

Submit to Appropriate
District Office
State Lease - 6 copies
Fee Lease - 5 copies
DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-105
Revised 1-1-89

WELL API NO. 30-025-26976
5. Indicate Type of Lease STATE ☒ FEE ☐
6. State Oil & Gas Lease No. L 4780
7. Lease Name or Unit Agreement Name NBR
8. Well No. 1
9. Pool name or Wildcat Atoka "Wildcat"

WELL COMPLETION OR RECOMPLETION REPORT AND LOG					
1a. Type of Well: OIL WELL ☐ GAS WELL ☒ DRY ☐ OTHER ☐					
b. Type of Completion: NEW WELL ☐ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☒ DDT RESVR ☐ OTHER ☐					
2. Name of Operator Pogo Producing Company					
3. Address of Operator P. O. Box 10340, Midland, TX 79702					
4. Well Location Unit Letter <u>J</u> : <u>1980</u> Feet From The <u>South</u> Line and <u>1980</u> Feet From The <u>East</u> Line Section <u>18</u> Township <u>22 S</u> Range <u>33 E</u> NMPM Lea County					
10. Date Spudded 8-18-80	11. Date T.D. Reached 1-10-81	12. Date Compl. (Ready to Prod) 7-19-91	13. Elevations (DF & RKB, RT, GR, etc.) 3631.2 GR	14. Elev. Casinghead W/A	
15. Total Depth 15372	16. Plug Back T.D. 14625	17. If Multiple Compl How Many Zones?	18. Intervals Drilled By Rotary Tools 0-15372	Cable Tools	
19. Producing Interval(s), of this completion - Top, Bottom, Name 13921-13927 Atoka					20. Was Directional Survey Made no
21. Type Electric and Other Logs Run GR, CNL, DLL, MSFL, CBL					22. Was Well Cored no

CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB/FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8	54.50	762	17 1/2	870 circ 200 sks	
10 3/4	40.5 & 51	5006	13 3/8	3135 sks	
7 5/8	26.4 & 29.7	12066	9 1/2	2040 sks	

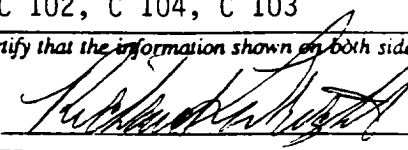
LINER RECORD				TUBING RECORD		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET
5"	11768	15120	580		2 3/8	13747
						13749

26. Perforation record (interval, size, and number) 13921-27 .5" 24 holes	27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.	
	DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED

PRODUCTION							
28. Date First Production 7-17-91		Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing				Well Status (Prod. or Shut-in) Producing	
Date of Test 7-18-91	Hours Tested 4	Choke Size 1 1/4 5.5/16 4/16	Prod n For Test Period 5/16 4	Oil - Bbl. 6.5	Gas - MCF 345	Water - Bbl. 0	Gas - Oil Ratio 53,077/1
Flow Tubing Press.	Casing Pressure 0	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.) 56.6°	

29. Disposition of Gas (Sold, used for fuel, vented, etc.) Vented	Test Witnessed By Merv Buecker
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30. List Attachments C 122, C 102, C 104, C 103
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31. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief	
Signature 	Printed Name Richard L. Wright Title Div. Op. Super. Date 7-24-91

OIL CONSERVATION DIVISION

P. O. BOX 2088

Form C-122
Revised 10-1-78STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

SANTA FE, NEW MEXICO 87501

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special Test Date 07-18-91

Company Pogo Producing Co. Connection Vented

Pool Wildcat Formation Atoka Unit

Completion Date 07-17-91 Total Depth 15372 Plug Back TD 14675 Elevation

Form or Lease Name NBR State Federal Well No. 1

Casing Size 5" H. 15120 Perforations From 13921 To 13927

Tubing Size 2 3/8 H. 13749 Perforations From To

Type Well - Single - Greenhead - G.G. or G.O. Multiple Single

Producing thru Tubing Reservoir Temp. °F Mean Annual Temp. °F 60 Base Press. - P_g 13.2 State New Mexico

L *13921 H *13921 G₁ .661 % CO₂ .36 % N₂ 1.42 % H₂S Prover Meter Run 3.068 Taps Flange

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. in. Hg	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
51							5865		PKR		4 hrs.
1.	3	X	1.750	600	7.50	70	5340		PKR		1 hr.
2.	3	X	1.750	600	13.00	80	4905		PKR		1 hr.
3.	3	X	1.750	600	24.00	82	4845		PKR		1 hr.
4.	3	X	1.750	600	28.00	80	4595		PKR		1 hr.
5.											

