

C/S

Type Test ☒ Initial FOUR POINT ☐ Annual ☐ Special				Date 6-18-82		1980 FNL	
Company DEPCO, INC.				Connection AIR NEW WELL		1980 FEL	
Well UNDESIGNATED				Formation ABO		Unit G	
Completion Date 6-18-82		Total Depth 4555		Plug Back TD 4535		Elevation C.D. 3580.00	
Tub. Size 4.5		Wt. 10.5		Set At 4535		Perforations: From 4085 To 3408	
Tub. Size 2.375		Wt. 4.7		Set At 4032		Perforations: From OPEN To ENDED	
Type Well - Single - Rodenthead - G.G. or C.O. Multiple SINGLE				Packer Set At NONE		County CHAVES	
Producing Time TUBING		Reservoir Temp. °F 105 • 4296		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2	
L 4296		H 4266		C _g .652		% CO ₂ 2.45	
						% N ₂ 3.18	
						% H ₂ S	
						Prover	
						Meter Run 4.028	
						Type FLANGE	

FLOW DATA						TUBING DATA		B.H.P. 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.	
SI							891	89	997	
1	4.028	X	1.500	160	4.0	91	862	82	967	9/64
2	4.028	X	1.500	160	9.5	84	831	82	934	11/64
3	4.028	X	1.500	163	22.0	76	778	84	876	15/64
4	4.028	X	1.500	170	45.0	68	686	82	783	18/64
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 _{sp}	Rate of Flow Q, Mcfd
1	11.1200	26.32	173.2	.9715	1.2384	1.0127	357
2	11.1200	40.56	173.2	.9777	1.2384	1.0133	553
3	11.1200	62.26	176.2	.9850	1.2384	1.0138	856
4	11.1200	90.80	183.2	.9924	1.2384	1.0153	1260
5							

NO	η	Temp. °R	T _i	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	.26	551	1.53	.975				.6520	675	360
2	.26	544	1.51	.974						
3	.26	536	1.49	.973						
4	.27	528	1.47	.970						
5										

NO	P ₁	P _w	P _w ²	P _c ² - P _w ²
1		980.2	960.8	60.0
2		947.2	897.2	123.0
3		889.2	790.7	230.0
4		796.2	633.9	387.0
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.6370$

AND $Q = \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2527.1$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.0056$

V. J. F. 2
9-12-82
Comp. + DCA. PM.

Absolute Open Flow 2527.1 Mcfd @ 15.025	Angle of Slope @ 54.3	Slope, n .7178
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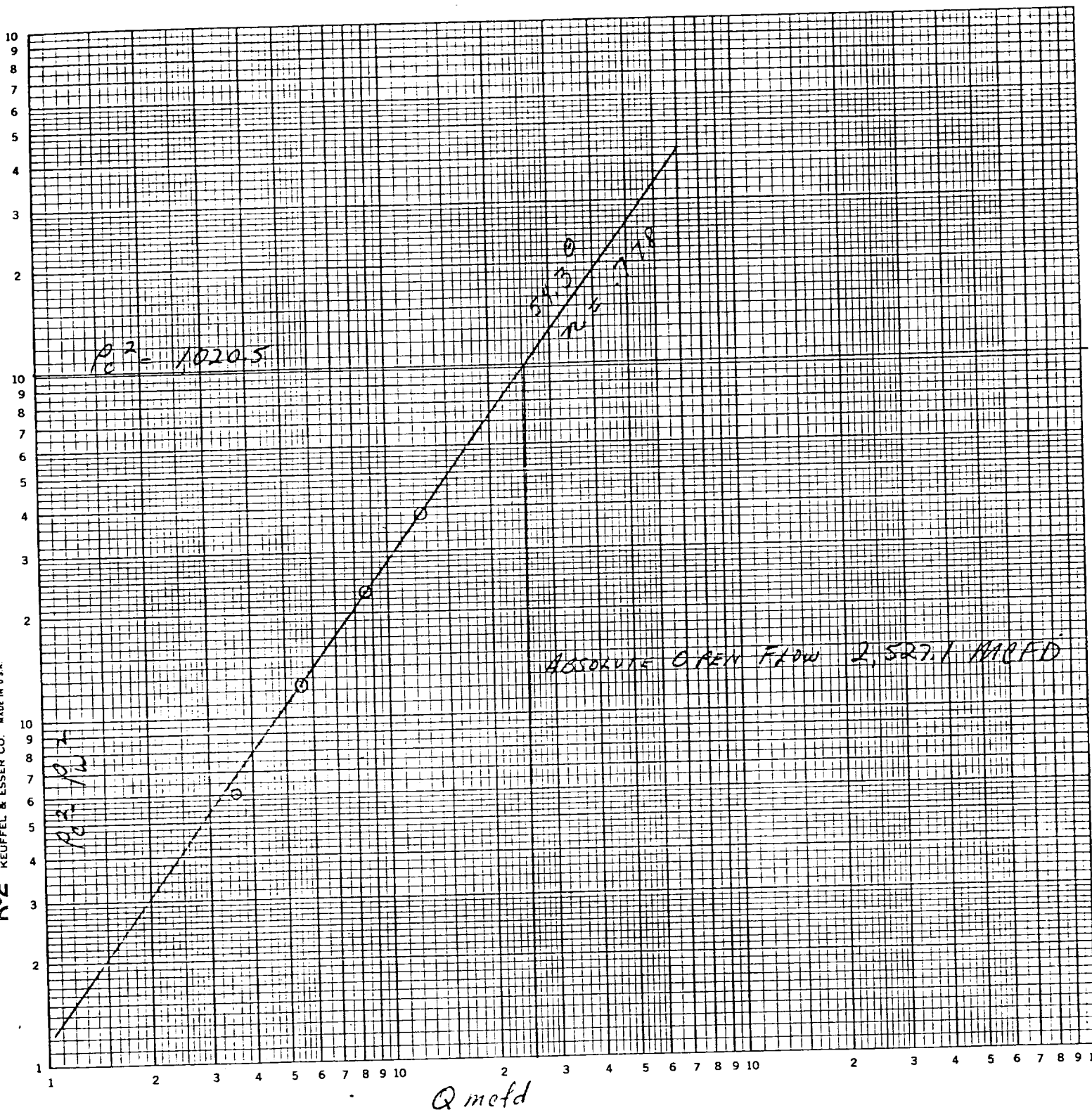
Remarks: BOTTOM HOLE PRESSURE MEASURED WITH AMERADA PRESSURE ELEMENTS.

