

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

5a. Indicate Type of Lease	
State ☒	Fee ☐
5. State Oil & Gas Lease No.	

1a. TYPE OF WELL

OIL WELL ☐ GAS WELL ☐ DRY ☒ OTHER ☐

b. TYPE OF COMPLETION

NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER ☐

2. Name of Operator

Mosbacher Production Co.

3. Address of Operator

1300 Main St., Ste. 2100, Houston, Tx 77002

4. Location of Well

UNIT LETTER N LOCATED 2310 FEET FROM THE West LINE AND 660 FEET FROMTHE South LINE OF SEC. 16 TWP. 4S RGE. 35E NMPM Roosevelt 12. County15. Date Spudded 12/16/83 16. Date T.D. Reached 1/17/84 17. Date Compl. (Ready to Prod.) 2/29/84 P&A 18. Elevations (DF, RKB, RT, GR, etc.) GL 4278.2'; KB 4290.2' 19. Elev. Casinghead ----20. Total Depth 8555' 21. Plug Back T.D. Surface 22. If Multiple Compl., How Many No 23. Intervals Drilled By Rotary Tools 0-8555' Cable Tools ----

24. Producing Interval(s), of this completion - Top, Bottom, Name

25. Was Directional Survey Made
No

26. Type Electric and Other Logs Run

CNL/LDT; DLL

27. Was Well Cored
No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8"	54.5	437'	17-1/2"	450 sxs Premium	0
8-5/8"	32	3199'	11"	900 sxs C1 C	0
4-1/2"	10.5	4322'	7-7/8"	450 sxs Lite + 100 sxs C1 C	3240'

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET

31. Perforation Record (Interval, size and number)

4274'-77' & 4282'-89' 4 SPF

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
4272'-4289'	2500 gal HCL, cmt plug set @ 4290'-4190'

33. PRODUCTION

Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)				Well Status (Prod. or Shut-in)	
Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)	

34. Disposition of Gas (Sold, used for fuel, vented, etc.)

Test Witnessed By

35. List of Attachments

DST & Logs

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED

TITLE Engineering Asst.DATE 3/27/84

RECEIVED
MAR 29 1984
C.C.D.
HQBBS OFFICE

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

Northwestern New Mexico

T. Anhy	T. Canyon	Missing	T. Ojo Alamo	T. Penn. "B"
T. Salt	T. Strawn	"	T. Kirtland-Fruitland	T. Penn. "C"
B. Salt	T. Atoka	"	T. Pictured Cliffs	T. Penn. "D"
T. Yates	T. Miss	"	T. Cliff House	T. Leadville
T. 7 Rivers	T. Devonian	"	T. Menefee	T. Madison
T. Queen	T. Silurian	"	T. Point Lookout	T. Elbert
T. Grayburg	T. Montoya	"	T. Mancos	T. McCracken
T. San Andres	T. Simpson	"	T. Gallup	T. Ignacio Qtzite
T. Glorieta	T. McKee	"	Base Greenhorn	T. Granite
T. Paddock	T. Ellenburger	"	T. Dakota	T. _____
T. Blinberry	T. Gr. Wash	7700	T. Morrison	T. _____
T. Tubb	T. Granite	7830	T. Todilto	T. _____
T. Drinkard	T. Delaware Sand		T. Entrada	T. _____
T. Abo	T. Bone Springs		T. Wingate	T. _____
T. Wolfcamp	T. _____		T. Chinle	T. _____
T. Penn.	T. _____		T. Pennian	T. _____
T. Cisco (Bough C)	T. _____		T. Penn. "A"	T. _____

OIL OR GAS SANDS OR ZONES

No. 1, from to No. 4, from to
No. 2, from to No. 5, from to
No. 3, from to No. 6, from to

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
No. 2, from.....to.....feet.....
.....from.....to.....feet.....
No. 4, from.....to.....feet.....

