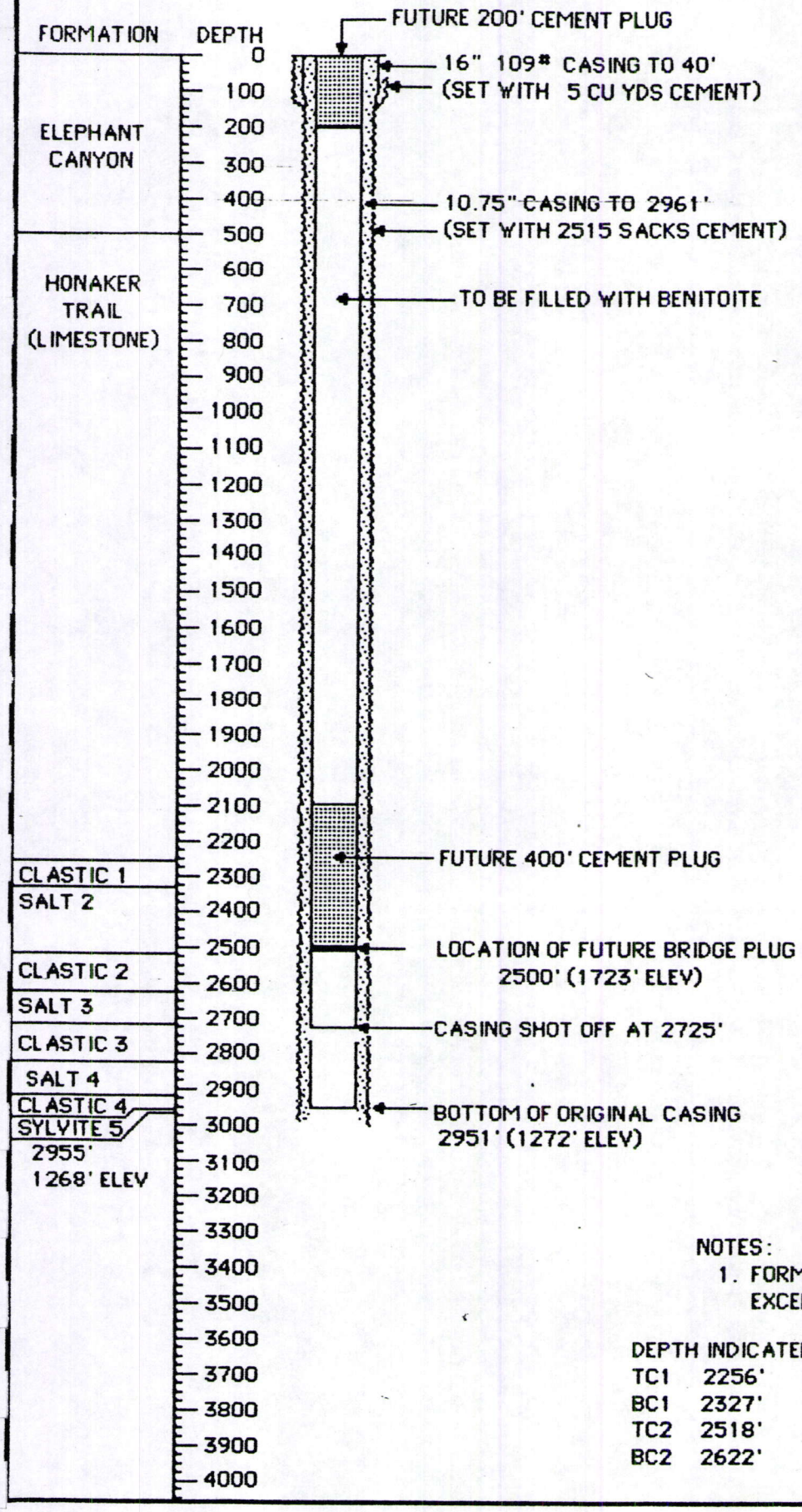
SPUD DATE
7 OCT 1970
COMPLETION DATE
2 DEC 1970

NOTES:
1. FORMATION LOCATIONS ARE APPROXIMATE EXCEPT AS INDICATED BELOW

DEPTH MEASURED WITH GAMMA RAY NEUTRON LOGS 6-6-85

TC1	2272'	TC3	2766'
BC1	2345'	BC3	2849'
TC2	2566'	TC4	3017'
BC2	2671'	BC4	3056'

WELL ABANDONMENT PLAN



WELL #4
LOCATION
2,519,146 E
678,499 N

	ELEV.
SURFACE	4223'
BOTTOM	1272'

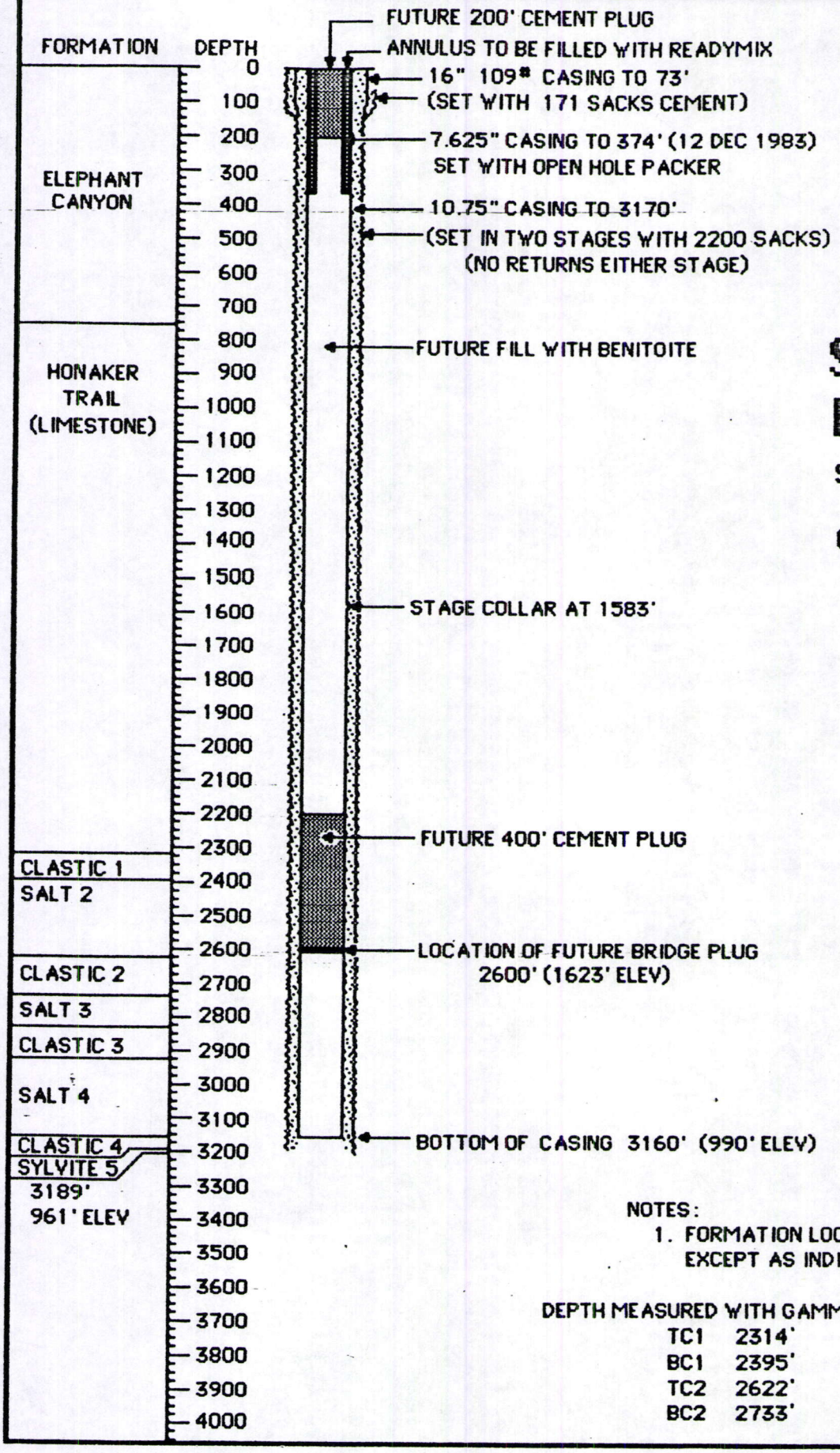
SPUD DATE
5 DEC 1970
COMPLETION DATE
23 DEC 1970

NOTES:
1. FORMATION LOCATIONS ARE APPROXIMATE EXCEPT AS INDICATED BELOW.

DEPTH INDICATED BY GAMMA RAY NEUTRON LOGS 6-6-85

TC1	2256'
BC1	2327'
TC2	2518'
BC2	2622'

WELL ABANDONMENT PLAN



WELL # 5
LOCATION
2,524,629 E
677,914 N

ELEV.
SURFACE 4150'
BOTTOM 990'

SPUD DATE
12 DEC 1970
COMPLETION DATE
31 DEC 1970

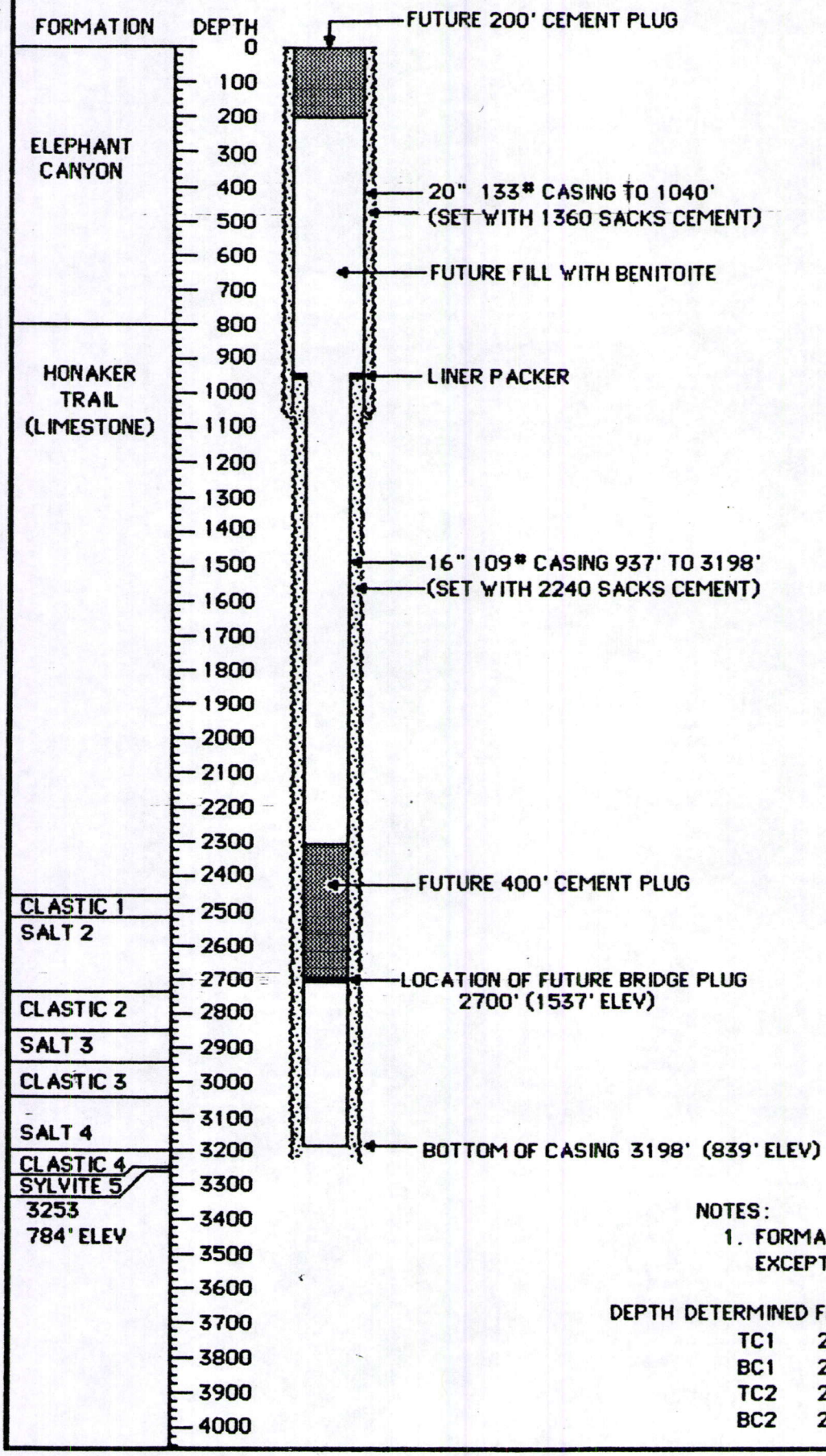
NOTES:

1. FORMATION LOCATIONS ARE APPROXIMATE EXCEPT AS INDICATED BELOW.

DEPTH MEASURED WITH GAMMA RAY NEUTRON LOGS 6-6-85

TC1	2314'	TC3	2833'
BC1	2395'	BC3	2927'
TC2	2622'	TC4	3154'
BC2	2733'		

WELL ABANDONMENT PLAN



WELL #6
LOCATION
2,526,916 E
677,737 N
ELEV.
SURFACE 4037
BOTTOM 839

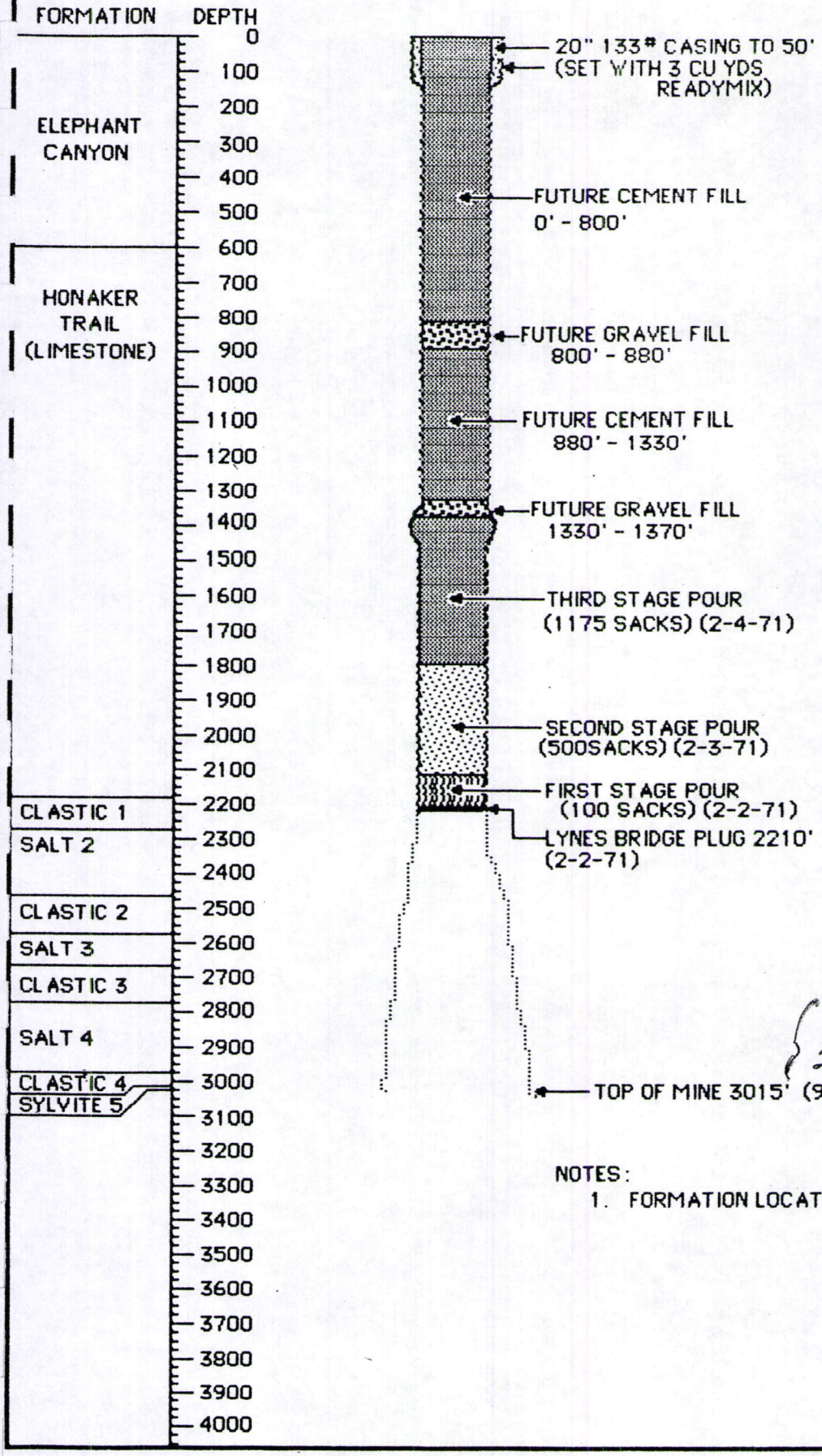
SPUD DATE
12 FEB 1971
COMPLETION DATE
19 APR 1971

NOTES:
1. FORMATION LOCATIONS ARE APPROXIMATE EXCEPT AS INDICATED BELOW.

