

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 1-4-82		JAN 21 1982	
Company MESA PETROLEUM CO. ✓				Connection UNCONNECTED					
Pool <i>Pecos Slope</i> UNDESIGNATED ABO				Formation ABO		Dirt O. C. D. ARTESIA, OFFICE			
Completion Date 1-4-82		Total Depth 4202		Plug Back TD 4027'		Elevation 4092'		Turn. or Lease Name HOBBS FEDERAL	
Csg. Size 4 1/2	Wt. 10.5#	d	Set At 4200'	Perforations: From 3722 To 4077		Well No. 2			
Tpg. Size 2 3/8	Wt. 4.7#	d	Set At 3628'	Perforations: From OPEN ENDED To		Unit Sec. Twp. Rge. C 8 6 25			
Type Well - Single - Protthead - G.G. or G.O. Multiple SINGLE						Packer Set At NONE		County CHAVES	
Producing Thru TUBINE		Reservoir Temp. °F 102 @ 4202		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2		State NEW MEXICO	
L	H	Gg .65	% CO ₂ 1	% N ₂ 1	% H ₂ S	Prover 2" ORIFICE WELL TESTER		Meter Run Taps	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
51							950		925		72 hrs. \$1
1.	2" ORIFICE	1 1/4	10.5			25	835	48	835		1 hr.
2.	WELL	1 1/4	27			30	615	58	660		1 hr.
3.	TESTER	1 1/4	31			30	430	56	540		1 hr.
4.		1 1/4	34			33	303	56	500		1 hr.
5.											

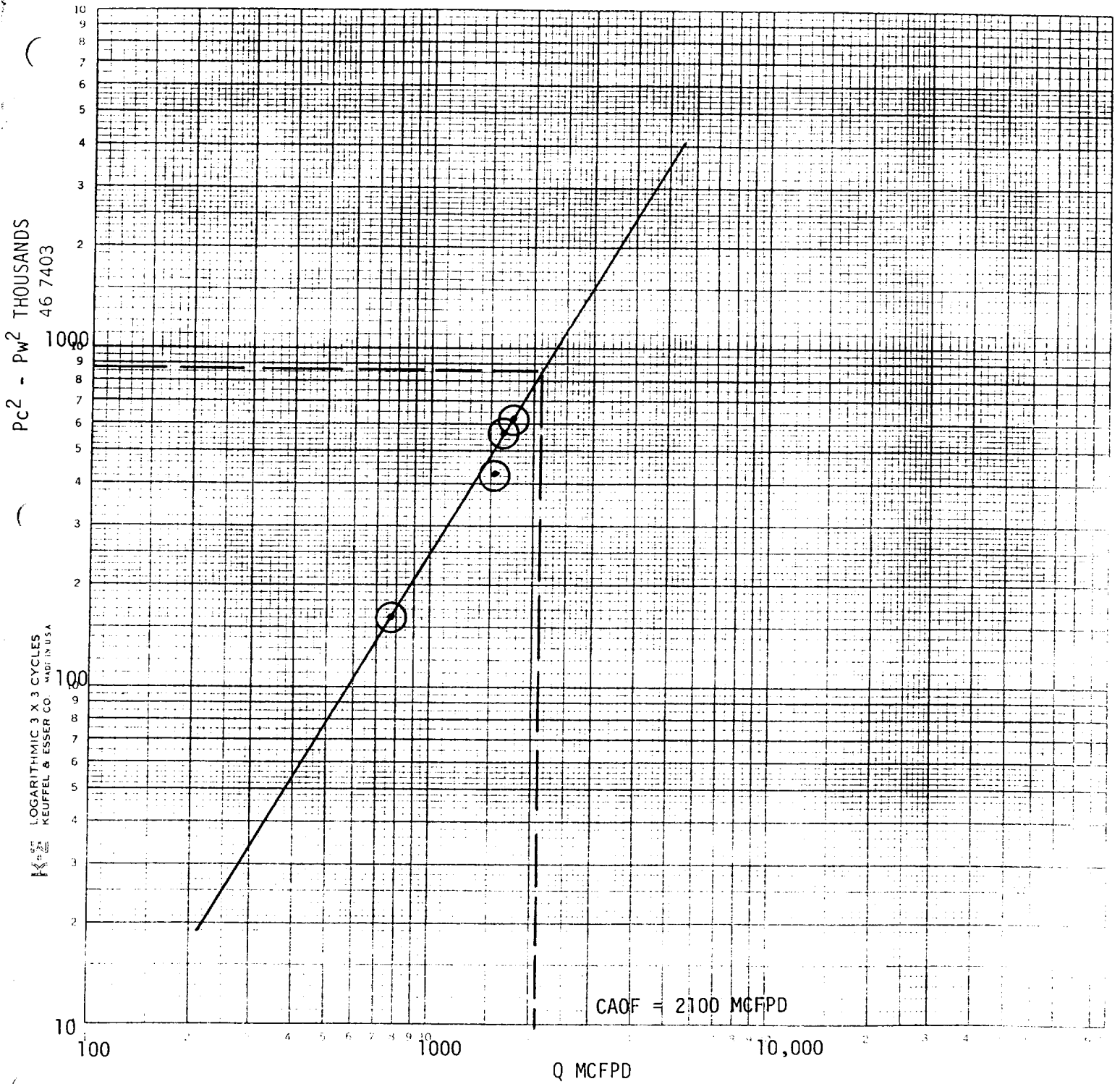
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mgd
1	776	2" ORIFICE WELL		1.0355	.9608		772
2	1527	TESTER		1.0302	.9608		1511
3	1653			1.0302	.9608		1636
4	1759			1.0270	.9608		1736
5							

