

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 5-11-88		AUG 01 '88	
Company MCKAY OIL CORPORATION ✓				Connection Air		O. C. D.	
Pool West Pecos Slope Abo				Formation Abo Sand		Unit ARTESIA, OFFICE	
Completion Date 5-11-88		Total Depth 3430'		Plug Back TD 3253'		Elevation 4094 KB	
Farm or Lease Name M & M Federal		Well No. #5		Unit A		Sec. Twp. Rge. 19 6S 23E	
Csg. Size 4-1/2"		Wt. 9.5#		d 4.090		Set At 3316'	
Perforations: From 2982 To 3098		Perforations: From -- To --		Perforations: From -- To --		Perforations: From -- To --	
Type Well - Single - Brdenhead - G.C. or G.O. Multiple Single		Packer Set At --		County Chaves		State New Mexico	
Producing Thru Tubing		Reservoir Temp. °F 90		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 3040		H 3040		C _g 0.610		% CO ₂ 0.00	
% N ₂ 5.531		% H ₂ S --		Prover 2.00		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
SI							800		820		SI 72 HRS.
1.	2.000		.250	227	--	60	730		753	60	60 MIN.
2.	2.000		.375	148	--	60	641		657	60	60 MIN.
3.	2.000		.500	97	--	60	387		435	60	60
4.	2.000		.500	87	--	60	220		338	60	60
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	1.087	--	240.2	1.000	1.280	1.019	341
2.	2.378	--	161.2	1.000	1.280	1.013	497
3.	4.279	--	110.2	1.000	1.280	1.018	614
4.	4.279	--	100.2	1.000	1.280	1.016	558
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.36	520	1.50	.963	A.P.I. Gravity of Liquid Hydrocarbons	--
2.	.24	520	1.50	.975	Specific Gravity Separator Gas	0.610
3.	.17	520	1.50	.982	Specific Gravity Flowing Fluid	X X X X X
4.	.15	520	1.50	.984	Critical Pressure	661 P.S.I.A.
5.					Critical Temperature	346 °R

NO.	P _i ²	P _w	P _w ²	P _i ² - P _w ²
1.		743.2	552.3	140.3
2.		654.2	428.0	264.6
3.		400.2	160.2	532.4
4.		233.2	54.4	638.2
5.				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.9366$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 762.5$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.2361$

Post IO-2
8-6-88
comp + BK

Absolute Open Flow	763	Mcf/d @ 15.025	Angle of Slope °	63.25	Slope, n	0.504
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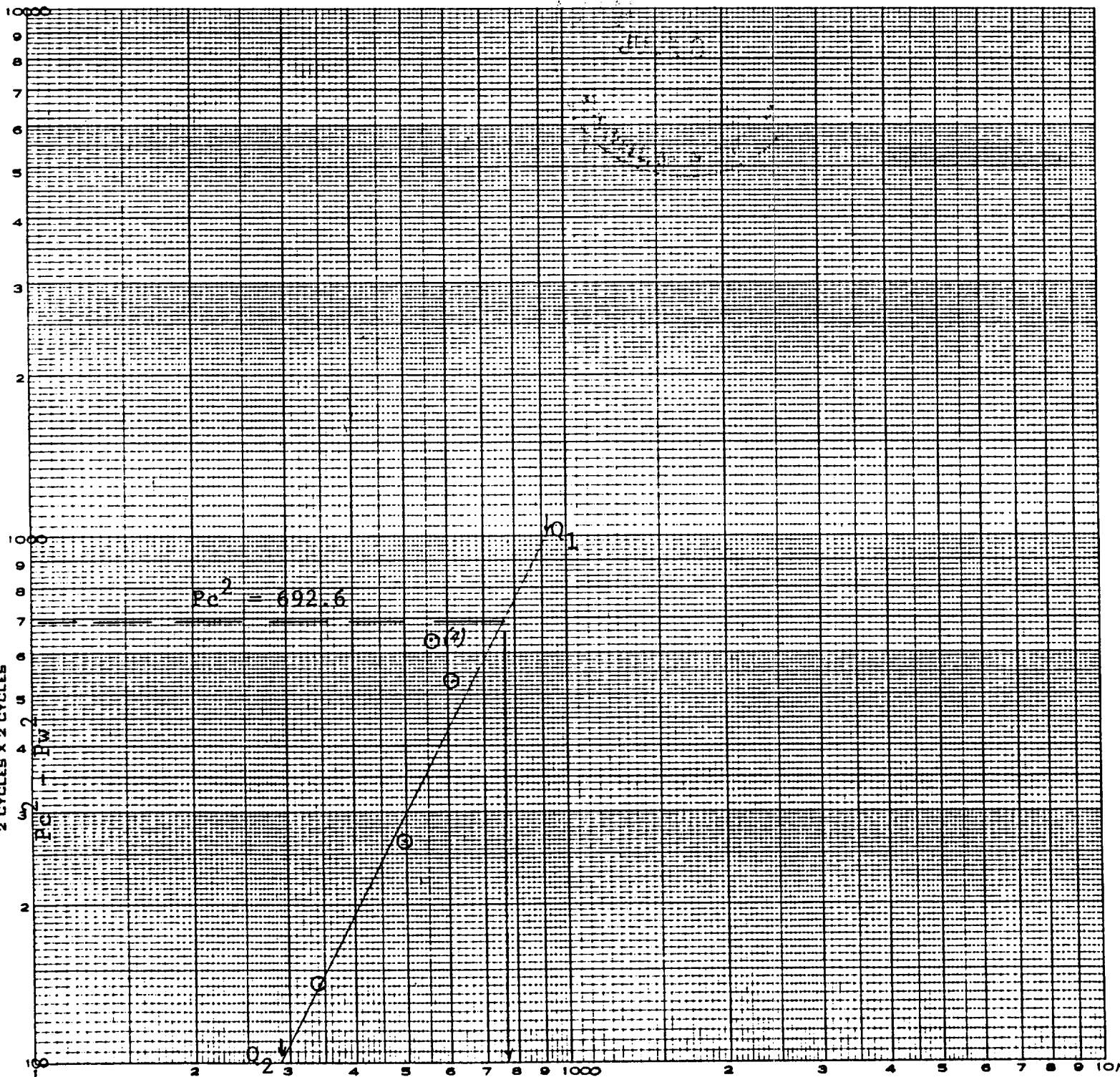
Remark: Started producing 1 BWPH last flow period.

