

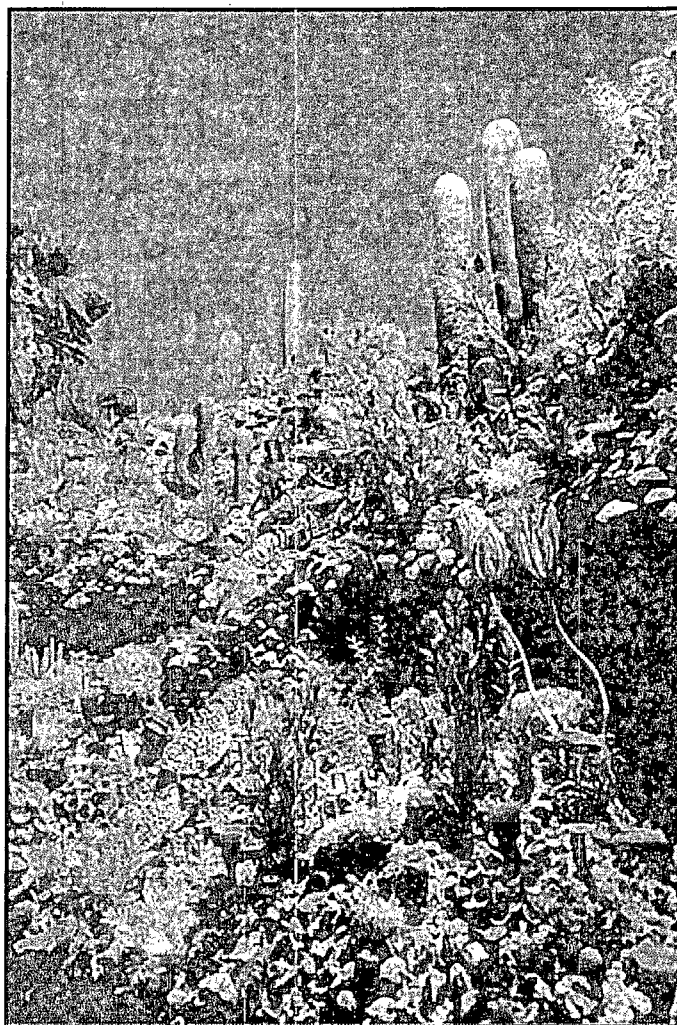
PAUL BACA PROFESSIONAL COURT REPORTERS

OIL CONSERVATIONS DIVISION

CASE #: 14178

EXHIBIT
5-A

Exhibit 5-A

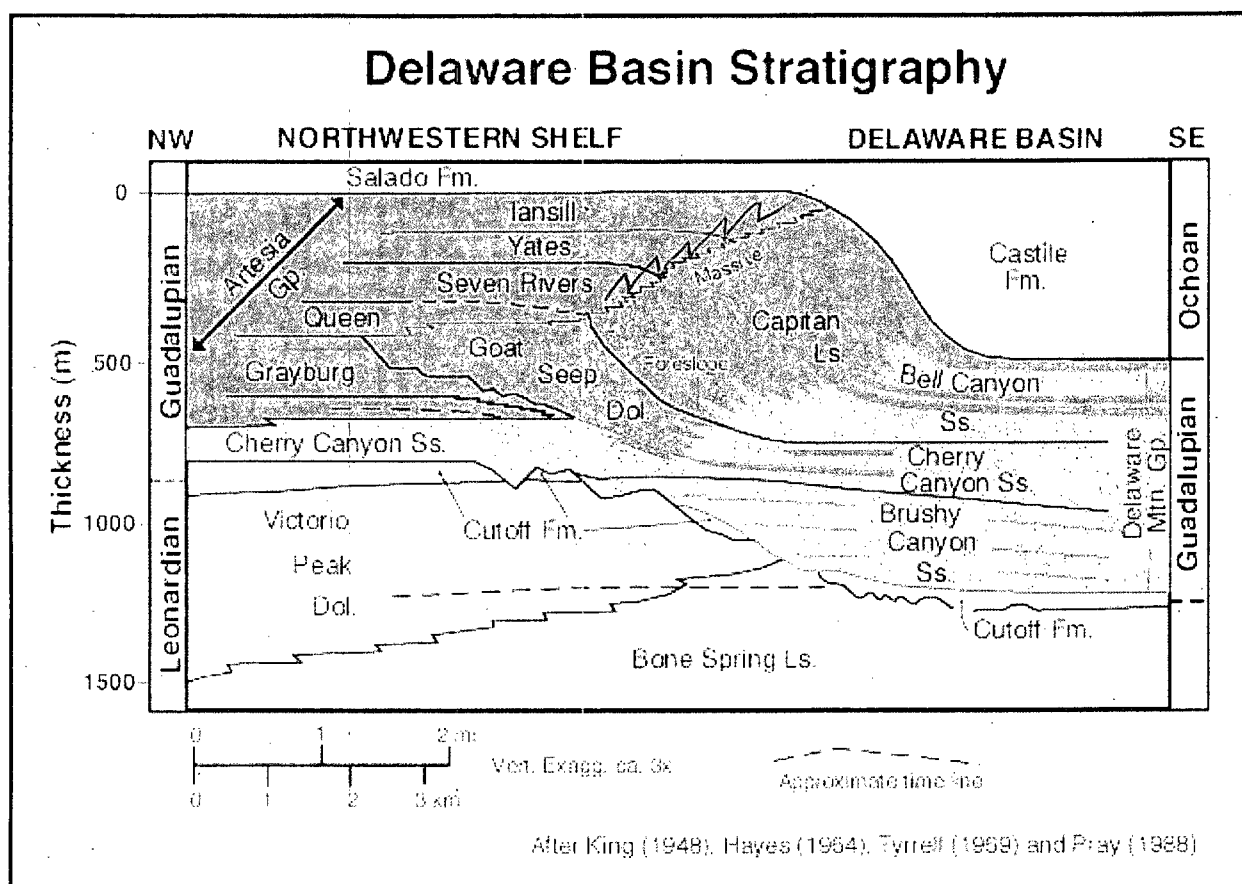


A portion of the diorama of the Capitan reef produced by Terry L. Chase and displayed at the Permian Basin Petroleum Museum in Midland, Texas. This artist's