WFX - 281

CONTINENTAL OIL COMPANY

P. O. Box 460
HOBBS, NEW MEXICO 88240

PRODUCTION DEPARTMENT
HOBBS DIVISION
L. P. THOMPSON
Division Manager
G. C. JAMIESON
Assistant Division Manager

1001 NORTH TURNER
TELEPHONE 393-4141

December 20, 1967

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico

Attention of Mr. A. L. Porter, Jr., Secretary-Director

Re: Application for Administrative Approval of MCA Waterflood Project - Maljamar - G-SA Pool - Lea County, New Mexico

Gentlemen:

Forwarded herewith is our Application to Expand the MCA Waterflood project in the Maljamar - G-SA Pool by adding 17 water injection wells in Sections 16, 17, 18, and 33, T-17S, R-32-E, Lea County, New Mexico. Copies of this application are being furnished this date by certified mail to the State Engineer's Office and the offset operators.

Your further handling and approval of this application will be sincerely appreciated.

Yours very truly,

L. P. Thompson

1967 DEC 26 AM 8 23

LPT-JS
Attach
cc: RLA JWK JJB

Commissioner of Public Lands
P. O. Box 1148
Santa Fe, New Mexico

By Certified Mail:

State Engineer
P. O. Box 1079
Santa Fe, New Mexico

Kersey and Company
P. O. Box 316
Artesia, New Mexico

E. C. Donohue
% Mrs. Wilma D. Moleen
Drawer 1372
El Paso, Texas

Standard Oil Company of Texas
P. O. Box 1660
Midland, Texas

Wm. R. and Edward A. Hudson
1510 First National Building
Fort Worth, Texas

C O N T I N E N T A L O I L C O M P A N Y

P. O. Box 460
Hobbs, New Mexico
December 20, 1967

'67 DEC 26 AM 8 23

New Mexico Oil Conservation Commission (3)
P. O. Box 2088
Santa Fe, New Mexico

Attention of Mr. A. L. Porter, Jr., Secretary-Director

CONTINENTAL OIL COMPANY AMENDED REQUEST FOR ADMINISTRATIVE APPROVAL TO EXPAND THE MCA UNIT SECONDARY RECOVERY PROJECT BY ADDING SEVENTEEN WATER INJECTION WELLS IN SECTIONS 16, 17, 18, AND 33, TOWNSHIP 17 SOUTH, RANGE 32 EAST, LEA COUNTY, NEW MEXICO

Gentlemen:

The New Mexico Oil Conservation Order R-2403, dated December 31, 1962, approved the Continental Oil Company-operated MCA Unit secondary recovery project beginning with the injection of water into six (6) Maljamar (Grayburg-San Andres) Pool wells, and set forth procedures for obtaining administrative approval for expansion of the secondary recovery project.

An additional thirteen (13) wells in an area described as the south half of the south half of Section 16, and all of Sections 21 and 28, Township 17 South, Range 32 East, Lea County, New Mexico, were converted to water injection under New Mexico Oil Conservation Commission Administrative Order WFX-19, dated April 15, 1965.

Administrative Order WFX-234, dated April 24, 1966, authorized expansion to include sixteen additional water injection wells in Sections 20 and 29, and Order No. WFX-253 dated March 15, 1967, authorized 16 additional injection wells in Sections 19 and 30, Township 17 South, Range 32 East, Lea County, New Mexico.

Continental Oil Company, as operator of the MCA Unit, and as operator of leases within the MCA Unit Area, but outside the Participating Area respectfully requests administrative approval under the provisions of Order No. R-2403 to further expand

the MCA Unit secondary recovery project to include seventeen additional water injection wells in Sections 16, 17, 18 and 33, Township 17 South, Range 32 East, Lea County, New Mexico. Under this proposed expansion, it is planned to convert the following wells to water injection:

Well No.	Location
MCA Unit No. 1	Unit B, Sec. 17-17S-32E
MCA Unit No. 3	Unit D, Sec. 16-17S-32E
MCA Unit No. 6	Unit H, Sec. 17-17S-32E
MCA Unit No. 7	Unit F, Sec. 17-17S-32E
MCA Unit No. 15	Unit N, Sec. 17-17S-32E
MCA Unit No. 220	Unit D, Sec. 33-17S-32E
MCA Unit No. 223	Unit B, Sec. 33-17S-32E
MCA Unit No. 232	Unit F, Sec. 33-17S-32E
MCA Unit No. 246	Unit P, Sec. 17-17S-32E
Mitchell "B" No. 7	Unit L, Sec. 17-17S-32E
Mitchell "B" No. 8	Unit J, Sec. 17-17S-32E
Mitchell "B" No. 12	Unit P, Sec. 18-17S-32E
Mitchell "B" No. 13	Unit N, Sec. 18-17S-32E
State "B" No. 3	Unit J, Sec. 16-17S-32E
State "B" No. 6	Unit B, Sec. 16-17S-32E
State "B" No. 7	Unit H, Sec. 16-17S-32E
State "O" No. 1	Unit F, Sec. 16-17S-32E

In conjunction with the expansion, it is proposed to discontinue gas injection into the following MCA Unit wells:

Well No.	Location
MCA Unit No. 16	Unit M, Sec. 17-17S-32E
MCA Unit No. 222	Unit P, Sec. 33-17S-32E

In support of this request and as required by Rule 701-B, the following exhibits are attached:

1. A plat showing the location of the proposed injection wells and of all wells within a radius of two miles from the injection wells, the formations from which said wells are producing or have produced, and lease ownership within said two mile radius.
2. Logs of eleven of the proposed injection wells which are available.
3. A diagrammatic sketch of each proposed injection well, including casing setting depths, cement tops, producing interval, and proposed tubing and packer setting depths.
4. A table summarizing the water injection well data shown on the diagrammatic sketches.

The casing pattern of these wells is influenced by the fact that in this particular area there are no fresh water sands. Anticipated total water injection rates into the proposed seventeen (17) injection wells described above is 9,000 BWPD, for a total of 50,000 BWPD in the ten section area. Exact volumes to be injected in each well will be dependent upon net producing interval open and injection pressures encountered.

Water for the proposed expansion will be obtained from the MCA Unit Water Leases now furnishing water for the present secondary recovery project.

A copy of this letter with attached data is being forwarded by certified mail to the State Engineer's Office, Box 1079, Santa Fe, New Mexico, and to the offset operators.

Your consideration and approval of the proposed expansion is respectfully requested.

Yours very truly,

L. P. THOMPSON

LPT-JS
cc: NMOCC-Hobbs JWK JJB RLA
USGS-Roswell
CPL-Santa Fe
Working Interest Owners per attached list (wo/Enc.)

By Certified Mail:

State Engineer
P. O. Box 1079
Santa Fe, New Mexico

Kersey and Company
P. O. Box 316
Artesia, New Mexico

E. C. Donohue
% Mrs. Wilma D. Moleen
Drawer 1372
El Paso, Texas

Standard Oil Company of Texas
P. O. Box 1660
Midland, Texas

Wm. R. and Edward A. Hudson
1510 First National Building
Fort Worth, Texas

M C A Unit
Working Interest Owners

Mr. J. C. McClure
Cities Service Oil Company
P. O. Box 4906
Midland, Texas 79701

Cities Service Oil Company
Attn: Mr. J. E. Embry
Bartlesville, Oklahoma 74003

Mr. R. F. Sawyer
Sinclair Oil and Gas Company
P. O. Box 1470
Midland, Texas 79702

Mr. H. F. Defenbaugh
Sinclair Oil and Gas Company
P. O. Box 521
Tulsa, Oklahoma 74102

Mr. W. F. Burns
Sinclair Oil and Gas Company
P. O. Box 1920
Hobbs, New Mexico 88240

Virginia Sears & Mary Jo
Vandiver, Co-exectrices
700 Hermosa Drive
Artesia, New Mexico 88210

Mr. Jack B. Shaw
for: Emily Katherine Flint Boyd
Rosemary Flint
Virginia Woods Shaw
Box 517
Artesia, N. M. 88210

Fair Oil Company
for: Fair N&N Trust
Richard L. Ray, Trustee
P. O. Box 689
Tyler, Texas 75701

Mr. J. P. Pierce
3621 Westcliff Road South
Fort Worth, Texas 76109

Cockburn Trusts
P. O. Box 241
Dallas, Texas 75200

Mrs. Addie P. Smith
2506 Bridwell Street
Wichita Falls, Texas 76301

Mrs. Jewell Smith
9809 Everwood Lane
El Paso, Texas 79925

Mary Katherine Fowles
2415 Larkin
San Francisco, Calif. 94109

Sally Seeber
6921 East Hawthorne
Tucson, Arizona 85700

Charlotte W. Runyan
Hope, New Mexico 88250

12-20-67

MCA UNIT

WATER INJECTION WELL DATA

Lease & Well No.	Total Depth and/or PBD	Surface Casing OD	Surface Casing Depth	Surface Casing Sacks Cement	Surface Casing Top	Production Casing OD	Production Casing Depth	Production Casing Sacks Cement	Production Casing Top	Producing Interval
MCA Unit No. 1	4123/4101	8 5/8"	137	100	Surface	5 1/2"	4122	700	2000	P 3638-4012 (overall)
3	4146/4005	8 5/8"	922	75	Surface	7"	3575	75	2700	OH 3575-4005
6	4100/4060	8 5/8"	805	50	Surface	7"	3525	100	2500	OH 3525-4060
7	4160/4028	8 5/8"	140	100	Surface	5 1/2"	4107	275	2700	P 3978-3994
15	4074	8 5/8"	834	50	Surface	7"	3634	150	2000	OH 3634-4074
220	4283/3884	8 3/4"	1195	50	Surface	7"	3566	100	2500	OH 3566-3884
223	4137	8 3/4"	29	15	Surface	5 1/2	3558	250	2000	OH 3885-4137
232	4167	8 3/4"	1124	75	Surface	7"	3755	170	2000	OH 3753-4167'
246	5462	8 5/8"	830	50	Surface	7"	3628	100	2000	OH 3628-4100 (overall)
Wm. Mitchell B No.7	4336/4135	9 5/8"	207	100	Surface	5 1/2"	4335	1450	1235	P 3784-4112 (overall)
No.8	4200/4187	8 5/8"	229	100	Surface	5 1/2"	4200	1425	Surf.	P 3758-3838 (overall)
No.12	4200/4035	8 5/8"	234	100	Surface	5 1/2"	4199	800	500	P 3714-3934 (overall)
No.13	4160/3766	8 5/8"	264	100	Surface	5 1/2"	4159	500	775	P 3660-3766 (overall)
State "B" No. 3	4318/4300	9 5/8"	182	100	Surface	5 1/2"	4318	1000	1673	P 3754-3812 (overall)
No. 6	4196	8 5/8"	237	125	Surface	5 1/2"	4196	1890	775	P 3868-4071 (overall)
No. 7	4147	8 5/8"	254	135	Surface	5 1/2"	4147	1575	725	P 3869-3946 (overall)
State "O" No. 1	4100	8 5/8"	848	50	Surface	7" *	3493	2000	100	**P 3700-4050 (overall)

(No Intermediate casing in these wells)

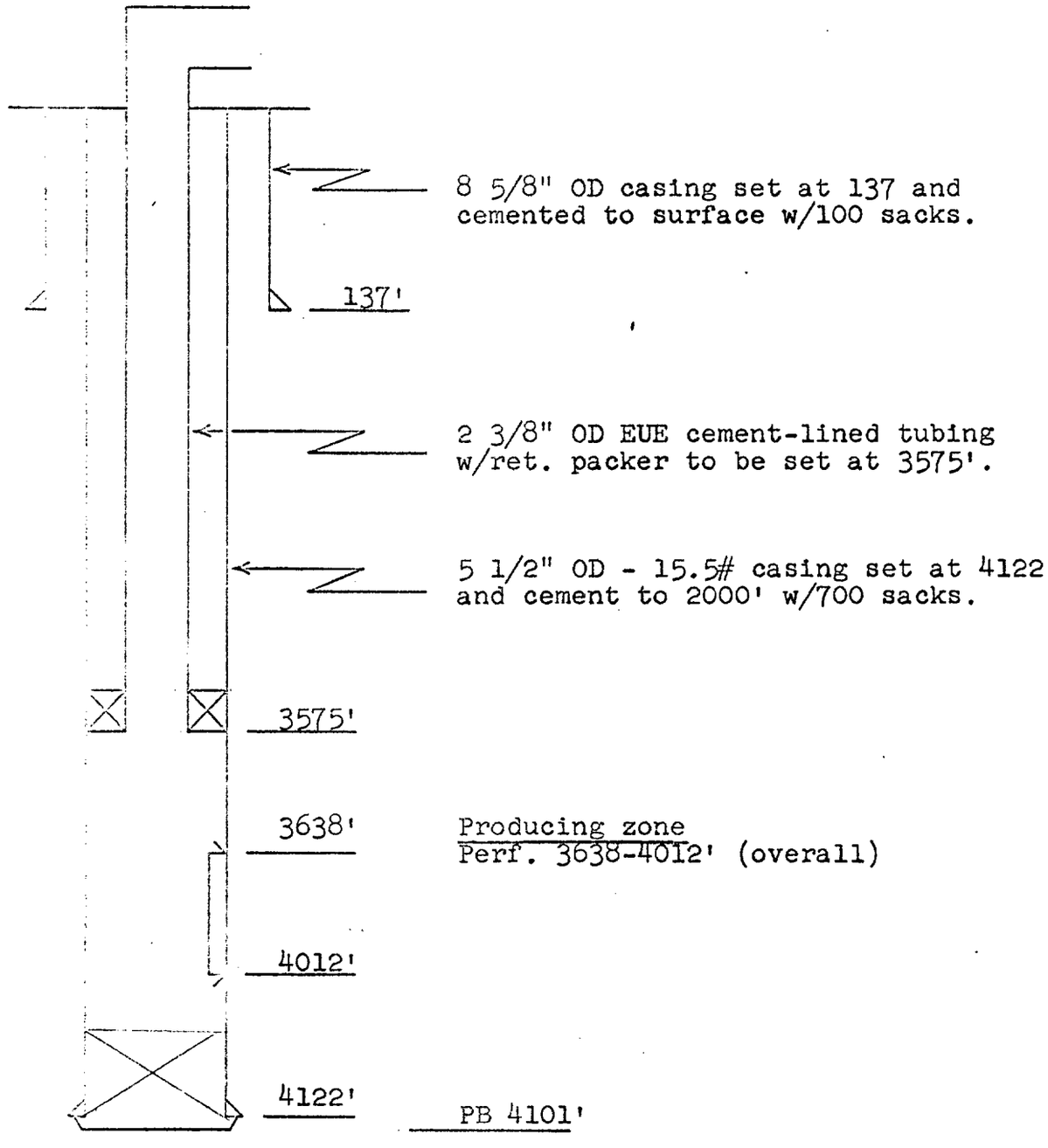
*Propose to set 4 1/2" OD liner from 3250" to new TD of 4100', and cement 4100' to 3250' w/70 sx cement.

