

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

Form C-122
Revised 9-1-65

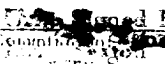
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 5/20/81			
Company ELK OIL COMPANY				Location NORTHERN NATURAL GAS					
Pool KERNITZ				Formation Morrow				Unit N. E. Kernitz	
Completion Date 9/21/80		Total Length 13,390		Plug back To 13,390		Elevation 4075 GR		Name of Lease Map N.E. Kernitz	
Csg. Size 5 1/2	Wt. 17	d 4.670	Set At 13,390	Perforations: From 13,187- to 13,208				Well No. 5	
Tub. Size 2 3/8	Wt. 4.7	d 1.995	Set At 12,907	Perforations: From To				Unit Sect. Twp. Range L 23 16S 34E	
Type Well - Single - Brokenhead - G.G. or G.O. Multiple Single						Packer Set At		County Lea	
Producing Thru		Reservoir Temp. °F 170 @ 13,250		Mean Annual Temp. °F 60		Zero. Press. - P _a 13.2		State N.M.	
L	H	Gg .668	% CO ₂ .74%	% N ₂ 1.21%	% H ₂ S	Prover 2"	Meter Run	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.	Temp. °F	
SI							3160				
1.	2		.75	333	3.5	64	2843	59	PACKER		1 hr
2.	2		.75	335	6.0	66	2645	61	"		1 hr
3.	2		.75	342	10.5	68	2450	64	"		1 hr
4.	2		.75	352	20.8	68	2190	64	"		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 Comp. Factor, F _{pv}	Rate of Flow Q, Mscf/d
1	2764.8		346.2	.9962	1.2235	1.1788	99
2	2764.8		348.2	.9943	1.2235	1.1852	119
3	2764.8		335.2	.9924	1.2235	1.1889	224
4	2764.8		365.2	.9924	1.2235	1.1925	350
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	4.25	519	1.37	.72						
2.	3.95	521	1.38	.712						
3.	3.66	524	1.38	.707						
4.	3.27	524	1.38	.703						
5.										

P _r 6785	P _r ² 46.035	(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 1.2861$ (2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.2861$	
NO	P _w	P _w ²	P _r ² - P _w ²
1	4150	17223	28812
2	3990	15920	30115
3	3575	12780	33255
4	3200	10240	35795
5			

Absolute Open Flow 450		Mcf/d @ 14.7 psia	Angle of Slope 450°	Slope n 1
Remarks:				
Approved By:  Conducted By: Northern Natural Calculated By: M.K. Checked By: M.K.				