conception emphasizes the framework sponges and the abundant encrusting fauna.

© Peter A. Scholle, 1999

[Guadalupe Mtns. geology](#) — [Scholle home page](#) — [NM Bureau staff page](#) — [NM Bureau main page](#)

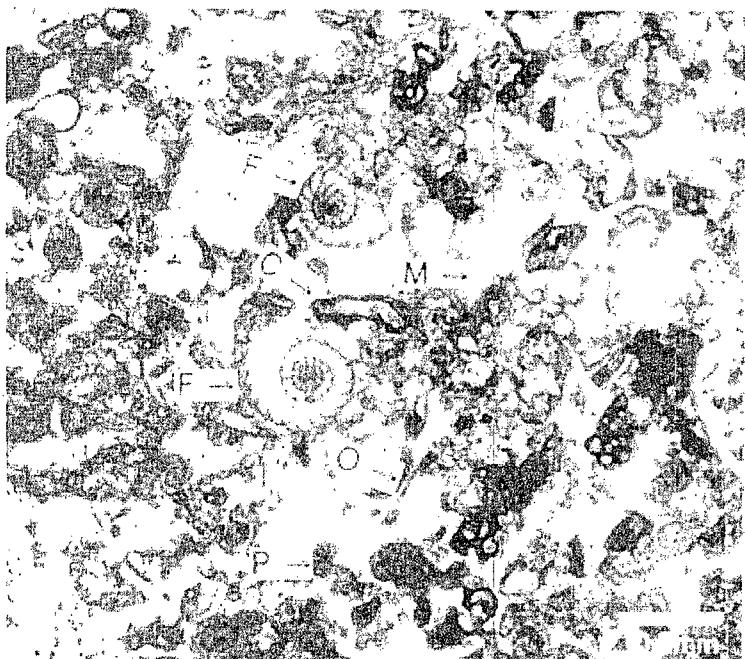
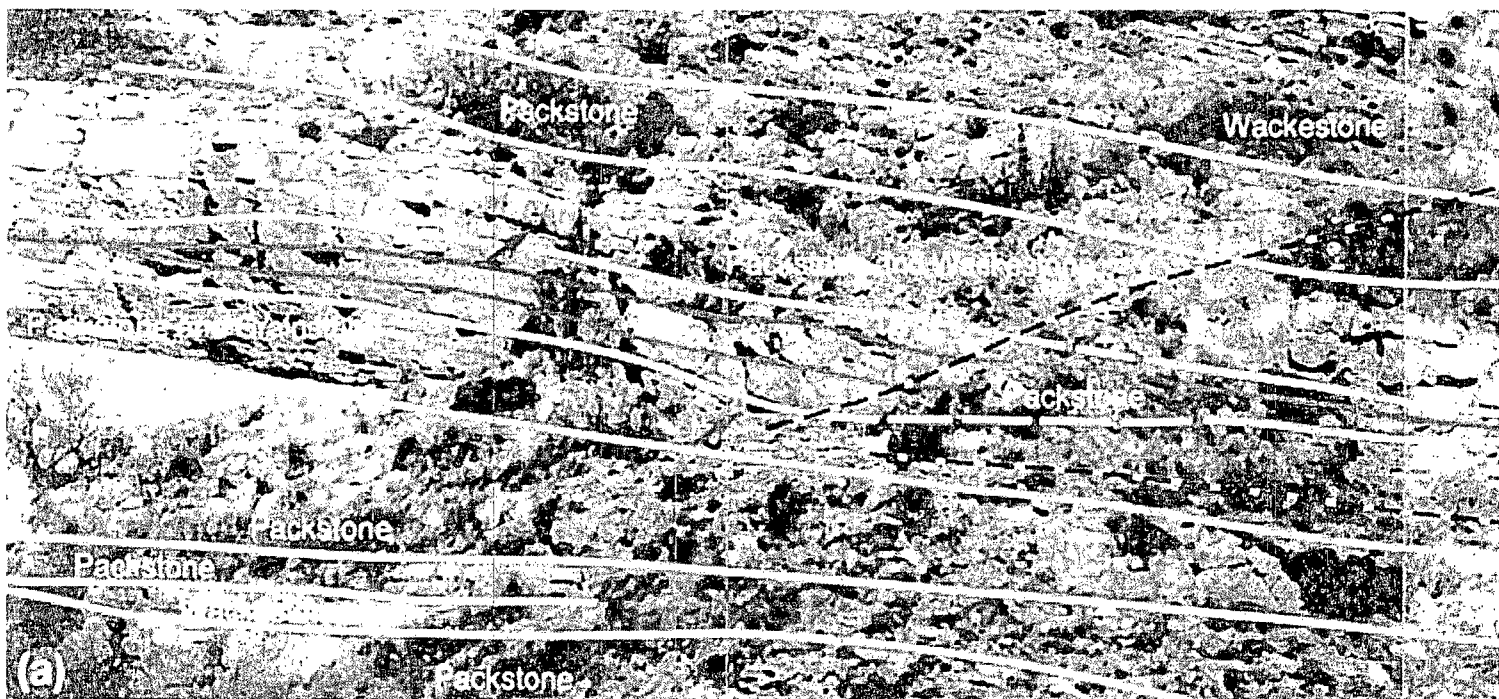
*Case 14178
Mesquite SWD, Inc.
OCD Exhibit 5-A*