**Proposed perf.

JS-JS
12-12--67

WATER INJECTION WELL DATA
MCA Unit No. 1

Unit B - 690' FNL & 1980' FEL Sec. 17-17S-32E
Elev - GL - 4037'
DF - 4047'



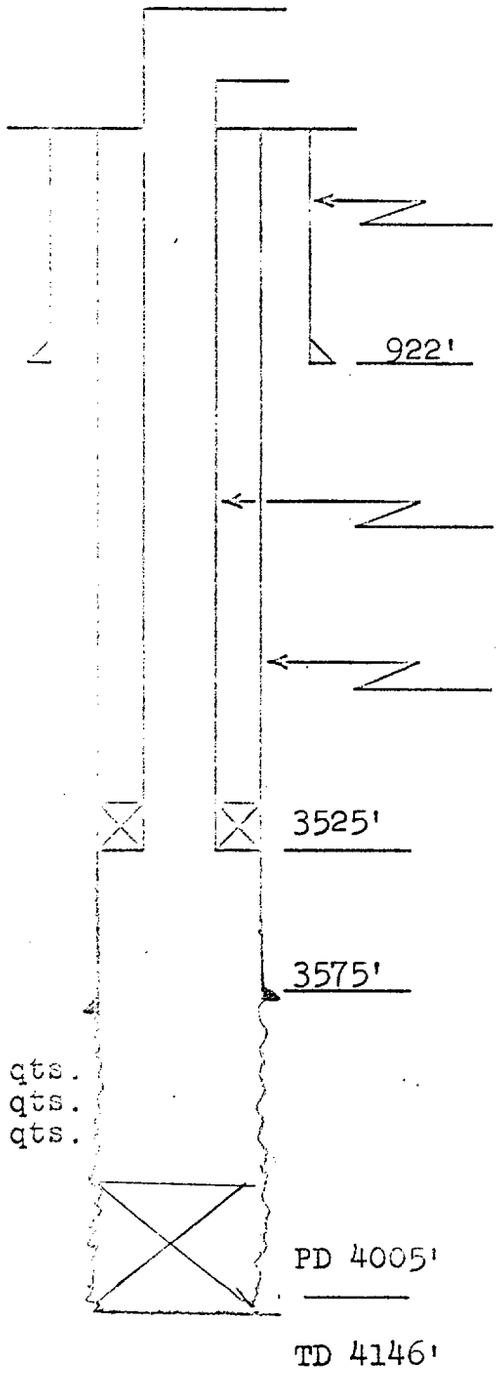
Proposed Procedure

1. Tag bottom and tally out.
2. Clean out to 4101'(PD) if fill found above 4020'.
3. Run cement-lined tubing w/packer to be set at 3575'.

NOTE: Tubing to be electronically inspected on rack.

WATER INJECTION WELL DATA
MCA Unit No. 3

Unit D- 660' FNL & 660' FWL Sec. 16-17S-32E
Elev - GL - 4050'
DF - 4053'



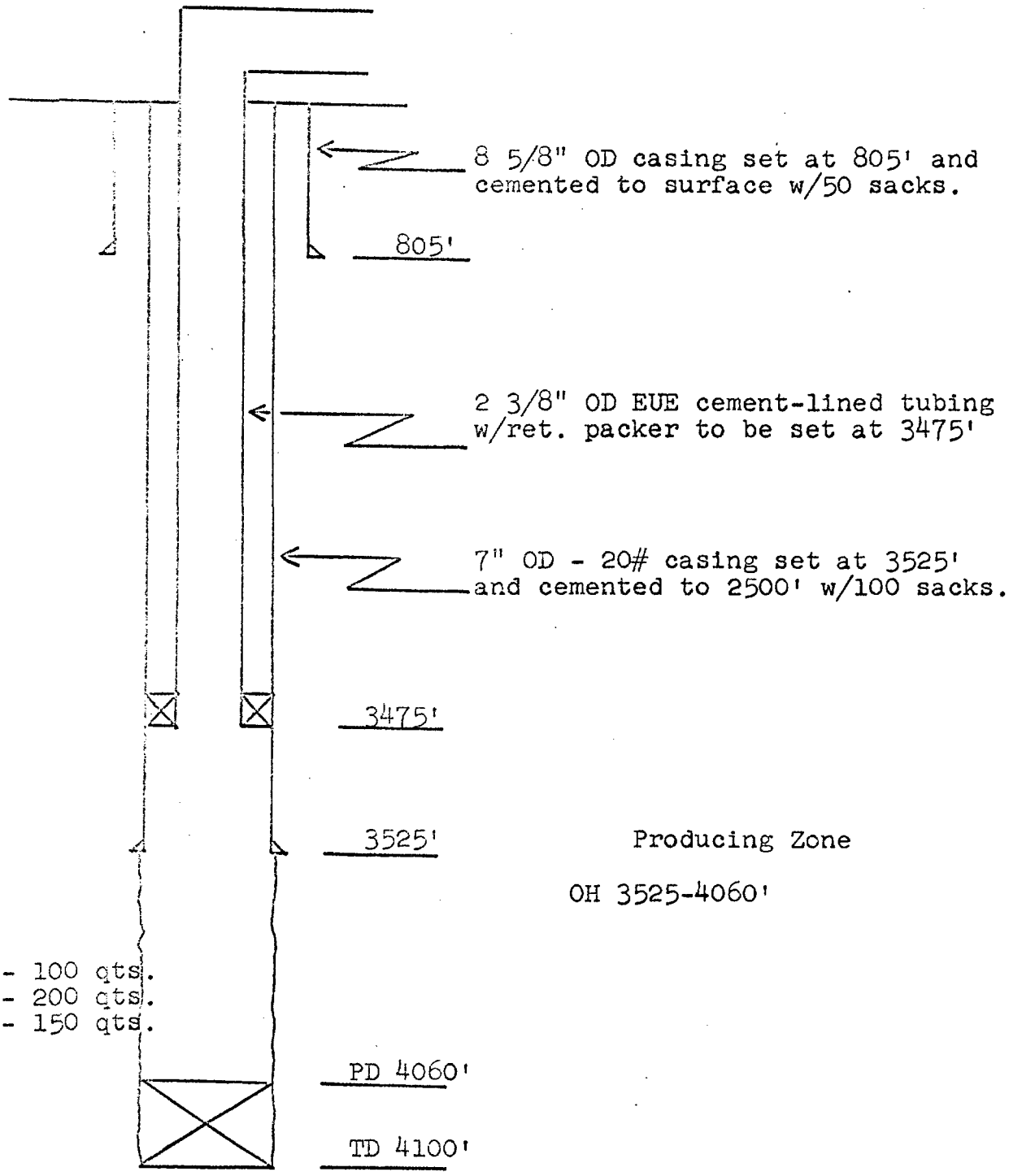
Proposed Procedure

1. Tag bottom and tally out.
2. Clean out any fill to PD of 4005'.
3. Run 3 joints open end tubing - make wireline dummy run to determine if injection survey tools can be run through shot hole.
4. Run gamma ray-neutron log w/caliper 4005-3100'.
5. Run cement-lined tubing w/packer to be set at 3525' - run 1 1/2" fiber glass pipe as tailpipe if required.

NOTE: Tubing to be electronically inspected on rack.

WATER INJECTION WELL DATA
MCA UNIT NO. 6

Unit H - 1980' FNL & 660' FEL Sec. 17-17S-32E
Elev. DF - 4031'

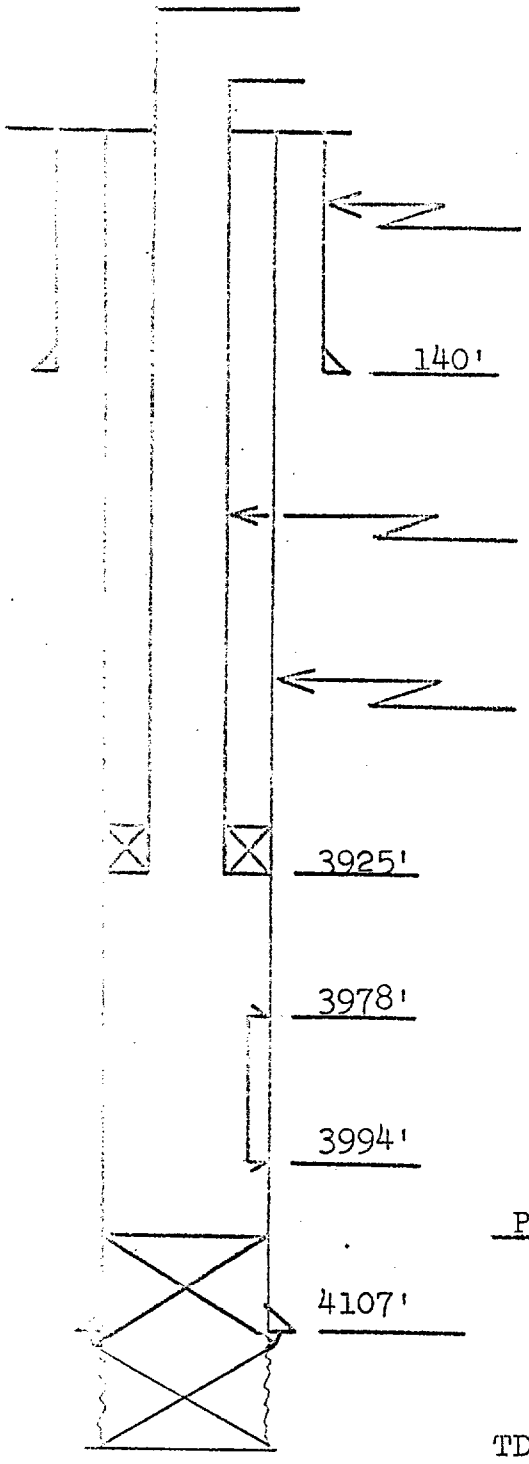


Proposed Procedure

1. Tag bottom and tally out.
2. Clean out any fill to 4060'.
3. Run 3 joints open end tubing - make wireline dummy run to determine if injection survey tools can be run through shot hole.
4. Run gamma ray - neutron log w/caliper 4060-3100'.
5. Run cement-lined tubing w/packer to be set at 3475' - run 1 1/2" fiber glass pipe as tailpipe, if required.

NOTE: Tubing to be electronically inspected on rack.

WATER INJECTION WELL DATA
MCA Unit No. 7
Unit F - 1650' FNL & 2310' FWL Sec. 17-17S-32E
Elev. GL - 4024'
DF - 4032'



8 5/8" OD casing set at 140' and cemented to surface w/100 sacks.

140'

2 3/8' OD EUE cement-lined tubing w/ret. packer to be set at 3925'

5 1/2" OD 14# casing set at 4107' and cemented to 2700' w/275 sacks.