DEPTH DETERMINED FROM PENETRATION RATE CHARTS 6-6-85

TC1	2464'	TC3	2944'
BC1	2518'	BC3	3039'
TC2	2738'	TC4	3197'
BC2	2854'		

WELL ABANDONMENT PLAN



WELL # 7
LOCATION
2,524,924 E
674,659 N

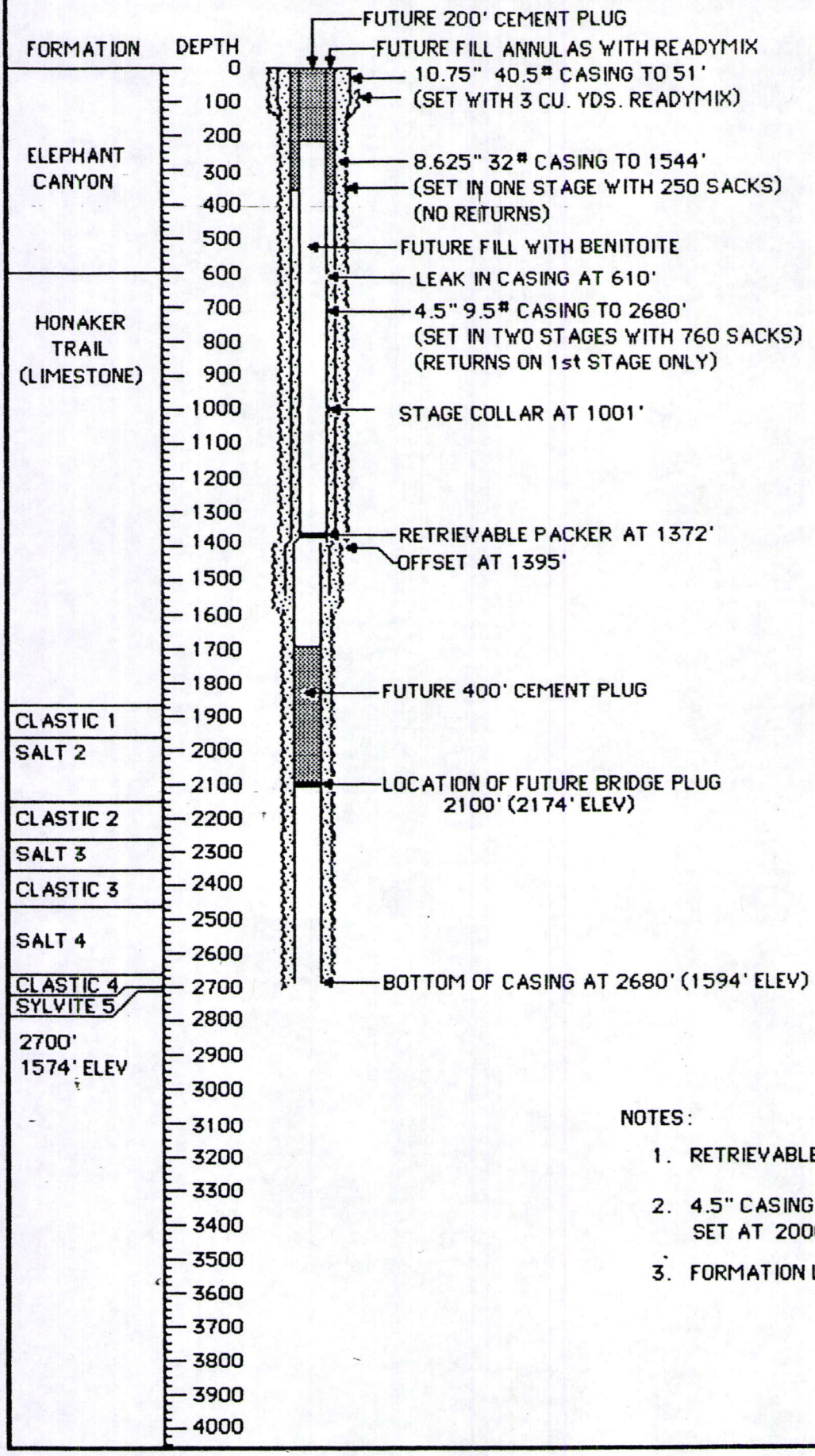
ELEV.
SURFACE 4397'
BOTTOM 1382'

SPUD DATE
27 DEC 1970
COMPLETION DATE
20 JAN 1971

0'- 200' ~~gravel~~ cement
200'-1370' gravel or washed sand

NOTES:
1. FORMATION LOCATIONS ARE APPROXIMATE.

WELL ABANDONMENT PLAN



WELL # 8

LOCATION

2,526,558 E

671,830 N

ELEV.

SURFACE 4274'

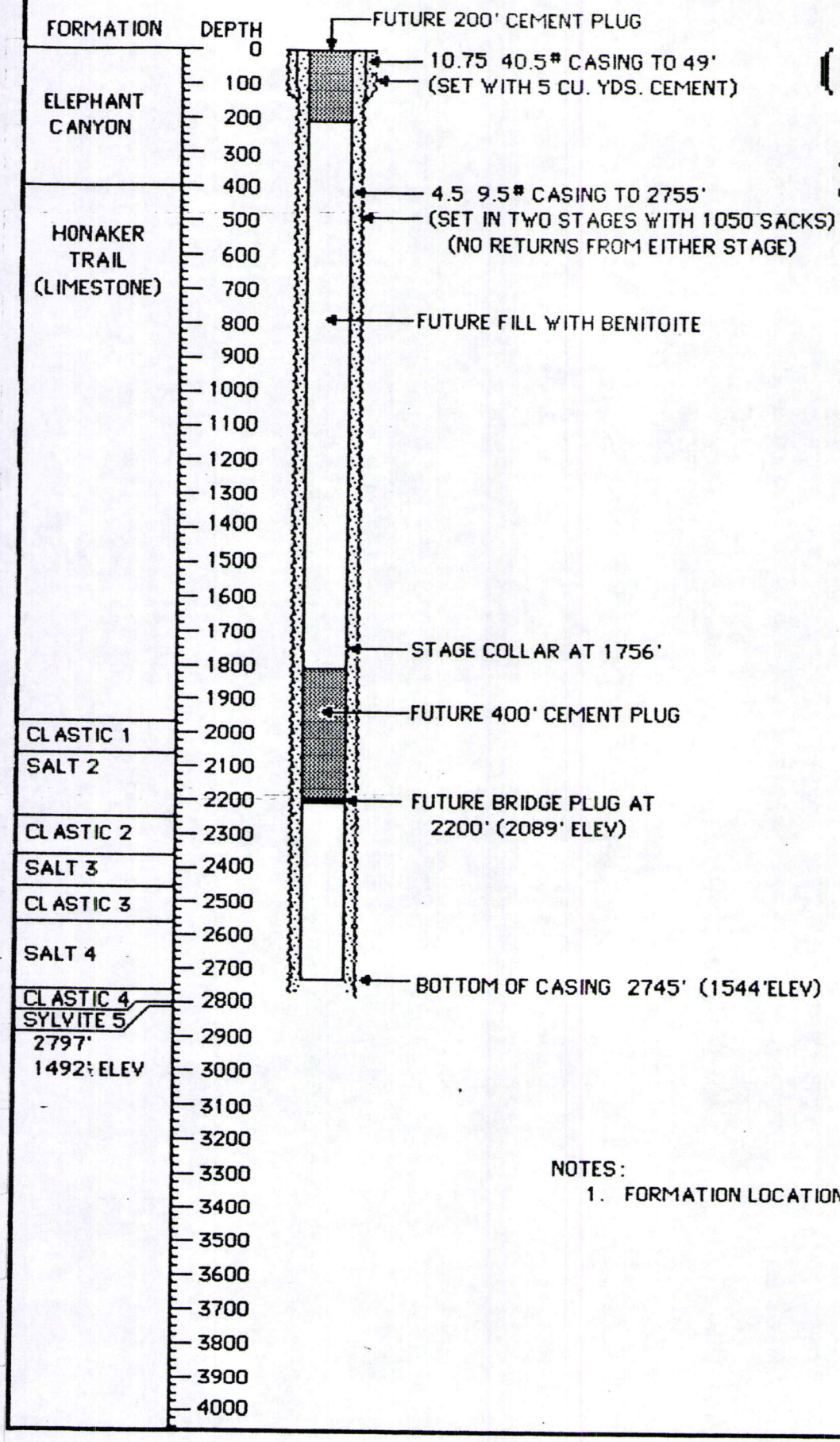
BOTTOM 1594'

SPUD DATE
15 OCT 1970
COMPLETION DATE
8 NOV 1970

NOTES:

1. RETRIEVABLE PACKER AT 1372' TO BE REMOVED
2. 4.5" CASING TO BE MILLED UNTIL BRIDGE PLUG CAN BE SET AT 2000'
3. FORMATION LOCATIONS ARE APPROXIMATE.

WELL ABANDONMENT PLAN



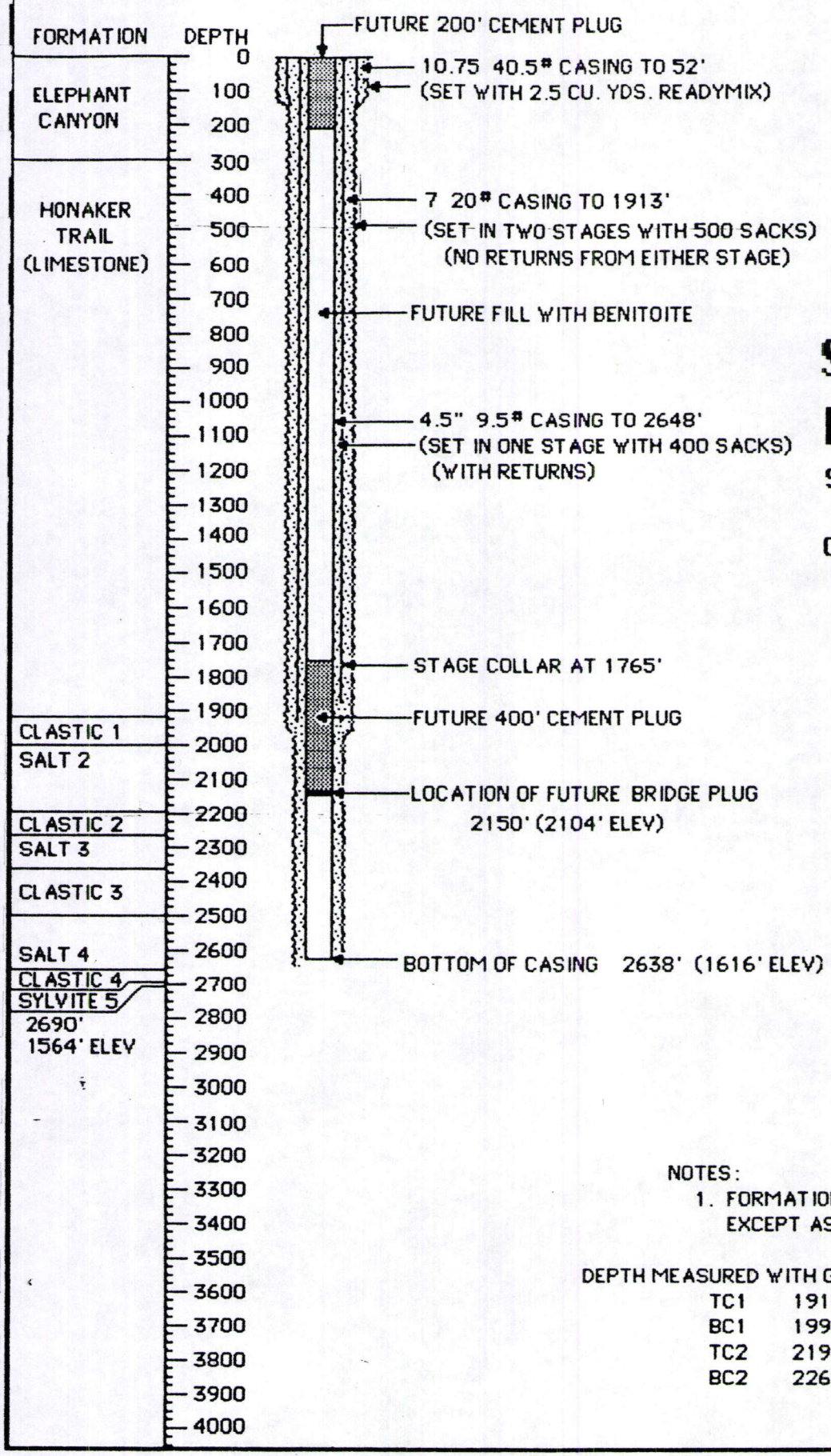
WELL # 9
(NOT INTO MINE)
LOCATION
2,525,351 E
671,670 N

ELEV.
SURFACE 4289'
BOTTOM 1544'

SPUD DATE
10 NOV 1970
COMPLETION DATE
29 NOV 1970

NOTES:
1. FORMATION LOCATIONS ARE APPROXIMATE.

WELL ABANDONMENT PLAN



WELL # 10
LOCATION
2,525,320 E
672,034 N

ELEV.
SURFACE 4254'
BOTTOM 1616'

SPUD DATE
1 DEC 1970
COMPLETION DATE
16 DEC 1970

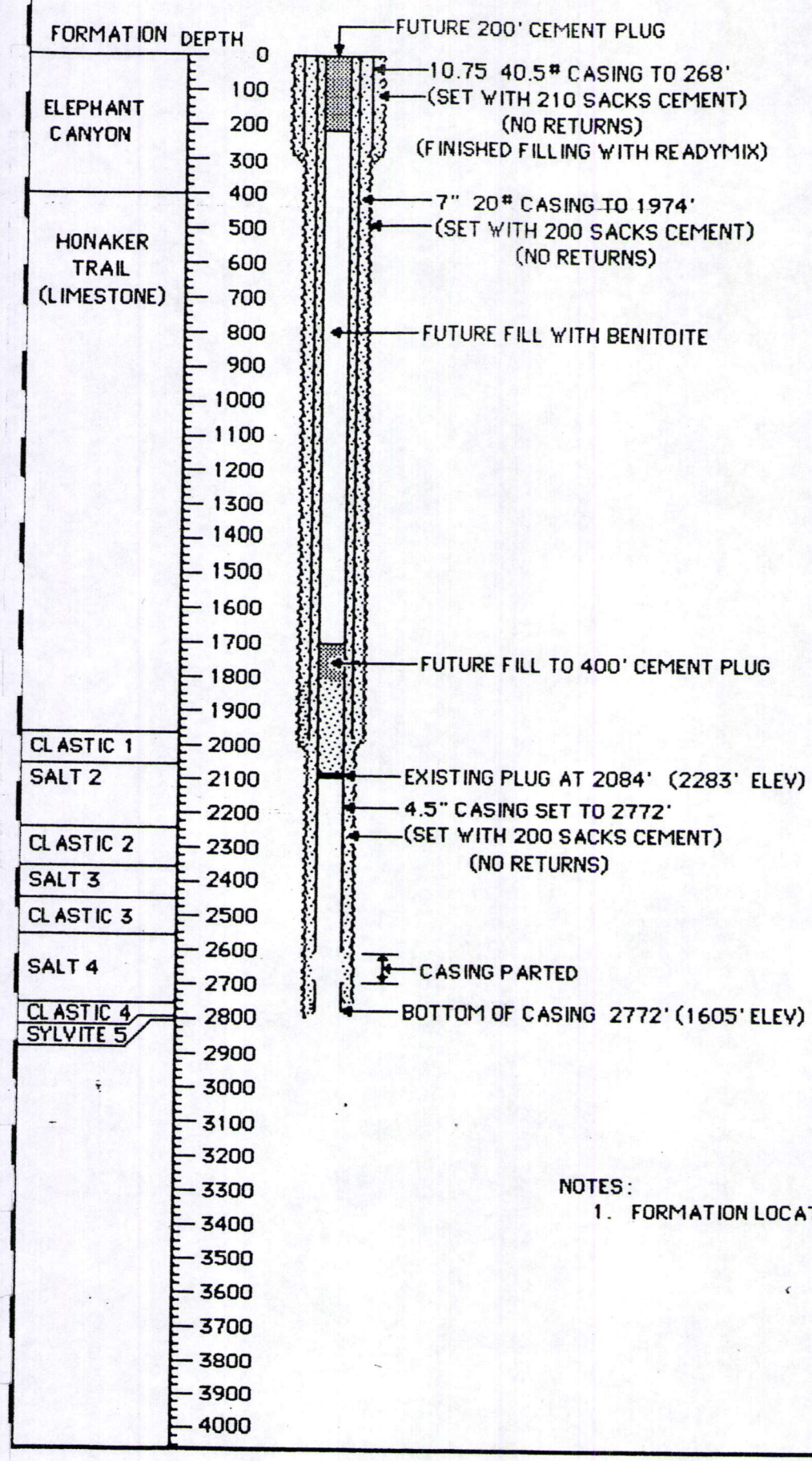
NOTES:

1. FORMATION LOCATIONS ARE APPROXIMATE EXCEPT AS INDICATED BELOW.

DEPTH MEASURED WITH GAMMA RAY NEUTRON LOGS 6-6-85

TC1	1916'	TC3	2364'
BC1	1997'		
TC2	2190'		
BC2	2263'		

WELL ABANDONMENT PLAN



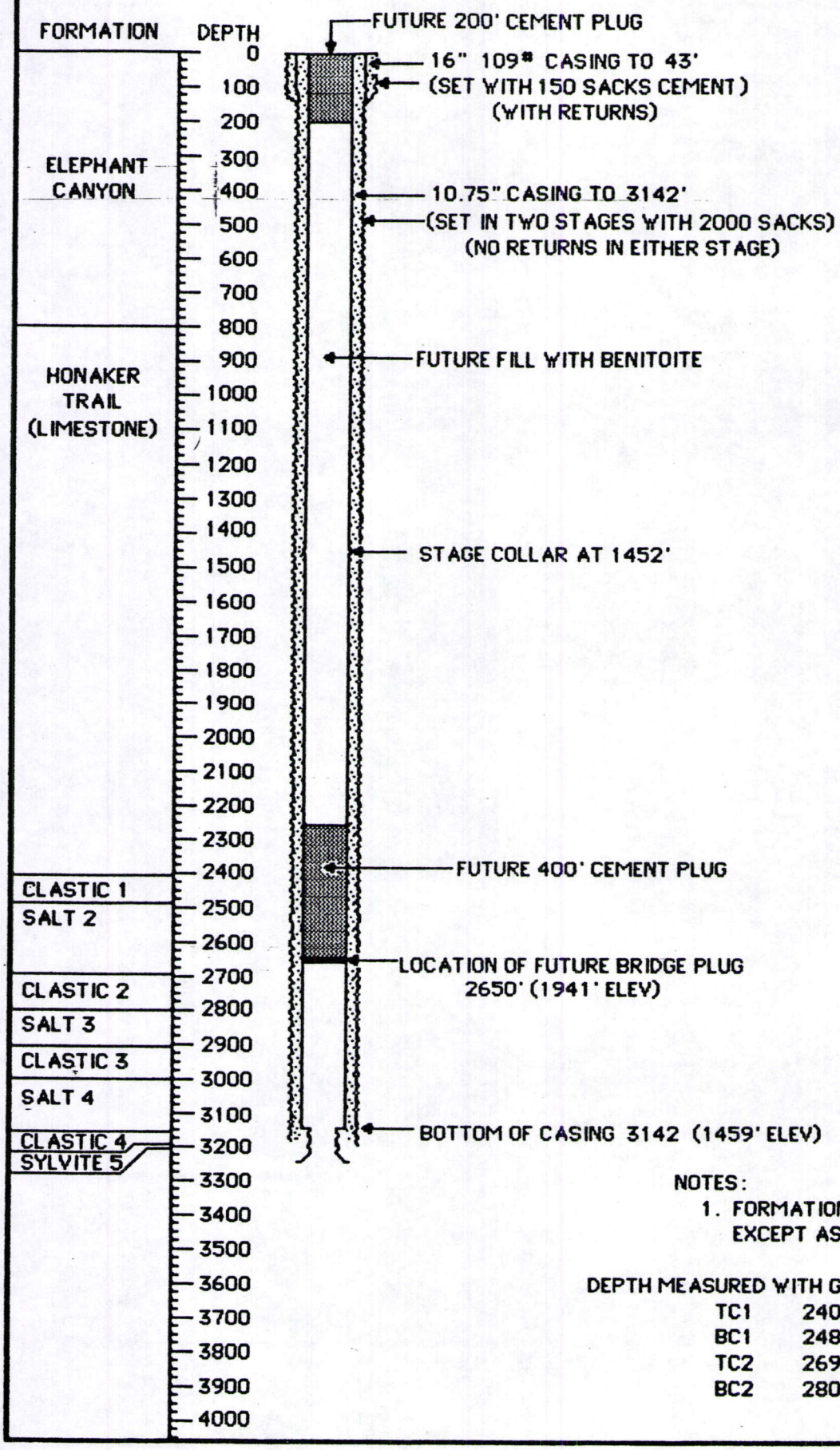
WELL # 11
LOCATION
2,526,983 E
672,589 N

ELEV.
SURFACE 4367'
BOTTOM 1605'

SPUD DATE
18 DEC 1970
COMPLETION DATE
3 JAN 1971

NOTES:
1. FORMATION LOCATIONS ARE APPROXIMATE.