NO.	P _g	Temp. °R	T _g	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.					Specific Gravity Separator Gas _____ X X X X X X X X
3.					Specific Gravity Flowing Fluid _____ X X X X X
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ R _____ R

P _c 938	P _w 880	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.4263$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2374$
NO	P _c	P _w	P _c ² - P _w ²
1		848	719
2		673	453
3		553	306
4		513	263
5			

Absolute Open Flow 2100		Mold @ 15.025	Angle of Slope @ 59°	Slope, n 60
Remarks:				
Approved By Commission:		Conducted By: JAMES CRAIG	Calculated By: E.L. BUTTROSS, JR.	Checked By:

MESA PETROLEUM CO.
HOBBS FEDERAL #2
JANUARY 4, 1982



$$N = 1/\text{SLOPE} = \frac{\text{LOG } Q_2 - \text{LOG } Q_1}{\text{CYCLE}} = \frac{\text{LOG } 2300 - \text{LOG } 580}{\text{CYCLE}} = 3.36 - 2.76 = .60$$

$$\theta = 59^\circ$$

**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

SUBMIT IN DUPLICATE

(See cover instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.**WELL COMPLETION OR RECOMPLETION REPORT AND LOG ***

5. LEASE DESIGNATION AND SERIAL NO.

NM-36410

RECEIVED

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME **JAN 21 1982**8. FARM OR LEASE NAME **O. C. D.**9. WELL NO. **HOBBS FEDERAL ARTESIA OFFICE**

10. FIELD AND POOL OR WILDCAT

UNDESIGNATED ABO

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec 8, T6S, R25E

12. COUNTY OR PARISH
CHAVES13. STATE
NEW MEXICO1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐

b. TYPE OF COMPLETION:

NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐

2. NAME OF OPERATOR

MESA PETROLEUM CO.

3. ADDRESS OF OPERATOR

1000 Vaughn Building Midland, Texas 79701-4493

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface

660' FNL / 1980' FWL

At top prod. interval reported below

SAME

At total depth

SAME

14. PERMIT NO.

DATE ISSUED

11-24-81

15. DATE SPUDDED

12-8-81

16. DATE T.D. REACHED

12-13-81

17. DATE COMPL. (Ready to prod.)

1-4-82

18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*

4092' GR

19. ELEV. CASINGHEAD

4092'

20. TOTAL DEPTH, MD & TVD

4202'

21. PLUG, BACK T.D., MD & TVD

4027'

22. IF MULTIPLE COMPL., HOW MANY*

23. INTERVALS DRILLED BY

ROTARY TOOLS

CABLE TOOLS

ALL

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

3722' --- 4077', ABO

25. WAS DIRECTIONAL SURVEY MADE

NO

26. TYPE ELECTRIC AND OTHER LOGS RUN

GR-CLL / GR-CNL-FDC

27. WAS WELL CORED

NO

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8	48#	878'	17 1/2"	300 HLW/300 Thixset/300 "C"	
8 5/8	24#	1783'	12 1/4"	700HLW/300 Thixset/300"C"	
4 1/2	10.5#	4200'	7 7/8"	500 "C"	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	BACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2 3/8	3628'	

31. PERFORATION RECORD (Interval, size and number)

3722', 23', 24', 25', 26', 27', 28', 4068',
4069', 72', 73', 76', 77'; Total of 26 holes
3 1/8" csg gun 2 JSPF

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
4068'--- 4077'	K/2000 gal 7 1/2% HCL + 36 BS
3722'--- 3728'	A/2500 gal 7 1/2% HCL + 42 BS
3722'--- 4077'	F/60,000 gal X-Link Gel KCL/CO2 + 114,000 # 20/40 SD+24,000 # 10/20SI

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut in)
	FLOWING	SHUT IN

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
1-4-82	4				236		

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
615	660			1414		

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

VENTED

TEST WITNESSED BY

E.L. BUTTROSS, JR

35. LIST OF ATTACHMENTS

C122, RECORD OF INCLINATION

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

R S MU.S. GEOLOGICAL SURVEY
ROSWELL, N.M.

