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appropriate district office
See Rule 401 & Rule 1122

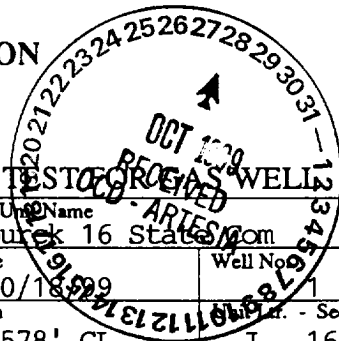
State of New Mexico
Energy, Minerals and Natural Resources Department

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 TESTS FOR PRODUCING WELLS



Operator Yates Drilling Company				Lease or Unit Name Spurk 16 State			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 10/18/99		Well No. 1	
Completion Date 07/22/99		Total Depth 10320		Plug Back TD 10265		Elevation 3578' GL	
Csg. Size 4 1/2		Wt. d 11.6# 4.000		Set At 10320		Perforations: From: 9958 To: 10025	
Tbg. Size 2 3/8		Wt. d 4.7# 1.995		Set At 9865		Perforations: From: Open To: Ended	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 9865		Formation Morrow	
Producing Thru Tbg		Reservoir Temp. °F 163.9@9993		Mean Annual Temp. °F 60		Baro. Press - P _a 13.2	
L 9865		H 9865		G _g 0.638		% CO ₂ 0.523	
				% N ₂ 0.667		% H ₂ S	
				Prover		Meter Run 4.026	
						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						2123		PACKER		24 Hrs
1.	4.026 x 2.875		360	4.00	72	2046		"		*30 min
2.	4.026 x 2.875		395	17.00	69	1902		"		30 min
3.	4.026 x 2.875		400	35.00	66	1694		"		30 min
4.	4.026 x 2.875		400	60.00	68	1441		"		30 min
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 _{pv}	Rate of Flow Q, Mcfd
1.	46.01	38.64	373.2	.9887	1.252	1.061	2,335
2.	46.01	83.30	408.2	.9915	1.252	1.039	4,943
3.	46.01	120.26	413.2	.9943	1.252	1.040	7,164
4.	46.01	157.46	413.2	.9924	1.252	1.041	9,371
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	1.00	532	1.44	.889	29.707	
2.	.60	529	1.43	.926	A.P. L Gravity of Liquid Hydrocarbons 59.5 @ 60°	Deg.
3.	.61	526	1.42	.924	Specific Gravity Separator Gas .638	XXXXXXXXXX
4.	.61	528	1.43	.923	Specific Gravity Flowing Fluid XXXXX	GMIX= .733
5.					Critical Pressure 670 P.S.I.A.	668 P.S.I.A.
					Critical Temperature 368 R	401 R

P _c 2136.2	P _c ² 4563.4			
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.		2095.6	4391.4	171.9
2.		2084.1	4343.4	219.9
3.		2081.0	4330.6	232.7
4.		2130.2	4537.8	25.5
5.				

$$1) \frac{P_c^2}{P_c^2 - P_w^2} = 19.61 \quad (2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 19.61$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 140,486$$

Absolute Open Flow	140,486	Mcf/d @ 15.025	Angle of Slope θ	45	Slope, n	1.000
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Remarks: * All rates stabilized in 30 minutes
Well produced 16.7 bbls condensate in 2.0 hours

Approved By Division	Conducted By: Jarrel Services, Inc.	Calculated By: Bob Murray	Checked By: Bob Murray
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