

**NE. MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL**

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 11-7-77			
Company Mewbourne Oil Company				Connection None					
Pool Querecho				Formation Queens				Unit L	
Completion Date		Total Depth 4300		Plug Back To		Elevation		Farm or Lease Name Federal F	
Coq. Size 4 1/2	Wt. 11.6	d	Set At 4300	Perforations: From 4132 To 4163		Well No. 1			
Tiq. Size 2 3/8	Wt. 4.7	d	Set At 4083	Perforations: From Open To end		Unit L		Sec. 23	Twp. 18
Type Well - Single - Freedom - G.G. or G.O. Multiple Single						Packer Set At None		County Lea	
Producing Thru Tbg.		Reservoir Temp. °F 94 @ 4110		Mean Annual Temp. °F		Buro. Press. - P ₀ 13.2		State New Mexico	
L 4110	H 4110	G _g .845	% CO ₂	% N ₂	% H ₂ S	Prover	Meter Run 3"	Days Flg.	

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							798		800		72 hrs.
1.	3	x	1.00	420	20.7	50	738		743		
2.	3	x	1.00	420	26.8	60	713		732		
3.	3	x	1.00	420	39.8	55	671		716		
4.	3	x	1.00	425	53.9	54	657		703		
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 _{sp}	Rate of Flow Q, Mhd
1	4.789	94.70	433.2	1.010	1.088	1.091	544
2	4.789	107.75	433.2	1.000	1.088	1.081	607
3	4.789	131.31	433.2	1.005	1.088	1.084	745
4	4.789	152.81	433.2	1.006	1.088	1.088	871
5.							

NO.	P ₀	Temp. °F	T _g	Z	Gas Liquid Hydrocarbon Ratio	Moist. %
1	.65	510	1.16	.840	Dry	
2	.65	520	1.19	.856	A.P.I. Gravity of Liquid Hydrocarbons	
3	.65	515	1.18	.851	Specific Gravity Separator Gas	.845
4	.65	514	1.17	.845	Specific Gravity Flowing Fluid	X X X X X
5.					Critical Pressure	664 P.S.I.A.
					Critical Temperature	438 °R

NO.	P ₀	P ₀ ²	P _w	P _w ²	P ₀ ² - P _w ²
1	813.2	661.3	745.6	555.9	105.4
2			735.9	541.5	119.8
3			719.7	518.0	143.3
4			704.8	496.7	164.6
5					

$$(1) \frac{P_0^2}{P_0^2 - P_w^2} = 4.018$$

$$AOF = Q \left[\frac{P_0^2}{P_0^2 - P_w^2} \right]^n = 3.499$$

$$(2) \left[\frac{P_0^2}{P_0^2 - P_w^2} \right]^n = 4.018$$

Absolute Open Flow	3.499	Mhd @ 15,025	Angle of Slope α	45	Slope, n	1.000
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Remarks: Static bottom hole 899 psig, bomb set at 4110. Point alignment too flat. A slope of 45° was drawn through high rate of flow.

