

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Submit in duplicate to
appropriate district office
See Rule 401 & Rule 1122

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Melzer Exploration Company						Lease or Unit Name Bilberry					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date		Well No. 2			
Completion Date		Total Depth 3225		Plug Back TD 3184		Elevation 3591.6 GL		Unit Ltr. - Sec. - TWP - Rge. F 6, T20S, R39E			
Csg. Size 4-1/2	Wt. 10.5	d	Set At 3225	Perforations: From: 2866 To: 3159				County Lea			
Tbg. Size 2-3/8	Wt. 4.6	d	Set At 3165	Perforations: From: --- To: ---				Pool House Yates/Seven Rivers			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple						Packer Set At None		Formation Yates/Seven Rivers			
Producing Thru Tubing		Reservoir Temp. °F 90 @ 2999GL		Mean Annual Temp. °F 60		Baro. Press - P _a 13.2		Connection			
L 2999	H 2999	Gg .865	% CO ₂ 0	% N ₂ 38	% H ₂ S 0	Prover Orifice Well Tester-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							1531	32			451 hrs SI
1.	1.94	X	.75			34	1160	50			1 hr
2.	1.94	X	.75			30	1150	50			1 hr
3.	1.94	X	1.25			30	905	50			1 hr
4.	1.94	X	1.25			30	690	52			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 Compress. Factor, F _{pv} .	Rate of Flow Q, Mcfd
1.			13.2	1.026	1.0752	1.0056	210.0
2.			13.2	1.0302	1.0752	1.0058	604.0
3.			13.2	1.0302	1.0752	1.0058	939.0
4.			13.2	1.0302	1.0752	1.0058	766.0
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.02	494	1.46	.989	0	
2.	.02	490	1.45	.989	NA	
3.	.02	490	1.45	.989	.865	XXXXXXXXXX
4.	.02	490	1.45	.989	594	XXXXXX
5.					338	

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.		1176	1382	1032
2.		1167	1362	1052
3.		925	856	1558
4.		709	503	1911
5.				

P_c **1553.7** P_c² **2414**

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.5499$

2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.5499$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1455$