3925'

3978' Producing Zone

Perf 3978-3994'

3994'

PD 4028

4107'

TD 4160'

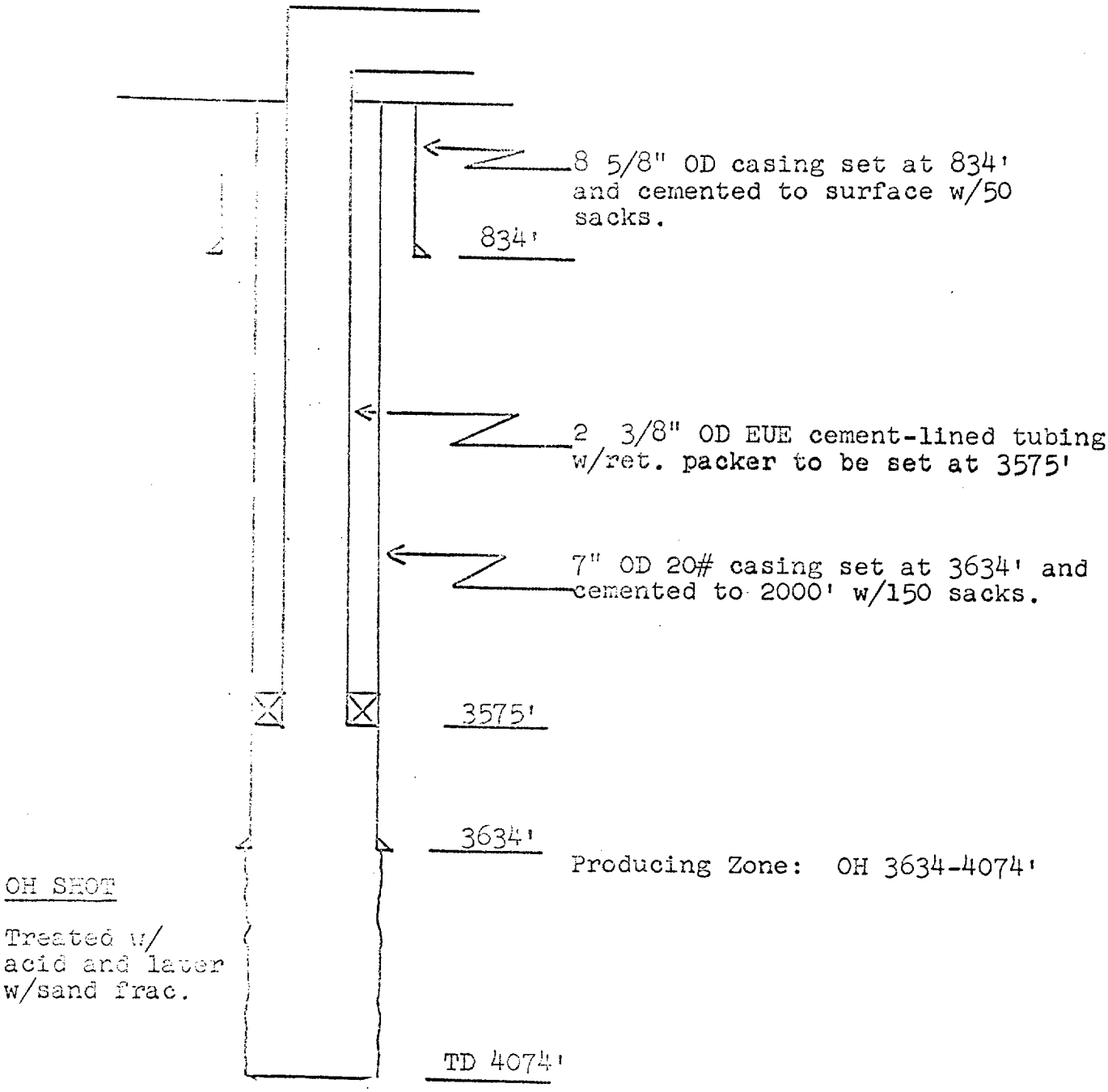
Proposed Procedure

1. Tag bottom and tally out.
2. Clean out any fill to 4028'
3. Run cement-lined tubing w/packer to be set at 3925'.

NOTE: TUBING TO BE ELECTRONICALLY INSPECTED ON RACK.

WATER INJECTION WELL DATA
MCA Unit No. 15

Unit N - 660' FSL & 1980' FWL Sec. 17-17S-32E
Elev. DF-3990'



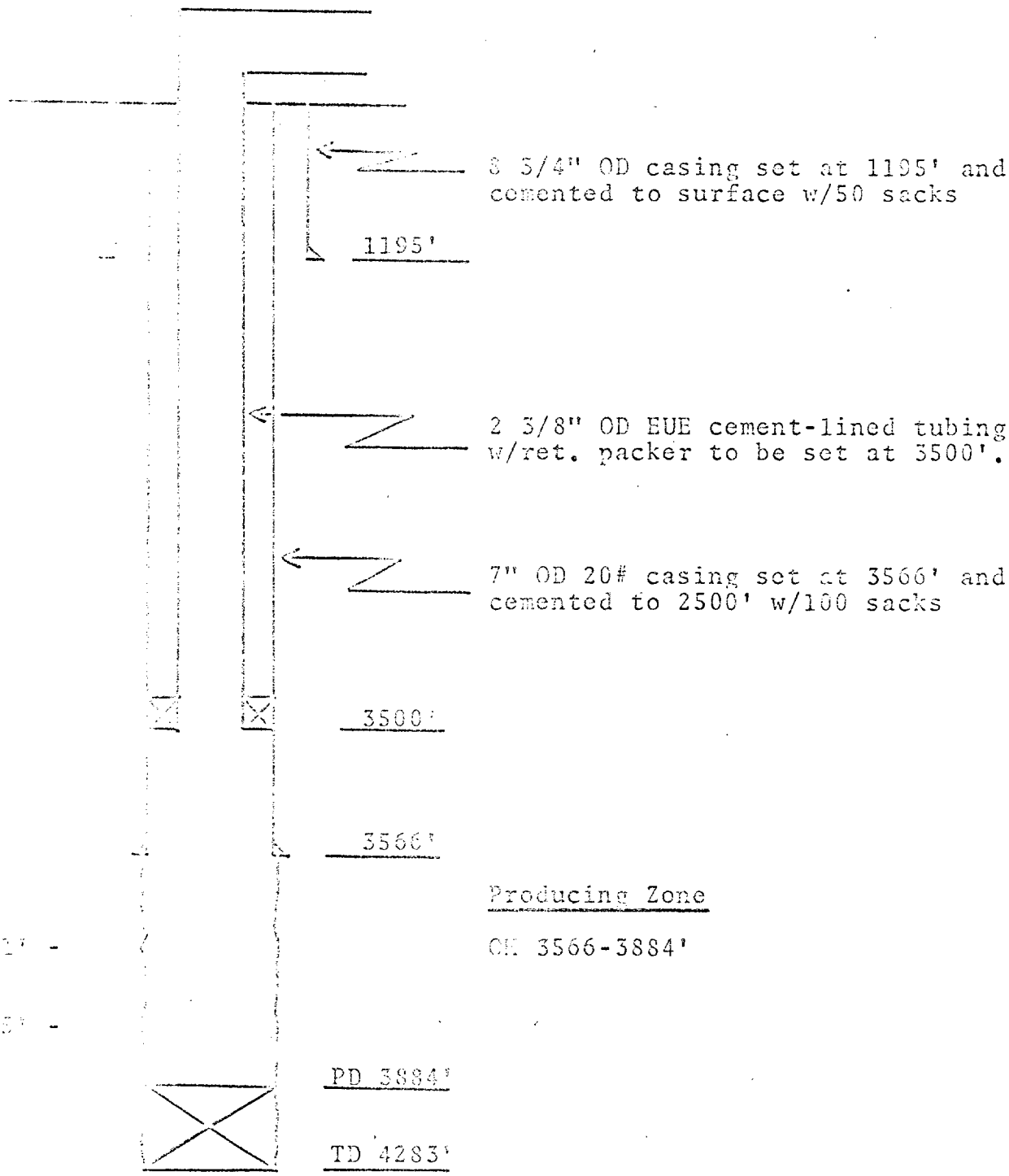
Proposed Procedure

1. Tag bottom and tally out.
2. Clean out any fill to TD of 4074'
3. Run cement-lined tubing w/packer to be set at 3575'

NOTE: TUBING TO BE ELECTRONICALLY INSPECTED ON RACK.

WATER INJECTION WELL DATA

MCA UNIT NO. 220
UNIT "D" - 660' FNL & 363' FWL, SEC. 33-17S-32E
ELEV. - DF - 3927'

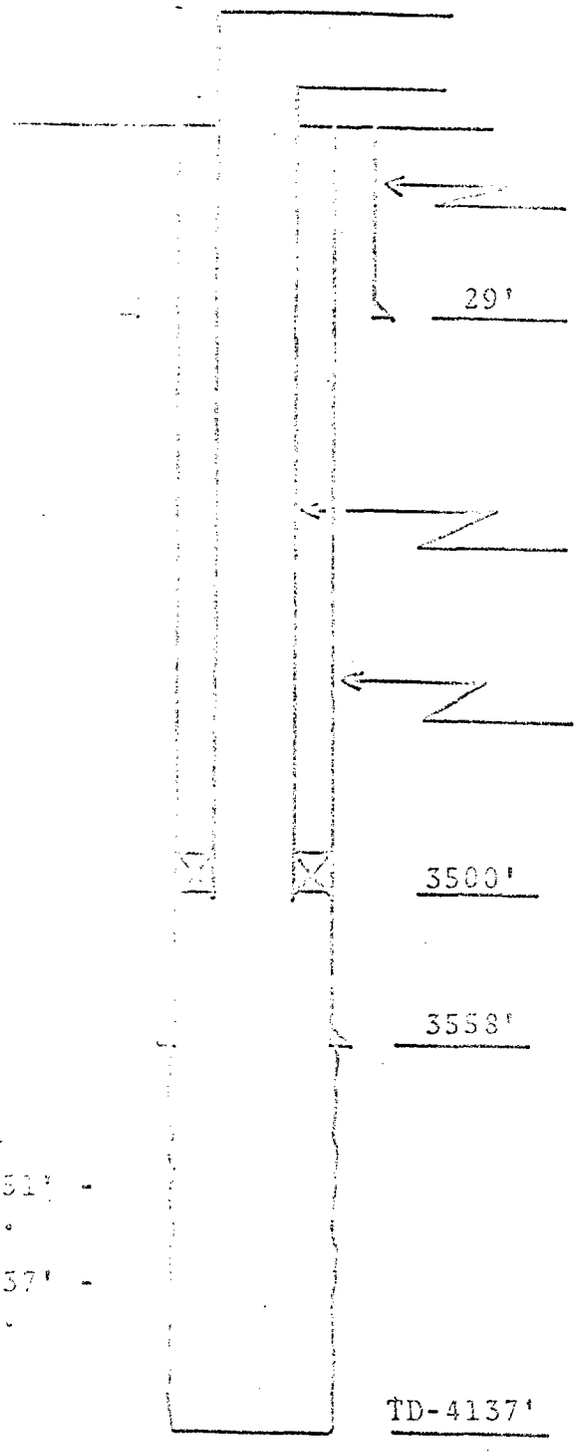


PROPOSED PROCEDURE

1. Tag bottom and tally out.
2. Cleanout and drill out to new PD of 4090' if possible - if not possible to obtain circulation cleanout and drill out will be done after well pressures up.
3. Run tubing with retrievable packer to be set at approximately 3500' and commence injecion. (If unable to drill out - unlined tubing will be run and used until drill out work is completed, then cement-lined tubing will be run.) Tailpipe will be run to 4070', if required for running injectivity surveys.

WATER INJECTION WELL DATA

MCA UNIT NO. 223
UNIT "B" - 660' FNL & 1980' FEL, SEC. 33-17S-32E
ELEV. - DF - 3938'



OH SIZE

3891-4051' - 320 qts.

4056-4137' - 210 qts.

Producing Zone

OH 3558-4137'

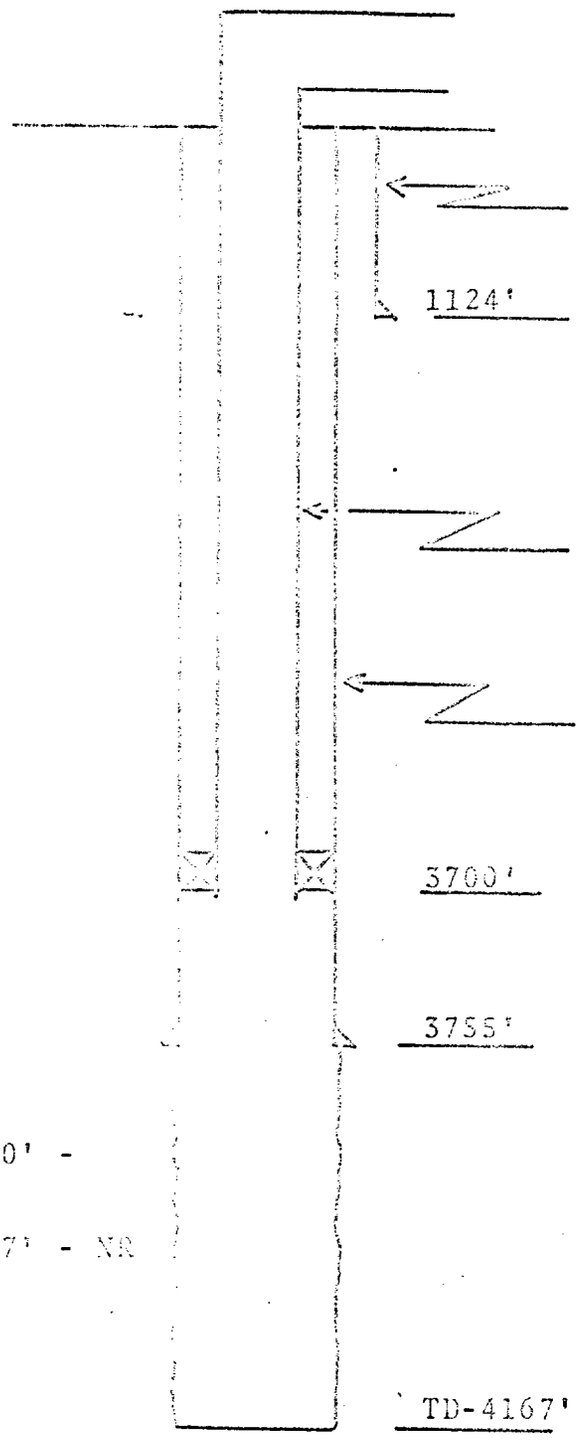
PROPOSED PROCEDURE

1. Tag bottom and tally out.
2. Cleanout to TD of 4137' if possible - if not possible to obtain circulation, cleanout will be done after well pressures up.
3. Run tubing with packer to be set at approximately 3500' and commence injection. If it is required to pressure up well prior to cleanout - unlined tubing will be run initially and cement-lined tubing will be run after cleanout is completed. Tailpipe will be run to 4120', if required for running injectivity surveys.

NOTE - Gamma ray-neutron log to be run 4137-3200' prior to running cement-lined tubing.