REGULATOR

DATE

1-6-82

*(See Instructions and Spaces for Additional Data on Reverse Side)

XC: USGS (6), TLS, CEN RCDS, ACCTG, MEC, ROSWELL, NM, D&M, ECTY, LMC, EEB, TW, K, PARTNERS, REM, FILE

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. **Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES				38. GEOLOGIC MARKERS	
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH TRUE VERT. DEPTH
	NOT LOGGED			SAN ANDRES GLORIETA TUBB ABO	584' 1478' 3030' 3671'

MESA PETROLEUM CO.
HOBBS FEDERAL NO.2
660' FNL & 1980' FWL, Sec 8, T6S, R25E
CHAVES COUNTY, NEW MEXICO

RECORD OF INCLINATION

<u>(Depth)</u>	<u>(Deviation)</u>
476'	1/2°
878'	3°
1355'	1 3/4°
1783'	1°
2792'	1°
2995'	1°
3286'	1°
3781'	1°
4200'	1°

R. E. Mathis

BY: R.E. MATHIS, REGULATORY COORDINATOR

Subscribed and sworn to before me this 8th. day of January, 1982.

Louella G. Porter

Notary Public in and for Midland, County, Texas.



Commission Expires: 10-31-84

COUNTY **CHAVES** FIELD **Pecos Slope** STATE **NM**
 OPR **MESA PETROLEUM CO.** API **30-005-61243**
 NO **2** HAST **Hobbs Federal** MAP
Sec 8, T6S, R25E CO-ORD
660 FNL, 1980 FWL of Sec **2-1-6 NM**
23 mi NW/Boaz SPD **12-8-81** CMP **1-4-82**

CSG.
 13 3/8-878-900 SX
 8 5/8-1783-1300 SX
 4 1/2-4200-500 SX
 2 3/8-3628

WELL CLASS: INIT D FIN DG LSE. CODE			
FORMATION	DATUM	FORMATION	DATUM
TD 4202 (WFMP)		PBD 4087	

IP (Abo) Perfs 3722-4077 CAOF 2100 MCFGPD. GOR Dry; gty (Gas)
 .65; SIWHP 950; SIBHP 938

CONTR Desert #1 OPRSTH 4092 GL sub-s 8

F.R. 11-23-81
 PD 4100 RT (Abo)
 2-6-82 AMEND FIELD: Formerly reported as Undesignated
 12-9-81 Drlg 820
 12-16-81 TD 4202; MICU
 12-28-81 TD 4202; PBD 4087; WOPT
 Perf (Abo) @ 3722, 3723, 3724, 3725, 3726,
 3727, 3728, 4068, 4069, 4072, 4073, 4076,
 4077 w/2 SPI
 Acid (3722-4077) 40000 gals
 Frac (3722-4077) 40,000 gals + 20,000
 gals CO2 + 138,000 gals
 1-5-82 TD 4202; PBD 4087; WOPT
 CAOF 2100 MCFGPD (3722-4077)
 2-1-82 TD 4202; PBD 4087; WOPT
 (Abo) FOUR POINT GAUGES.
 Flwd 772 MCFGPD, chg (NM), 6 mos, TP 835
 2-1-82

CHAVES
MESA PETROLEUM CO.

Pecos Slope
2 Hobbs Federal
Sec 8, T6S, R25E

NM
Page #1

2-1-82 Continued
Flwd 1511 MCFGPD, chk (NR), 60 mins, TP 615
Flwd 1636 MCFGPD, chk (NR), 60 mins, TP 430
Flwd 1736 MCFGPD, chk (NR), 60 mins, TP 303
LOG TOPS: San Andres 584, Glorieta 1478,
Tubb 3030, Abo 3671
LOGS RUN: GRL, CCL, CNL, FDC
BHT 102 deg @ 4202
2-6-82 COMPLETION ISSUED

2-1-6 NM
IC 30-005-70486-81

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☒ other _____
2. NAME OF OPERATOR
MESA PETROLEUM CO. ✓
3. ADDRESS OF OPERATOR
1000 VAUGHN BUILDING/MIDLAND, TEXAS 79701
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 660' FNL & 1980' FWL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: same
16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

