

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

45F
File

RECEIVED BY NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

JAN 7 1985

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type of Test: C.D. Initial
 ARTESIA Annual Special
 Test Date: 10-1-84

Company: ELK OIL COMPANY ✓ Connection: AIR
 Pool: Four Ranch ~~Pre-Permian~~ Formation: Wolfcamp Unit:

Completion Date: 9/25/84 Total Depth: 6150 Plug Back TD: 6110 Elevation: 3794 Grd.
 Farm or Lease Name: SE

Csq. Size: 2-3/8 In. d. Set At: 5146 Perforations: From 5234 To 5250 Well No.: 2

Tbg. Size: 2-3/8 In. d. Set At: 5146 Perforations: From OPEN To ENDED Unit: I Sec.: 23 Twp.: 9S Rge.: 26E

Type Well - Single - Bradenhead - G.G. or G.O. Multiple: SINGLE Packer Set At: 5146 County: CHAVES

Producing Thru: TUBING Reservoir Temp. °F: 101# 5200 Mean Annual Temp. °F: 60 Baro. Press. - P_a: 13.2 State: NM

L: H: G_g: .6 % CO₂: % N₂: % H₂S: Prover: 2" Meter Run: Taps:

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.	Temp. °F	
SI							1145		PACKER		
1.	2		3/16	1029		72	1070				1 hr.
2.	2		1/4	846		71	890				"
3.	2		3/8	531		71	575				"
4.	2		1/2	317		69	365				"
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	.6082		1042.2	.9887	1.291	1.0843	944
2	1.087		859.2	.9896	1.291	1.0699	1377
3	2.378		544.2	.9896	1.291	1.0436	1861
4	4.279		330.2	.9915	1.291	1.0264	2002
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2					Specific Gravity Separator Gas _____ X X X X X X X X X
3					Specific Gravity Flowing Fluid _____ X X X X X
4					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5					Critical Temperature _____ R _____ R

P_c 1310.2 P_c² 1717

NO	P _r ²	P _w	P _w ²	P _c ² - P _w ²
1		1210.2	1465	252
2		1084.2	1175	541
3		846.2	716	1001
4		695.2	483	1233
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.3924$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1753$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2400$

Absolute Open Flow: 2400 Mcfd @ 15.025 Angle of Slope θ: 24 Slope, n: 4.887

Remarks: Bottom Hole Pressures recorded with Amerada type gauge

Approved By Division: Conducted By: KELTIC SERVICES Calculated By: KELLY Checked By: