

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

(See other instructions on reverse side)

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____		5. LEASE DESIGNATION AND SERIAL NO. NM-36648		
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME		
2. NAME OF OPERATOR Mesa Petroleum Co. ✓		7. UNIT AGREEMENT NAME		
3. ADDRESS OF OPERATOR P.O. Box 2009 / Amarillo, Texas 79189		8. FARM OR LEASE NAME China Federal		
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) At surface 1444' FSL & 1950' FWL At top prod. interval reported below same At total depth same		9. WELL NO. 15		
10. FIELD AND POOL, OR WILDCAT West Pecos Slope ABO		11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Sec. 19, T7S, R23E		
12. COUNTY OR PARISH Chaves		13. STATE NM		
14. PERMIT NO. ARTESIA, OFFICE		DATE ISSUED 4-14-83		
15. DATE SPUNDED 4-21-83	16. DATE T.D. REACHED 4-28-83	17. DATE COMPL. (Ready to prod.) 5-7-83	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 3958' GR 3971' RKB	19. ELEV. CASINGHEAD 3958'
20. TOTAL DEPTH, MD & TVD 3150'	21. PLUG, BACK T.D., MD & TVD 3090'	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY → All	ROTARY TOOLS CABLE TOOLS
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 2666' - - - 2776', 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
8 5/8"	24#	1230'	12"	450/200 sx "C"/375 sx "C"
4 1/2"	10.5#	3150'	7 7/8"	400 sx "C"
29. LINER RECORD				
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
30. TUBING RECORD				
SIZE	DEPTH SET (MD)	PACKER SET (MD)		
2 3/8"	2786'	-		
31. PERFORATION RECORD (Interval, size and number) 2666', 68', 70', 72', 74', 76', 92', 93', 94', 2742', 44', 59', 61', 70', 72', 73', 74', 76'; .40" entry; 18 holes				
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.				
DEPTH INTERVAL (MD)		AMOUNT AND KIND OF MATERIAL USED		
2666'-2776'		A/2700 gal 7 1/2% HCL + 45 BS		
2666'-2776'		F/54,000 gal x link gel + 21,250 gal CO2+126,000# 20/40 + 88,000# 10/20 SD		
33. PRODUCTION				
DATE FIRST PRODUCTION WOPLC		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing		WELL STATUS (Producing or shut-in) shut-in
DATE OF TEST 5-11-83	HOURS TESTED 4	CHOKE SIZE -	PROD'N. FOR TEST PERIOD →	OIL—BBL. -
FLOW. TUBING PRESS. 665		CASING PRESSURE 741	CALCULATED 24-HOUR RATE →	GAS—MCF. 437
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Vented		TEST WITNESSED BY (ORIG. SGD.) DAVID R. GLASS Buttross, Jr.		
35. LIST OF ATTACHMENTS Cl22, 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. E. Mack		TITLE Regulatory Coordinator		DATE May 13, 1983

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

XC: BLM-R (0+6), CEN RCDS, ACCTG, MAT CONT, GAS CONT, ENG, OPS(FILE), MIDLAND, ROSWELL, PARTNERS, D&M, TW, 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.	NAME	MEAS. DEPTH	TOP TRUE VERT. DEPTH
NOT LOGGED				Glorieta Yeso Tubb ABO	396' 602' 1964' 2596'	

IL CONSERVATION DIVISIO

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

Form C-122
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 5-11-83		MAY 26 1983	
Company Mesa Petroleum Co.		Connection unconnected		O. C. D.	
Pool West Pecos Slope ABO		Formation ABO		Unit ARTESIA, OFFICE	
Completion Date 5-7-83		Total Depth 3150'		Plug Back TD 3090'	
Elevation 3971' RKB		Farm or Lease Name China Federal			
Csg. Size 4 1/2"	Wt. 10.5#	Set At 3150'	Perforations: From 2666' To 2776'		Well No. 15
Thg. Size 2 3/8"	Wt. 4.7#	Set At 2786'	Perforations: From open ended To		Unit K
Type Well - Single - Draddenhead - G.G. or G.O. Multiple single		Packer Set At none		County Chaves	
Producing Thru Tubing		Reservoir Temp. °F 100° @ 3150'		Mean Annual Temp. °F 60	
Baro. Press. - P _g 13.2		State New Mexico			
L	H	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						884		900		72 hr. SI
1.	2" x 1"		60		38	830	75	845		1 hr.
2.	2" x 1"		103		42	730	79	775		1 hr.
3.	2" x 1"		129		49	610	81	700		1 hr.
4.	2" x 1"		145		54	490	82	645		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 F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	17.09	Flow prover	73	1.022	1.24		1581
2.	"	" "	116	1.018	1.24		2502
3.	"	" "	142	1.011	1.24		3042
4.	"	" "	158	1.006	1.24		3368
5.							