Approved By Division	Conducted By: D. Kelton	Calculated By: C. Sanders	Checked By: P. Stewart
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MCKAY OIL CORPORATION
M & M FEDERAL #5
Sec. 19, T6S, R23E
5/11/88

DIETZEN CORPORATION
MADE IN U.S.A.

NO. 340-L22 DIETZEN GRAPH PAPER
LOGARITHMIC
2 CYCLES X 2 CYCLES



$$\begin{aligned}
 Q, \text{ MCFPD} \\
 Q_1 &= 920; \log = 2.96379 \\
 Q_2 &= 288; \log = 2.45939 \\
 &\quad 0.50440 \\
 n &= 0.504 \\
 \text{AOF} &= 763 \text{ MCFPD}
 \end{aligned}$$

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Artesia, NM 88210

Budget Bureau No. 1004-4
Expires August 31, 1985
5. LEASE DESIGNATION AND SERIAL

NM-32324

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

M & M Federal

9. WELL NO.

#5

10. FIELD AND POOL OR WILDCAT

W. Pecos Slope-Abo

11. SEC., T., S., M., OR BLK. AND SURVEY OR AREA

Sec. 19-6S-23E

12. COUNTY OR PARISH 13. STATE

Chaves

NM

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different depth.
Use "APPLICATION FOR PERMIT" for such proposals.)

1. OIL WELL ☐ GAS WELL ☒ OTHER

2. NAME OF OPERATOR

McKay Oil Corporation

3. ADDRESS OF OPERATOR

Post Office Box 2014, Roswell, New Mexico 88201

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.
See also space 17 below.)
At surface

587' FEL & 995' FNL

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

4082' GR

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

FRACTURE TREAT

MULTIPLE COMPLETE

SHOOT OR ACIDIZE

ABANDON*

REPAIR WELL

CHANGE PLANE

(Other)

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREATMENT

ALTERING CASING

SHOOTING OR ACIDIZING

ABANDONMENT*

(Other) commenced gas sales

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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.)

commenced gas sales to pipeline on 7-14-88

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

SIGNED Theresa Rodriguez

TITLE Production Analyst

DATE 7-15-88

(This space for Federal or State office use)

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

ACCEPTED FOR RECORD
PETER W. CHESTER

JUL 22 1988

BUREAU OF LAND MANAGEMENT
ROS WELL RESOURCE AREA

*See Instructions on Reverse Side