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
3200	4460		(San Andres) - Dol., LS, Anhy.				
4460	5815		(Glorieta)-LS., Anhy., Salt., Dol.				
5815	6560		(Drinkard)-LS., Shale				
6560	7190		(Abo)- Shale, LS., Anhy.				
7190	7700		(Wolfcamp) - LS				
7700	7830		Granite wash				
7830	8555		Granite				

RECEIVED
MAR 29 1984
O.C.D.
HOBBS OFFICE

INCLINATION REPORT

LEASE NAME New Mexico State
COUNTY, STATE Roosevelt County, N.M.
OPERATOR Mosbacher Production Co.
ADDRESS 1300 Main St., Ste. 2100, Houston, Tx 77002

Measured Depth (feet)	Course of Length (Hundreds of feet)	Angle of Inclination (Degree)	Displacement per Hundred feet (Sine of Angle x 100)	Course Displacement (feet)	Accumulative Displacement (feet)
140	1.40	1/2	.873	1.22	1.22
437	2.97	1/4	.436	1.30	2.52
1079	6.42	1/2	.873	5.61	8.13
1574	4.95	1-1/2	2.618	12.96	21.09
2059	4.85	3/4	1.309	6.35	27.44
2382	3.23	3/4	1.309	4.23	31.67
3200	8.18	1	1.745	14.27	45.94
3739	5.39	3/4	1.309	7.06	53.00
4171	4.32	1	1.745	7.54	60.54
4729	5.58	1/4	.436	2.43	62.97
5224	4.95	1/4	.436	2.16	65.13
5718	4.94	1/2	.873	4.31	69.44
5811	.93	3/4	1.309	1.22	70.66
6713	9.02	3/4	1.309	11.81	82.47
7151	4.38	1	1.745	7.64	90.11
7623	4.72	1	1.745	8.24	98.35
7832	2.09	1	1.745	3.65	102.00
8057	2.25	1	1.745	3.93	105.93
8340	2.83	3	5.234	14.81	120.74
8483	1.43	2	3.490	4.99	125.73
8555	.72	1-3/4	3.054	2.20	127.93

EXECUTED THIS 27th DAY OF March 19 84.

Mosbacher Production Co.

(Company or Operator)

STATE OF Texas ()
COUNTY OF Harris ()

Beverly Dausin Engineering Asst.
(Signature) (Title)

Before me the undersigned authority on this day personally appeared Beverly Dausin
known to me to be the person whose name is subscribed to the above instrument, who being by me
duly sworn on oath states that he is authorized to make this report and has knowledge of the
facts stated herein and that said report is true and correct.

Subscribed and sworn to before me this the 27th day of March 19 84.

MARY BETH CHAL
Notary Public, State of Texas
My Commission expires Nov 22 1985 Notary Public in and for Harris Co., Texas

RECEIVED

MAR 29 1984

HOSEA OFFICE

ROGER L. HOEGER

Consulting Petroleum Geologist

6851 South Holly Circle

Suite 290

Englewood, Colorado 80112

(303) 694 1180

Comments relative to the analysis of the pressure chart from DST #2, Interval: 4256-4325', which was run in the Mossbacher Production Company, New Mexico State #1, Section 16, T4S-R35E, Roosevelt County, New Mexico:

This analysis is based on the total fluid recovery, the Horner method of pressure build-up curve extrapolation and the Horner equations applicable to liquid recovery tests.

1. Extrapolation of the Initial and Final Shut-in pressure build-up curves indicates a maximum reservoir pressure of 1426 psi at the recorder depth of 4316 feet. The indicated maximum reservoir pressure at the recorder depth is equivalent to a subsurface pressure gradient of 0.330 psi/ft. This pressure gradient, in turn, is anomalously low compared to a "normal" hydrostatic pressure gradient which ranges from about 0.43 to 0.47 psi/ft., depending upon formation water salinity. It therefore is indicated that the tested reservoir has a "sub-normal" reservoir pressure environment.
2. The calculated Average Production Rate which was used in this analysis, 17.8 BPD, is based upon the total fluid recovery of 1.54 barrels and the total flowing time of 125 minutes. It should be noted, in view of the small volume and nature of the recovered fluid (100% drilling fluid), that the reliability of the production rate is subject to question. Also, because the production rate is a key factor used in the basic Horner equation to calculate numerical values for the various reservoir properties shown below and on the summary page, these numerical results should be considered as indicators rather than quantitative values.
3. The calculated Damage Ratio of 0.59 indicates that no significant well-bore damage was present at the time of this test. The well-bore damage referred to is "skin-effect" type damage. It should be noted, however, because of the fact that insufficient sampling of formation fluid occurred during the test, that the tested zone may have been affected by "deep invasion" or "deep damage". It is conceivable, therefore, that because of the limited radius of investigation of this test, the quality of the "deeply damaged" zone only was evaluated by the test and the calculated values for the various reservoir parameters do not reflect the true undamaged characteristics of the reservoir.
4. The calculated Effective Transmissibility of 7.8 md.-ft./cp. indicates an Average Permeability of 0.98 md./cp. for the reported 8 feet of effective porosity within the total 69 feet of interval tested.

