

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 8/3/79		AUG 15 1979	
Company Anadarko Production				Connection Gas Co. of New Mexico		O. C. C.	
Pool Cedar Lake <i>Morrow</i>				Formation Morrow		RTESIA, OFFICE	
Completion Date 9/26/78		Total Depth 11378' KB		Plug Back TD 11300' KB		Elevation 3606' KB	
Farm or Lease Name Power Fed. Com				Well No. 1-Y		Unit J	
Gas. Size 4 1/2"	Wt. 11.6	d 4.000	Set At 11372'	Perforations: From 11035' To 11076'		Well No. 1-Y	
Flg. Size 2 3/8"	Wt. 4.7	d 1.995	Set At 10971	Perforations: Open Ended From To		Unit Sec. Twp. Rge. J 26 17s 30e	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 10971'		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 176 @ 11056'		Mean Annual Temp. °F 60		State New Mexico	
L 11056	H -	Gg 0.668	% CO ₂ 0.32	% N ₂ 0.80	% H ₂ S -	Prover -	Meter Run 2"
Taps Flg.							

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							2012		PACKER		50.5 hrs
1.	2 X		1.00	312	6.3	89	1722				1.0 hr
2.	2 X		1.00	396	12.3	98	1490				1.0 hr
3.	2 X		1.00	396	20.3	96	1250				1.0 hr
4.	2 X		1.00	384	30.3	96	1015				1.0 hr
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	4.946	45.26	325.2	.9732	1.224	1.027	274
2	4.946	70.94	409.2	.9653	1.224	1.034	429
3	4.946	91.14	409.2	.9671	1.224	1.035	552
4	4.946	109.70	397.2	.9671	1.224	1.034	664
5							

NO.	R _f	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio		A.P.I. Gravity of Liquid Hydrocarbons	
1	.49	549	1.45	.948			Mcf/lbl.	
2	.61	558	1.48	.935			Deg.	
3	.61	556	1.47	.933				
4	.59	556	1.47	.935				
5								

* P _c 2286.8 P _c ² 5229.5				
NO.	P _f	P _w	P _w ²	P _c ² - P _w ²
1	*	2004.8	4019.2	1210.3
2	*	1771.5	3138.2	2091.3
3	*	1536.2	2359.9	2869.6
4	*	1303.0	1697.8	3531.7
5				

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.481$$

$$ADP = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = .934$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.407$$

Absolute Open Flow	934	Mcf/d @ 15.025	Angle of Slope @	49	Slope, n	.869
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Remarks: BOTTOM HOLE PRESSURE @ (-7450) 11056' USED FOR PRESSURE CALCULATIONS.
 * CALCULATED FROM KNOWN BOTTOM HOLE PRESSURE

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	JARREL SERVICES, INC.		

JARREL SERVICES, INC.