WELL ABANDONMENT PLAN



WELL # 12
LOCATION
2,521,020 E
675,241 N
ELEV.
SURFACE 4591
BOTTOM 1459

SPUD DATE
2 JAN 1971
COMPLETION DATE
20 JAN 1970

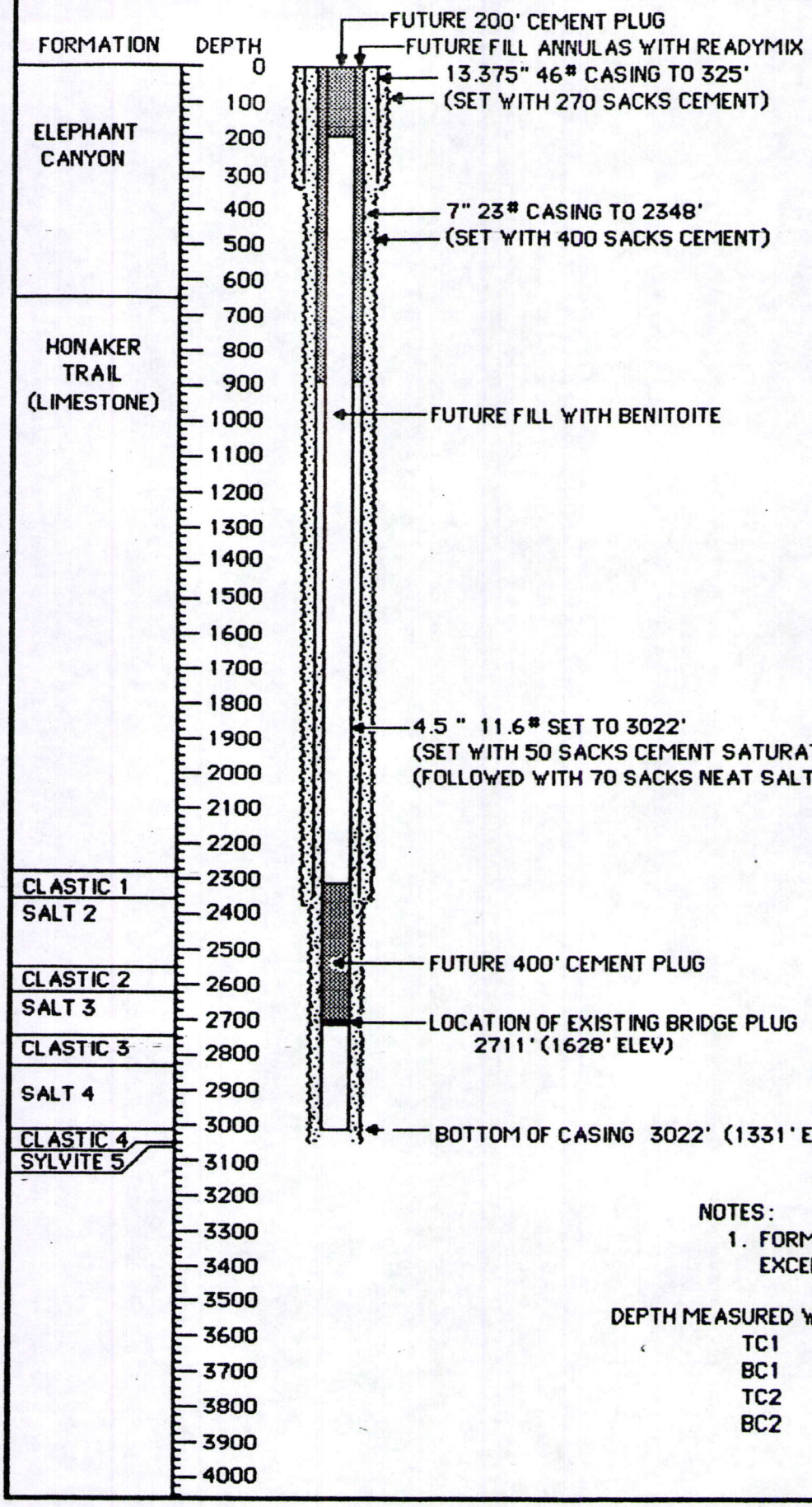
NOTES:

1. FORMATION LOCATIONS ARE APPROXIMATE EXCEPT AS INDICATED BELOW.

DEPTH MEASURED WITH GAMMA RAY NEUTRON LOGS 6-6-85

TC1	2408'	TC3	2908'
BC1	2489'	BC3	2992'
TC2	2695'		
BC2	2802'		

WELL ABANDONMENT PLAN



WELL # 13
LOCATION
2,523,592 E
675,925 N
ELEV.
SURFACE 4339
BOTTOM 1331

SPUD DATE
26 MAR 1973
COMPLETION DATE
25 APR 1973

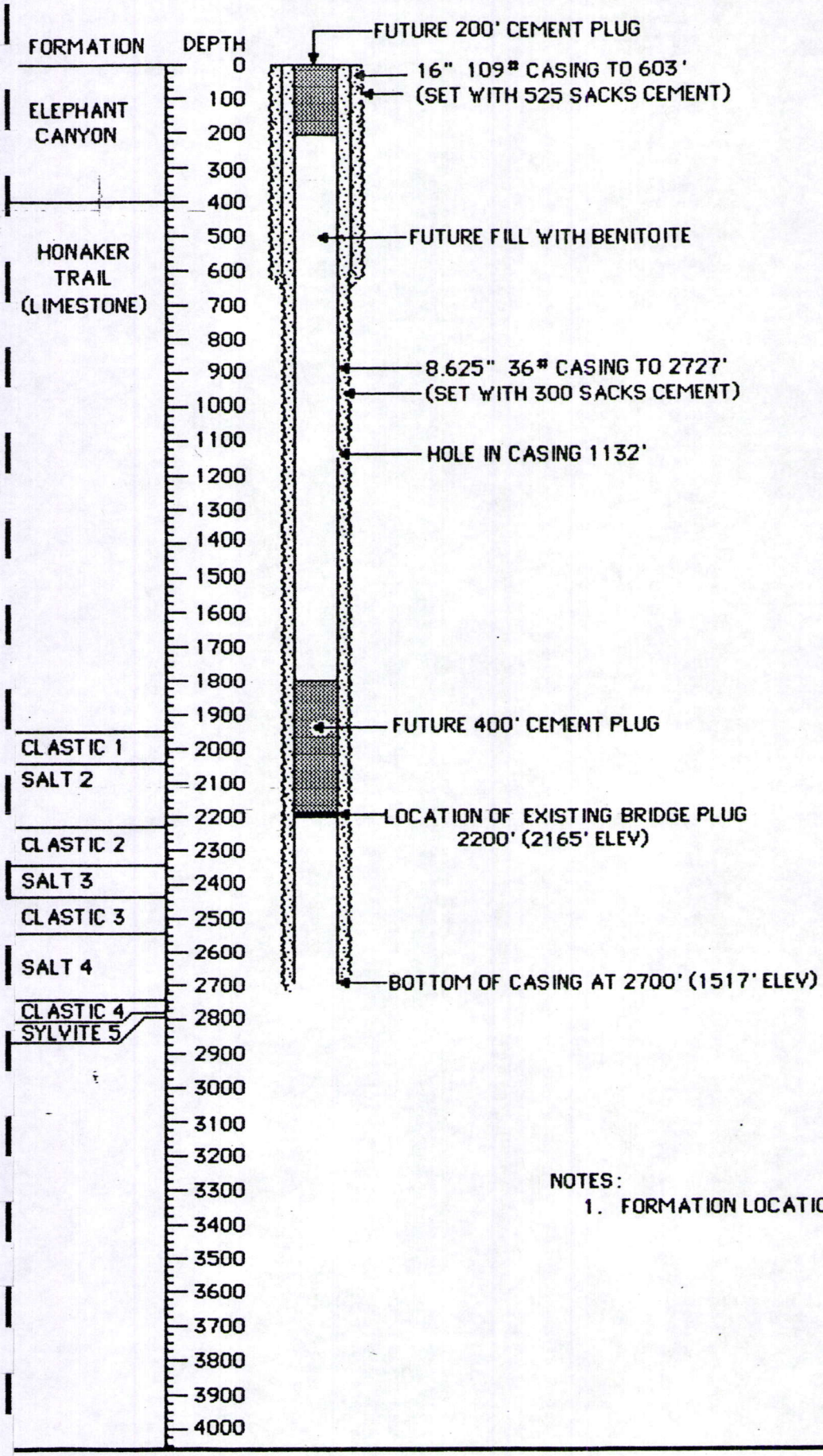
NOTES:

1. FORMATION LOCATIONS ARE APPROXIMATE EXCEPT AS INDICATED BELOW.

DEPTH MEASURED WITH GAMMA RAY NEUTRON LOGS 6-6-85

TC1	2279'	TC3	2744'
BC1	2357'	BC3	2831'
TC2	2550'		
BC2	2626'		

WELL ABANDONMENT PLAN



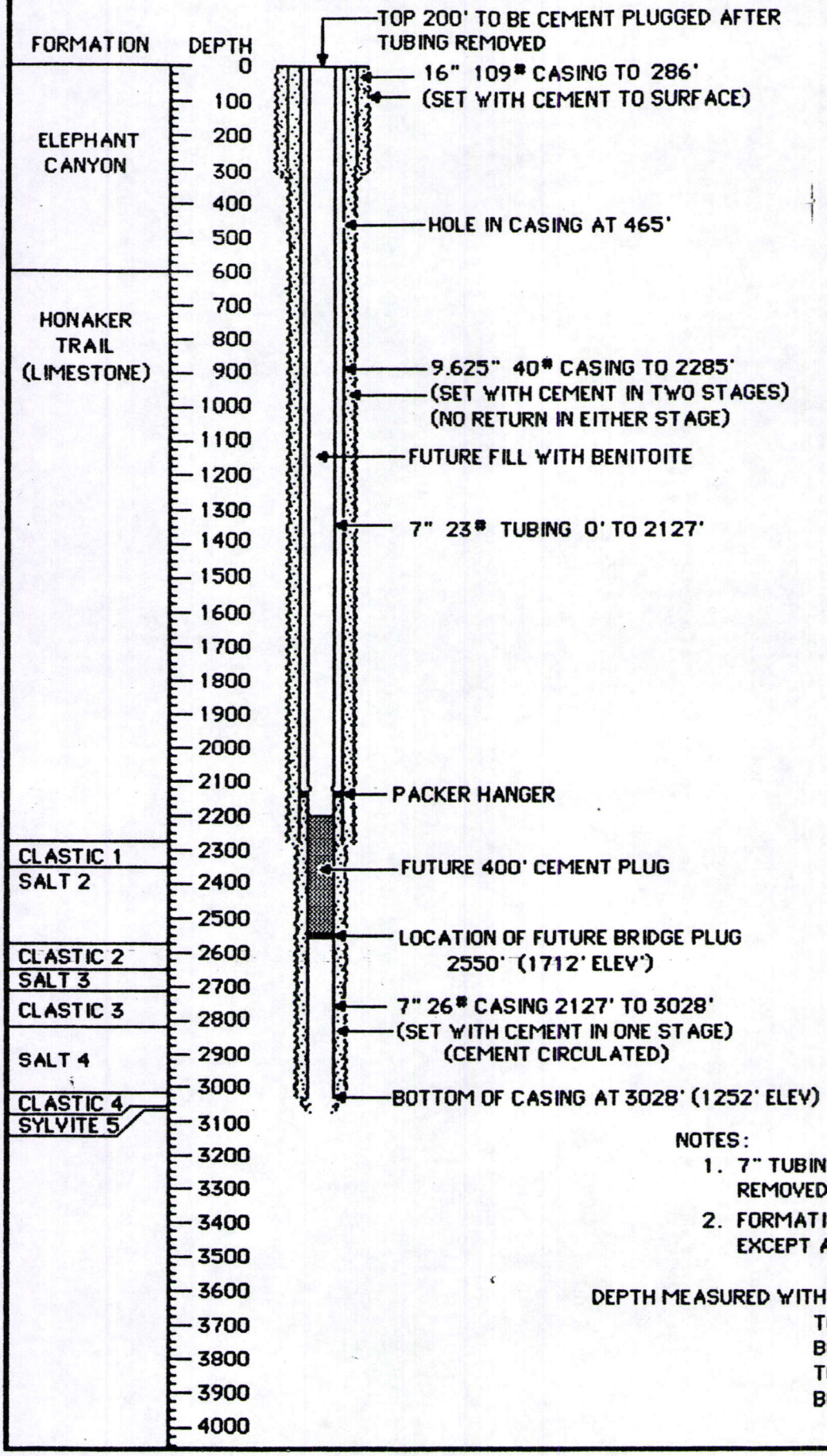
WELL # 14
LOCATION
2,527,017 E
672,339 N

ELEV.
SURFACE 4365'
BOTTOM 1517'

SPUD DATE
3 MAY 1974
COMPLETION DATE
6 JUN 1974

NOTES:
1. FORMATION LOCATIONS ARE APPROXIMATE.

WELL ABANDONMENT PLAN



WELL # 15
LOCATION
2,521,780 E
677,700 N
ELEV.
SURFACE 4262
BOTTOM 1252

SPUD DATE
20 MAR 1975
COMPLETION DATE
16 APR 1975

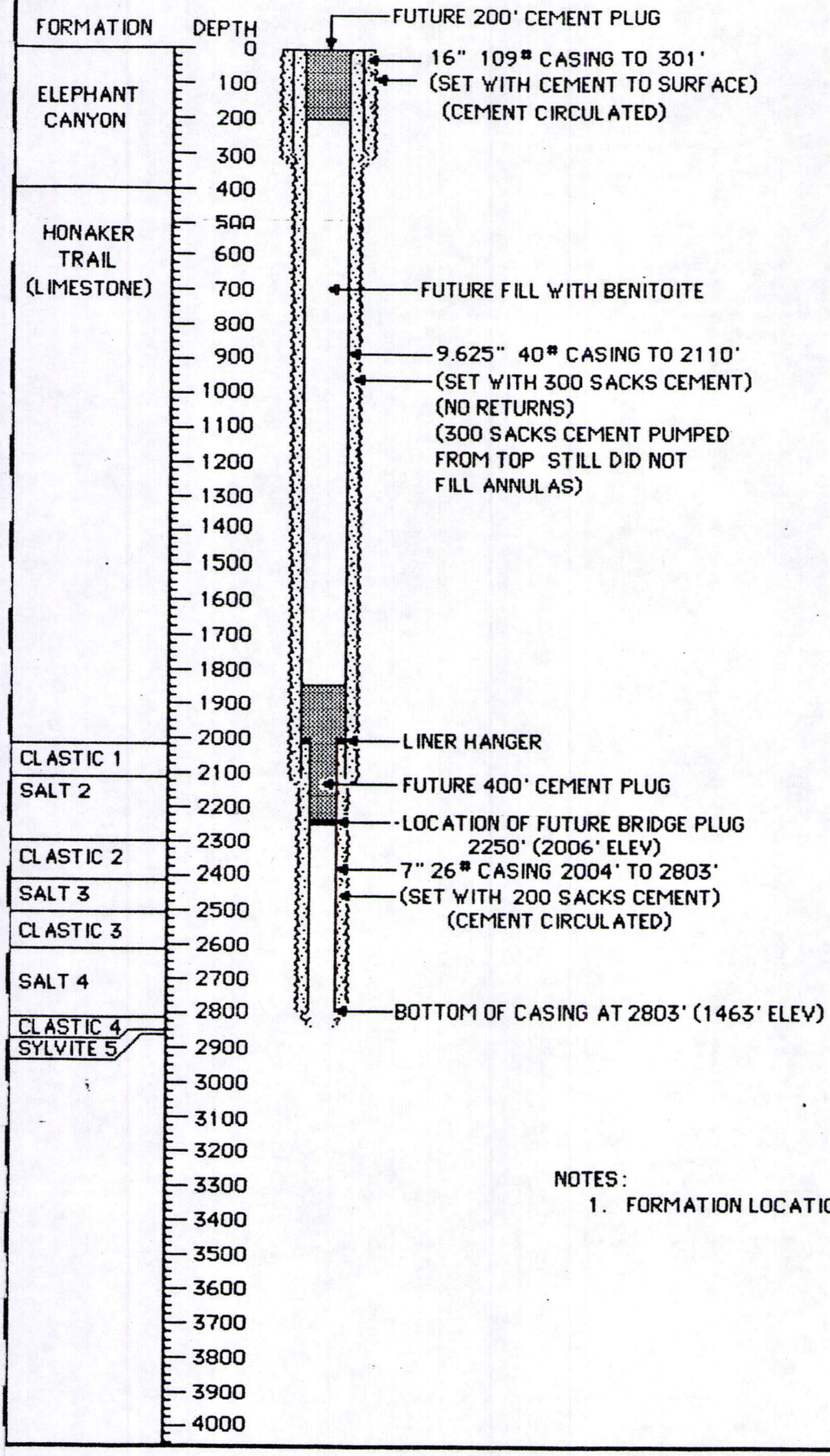
NOTES:

1. 7" TUBING FROM SURFACE TO 2127' TO BE REMOVED BEFORE CEMENTING.
2. FORMATION LOCATIONS ARE APPROXIMATE EXCEPT AS INDICATED BELOW.