WATER INJECTION WELL DATA

MCA UNIT NO. 232
UNIT "F" - 1180' FNL & 1980' FWL, SEC. 33-17S-32E
ELEV. - DF - 3916'



8 5/8" OD casing set at 1124' and cemented to surface w/75 sacks

2 3/8" OD EUE cement-lined tubing w/ret. packer to be set at 3700'.

7" OD 23# casing set at 3755' and cemented to 2000' w/170 sacks.

OH SHOT

3880-3970' - 230 qts.

4045-4157' - NR

Producing Zone

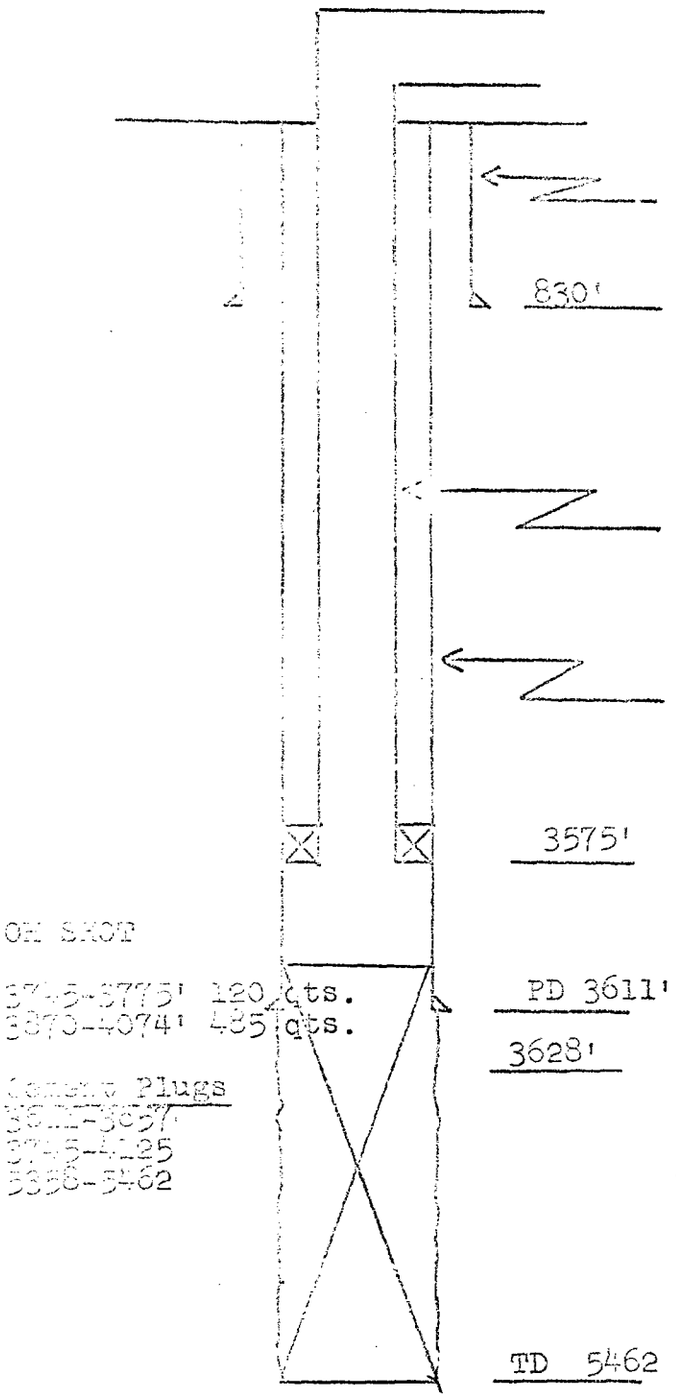
OH 3755-4167'

PROPOSED PROCEDURE

1. Tag bottom and tally out.
2. Cleanout to TD of 4167' if possible - if not possible to obtain circulation, cleanout will be done after well pressures up.
3. Run tubing with packer to be set at approximately 3700' and commence injection. If it is required to pressure up well prior to cleanout - unlined tubing will be run initially and cement-lined tubing will be run after cleanout is completed. Tailpipe will be run to 4150', if required for running injectivity surveys.

NOTE - Gamma ray-neutron log to be run 4167-3200' prior to running cement-lined tubing.

WATER INJECTION WELL DATA
On King "B" No. 1 (NCA Unit No. 246)
Unit P - 660' FSL & 660" FEL Sec. 17
17S-32E, - Elev. EHF - 4044'
DF - 4048'



8 5/8" OD casing set at 830' and cemented to surface w/50 sacks.

2 3/8" OD EUE cement-lined tubing w/ret. packer to be set at 3575'

7" OD 20# casing set at 3628' and cemented to 2000' w/100 sacks.

OH SHOT

3743-3775' 120 qts.
3870-4074' 485 qts.

Cement Plugs
3611-3697'
3745-4125
5358-5462

Proposed Injection Zone

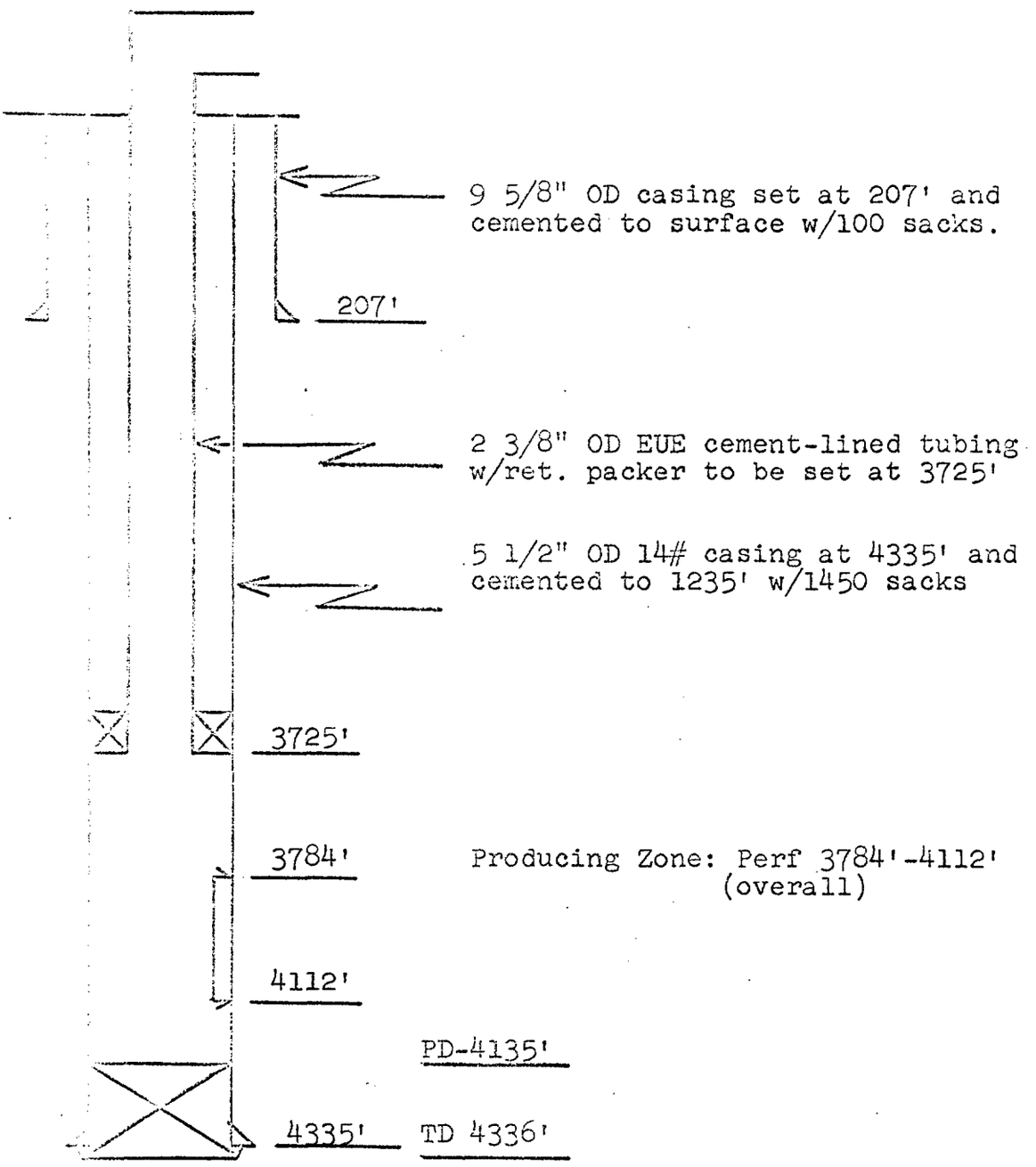
OH 3628-4100' (overall)

Proposed Procedure

1. Drill out cement plugs to new PD of 4100'.
2. Run gamma ray log w/caliper 4100-3100'
3. Perforate 3733, 3760', 3775', 3842', 3875', 3880', 3890', 4030', 4040' w/open hole jets and acid wash 5000 gal. 15% LSTNE (perf. will be reviewed after interpretation of caliper log.)
4. Run 3 joints cement line tubing - make dummy wireline run to determine if injection survey tools can be run through shot hole. Run cement-lined tubing w/packer to be set at 3575'.
5. Run 1 1/2" fiber glass pipe as tailpipe if required, depending upon dummy run.

WATER INJECTION WELL DATA
Wm. Mitchell "B" No. 7

Unit L - 1980' FSL & 660' FWL - Sec. 17-17S-32E
Elev. DF 4008'

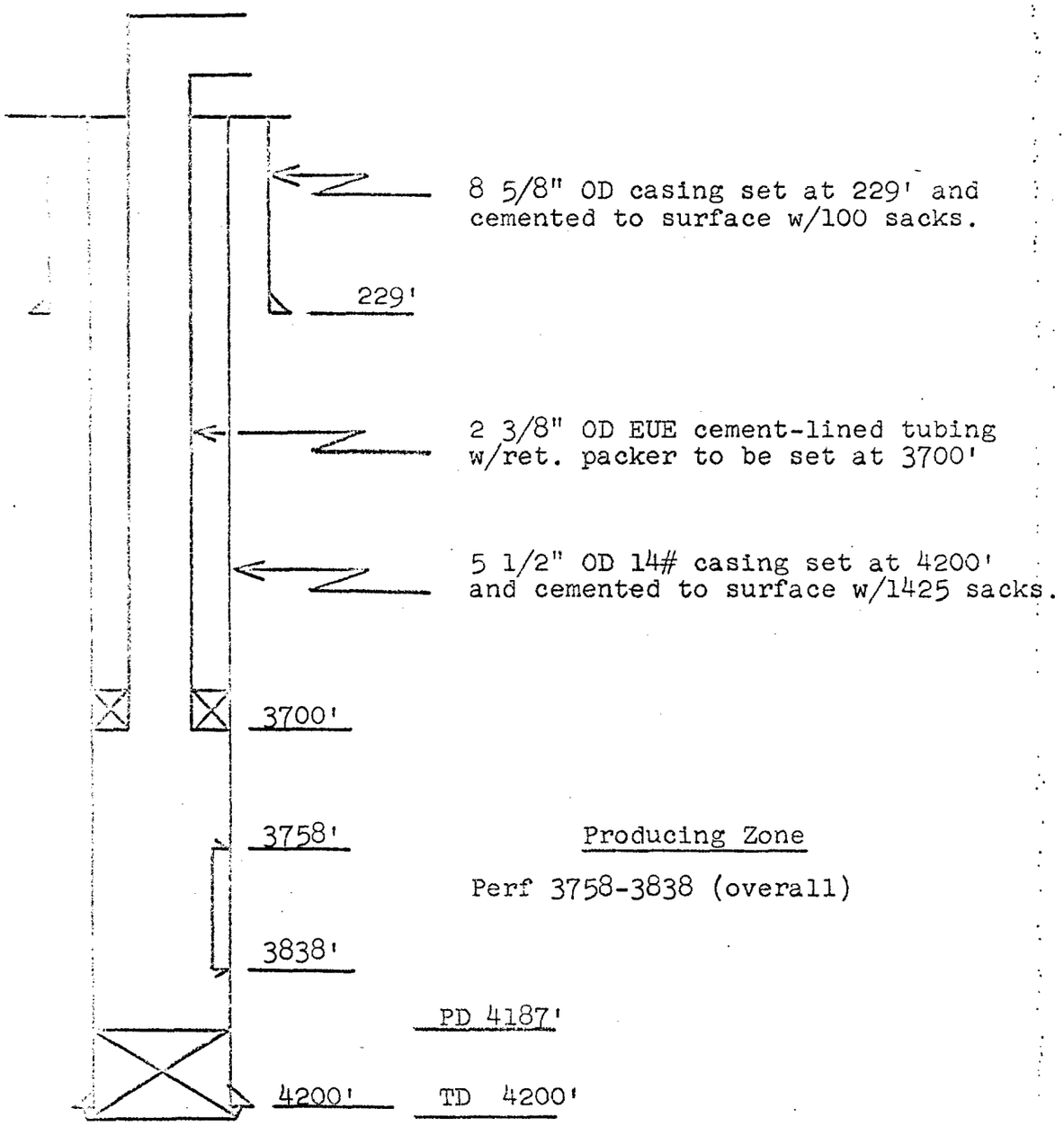


Proposed Procedure

1. Tag bottom and tally out.
2. If any fill found above 4120' - clean out to PD of 4135.
3. Run cement-lined tubing w/packer to be set at 3725'.

NOTE: Tubing to be electronically inspected on rack.