Standard stratigraphic nomenclature of the Permian strata exposed in the Guadalupe Mountains. Modified from many sources including King (1948), Hayes (1964), Tyrrell (1969) and Pray (1988a).

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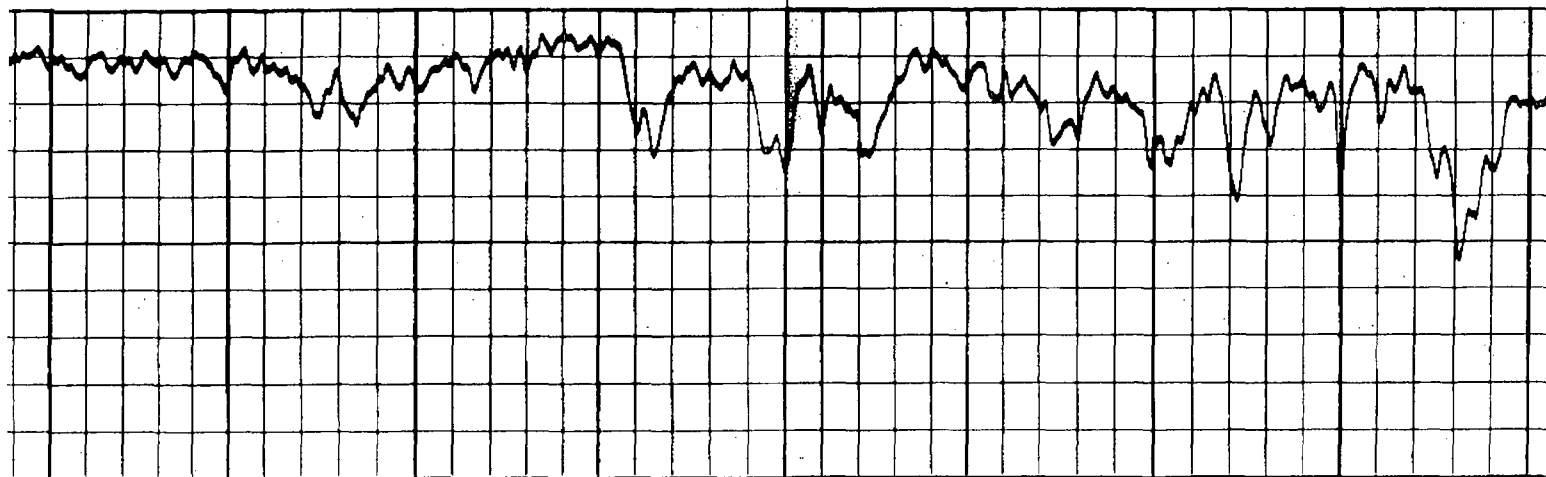
*Case 14178
Mesquite SWD, Inc.
OCD Exhibit 5-B*



Case 14178
 Mesquite SWD, Inc.
 OCD Exhibit 5-C

[illegible]

