

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

E*

Form approved,
Budget Bureau No. 42-R355.5.

WELL COMPLETION (See other instructions on reverse side)

Drawer DD

Artesia, NM 88210

5. LEASE DESIGNATION AND SERIAL NO.

NM-36644

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL:		OIL WELL ☐	GAS WELL ☒	DRY ☐	Other ☐	7. UNIT AGREEMENT NAME		
b. TYPE OF COMPLETION:		NEW WELL ☒	WORK OVER ☐	DEEP-EN ☐	PLUG BACK ☐	DIFF. RESVR. ☐	Other ☐	8. FARM OR LEASE NAME
2. NAME OF OPERATOR								Debbie Federal
3. ADDRESS OF OPERATOR								WELL NO.
P. O. Box 2009 / Amarillo, Texas 79189								2
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)								9. FIELD AND POOL, OR WILDCAT
At surface 792' FNL & 1650' FWL								West Pecos Slope Abo
At top prod. interval reported below Same								10. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
At total depth Same								Sec. 30, T7S, R23E
14. PERMIT NO.				DATE ISSUED		12. COUNTY OR PARISH		13. STATE
				5-16-83		Chaves		New Mexico
15. DATE SPUDDED		16. DATE T.D. REACHED		17. DATE COMPL. (Ready to prod.)		18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*		19. ELEV. CASINGHEAD
8-20-83		8-25-83		9-7-83		4188' GR 4206' RKB		4188'
20. TOTAL DEPTH, MD & TVD		21. PLUG, BACK T.D., MD & TVD		22. IF MULTIPLE COMPL., HOW MANY*		23. INTERVALS DRILLED BY		ROTARY TOOLS
3200'		3119'				All		CABLE TOOLS
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*								25. WAS DIRECTIONAL SURVEY MADE
2874' -- 2917', Abo								No
26. TYPE ELECTRIC AND OTHER LOGS RUN								27. WAS WELL CORED
CNLD								No

28. CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	24#	1200'	12"	450/200/725	--
4 1/2"	10.5#	3193'	7 7/8"	400	--

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"	2925'	--

31. PERFORATION RECORD (Interval, size and number)		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
2874'-32'; 2893'-97'; 2915'-17'; .40" entry; total of 17 holes, 1 JSPF		DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
		2874' - 2917'	A/2500 gal 7 1/2% HCl + 42 BS
		2874' - 2917'	F/36,000 gal Terra-Frac T 40#
			x-link gel + 12,000 gals liquid
			CO ₂ + 80,000# 20/40 SD + 59,000#

33.* PRODUCTION							
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
WOPLC		Flowing				Shut-in	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
9-11-83	4	-	→	-	178	-	-
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
370	448	→	-	1071	-	-	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)	TEST WITNESSED BY
Vented	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	TITLE	DATE
R. E. Mathis	Regulatory Coordinator	9-13-83

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

xc: BLM-R(0+6), CEN RCDS, ACCTG, MAT CONT, GAS CONT w/log, ENG, OPS(FILE), MIDLAND, ROSWELL PARTNERS, TW, P, D&M, PROD

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.																				
NOT LOGGED																							
			<table border="1"> <thead> <tr> <th>NAME</th> <th>MEAS. DEPTH</th> <th>TOP</th> <th>TRUE VERT. DEPTH</th> </tr> </thead> <tbody> <tr> <td>Glorieta</td> <td>588'</td> <td></td> <td></td> </tr> <tr> <td>Yeso</td> <td>778'</td> <td></td> <td></td> </tr> <tr> <td>Tubb</td> <td>2194'</td> <td></td> <td></td> </tr> <tr> <td>Abo</td> <td>2814'</td> <td></td> <td></td> </tr> </tbody> </table>	NAME	MEAS. DEPTH	TOP	TRUE VERT. DEPTH	Glorieta	588'			Yeso	778'			Tubb	2194'			Abo	2814'		
NAME	MEAS. DEPTH	TOP	TRUE VERT. DEPTH																				
Glorieta	588'																						
Yeso	778'																						
Tubb	2194'																						
Abo	2814'																						

MESA PETROLEUM CO.
DEBBIE FEDERAL #2
792' FNL & 1650' FWL, SEC. 30, T7S, R23E
CHAVES COUNTY, NEW MEXICO

RECORD OF INCLINATION

<u>DEPTH</u>	<u>DEVIATION</u>
1720'	1/2°
2310'	1/4°
2809'	1/2°
3200'	1 1/4°

R. E. Mathis

R. E. Mathis, Regulatory Coordinator

Subscribed and sworn to before me this 13th day of September, 1983.

Laura Fox

Notary Public in and for Potter Co., TX

Commission Expires: 8/22/87

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 9-11-83				
Company MESA PETROLEUM CO.				Connection UNCONNECTED					
Pool WEST PECOS SLOPE ABO				Formation ABO				Unit	
Completion Date 9-7-83		Total Depth 3200		Plug Back TD 3119		Elevation 4188		Farm or Lease Name DEBBIE FEDERAL	
Coq. Size 4 1/2	Wt. 10.5#	d	Set At 3193	Perforations: From 2874 To 2917		Well No. 2			
Thq. Size 2 3/8	Wt. 4.7#	d	Set At 2925	Perforations: From OPEN ENDED To		Unit Sec. Twp. Rge. C 30 7S 23E			
Type Well - Single - Bradenhead - G.C. or G.O. Multiple SINGLE					Packer Set At NONE		County CHAVES		
Producing Thru TUBING		Reservoir Temp. °F 89° 3194		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State NEW MEXICO	
L 2925	H 2925	G _g .65	% CO ₂ 1	% N ₂ 1	% H ₂ S	Prover 2" CRITICAL FLOW PROVER		Meter Run Taps	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	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	
SI						710		775		72 hr SI
1.	2" x 1"		27		52	560	75	640		1 hr
2.	2" x 1"		38		56	410	75	490		1 hr
3.	2" x 1"		42		62	295	78	370		1 hr
4.	2" x 1"		43		65	215	79	290		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	17.09	FLOW PROVER	40	1.008	1.24		854
2	17.09	FLOW PROVER	51	1.004	1.24		1085
3	17.09	FLOW PROVER	55	.9981	1.24		1163
4	17.09	FLOW PROVER	56	.9952	1.24		1181
5							