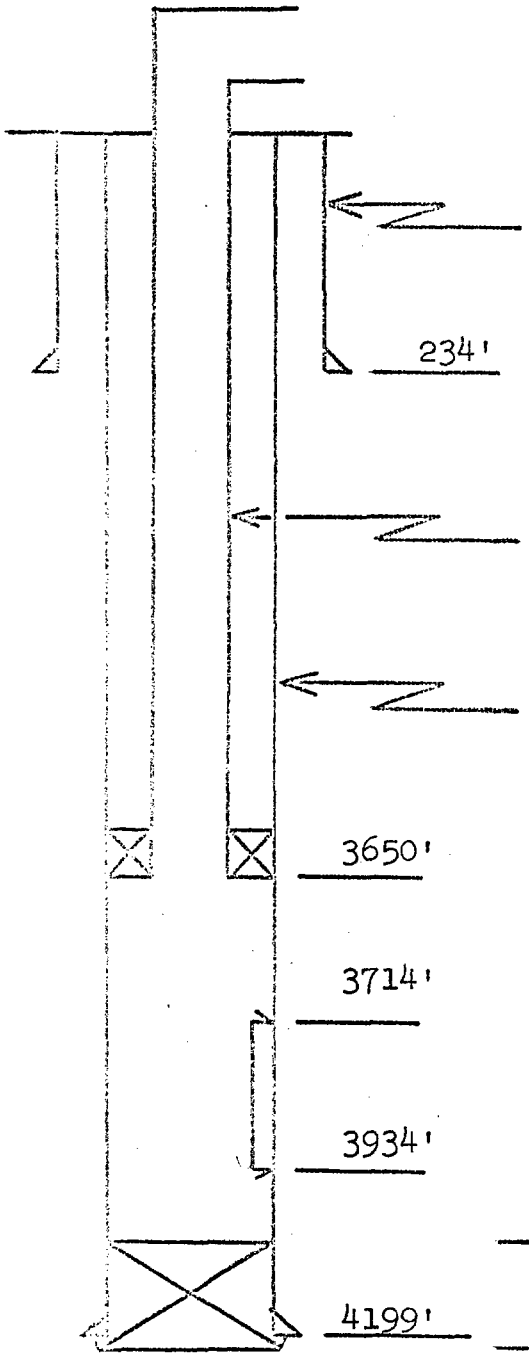
WATER INJECTION WELL DATA
Wm. Mitchell "B" No. 8 - Unit J -
1980' FSL & 1980' FEL, Sec. 17-17S-32E
Elev. BHF - 4008'
DF - 4017'



1. Tag bottom and tally out.
2. Clean out to 4187' (PD) if fill found above 3850'.
3. Run cement-lined tubing w/packer to be set at 3700'.

NOTE: Tubing to be electronically inspected on rack.

WATER INJECTION WELL DATA
Wm. Mitchell "B" No. 12
Unit P - 660' FSL & 660' FEL Sec. 18-17S-32E
Elev - BHF - 3986'
DF - 3998'



8 5/8" OD casing set at 234' and cemented to surface w/100 sx.

2 3/8" OD EUE cement-lined tubing w/ret. packer to be set at 3650.

5 1/2" OD - 14# casing set at 4199' and cemented to 500' w/800 sacks.

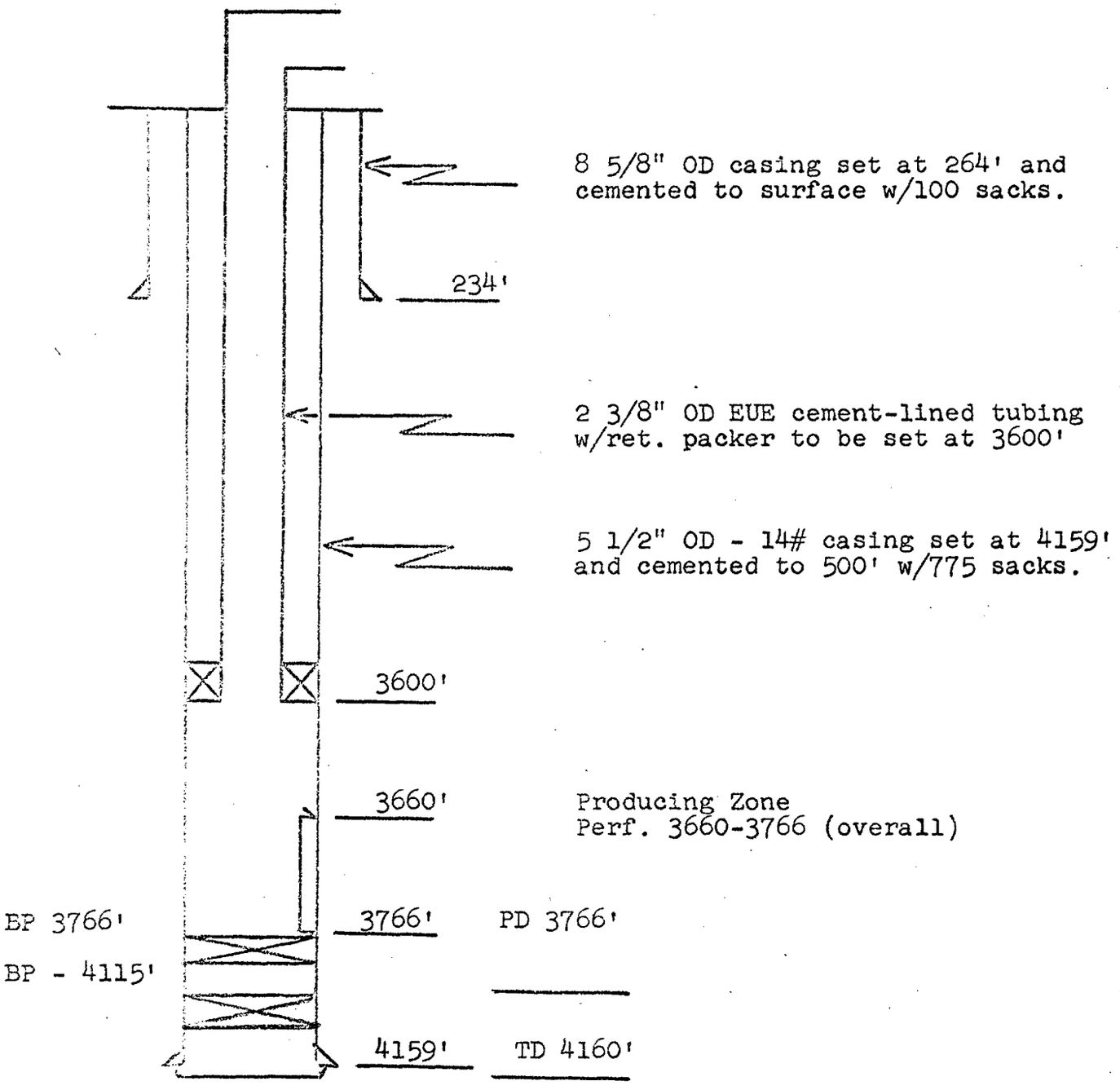
Producing Zone: Perf. 3714-3934 (overall)

Proposed Procedure

1. Tag bottom and tally out.
2. Clean out to 4035' (PD) if any fill found above 3950'.
3. Run cement-lined tubing w/packer to be set at 3650.

NOTE: Tubing to be electronically inspected on rack.

WATER INJECTION WELL DATA
Wm. Mitchell "B" No. 13 -
Unit N - 660' FSL & 1980 FWL Section 18,
17S-32E. Elev. BHF - 3955'
DF - 3964'

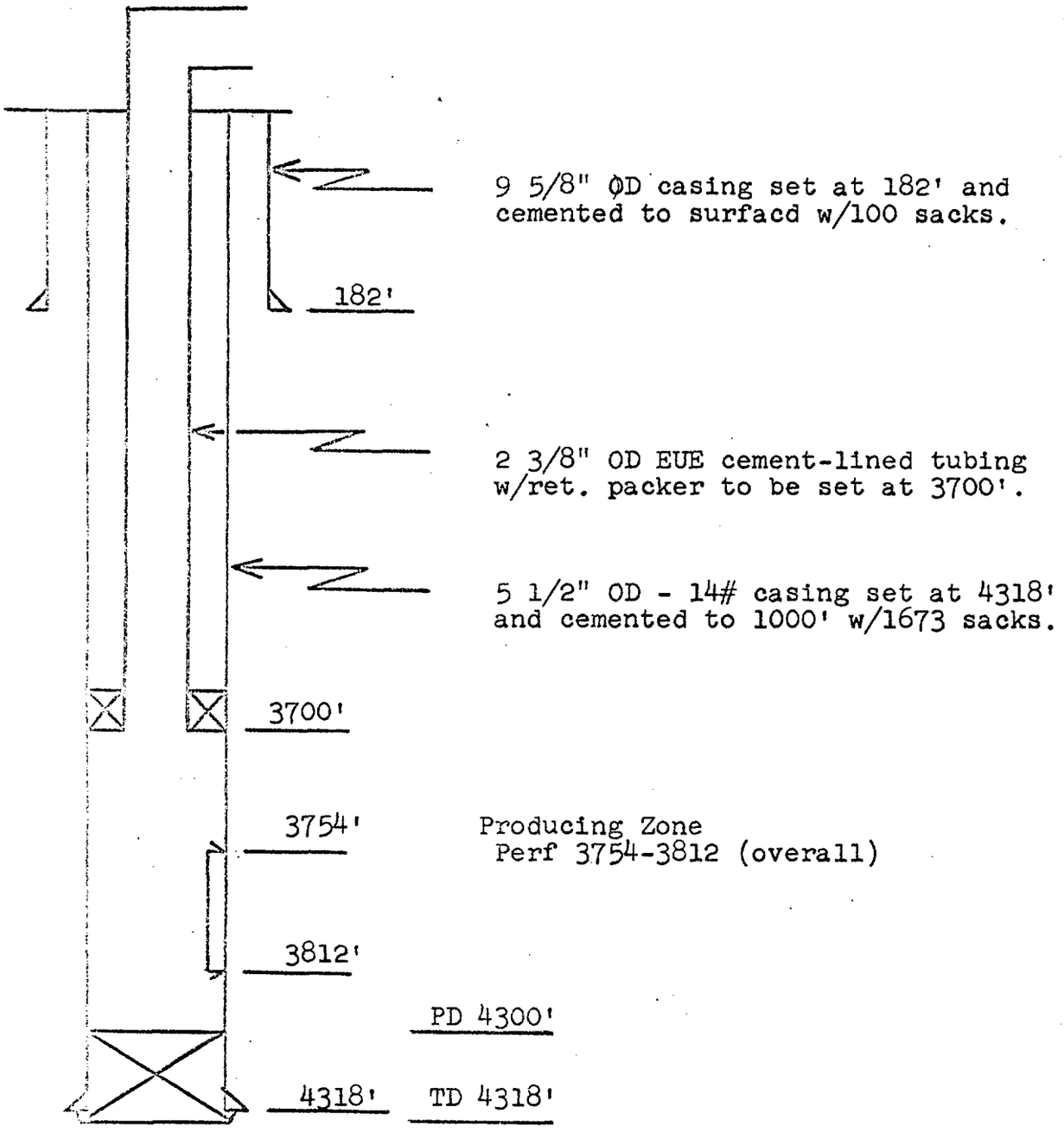


Proposed Procedure

1. Tag bottom and tally out.
2. If fill is found - drill out BP at 3766' and push to top of other BP at 4115'
3. Run cement-lined tubing w/packer to be set at 3600'

NOTE: Tubing to be electronically inspected on rack.

WATER INJECTION WELL DATA
State "B" No. 3
Unit J - 1980' FSL & 1980 FEL Sec. 16
17S-32E. Elev. BHF - 4029'
DF - 4040'

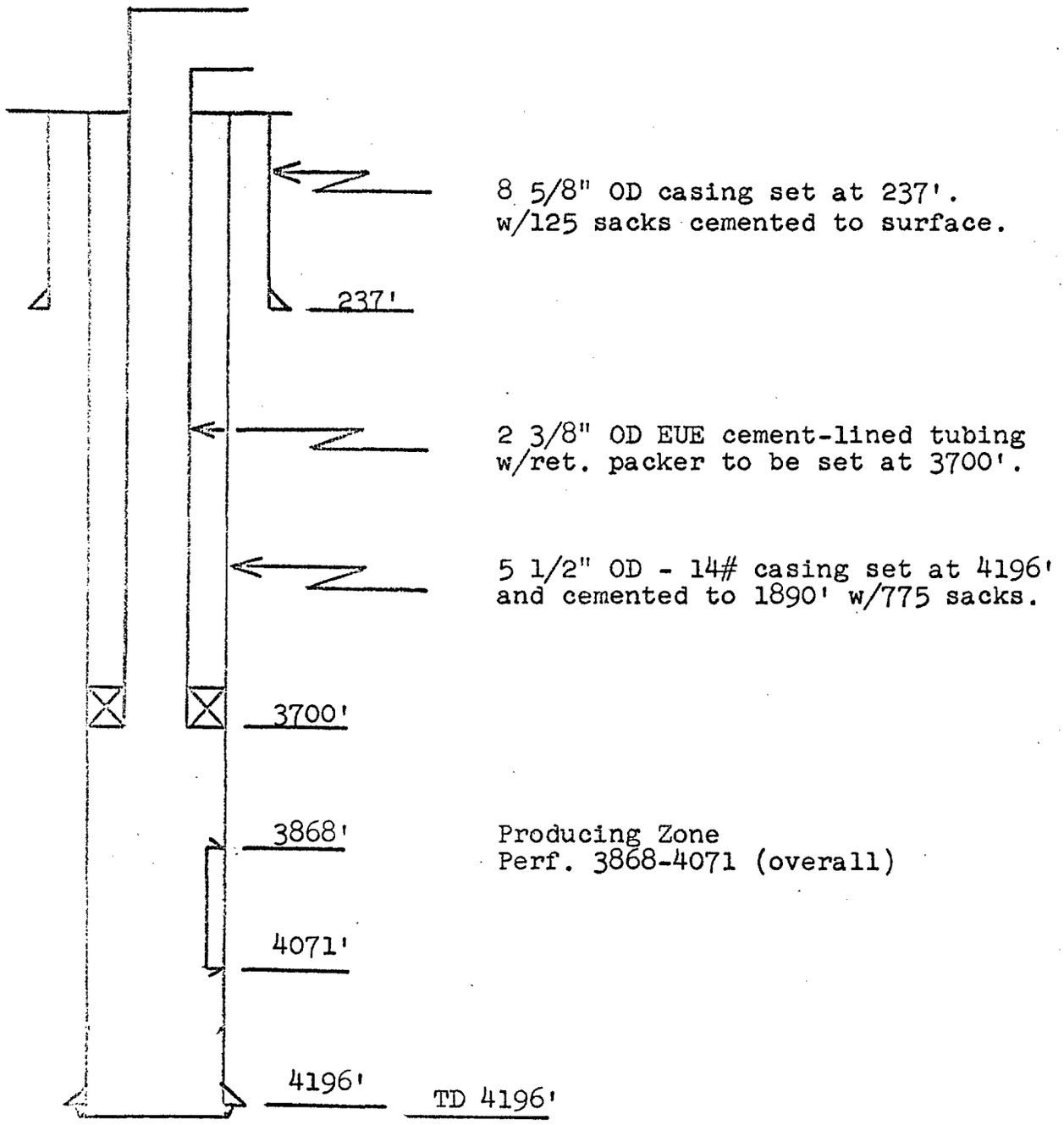


Proposed Procedure

1. Tag bottom and tally out.
2. If fill found above 3850- clean out to PD of 4300'.
3. Run cement-lined tbg. w/packer to be set at 3700'.

