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See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION

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

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator MEUBOURNE OIL COMPANY						Lease or Unit Name PECOS SLOPE 24 FEDERAL					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 5-24-95		Well No. 1			
Completion Date		Total Depth 4450		Plug Back TD 4397		Elevation		Unit Ltr. - Sec. - TWP - Rge. 24-8-25			
Csg. Size 4 1/2	Wt. 13.5	d 3.920	Set At 4450	Perforations: From: 4046 To: 4270				County CHAVES			
Tbg. Size 2-3/8	Wt. 4.7	d 1.995	Set At 3948	Perforations: From: To:				Pool			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple single						Packer Set At 3948		Formation ABO			
Producing Thru TBG		Reservoir Temp. °F		Mean Annual Temp. °F 60		Baro. Press - P _a 13.2		Connection			
L **4150	H 4150	Gg .673	% CO ₂ .20	% N ₂ 11.04	% H ₂ S	Prover		Meter Run 2.067		Taps FLG.	

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					60	525				
1.	2.067 X .750		120	1	66	510		PKR		1 hr.
2.	2.067 X .750		120	11	84	480				1 hr.
3.	2.067 X .750		160	37	99	425				1 hr.
4.	2.067 X .750		160	87	90	385				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, F _{pv}	Rate of Flow Q, Mcfd
1.	2.709	11.54	133.2	.9943	1.219	1.011	38
2.	2.709	38.28	133.2	.9777	1.219	1.011	125
3.	2.709	80.10	173.2	.9645	1.219	1.011	259
4.	2.709	122.75	173.2	.9723	1.219	1.011	400
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.20	526	1.49	.978	DRY GAS	
2.	.20	544	1.55	.979	DRY	
3.	.26	559	1.59	.973		
4.	.27	550	1.56	.972		
5.						

A.P. I. Gravity of Liquid Hydrocarbons DRY		Deg.	
Specific Gravity Separator Gas .673		XXXXXXXXXX	
Specific Gravity Flowing Fluid DRY		XXXXXX	
Critical Pressure *650		P.S.I.A.	
Critical Temperature *352		R	

P _c 522.9		P _c ² 273.42	
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NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1.		516.7	266.98	6.44
2.		495.4	245.42	28.0
3.		450.1	202.59	70.83
4.		417.8	174.56	98.86
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{2.76573}{P_c^2 - P_w^2}$

2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{2.58221}{P_c^2 - P_w^2}$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{1,033}{P_c^2 - P_w^2}$

1,033

47°

.93251

Absolute Open Flow 1,033	Mcf @ 15.025	Angle of Slope 47°	Slope, n .93251
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Remarks: * CORRECTED TO 11 % N₂ ** BHP INST HANGING @ THIS DEPTH.