Mossbacher Production Company, New Mexico State #1
DST #2, Interval: 4256-4325'
Comments - Page 2

5. The evaluation criteria used in the Drill-Stem-Test Analysis System indicate that the tools and recorder functioned properly; however, as noted above, because of the questionable reliability of the calculated production rate, the numerical results obtained in this analysis should be considered as indicators only. Also, as noted above, because of the possible presence of "deep damage", plus the apparent relatively small radius of investigation, this test may have succeeded in evaluating only the zone of "deep damage". Additional testing or other well data will therefore be required to evaluate the productive capability and the quality of the transmissibility of the undamaged formation within the test interval.

Drill-Stem-Test Pressure Analysis Report (Liquid Recovery)

LOCATION: T4S-R35E, Section 16	TIME OPEN: Initial: 35 mins. Final: 90 mins.	FILE NUMBER: ---
COUNTY AND STATE: NEW MEXICO, ROOSEVELT	INITIAL SHUT-IN TIME: 78 minutes	I. D. NUMBER: Permian-5351
COMPANY: Mossbacher Production Co.	FINAL SHUT-IN TIME: 24 minutes	DATE COMPUTED: 1/26/84
LEASE AND WELL NUMBER: New Mexico State #1	TEST NUMBER: 2	DATE TESTED: 1/25/84
FORMATION TESTED: San Andres	INTERVAL TESTED: 4256-4325	ELEVATION: KB 4290

RECOVERY

315 ft. of drilling fluid.

HOLE, TOOL AND RECOVERY DATA

DRILL PIPE CAPACITY (Barrels per foot)	0.0142	FEET OF MUD	315.	MUD PERCENTAGE %	100.
DRILL COLLAR CAPACITY (Barrels per foot)	0.0049	FEET OF WATER		WATER PERCENTAGE %	
DRILL COLLAR FOOTAGE (Feet)	517.	FEET OF OTHER		OTHER PERCENTAGE %	
HOLE DIAMETER (Inches)	7.875	FEET OF OIL		OIL PERCENTAGE %	
PIST FOOTAGE EQUIVALENT TO ANNULUS (Feet)	---	FEET OF CUSHION		FORMATION RECOVERY PERCENTAGE %	
INTERVAL THICKNESS (Feet)	69.	TOTAL RECOVERY (Feet)	315.	AVERAGE PRODUCTION RATE (Barrels per day)	17.8
MUD WEIGHT (Pounds per gallon)	9.7	CAPACITY OF ANNULUS (Barrels)	4.2	BHT = 102 °F.	
EFFECTIVE FLOWING TIME (Minutes)	125.	GROSS RECOVERY VOLUME (Barrels)	1.54	RECOVERY LESS THAN ANNULAR VOLUME. (X)	X

GAUGE SUMMARY

RECORDER NUMBER	DEPTH:	DATUM:
4334	4316'	-26'

KEY POINT SUMMARY

First Flow	
INITIAL FLOWING PRESSURE: psig	
80.	
FINAL FLOWING PRESSURE: psig	
105.	
Second Flow	
INITIAL FLOWING PRESSURE: psig	
135.	
FINAL FLOWING PRESSURE: psig	
224.	
INITIAL SHUT-IN PRESSURE: psig	
1348.	
FINAL SHUT-IN PRESSURE: psig	
1358.	
INITIAL HYDROSTATIC MUD PRESSURE: psig	
2188.	
FINAL HYDROSTATIC MUD PRESSURE: psig	
2188.	

EXTRAPOLATION SUMMARY

INITIAL (1+0)/9 CALCULATED FROM MEASURED DATA:	1.45
NUMBER OF POINTS USED FOR INITIAL CURVE-FIT:	6.
SLOPE OF INITIAL BUILD-UP CURVE: psi/cycle	486.
INITIAL EXTRAPOLATED PRESSURE: psig	1426.
FINAL (1+0)/9 CALCULATED FROM MEASURED DATA:	1.50
NUMBER OF POINTS USED FOR FINAL CURVE-FIT:	7.
SLOPE OF FINAL BUILD-UP CURVE: psi/cycle	370.
FINAL EXTRAPOLATED PRESSURE: psig	1426.