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

P _c 788	P _c ² 621		
NO.	P _t ²	P _w	P _w ²
1		653	426
2		503	253
3		383	147
4		303	92
5			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.1739$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.300$

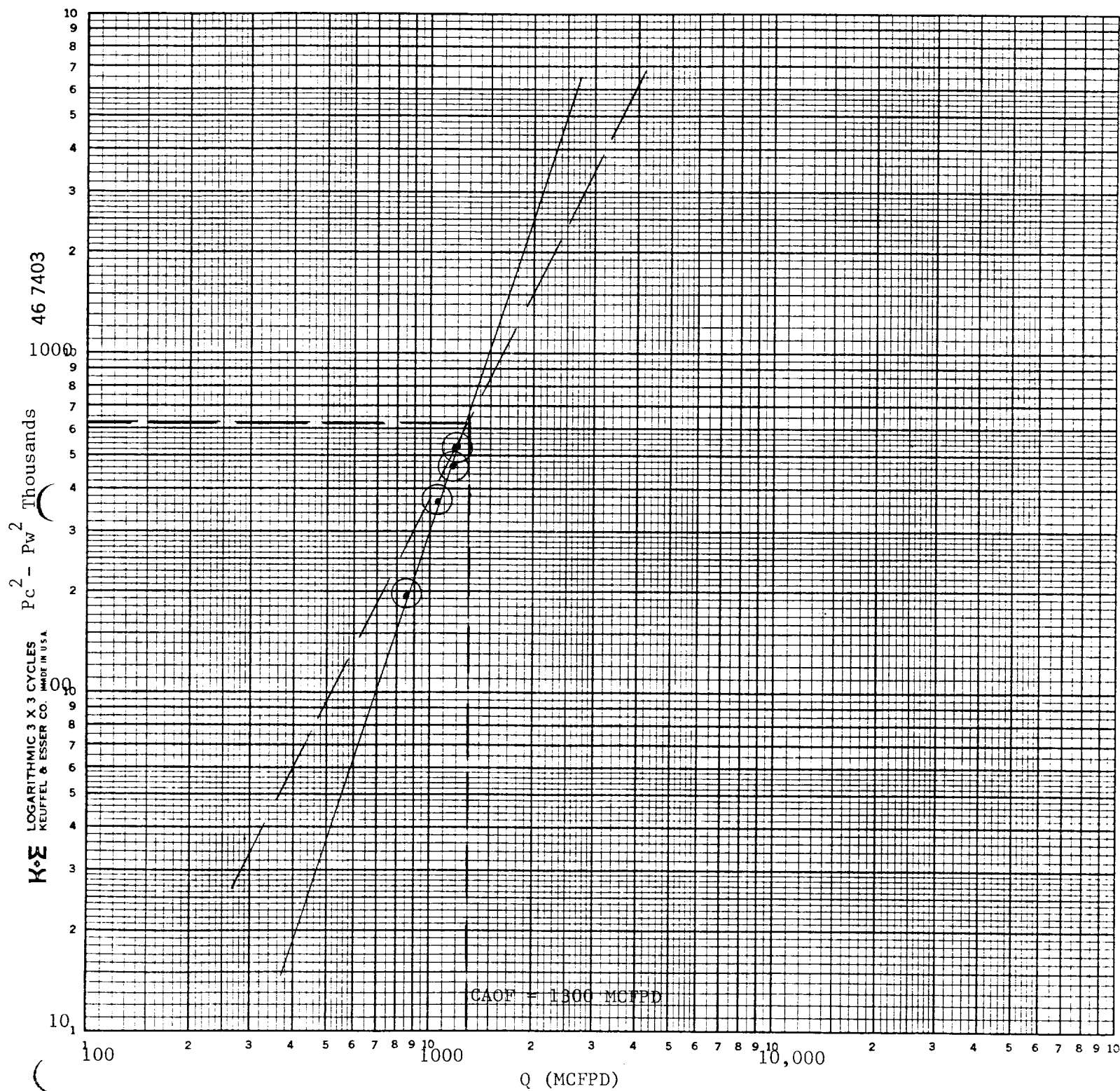
(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0835$

Absolute Open Flow <u>1.300</u> Mcfd @ 15.025	Angle of Slope θ <u>63.5°</u>	Slope, n <u>.5</u>
---	--------------------------------------	--------------------

Remarks: Plot of P_c²-P_w² Vs Q yielded a straight line with a θ greater than 63.5°. Drew 63.5° line through highest point.

Approved By Division	Conducted By: JAMES CRAIG	Calculated By: <u>ELB 9-13-83</u> E. L. BUTTROSS, JR.	Checked By:
----------------------	------------------------------	--	-------------

MESA PETROLEUM CO.
 DEBBIE FEDERAL No. 2
 CHAVES COUNTY, NEW MEXICO
 9-11-83



ASSUMED $\theta=63.5^\circ$ & $N=.5$