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h/P_m}$	Pressure P _m	Flow Temp. Factor F _L	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mscf
1	15.61	67.82	613.2	.9905	1.230	1.062	1,370
2	15.61	89.28	613.2	.9813	1.230	1.056	1,776
3	15.61	121.31	613.2	.9795	1.230	1.056	2,409
4	15.61	131.03	613.2	.9813	1.230	1.056	2,607
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 52.3 Mscf/bbl.	A.P.I. Gravity of Liquid Hydrocarbons 56.6 @ 60° Deg.	Specific Gravity Separator Gas .661	Specific Gravity Flowing Fluid x x x x x	Critical Pressure **669 P.S.I.A.	Critical Temperature **375 °R
1.	.91	530	1.41	.886						
2.	.91	540	1.44	.896						
3.	.91	542	1.44	.896						
4.	.91	540	1.44	.896						
5.										

P_c 5878.2 P_c² 34553.2

NO.	P ₁ ²	P ₂	P ₂ ²	P ₁ ² - P ₂ ²
1	5364.4	28776.8	5776.4	
2	4937.3	24376.9	10176.3	
3	4893.1	23942.1	10610.8	
4	4649.7	21619.7	12933.5	
5				

(1) $\frac{P_c^2}{P_1^2 - P_2^2} = 2.672$ (2) $\left[\frac{P_c^2}{P_1^2 - P_2^2} \right]^n = 2.263$

AOF = 0 $\left[\frac{P_c^2}{P_1^2 - P_2^2} \right]^n = 5.900$

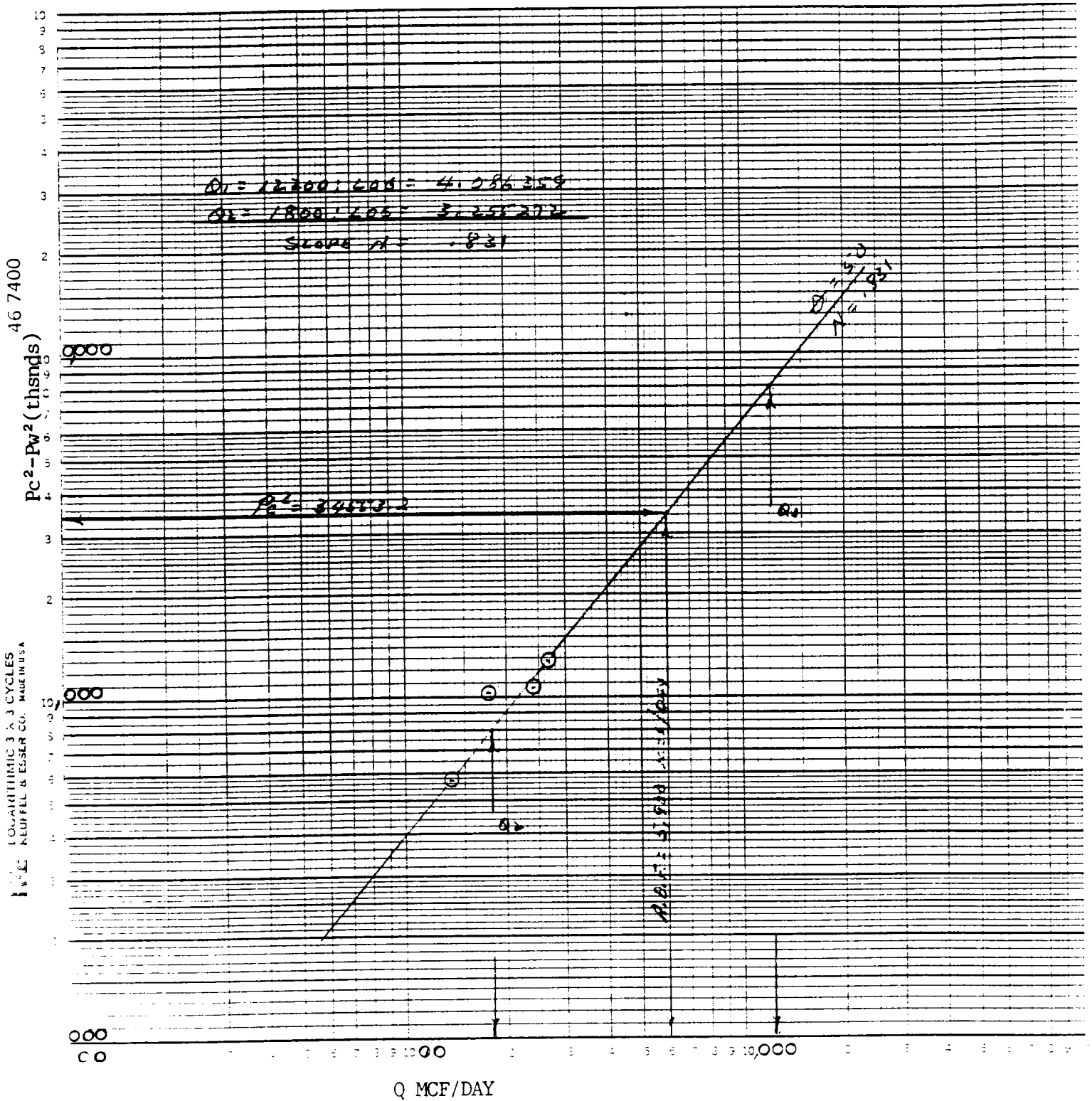
Absolute Open Flow 5,900 Mscf @ 15.023 Angle of Slope 50 Slope, n .831

