STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
NTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 7/11/85	
Company: H.N.G. OIL COMPANY		Connection: TRANS WESTERN			
Pool:		Formation: MORROW			Unit: I
Completion Date: 3/17/85	Total Depth: 15410	Plug Back TD: 15361		Elevation: 3479.2' GR	Farm or Lease Name: DIAMOND SM-36 State
Csg. Size: 3-1/2" / Wt.: 15.5 / d: 4.950 / Set At: 15410		Perforations: From 15217 To 15298			Well No.: 1
Tbg. Size: 2 7/8 / Wt.: 6.5 / d: 2.441 / Set At: 14386		Perforations: From OPEN To END			Unit: I / Sec.: 36 / Twp.: 24S / Rge.: 33E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE			Packer Set At: 14386		County: LEA
Producing Thru: Tbg.	Reservoir Temp. °F: 227 @ 15258	Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2		State: NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
15258	15258	.576	.755	.127			4.026	Flg

	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					5330		1340		
1.	4.026 X 1.00	818	5	102	5087		1340		60 min.
2.	4.026 X 1.00	818	13	99	4912		1340		60 min.
3.	4.026 X 1.00	825	30	97	4567		1340		60 min.
4.	4.026 X 1.00	825	54	93	4165		1340		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	4.753	64.47	831.2	.9619	1.318	1.048	407
2.	4.753	103.95	831.2	.9645	1.318	1.048	658
3.	4.753	158.57	838.2	.9662	1.318	1.050	1008
4.	4.753	212.75	838.2	.9697	1.318	1.051	1358
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	1.24	562	1.62	.910
2.	1.24	559	1.62	.910
3.	1.25	557	1.61	.907
4.	1.25	553	1.60	.905
5.				

Gas Liquid Hydrocarbon Ratio: DRY Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .576 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 672 P.S.I.A. P.S.I.A.
Critical Temperature: 346 R R

P_c 5460.1 P_c^2 29812.7

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		5246.1	27521.6	2291.1
2		5067.0	25674.5	4138.2
3		4718.8	22267.1	7545.6
4		4320.1	18663.3	11149.4
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2,674$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2,112$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.868$

Absolute Open Flow: 2,868 Mcfd @ 15.025 Angle of Slope θ: 52.75 Slope, n: .760

Remarks: CACULATED FROM KNOWN B.H.P.; NO FLUID MADE DURING TEST

Approved By Division	Conducted By:	Calculated By:	Checked By:
	DUKE SERVICES, INC.	R. RESTON	Kenny Seldon HNG oil company