*Case 14178
Mesquite SWD, Inc.
OCD Exhibit 5-D*



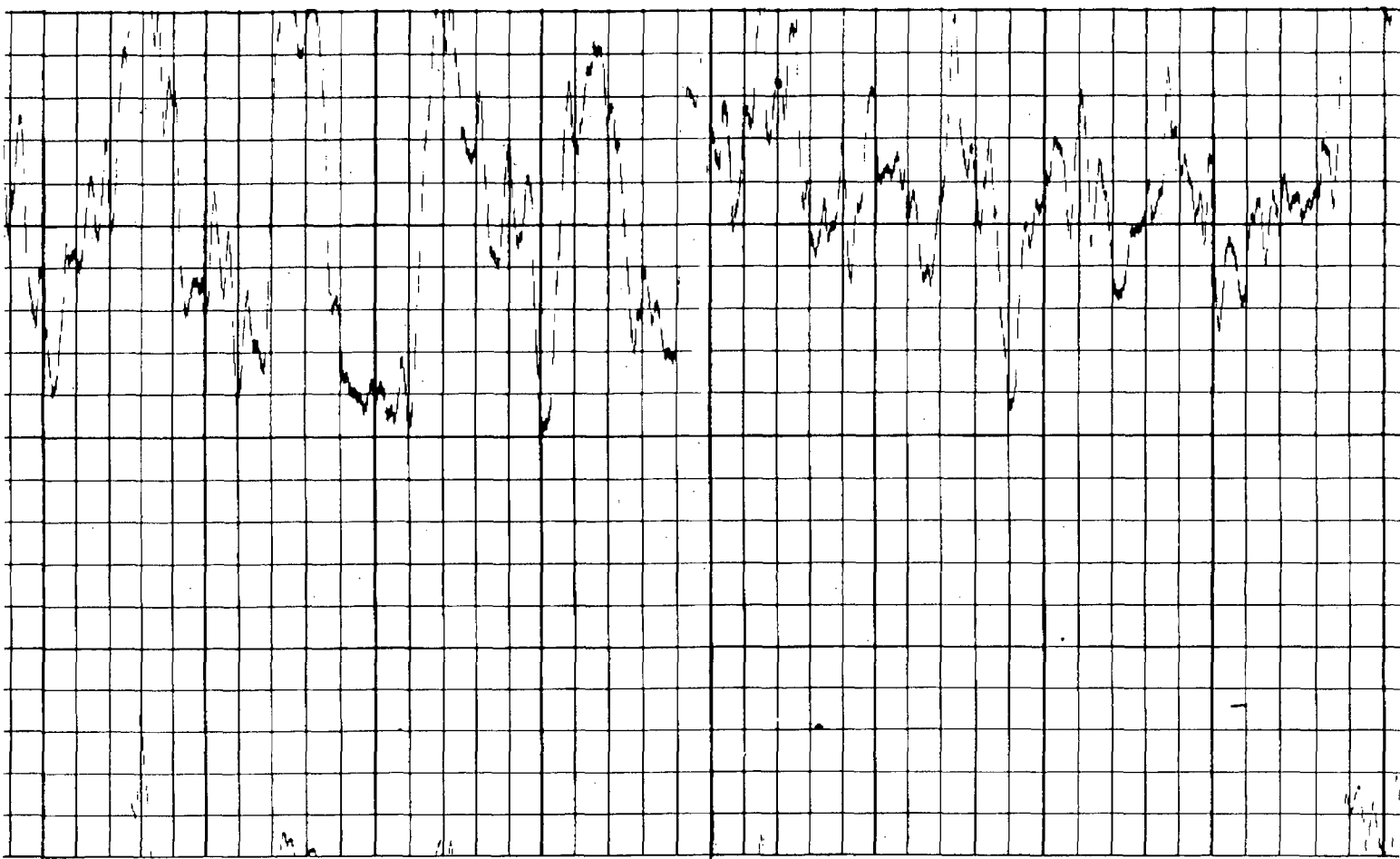
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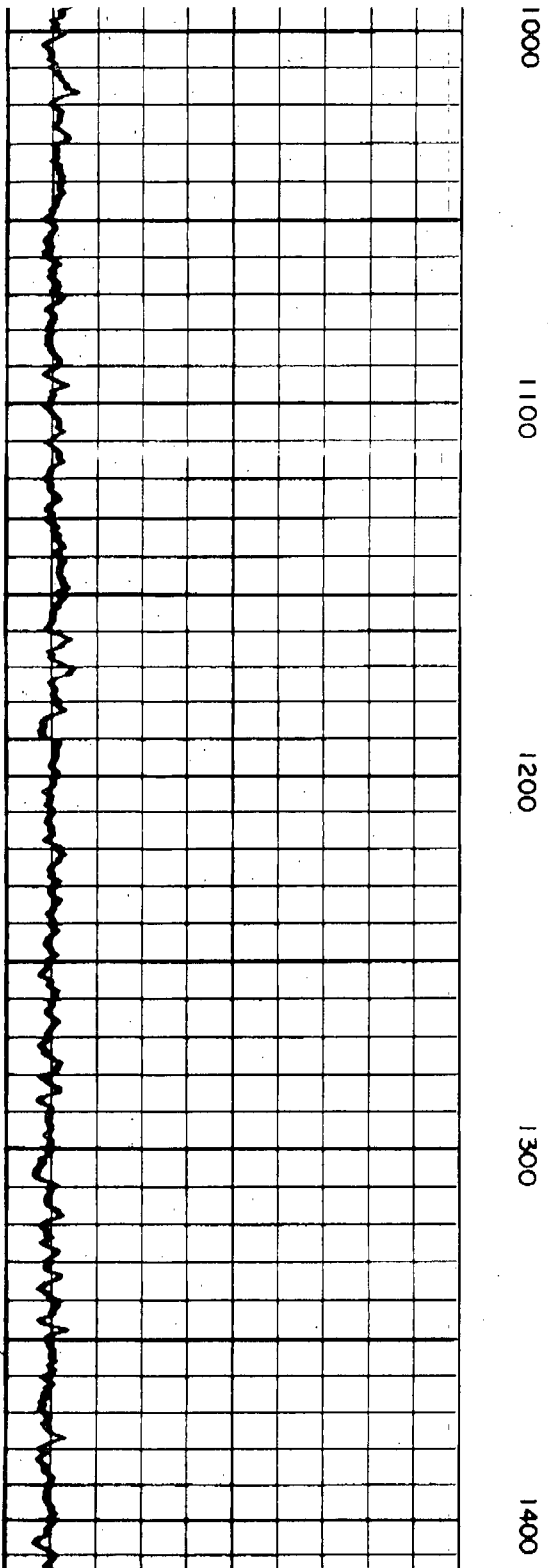
