SF File 122

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL
Form C-122 Revised 9-1-65

RECEIVED
DEC 20 1979
O. C. D.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special		Test Date: 12/5/79	SPUD DATE: 7-18-79
Company: Southland Royalty Company	Connection:		
Pool: ~~Undesignated~~ Angell Ranch Morrow	Formation: Morrow		Unit: E
Completion Date: 9-29-79	Total Depth: 11136	Plug Back TD: 10780	Elevation:	Farm or Lease Name: State G Com
Csg. Size: 4½ / Wt.: 11.6 / d: / Set At: 10862	Perforations: From 10373 To 10730	Well No.: 1
Tbg. Size: 2 3/8 / Wt.: / d: / Set At: 10317	Perforations: From To	Unit: E / Sec.: 24 / Twp.: 19S / Rge.: 27E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single	Packer Set At: 10317	County: Eddy
Producing Thru: Tbg.	Reservoir Temp. °F: 177 @ 10317	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
10317	10317	.630	.56	4.83			2	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					2692				72 hrs.
1.	2 x .750	405	4.0	78	2315				1 hr.
2.	2 x .750	420	8.0	68	1910				1 hr.
3.	2 x .750	450	12.0	64	1405				1 hr.
4.	2 x .750	440	16.0	64	625				1 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	2.709	40.90	418.2	.9831	1.260	1.036	142
2	2.709	58.87	433.2	.9924	1.260	1.041	208
3	2.709	74.55	463.2	.9962	1.260	1.045	265
4	2.709	85.15	453.2	.9962	1.260	1.044	302
5							

NO.	P_t	Temp. °R	T_r	Z
1	.62	538	1.46	.931
2	.65	528	1.43	.922
3	.69	524	1.42	.916
4	.68	524	1.42	.917
5				

Gas Liquid Hydrocarbon Ratio: Dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .630 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 670 P.S.I.A. P.S.I.A.
Critical Temperature: 368 R R

P_c 2705.2 P_c^2 7318.1

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		2328.3	5421.1	1897.0
2		1923.5	3700.0	3618.1
3		1419.0	2013.5	5304.6
4		640.7	410.5	6907.6
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.059$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.034$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = .312$

Absolute Open Flow: 312 Mcfd @ 15.025 Angle of Slope θ: 60° Slope, n: .580

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Rick Pagan	Rick Pagan	D. CRAIG CHC