DEPTH MEASURED WITH GAMMA RAY NEUTRON LOGS 6-6-85

TC1	2275'
BC1	2348'
TC2	2575'
BC2	2650'

WELL ABANDONMENT PLAN

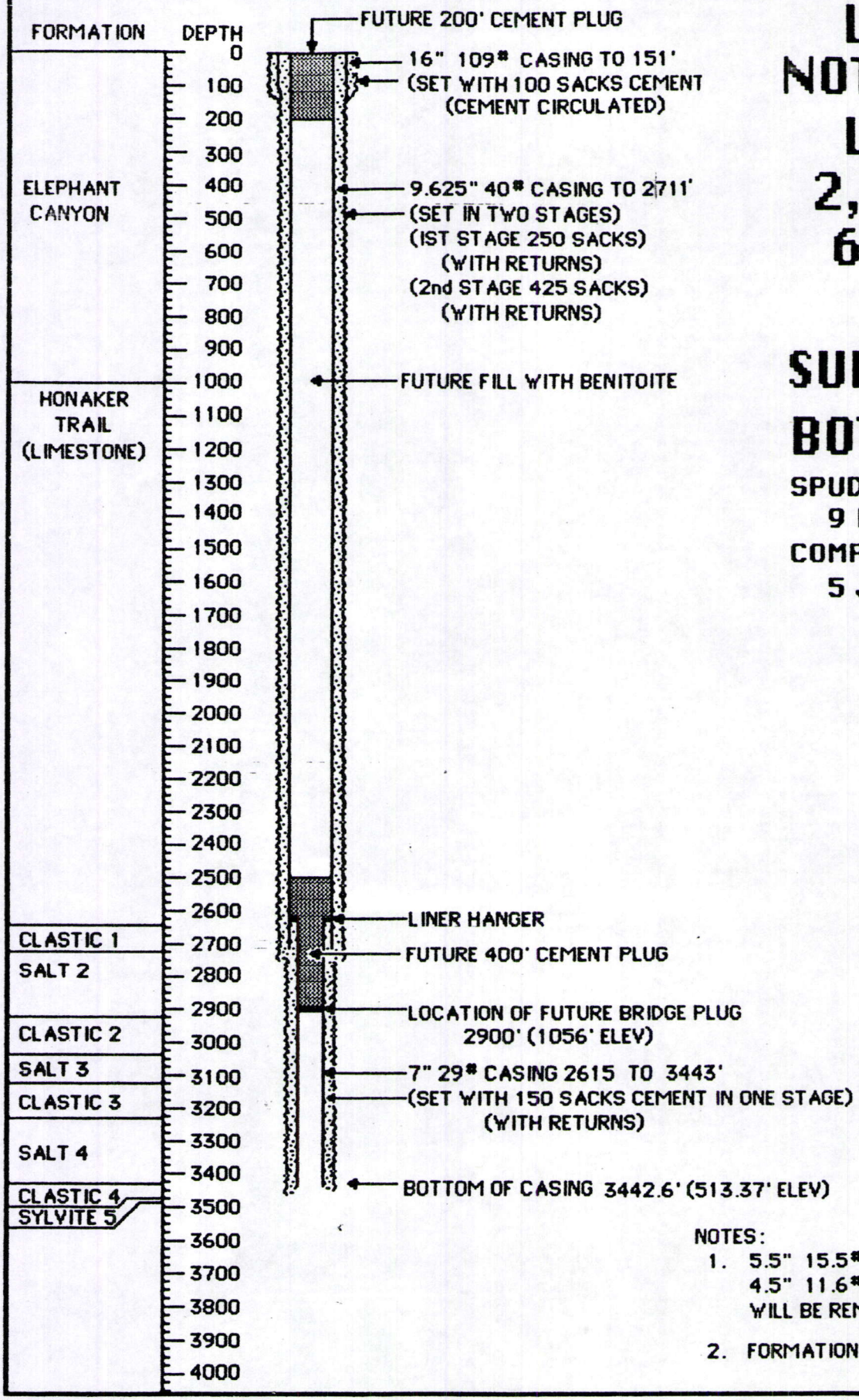


WELL # 16
LOCATION
2,523,261 E
673,447 N
ELEV.
SURFACE 4256'
BOTTOM 1463'

SPUD DATE
27 APR 1975
COMPLETION DATE
21 MAY 1975

NOTES:
1. FORMATION LOCATIONS ARE APPROXIMATE.

WELL ABANDONMENT PLAN



WELL # 17
NOT INTO MINE

LOCATION
2,528,501 E
678,539 N

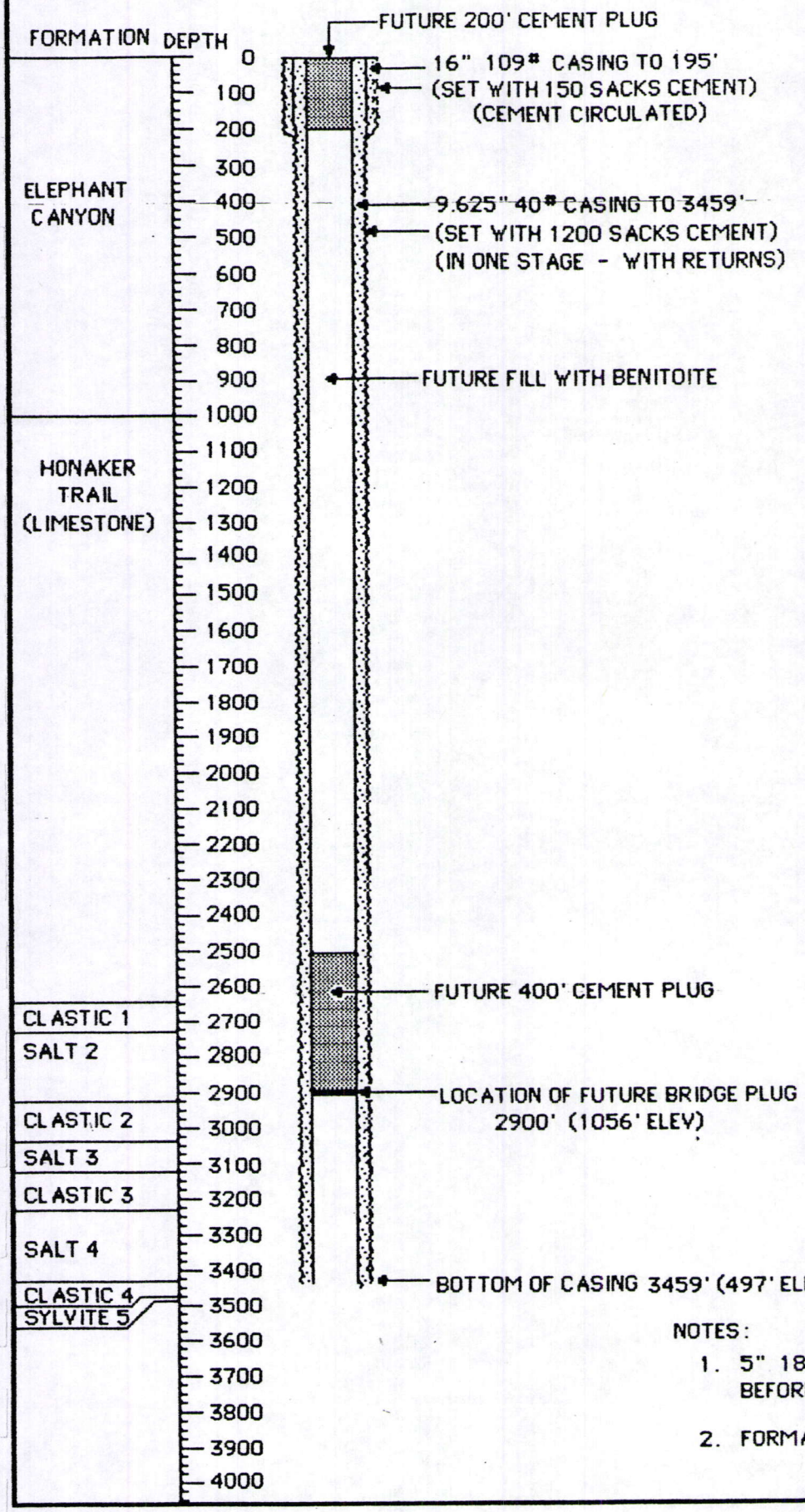
ELEV.
SURFACE 3956'
BOTTOM 1463'

SPUD DATE
9 MAY 1976
COMPLETION DATE
5 JUN 1976

NOTES:

1. 5.5" 15.5# TUBING FROM 0 TO 2603' AND 4.5" 11.6# TUBING FROM 2603' TO 3508' WILL BE REMOVED BEFORE CEMENTING
2. FORMATION LOCATIONS ARE APPROXIMATE.

WELL ABANDONMENT PLAN



WELL # 18
NOT INTO MINE

LOCATION
2,528,508 E
678,589 N

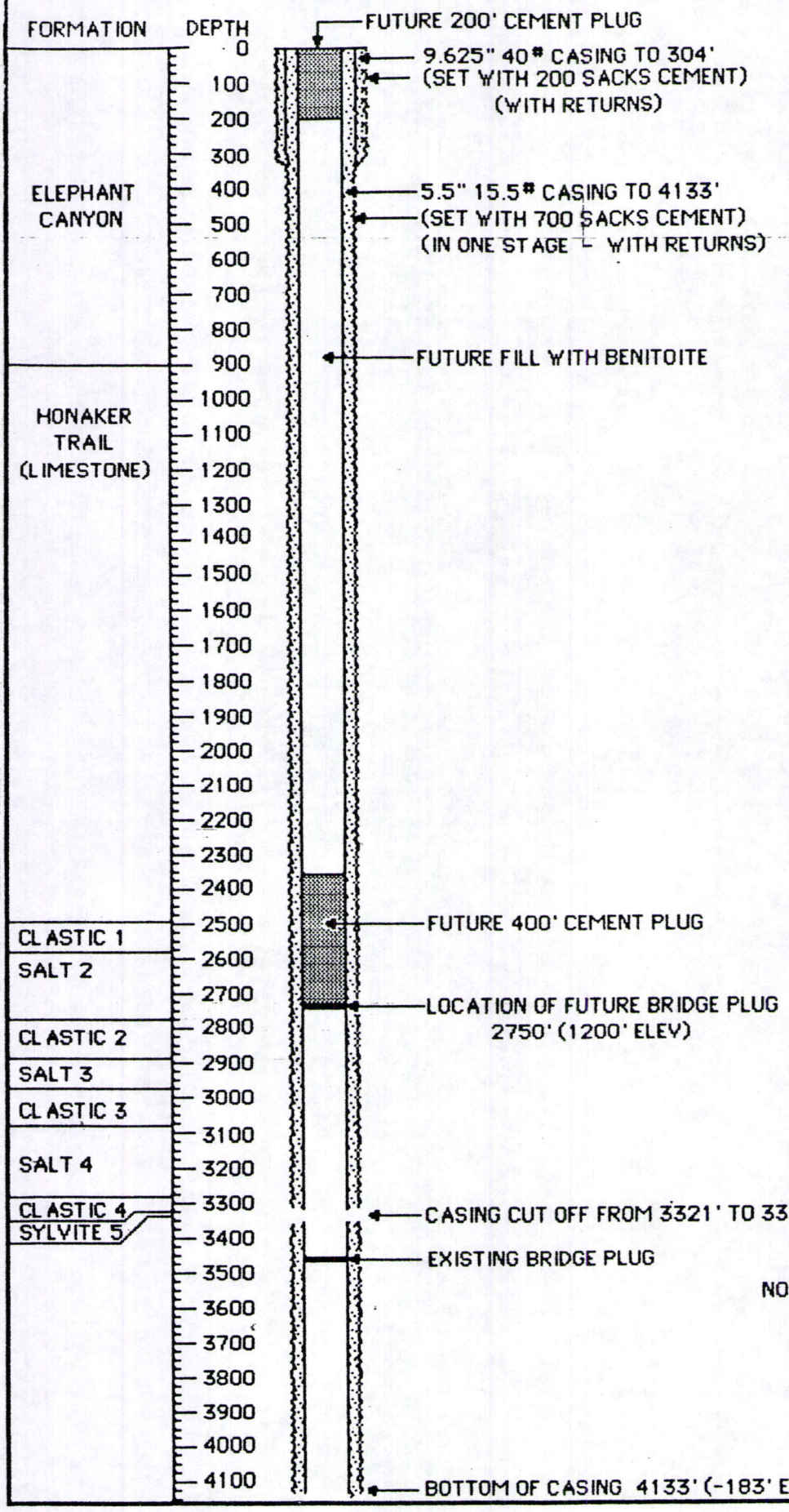
ELEV.
SURFACE 3956'
BOTTOM 497'

SPUD DATE
8 JUN 1976
COMPLETION DATE
2 JUL 1976

NOTES:

1. 5" 18# TUBING FROM 0 TO 3956' WILL BE REMOVED BEFORE CEMENTING
2. FORMATION LOCATIONS ARE APPROXIMATE.

WELL ABANDONMENT PLAN



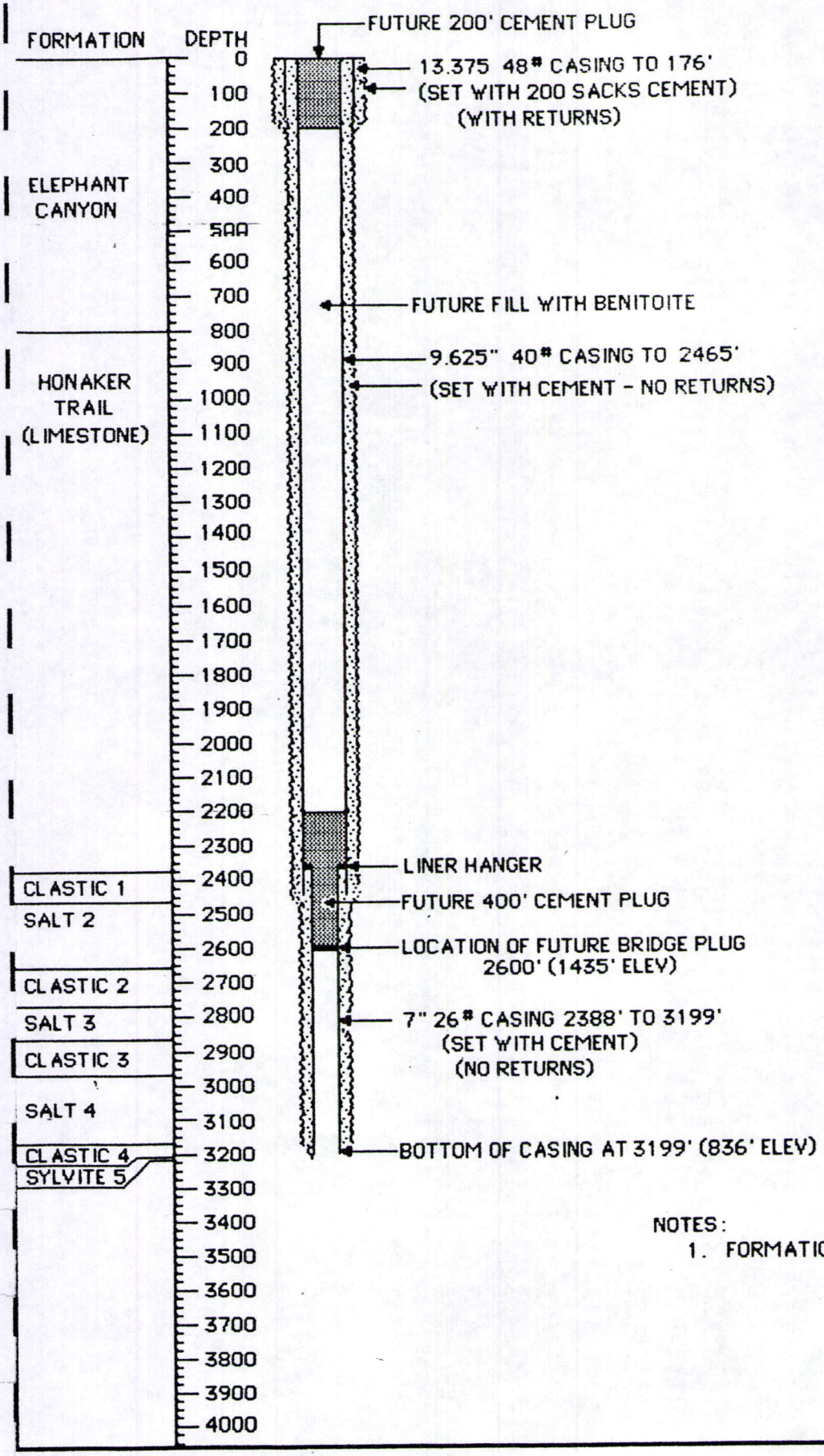
WELL # 19
NOT INTO MINE
LOCATION
2,528,418 E
677,819 N
ELEV.
SURFACE 3950'
BOTTOM -183'

SPUD DATE
21 FEB 1979
COMPLETION DATE
18 MAR 1979

NOTES:

1. 2.875" 6.5# TUBING FROM 0 TO 3330' WILL BE REMOVED BEFORE CEMENTING
2. FORMATION LOCATIONS ARE APPROXIMATE.

WELL ABANDONMENT PLAN



WELL # 20

LOCATION

2,527,598 E

677,376 N

ELEV.