SUMMARY OF RESULTS

EFFECTIVE TRANSMISSIBILITY, khD: md ft per cp	7.8
INDICATED AVERAGE PERMEABILITY, k _{av} : md/cp	0.08 (for 8' effect. a)
PRODUCTIVITY INDEX: Barrels per day per psi	0.015
DAMAGE RATIO:	0.59
FLOWING PRESSURE COMPARISON: %	---
INITIAL POTENTIOMETRIC SURFACE: feet	3297.
INITIAL MUD PRESSURE COMPARISON: %	99.5
FINAL MUD PRESSURE COMPARISON: %	99.5

MOSSBACHER PRODUCTION COMPANY
 NEW MEXICO STATE #1
 DST # 2
 INTERVAL 4256-4325'
 GAUGE NUMBER 4334
 GAUGE DEPTH 4316 FT.

INITIAL SHUT-IN
 TOTAL FLOWING TIME 35 MIN.

TIME MIN	LOG $\frac{I + A}{A}$	PRESSURE PSI
0		105
6	0.835	1038
12	0.693	1146
18	0.469	1200
24	0.391	1238
30	0.336	1263
36	0.295	1283
42	0.263	1296
48	0.238	1308
54	0.217	1317
60	0.200	1325
66	0.185	1333
72	0.172	1342
78	0.161	1348

FINAL SHUT-IN
 TOTAL FLOWING TIME 125 MIN.

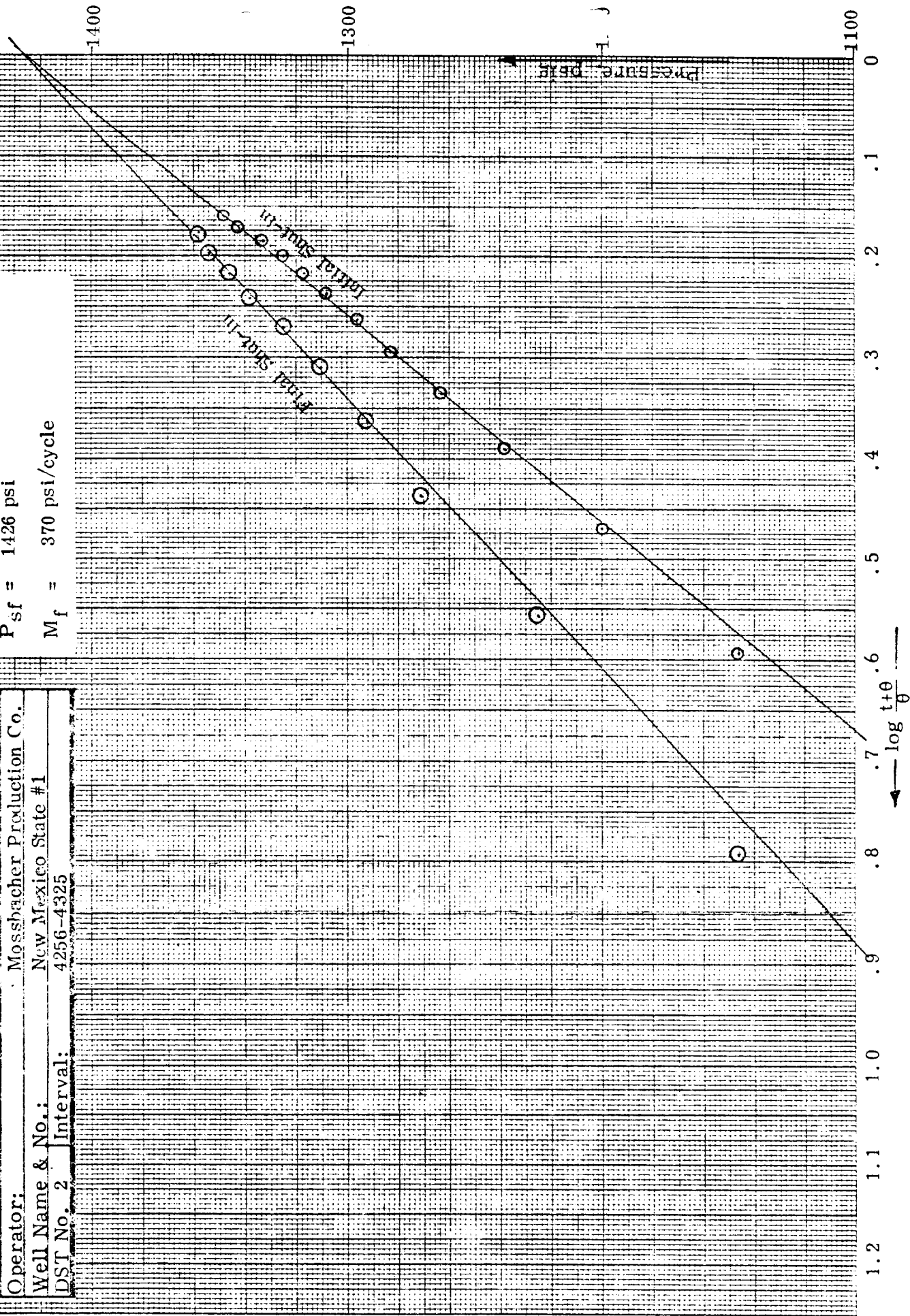
TIME MIN	LOG $\frac{I + A}{A}$	PRESSURE PSI
0		224
6	1.339	941
12	1.058	1050
24	0.793	1146
48	0.557	1225
72	0.437	1271
96	0.362	1292
120	0.310	1310
144	0.271	1325
168	0.242	1338
192	0.218	1346
216	0.198	1354
240	0.182	1358
248	0.177	1358

