NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122 Revised 2-1-65 — File

Type Test: [X] Initial [ ] Annual [ ] Special			Test Date: 2/22/85	
Company: H.N.G. OIL CO. ✓	Connection: TO AIR			
Pool: ~~Und.~~ East Black River Atoka	Formation: ATOKA			Unit: E
Completion Date: 1-16-85	Total Depth: 12,700	Plug Back TD: 11,640	Elevation: 3212	Farm or Lease Name: TARGET 23 STATE
Csg. Size: 5½ / Wt.: 20# / d: / Set At: 11,711		Perforations: From 11,354 To 11,502		Well No.: 1
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: / Set At: 10,207		Perforations: From OPEN To END		Unit: E / Sec.: 23 / Twp.: 24S / Rge.: 27E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE		Packer Set At: 10,207		County: EDDY
Producing Thru: TBG	Reservoir Temp. °F: 188@ 11,428	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2	State: N MEX

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
11,428	11,428	.5738	.522	.608			2.900	flg

NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Tubing Data: Press. p.s.i.g.	Tubing Data: Temp. °F	Casing Data: Press. p.s.i.g.	Casing Data: Temp. °F	Duration of Flow
SI							6155				
1.	2.90x1.00			900	7	91	5950				2 hrs.
2.	2.90x1.00			900	13.5	85	5777				2 hrs.
3.	2.90x1.00			905	27	85	5500				2.5 hrs.
4.	2.90x1.00			905	42	83	5073				7.5 hrs.
5.	2.90x1.00			900	66	84	4545				3.5 hrs.

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	4.801	79.95	913.2	.9715	1.320	1.058	521
2	4.801	111.03	913.2	.9768	1.320	1,059	728
3	4.801	157.45	918.2	.9768	1.320	1.059	1032
4.	4.801	196.38	918.2	.9786	1.320	1.061	1292
5.	4.801	245.50	913.2	.9777	1.320	1.061	1614

NO.	P_t	Temp. °R	T_t	Z
1.	1.36	551	1.59	.894
2.	1.36	545	1.58	.892
3.	1.37	545	1.58	.892
4.	1.37	543	1.57	.889
5.	1.36	544	1.57	.889

Gas Liquid Hydrocarbon Ratio: DRY Mcf/bbl.

A.P.I. Gravity of Liquid Hydrocarbons: Deg.

Specific Gravity Separator Gas: .574 XXXXXXXXXX

Specific Gravity Flowing Fluid: XXXXX

Critical Pressure: 672 P.S.I.A. P.S.I.A.

Critical Temperature: 346 R R

P_c 6263.4 P_c^2 39230.2

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		6015.9	36191.1	3039.1
2		5809.4	33749.1	5481.1
3		5563.4	30951.4	8278.8
4		5157.1	26595.7	12634.5
5		4653.2	21652.3	17577.9

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.232$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.719$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.775$

Absolute Open Flow: 2,775 Mcfd @ 15.025 Angle of Slope θ: 56 Slope, n: .675

Remarks: CACULATED FROM KNOWN BOTTOM HOLE PRESSURES, BHP INST. SET AT 11,428'

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	DUKE SERVICES, INC.	R. RESTON	