POST OFFICE BOX 1654

PHONE 505 393-5396

HOBBS, NEW MEXICO 88240

COMPANY: Anadarko Production Company

WELL: Power Federal Com, No. 1-Y

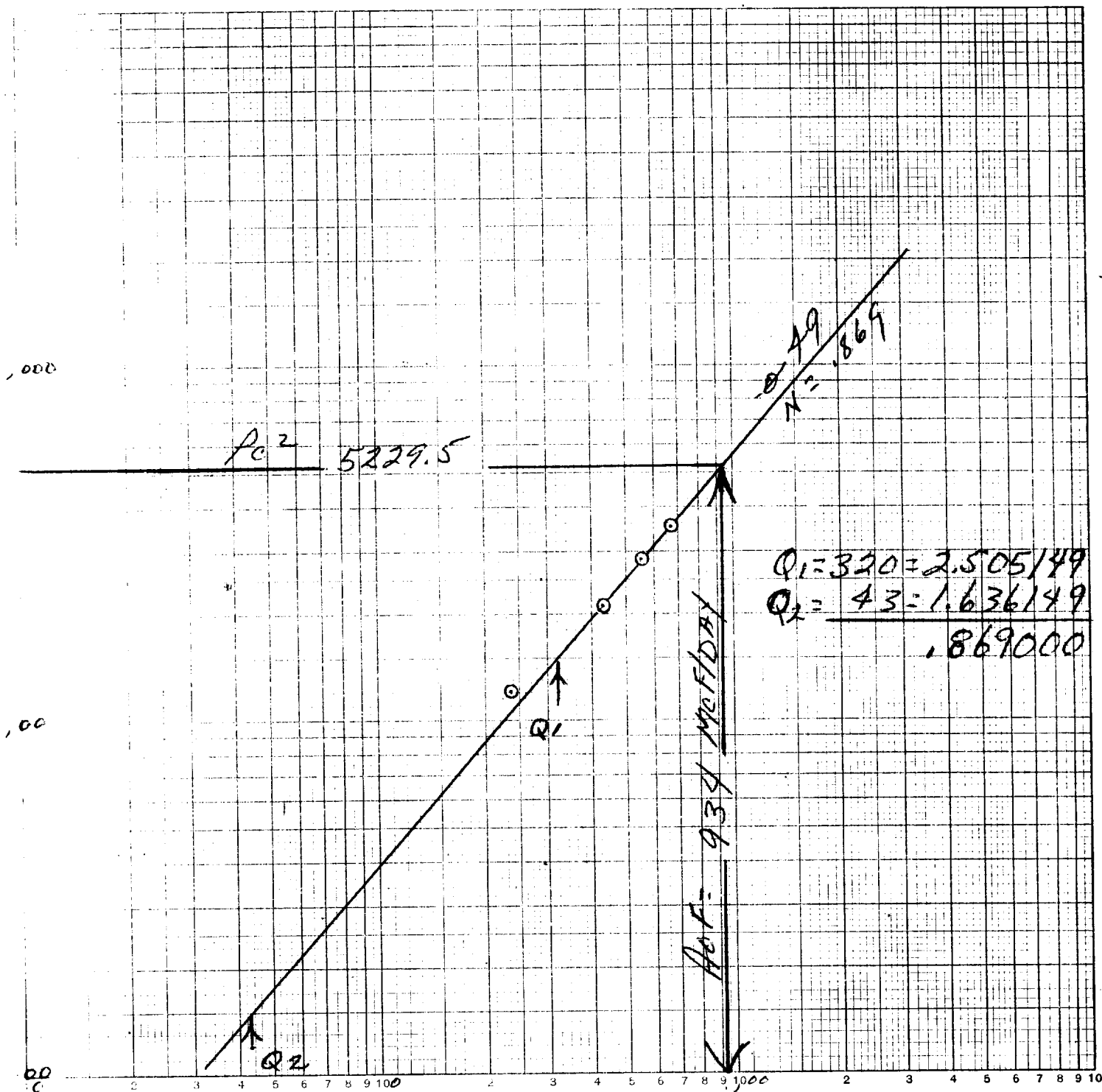
FIELD: Cedar Lake Morrow

CHRONOLOGICAL PRESSURE DATA

DATE	STATUS OF WELL	TIME	ELAPSED TIME HRS.	MIN.	SURFACE PRESSURE TBG	CSG	BHP @ (-7450 11056' PSIG)
10/7/69							
3/3	Shut in. Run Static Gradient w/Tandem Bombs & hang Bombs @ 11056'	10:00 AM	0	00	2012 DWT	PKR	3088
	Started 1st Rate						
	Flowing	11:00	1	00	2012 DWT	-	3088
	"	11:05	0	05	-	-	3010
	"	11:10	0	10	-	-	2969
	"	11:15	0	15	-	-	2931
	"	11:20	0	20	-	-	2897
	"	11:25	0	25	-	-	2866
	"	11:30	0	30	-	-	2842
	"	11:40	0	40	-	-	2798
	"	11:50	0	50	-	-	2760
	Finished 1st Rate & Started 2nd Rate	12:00 N	1	00	1722 DWT	-	2712
	Flowing	12:05	0	05	-	-	2678
	"	12:10	0	10	-	-	2637
	"	12:15	0	15	-	-	2603
	"	12:20	0	20	-	-	2572
	"	12:25	0	25	-	-	2541
	"	12:30	0	30	-	-	2517
	"	12:40	0	40	-	-	2473
	"	12:50	0	50	-	-	2439
	Finished 2nd Rate & Started 3rd Rate	1:00 AM	1	00	1490 DWT	-	2391
	Flowing	1:05	0	05	-	-	2350
	"	1:10	0	10	-	-	2305
	"	1:15	0	15	-	-	2268
	"	1:20	0	20	-	-	2237
	"	1:25	0	25	-	-	2203
	"	1:30	0	30	-	-	2175
	"	1:40	0	40	-	-	2127
	"	1:50	0	50	-	-	2090
	Finished 3rd Rate & Started 4th Rate	2:00	1	00	1250 DWT	-	2062
	Flowing	2:05	0	05	-	-	2028
	"	2:10	0	10	-	-	1987
	"	2:15	0	15	-	-	1953
	"	2:20	0	20	-	-	1919
	"	2:25	0	25	-	-	1888
	"	2:30	0	30	-	-	1861
	"	2:40	0	40	-	-	1806
	"	2:50	0	50	-	-	1768
	Finished 4th Rate & Pulled Bombs & Run						
	Flowing Gradient	3:00	1	00	1015 DWT	-	1734

