BTH

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
JUN 18 1974
O. C. C.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 3-16-74	
Company: JULIAN ARD		Connection: TO AIR			
Pool:		Formation: MORROW		Unit:	
Completion Date: 2-15-74	Total Depth: 12,500'	Plug Back TD: 12,200	Elevation: 3306'GR.	Farm or Lease Name: HACKBERRY ~~UNIT~~	
Csg. Size: 5½" / Wt.: / d: / Set At: 12,187		Perforations: From 11,993 To 12,003		Well No.: 1	
Tbg. Size: 2 7/8" / Wt.: 6.5 / d: 2.441 / Set At: 11,954		Perforations: From To		Unit: G / Sec.: 25 / Twp.: 19S / Rge.: 30E	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE		Packer Set At: 11,954		County: EDDY	
Producing Thru: TUBING	Reservoir Temp. °F: 192° @ 11,99'	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
11,954	11,954	0.6779	0.81	0.42	-0-	---	4"	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.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							2858.0		PACKER – CHOKE		
1.	4"	x	1.00"	480.0	16.0	85	2267.0	61	7/64"		1.0 HR.
2.	4"	x	1.00"	480.0	19.0	90	1953.0	64	8/64"		1.0 HR.
3.	4"	x	1.00"	480.0	35.0	90	1538.0	64	10/64"		1.0 HR.
4.	4"	x	1.00"	480.0	48.0	95	1130.0	65	13/64"		1.0 HR.
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	88.83	493.2	.9768	1.214	1.047	524
2.	4.753	96.80	493.2	9723	1.214	1.045	568
3.	4.753	131.38	493.2	.9723	1.214	1.045	770
4.	4.753	153.86	493.2	.9680	1.214	1.044	897
5.							

NO.	P_t	Temp. °R	T_t	Z
1.	0.74	545	1.43	.913
2.	0.74	550	1.44	.915
3.	0.74	550	1.44	.915
4.	0.74	555	1.45	.917
5.				

Gas Liquid Hydrocarbon Ratio 24.444 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 50.4 @ 60 Deg.
Specific Gravity Separator Gas 0.6779 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 669 P.S.I.A. P.S.I.A.
Critical Temperature 382 R R

P_c 2871.2 P_c^2 8243.8

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	5199.3			3044.5
2	3865.9			4377.9
3	2406.2			5837.6
4	1306.9	1148.0	1317.9	6936.9
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.1884$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.1874$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1065$

Absolute Open Flow 1065 Mcfd @ 15.025 Angle of Slope θ 45.5° Slope, n 982

Remarks: USED BTH PLOT AND CALCULATE POTENTIAL DUE TO FRICTION CALCULATIONS ON HIGH RATE OF FLOW