SURFACE 4035'

BOTTOM 835'

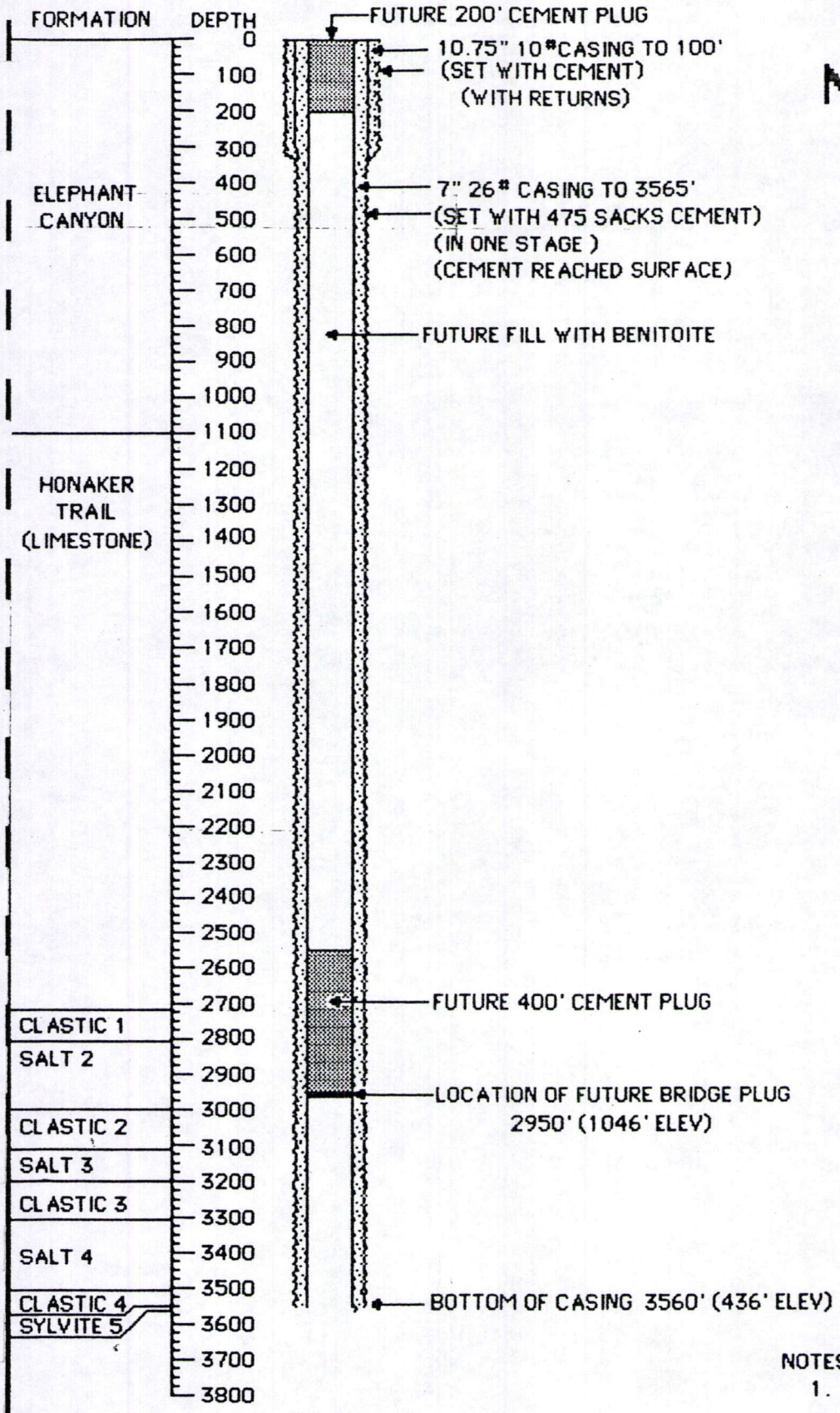
SPUD DATE
14 MAY 1981

COMPLETION DATE
30 JUN 1981

NOTES:

1. FORMATION LOCATIONS ARE APPROXIMATE.

WELL ABANDONMENT PLAN



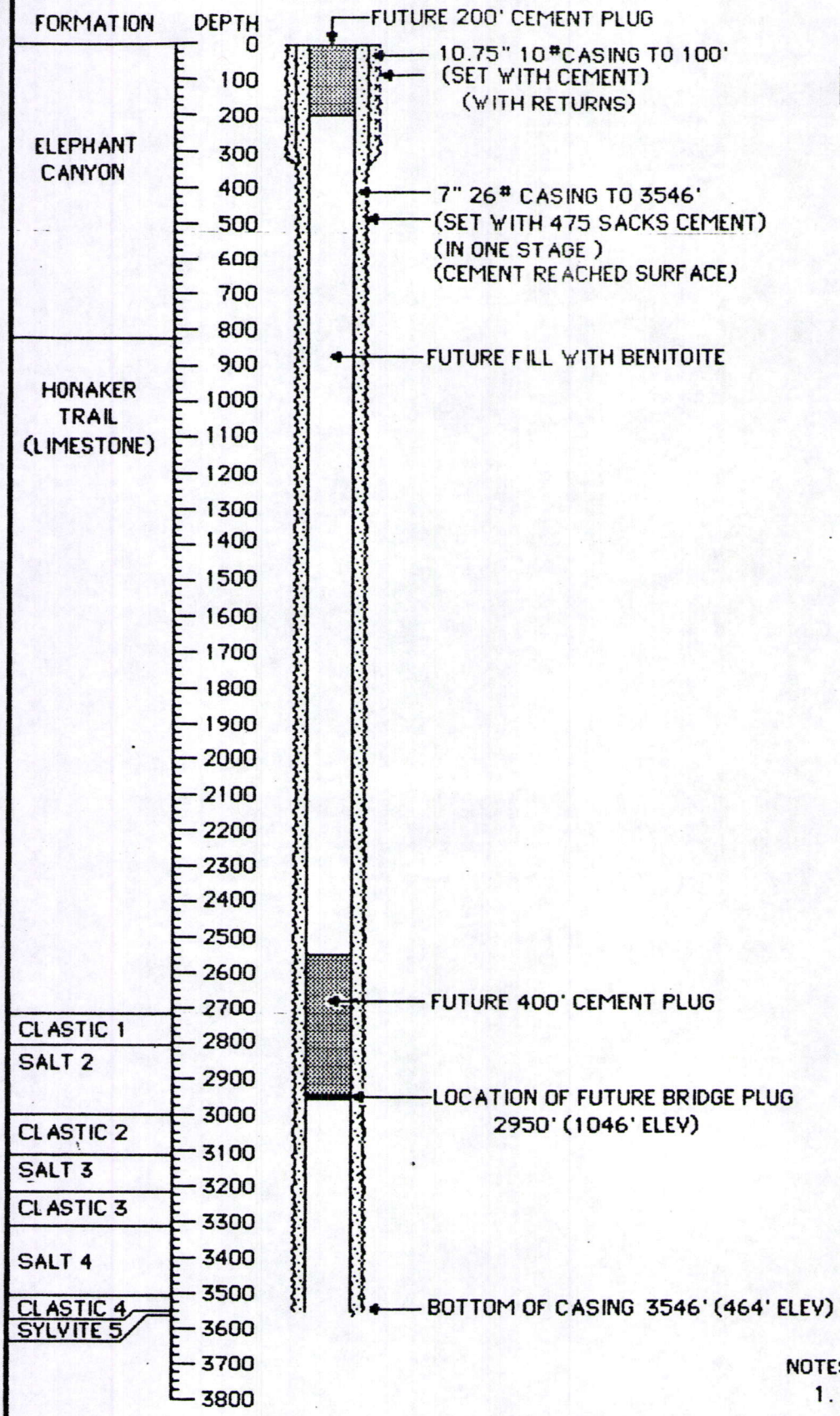
WELL # 21
NOT INTO MINE
LOCATION
2,527,978 E
679,248 N
ELEV.
SURFACE 3996'
BOTTOM 436'

SPUD DATE
24 JUN 1981
COMPLETION DATE
28 JUL 1981

NOTES:

1. 4.5" 11.6# TUBING FROM 0 TO 3556' WILL BE REMOVED BEFORE CEMENTING
2. FORMATION LOCATIONS ARE APPROXIMATE

WELL ABANDONMENT PLAN



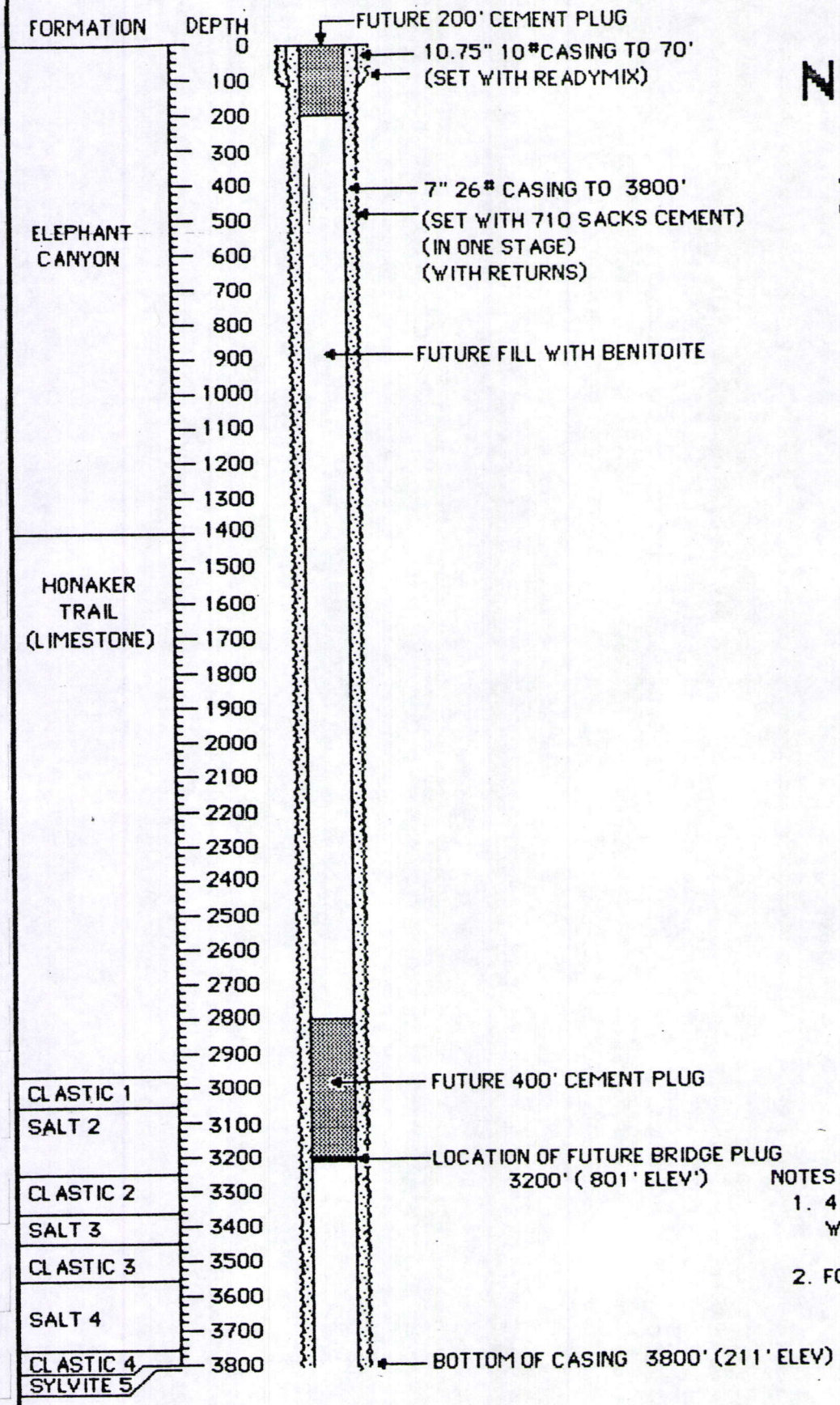
WELL #22
NOT INTO MINE
LOCATION
2,527,339 E
679,700 N
ELEV.
SURFACE 4010'
BOTTOM 464'

SPUD DATE
31 JUL 1981
COMPLETION DATE
28 AUG 1981

NOTES:

1. 4.5" 11.6# TUBING FROM 0 TO 3546' WILL BE REMOVED BEFORE CEMENTING
2. FORMATION LOCATIONS ARE APPROXIMATE

WELL ABANDONMENT PLAN



WELL # 23
NOT INTO MINE

LOCATION
2,527,841 E
680,492 N

ELEV.
SURFACE 4011'
BOTTOM 211'

SPUD DATE
1 SEP 1981

COMPLETION DATE
28 SEP 1981

NOTES:

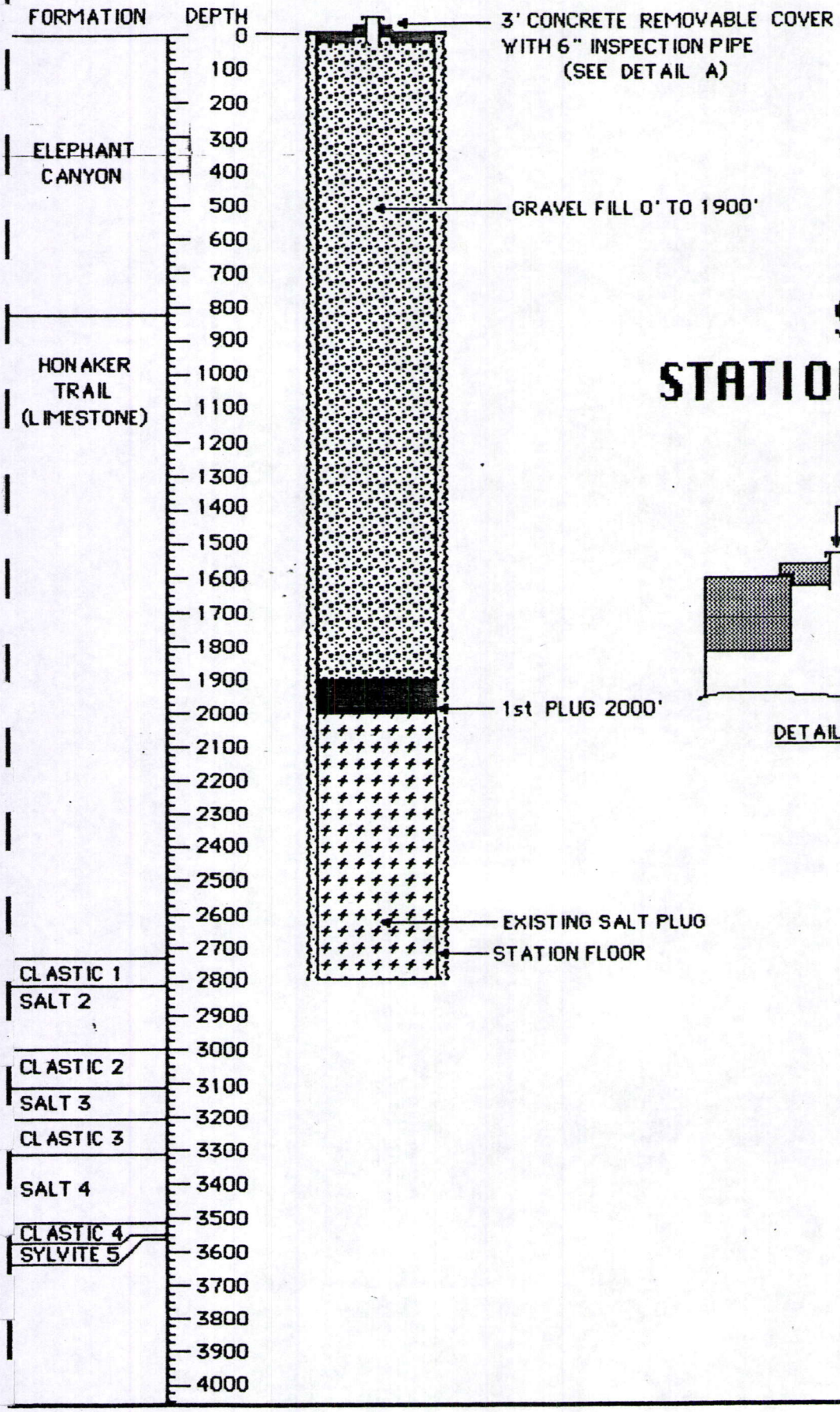
1. 4.5" 11.6# TUBING FROM 0 TO 3811' WILL BE REMOVED BEFORE CEMENTING
2. FORMATION LOCATIONS ARE APPROXIMATE.

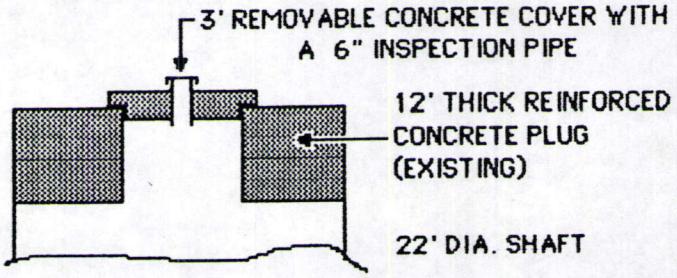
APPENDEX B

Graphic Representation of each Shaft

SHAFT ABANDONMENT PLAN

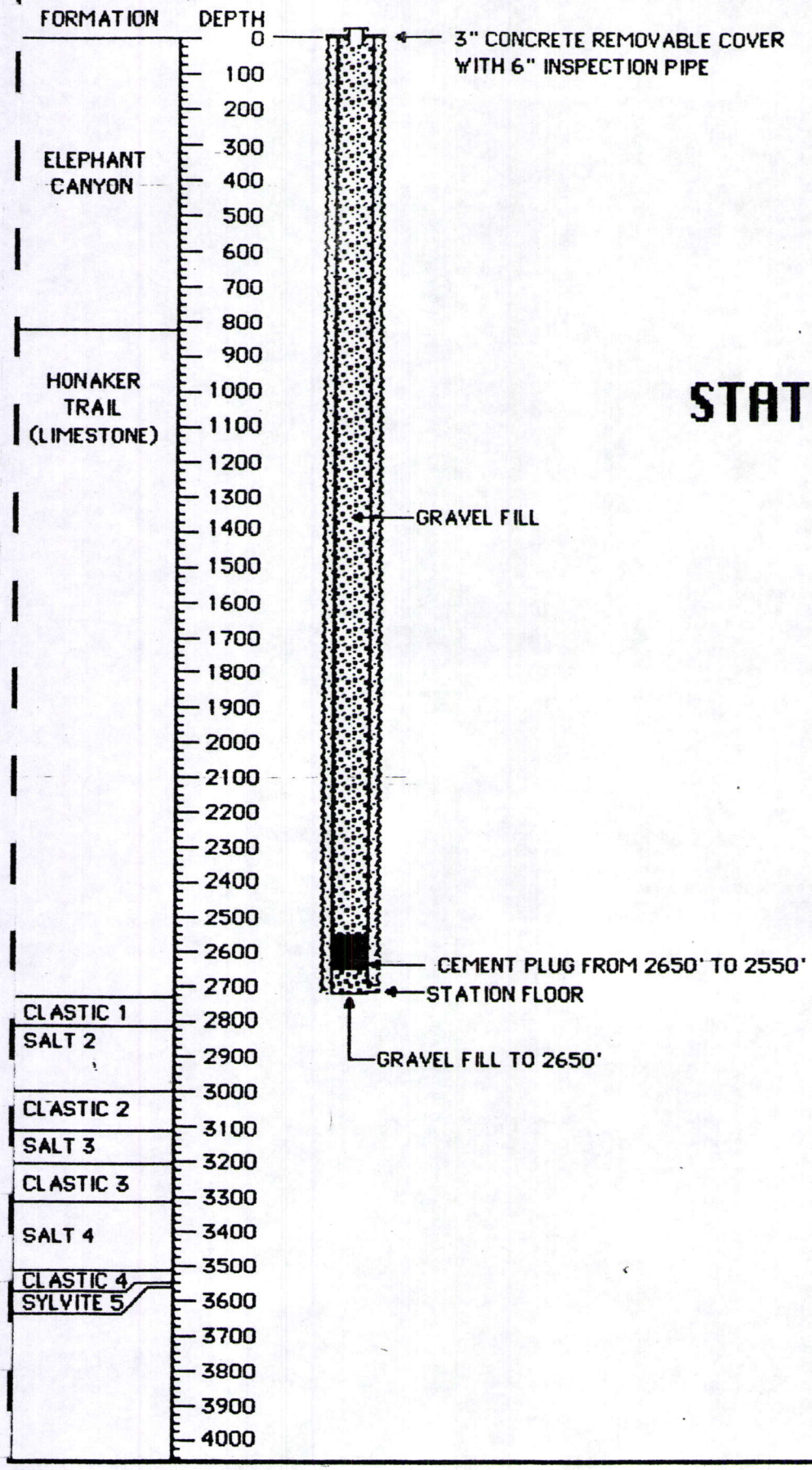
#1 SHAFT
LOCATION
2,526,389 E
680,532 N
ELEV.
SURFACE 4032'
STATION FLOOR 1310'
BOTTOM 1236'





DETAIL A

SHAFT ABANDONMENT PLAN



#2 SHAFT LOCATION

2,526,752 E

680,717 N

ELEV.