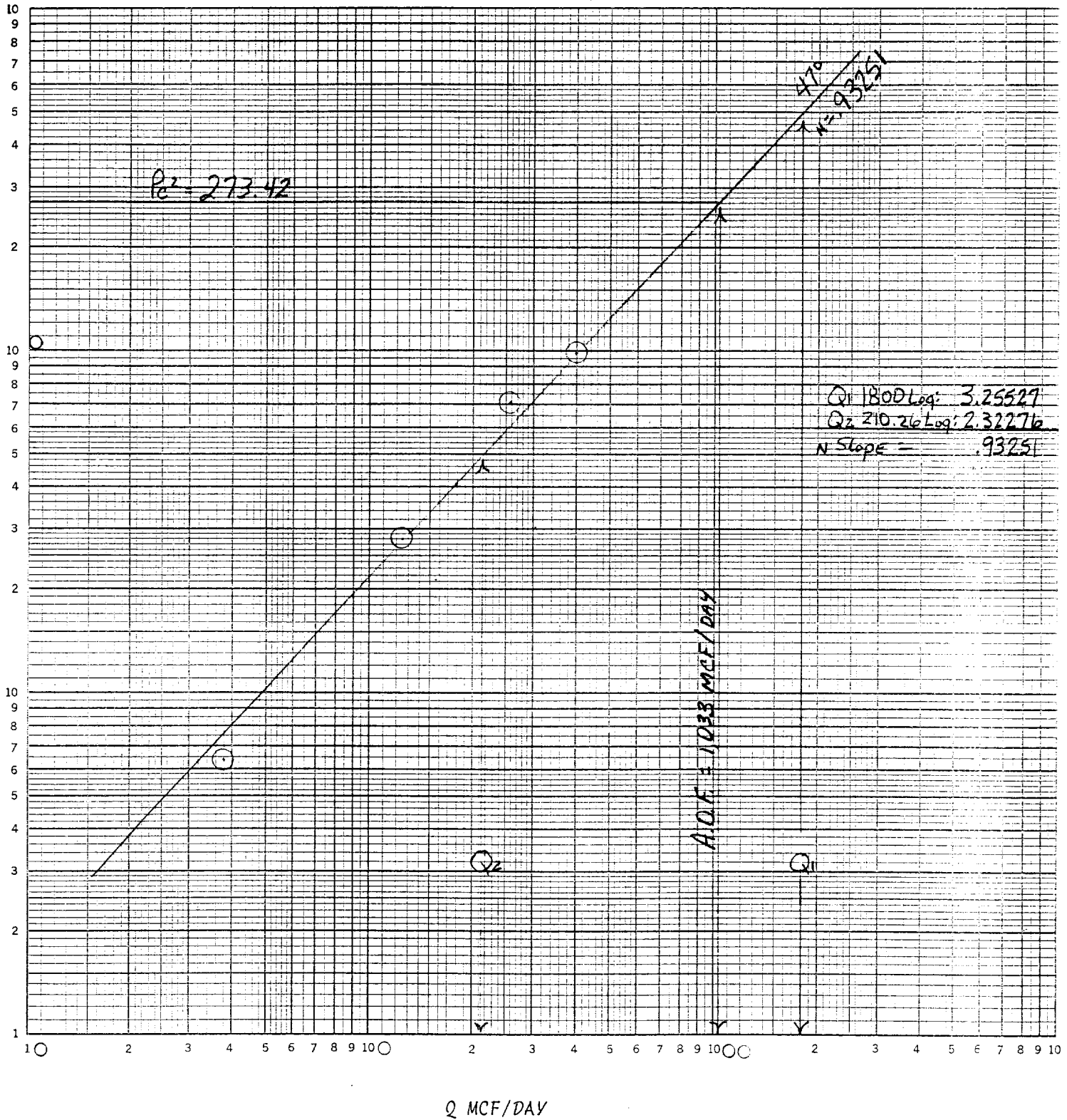
CALCULATED FROM KNOWN BHP'S.

Approved By Division	Conducted By: PRO WELL TESTER	Calculated By: KS	Checked By: BM
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MEWBOURNE OIL COMPANY
 PECOS SLOPE 24 FEDERAL, Well # 1
 CHAVES COUNTY, NEW MEXICO
 5-24-95

$p_c^2 - p_w^2$ (th.snds) 46 7400

LOGARITHMIC 3 X 3 CYCLES
 KEUFFEL & ESSER CO. MADE IN U.S.A.



WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURE (Pc or Pw)
FROM KNOWN BOTTOM HOLE PRESSURE (Pf or Ps)

FORM C-122F

COMPANY MEWBOURNE OIL

LEASE : PECOS SLOP WELL NO. : 24[#] 1

DATE 05-24-95

UNIT

SECTION :

TWNSHP :

RANGE :

L : 4150

H : 4150

L/H : 1

G/GMIX : 0.6730

CO2 : 0.2

N2 : 11.04

H2S :

GH : 2793.0

PCR : 650

TCR : 352

LINE		1	2	3	4	5	6	7	8
1	TW(W.H. R)	534	534	534	534	534	534	534	534
2	Ts(B.H. R)	575.5	575.5	575.5	575.5	575.5	575.5	575.5	575.5
3	T=(Tw+Ts/2)	554.8	554.8	554.8	554.8	554.8	554.8	554.8	554.8
4	Z (EST.)	0.971	0.908	0.908	0.911	0.914	0.917	0.918	0.921
5	TZ	539	504	504	505	507	508	509	511
6	GH/TZ	5.184	5.545	5.547	5.527	5.511	5.493	5.485	5.469
7	eS(TABLE XIV)	1.215	1.231	1.231	1.230	1.230	1.229	1.228	1.228
8	Pf or Ps	573.28	573.28	549.55	549.55	498.96	498.96	462.87	462.87
9	Pf2 or Ps2	328.6	328.6	302.0	302.0	249.0	249.0	214.2	214.2
10	Pc2=Pf/eS or Pw2=Ps2/eS	270.6	266.9	245.3	245.5	202.5	202.6	174.4	174.5
11	Pc or Pw	520	517	495	495	450	450	418	418
12	P=(Pw+Ps/2) or (Pc+Pf/2)	547	545	522	522	474	475	440	440
13	Pr=(P/Pcr)	0.84	0.84	0.80	0.80	0.73	0.73	0.68	0.68
14	Tr(T/Tcr)	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58
15	Z (TABLE XI)	0.908	0.908	0.911	0.911	0.917	0.917	0.921	0.921