Absolute Open Flow **1455** Mcfd @ 15.025

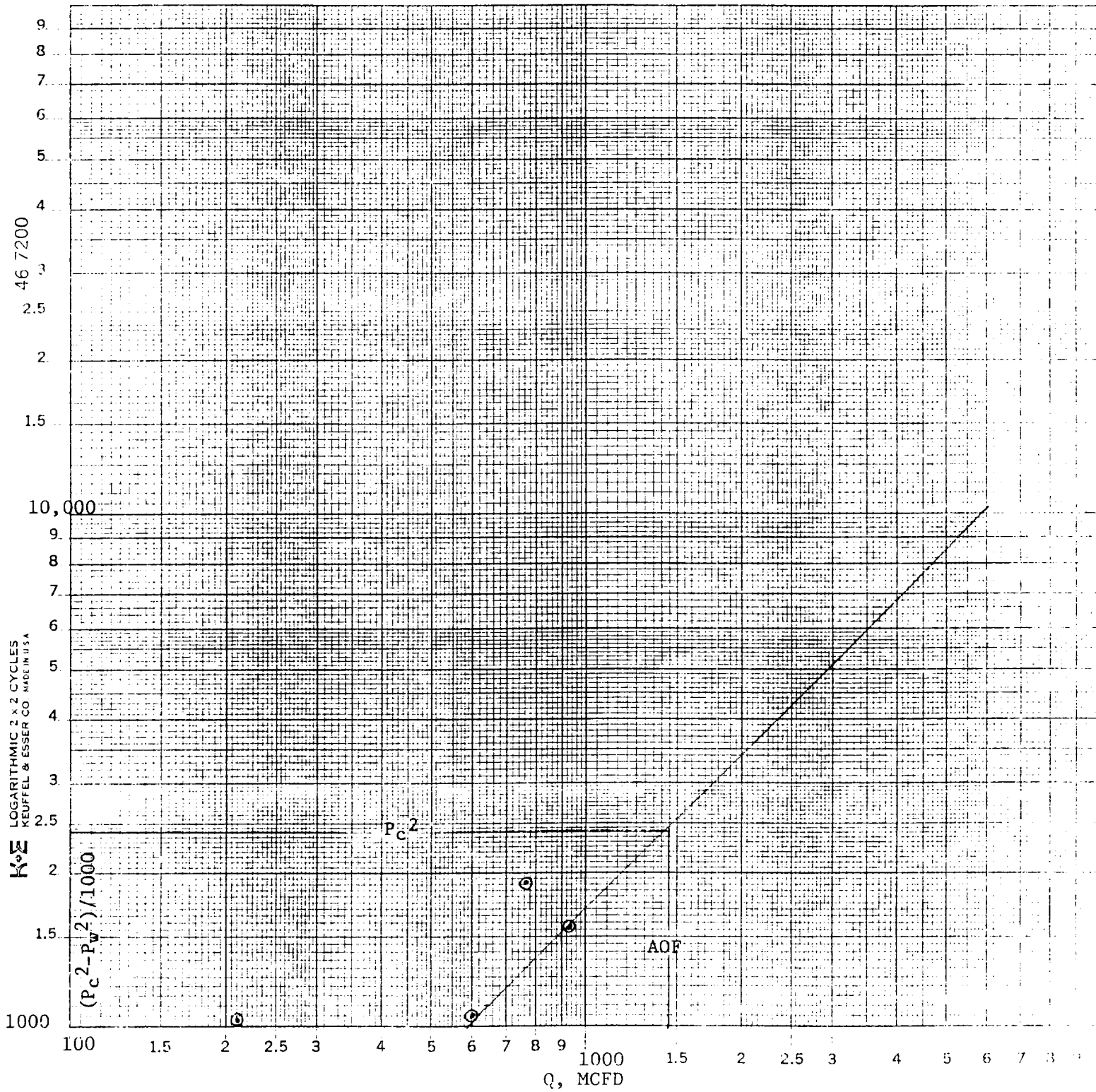
Angle of Slope θ **45**

Slope, n **1.0**

Remarks: **Test was run using 2" orifice well tester vented to atmosphere.**

Approved By Division	Conducted By: ARC PRESSURE DATA, INC.	Calculated By: Scott Snodgrass	Checked By:
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MELZEL EXPLORATION
 Bilberry #2
 Lea County, New Mexico
 October 30, 1991