SURFACE 4018'

STATION FLOOR 1318'

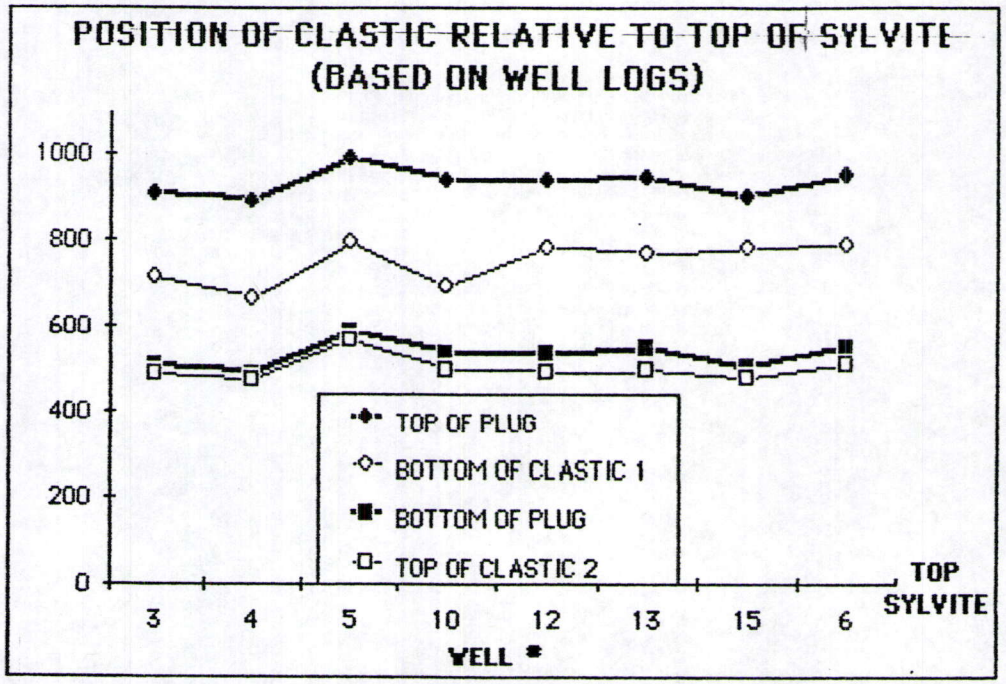
BOTTOM 1308'

APPENDEX C

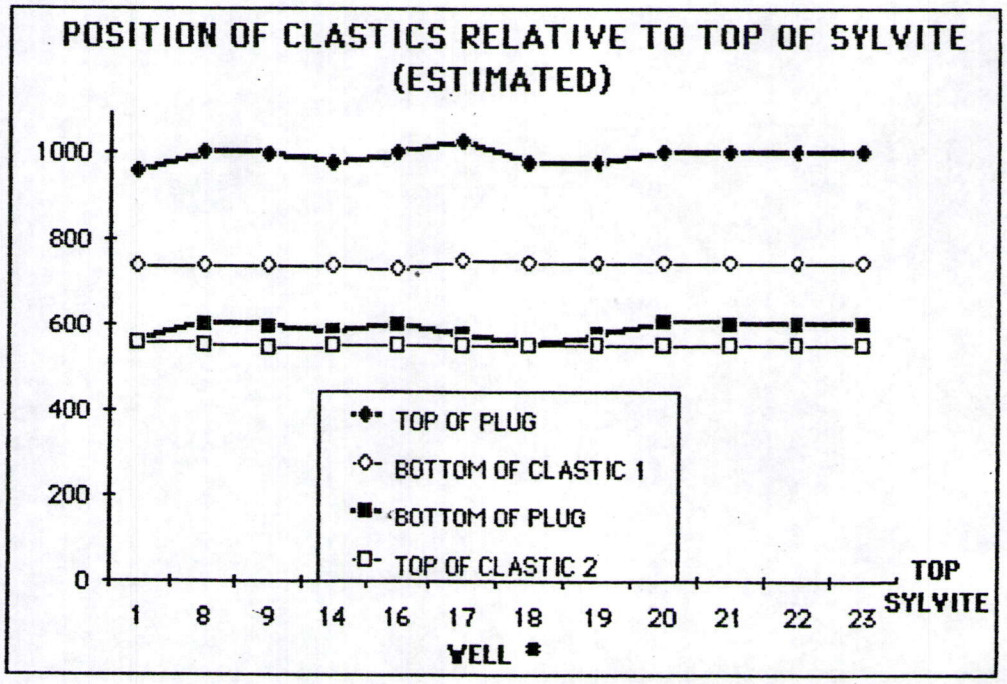
Criteria for Location of Bridge Plugs

CRITERIA FOR LOCATION OF BRIDGE PLUGS IN SOLUTION MINING WELLS

The following graph shows the elevation of two clastic beds in relation to the top of sylvite 5. These elevations were determined by gamma ray - neutron logs. The top of clastic 2 ranges from 500 to 600 feet above sylvite 5. The bridge plug in these wells is to be set just above clastic 2 as shown .



A distance of approximately 600 feet above the top of the mine (top of sylvite 5) was chosen for the location of the bridge plug for the remainder of the wells.



APPENDEX D

One Time and Unit Costs
Summary Sheet

ABANDONMENT PLAN

ONE TIME COSTS

HALLIBURTON MOVE IN COSTS - FROM CORTEZ COLO.	MILES	$/MILE	
CEMENT PUMP TRUCK	140	$2.15	$301.00
BULK TRUCK	140	$0.90	$126.00
CREW TRUCK	140	$0.90	$126.00
TOOL PUSHERS TRUCK	140	$0.90	$126.00
SUBSISTANCE 4 MEN $80 / DAY			$320.00
TOTAL			$999.00

WORKOVER RIG MOVE IN COSTS - FROM MOAB UTAH	$350.00
CASING CREW MOVE IN COSTS - FROM GRAND JUNCTION COLO.	$396.00

UNIT COSTS

HALLIBURTON PER WELL ASSUMING ONE WELL / DAY

CEMENT PUMPING TRUCK (1500 - 3000')	$1260.00
LABOR 4 MEN $80.00 / DAY	$320.00
MILEAGE FOR 2 TRUCKS $.90 / MILE 50 MILES / DAY	$90.00
TOTAL	$1670.00

WORKOVER RIG - PER WELL COSTS DURING CEMENTING	$2426.00
- PER WELL COSTS DURING TUBING REMOVAL	$1750.00
CASING CREW - PER WELL COSTS	$1950.00

BRIDGE PLUG COSTS		+10% DELIVERED
4.5	$1111.00	$1222.00
5.5	$1159.00	$1275.00
7	$1321.00	$1453.00
8.625	$1826.00	$2009.00
9.635	$2285.00	$2514.00
10.75	$2717.00	$2989.00
16	$5000.00	$5500.00

CEMENT COSTS	$10.54	/CU FT
BENITOITE COSTS	$0.31	/CU FT

QUOTE FROM: T & M CASING SERVICES
P.O.BOX 2722
GRAND JUNCTION COLORADO 81502
PHONE: 303-245-0593
CONTACTED RANDY MILLIGAN

WORK REQUIRED: REMOVE TUBING FROM THE FOLLOWING WELLS;

WELL #	FOOTAGE	SIZE	#/FT	WT OF PIPE	
1	3,033	5.500	14.62	44,342	
15	2,127	7.000	23.00	48,921	
17	2,603	5.500	15.50	40,347	
	905	4.500	11.60	10,498	
18	3,956	5.000	18.00	71,208	
19	3,330	2.875	6.50	21,645	
21	3,565	4.500	11.60	41,354	
22	3,546	4.500	11.60	41,134	
23	3,711	4.500	11.60	43,048	
TOTAL FOOTAGE	26,776			362,496	#
				181	TONS

RANDY ESTIMATED A TOTAL OF FIVE DAYS TO COMPLETE.

TRAVEL COSTS $396.00
PER DAY COSTS $1,950.00 (TOTAL COST - INCLUDES EQUIPMENT)
(AND SUBSISTANCE)

TO BE CONSERVATIVE AN ESTIMATE OF ONE WELL PER DAY IS USED.

QUOTE FROM : BOB BEEMAN DRILLING
P.O. BOX 788
MOAB, UTAH 84532
PHONE: 801-259-7281
CONTACTED TED CHRISTIANSEN

	HOURS	$/HOUR	TOTAL
MOVE IN COSTS	2	$175.00	$350.00

WORKOVER RIG COSTS (PER WELL CEMENTING COSTS)

	HOURS		
RIG UP	2		
PICKUP PIPE	3		
SET BRIDGE PLUG	2		
ASSIST HALLIBURTION IN PUMPING CEMENT AND BENITOITE	3		
LAY DOWN	2		
TOTAL HOURS	12	$175.00	$2,100.00
RENT 3100' - 2 7/8" DRILL PIPE @ .06/FT/DAY			$186.00
WATER TRUCK FOR CEMENTING	4	$35.00	$140.00
TOTAL PER WELL COSTS			$2,426.00

WORKOVER RIG COSTS (PER WELL TUBING REMOVAL COSTS)

RIG UP	2		
PULL PIPE	6		
RIG DOWN	2		
TOTAL PER WELL COSTS	10	$175.00	$1,750.00

NOTE: LABOR AND SUBSISTANCE ARE INCLUDED IN THE HOURLY RATE OF $175.

QUOTE FROM: HALLIBURTON
4109 E. MAIN
FARMINGTON N M
PHONE: 505-325-3575
CONTACTED LARRY WILLIINGER

SERVICES OUT OF CORTEZ COLO.
BOB ODELL
PHONE: 303-565-6521

MOVE IN COSTS	$/MILE
CEMENT PUMP TRUCK	$2.15
BULK TRUCK	$0.90
CREW TRUCK	$0.90
TOOL PUSHERS TRUCK	$0.90

CEMENT PUMPING TRUCK COST

1ST 8 HOURS	$1,260.00
OTHER 8 HOUR SHIFTS	$1,250.00

INCLUDES LABOR FOR ONE MAN
CAPACITY 10-12 BARRELS(42GAL)/MIN
OR 2847 SACKS/HR
RATES ARE FOR DEPTHS FROM 1500' TO 3000'
OVER 3000' ADD $15 / 100'

TOOLMAN NEEDED TO SET BRIDGE PLUG
FIRST 8 HOURS INCLUDED IN THE COST OF THE PLUG
OVER 8 HOURS @ $260.00 PER 8 HOURS

1000SACK CEMENT BIN COST
$112.00 PER DAY $1170.00 PER MONTH (5 DAYS MIN)

SUBSISTANCE IS $80.00 PER NIGHT PER MAN

CEMENT COST

FOB CORTEZ	$7.50	/SACK
TRANSPORTATION COST $.75/TON/MILE		
140 MILES*94#/SACK*.75/2000#/TON	$4.94	/SACK
TOTAL	$12.44	/SACK
VOLUME AFTER MIXING 1.18 CU FT/SACK	$10.54	/CU FT

BENITOITE COST

FOB CORTEZ	$6.60	/SACK
TRANSPORTATION	$4.94	/SACK
PER SACK	$11.54	/SACK
MIX AT A RATE OF 3 SACKS/20 BARRELS		
20*42 GAL/BARREL/3/7.48 GAL/CF	37	CF/SACK
	$0.31	/CU FT

WELL ABANDONMENT PLAN

PROCEDURE FOR ABANDONMENT OF WELL #7

WELL #7 IS AN UNCASED WELL THAT HAS BEEN CEMENTED FROM 2210' TO 1370'

A CALIPER LOG OF 10 - 29 - 76 (ATTACHED) SHOWED A HOLE DIAMETER VARING FROM 15.5" TO 23" WITH TWO PLACES OVER 20". THE LARGE DIAMETER AREAS WILL BE FILLED WITH GRAVEL AND THE REMAINING VOLUME FILLED WITH CEMENT AS OUTLINED BELOW.

DEPTH FROM	TO	HOLE DIA.	AREA SF	VOLUME CF		CF GRAVEL	
0	40	15.5	1.31	52.41			
40	50	23	2.89	28.85			
50	170	17	1.58	189.15			
170	270	19	1.97	196.89			
270	400	18	1.77	229.73			
400	670	17	1.58	425.59			
670	800	16	1.40	181.51			
800	880	+20	GRAVEL FILL ASSUME 36" DIA			565	
880	920	16	1.40	55.85			
920	1140	16	1.40	307.18			
1140	1330	17	1.58	299.49			
1330	1370	+20	GRAVEL FILL ASSUME 36" DIA			283	
				TOTAL CEMENT		TOTAL GRAVEL	
				1967	CU FT	848	CU FT
				1667	SACKS	31	CU YDS

FOR ESTIMATING ASSUME 2000 CU FT CEMENT
100 CU YDS GRAVEL

WELL NO. 1 · Caliper Log

FIELD

COMPANY Texoscuff, Inc #7 Mach

COUNTY

ELEV. ____ FT. ABOVE PERM. DATUM

ELEV.: K.B. D.F. G.L.

OTHER SERVICES

HOLE RECORD TO	CASING RECORD SIZE	WGT.	FROM	TO
	10.24			
	8 5/8			
	1320'			
	1320'			
	surface			
	csg			
	420			
	120 BIG			
	R Rucks			
	K caliper			

FOLD HERE

THIS HEADING AND LOG CONFORMS TO API RP 33

EQUIPMENT DATA

RUN NO.				RUN NO.			
TOOL MODEL NO.				LOG TYPE			
DIAMETER				TOOL MODEL NO.			
DETECTOR MODEL NO.				DIAMETER			
TYPE				DETECTOR MODEL NO.			
LENGTH				TYPE			
DISTANCE TO N. SOURCE				LENGTH			
GENERAL				SOURCE MODEL NO.			
HOIST TRUCK NO.				SERIAL NO.			
INSTRUMENT TRUCK NO.				SPACING			
TOOL SERIAL NO.				TYPE			
				STRENGTH			

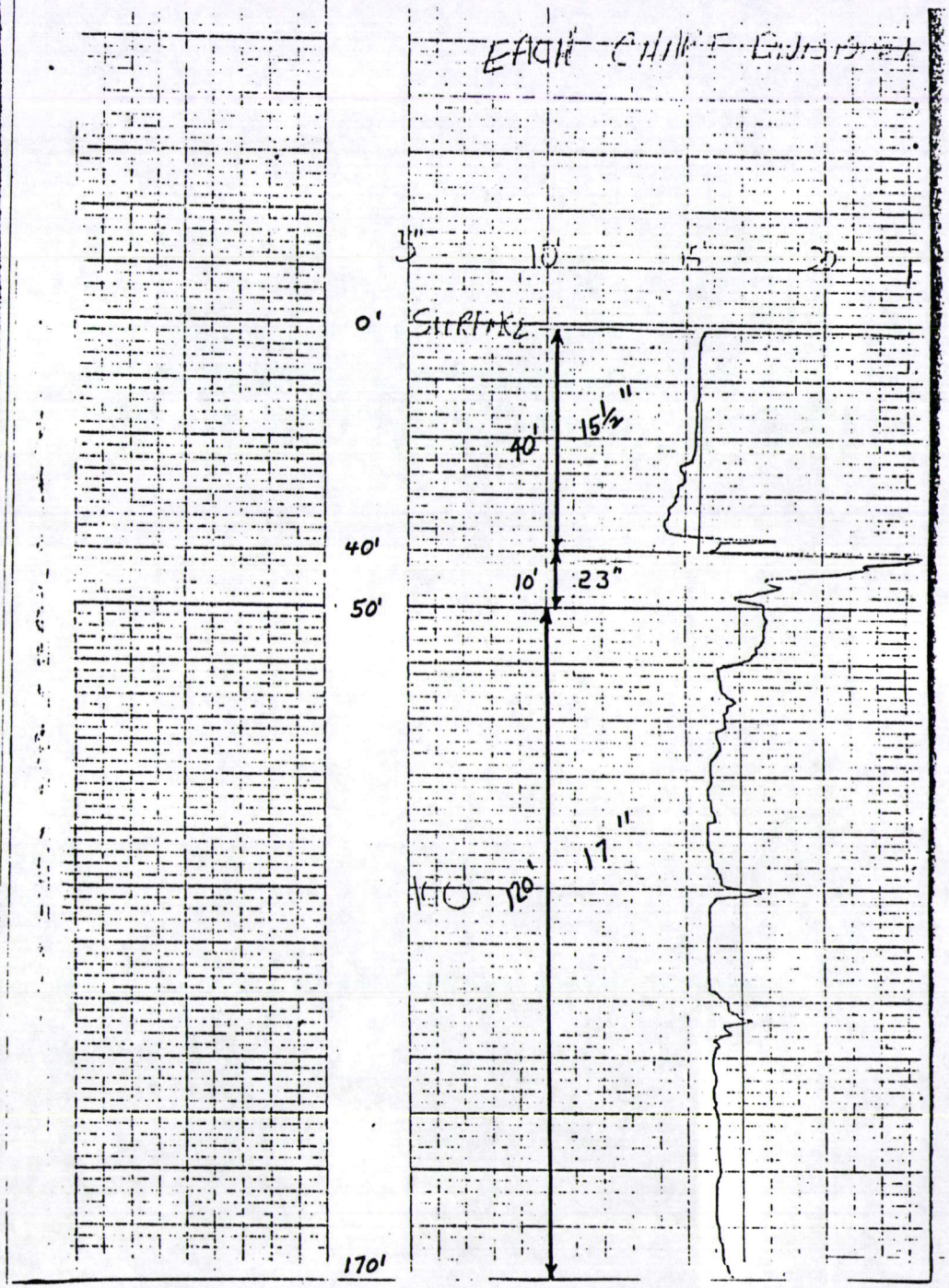
LOGGING DATA

GENERAL RUN NO.	DEPTHS FROM	TO	SPEED FT/MIN.	T.C. SEC.	SENS. SETTINGS	ZERO DIV. L OR R	API G R UNITS PER LOG DIV.	T.C. SEC.	SENS. SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	1320'	SURF.	25	1	179	433					

