

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE O.C.C. Form C-122
FEB 24 3 14 PM '65
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Murray Penn. County Lea
Initial X Annual _____ Special _____ Date of Test 2-24-65
Company Greathouse, Pierce & Davis Lease Federal 2-10 Well No. _____
Unit _____ Sec. 10 Twp. 20-5 Rge. 34E Purchaser Phillips Pet. Co.
Casing 4.5" Wt. 13.5 I.D. 3.920 Set at 13,200 Perf. 13,162 To 13,168
Tubing 2" Wt. 4.70 I.D. 1.995 Set at 13,150 Perf. None To _____
Gas Pay: From 13,162 To 13,174 L 13,162 xG 0.675 -GL 8884 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 2-3-65 Packer OTIS Reservoir Temp. 198°F

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)Type Taps Flange

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	
SI	3"	1.5"				4765	75°	72 hr. S.I.
1.	"	"	690	36.1	82	4250	78°F	3 hrs.
2.	"	"	645	74.3	82	4040	80°F	3 hrs.
3.	"	2.0"	825	33.5	85	3535	88°F	3 hrs.
4.	"	"	930	36.0	86	3110	91°F	34 hrs.
5.								

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	14.36	159.08	703.2	0.9795	0.9427	1.070	2,257
2.	14.36	221.36	658.2	0.9795	0.9427	1.062	3,115
3.	27.52	152.71	838.2	0.9768	0.9427	1.081	4,184
4.	27.52	184.50	943.2	0.9759	0.9427	1.092	5,101
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 22,000 cf/bbl.
Gravity of Liquid Hydrocarbons 50 @ 60°F deg.
F_c 9.936 (1-e^{-s}) .457

Specific Gravity Separator Gas .675
Specific Gravity Flowing Fluid .716
P_c 4778.2 P_c 22,831

No.	P _w P _t (psia)	P _c ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w P _c
1.	4263.2	18174.4	22.43	503.11	229.9	18414.8	4426	4296	.878
2.	4053.2	16428.4	30.95	957.90	437.8	16486.2	5965	4107	.860
3.	3548.2	12589.7	41.57	1728	789.7	13379.4	9452	3658	.764
4.	3123.2	9754.4	50.68	2568	1173.6	10928.0	11903	3306	.693
5.									

Absolute Potential: 8,500 MCFPD; n .8098COMPANY Greathouse, Pierce & DavisADDRESS Midland, TexasAGENT and TITLE J.C. Davis, PartnerWITNESSED Russell R. HicksCOMPANY National Tank Co.

REMARKS