

Copy to SF
C-122

NEW MEXICO OIL CONSERVATION COMMISSION

HORIZON OIL & GAS COMPANY MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL
SPEARMAN, TEXAS

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 9-1-73		SEP 26 1973	
Company HORIZON OIL & GAS CO			Connection TO AIR		
Pool GRAYBURG <i>Morrow</i>			Formation MORROW		
Completion Date 8-16-73		Total Depth 10,890'		Plug Back TD 10,870' ⁷⁹⁰	
Elevation 3571 GR.		Farm or Lease Name STATE 28 <i>Con</i>			
Csg. Size 5 1/2"	Wt. d	Set At 10,870'	Perforations: From 10,709' To 10,722'		Well No. 2
Thq. Size 2 1/16"	Wt. d	Set At 10,658'	Perforations: From To		Unit K
Type Well - Single - Bradenhead - G.C. or G.O. Multiple GAS - GAS MULTIPLE			Packer Set At 10,658'		County EDDY
Producing Thru TUBING		Reservoir Temp. °F 158° @ 10,500	Mean Annual Temp. °F 60°		State NEW MEXICO
L 10,658'	H 10,658'	G _g 0.6515	% CO ₂ 0.45	% N ₂ 0.36	% H ₂ S -0-
Prover 3"			Meter Run 3"		Taps FLANGE

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.	
SI							2001.0		PACKER	CHOKE
1.	3.00" X 1.00"		490.0	6.5	90	1328.0	72		6/64"	120 MIN.
2.	3.00" X 1.00"		490.0	10.0	90	960.0	72		9/64"	60 "
3.	3.00" X 1.00"		360.0	10.0	78	721.0	66		11/64"	60 "
4.	3.00" X 1.00"		330.0	13.0	97	459.0	72		14/64"	60 "
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	4.789	57.19	503.2	0.9723	1.239	1.043	344.1
2	4.789	70.94	503.2	0.9723	1.239	1.043	426.9
3	4.789	61.09	373.2	0.9831	1.239	1.035	368.8
4	4.789	66.80	343.2	0.9662	1.239	1.028	393.7
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.	
1.	0.75	550	1.47	0.920	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.	
2.	0.75	550	1.47	0.920	Specific Gravity Separator Gas _____ 0.6515	
3.	0.56	538	1.43	0.933	Specific Gravity Flowing Fluid _____ XXXXX	
4.	0.51	557	1.49	0.947	Critical Pressure _____ 670 P.S.I.A.	
5.					Critical Temperature _____ 375 °R	

NO.	P _t ²	P _w	P _w ²	P _t ² - P _w ²
1	1993.2	3972.8	4368.9	
2	1476.2	2179.2	6162.5	
3	1250.2	1563.0	6778.7	
4	965.2	931.6	7410.1	
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.9093$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 475.5$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.3819$

Absolute Open Flow	475.5	Mcf/d @ 15.025	Angle of Slope °	63.4°	Slope, n	0.500 LIMIT
--------------------	-------	----------------	------------------	-------	----------	-------------

Remarks: BOTTOM HOLE PRESSURE MEASURED WITH KUSTER GAUGE @ 10,500 FEET			
Approved By Commission:	Conducted By: DON TYSON	Calculated By: ROY WEST	Checked By: J.W.W.