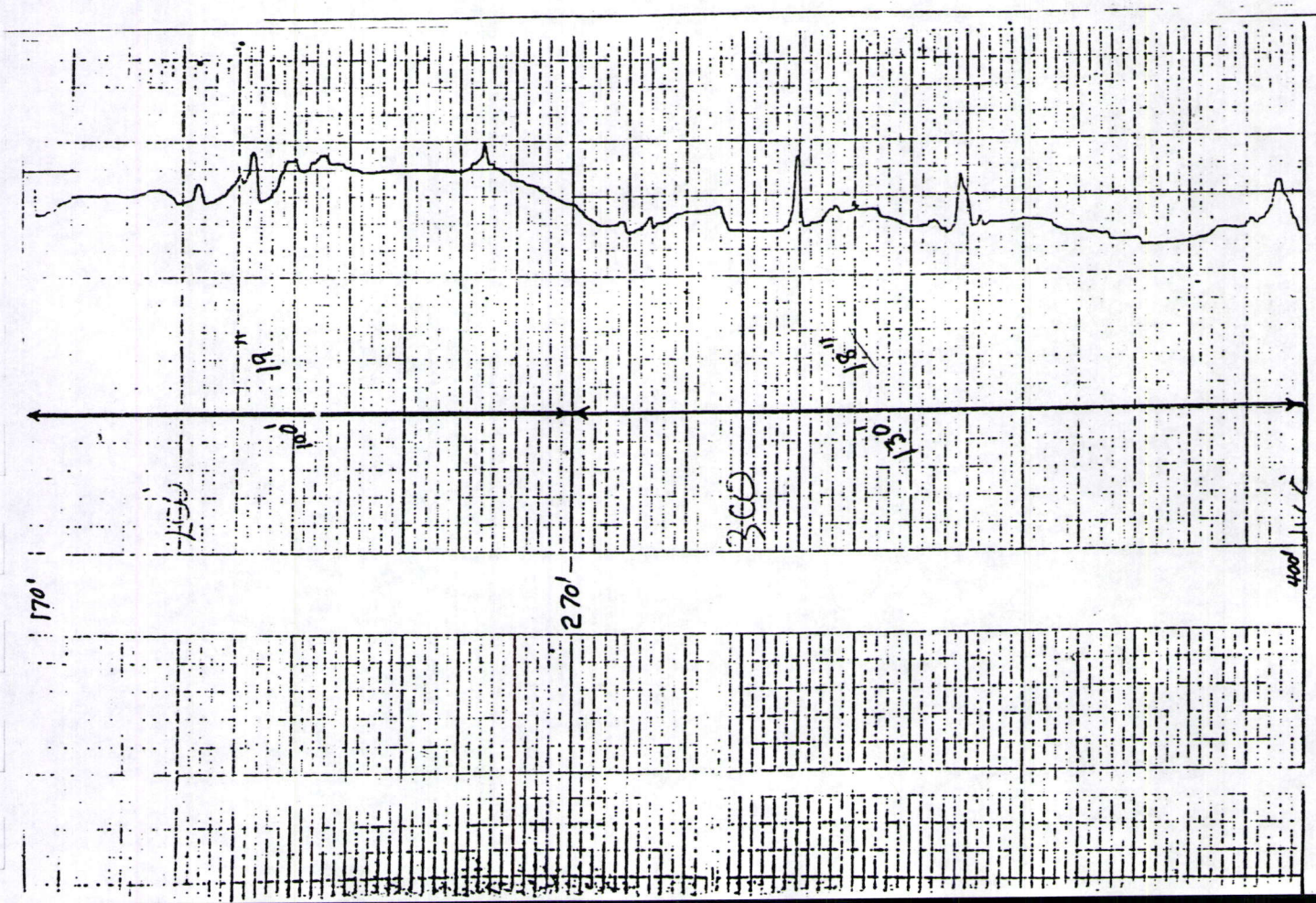
REFERENCE LITERATURE

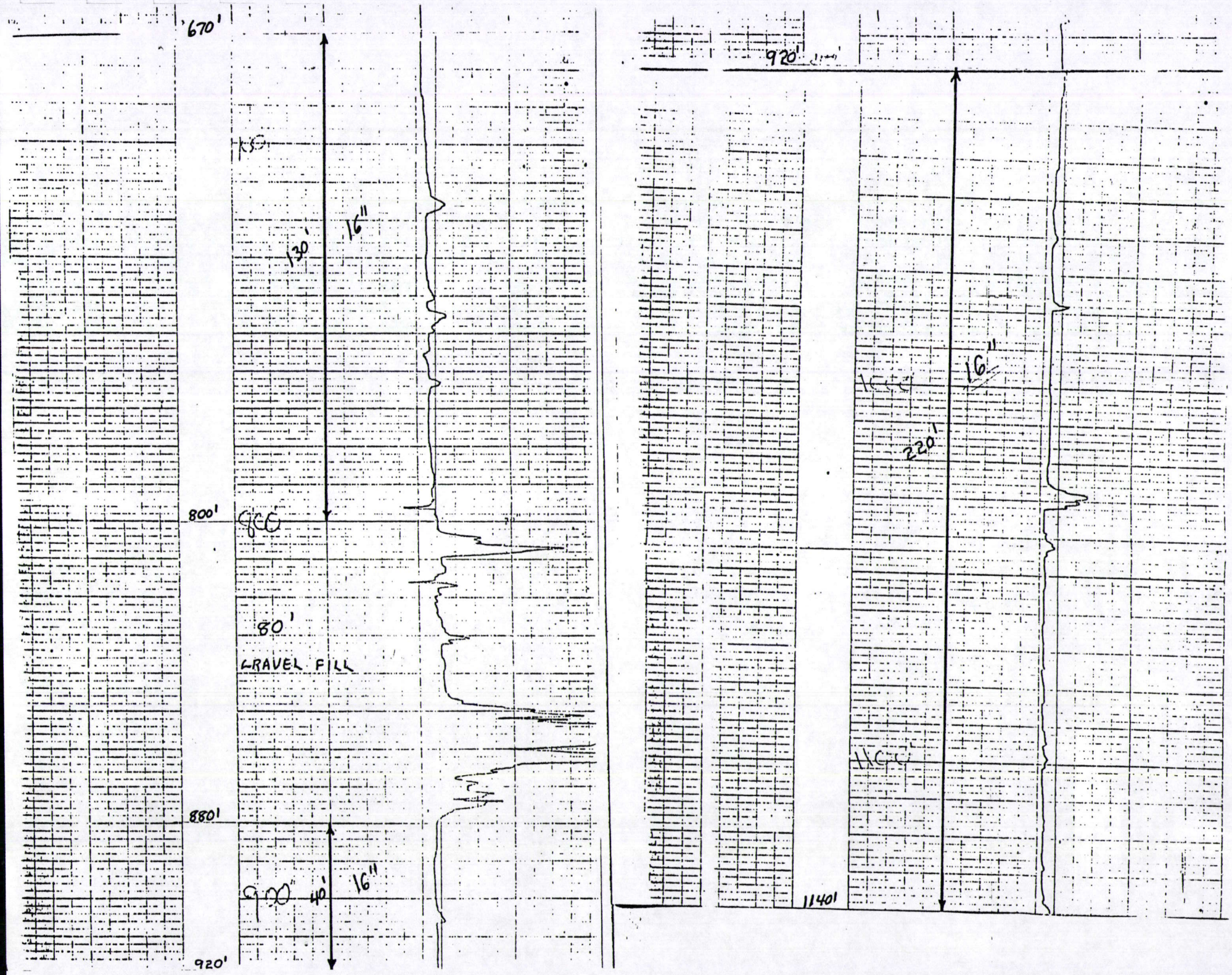
REMARKS

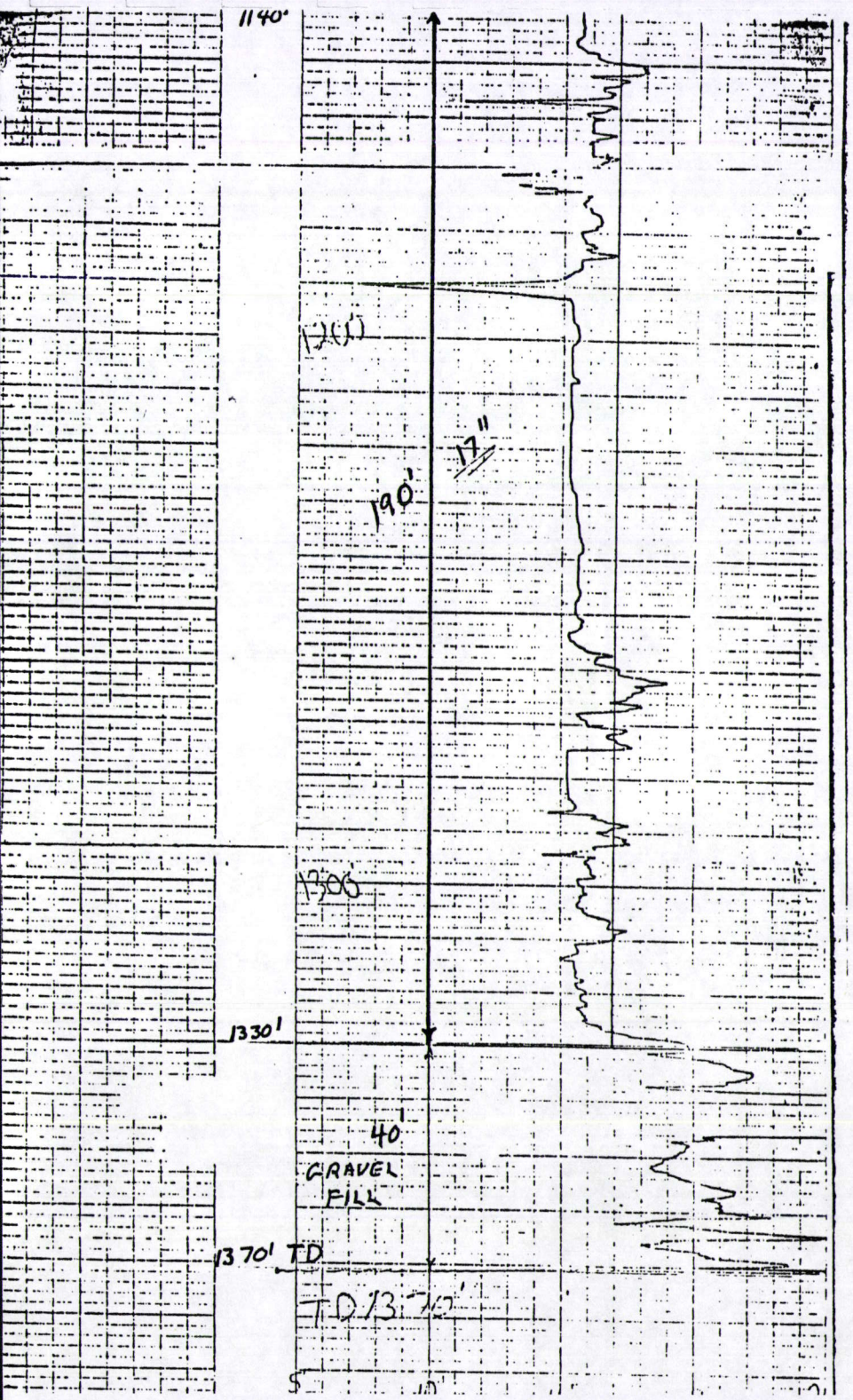
DEPTH



17"
270'
15'
5'


19"
100'
18"
130'
300
170'
270'
400'


670'
130'
16"
800'
880'
80'
GRAVEL FILL
40'
16"
920'
920'
220'
16"
1140'


1140'
1200
17"
190'
1300
1330'
40'
GRAVEL
FILL
1370' TD
TD 1370'

APPENDEX 9

Horsepower Requirements
Required for
Solution Mining Shaft # 1

HORSEPOWER REQUIRED FOR SOLUTION MINING SALT FROM SHAFT

PUMPING FROM RIVER TO #1 SHAFT

FRICTION LOSS IN 8" SURFACE PIPE		
2800' * .0338 FT PER FT * .433 PSI/FT	41	PSI
FRICTION LOSS IN 6" PIPES DOWN SHAFT		
2000' * .0357 FT PER FT * .433 PSI/FT	31	PSI
STATIC HEAD		
#1 SHAFT ELEV. = 4032'		
RIVER ELEV = 3950'		
DIFFERENCE 82' * .433	36	PSI
BRINE - WATER DIFFERENTIAL		
WATER = 2000FT * .433PSI/FT =867PSI		
BRINE = 2000FT * .52PSI/FT = 1040PSI		
DIFFERENCE	173	PSI
MISC. VALVES AND FITTINGS	20	PSI
TOTAL HEAD REQUIRED	300	PSI

HORSEPOWER REQUIRED FOR PUMP

$$HP = \frac{1500GPM * 300PSI}{.433PSI/FT * .7\ EFF * 3960} \quad 375\ HP$$

PUMPING FROM #1 SHAFT TO TAILS LAKE

FRICTION LOSS IN 8" SURFACE PIPE		
900' * .0338 FT PER FT * .433 PSI/FT	13	PSI
STATIC HEAD		
ELEV TAILS LAKE DAM = 4080FT		
ELEV #1 SHAFT = 4032FT		
DIFFERENCE = 48FT * .52PSI/FT	25	PSI
MISC VALVES AND FITTINGS	10	PSI
TOTAL HEAD REQUIRED	48	PSI

HORSEPOWER REQUIRED FOR PUMP

$$HP = \frac{900GPM * 48PSI * 1.2SP\ GR}{.433PSI/FT * .7\ EFF * 3960} \quad 43\ HP$$

TIME REQUIRED TO SOLUTION MINE TO 2000 FT

VOLUME =	760,265	CU FT
WEIGHT OF SALT @ 131#/CF	99,594,686	LBS
WT REMOVED BY 1 GAL WATER		
(75#/CF-62.4#/CF)/7.48GAL/CF	1.68	LBS/GAL
GALLONS REQUIRED	59,124,464	GAL
DAYS REQUIRED @1500GPM	27	DAYS

COSTS TO TRANSPORT GRAVEL FROM BEDS TO SHAFTS

DISTANCE	5200 FT EACH WAY	
MATERIAL	SAND AND GRAVEL APPROXIMATE WT. - 3400 LBS/CU YD	
	ASSUME .15% SWELL FACTOR DURING HAULING - WT. 2960 LBS/CU YD	
EQUIPMENT	BULLDOZER	CAT D - 8K
	FRONT END LOADER	CAT 966-D WITH 4 CU YD BUCKET
	TRUCKS	25 TON DUMP RENTED FROM McFARLAND & HULLINGER
		LOCATED IN MOAB $38 / HR WITH OPERATER

BULLDOZER WILL CUT AND PILE MATERIAL FOR FRONT END LOADER
PRODUCTION CAPABILITY = 245 CU YDS/HR
TRUCK CAPACITY = 25 TONS

25TONS * 2000 LBS/TON / 2960 LBS/CU YD 17 CU YDS

				USE
LOAD TIME	17CU YDS/245CU YD/HR * 60MIN/HR =	4.2	MIN	5 MIN
TRAVEL TIME	10400 FT/5280FT/MILE/20MI/HR*60MIN/HR =	7.9	MIN	8 MIN
DUMP TIME	ASSUME			5 MIN
	TOTAL TRIP TIME			18 MIN

ASSUME 8 HR DAYS WITH 7 HOURS ACTUAL WORKING TIME
@ 17 CU YDS/TRIP/TRUCK/18MIN/TRIP * 60MIN/HR * 3 TRUCKS * 7 HOURS/DAY = 1190 CU YDS/DAY

ASSUMING 15% COMPACTION FACTOR IN SHAFT = 1035 CU YDS/DAY

EQUIPMENT COST	$/HR
BULLDOZER	$125.00
FRONT END LOADER	$89.25
3 - DUMP TRUCKS @ $38/HR (INCLUDES OPERATOR)	$114.00
2 OPERATORS @ $18.72/HR EA	$37.44
FOREMAN	$19.22
	$384.91
TOTAL $/DAY	$3079.28
TOTAL $/CU YD IN PLACE	$2.98

PRODUCTION CAPACITIES AND COSTS TAKEN FROM
RICHARDSON COST ESTIMATION BOOKS VOLUME 1 PAGE 2-18

APPENDEX 1

Quanties of Gravel Available and Size Distribution

CALCULATIONS FOR VOLUMES OF GRAVEL SHOWN ON FIGURE #2

AREAS	WIDTH	LENGTH	ESTIMATED DEPTH	USED FOR CALC	CU YDS
I	180	350	5 - 10	5	11,667
II	180	400	10 - 15	10	26,667
III	200	650	10 - 15	10	48,148
IIII	200	200	5 - 10	5	7,407
			TOTAL AVAILABLE		93,889
REQUIRED FOR #1 SHAFT 22 FOOT DIA. 1900 FEET DEEP					26,750
REQUIRED FOR #2 SHAFT 4 FOOT DIA. 2550 FEET DEEP					1,187
			TOTAL CU YDS REQD		27,937

The following samples were taken from the locations shown on figure #2.3
In each case a 5 foot trench was dug with a backhoe and the sample taken from a vertical wall of gravel.

The total sample was split into +1, +1/8 and -1/8 inch by hand screening.
A small sample was split from the -1/8 inch using splitter pans.
After drying, the small sample was then separated using tyler square mesh screens on a rotap.
Rotap time was 5 minutes for each sample.

