

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

Form O-122
Revised 9-1-82
c-57
7-10

RECEIVED BY
MAR 29 1984
O. C. D.
ARTESIA, OFFICE

Type of Test ☒ Initial ☐ Annual ☐ Special		Test Date 11/23/82	
Company Samedan Oil Co.		Fluid Air	
Well <i>Paces Shm Hbo</i>		Formation ABO	
Completion Date 11/19/82 12-24-82	Total Depth 4400	Flow Line Top 4142	Elevation 3604 KB
Perforations: From 4053 To 4065		Well No. 3	
Coq. Size 4 1/2	Wt. 9.5	Set At 4400	Perforations: From To
Tiq. Size 2 1/16	Wt. 3.25	Set At 3530	Unit E
Type Well - Single - Provenhead - G.G. or G.O. Multiple Single		Packer Set At none	County Chaves
Producing Thru Tbg. 4049	Reservoir Temp. °F 114 4049	Mean Annual Temp. °F 60°	Baro. Press. - P _a 13.2
L 4049	H 4049	G _g .7316	% CO ₂ 10.218
		% N ₂ 5.088	% H ₂ S
		Provor 	Meter Run 4"
			Flg.

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Provor Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
5!							960		960		
1.	4 X 1.000			150	10.0	66	930		922		1.5 hrs
2.	4 X 1.000			150	21.0	83	920		915		1 hr
3.	4 X 1.000			160	42.0	100	900		895		1 hr
4.	4 X 1.000			160	87.0	96	865		865		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 F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mhd
1	4.753	40.40	163.2	.9943	1.169	1.015	227
2	4.753	58.54	163.2	.9786	1.169	1.013	322
3	4.753	85.29	173.2	.9636	1.169	1.013	463
4	4.753	122.75	173.2	.9671	1.169	1.013	668
5							

NO.	P ₁	Temp. °R	T ₁	Z	Gas Liquid Hydrocarbon Ratio	A.P.L. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	.23	526	1.42	.971	dry		.7316	XXXXXX	703	370
2	.23	543	1.47	.974						
3	.25	560	1.51	.975						
4	.25	556	1.50	.974						
5										

NO.	P ₁	P _w	P _w ²	P ₁ ² - P _w ²	(1) $\frac{P_1^2}{P_1^2 - P_w^2} =$	(2) $\left[\frac{P_1^2}{P_1^2 - P_w^2} \right]^n =$
1		928.5	862.1	85.0	5.351	5.351
2		918.8	844.3	102.8		
3		903.9	817.1	130.0		
4		877.6	770.1	177.0		
5						

Absolute Open Flow	3,574	Mcf/D @ 15.025	Angle of Slope θ	45°	Slope, n	1.000
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Remarks:

Approved By Consultant:	Conducted By:	Collected By:	Checked By:
	Davis Services, Inc.	Rick Pagan	

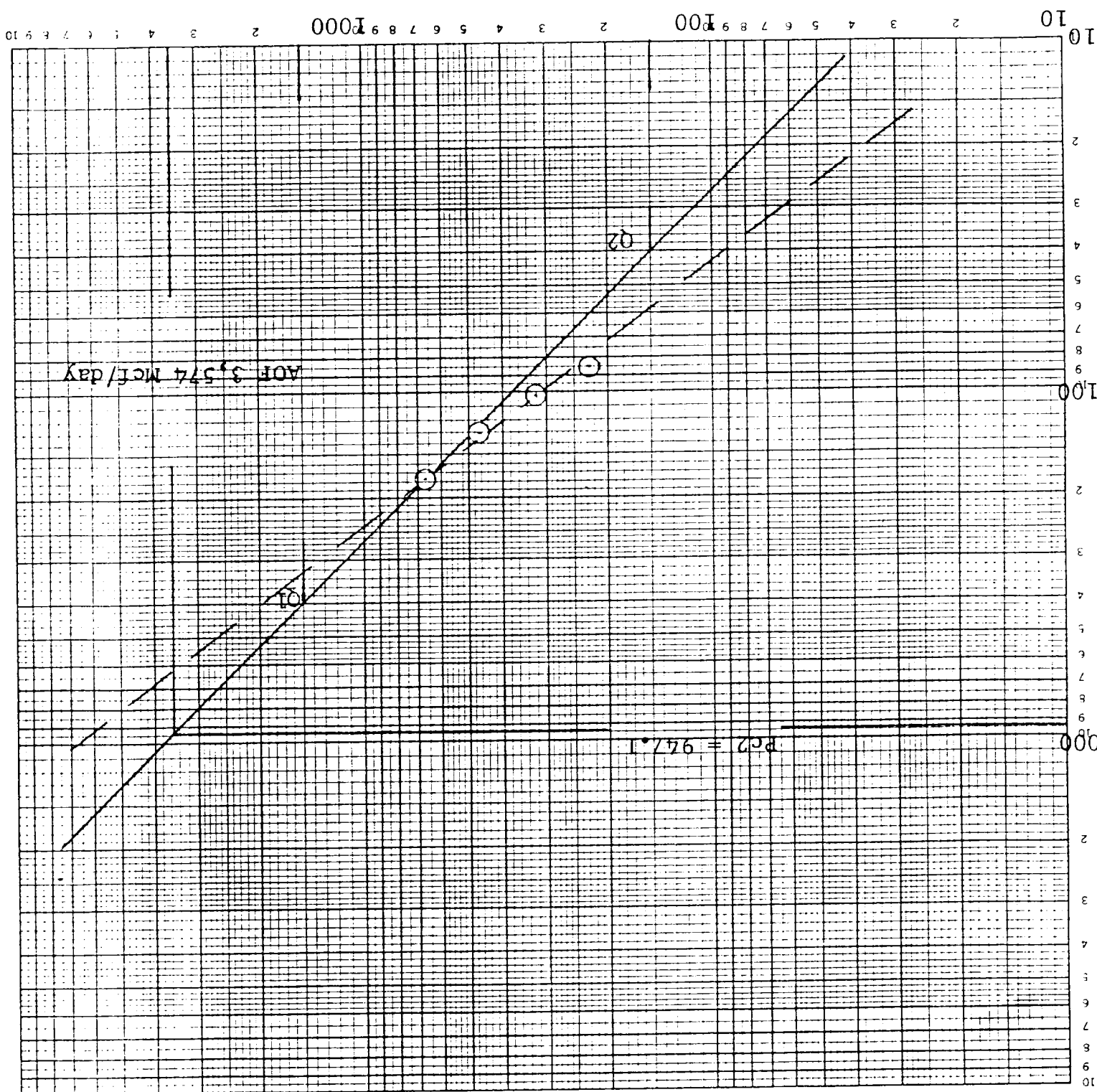
$$Q = McF/day$$

$$Q1 = \log 1500 = 3.176091$$

$$- Q2 = \log 150 = 2.176091$$

$$N = 1.000$$

$$\theta = 45^\circ$$



NEW-TEX LAB

PHONE 505/393-3561

P. O. BOX 1161

611 W. SNYDER

HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

CLIENT: DAVIS SERVICES
ADDRESS: P. O. BOX 2033
CITY: STATE: HOBBS NM 88240

ANALYSIS NUMBER: 8696
DATE OF RUN: 11/24/82
DATE SECURED: 11/23/82

SAMPLE IDENT: SEDAN - STATE 16 #3
SAMPLING PRESS: SAMPLING TEMP:

***** GAS ANALYSIS *****

	MOLE PERCENT	GAL/ MCF
NITROGEN	5.388	
CARBON DIOXIDE	10.218	
METHANE	77.832	
ETHANE	4.073	1.037
PROPANE	1.445	0.397
ISO-BUTANE	0.252	0.062
NORMAL BUTANE	0.482	0.132
ISO-PENTANE	0.153	0.056
NORMAL PENTANE	0.164	0.059
HEXANES	0.133	0.055
HEPTANES PLUS	0.158	0.073
TOTAL	100.000	1.961

PROPANE GRM:	0.40	BUTANES GRM:	2.23
ETHANE GRM:	1.05	PENTANES PLUS GRM:	0.24

SPECIFIC GRAV (CALC): 0.7315
MOLE WEIGHT: 21.20

HRV-SCU/CU FT	PRESSURE (PSIA)	WET	DRY
14.696		930	946
14.650		927	944
14.720		932	949
14.735		932	949

ANALYZED BY: E. W. HAMILTON

APPROVED BY: [Signature]

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (P_c or P_w)

Form C-1122F
Adopted 9-1-65

FROM KNOWN BOTTOM HOLE PRESSURE (P_f or P_s)

COMPANY Samedan Oil Corp. LEASE State 16 WELL NO. 3 DATE 11/23/82

LOCATION: Unit 4049 Section 16 Township 7S Range 26E
L 4049 H 4049 L/H 1.000 G .7316 %CO₂ 10.218 %N₂ 5.088 %H₂S

GH 2962 P_{cr} 703 T_{cr} 370
TABLE D.1 TABLE D.2

LINE	1	2	3	4	5	6	7	8
1	$T_w(W.H. \cdot R)$	534	534	534	534	534	534	534
2	$T_g(B.H. \cdot R)$	574	574	574	574	574	574	574
3	$T = (\frac{T_w}{2} + T_g)$	554	554	554	554	554	554	554
4	Z (Est.)	.861	.868	.862	.869	.865	.871	.868
5	TZ	477.0	480.9	477.5	481.4	479.2	482.5	480.9
6	GH/TZ	6.210	6.160	6.203	6.153	6.181	6.138	6.160
7	e^S (Table XIV)	1.262	1.260	1.262	1.260	1.261	1.259	1.260
8	P_f or P_s	1042.2	1042.2	1031.2	1031.2	1014.2	1014.2	984.2
9	P_f^2 or P_s^2	1086.2	1086.2	1063.4	1063.4	1028.6	1028.6	968.7
10	$P_c^2 = P_f^2/e^S$ or $P_w^2 = P_s^2/e^S$	860.5	862.1	842.7	844.3	815.8	817.1	768.9
11	P_c or P_w	927.6	928.5*	918.0	918.8*	903.2	903.9*	876.8
12	$P - (\frac{P_w + P_s}{2})$ or $(\frac{P_c + P_f}{2})$	984.9	985.4	964.6	975.0	958.7	959.1	930.5
13	$P_r = (P/P_{cr})$	1.40	1.40	1.39	1.39	1.36	1.36	1.32
14	$T_r = (T/T_{cr})$	1.50	1.50	1.50	1.50	1.50	1.50	1.50
15	Z (Table XI)	.868	.868	.869	.869	.871	.871	.874

