

Submit in duplicate to appropriate district office See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

RECEIVED

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

OCT 14 '94

O. C. D.

ARTESIA, OFFICE

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Mewbourne Oil Company				Lease or Unit Name Vandagriff "26" Federal			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 10/04/94		Well No. 1	
Completion Date 08/18/94		Total Depth 2202		Plug Back TD 1975		Elevation 3653 GP	
Csg. Size 4-1/2		Wt. d 10.5 4.052		Set At 2202		Perforations: From: 1527 To: 1537	
Tbg. Size 2-3/8		Wt. d 4.7 1.995		Set At 1571		Perforations: From: To:	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At N/A		Formation Lower Penrose Sd	
Producing Thru Tbg/Csg		Reservoir Temp. °F 101		Mean Annual Temp. °F 60		Baro. Press - P 13.2	
L 1571		H 1571		Gg .889		% CO ₂ .19	
				% N ₂ 40.2		% H ₂ S --	
				Prover --		Meter Run 2.067	
						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							20		65		24 Hr.
1.	2.067	x	.375	29.1	18.5	76	20	72	36	72	24 Hr.
2.											
3.											
4.											
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, F _{pv}	Rate of Flow Q, Mcfd
1.	.6689	27.974	42.3	.985	1.061	1.002	19.6
2.							
3.							
4.							
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.0839	546	1.534	.996	N/A	
2.					A.P. I. Gravity of Liquid Hydrocarbons	Deg.
3.					Specific Gravity Separator Gas	.889
4.					Specific Gravity Flowing Fluid	XXXXXX
5.					Critical Pressure	601
					Critical Temperature	356

P _c 65		P _c ² 4225		1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.703$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.153$	
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 61.8$		
1.	2420	51.6	2662	1563			
2.							
3.							
4.							
5.							

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 61.8$

Absolute Open Flow 61.8 Mcfd @ 15.025 Angle of Slope 40.6 Slope, n 1.1549

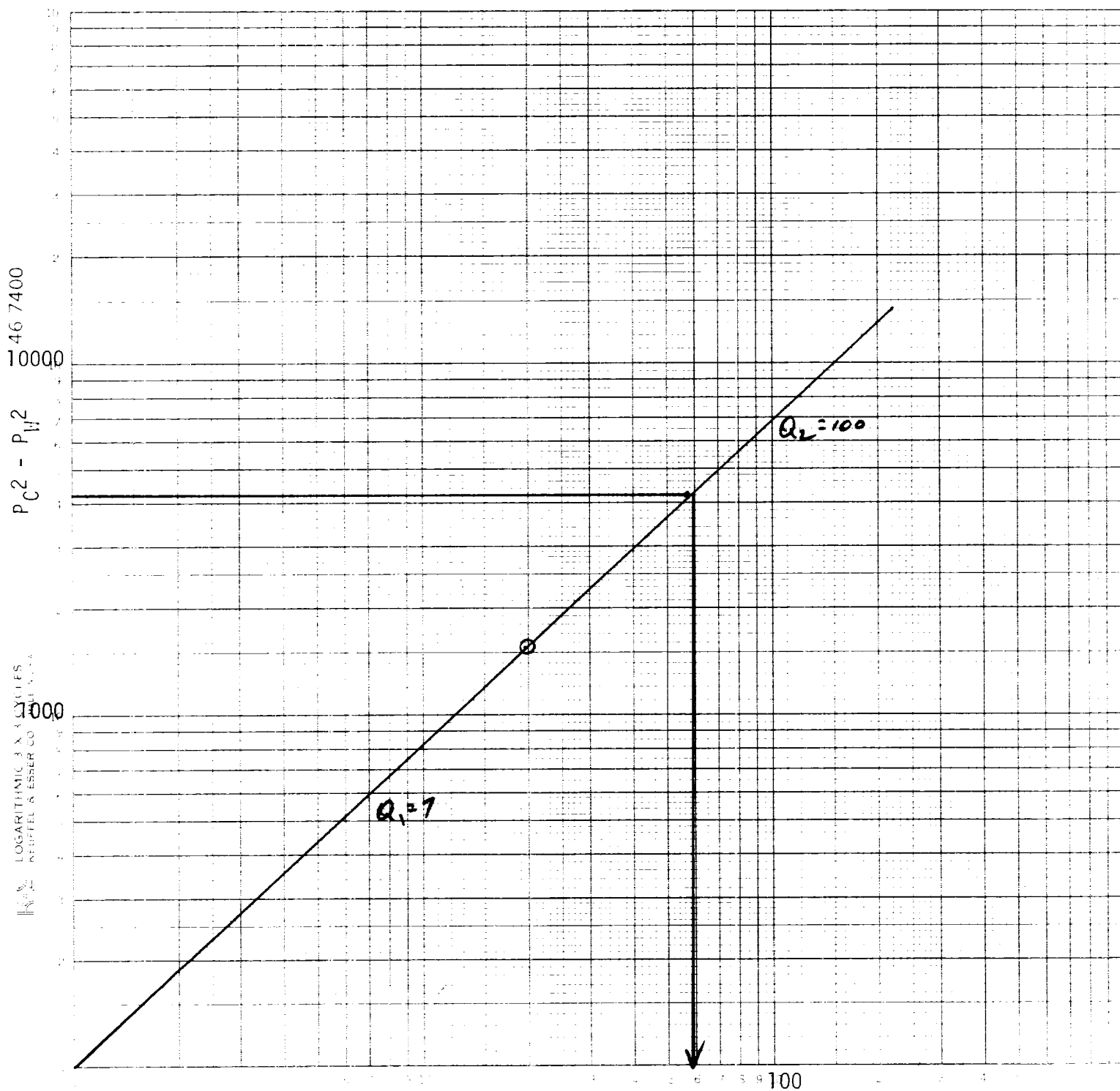
Remarks:

