NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test: [X] Initial [ ] Annual [ ] Special — Test Date: 9-11-80

Company: HNG Oil Company	Connection: None	
Pool: ~~Wildcat~~ Vaca Draw	Formation: Morrow	Unit
Completion Date: 8-21-80	Total Depth: 15,930	Plug Back T.D.: 15,033'
Elevation: 3408 GL	Farm or Lease Name: Bell Lake 11 Federal	
Csg. Size: 7" / Wt.: 26# / d / Set At: 12,934'	Perforations: From 14,883 To 14,977	Well No.: 1
Tbg. Size: 2 7/8 / Wt.: 6.7 / d / Set At: 12,667'	Perforations: From To	Unit: B / Sec.: 11 / Twp.: 25S / Rge.: 33E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single	Packer Set At: 12,667	County: Lea
Producing Thru: TBG.	Reservoir Temp. °F: 239 @ 14930'	Mean Annual Temp. °F: 68
Baro. Press. – P_a: 13.2	State: New Mexico	
L: 12667 / H: 12667	Gg: .573	% CO_2: None / % N_2: None / % H_2S: None
Prover:	Meter Run: X	Taps: 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						68	8215.2	78	Packer		
1.	4.026		1.250	500	11	73	6394.2	75	In		60 Min.
2.	4.026		1.250	500	14	77	4887.2	78	Well		60 Min.
3.	4.026		1.250	510	16	70	3398.2	78			60 Min.
4.	4.026		1.250	510	12	90	1703.2	81			60 Min.
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	7.469	75.13	513.2	.9877	1.321	1.040	761
2	7.469	84.76	513.2	.9831	1.321	1.031	848
3	7.469	91.49	523.2	.9905	1.321	1.041	931
4	7.469	75.86	523.2	.9723	1.321	1.031	750
5							

NO	P_t	Temp. °R	T_t	Z
1	.76	533	1.54	.924
2	.76	537	1.55	.941
3	.78	530	1.53	.922
4	.78	550	1.59	.940
5				

Gas Liquid Hydrocarbon Ratio: No Fluid Produced Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .573 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 672 P.S.I.A. P.S.I.A.
Critical Temperature: 346 R R

P_c 10,391.2 P_c^2 107977

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		7988.2	63811	44166
2		7432.2	55238	55739
3		6738.2	45403	62574
4		5546.2	30760	77217
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2}$ = 1.7256 (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1.4565

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1356

Absolute Open Flow: 1356 Mcfd @ 15.025 — Angle of Slope θ: 58° — Slope, n: .6256

Remarks: PW Substituted for PT - Measured with Amerada
Instrument No. 33122 0 - 11,000# Element
Third flow rate used for open flow calculations

Approved by Commission:	Conducted By:	Calculated By:	Checked By:
Orig. Signed By Jerry Sexton Dist. I Supv.	Richburg	Richburg	Spruell