- | | |
|----------------------|--------------------------|
| TEST WATER SHUT-OFF | ☐ |
| FRACTURE TREAT | ☐ |
| SHOOT OR ACIDIZE | ☐ |
| REPAIR WELL | ☐ |
| PULL OR ALTER CASING | ☐ |
| MULTIPLE COMPLETE | ☐ |
| CHANGE ZONES | ☐ |
| ABANDON* | ☐ |
| (other) | ☐ |
- 8 5/8", TD, 4

SUBSEQUENT REPORT OF:

- | | | | | | | | |
|--|--|--|--|--|--|--|--|
| | | | | | | | |
|--|--|--|--|--|--|--|--|

ABANDON* (other) 8 5/8", TD, 4 1/2" csg & cement

OIL & GAS
U.S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

5. LEASE
NM-36410
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
RECEIVED
7. UNIT AGREEMENT NAME
DEC 29 1981
8. FARM OR LEASE NAME
HOBBS FEDERAL
O. C. D.
9. WELL NO.
#2
ARTESIA, OFFICE
10. FIELD OR WILDCAT NAME
UNDESIGNATED ABO
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
SEC 8, T6S, R25E
12. COUNTY OR PARISH
CHAVES
13. STATE
NEW MEXICO
14. API NO.
15. ELEVATIONS (SHOW DF, KDB, AND WD)
4092'

DECEIVE

DEC 21 1981 (NOTE: Report change)

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Drilled 12 1/4" hole to 1783' and ran 43 jts 8 5/8", 24#, K-55 casing set at 1783'. Cemented with 700 sx HLW + 1# Flocele + 4% CaCl, 300 sx Thixset + 4% CaCl, and tailed in with 300 sx "C" + 2% CaCl. PD at 2:30 p.m. 12-11-81. Circulated 100 sx. Tested BOPs and casing to 600 psi for 30 min.- ok. Woc total of 18 1/2 hours. Reduced hole to 7 7/8" and drilled to TD of 4202' on 12-13-81. Ran 102 jts 4 1/2", 10.5#, K-55 casing set at 4200'. Cemented with 500 sx "C" + 5# KCL + 3/10% HALAD-4 + 2/10% CFR-2. PD at 7:00 p.m. 12-13-81. Cement did not circulate. Released rig at 6:00 a.m. 12-14-81. WOCU estimated to arrive 12-21-81.

XC: USGS (6), TLS, CEN RCDS, ACCTG, MEC, REM , PARTNERS, ROSWELL , FILE

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED R. E. Mark TITLE REGULATORY COORDINATOR DATE 12-18-81

APPROVED BY
CONDITIONS OF

ACCEPTED FOR RECORD

PETER W. CHESTER

DEC 28 1981

U.S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO*

See Instructions on Reverse Side

UNITED STATES Artesia, NM 88210
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

C/SF
SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☐ well gas ☒ well other ☐
2. NAME OF OPERATOR
MESA PETROLEUM CO. /
3. ADDRESS OF OPERATOR
1000 VAUGHN BUILDING/MIDLAND, TEXAS 79701
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 660' FNL & 1980' FWL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO: SUBSEQUENT REPORT OF:

- | | | |
|---|--------------------------|--------------------------|
| TEST WATER SHUT-OFF | ☐ | ☐ |
| FRACTURE TREAT | ☐ | ☐ |
| SHOOT OR ACIDIZE | ☐ | ☐ |
| REPAIR WELL | ☐ | ☐ |
| PULL OR ALTER CASING | ☐ | ☐ |
| MULTIPLE COMPLETE | ☐ | ☐ |
| CHANGE ZONES | ☐ | ☐ |
| ABANDON* | ☐ | ☐ |
| (other) <u>Spud, 13 3/8" csg & cement</u> | | |

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Spudded well with 17 1/2" hole on 12-8-81. Drilled to 878' and ran 21 jts, 13 3/8", 48#, H40 casing set at 878'. Cemented with 700 sx HLW + 1# FLOCELE + 4% CaCl, 300 sx Thixset + 4% CaCl, and tailed in with 300 sx "C" + 2% CaCl. PD at 4:30 p.m. 12-9-81. Circulated 50 sx. WOC 18 1/2 hours. Blew hole dry and waited one hour-no fluid. Reduced hole to 12 1/4" and drilled ahead on 12-10-81.

