NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 9-1-65

MULTI POINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED
APR 25 1966
O. C. C.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 3-30-66	
Company: The Atlantic Refining Co.			Connection: Natural Gas Pipeline Co. of America		
Pool: Indian Basin			Formation: Upper Penn Gas		Unit
Completion Date: 9-13-65	Total Depth: 9702'		Plug Back TD: 8170'	Elevation	Farm or Lease Name: Smith Federal
Csg. Size: 4-1/2"	Wt.: 11.6&10.5	d: 4.052-4.000	Set At: 8120.00	Perforations: From 7500' To 7550'	Well No.: 1
Tbg. Size: 2-3/8	Wt.: 4.70	d: 1.995	Set At: 7404.72	Perforations: From Open To Ended	Unit: G; Sec.: 1; Twp.: 22; Rge.: 23
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 7394.07		County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 139° @ 7500		Mean Annual Temp. °F	Baro. Press. – P_a: 13.2	State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
7500	7500	.641					3"	Flange

	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	3" x 1.375				2359	75	pkr		SI 27 hrs
1.	3" x 1.375	1110	49.00	81	2238	75			4
2.	3" x 1.625	1110	38.44	75	2188	75			1
3.	3" x 1.625	1110	55.50	75	2120	75			1
4.	3" x 1.625	1110	79.21	74	2037	75			1
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	9.249	260.0	1113.2	.9804	1.249	1.099	3236
2	13.24	230.3	1113.2	.9859	1.249	1.103	4175
3	13.24	276.7	1113.2	.9859	1.249	1.103	4976
4	13.24	330.5	1113.2	.9868	1.249	1.105	5960
5							

NO.	P_r	Temp. °R	T_r	Z
1	1.661	541	1.454	.827
2	1.661	535	1.438	.821
3	1.661	535	1.438	.821
4	1.661	534	1.435	.819
5				

Gas Liquid Hydrocarbon Ratio 103.7 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 59.4 Deg.
Specific Gravity Separator Gas .641 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 670 P.S.I.A. 670 P.S.I.A.
Critical Temperature 372 R 372 R

P_c 2372.2 P_c^2 5,627.3

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	5067.9	2311.5	5343.0	284.3
2	4845.3	2281.3	5204.3	423.0
3	4550.5	2258.5	5100.8	526.5
4	4162.4	2218.1	4920.0	707.3
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 7.956$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.919$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 23.36$

Absolute Open Flow 23,360 Mcfd @ 15.025 Angle of Slope θ Slope, n .659

Remarks: Because of plant and pipeline conditions we were unable to draw wellhead pressure down to 75% of shut-in pressure.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Norman Truitt	Gerald E. Henderson	