Remarks: **=equivalent length calc. 172' 5" csg. & 13749' 2 3/8"=13921' total to perfs.
 **=corrected to 1.42% N₂

Well made 6.5 BBLS 56.6 API GR. CONDENSATE during test

Calculated By Checked By

Pogo Producing
 NBR State Federal, Well #1
 18 - 22-S - 33-E
 Lea County, New Mexico
 07-18-91



PRO WELL TESTING & WIRELINE FIELD DATA SHEET

COMPANY Pogo Producing COMPANY REPRESENTATIVE Jim Lunday
 LEASE NAME & NO. NBR State Federal #1 TEST DATE & TIME 07-18-91 / 1:45PM
 COUNTY Lea STATE New Mexico ELEVATION 3619 G.L. FORMATION Atoka
 UNIT _____ SECTION 18 TOWNSHIP 22-S RANGE 33-E
 TEST TYPE X INITIAL _____ ANNUAL _____ SPECIAL _____ TYPE WELL Single
 COMPLETION DATE 07-17-91 TDE 15372 PBTDE 14675 PKR@ 13749
 CONNECTION Air METER RUN 3.068 TAPS Flange
 CASING SIZE 5" WT. 18" DIA. _____ SET@ 15120
 TUBING SIZE 2 3/8 WT. 4.7 DIA. _____ SET@ 13749
 PERFORATIONS FROM 13921 TO 13927
 PRODUCING THRU Tubing