5. LEASE
NM-36410
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME **RECEIVED**
8. FARM OR LEASE NAME **DEC 31 1981**
HOBBS FEDERAL
9. WELL NO. #2 **O. C. D.**
ARTESIA, OFFICE
10. FIELD OR WILDCAT NAME
UNDESIGNATED ABO
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
SEC 8, T6S, R25E
12. COUNTY OR PARISH CHAVES 13. STATE NEW MEXICO
14. API NO.
15. ELEVATIONS (SHOW DF, KDB, AND WD)
4092' GR

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

RECEIVED
DEC 15 1981

U. S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

XC: USGS (6), TLS, CEN RCDS, ACCTG, MEC, REM , PARTNERS, ROSWELL , FILE
Subsurface Safety Valve: Manu. and Type Set @ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED R. E. Mark REGULATORY COORDINATOR DATE 12-11-81

ACCEPTED FOR RECORD (This space for Federal or State office use)
ROGER A. CHAPMAN
APPROVED BY
CONDITIONS OF APPROVAL, IF ANY

DEC 17 1981

U. S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

See Instructions on Reverse Side

Artesia, NM 88210

SUBMIT 1. PLICATE*
(Other instructions on
reverse side)Form approved.
Budget Bureau No. 42-R1425.UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
DRILL ☒ DEEPEN ☐ PLUG BACK ☐

b. TYPE OF WELL
OIL WELL ☐ GAS WELL ☒ OTHER ☐ SINGLE ZONE ☒ MULTIPLE ZONE ☐

2. NAME OF OPERATOR
MESA PETROLEUM CO.

3. ADDRESS OF OPERATOR
1000 VAUGHN BLDG./MIDLAND, TEXAS 79701-4493

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements*)
At surface 660' FNL & 1980' FWL
At proposed prod. zone SAME

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* ARTESIA, OFFICE
36 miles north of Roswell, New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 660'

16. NO. OF ACRES IN LEASE 360

17. NO. OF ACRES ASSIGNED TO THIS WELL 160

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2640'

19. PROPOSED DEPTH 4100'

20. ROTARY OR CABLE TOOLS ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
4092' GR

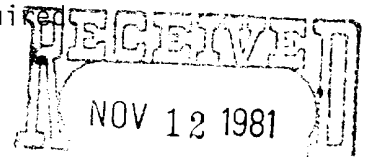
22. APPROX. DATE WORK WILL START*
DECEMBER 15, 1981

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48#	900'	SURFACE
11"	8 5/8"	24#	1600'	ISOLATE WATER, OIL & GAS
7 7/8"	4 1/2"	10.5#	4100'	COVER ALL PAY

Propose to drill 17 1/2" hole to approximately 900' to set 13 3/8" surface casing and cement to surface. Will reduce hole to 11" and drill to approximately 1600' to set 8 5/8" casing. Will nipple up RAM type BOPs, reduce hole to 7 7/8" and drill to total depth. Drilling medium will be air, foam, or mud as required.

Gas Sales are Dedicated.

OIL & GAS
U.S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

xc: USGS (6), TLS, CEN RCDS, ACCTG, MEC, ROSWELL, PARTNERS, LAND, REM, FILE

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED R. E. Nichols TITLE REGULATORY COORDINATOR DATE 11-11-81

(This space for Federal or State office use)

PERMIT NO. APPROVED APPROVAL DATE NOV 24 1981

APPROVED BY JAMES A. GILLHAM TITLE DISTRICT SUPERVISOR DATE 12-4-81

*See Instructions On Reverse Side

All distances must be from the outer boundaries of the Section.

