

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

(See instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.6.

5. LEASE DESIGNATION AND SERIAL NO.

NM - 27970

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME
FEB 23 1981

8. FARM OR LEASE NAME

COYOTE FEDERAL

9. WELL NO.

2

10. FIELD AND POOL, OR WILDCAT

UNDESIGNATED ABO

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

SEC 8, T7S, R25E

12. COUNTY OR PARISH
CHAVES

13. STATE
NEW MEXICO

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL GAS WELL DRY Other PETROL W. CEMENT

b. TYPE OF COMPLETION: NEW WELL WORK OVER DEEP-EN PLUG BACK DIFF. RESVR. Other FEB 19 1981

2. NAME OF OPERATOR
MESA PETROLEUM CO.

3. ADDRESS OF OPERATOR
1000 VAUGHN BUILDING/MIDLAND, TEXAS 79701

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

At surface 1980' FNL & 660' FEL

At top prod. interval reported below

SAME

At total depth

SAME

14. PERMIT NO. DATE ISSUED
9-5-80

15. DATE SPUDDED 16. DATE T.D. REACHED 17. DATE COMPL. (Ready to prod.) 18. ELEVATIONS (DF, REB, RT, GR, ETC.)* 19. ELEV. CASINGHEAD

12-21-80 1-2-81 2-4-81 3861.5' GR 3862' GR

20. TOTAL DEPTH, MD & TVD 21. PLUG, BACK T.D., MD & TVD 22. IF MULTIPLE COMPL., HOW MANY* 23. INTERVALS DRILLED BY 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 25. WAS DIRECTIONAL SURVEY MADE

4400' 4330' ALL

3626'---3860', ABO

NO

26. TYPE ELECTRIC AND OTHER LOGS RUN 27. WAS WELL CORED

GR-CLL, GR-FDC-CNL

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#	850'	17 1/2"	300 Thixset/700 Lt/200"C"	-
8 5/8"	24#	1784'	11"	200 Thixset/200 Lt/200 "C"	-
4 1/2"	10.5#	4399'	7 7/8"	700 Lt/300 50-50 Pozmix	-

29. LINER RECORD 30. TUBING RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2 3/8"	3792'	

31. PERFORATION RECORD (Interval, size and number) 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

3626'---3860', .33 ENTRY, 38 HOLES

3626'---3653'/1500GALS 7 1/2%HCL/30,000GALS 75%QUA. FOAM+38,000#20-40SD

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
3852'---3860'	1000GALS 7 1/2%HCL/12,000GALS 65%QUA. FOAM+14,000#20-40SD
3722'---3781'	1500GALS 7 1/2%HCL/24,700GALS 75%QUA. FOAM+30,300#20-40SD

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

2-4-81 3 HRS - TSTM 158 TRACE DRY

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

770 790 - 1263 -

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

VENTED

E. L. BUTTROSS, JR.

35. LIST OF ATTACHMENTS

C-122, 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. P. Mack TITLE REGULATORY COORDINATOR DATE FEBRUARY 11, 1981

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

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 3b.

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	NAME	MEAS. DEPTH
	BOTTOM		TRUE VERT. DEPTH
		ABO	3580

MESA PETROLEUM CO.
COYOTE FEDERAL #2
1980' FNL & 660' FEL
SEC 8, T7S, R25E
CHAVES COUNTY, NEW MEXICO

RECORD OF INCLINATION

<u>(Depth)</u>	<u>(Deviation)</u>
123'	1/4°
360'	1/2°
610'	1/4°
850'	1/4°
1365'	1 3/4°
1784'	2°
2277'	1 1/2°
2777'	1 3/4°
3266'	1 3/4°
3742'	1 1/2°
4400'	3°

CC Wheeler
BY: C. C. WHEELER, DIVISION ENGINEER

Subscribed and sworn to before me this 10th day of February, 1981.

Cindy Lu Sheppard
Notary Public in and for Midland County
Texas.