NOTE: Tubing to be electonically inspected on rack.

WATER INJECTION WELL DATA
State B No. 6
Unit B - 660' FNL & 1980' FEL Sec. 16-17S-32E
Elev. BHF - 4086'
DF - 4096'

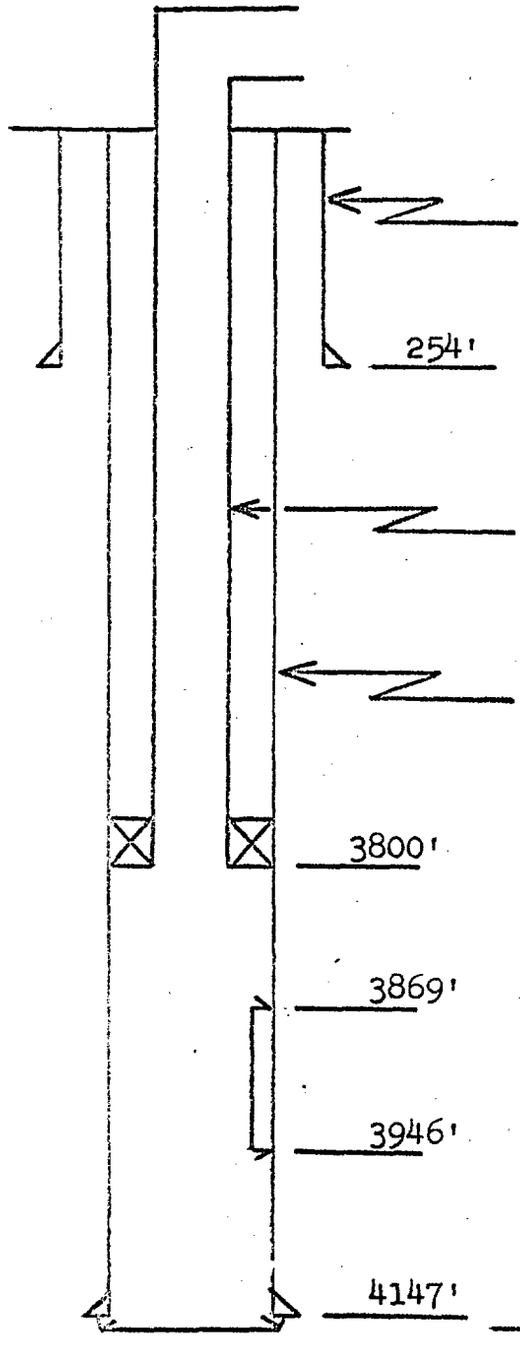


Proposed Procedure

1. Tag bottom and tally out.
2. Clean out to 4190' if fill above 4080'
3. Perf. w/1 JSPF - 3753-57', 3792-96', 3807-10, and 3816-22. Run 2 1/2" frac tubing w/RBP & packer. Treat perf. 3753'3822' w/1500 gal mud acid using ball sealers - follow w/20,000 gal sand-water frac w/20 gal ADOMALL, 400# guar and 500# ADOMITE AQUA. Swab back load water for 8 hours. Pull RBP and packer.
4. Run cement-lined tubing w/packer to be set at 3700'.

NOTE: Tubing to be electronically inspected on rack.

WATER INJECTION WELL DATA
State "B" No. 7
Unit H - 1980' FNL & 660' FEL, Sec. 16-17S-32E
Elev. BHF - 4064'
DF - 4075'



8 5/8" OD casing set at 254' and cemented to surface w/135 sacks.

2 3/8" OD EUE cement-lined tubing w/ret. packer to be set at 3800'.

5 1/2" OD 14# casing set at 4147' and cemented to 1575' w/725 sacks.

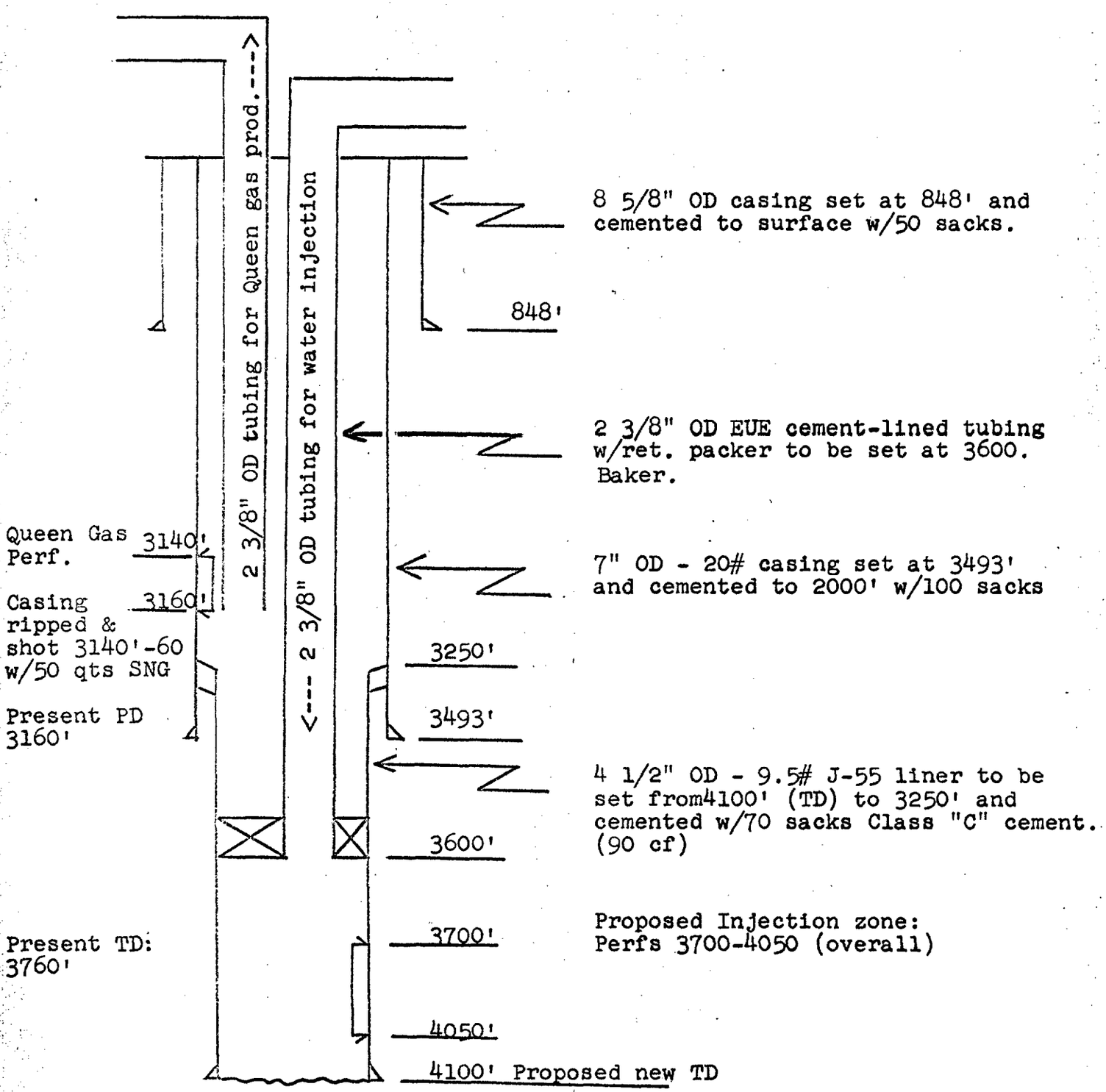
Producing Zone
Perf. 3869-3946' (overall)

Proposed Procedure

1. Tag bottom and tally out.
2. Clean out to 4140' if fill found above 4000'.
3. Run cement-lined tubing w/packer to be set at 3800'.

NOTE: Tubing to be electronically inspected on rack.

WATER INJECTION WELL DATA
State "O" No. 1
(Queen Gas Well)
Unit F - 1980' FNL & 1980' FWL Sec. 16-17S-32E
Elev. DF - 4065'



Proposed Procedure

1. Kill well with oil.
2. Rig up to drill w/gas.
3. Drill to new TD of 4100'. Load hole with oil.
4. Run gamma ray-neutron log w/caliper 4100 (TD) to 3100'.
5. Run 850' of 4 1/2" OD 9.5# J-55 as liner and set from 3250' to 4100'. Cement w/70 sx Class "C" cement (as determined from caliper survey)
6. Perf selected intervals and treat w/20,000# 20,000 gal sand-water frac w/400# Guar 500# ADOMITE AQUA and 20 gal ADOMITE ADOMALL. Swab back load for 8 hours.
7. Run tubing with packer to be set at 3600' for water injection.
8. Run tubng to be set at 3150' for gas production. Swab in gas.