Approved By Division

Conducted By:

Calculated By:

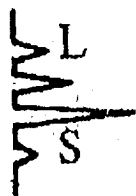
Checked By:



Q MCF

$AOF = 60 \text{ mcf/D}$

$n = 1.1549$



Laboratory Services, Inc.

1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR:

Mewbourne Oil Company
Attention: Mr. Greg Milner
P. O. Box 5270
Hobbs, New Mexico 88241

SAMPLE

IDENTIFICATION: Vandagriff "26" Fed. #1

COMPANY: Mewbourne Oil Co.

LEASE:

PLANT:

SAMPLE DATA: DATE SAMPLED: 10-11-94 10:00 AM GAS (XX) LIQUID ()
ANALYSIS DATE: 10-11-94 SAMPLED BY: Greg Milner
PRESSURE - PSIA 32.30 ANALYSIS BY: Vickie Walker
SAMPLE TEMP. °F
ATMOS. TEMP. °F

REMARKS:

COMPONENT ANALYSIS

COMPONENT		MOL PERCENT	GPM	
Hydrogen Sulfide	(H2S)			
Nitrogen	(N2)	40.20		
Carbon Dioxide	(CO2)	0.19		
Methane	(C1)	41.26		
Ethane	(C2)	8.70	2.320	
Propane	(C3)	5.42	1.490	
I-Butane	(IC4)	0.78	0.254	
N-Butane	(NC4)	1.77	0.558	
I-Pentane	(IC5)	0.51	0.186	
N-Pentane	(NC5)	0.49	0.177	
Hexane Plus	(C6)	0.68	0.278	
		100.00	5.263	
BTU/CU.FT. - DRY		862	MOLECULAR WT.	25.7541
AT 14.650 DRY		860		
AT 14.650 WET		845		
AT 14.73 DRY		864		
AT 14.73 WET		849		
SPECIFIC GRAVITY -				
CALCULATED		0.889		
MEASURED				

COMPANY NEUBOURNE OIL CO. LEASE VANDAGRIFF "26" FED WELL NO. #1 DATE

LOCATION: Unit F Section 26 Township 16 S Range 28 E

H	1571	L/H	1.00	G	.889	% CO ₂	.19	% N ₂	40.2	% H ₂ S	—
---	------	-----	------	---	------	-------------------	-----	------------------	------	--------------------	---

d 1.995 F_I - 018231 GH 1396-62
P_{Cr} 601 TABLE IX & X
T_{Cr} 356 TABLE IX & X

LINE	①	①
1 Q_m	.019	.020
2 T_w (W.H. °R)	.532	.532
3 T_s (B.H. °R)	.561	.561
4 $T = (\frac{T_w + T_s}{2})$	.546	.546
5 Z (Est.)	.985	.996
6 TZ	.538.3	.543.8
7 GH/TZ	2.595	2.568
8 e^S (Table XIV)	1.102	1.101
9 $1 - e^S$ (Table XIV)	.093	.092
10 P_t	49.2	49.2
11 $P_t^2/1000$	2.421	2.421
12 F_t (Table XV)	.018231	.018231
13 $F_c = F_t TZ$	9.814	9.914
14 $F_c Q_m$	.186	.1983
15 $L/H (F_c Q_m)^2$	.035	.039
16 $F_w = L/H (F_c Q_m)^2 (1 - e^S)$	.003	.004
17 $P_w^2 = P_t^2 + F_w$	2420.64	2420.64
18 $P_s^2 = e^S P_w^2$	2667.54	2667.54
19 P_s	51.65	51.65
20 $P = (\frac{P_t + P_s}{2})$	50.42	50.42
21 $P_r = (P/P_{cr})$	.0839	.0839
22 $T_r = (T/T_{cr})$	1.534	1.534
23 Z (Table XI)	.996	.996