$\theta = 45^\circ$
 $n = 1.000$
 AOF = 1455 MCFD

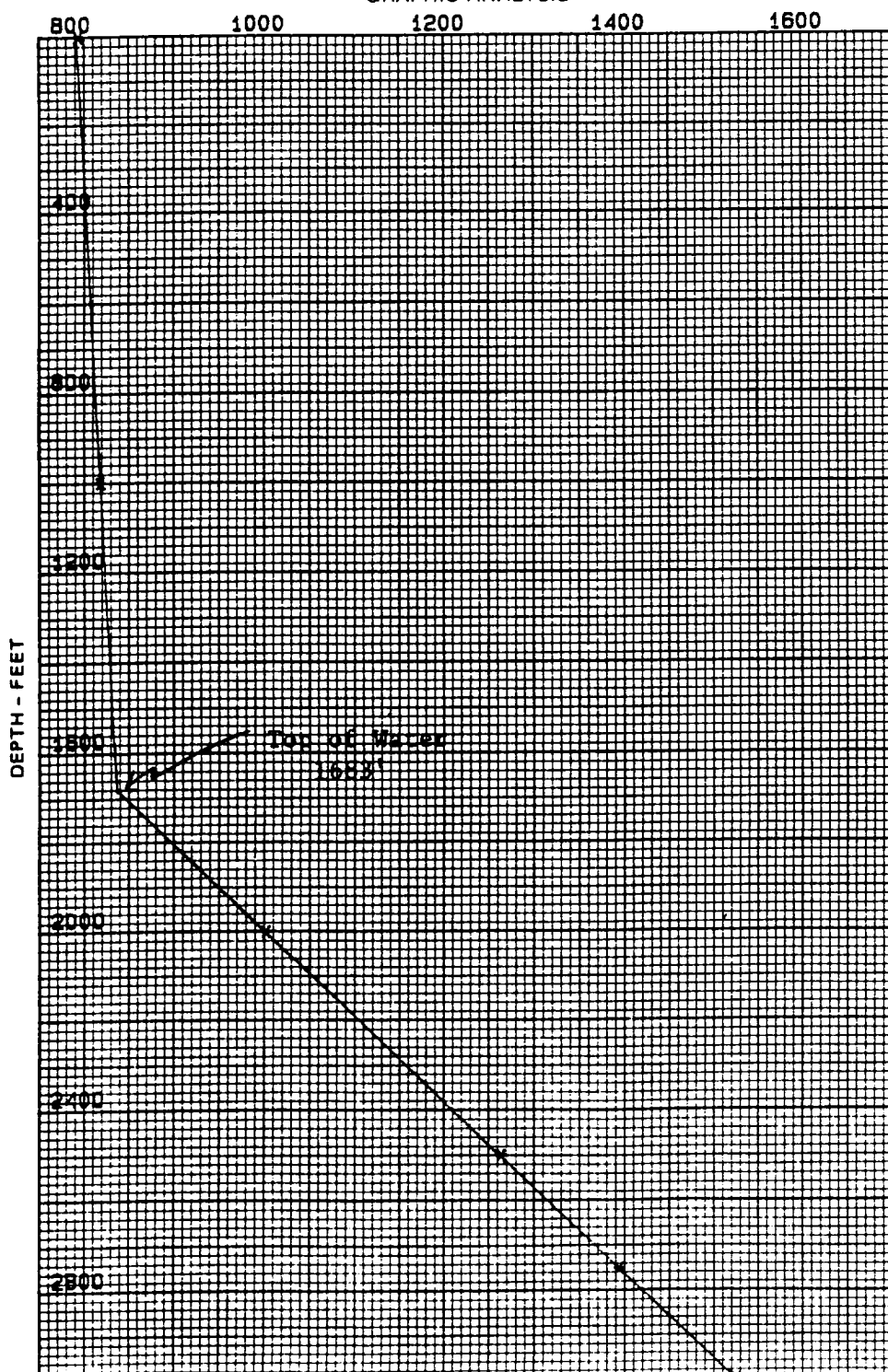


915/563-2371 • P. O. Box 13268 • Odessa, Texas 79768-3268

ARC PRESSURE DATA, INC. INDIVIDUAL WELL DATA SHEET

COMPANY MELZEL EXPLORATION LEASE BILBERRY WELL NO. 2
FIELD HOUSE (YATES-SEVEN RIVERS) COUNTY LEA STATE NM
TEST DATE 10/30/91 TIME 9: 45 STATUS OF WELL SHUT-IN SHUT IN 15: 00
10/11/91

GRAPHIC ANALYSIS



Depth Feet (G.L.)	Pressure Lbs. Sq. In. GAUGE	*Gradient Lbs./Ft.
0	844	
		.025
1000	869	
		.183
2000	1052	
		.523
2500	1314	
		.519
2750	1444	
		.527
2999 R.D.	1575	

ELEV. K.B. 3606 (+ 14') GR. 3592
PRESSURE DATUM 2999 GL
TOP OF PAY
TUBING 2 3/8 DEPTH 3165
S.N. PACKER
CASING 4 1/2 DEPTH 3184
PERF. 2866-3159
TOTAL DEPTH
FORMATION YATES - SEVEN RIVERS
CASING PRESS.
TUBING PRESS. 846 DWG
TOP OF FLUID 1683
TOP OF WATER 1683
HRS.-SHUT IN 451 FLOWING
TEMP. @ 2999 GL - 90 °F
LAST TEST DATE
PRESS. LAST TEST
B. H. P. CHANGE
INSTRUMENT NO. 036660
RUN BY MAX WHEELER
CALCULATED BY SCOTT SNOODGRASS