

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

SF
File
122
Form O.C. 1
Revised 9-1-65

NO. 2 1979

Type Test: ☒ Initial ☐ Annual ☐ Special				Test Date: 7-15-79	
Company: Esso Inc				Connection: ARTESIA, OFFICE	
Well: Sand Ranch - Atoka				Formation: Atoka	
Completion Date: 6-26-79		Total Depth: 9950		Plug Back TO: 9950	
				Elevation: 3983.5 ft.	
Casing Size: 2 1/2		Set At: 9950		Perforations: From 9284 To 9382	
Well No.:				Form or Lease Name: EXXON Federal	
Casing Size: 2 3/8		Set At: 9206		Perforations: From To	
Unit: E		Sec: 24		Twp: 10 Rge: 25	
Type Well: Single				Packer Set At: 9206	
Producing Thru: Tbg.		Reservoir Temp. *F: a		Mean Annual Temp. *F:	
Baro. Press. - P _s		State: New Mexico			
L: 9333	H: 9333	G _g : .729	% CO ₂ : 9.32	% N ₂ : 1.11	% H ₂ S: Trace
Prover:		Meter Run: X		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	
1.	2.067" x 1.250"			408.2	2.1	81	1737	81			1 hr.
2.	2.067" x 1.250"			416.1	2.9	83	1626	81			1 hr.
3.	2.067" x 1.250"			424.2	5.1	87	1473	84			1 hr.
4.	2.067" x 1.250"			424.2	6.8	92	1305	90			1 hr.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{P_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mscf
1.	8.120	29.748	421.4	.9804	1.171	1.039	258
2.	8.120	35.284	429.3	.9786	1.171	1.040	341
3.	8.120	47.231	437.4	.9750	1.171	1.039	455
4.	8.120	54.537	437.4	.9706	1.171	1.038	522
5.							

NO.	P _s	Temp. *R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/STB
1.	597	541	1.416	.926	A.P.I. Gravity of Liquid Hydrocarbons	None Produced
2.	608	543	1.421	.925	Specific Gravity Separator Gas	.729
3.	620	547	1.432	.926	Specific Gravity Flowing Fluid	XXXXXX
4.	620	552	1.445	.923	Critical Pressure	706
5.					Critical Temperature	382

NO.	P _s	P _w	R _w ²	P _s ² - R _w ²	(1) $\frac{P_s^2}{P_s^2 - P_w^2} = \frac{7077}{1044}$	(2) $\left[\frac{P_s^2}{P_s^2 - P_w^2} \right]^n = 2.604$
1.		2456.2	6033	1044		
2.		2300.2	5291	1786		
3.		2079.2	4323	2754		
4.		1867.2	3486	3591		
5.						

Absolute Open Flow: 750		Mcf @ 15.025	Angle of Slope: 63.5°	True, q _{sc} : .500
Remarks:				

Approved By: Commission:	Conducted By:	Calculated By:	Checked By:
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