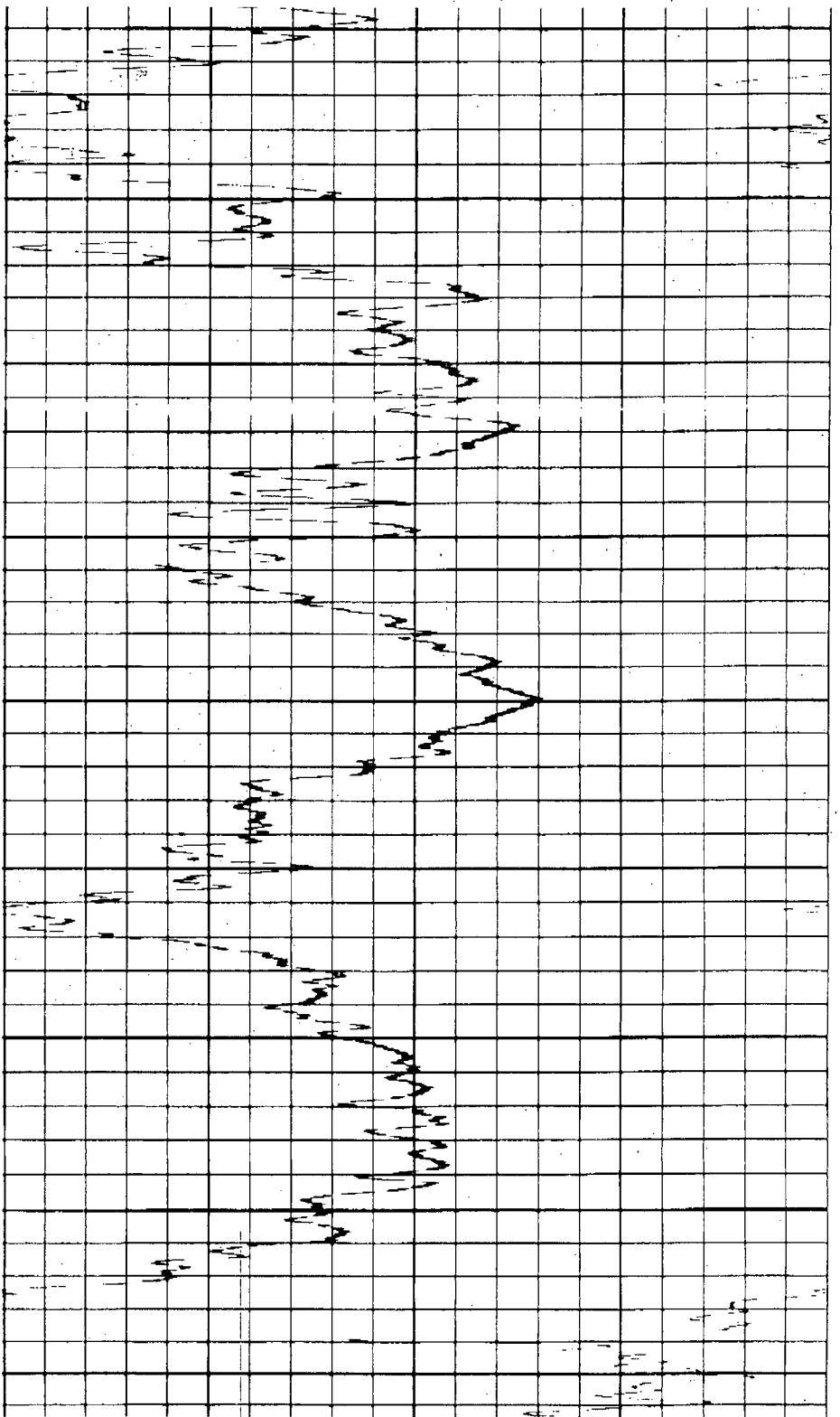
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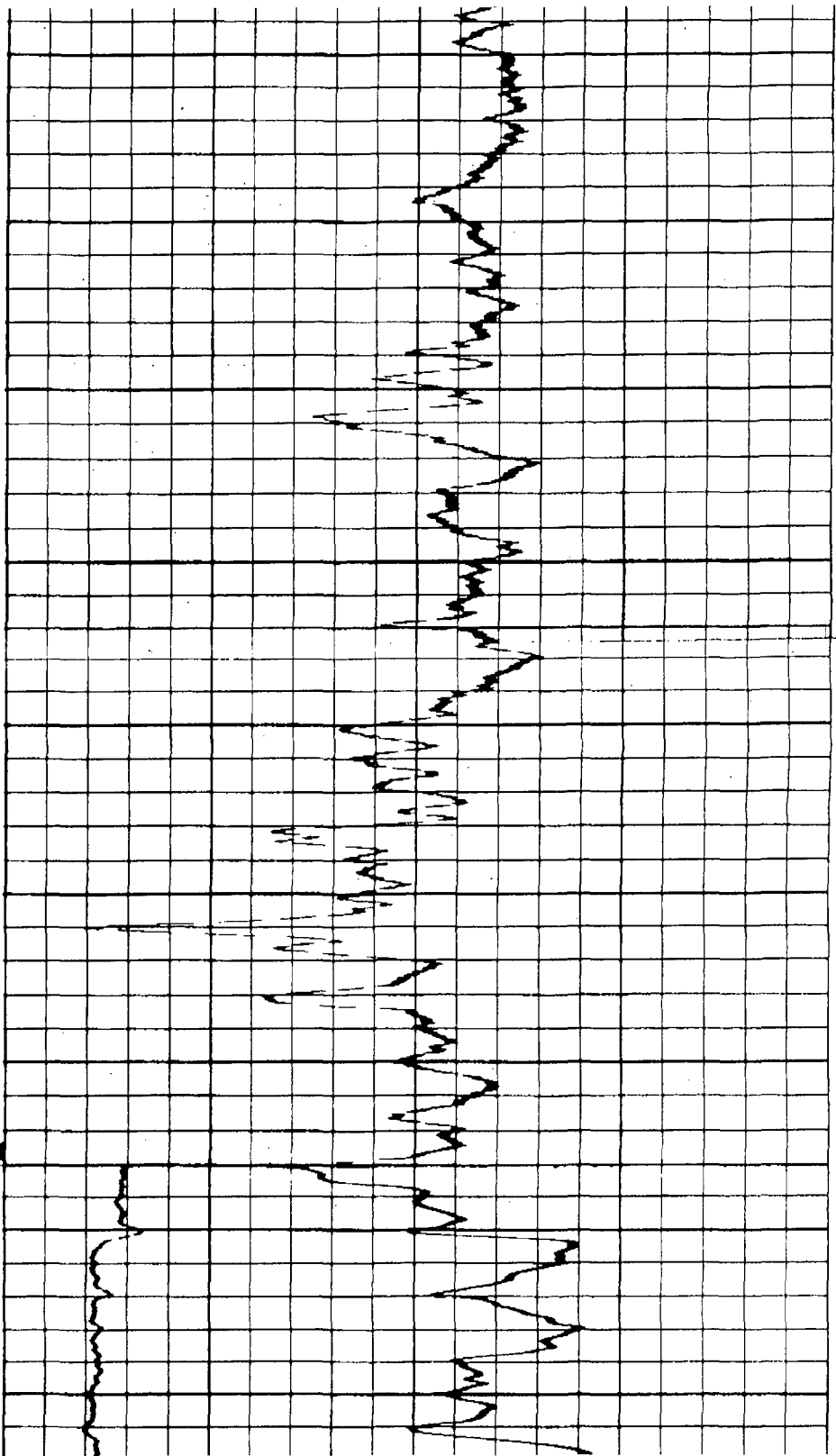
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0700