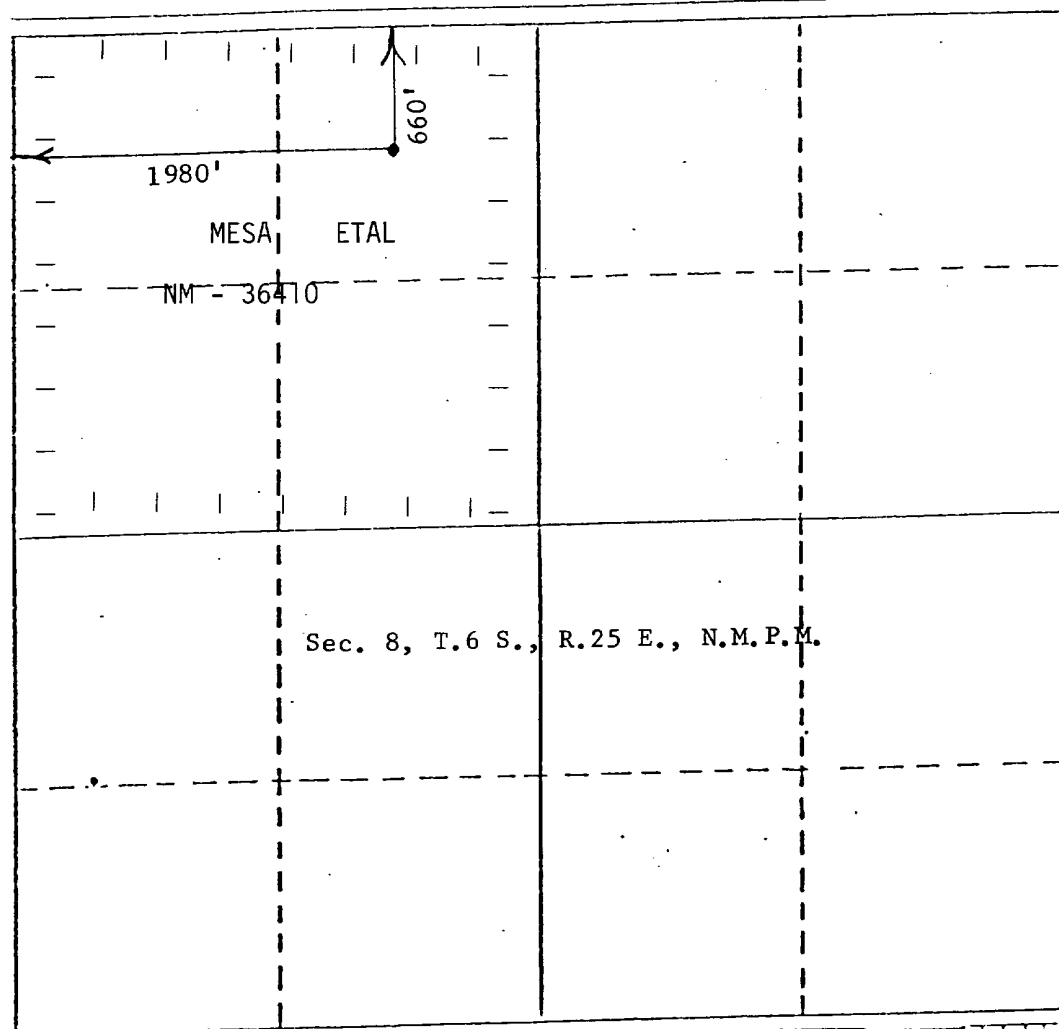
Operator Mesa Petroleum Co.		Lease Hobbs Federal		Well No. 2
Unit Letter C	Section 8	Township 6 South	Range 25 East	County Chaves
Actual Footage Location of Well: 1980 feet from the West line, and 660 feet from the North line				
Ground Level Elev. 4092	Producing Formation ABO	Pool UNDESIGNATED	Dedicated Acreage: NW/4 160 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Division.



CERTIFICATION

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

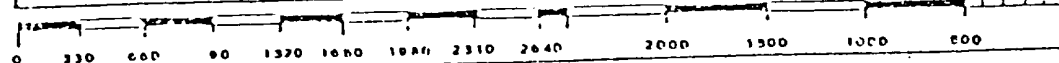
R. E. Mathis

Name
R.E. MATHIS
Position
REGULATORY COORDINATOR
Company
MESA PETROLEUM CO.

Date
11-11-81

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

JOHN D. JAGUESS
NEW MEXICO
6290
October 14, 1981
Registered Professional Engineer
John D. Jaguess
John D. Jaguess, P.E. & L.S.
Certificate No.
6290

