

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED BY
AUG 31 1983O. C. D.
ARTESIA, OFFICE

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 6/19/82	
Company Exxon Company USA		Connection None	
Well Burton Flats, <i>Morrow</i>		Formation Morrow	
Completion Date 6/19/82		Total Depth 11467' <i>11,470</i>	
Plug Back TD 11378'		Elevation 3236' GL <i>3266</i>	
Farm or Lease Name Yates Federal C <i>Prod.</i>		Well No. 1	
Casing Size 5" <i>18.0</i>		Casing Weight 4.276	
Casing Depth 11467'		Casing Perforations From 11040' To 11110'	
Tubing Size 2 7/8" <i>6.5</i>		Tubing Weight 2.441	
Tubing Depth 10950'		Tubing Perforations From Open To Ended	
Type Well - Single - Drivenhead - G.C. or G.O. Multiple Single		Packer Set At 10950'	
Producing Through Tubing		Reservoir Temp. °F 184 @ 10950'	
Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 11075'		H -	
C _g 0.5951		% CO ₂ 0.983	
% N ₂ 0.438		% H ₂ S -	
Prover -		Meter Run 2.900 X 1.000	
Taps Flg.			

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. DWT	Temp. °F	Press. p.s.i.g.		Temp. °F
1	2.900	5.7/64	1.00	495	2	80	2788	60	PACKER		66.25 hrs
2	2.900	7/64	1.00	495	19	90	2613	60			1.0 hr
3	2.900	9.1/64	1.00	495	24	83	2185	60			1.0 hr
4	2.900	11.3/64	1.00	500	52	92	1844	60			1.0 hr
5							1411	60			1.0 hr

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 _{sp}	Rate of Flow Q, Mscf/d
1	4.801	31.88	508.2	0.9813	1.296	1.036	201.66
2	4.801	98.26	508.2	0.9723	1.296	1.033	614.06
3	4.801	110.44	508.2	0.9786	1.296	1.035	696.00
4	4.801	163.36	513.2	0.9706	1.296	1.032	1018.13
5							

NO.	R ₁	Temp. °R	T ₁	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcf/ubl.
1	0.75	540	1.54	0.932	A.P.I. Gravity of Liquid Hydrocarbons	-	Deg.
2	0.75	550	1.57	0.937	Specific Gravity Separator Gas	0.5951	XXXXXX
3	0.75	543	1.55	0.934	Specific Gravity Flowing Fluid	XXXXX	
4	0.76	552	1.58	0.939	Critical Pressure	675	P.S.I.A.
5					Critical Temperature	350	R

NO.	P ₁ ²	P _w	P ₂ ²	P ₁ ² - P ₂ ²
1	3409.2	11622.6	1672.2	
2	2894.2	8376.4	4918.4	
3	2626.2	6896.9	6397.9	
4	1947.2	3791.6	9503.2	
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.399$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.371$

LOG = 0 $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1396$

Absolute Open Flow 1396		Mscf @ 15.025	Angle of Slope @ 46° 49'	Slope, n 0.939
-------------------------	--	---------------	--------------------------	----------------

Remarks: * BOTTOM HOLE PRESSURE @ (-7813)11075' USED FOR PRESSURE CALCULATIONS
WELL PRODUCED NO FLUID DURING TEST
7" CASING SET @ 10395'

Approved By Division	Conducted By JARREL WELL TESTING, INC	Calculated By D. Dickerson	Checked By D. Dickerson
----------------------	--	-------------------------------	----------------------------