0600







2500

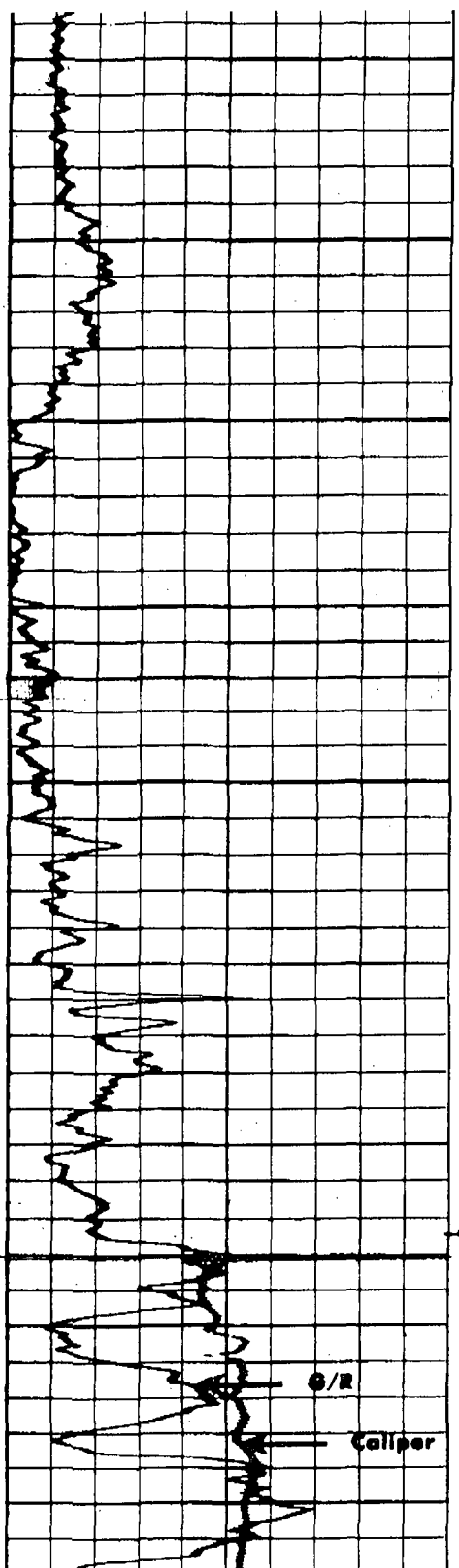
2600

2700

2800

2900

LAR
24



G/R

Caliper

Mewbourne Oil Company
Esperanza '14' State Com. #1
Unit M, Sec. 14, T21S-R27E
685' FSL & 660'FWL; (G.L.-3242', K.B.-3260')
Eddy Co., N.M.
30-015-32415
GEOLOGICAL TOPS PER/BRYAN G. ARRAnt-OCD