Approved By Commission:	Conducted By: DON BENNETT	Calculated By: BENNETT - CATHEY	Checked By:
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VANCE Federal A #1
 G, 34, 7S, 26E
 Chaves County, New Mexico
 6-21-82

46 7400

K-E LOGARITHMIC 3 X 3 CYCLES
 KEUFFEL & ESSER CO. MADE IN U.S.A.



$\overline{\Delta P}_1$ $P_c^2 - P_w^2 = 300$
 $\overline{\Delta P}_2$ $P_c^2 - P_w^2 = 30$
 Q_1 1034 mcf/d
 Q_2 198 mcf/d

$\log Q_1$ 3.0145
 $\log Q_2$ 2.2967
 $n = .7178$

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY DEPCO INC. WELL NAME VANCE FEDERAL A WELL NO. 1
DATE OF TEST 6-21-82 FORMATION _____ PAGE 1 OF 1
COMPANY MAN DANNY HOKETT

FOUR POINT BACK PRESSURE TEST

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER	RPG3 #22749	RANGE	5,150 LBS.
CLOCK NUMBER	B3443	RANGE	12 HOURS
TIME WELL SHUT IN	1300 HOURS	6-18-82	
TIME CLOCK STARTED	0857 HOURS	6-21-82	
DEAD WEIGHT ELEMENT ON SURFACE	901 PSIA	SHUT IN	LBS.
TIME ELEMENT REACHED BOTTOM	1041 HOURS	6-21-82	
DEAD WEIGHT ELEMENT ON BOTTOM	901 PSIA	SHUT IN	LBS.
ELEMENT SET AT	4,296		FEET.
TEMPERATURE	4,296	FT.	105 °F.
DEAD WEIGHT AT THE END OF	73	HOURS	40 MINUTES.

[illegible]

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY DEPCO, INC. WELL NAME VANCE A FEDERAL WELL NO. 1
 DATE OF TEST 6-18-82 - 6-21-82 FORMATION _____ PAGE 1 OF 1
 COMPANY MAN DANNY HOKETT

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3 #22749 RANGE 5,150 LBS.
 CLOCK NUMBER 27191 RANGE 72 HOURS
 TIME WELL SHUT IN 1300 HOURS 6-18-82
 TIME CLOCK STARTED 1200 HOURS 6-18-82
 DEAD WEIGHT ELEMENT ON SURFACE 270 PSIA SHUT IN LBS.
 TIME ELEMENT REACHED BOTTOM 1250 HOURS 6-18-82
 DEAD WEIGHT ELEMENT ON BOTTOM 270 PSIA SHUT IN LBS.
 ELEMENT SET AT 4,296 FEET.
 TEMPERATURE 4,296 FT. 105 °F.
 901 PSIA DEAD WEIGHT AT THE END OF 73 HOURS 40 MINUTES.

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psia	PRESSURE AT MID-POINT OF PERFORATIONS psia
6-18-82	0	1250		353	13.2		366
	1/4	1305		613	13.2		626
	1/2	1320		732	13.2		745
	3/4	1335		784	13.2		797
	1	1350		805	13.2		818
	1-1/4	1405		822	13.2		835
	1-1/2	1420		833	13.2		846
	1-3/4	1435		843	13.2		856
	2	1450		853	13.2		866
	2-1/4	1505		859	13.2		872
	2-1/2	1520		863	13.2		876
	2-3/4	1535		869	13.2		882
	3	1550		874	13.2		887
	3-1/2	1620		882	13.2		895
	4	1650		887	13.2		900
	4-1/2	1720		892	13.2		905
	5	1750		897	13.2		910
	6	1850		905	13.2		918
	7	1950		910	13.2		923
	8	2050		915	13.2		928
	9	2150		920	13.2		933
	10	2250		923	13.2		936
	12	2450		931	13.2		944
6-19-82	14	0250		937	13.2		950
	16	0450		942	13.2		955
	18	0650		946	13.2		959
	20	0850		952	13.2		965
	25	1350		960	13.2		973
	30	1850		966	13.2		979
	35	2350		970	13.2		983
6-20-82	40	0450		974	13.2		987
	45	0950		979	13.2		992
	50	1450		982	13.2		995
	55	1950		983	13.2		996
	60	2450		986	13.2		999
6-21-82	65	0550		989	13.2		1002
	67-1/2	0820		992	13.2		1005

HOBBS, NEW MEXICO 88240

WET	DRY
14.191	1031
14.193	1032
14.730	1047
14.730	1054
14.730	1056
14.730	1057