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

WELLS

ILLEGIBLE

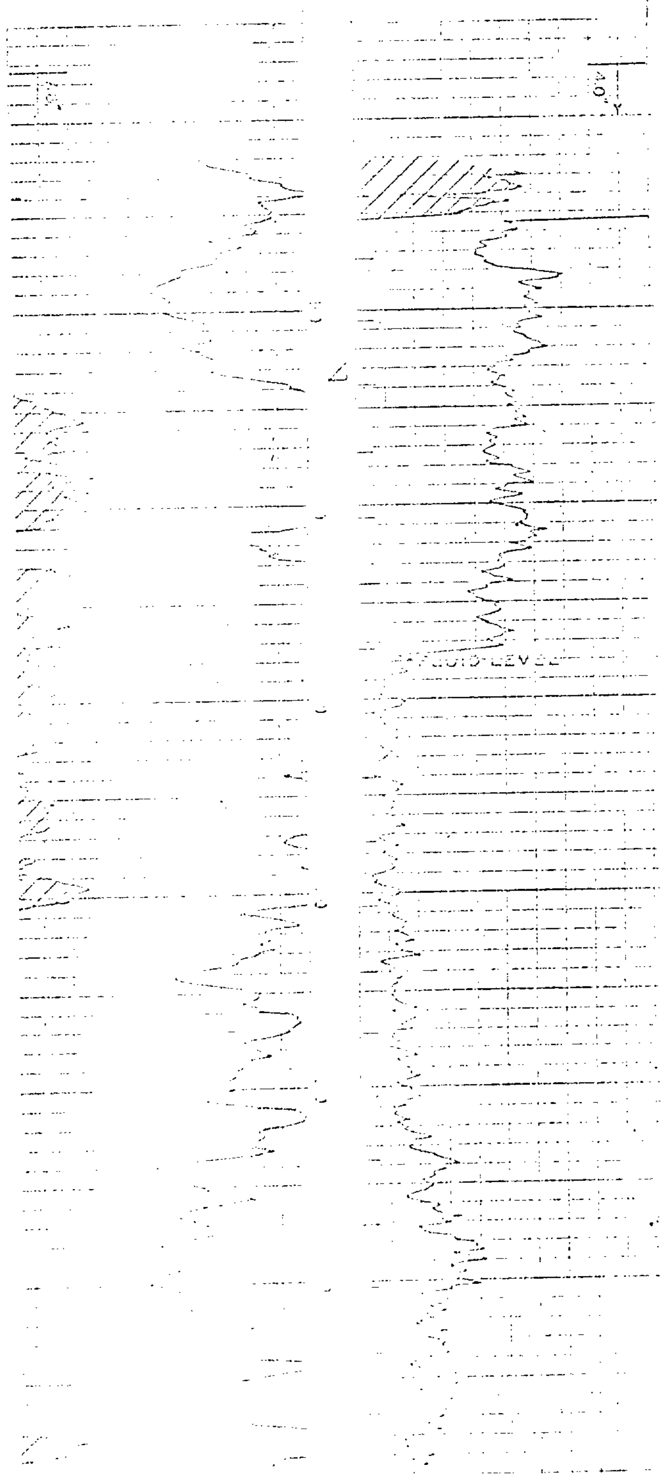
CASING RECORD

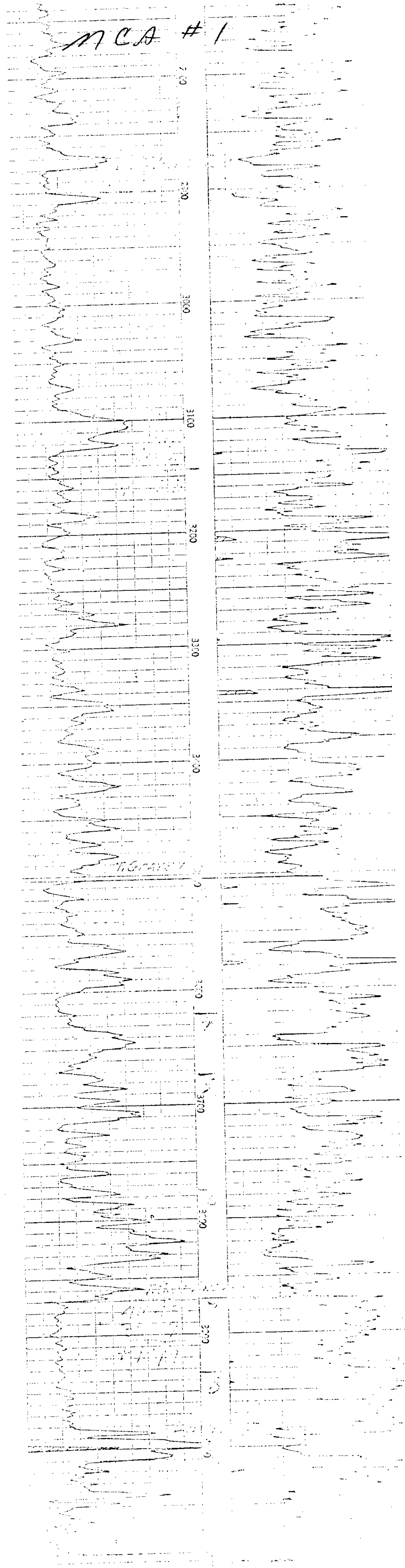
REMARKS OR OTHER DATA

NEUTRON

RADIATION INTENSITY INCREASES

RADIATION INTENSITY INCREASES



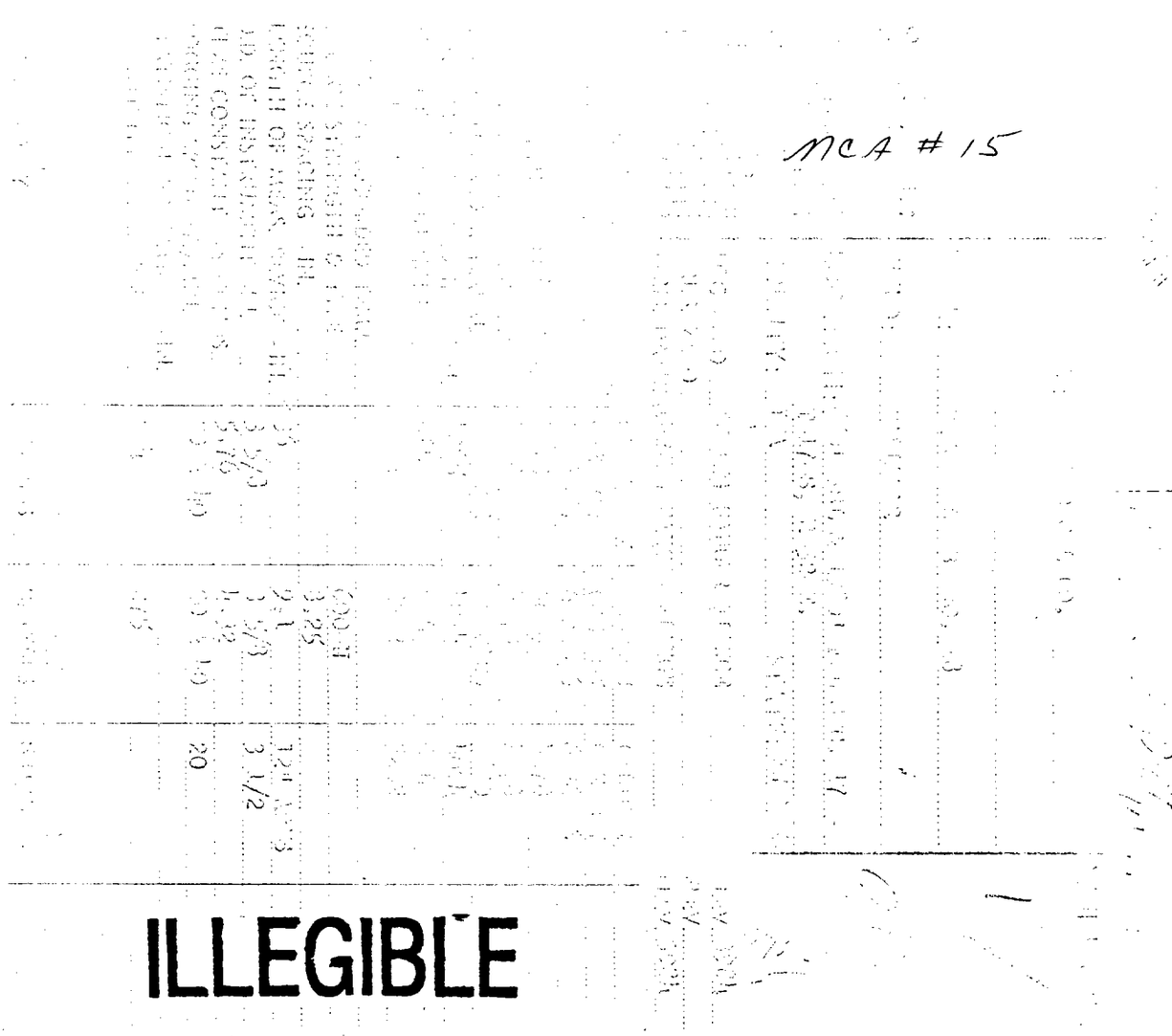


MCA # 7

WELLS

ILLEGIBLE

NCA # 15



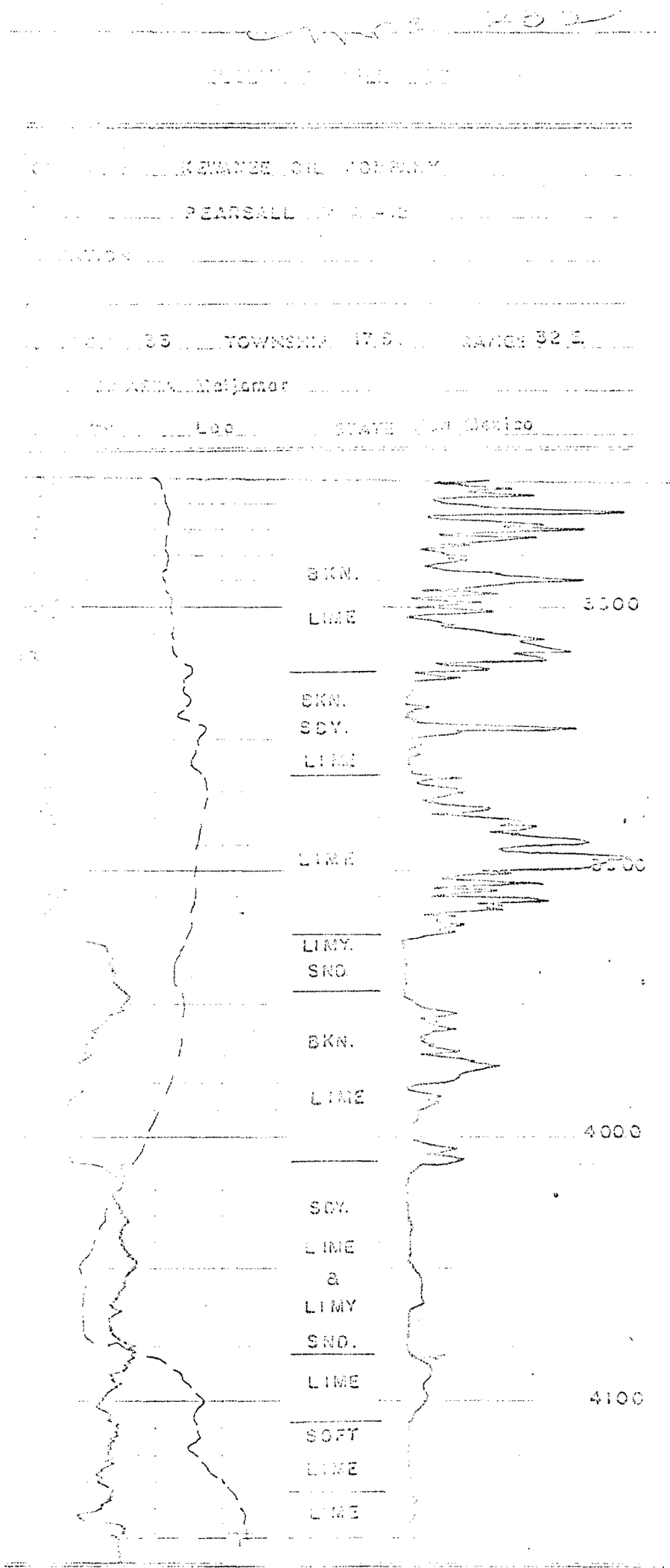
ILLEGIBLE

MCA #220

ILLEGIBLE

NCA #232

ILLEGIBLE



ILLEGIBLE

Mitchell "B" #7

Other Surveys

Location of Well

1980' FSL
660' FWL

Elevation D.F. 4004

or G.L.

BRADEN HEAD

West Texas Electrical Log Service

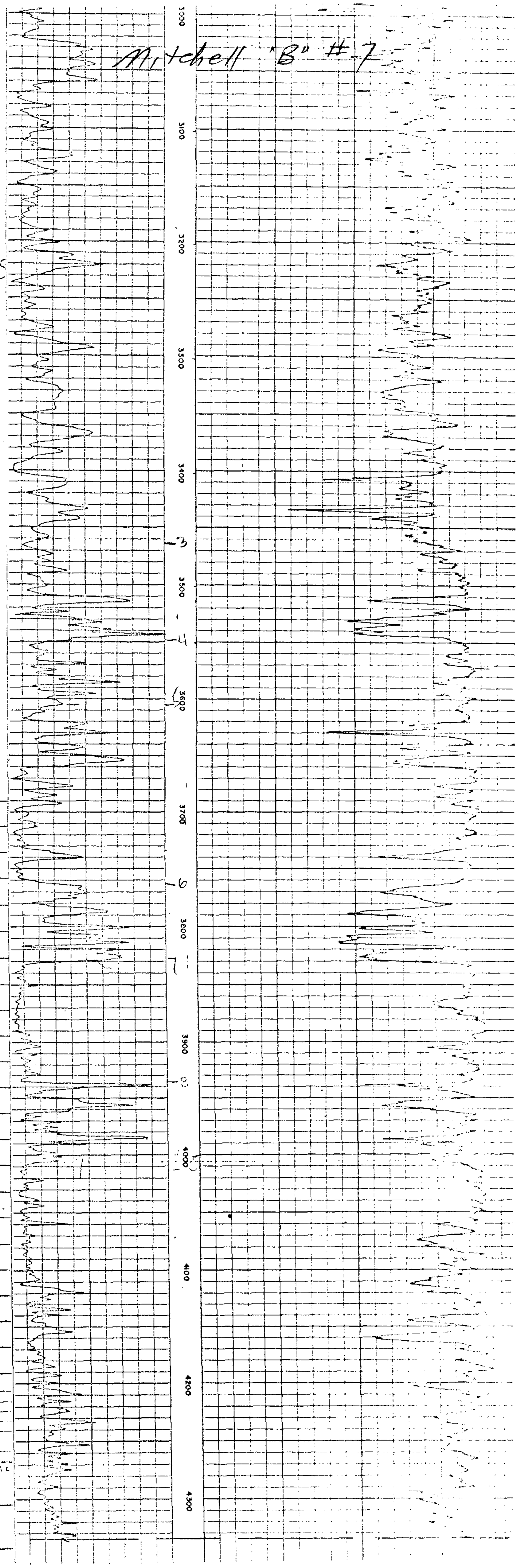
ELSI

INTERVAL TRANSIT TIME

microseconds per foot

Increases

Span 2 Ft., 2 Receivers



Log Ticket No. 66488

Maximum Recorded Temp. LESS 100°

Effective Depth (McCullough) 4187'

Fluid Level FULL

Length of Device—Overall 11'

Spacing 19.5"