Capitan Limestone	632'
Delaware Sands	3099'
Bone Spring	5397'
1 st Bone Spring Sand	6610'
2 nd Bone Spring Sand	7357'
3 rd Bone Spring Sand	8714'
Wolfcamp	8958'
Strawn	10248'
Atoka	10550'
Morrow Clastics	11310'
Barnett Shale	11732'

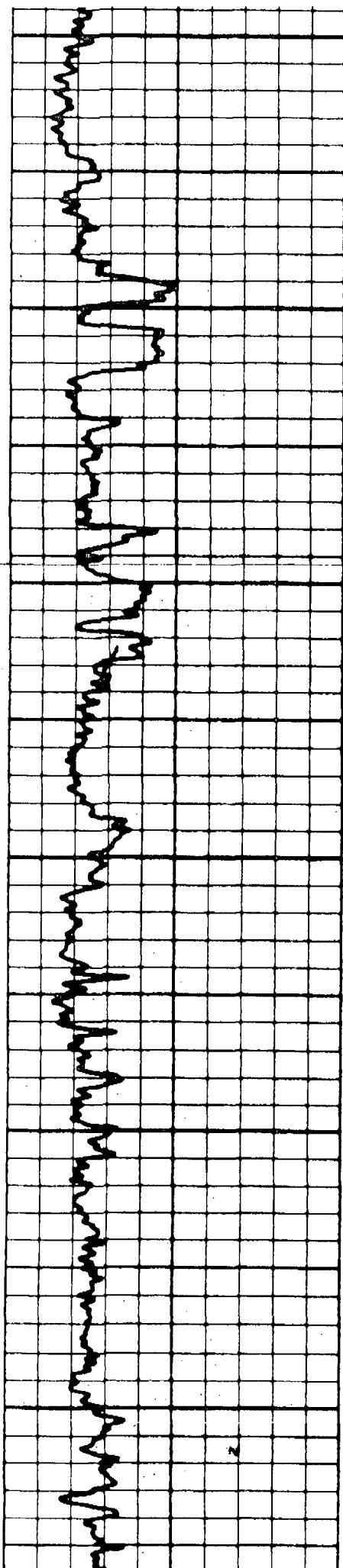
Case 14178
Mesquite SWD, Inc.
OCD Exhibit 5-E

ESTIMATED FORMATION MARKERS

Elevation: 3300' GL; 3318' KB.

<u>GEOLOGICAL HORIZONS:</u>	<u>DEPTH</u>	<u>DATUM</u>
Tansill	488	+ 2830
Yates	618	+ 2700
Seven Rivers Reef	748	+ 2570
Delaware Sand	2925	+ 393
Bone Springs	5247	- 1929
Wolfcamp	8818	- 5500
Strawn	10191	- 6873
Atoka	10518	- 7200
Morrow	10993	- 7675
Top Sand	11168	- 7850
Top Lower Morrow	11443	- 8125
Base Sand	11628	- 8310
Mississippi Lime	12018	- 8700