NO.	P ₁	Temp. °R	T ₁	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 913	P _c ² 834			
NO.	P ₁ ²	P _w	P _w ²	P _c ² - P _w ²
1		858	736	98
2		788	621	213
3		713	508	326
4		658	433	401
5				

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = \frac{2.0798}{1} = 2.0798$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4,800$$

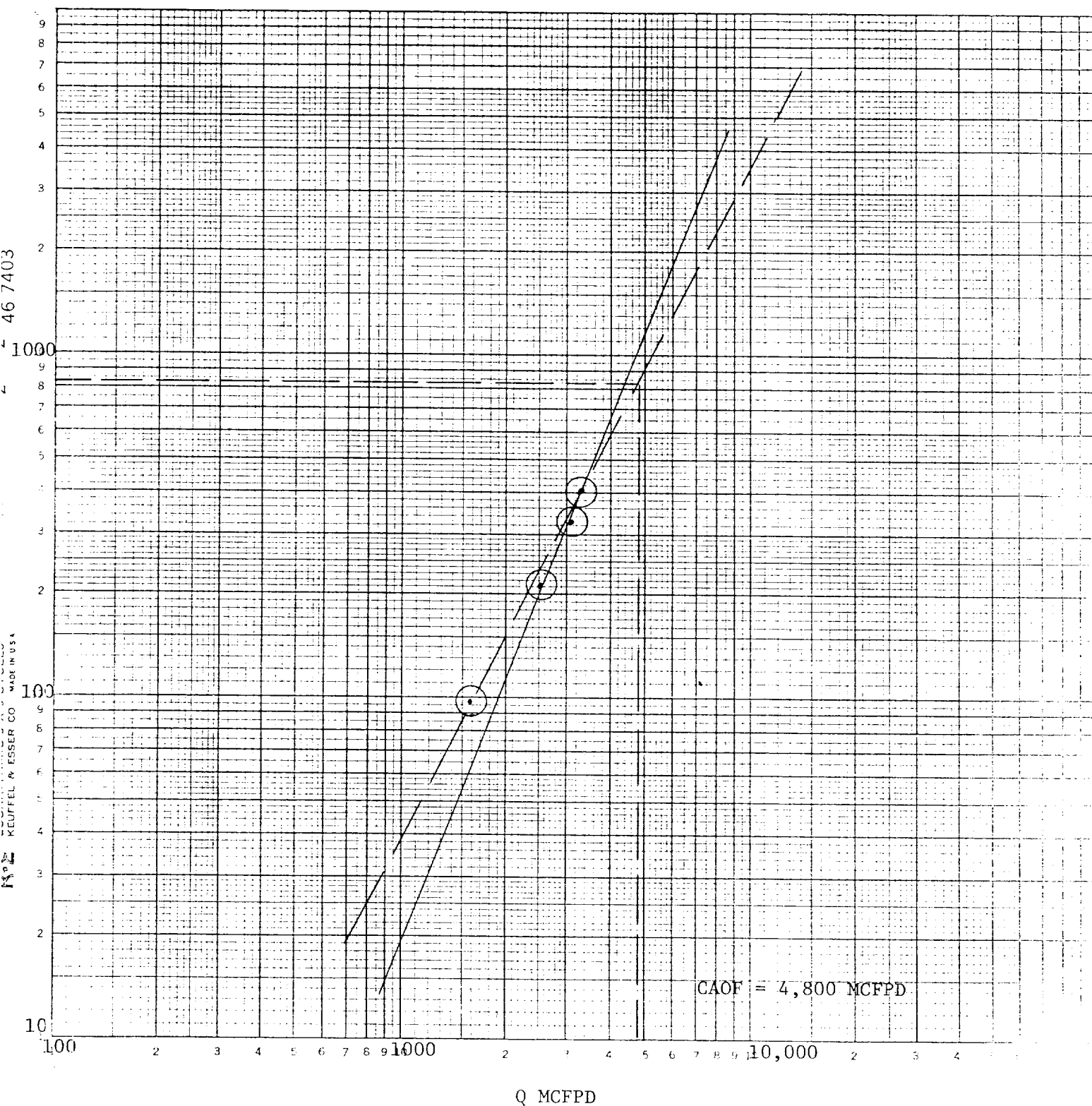
$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.4422$$

Absolute Open Flow 4,800	Mcf/d @ 15.025	Angle of Slope @ 63.5°	Slope, n .5
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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 the highest point.

Approved By Division	Conducted By: James Craig	Calculated By: <u>5-13-83</u> E. L. Buttross, Jr.	Checked By:
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MESA PETROLEUM CO.
 China Federal No. 15
 1444' FSL & 1950' FWL, Sec. 19, T7S, R23E
 Chaves County, New Mexico
 May 11, 1983



Assumed $N = .5$ and $\theta = 63.5^\circ$

MESA PETROLEUM CO.
China Federal No. 15
1444' FSL & 1950' FWL, Sec. 19, T7S, R23E
Chaves County, New Mexico

RECORD OF INCLINATION

<u>DEPTH</u>	<u>DEVIATION</u>
419'	1/4°
1067'	1/4°
1706'	1/2°
2276'	1/2°
2745'	1/2°
3150'	1 1/4°

R. E. Mathis
R. E. Mathis, Regulatory Coordinator

Subscribed and sworn to before me this thirteenth day of May, 1983.

Chris H. L. L. L. L. L.
Notary Public in and for Potter County, Texas.

Commission Expires: 1-26-87

RECEIVED

MAY 16 1983

O. C. D.
ARTESIA, OFFICE

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China Federal No. 15
1444' FSL & 1950' FWL, Sec. 19, T7S, R23E
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Chris Hildebrand
Notary Public in and for Potter County, Texas.

Commission Expires: 1-26-87