

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 1-15-75		JAN 27 1975	
Company Amoco Production Company				Connection Transwestern Pipeline				D. C. C.	
Pool South Empire Morrow				Formation Morrow				Unit ARTESIA, OFFIC	
Completion Date 11-26-74		Total Depth 10,968		Plug Back TD 10,876		Elevation 3658' RDB		Farm or Lease Name Empire South Deep Unit	
Csg. Size 5 1/2"	Wt. 17 Lb/Ft	d 4.892 4.767	Set At 10,966	Perforations: From 10,796 To 10,803		Well No. 5			
Tbg. Size 2-3/8"	Wt. 4.7 Lb/Ft	d 1.995 1.901	Set At 10,807	Perforations: From 10,744 To 10,746		Unit Sec. Twp. Rge. G 31 17-S 29-E			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At 10,738'		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 127 @ 10,876		Mean Annual Temp. °F 65		Baro. Press. - P _a 13.2		State New Mexico	
L 10,803	H 10,803	G _g .668	% CO ₂ .41%	% N ₂ .54%	% H ₂ S 0	Prover	Meter Run 3"	Taps Flange	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
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.	
SI							3110	50	Pkr	Pkr
1.	3" X 2.25"			615	4.8	52	2883	70	"	"
2.	3" X 2.25"			618	11.3	50	2673	72	"	"
3.	3" X 2.25"			647	24.7	47	2492	74	"	"
4.	3" X 2.25"			681	35.9	50	2129	74	"	"
5.										

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	28.78	54.9	628.2	1.008	1.224	1.076	1317.7
2	28.78	84.5	631.2	1.010	1.224	1.076	2041.9
3	28.78	127.7	660.2	1.013	1.224	1.083	3258.2
4	28.78	157.9	694.2	1.010	1.224	1.085	4231.5
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcft/bbl.
1.	0.94	512	1.35	.864	A.P.I. Gravity of Liquid Hydrocarbons	Dry Gas	Deq.
2.	0.94	510	1.35	.864	Specific Gravity Separator Gas	.668	XXXXXXX
3.	0.99	507	1.34	.853	Specific Gravity Flowing Fluid	XXXXX	
4.	1.04	510	1.35	.850	Critical Pressure CORR	668	P.S.I.A.
5.					Critical Temperature CORR	379	R

P _c 4368.2* P _c ² 19081				
NO.	P _t ²	P _w * P _w ²	P _w ²	P _c ² - P _w ²
1		4123.2	17001	2080
2		3984.2	15874	3207
3		3775.2	14252	4829
4		3405.2	11595	7486
5				

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = \frac{19081}{4829}$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 12874$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.95$$

Absolute Open Flow	12874	Mcfd @ 15.025	Angle of Slope @	45°	Slope, n	1.000
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Remarks: *Pressures obtained with bottom hole pressure recorder. Original slope = 1.049.
AOF calculated from highest flow rate and using N = 1.000

Approved By Commission:	Conducted By: William Cass	Calculated By: Sal Pagano	Checked By: J. A. Detterick
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