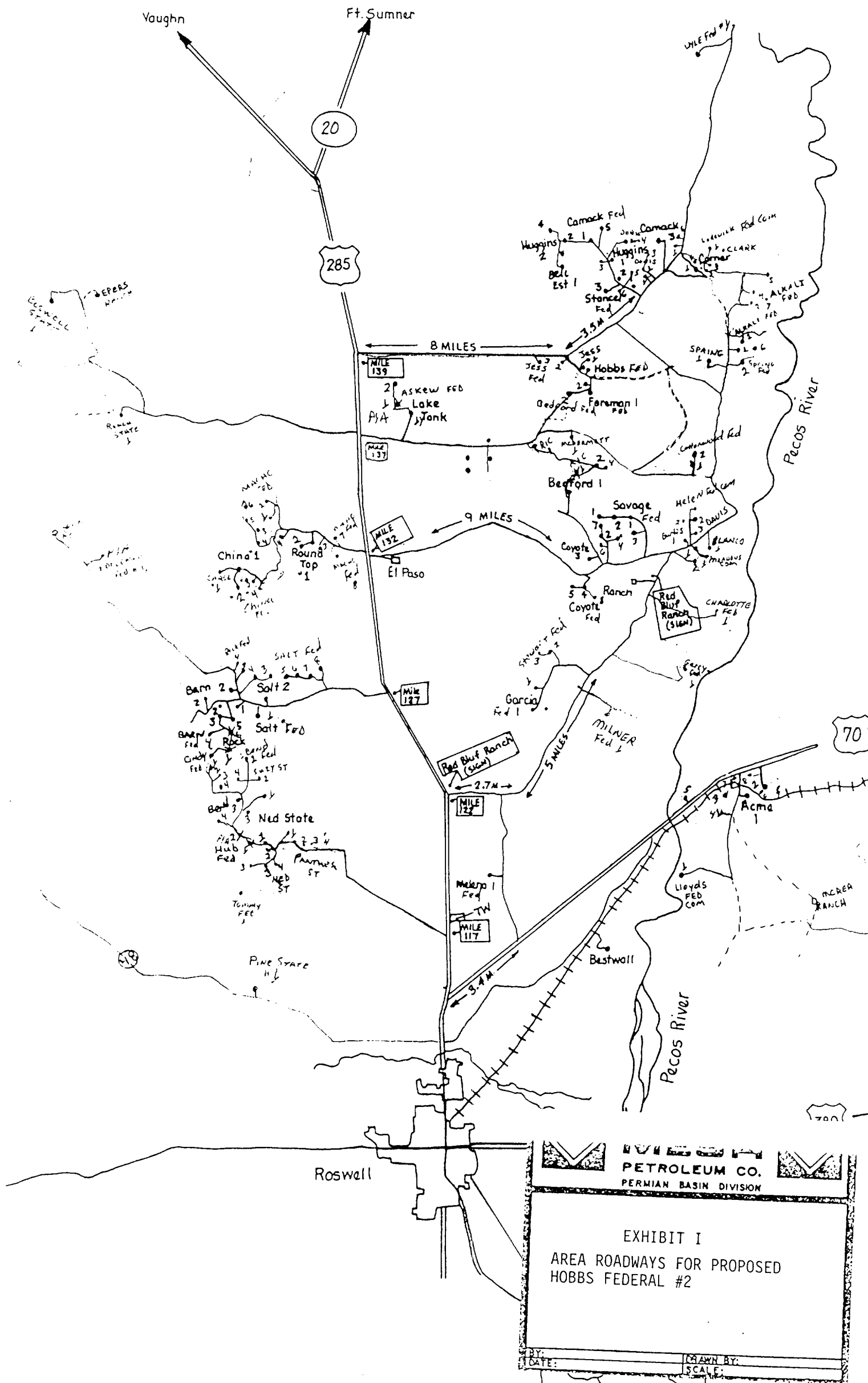


MESA PETROLEUM CO.
HOBBS FEDERAL #2
660' FNL & 1980' FWL, SEC 8, T6S, R25E
CHAVES COUNTY, NEW MEXICO
LEASE NO: NM - 36410

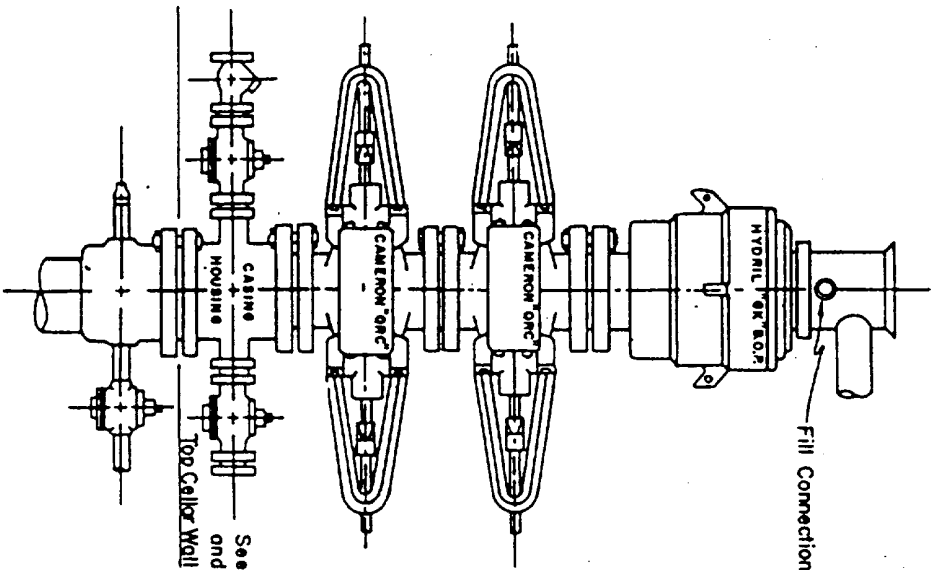
In conjunction with Form 9331-C, Application For Permit to Drill subject well, the following additional information is provided:

1. Applicable portions of the GENERAL REQUIREMENTS FOR OIL AND GAS OPERATIONS ON FEDERAL LEASES, Roswell District, Geological Survey of September 1, 1980 will be adhered to.
2. Geological markers are estimated as follows:

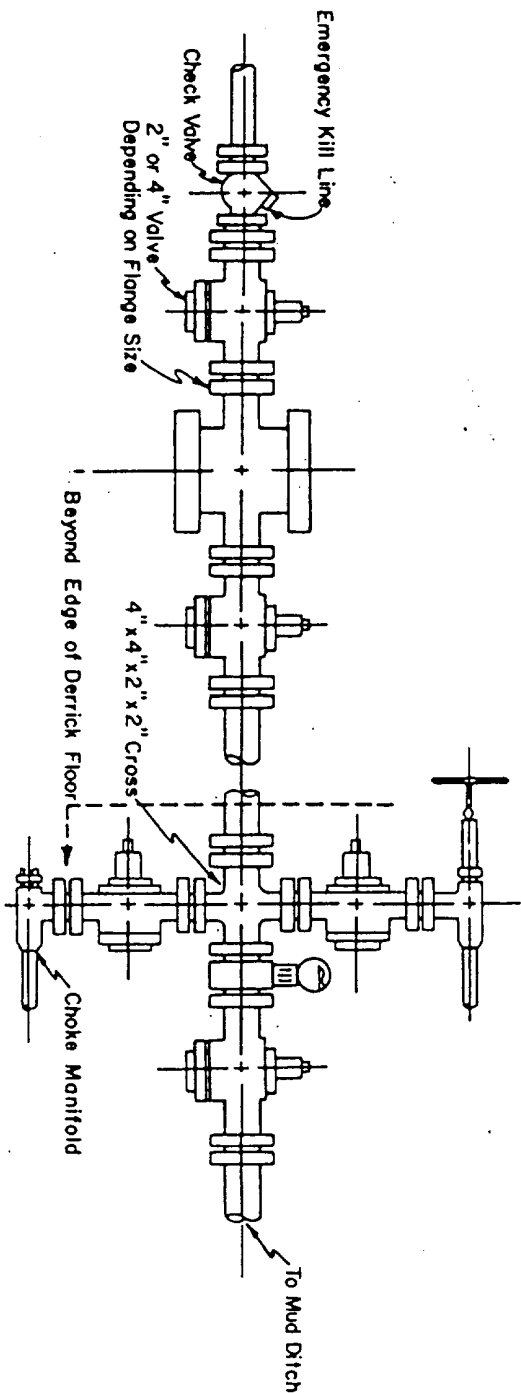
Seven Rivers	Surface
San Andres	554'
Glorieta	1464'
Tubb	3022'
Abo	3667'
3. Hydrocarbon bearing strata may occur in the ABO formation(s). No fresh water is expected to be encountered below 900'.
4. The Casing and Blowout Preventer Program will be determined by hole conditions as encountered. (See Exhibit VI) Anticipate drilling with air or foam using ram type preventer and rotating head for well control. The 13 3/8" casing will be set at approximately 900' to protect any fresh water zones and cemented to the surface. The 8 5/8" casing will be set at approximately 1600' if water zones have been encountered or omitted if not and ram type preventers installed. Sufficient amounts and kinds of cement would be used to ensure any water, gas, or oil zones encountered are isolated and shut off down to the casing point if run. The 4 1/2" production casing will be set at total depth or shallower depending upon the depth of the deepest commercial hydrocarbon bearing strata encountered.
5. No drill stem tests or coring program is planned. The logging program may consist of a GR-CNL from surface total depth and FDC from casing point to total depth.
6. Anticipated drilling time is fifteen days with completion operations to follow as soon as a completion unit is available.



Blow-out Preventers hydril and choke manifold are all 900 Series



3,000 PSI WORKING PRESSURE
BLOW-OUT PREVENTER HOOK-UP



3,000 PSI WORKING PRESSURE
KILL, CHOKE, AND FILL CONNECTIONS

DETAIL OF 4" FLOW LINE CHOKE ASSEMBLY

Minimum assembly for 3,000 PSI working pressure will consist of three preventers.
The bottom and middle preventers may be Cameron.

NOTE: HYDRIL not installed on shallow-low pressure wells.
RAM type BOPs are API 10" X 3000 PSI



MESA

PETROLEUM CO.

PERMIAN BASIN DIVISION



E X H I B I T

V I

DATE

BY

REVIEW