Anadarko Production

Power Fed. Com. 1-Y



Q = MCF/DAY

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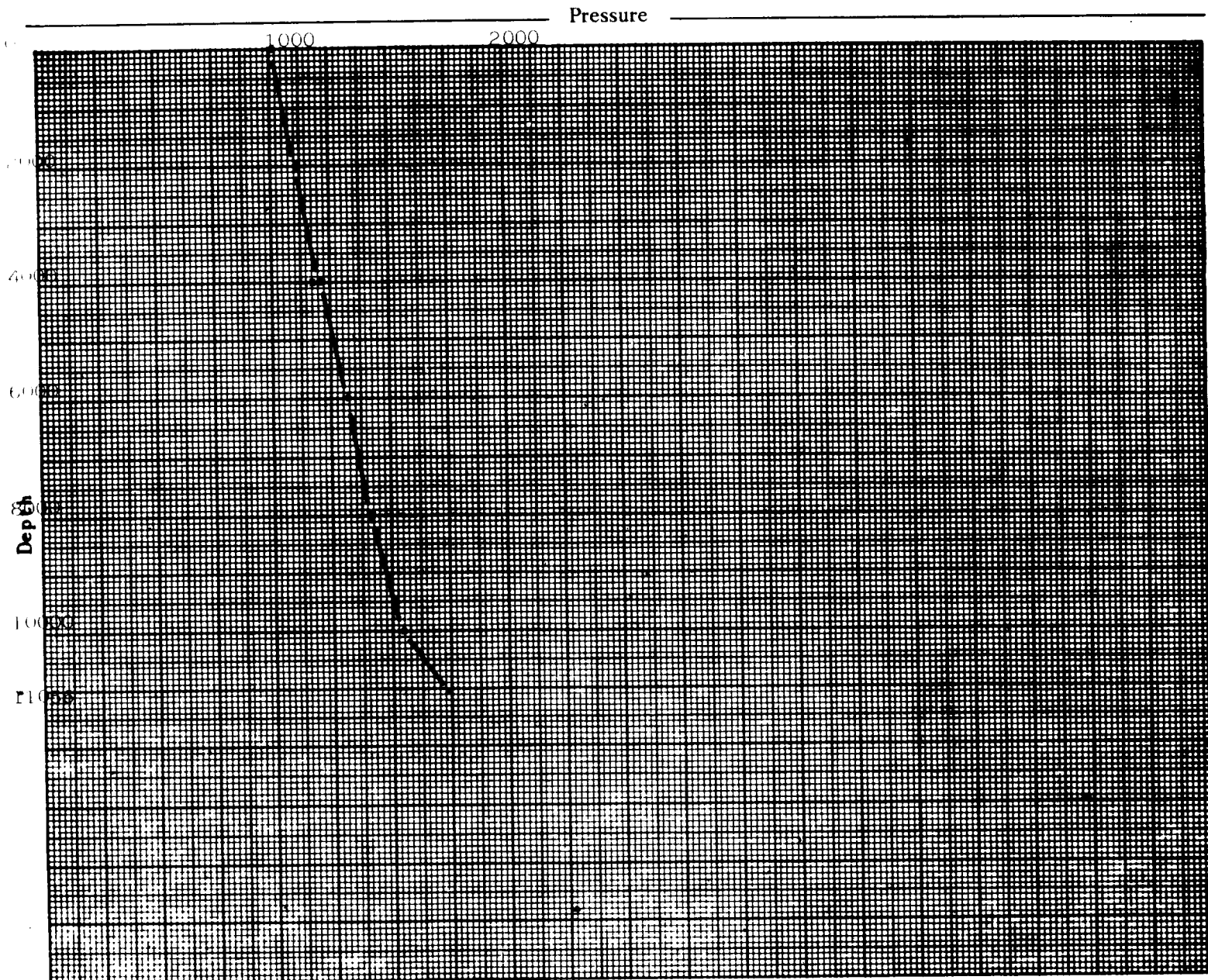
HOBBS, NEW MEXICO 88240

BOTTOM HOLE PRESSURE RECORD

OPERATOR Andadarko Production Company
 FIELD Cedar Lake
 FORMATION Morrow
 LEASE Power Federal Com **WELL 1-Y**
 COUNTY Eddy STATE New Mexico
 DATE August 3, 1979 TIME 3:00 PM
 Status Flowing
 Test Depth 11056'
 Time S. I. - Last test date -
 Tub Pres. 1015 BHP last test -
 Cas. Pres. PKK BHP change -
 Elev. 3606' KB Fluid top Flowing
 Datum (-7450) ** Water top -
 Temp. @ 176 F Run by JSI #10
 Cal. No. A 19189 N Chart No. 2

Depth	Pressure	Gradient
0	1015	-
2000	1108	.046
4000	1214	.053
6000	1324	.055
8000	1422	.049
10000	1546	.062
11056 (-7450)	1734 **	.178

** MIDPOINT OF CASING PERFORATIONS



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BOTTOM HOLE PRESSURE RECORD

OPERATOR Anadarko Production Company
FIELD Cedar Lake
FORMATION Morrow
LEASE Power Federal Com **WELL** 1-Y
COUNTY Eddy **STATE** New Mexico
DATE August 3, 1979 **TIME** 10:00 AM
Status Shut in
Test Depth 11056'
Time S. I. 50.5 hrs. **Last test date** 7/25/79
Tub Pres. 1975 **BHP last test** 3056
Cas. Pres. PKR **BHP change** 32# Gain
Elev. 3006' AB **Fluid top** None
Datum (-7450) ** **Water top** None
Temp. @ 176°F **Run by** JSI #10
Cal. No. A 19189 N **Chart No.** 1

Depth	Pressure	Gradient
0	2012	-
2000	2204	.096
4000	2398	.097
6000	2592	.097
8000	2788	.098
10000	2984	.098
11056 (-7450)	3088 **	.099

** MIDPOINT OF CASING PERFORATIONS