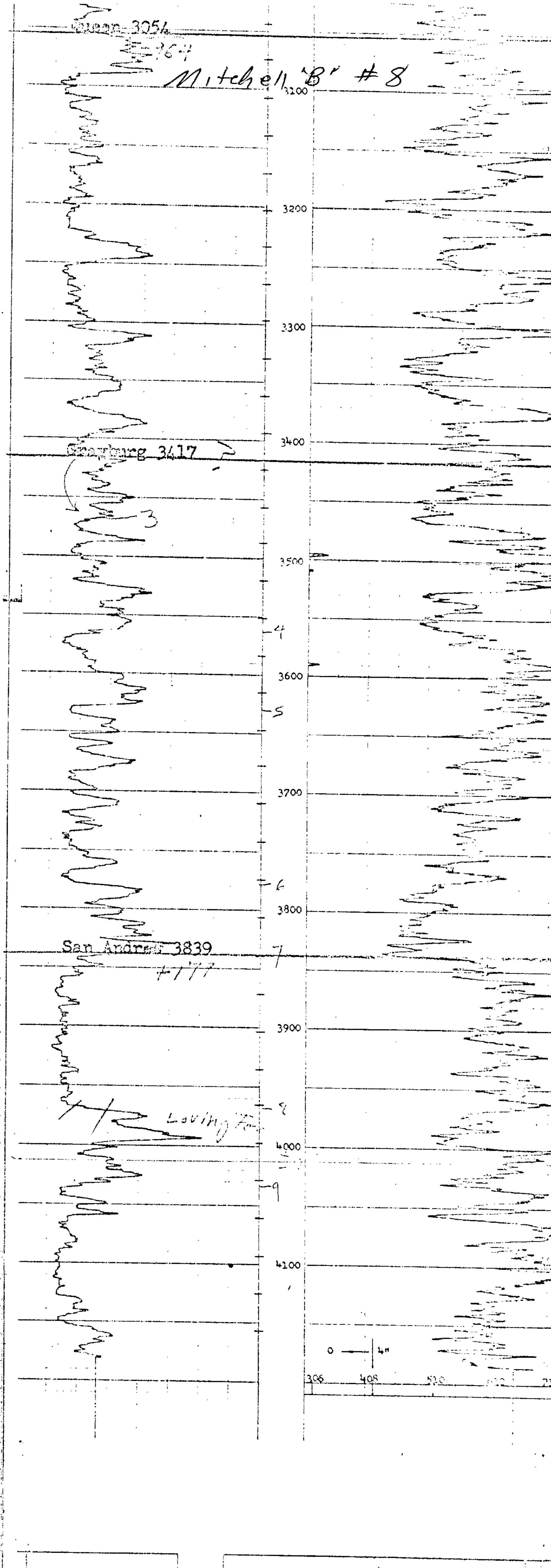
			NEUTRON	NEUTRON
	[illegible] - 5"	[illegible] - 2"	[illegible] - 5"	[illegible] - 2"
	[illegible]	0'	3500'	0'
	[illegible]	4160'	4180'	4160'
	[illegible]		64-10 3.25 [illegible]- D 240-R 4	
	[illegible]	60'	30'	60'
			102 COUNTS PER INCH	PER SECOND

	OPEN (BORE) HOLE RECORD	
Interval	Bit Size	Interval
0' to 229'	11"	0' to 229'
0' to 4200'		229' to 4200'

REMARKS OR OTHER DATA

West Texas Electrical Log Service

ILLEGIBLE



RADIATION INCREASE

1" GAMMA RAY ZERO AND STATISTICAL RECORDED AT 3454' NEUTRON ZERO AND STATISTICAL RECORDED AT 3458'

Mitchell "B" #12

West Texas Electrical Log Service

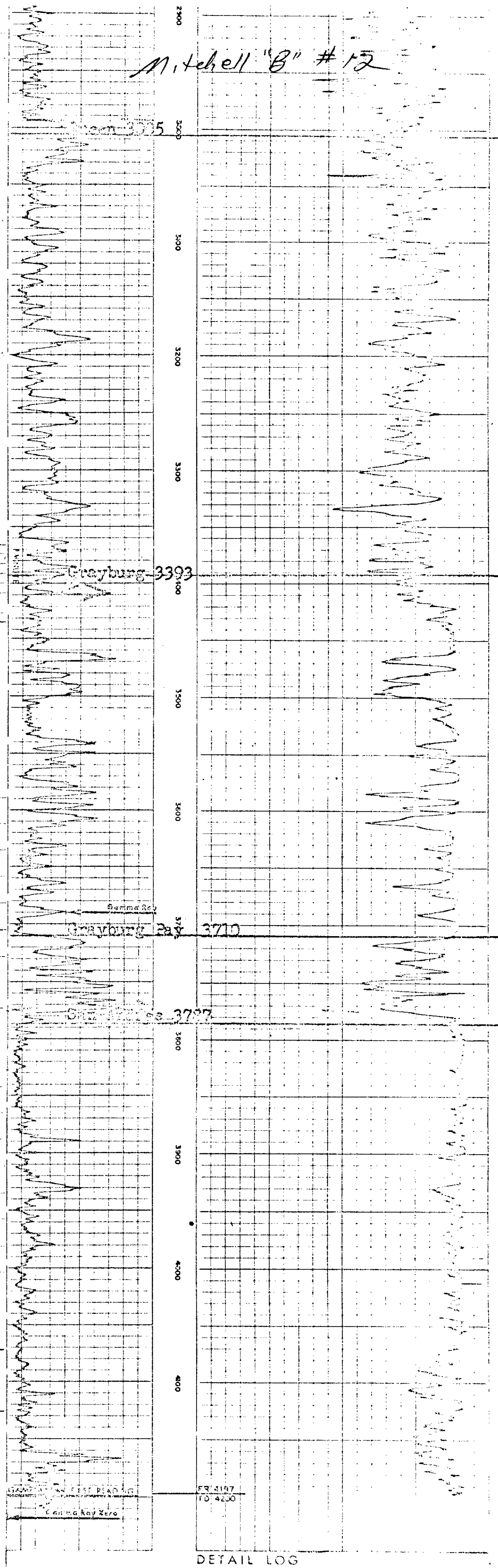
ILLEGIBLE

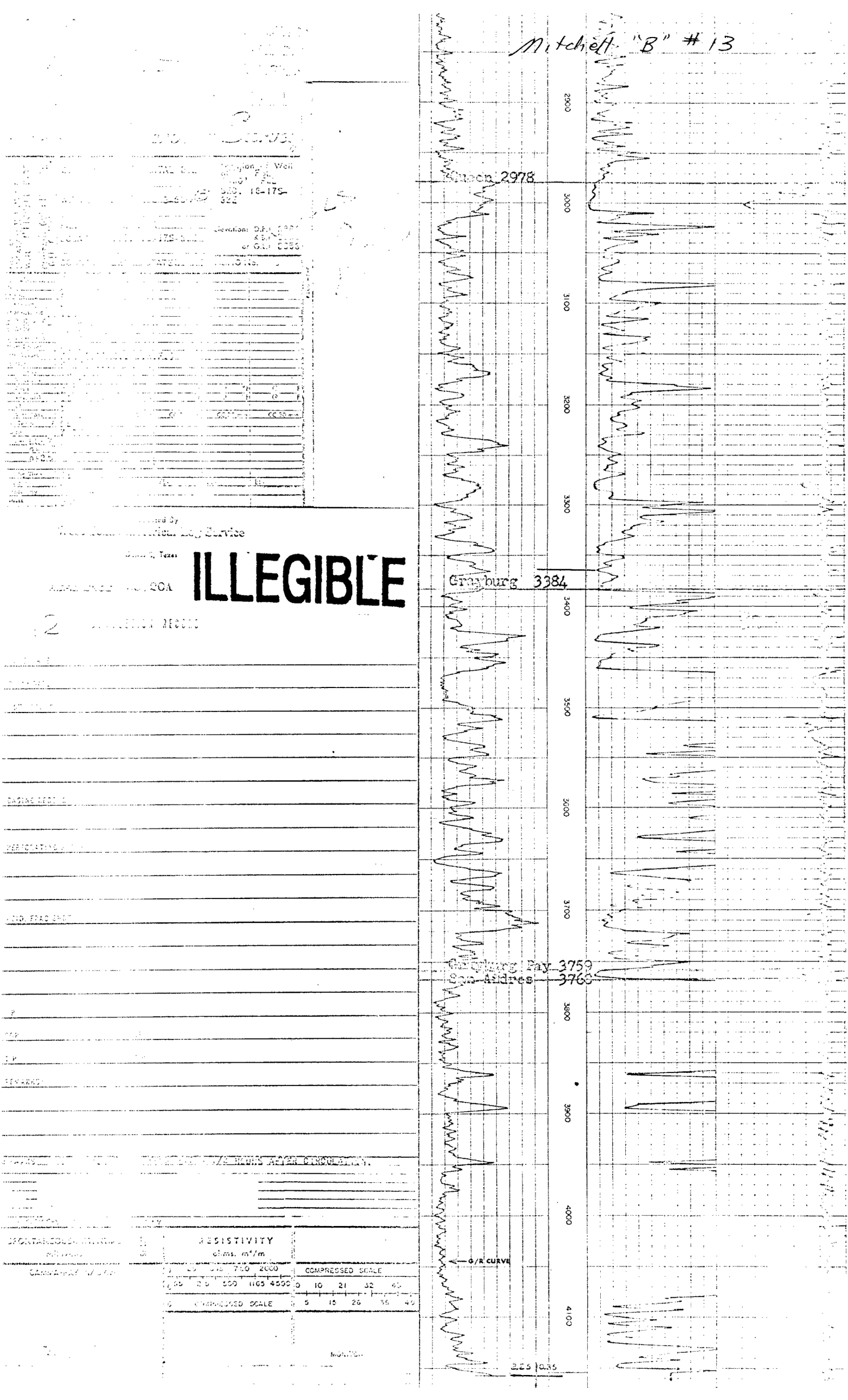
INTERVAL TRANSIT TIME

microseconds per foot

increases

3500 TO 4197




Mitchell "B" #13
Queen 2978
Grayburg 3384
Grayburg Pay 3759
San Andres 3768
2600
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000
4100
G/R CURVE
RESISTIVITY
ohms. m²/m
COMPRESSED SCALE
ILLEGIBLE

Other Surveys
GRS

Location of Well
1980'From S/L
1980'From E/L

LOCATION [illegible] 7S-32E

COUNTY [illegible]

Elevation: K.B. [illegible]
D.F. [illegible]
or G.L. 4023

3 Ft. above BHF

CC 30 min | CC 30 min

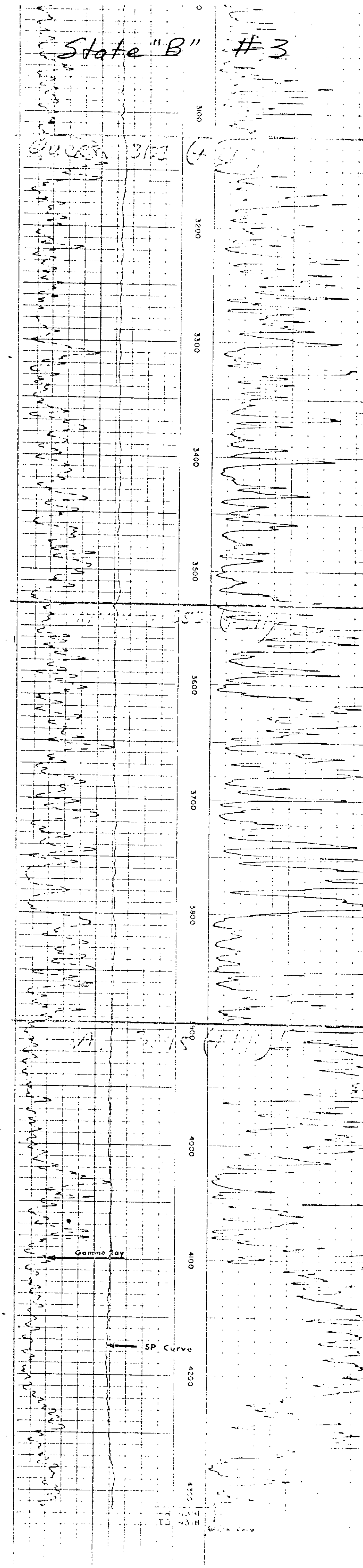
Produced By
West Texas Electrical Log Service
Dallas 2, Texas

REFERENCE KS7210

ILLEGIBLE

COMPLETION RECORD

RESISTIVITY
ohms. m²/m



State "B" #6

Other Surveys

Location of Well

Elevation: K.B.

D.F.

or G.L.

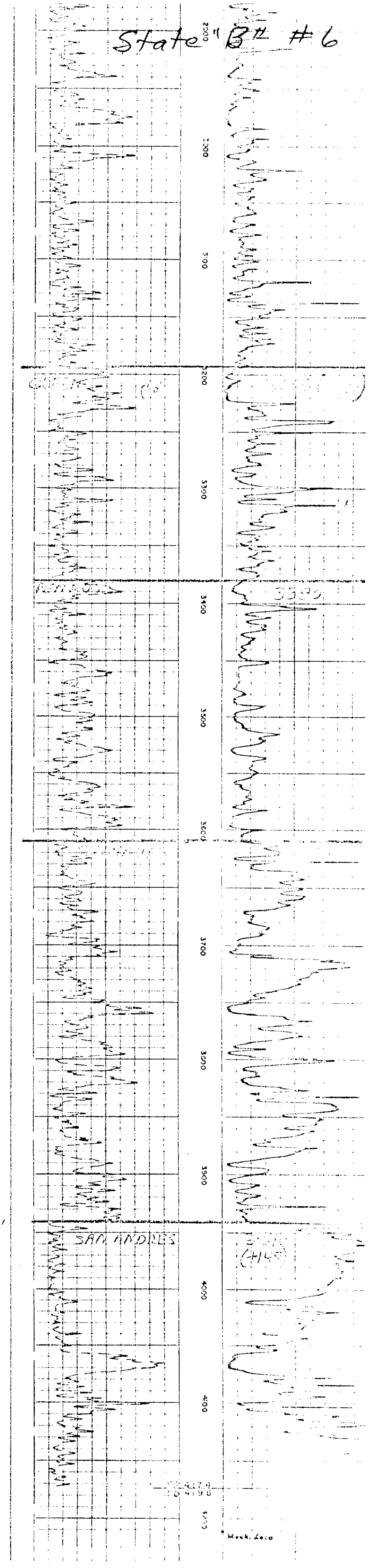
Ft. above

Reproduced By
West Texas Electrical Log Service
Dallas 2, Texas

ILLEGIBLE

COMPLETION RECORD

RESISTIVITY
ohms. m²/m



State "B" # 7

Other Surveys

Location of Well

Electrical Log Service

Dallas 2, Texas

ILLEGIBLE

RESISTIVITY
ohms m²/m