Commission Expires: 7-27-81

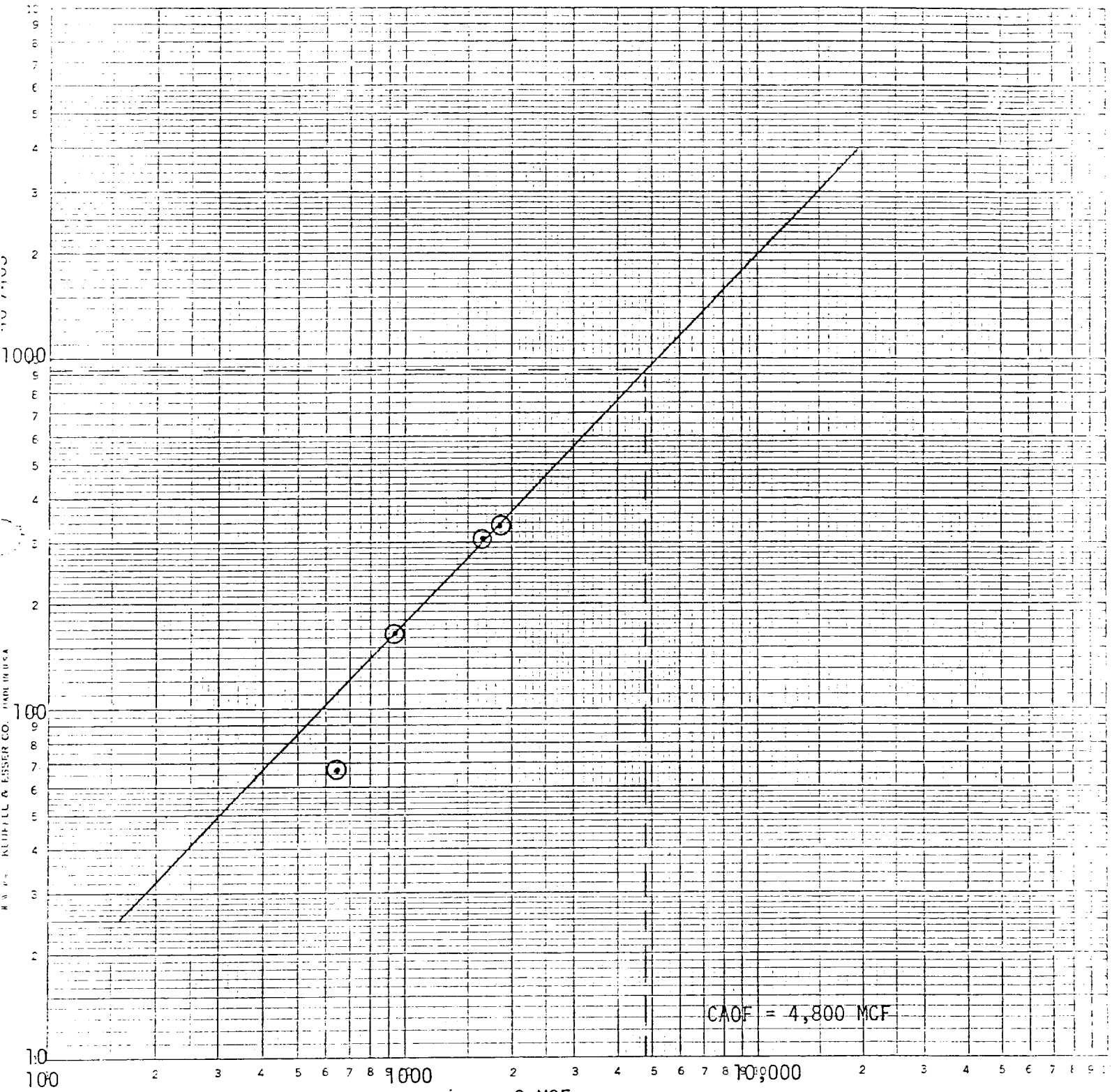
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Received 5/1/81

RECEIVED

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special					Test Date 2-4-81		FEB 23 1981				
Company Mesa Petroleum Co. ✓				Connection To Be Determined			O. C. D.				
Pool Undesignated Abo				Formation Abo			Unit ARTEZIA, OFFICE				
Completion Date 2-4-81		Total Depth 4400'		Plug Sock TD 4330'		Elevation 3862'		Farm or Lease Name Coyote Federal			
Csg. Size 4 1/2	Wt. 10.5	d 	Set At 4399'	Perforations: From 3626' To 3860'			Well No. 2				
Tng. Size 2 3/8	Wt. 4.7	d 	Set At 3792'	Perforations: From Open ended			Unit EH 8	Sec. 7S	Twp. 25E		
Type Well - Single - Bronthead - G.G. or G.O. Multiple Single				Packer Set At None			County Chaves				
Producing Thru Tubing		Reservoir Temp. °F 105° @ 4400'		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico			
L 3792	H 3792	Gg .66	% CO ₂ ---	% N ₂ 4	% 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. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							975		965		72 hrs
1.	2" orifice		8		---	40	930	80	930	---	3/4 hr
2.	well tester		15		---	40	875	80	875	---	1/2 hr
3.			32		---	40	770	80	790	---	1 hr
4.			37		---	40	555	80	780	---	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, Mcfd				
1	661	2" orifice well tester		1.0198	.9535	----	643				
2	964			1.0198	.9535	----	937				
3	1686			1.0198	.9535	----	1639				
4	1885			1.0198	.9535	----	1832				
5											
NO.	R _g	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.			A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.			
1.					Specific Gravity Separator Gas _____			X X X X X X X X			
2.					Specific Gravity Flowing Fluid _____			X X X X X			
3.					Critical Pressure _____ P.S.I.A.			P.S.I.A.			
4.					Critical Temperature _____ R			R			
5.											
$P_c = 965 \quad P_c^2 = 931$											
NO.	P ₁ ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 5.6424$			(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5.1391$			
1		930	865	66							
2		875	766	165							
3		790	624	307							
4		780	608	323							
5											
$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4,800$											
Absolute Open Flow				4,800 Mcfd @ 15.025		Angle of Slope @ 46.6°		Slope, n 946			
Remarks:											
Approved By Commission:				Conducted By: <i>ELO</i> E. L. BUTTROSS, JR.				Calculated By: <i>ELO</i> E. L. BUTTROSS, JR.			
Checked By:											

Mesa Petroleum Co.
 Coyote Federal #2
 Sec , T7S, R25E
 Chaves County, New Mexico
 2-4-81



$$N = 1/\text{slope} = \frac{\text{Log } Q_2 - \text{Log } Q_1}{\text{Cycle}} = \frac{\text{Log } 5200 - \text{Log } 590}{\text{Cycle}} = \frac{3.716 - 2.77}{\text{Cycle}} = .946$$

$$\theta = 46.6^\circ$$