PW 1 : 516.7 PW 2 : 495.4 PW 3 : 450.1 PW 4 : 417.8

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURE (Pc or Pw)
FROM KNOWN BOTTOM HOLE PRESSURE (Pf or Ps)

FORM C-122F

COMPANY MEWBOURNE OIL

LEASE : PECOS SLOP WELL NO. : 24# 1

DATE 05-24-95

UNIT

SECTION :

TWN SHP :

RANGE :

L :

4150

H : 4150

L/H : 1

G/GMIX : 0.6730

CO2 : 0.2

N2 : 11.04

H2S :

GH : 2793.0

PCR : 650

TCR : 352

LINE		1	2	3	4	5	6	7	8
1	TW(W.H. R)	534	534	534	534	534	534	534	534
2	Ts(B.H. R)	575.5	575.5	575.5	575.5	575.5	575.5	575.5	575.5
3	T=(Tw+Ts/2)	554.8	554.8	554.8	554.8	554.8	554.8	554.8	554.8
4	Z (EST.)	0.970	0.907	ERR	ERR	ERR	ERR	ERR	ERR
5	TZ	538	503	ERR	ERR	ERR	ERR	ERR	ERR
6	GH/TZ	5.189	5.550	ERR	ERR	ERR	ERR	ERR	ERR
7	eS(TABLE XIV)	1.215	1.231	ERR	ERR	ERR	ERR	ERR	ERR
8	Pf or Ps	580.27	580.27						
9	Pf2 or Ps2	336.7	336.7	ERR	ERR	ERR	ERR	ERR	ERR
10	Pc2=Pf/eS or Pw2=Ps2/eS	277.2	273.5	ERR	ERR	ERR	ERR	ERR	ERR
11	Pc or Pw	526	523	ERR	ERR	ERR	ERR	ERR	ERR
12	P=(Pw+Ps/2) or (Pc+Pf/2)	553	552	ERR	ERR	ERR	ERR	ERR	ERR
13	Pr=(P/Pcr)	0.85	0.85	ERR	ERR	ERR	ERR	ERR	ERR
14	Tr(T/Tcr)	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58
15	Z (TABLE XI)	0.907	0.907	ERR	ERR	ERR	ERR	ERR	ERR

~~Pw~~ 1 : 522.9 PW 2 : ERR PW 3 : ERR PW 4 : ERR
Pc

Laboratory Services, Inc.

1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR:

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

SAMPLE Pecos Slope "24"
IDENTIFICATION: Federal #1
COMPANY: Newbourne Oil Co.
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 5-24-95 12:45 PM GAS (XX) LIQUID ()
ANALYSIS DATE: 05-30-95 SAMPLED BY: Greg Milner
PRESSURE - PSIA 190.00 ANALYSIS BY: Vickie Walker
SAMPLE TEMP. °F 81.00
ATMOS. TEMP. °F

REMARKS:

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	11.04	
Carbon Dioxide (CO2)	0.20	
Methane (C1)	80.98	
Ethane (C2)	4.09	1.090
Propane (C3)	1.72	0.473
i-Butane (iC4)	0.33	0.106
n-Butane (nC4)	0.65	0.206
i-Pentane (iC5)	0.26	0.094
n-Pentane (nC5)	0.34	0.122
Hexane Plus (C6+)	0.39	0.158
	100.00	2.249
BTU/CU.FT. - DRY	1009	MOLECULAR WT. 19.4891
AT 14.650 DRY	1005	
AT 14.650 WET	987	
AT 14.73 DRY	1010	
AT 14.73 WET	992	
SPECIFIC GRAVITY - CALCULATED	0.673	
MEASURED		