

NEW MEXICO OIL CONSERVATION COMMISSION
 MATHIAS AND POINT BACK PRESSURE TEST FOR GAS WELL

35
 122 file
 Form C-122
 Revised 9-1-65
 file

APR 14 1977

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 3-31-77		SPUD DATE NOT AVAIL-	
Location ARVEDIA, OKLA				Connection None		ABLE 3-21-77	
Owner and Nancy Same Ranch Grayburg				Formation Grayburg (Premeir)		Unit C	
Completion Date 2-30-77		Total Depth 1591 1621		Plug Back To Elevation		Farm or Lease Name Barnhill	
Gas Size 15.5	Set At 1558 1588	Perforations: From open To hole		Well No. 1			
2 2/8	Set At 1591 1621	Perforations: From open To end		Unit C		Sec. 17	Twp. 14
Type Well - Single - Bradenhead - G.G. or G.O. Multiple				Packer Set At None		County Chaves	
Producing Thru		Reservoir Temp. °F		Mean Annual Temp. °F		State New Mexico	
1591		1591		13.2			
H 1591		Gg .720		% CO ₂		% N ₂	
						Prover	
						Meter Run	
						Taps	
6" Positive Chokes							

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	
5.				1272			1272		1272		72 hr.
1.	3	3/16		1260		66	1260	66	1261		45 min.
2.	6	1/4		1244		68	1244	68	1249		1 hr.
3.	6	5/16		1222		69	1222	69	1230		1 hr.
4.	6	3/8		1174		69	1174	69	1198		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 Fpv	Rate of Flow Q, Mcfd
1.	.6101		1273.2	.9943	1.179	1.182	1,076
2.	1.112		1257.2	.9924	1.179	1.183	1,935
3.	1.771		1235.2	.9915	1.179	1.169	2,989
4.	2.591		1187.2	.9915	1.179	1.162	4,178

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Met/boil.
1.	1.91	526	1.32	.716	No fluid	
2.	1.85	528	1.33	.715	A.P.I. Gravity of Liquid Hydrocarbons	Dep.
3.	1.85	529	1.33	.732	Specific Gravity Separator Gas .720	XXXXXX
4.	1.76	529	1.33	.741	Specific Gravity Flowing Fluid XXXXX	
					Critical Pressure 668	P.S.I.A.
					Critical Temperature 398	P.S.I.A.

NO.	P _r	P _w	P _r ²	P _w ²	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2} =$	(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n =$
1.	1274.2	1623.59	1623.59	1623.59	0.15	8.941	4.874
2.	1261.2	1590.63	1590.63	1590.63	61.11		
3.	1243.2	1545.55	1545.55	1545.55	106.19		
4.	1211.2	1467.01	1467.01	1467.01	184.73		

Actual Open Flow	20,362	Mcf @ 15.025	Angle of Slope	54.25	Slope, n	.723
Remarks: No fluid produced during test.						

Approved by Commission	Conducted by:	Calculated by:	Checked by:
	Marshall Morris	Stanley Leason	

LARGE FISH

BARNHILL No. 1

3-17-14-28

SHARPS (CONV), 1000 1000

$$Q_2 = 0.436; 206 = 5.869232$$

$$Q_1 = 0.436; 206 = 5.869232$$

$$\text{Slope } N = 1.023$$

0.436
0.436
0.436

P.O. 1.5 = 20,362 12/14/10

Q₂

Q₁

Y

Y

Y

00

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

Q - 1005/DAY

Mass Spec.	Chromatograph	Other	Analysis No. 396.01
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C.E. Lake & B.N. G. Money Jr.	State NM	County Chaves
C-17-14-28	Formation Grayburg Premier	Depth From To

Secured by	Department	
Wright		
Run by	Checked by	
Day		
Bomb Press.	Source Temp.	Atmos. Temp.

Actual	Calculated, Dry	SP. GR. @ 14.696 2 60° F	Actual	Calculated
	885.04			.720
Mercaptan as grs. Sulfur/100 SCF	0	0	Total	Sweet
			0	

Actual, Reid	Calculated
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COMPONENT	MOLE %	GPM	LIQ. VOL. %
Hydrogen Sulfide			
Carbon Dioxide			
Nitrogen	23.42		
Methane	57.31		
Ethane	5.67		
Propane	2.32	.638	
Isobutane	.27	.088	
Normal Butane	.66	.208	
Isopentane	.14	.051	
Normal Pentane	.16	.058	
Hexane	.05	.021	
Heptane			
	100.00	1.04	

DISTRIBUTION

ENGLER	
IBP	% @ 96
5	% @ 140
10	% @ 275
20	End Point
30	Recovery
40	Residue
50	Loss
60	
70	
80	
90	

REMARKS

Sec. 17, Twp 14, Rge 28

JNC
JNB
ES
Sam Smith
Res. Eng. - Test Section
File