TIME DATE	ELAP. HR	TBG. PRES	CASING PRES	W/H TEMP	METER OR PROVER			ORIF. SIZE	CHOKE SIZE	MCFD	REMARKS
					PRES	DIFF	TEMP				
1:45PM	5 1/2 hrs	5865							645		
1:45PM	.00	5865	PKR		600	8"	88°	1.750	4/64	1355	
2:00	.15	5332	PKR		600	8"	85°	1.750	4/64	1355	71
2:15	.30	5310	PKR		600	9"	73°	1.750	4/64	1438	
2:30	.45	5325	PKR		600	8"	70°	1.750	4/64	1355	
2:45	1.00	5340	PKR		600	7 1/2"	70°	1.750	4/64	1312	End Rate I
3:00	1.15	4780	PKR		600	16"	70°	1.750	5.5/64	1917	
3:15	1.30	4835	PKR		600	15"	70°	1.750	5.5/64	1857	76
3:30	1.45	4890	PKR		580	14"	76°	1.750	5.5/64	1764	
3:45	2.00	4905	PKR		600	13"	80°	1.750	5.5/64	1728	End Rate II
4:00	2.15	5045	PKR		590	20"	80°	1.750	6/64	2126	
4:15	2.30	5075	PKR		590	19"	81°	1.750	6/64	2072	70
4:30	2.45	5092	PKR		590	19"	84°	1.750	6/64	2072	
4:45	3.00	4845	PKR		600	24"	82°	1.750	6/64	2348	End Rate III
5:00	3.15	4580	PKR		605	30"	79°	1.750	6.5/64	2636	
5:15	3.30	4545	PKR		600	30"	82°	1.750	6.5/64	2625	103
5:30	3.45	4612	PKR		600	29"	80°	1.750	6.5/64	2582	
5:45	4.00	4595	PKR		600	28"	80°	1.750	6.5/64	2537	End Rate IV

6.5 BBL CONDENSATE

API GRAVITY 56.6 @ 60°



Laboratory Services

1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: Pro Well Testing & Wireline
Attention: Mr. Merv Buecker
P. O. Box 791
Hobbs, New Mexico 88240

SAMPLE
IDENTIFICATION: NBR State #1
COMPANY: Pogo Production
LEASE:
PLANT:

SAMPLE DATA:	DATE SAMPLED:	7/18/91 5:00PM	GAS (XX)	LIQUID ()
	ANALYSIS DATE:	07-18-91	SAMPLED BY:	Pro Well - Davis
	PRESSURE - PSIG	600.00	ANALYSIS BY:	Rolland Perry
	SAMPLE TEMP. °F	82.00		
	ATMOS. TEMP. °F	99.00		

REMARKS:

COMPONENT ANALYSIS

COMPONENT		MOL PERCENT	GPM	
Oxygen	(O2)			
Hydrogen Sulfide	(H2S)			
Nitrogen	(N2)	1.42		
Carbon Dioxide	(CO2)	0.36		
Methane	(C1)	86.61		
Ethane	(C2)	6.80	1.814	
Propane	(C3)	2.61	0.717	
I-Butane	(IC4)	0.60	0.196	
N-Butane	(NC4)	0.64	0.202	
I-Pentane	(IC5)	0.32	0.117	
N-Pentane	(NC5)	0.15	0.054	
Hexane	(C6)	0.49	0.201	
Heptanes Plus	(C7+)	0.00	0.000	
		100.00	3.301	
BTU/CU.FT. - DRY		1143	MOLECULAR WT	19.1290
AT 14.650 DRY		1140		
AT 14.650 WET		1120	26# GASOLINE -	0.439
AT 15.025 DRY		1169		
AT 15.025 WET		1149		
SPECIFIC GRAVITY -				
CALCULATED		0.561		
MEASURED		0.000		

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NEW MEXICO G.O.R./G. MIX

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NO. OF BBLs PRODUCED = 6.5
API GRAVITY @ 60 DEG. = 56.6

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SPECIFIC GRAVITY OF GAS = 0.6610

XX
TOTAL GAS PRODUCED = 340

G.O.R. = 52.321 ✓

G.MIX = 0.716 ✓

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Equivalent Diameter Program
Author: Bob Murray
Date: December 26, 1990

L1 =	172 ft.	L5 =	0 ft.	L6 =	13921 ft.
D1 =	4.494 in.	D5 =	1 in.	C =	0.10797

L2 =	13749 ft.	L6 =	0 ft.
D2 =	1.995 in.	D6 =	1 in.

Deff = 2.000 in. /

L3 =	0 ft.	L7 =	0 ft.	Fr =	0.01767 /
D3 =	1 in.	D7 =	1 in.		

L4 =	0 ft.	L8 =	0 ft.
D4 =	1 in.	D8 =	1 in.