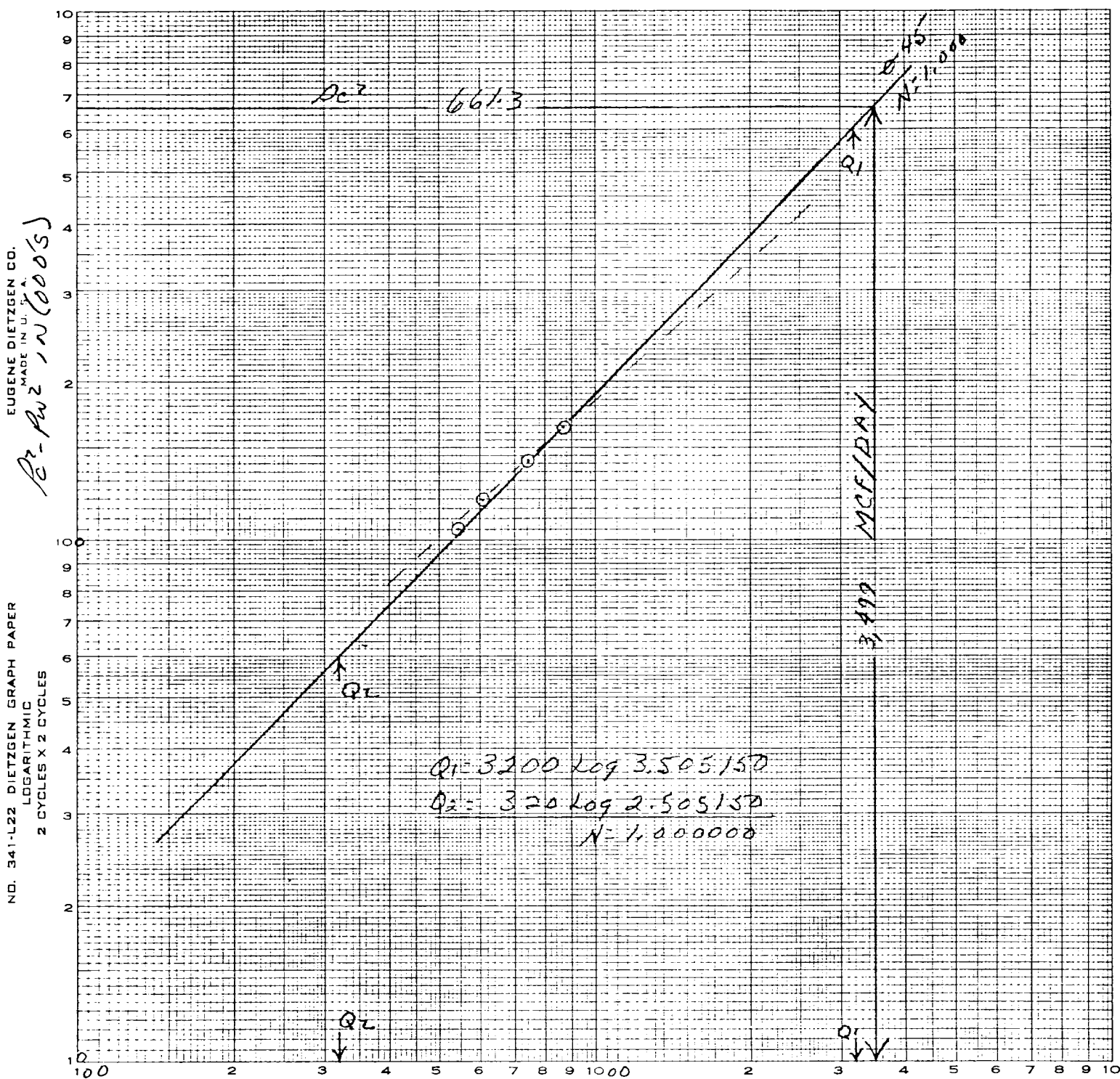
Approved By:	Conducted By: Johnny Ellis	Calculated By: Reggie Peston	Checked By:
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Mewbourne Oil Co.

"Federal F No. 1"

Unit L, Sec. 23, Twp. 18, Rge. 32

Lea County, N.M.



[illegible]



KENNETH D. REYNOLDS - ARTESIA
LESLIE K. EVERTSON - ROSWELL

DRILLING CO., INC. - OIL WELL DRILLING CONTRACTORS

P. O. Box 2055 ROSWELL, NEW MEXICO 88201
TELEPHONES: ARTESIA 505/746-6757
ROSWELL 505/623-5070

October 12, 1977

Mewbourne Oil Co.
1907 N. Cielo
Hobbs, New Mexico 88240
Att: Herman Cravey

Re: #1 Federal "F"

Gentlemen:

The following is a Deviation Survey of the above well:

492	1/4°	3019	2°
941	1°	3137	1 1/4°
1167	1/2°	3633	3/4°
1650	1/2°	4124	1/2°
2147	1°	4300	1/2° T.D.
2521	2 1/2°		

Yours very truly,

WEK DRILLING CO., INC.

Arnold Newkirk
Arnold Newkirk

STATE OF NEW MEXICO)
)
COUNTY OF CHAVES)

The foregoing was acknowledged before me this 12th day
of October, 1977 by Arnold Newkirk.

My Commission Expires:

April 9, 1980

Leslie K. Evertson
Notary Public

RECEIVED

FEB 21 1978

CA CONSULTATION COMM.
ALBUQUERQUE, N. M.