

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 9/30-10/1-86	
Company HNG OIL COMPANY		Connection TRANSWESTERN PIPELINE	
Pool -Wildcat		Formation WOLFCAMP	
Completion Date 9/15/86		Total Depth 15,750	Plug Back TD 13742
Csg. Size 3.5		Wt. 10.3	Set At 14973
Tub. Size 2.875		Wt. 6.5	Set At 13423
Perforations: From 13528 To 13580		Perforations: From OPEN To ENDED	
Farm or Lease Name MADERA RIDGE 25		Well No. FED COM 1	
Unit L		Sec. 25	
Twp. 24S		Rge. 33E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE		Packer Set At 13414	
Producing Thru TUBING		Reservoir Temp. °F 270 @ 13580	Mean Annual Temp. °F 60
Baro. Press. - P _a 13.2		State NEW MEXICO	
L 13554	H 13554	G _g 0.674	% CO ₂ 0.26
% N ₂ 1.06		% H ₂ S 0	Prover 0
Meter Run 4.026		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.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							6062	72	8542	270	75.25HR
1.	4.026		1.750	820	3.0	77	5730	72	8124	270	2.5HRS
2.	4.026		1.750	810	6.0	78	5459	71	7843	270	2.5HRS
3.	4.026		1.750	810	16.0	72	4676	70	6952	270	2.5HRS
4.	4.026		1.750	800	28.0	63	3885	69	6113	270	4.5HRS
5.											

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w}^3 p_m$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	14.93	50.00	833.2	0.9845	1.2181	1.0826	969
2	14.93	70.28	823.2	0.9831	1.2181	1.0806	1358
3	14.93	114.77	823.2	0.9887	1.2181	1.0844	2237
4	14.93	150.90	813.2	0.9971	1.2181	1.0897	2981
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	1.25	537	1.42	0.853	10,072/1	
2	1.23	538	1.42	0.856	A.P.I. Gravity of Liquid Hydrocarbons 60.6 @ 60°F	Deq.
3	1.23	532	1.41	0.850	Specific Gravity Separator Gas 0.674	XXXXXXX
4	1.22	523	1.38	0.842	Specific Gravity Flowing Fluid XXXXX	0.910
5					Critical Pressure 668 P.S.I.A.	656 P.S.I.A.
					Critical Temperature 378 °R	452 °R

NO.	P _t	P _w	P _w ²	P _t ² - P _w ²	(1) $\frac{P_t^2}{P_t^2 - P_w^2} = 1.7481$	(2) $\left[\frac{P_t^2}{P_t^2 - P_w^2} \right]^n = 1.5009$
1		5977	35719	4761		
2		5781	32701	7779		
3		4909	24097	16383		
4		4162	17324	23156		
5						

Absolute Open Flow	4474	Mcf @ 15.025	Angle of Slope θ	54.0	Slope, n	0.727
--------------------	------	--------------	------------------	------	----------	-------

Remarks: BOTTOM HOLE PRESSURES OBTAINED W/ AMARADA PRESSURE INSTRUMENTS
PRODUCED 102.7 BBLS CONDENSATE 00BBLS H₂O

APPROVED BY DIVISION SUPERVISOR
DISTRICT 1 SUPERVISOR
Conducted By: Richard Stanley
Calculated By: Richard Stanley
Checked By: Barry Seldon

HNG Oil Company
10/16/86

RECEIVED

OCT 10 1986

**O.C.D.
HOBBS OFFICE**