C-122 File

NEW MEXICO OIL CONSERVATION COMMSSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
NOV 9 1970
O. C. C.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 11-3-70	
Company: Midwest Oil Co.,		Connection: None			
Pool: ~~Wildcat~~ N. M.		Formation: Morrow		Unit	
Completion Date: 11-3-70	Total Depth: ?	Plug Back TD: ?	Elevation: ?	Farm or Lease Name: Federal "J"	
Csg. Size: 5½ / Wt.: 17 / d: 4.767 / Set At: 8750		Perforations: From 8442 To 8457		Well No.: 1	
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: 1.99 / Set At: 8376		Perforations: From Open End To		Unit: M / Sec.: 21 / Twp.: 18-S / Rge.: 24-E	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 8315		County: Eddy	
Producing Thru: Tubing	Reservoir Temp. °F: 1470 @ 8450	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2	State: N.M.	

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
?	?	.625	?	?	?		X	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	4" x 1.5"	585	2.5	88	1515	60 ?	Packer		~~1.25~~
1.	"	605	4.0	88	1235	60 ?			1.00
2.	"	610	5.5	86	1084	60 ?			1.00
3.	"	615	9.5	85	852	60 ?			1.00
4.									
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	~~13.99~~ 10.84	38.52 ✓	598.2 ✓	.9741 ✓	~~.9798~~ 1.265	~~1.048~~ 1.058	~~539~~ 544
2.	"	49.53 ✓	613.2 ✓	.9741 ✓	"	~~1.050~~ 1.059	~~694~~ 701
3.	"	59.06 ✓	623.2 ✓	.9759 ✓	"	~~1.050~~ 1.061	~~830~~ 838
4.	"	77.65 ✓	628.2 ✓	.9768 ✓	"	~~1.051~~ 1.061	~~1093~~ 1106
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	0.89	520	1.42	0.893
2.	0.91	520	1.42	0.911
3.	0.93	520	1.42	0.899
4.	0.94	520	1.42	0.888
5.				

Gas Liquid Hydrocarbon Ratio 176.0 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 47.5 Deg.
Specific Gravity Separator Gas .625 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure ~~628.2~~ 671 P.S.I.A. P.S.I.A.
Critical Temperature 365 R R

P_c 2743.2 P_c^2 7525

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	BHP	1974.2	3897	3628 ✓
2		1770.2	3134	4391 ✓
3		1650.2	2723	4802 ✓
4		1257.2	1581	5944
5				5747

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.266$ High rate of flow

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.266$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1400$

Absolute Open Flow ~~1375~~ 1400 Mcfd @ 15.025 Angle of Slope θ 45 Slope, n 1.000

Remarks: Survey run as a Shut In Gas Well

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
N.L.J. 11-13-70 RLS	C. Allen Dorsey	C. Allen Dorsey	

Company MIDWEST OIL CORP.,

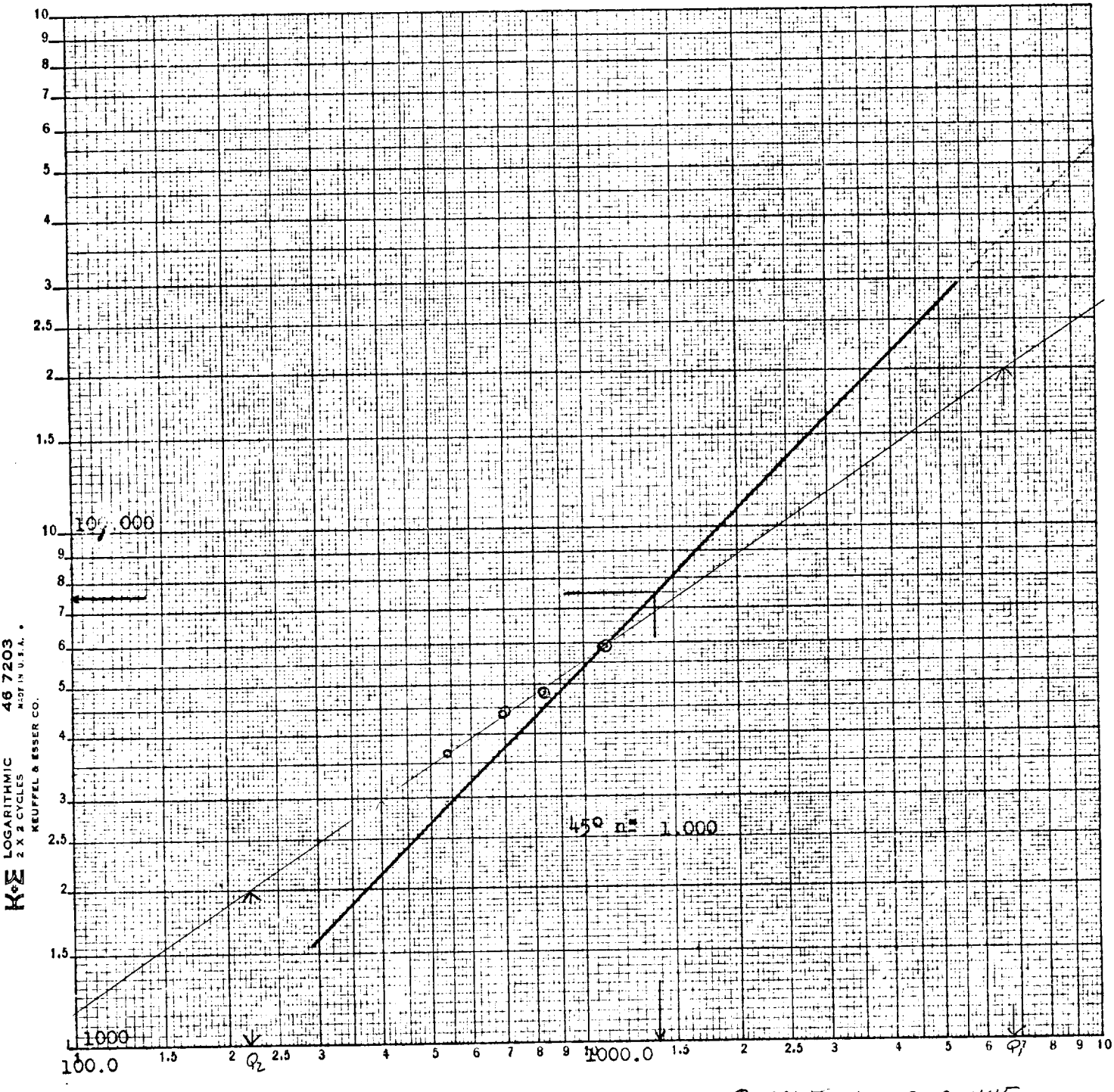
Well FEDERAL "J" # 1

Location SEC. 21, 18-S 24-E

County EDDY

Date 11-3-70

CAS WELL
BACK PRESSURE TEST



Q = MCFD - 15.025 psia

Q_1 6675 log 3.82445

Q_2 220 log 2.34242

n = 1.48203