1-OCC
1-File
1-C-102

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED
AUG 21 1978
O. C. C.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 8-16-78	
Company: Atlantic Richfield Co.		Connection: El Paso Nat. Gas Co.			
Pool: S. Empire ~~South~~ Morrow Gas		Formation: ~~Empire~~ Morrow Gas		Unit	
Completion Date: 6-9-78	Total Depth: 10860	Plug Back TD: 10850	Elevation: 3688.5	Farm or Lease Name: State BV	
Csg. Size: 7 5/8 / 4 1/2 Liner	Wt.: 26.4 / 11.6	d: 6.969 / 4.00	Set At: 6805 / 6562-10860	Perforations: From 10685 To 10765	Well No.: 1
Tbg. Size: 2 3/8	Wt.: 4.7	d: 1.995	Set At: 10645	Perforations: From Open To Ended	Unit: J; Sec.: 25; Twp.: 17S; Rge.: 28E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 10645		County: Eddy	
Producing Thru: tbg	Reservoir Temp. °F: 166° @ 10779	Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2	State: New Mexico	

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
10647	10647	0.639	0.62	0.55	0	-	6"	Flg

	FLOW DATA				TUBING DATA		CASING DATA		
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	Duration of Flow
SI					2911		Pkr		48 hrs
1.	6 x 3.000	765	5.29	66	2812	76			1.25 hrs
2.	6 x 3.000	790	16.00	51	2607	77			1.25 hrs
3.	6 x 3.000	829	32.49	48	2302	77			1.0 hr
4.	6 x 3.000	854	49.00	55	1962	72			1.75 hrs
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	44.51	64.16	778.2	0.9943	1.251	1.070	3801
2	44.51	113.36	803.2	1.009	1.251	1.084	6904
3	44.51	165.42	842.2	1.012	1.251	1.088	10142
4	44.51	206.14	867.2	1.005	1.251	1.089	12562
5							

NO.	P_t	Temp. °R	T_r	Z
1	1.16	526	1.45	0.873
2.	1.19	511	1.40	0.851
3.	1.25	508	1.40	0.845
4.	1.29	515	1.41	0.844
5				

Gas Liquid Hydrocarbon Ratio: 189.6 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 58.0 Deg.
Specific Gravity Separator Gas: 0.639 XXXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX 0.654
Critical Pressure: 673 P.S.I.A. 670 P.S.I.A.
Critical Temperature: 364 R 375 R

P_c 4013.2 P_c^2 16105.8

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		3996.2	15969.6	136.2
2		3978.2	15826.1	279.7
3		3951.2	15612.0	493.8
4		3929.2	15438.6	667.2
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 24.1394$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 9.3768$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 117792$

Absolute Open Flow: 117792 Mcfd @ 15.025 Angle of Slope θ: 54.90° Slope, n: 0.703

Remarks: BHP recorded is at 10725 (mid point of perforations)
10 Bbl of distillate (58° API) produced during test

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	J. D. Cogburn	R. Dailey	L. C. Hudry