GRAVEL SAMPLES TAKEN 12 NOV. 1985

SAMPLE #1

				CUMUL PERCENT
TOTAL WT - LBS	63.4			
+1	10.3	16.2	16.2	
+1/8	33.3	52.5	68.8	
-1/8	19.8	31.2		
TOTAL	63.4	100.0		

-1/8 SAMPLE		WT. GRAMS	CUMUL. PERCENT	ADJ. TO TOTAL /62		
	+10	44.7	23.4	4.6	7.3	76.1
	+28	63.7	33.3	2.0	3.1	79.2
	+48	163.0	85.2	10.3	16.2	95.4
	+100	189.1	98.8	2.7	4.3	99.6
	+200	190.4	99.5	0.1	0.2	99.9
	-200	0.9	0.5	0.1	0.1	0.1
	TOTAL	191.3		19.8		

GRAVEL SAMPLES TAKEN 12 NOV. 1985

SAMPLE #2

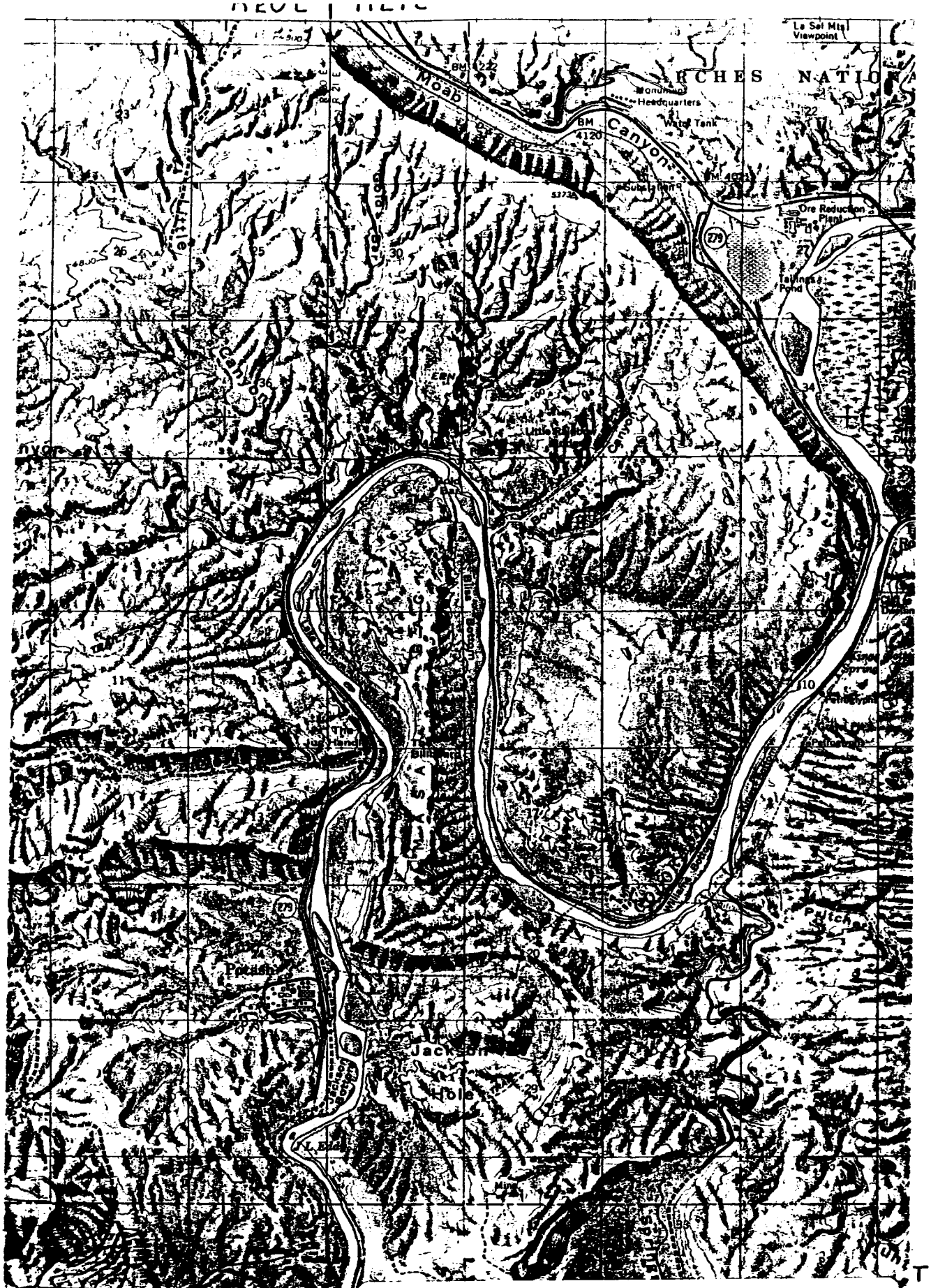
		%	CUMUL PERCENT
TOTAL WT - LBS	64.2		
+1	9.3	14.5	14.5
+1/8	33.4	52.0	66.5
-1/8	21.5	33.5	
TOTAL	64.2	100.0	

-1/8 SAMPLE		WT. GRAMS	CUMUL. PERCENT	ADJ. TO TOTAL		
	+10	39.1	20.4	4.4	6.8	73.4
	+28	53.1	27.8	1.6	2.5	75.8
	+48	121.4	63.5	7.6	11.8	87.6
	+100	180.7	94.5	6.7	10.4	98.0
	+200	188.1	98.3	0.8	1.3	99.3
	-200	4.2	2.2	0.5	0.7	0.7
	TOTAL	191.3		21.5		

SAMPLE #3

		%	CUMUL PERCENT
TOTAL WT - LBS	66.7		
+1	27	40.5	40.5
+1/8	23.1	34.6	75.1
-1/8	16.6	24.9	
TOTAL	66.7	100.0	

-1/8 SAMPLE		WT. GRAMS	CUMUL. PERCENT	ADJ. TO TOTAL		
	+10	69.1	36.0	6.0	9.0	84.1
	+28	87.7	45.7	1.6	2.4	86.5
	+48	131.8	68.6	3.8	5.7	92.2
	+100	177.1	92.2	3.9	5.9	98.1
	+200	185.9	96.8	0.8	1.1	99.2
	-200	6.2	3.2	0.5	0.8	0.8
	TOTAL	192.1		16.6		



T26S
T27S

Figure # 1
Location of Texasgulf
Cane Creek Potash Mine

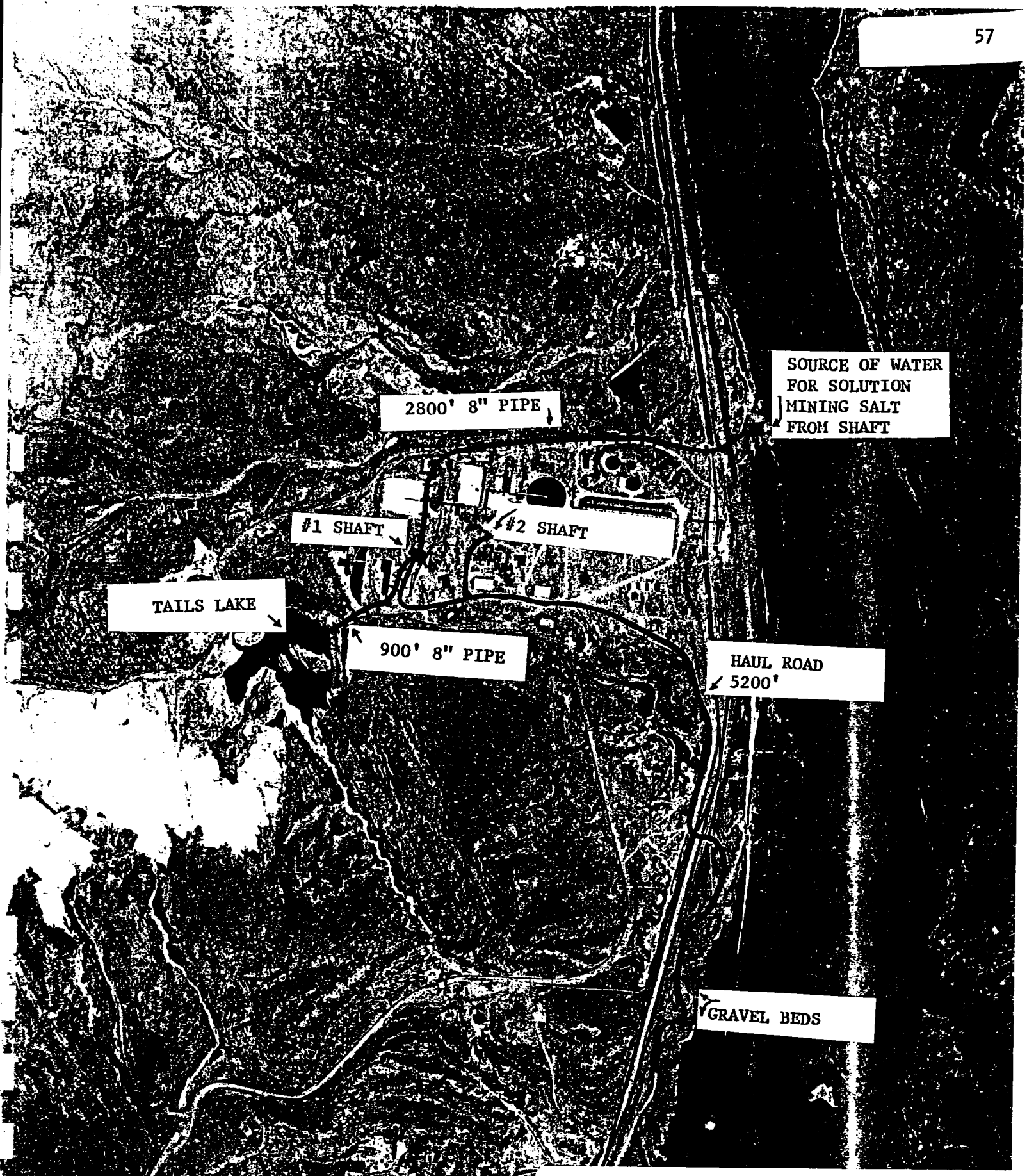


Figure # 2
Location of Shafts
Pipelines, Haul Roads
Gravel Beds, Tails Lake

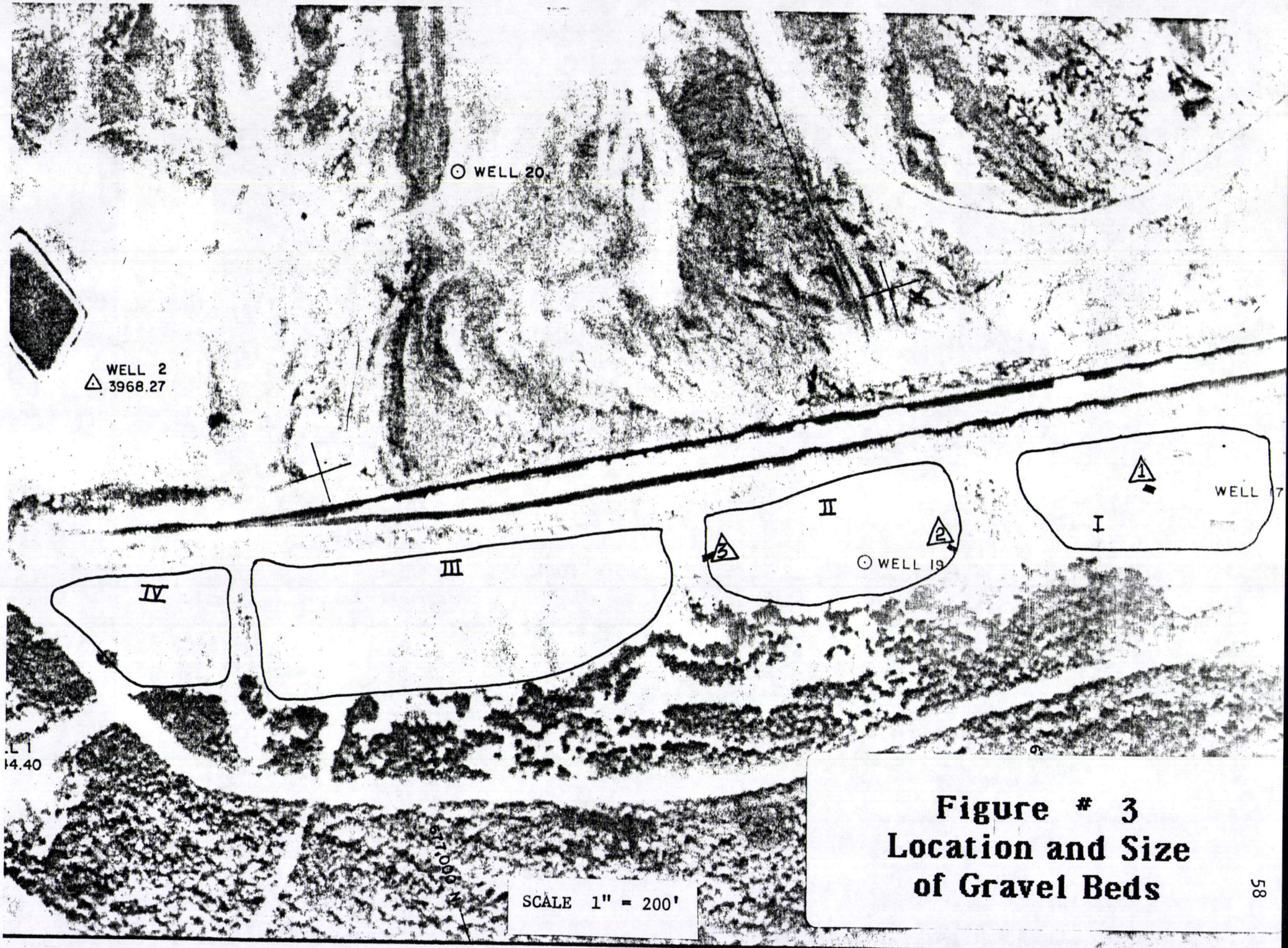


Figure # 3
Location and Size of Gravel Beds

ABANDONMENT PLAN

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DIVISION OF OIL
GAS & MINING

Cost Estimate to Plug #1 Shaft

Remove Salt

Prepare Shaft for Solution Mining	**HRS**	**$/HR**	
Prepare Headframe as Derick			$10,000.00
Move in Workover Rig	8	$175.00	$1,400.00
Pickup Pipe	2	$175.00	$350.00
Rent 2000ft 2 7/8" Drill Pipe @$.06/ft/day 2 Days			$240.00
Drill to 2000ft @5ft/min West Side	8	$175.00	$1,400.00
Drill to 2000ft @5ft/min East Side	8	$175.00	$1,400.00
Lay Down Drill Pipe	2	$175.00	$350.00
Rental on 6" Pipe @$.07/ft/day for 40 Days			$11,200.00
Pickup 6" Pipe	2	$175.00	$350.00
Set 6" Pipe to 2000ft East Side	6	$175.00	$1,050.00
Pickup 6" Pipe	2	$175.00	$350.00
Set 6" Pipe to 2000ft West Side	6	$175.00	$1,050.00
Travel Costs Casing Crew			$396.00
Casing Crew 2 Days @$1950/Day			$3,900.00
Valves and Fittings for Surface			$10,000.00
Install Valves and Fittings			$4,000.00
Subtotal			$47,436.00

Solution Mine Salt From #1 Shaft

Prepare Area by River for Pumps	$1,000.00
Setup 50HP 1500GPM Diesel Pump at River	$500.00
Setup 2 - 200HP 1500GPM Diesel Pumps at River	$2,000.00
Rental on 50HP Pump for 30 Days @$50/Day	$1,500.00
Rental on 200HP Pumps for 30 Days @$100/Day Ea	$6,000.00
Install 2800Ft 8" Pipeline from River to Shaft	$4,500.00
Rental on Pipe for 30 Days @$.13/ft/day	$10,920.00
Setup 50HP 1500GPM Pump At Shaft	$500.00
Rental on 50HP Pump for 30 Days @$50/Day	$1,500.00
Install 900ft 8" Pipe from Shaft to Tails Lake	$1,350.00
Rental on 900ft 8" Pipe	$3,510.00
Fuel for Pumps	
2 - 200HP 11gal/hr *24hrs*30days*$.92	$14,573.00
2 - 50HP 4GAL/HR *24*30*$.92	$5,299.00
Operator 30Days @ $27.55/HR	$19,836.00
Subtotal	$72,988.00

Remove 6" Pipe From Shaft

Move in Workover Rig	8	$175.00	$1,400.00
Remove 4000ft 6" Pipe	12	$175.00	$2,100.00
Lay Down 6" Pipe	4	$175.00	$700.00
Travel Costs Casing Crew			$396.00
Casing Crew 2 Days @$1950/day			$3,900.00
Subtotal			$8,496.00

Total For Removing Salt **$128,920.00**

VEIT-SCB CORRECTION

ABANDONMENT PLAN

Cost Estimate to Plug #1 Shaft

Cost of Cement for Shafts

Quote from Ideal Cement @79.75/ton FOB SLC
$79.75/ton * 25 Ton Truck Capacity =$1,993.75
Freight Cost

Cost per 94lb Sack	$4.43	SACK
Halliburton Handling Charge	$0.95	SACK
	$5.38	SACK

Cementing Costs - 32,215 Sacks Required

Assuming 6 Days 5400 Sacks per Day

Move in Workover Rig		$350
Move in Cost for Halliburton		
Cement Pump Truck 140Miles @$2.15	$301.00	
Bulk Truck 140Miles @$.90	$126.00	
Crew Truck 140Miles @$.90	$126.00	
Subsistance 3 Men @$80 - 6 Days	$1,440.00	
		$1,993
Workover Rig 6 - 8 HR Days @$175/hr		$8,400
Rent 2000ft 2 7/8" Drill Pipe @$.06/ft/Day 6 Days		$720
Halliburton Cement Truck 6 Days @$1,260		$7,560
Halliburton Subsistance 3 Men 6 Days @ $80/day		$1,440
1000 Sack Cement Bins 6 Required		
Move in Costs 140Miles @$.9	$756.00	
6 Bins @ $112/day * 6 Days	$4,032.00	
		$4,788
Total Pumping Costs		$25,251
Cement Cost #1 Shaft 32,215 Sacks		$173,317
Total Cementing Costs		**$198,568**

Prepare Shaft for Filling with Gravel

Drill and Blast 4ft Dia hole in Center of Shaft	Allow	$4,000
Fabricate 3ft Thick Removable Cover with 6" Inspection Pipe	Allow	$3,000
Fabricate Chute for Dumping Gravel in Shaft	Allow	$3,000
Subtotal		$10,000

Fill #1 Shaft with Gravel (1900ft Deep 22ft Diameter)

(See Appendex H for Availability and Cost of Gravel)
Fill with 26750 Cu Yds Gravel @$4.47/CY — $119,573

Refill With Gravel after 5 Years

Gravel Refill
Assume 10% Settling (2675 Cu Yds) @$4.47/CY — $11,957

Total Cost For Gravel Fill — **$151,530**

Total Cost for Plugging #1 Shaft — **$479,018**

1-17-86 CORRECTION

ABANDONMENT PLAN
TOTAL COST ESTIMATE

1. Plug Wells 1 thru 23	$263,700
2. Plug #1 Shaft	$479,000
3. Plug #2 Shaft	$18,500
4. Engineering Supervision $535/Day - 60 Days	$32,100
Subtotal	$793,300
15% Contingency	$119,000
Total	$912,300
Adjusted to 1990 @3.75% Interest (rounded to ,000)	**$1,097,000**

1-17-96 CORRECTION

This page is a reference page used to track documents internally for the Division of Oil, Gas and Mining

Mine Permit Number M0190005 Mine Name Cane Creek Potash
Operator Moab Salt LLC Date 1-3-1986
TO _____ FROM _____

__CONFIDENTIAL __BOND CLOSURE __LARGE MAPS X EXPANDABLE
__MULTIPUL DOCUMENT TRACKING SHEET __NEW APPROVED NOI
__AMENDMENT _OTHER _____

Description YEAR-Record Number

__NOI X Incoming __Outgoing __Internal __Superceded

Abondonment Plan of Class III Wells and Mine Shafts

___NOI __Incoming __Outgoing __Internal __Superceded

__NOI __Incoming __Outgoing __Internal __Superceded

__NOI __Incoming __Outgoing __Internal __Superceded

__TEXT/ 81/2 X 11 MAP PAGES __11 X 17 MAPS __LARGE MAP

COMMENTS: _____

CC: _____