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NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
SEP 26 1972
O. C. C.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 8-28-72	
Company: Elwyn C. Hale		Connection: NONE			Unit: 640
Pool: Dos Hermanos-Morrow Gas ~~Pool (Extension)~~		Formation: Morrow Gas			
Completion Date: 5-19-72	Total Depth: 12530'	Plug Back TD: 12488'	Elevation: 3311'KB		Farm or Lease Name: ~~Hale~~ Federal
Csg. Size: 5 1/2" / 20	Wt. 17 / d 4.787 / 4.653	Set At: 12523'	Perforations: From 11837' To 11980' / From 12140' To 12213'		Well No.: 2
Tbg. Size: 2 3/8EUE	Wt.: 4.70	d: 1.995	Set At: 12074'*	Perforations: From 12070' To 12074'	Unit K, Sec. 22, Twp. 20s, Rge. 30e
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 11765' & 12066'*		County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 176° @ 12000'	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
12025'	-	0.635	0.77	0.00	0.00	-	X	Flange

NO.	FLOW DATA: Prover Line Size	X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g. DWT	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI						3260				36.0 Hrs
1.	4	19/64 2.250	330	44	56	1930	75	PACKER		2.0
2.	4	17/64 2.250	330	34	58	2107	76			1.0
3.	4	15/64 2.250	330	22	60	2444	76			1.0
4.	4	13/64 2.250	315	12	72	2730	75			2.0
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	25.64	122.88	343.2	1.004	1.255	1.034	4104.8
2.	25.64	108.03	343.2	1.002	1.255	1.034	3601.5
3.	25.64	86.89	343.2	1.000	1.255	1.034	2891.1
4.	25.64	62.75	328.2	0.9887	1.255	1.030	2056.2
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	0.52	516	1.41	0.935
2.	0.52	518	1.41	0.935
3.	0.52	520	1.42	0.936
4.	0.49	532	1.45	0.943
5.				

Gas Liquid Hydrocarbon Ratio: Not Measured Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 53.9 Deg.
Specific Gravity Separator Gas: 0.635 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 666 P.S.I.A. - P.S.I.A.
Critical Temperature: 367 R - R

P_c 4473.2 P_c^2 20010.0

NO	P_t^2	P_w +	P_w^2	$P_c^2 - P_w^2$
1	-	2897.2	8393.8	11616.2
2	-	3144.2	9886.0	10124.0
3	-	3473.2	12063.1	7946.9
4	-	3811.2	14525.2	5484.8
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.723$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.660$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 6814$

SEP 26 1972

Absolute Open Flow: 6810 / 12,055 Mcfd @ 15.025 | Angle of Slope θ: 47° 5' | Slope, n: 0.930

Remarks: *Csg.Perfs.separated by packer at 12066'.Csg.perfs.11837-11980 produced via open sleeve at ~~12063'~~.Csg perfs.12140-12143 produced via Tbg perfs @ 12070-12074'. Van Guns hung 12140-12213'.Prod.PKR (top) at 11765'

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	COLEMAN PETRO.ENG.	JOE A. COLEMAN	JOE A. COLEMAN

+ BHP @ (-8714') 12025' used for pressure calculations