Liquid Recovery

Recorder No. 4334 at 4316 feet.

State:	New Mexico	Spot	Sec.	Tp.	Rg.
County:	Roosevelt	--	16	45	35E
Operator:	Mossbacher Production Co.				
Well Name & No.:	New Mexico State #1				
DST No. 2	Interval:	4256-4325			

$P_{si} = 1426$ psi
 $P_{sf} = 1426$ psi
 $M_f = 370$ psi/cycle





PERMIAN TESTERS, INC.

P. O. BOX 6441 • PHONE 366-0811

ODESSA, TEXAS

79762

TEST TICKET NO. 5351

PRESSURE BREAKDOWN

Date January 25, 1984

Company Mosbacher Production Company County Roosevelt
Well Name & No. N. M. State # 1 State New Mexico
ST No. 2 Tool Open 35 Min. For Pre Flow Tool Closed 78 Min. For ISIP
Interval 4256 To 4325 Tool Open 90 Min. For Final Flow Tool Closed 248 Min. For FSIP

INITIAL SHUT-IN				FINAL SHUT-IN			
Time Deflection	Min.	Deflection	Pressure	Time Deflection	Min.	Deflection	Pressure
	0		105		0		224
	2		806		2		654
	4		958		4		852
	6		1038		6		941
	8		1083		8		987
	10		1113		10		1021
	12		1146		12		1050
	18		1200		24		1146
	24		1238		48		1225
	30		1263		72		1271
	36		1283		96		1292
	42		1296		120		1310
	48		1308		144		1325
	54		1317		168		1338
	60		1325		192		1346
	66		1333		216		1354
	72		1342		240		1358
	78		1348		248		1358

PH. 366-0811

PERMIAN TESTERS, INC.
ODESSA, TEXAS 79762

P. O. BOX 6441

BOTTOM HOLE SAMPLER REPORT

Date January 25, 1984 Ticket No. 5351
Company Mosbacher Production Company
Well Name & No. N. M. State # 1 DST No. 2
County Roosevelt State New Mexico
Sampler No. _____ Test Interval 4256 To 4325
Pressure in Sampler 0 PSI BHT 102 °F

Total Volume of Sampler: 1500 cc.
Oil: _____ cc.
Water: _____ cc.
Mud: 1500 cc.
Gas: _____ cu. ft.
Other: _____

Resistivity

Drilling Fluid in Pits 0.09 @ 60 °F Chloride Content 99,000 ppm.
Fluid from Sampler 0.09 @ 60 °F Chloride Content 95,000 ppm.
Gas/Oil Ratio _____ Gravity _____ -API @ _____ °F
Where was sample drained _____ Rig _____

Remarks: _____