STATE 22 com well no. 1
30-015-21263



00400

00500

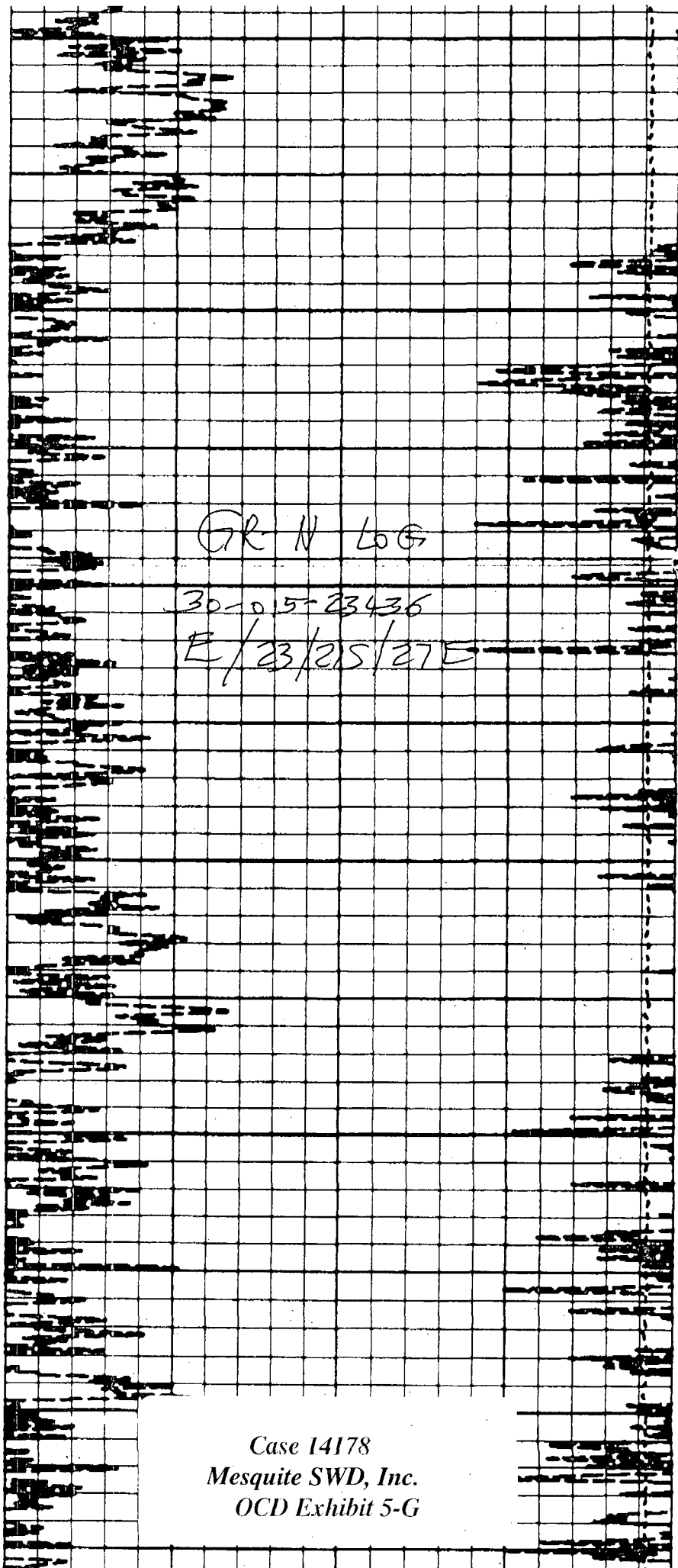
00600

00700

00800

00900

Cup
Reef



GR N LOG

30-015-23436

E/23/215/27E

Case 14178
Mesquite SWD, Inc.
OCD Exhibit 5-G

STATE "CP" No. 1

1980' FEL, 1830' FSL
Sec. 9-21S-27E
Eddy Co., New Mexico

MUD PROGRAM

0' - 610'	Drill with fresh water mud. Mud wt. approximately 8.5 ppg. Viscosity 30-34.
610' - 2970'	Drill with fresh water. If returns are lost and cannot be regained, dry drill to casing depth of 3290'. Mud wt. 8.5-9.0 ppg. Viscosity 28-31.
2970' - 7000'	Drill with fresh water. Add caustic for Ph control. Mud wt. 8.5-9.0 ppg. Viscosity 28-31.
7000' - 8800'	Start raising mud weight to approximately 9.6 ppg with potash brine. Viscosity 28-31.
8800' - 9800'	Drill with potash brine. Mud wt. 9.6 ppg. Viscosity 28-31.
9800' - 11650'	Mud up with Morrow protection fluid. Maintain mud wt. and fluid loss as hole conditions dictate.

(1.5 MILES NW of EXXON STATE #8)

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
911 South First, Artesia, NM 88210

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-101

Revised October 18, 1994

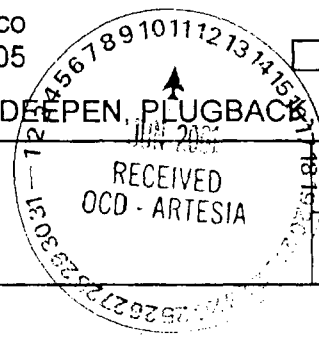
Instructions on back
Submit to Appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

☐ AMENDED REPORT

CISF
B6M
SLD
OP

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address Mewbourne Oil Company P.O. Box 5270 Hobbs, NM 88241 (505)393-5905		OGRID Number 14744
Property Code 28193	Property Name Esperanza "15" State Com.	API Number 30-015-31877
		Well No. # 1



NSL- 4606

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West Line	County
J	15	21S	27E		2232	South	1980	East	Eddy

Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West Line	County
Proposed Pool 1 Burton Flat Morrow					Proposed Pool 2				

Work Type Code N	Well Type Code G	Cable/Rotary R	Lease Type Code S	Ground Level Elevation 3284
Multiple No	Proposed Depth 11800	Formation Morrow	Contractor Unknown	Spud Date

Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17-1/2"	13-3/8"	48#	400	400	Circ. to Surface
12-1/4"	8-5/8"	32#	2600	1200	Circ. to Surface
7-7/8"	5-1/2"	17#	11800	1200	Tie back Intermediate

Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

BOP Program : 2K Hydril (See Exhibit #2) from surface casing to intermediate TD. Schaffer LWS or equivalent (Double-Ram Hydraulic) 900 series with Hydril 900 series (See Exhibit #2A) from intermediate casing to total depth. Rotating Head, PVT, Flow Monitors, and mud gas Separator from the Wolfcamp to TD.

Mud Program: 0 to 400' Fresh Water, spud mud, lime for PH, and LCM as needed for seepage. 400 to 2600' 10# Brine, Caustic for PH, and LCM as needed for seepage. 2600 to TD 9.3 to 10# Brine, Caustic for PH, Starch for WL Control, and LCM as needed for seepage.

Fresh Water

I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature: Terry Burke

Printed name: Terry Burke

Title: Drilling Foreman

OIL CONSERVATION DIVISION
Approved By: ORIGINAL SIGNED BY TERRY W. GUM
DISTRICT II SUPERVISOR

Approval Date: JUL 19 2001

Expiration Date: JUL 19 2002

NOTIFY OCD SPUD & TIME TO WITNESS
CEMENTING OF WATER PROTECTION
STRING

Case 14178
Mesquite SWD, Inc.
OCD Exhibit 5-J