

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

Form C-122
Revised 9-1-65

RECEIVED

Type Test: ☒ Initial 4 POINT ☐ Annual ☐ Special				Test Date: 10-14-82		NOV 1 1982	
Company: SANDERS PETROLEUM ✓				Connection: AIR NEW WELL		O. C. D.	
Pool: PECOS SLOPE <i>U.D. Also</i>				Formation: ABO		Unit: ARTESIA, O.G.	
Completion Date: 10-10-82		Total Depth: 4250		Plug Hole: 4181		Elevation: 4182	
Farm or Lease Name: HUGGINS DRAW							
Well Size: 4.500	Wt.: 11.6	d: 4.000	Set At: 4224	Perforations: From 3751 To 3943		Well No.: 2	
Reg. Size: 2.375	Wt.: 4.7	d: 1.995	Set At: 3715	Perforations: From OPEN To ENDED		Unit: A Sec: 31 Twp: 5S Rge: 24E	
Type Well - Single - Padenhead - O.G. or O.O. Multiple				Packer Set At: NONE		County: CHAVES	
Producing Through TUBING		Reservoir Temp. °F: 108 @ 3847		Mean Annual Temp. °F: 60°		Base. Press. - P _g : 13.2	
State: NEW MEXICO							
L: 3847	H: 3847	Q _g : 0.693	% CO ₂ : 1.59	% N ₂ : 16.20	% H ₂ S: 0	Prover: 0	Meter Run: 4.0 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.	CHOKE	
51							785	76			2160 HRS.
1	4.03	X	0.625	250	11.5	59	727	59	0	6/64	1 HR
2	4.03	X	0.625	250	16.5	59	673	59	0	8/64	1 HR
3	4.03	X	0.625	255	36.0	59	598	59	0	9/64	1 HR
4	4.03	X	0.625	255	42.0	59	468	59	0	10/64	1 HR
5											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{P_{wf} - P_{ws}}$	Pressure P _{ws}	Flow Temp. Factor F _t	Gravity Factor F _g	Super. Compres. Factor F _{sp}	Rate of Flow Q, Mcfd
1	1.85	55.02	263.2	1.0010	1.2013	1.0203	125.
2	1.85	65.99	263.2	1.0010	1.2013	1.0203	149.
3	1.85	98.26	268.2	1.0010	1.2013	1.0207	223.
4	1.85	106.13	268.2	1.0010	1.2013	1.0207	240.
5							

NO.	P ₁	Temp. °R	Q	Z	Gas Liquid Hydrocarbon Ratio _____ Mol/bbl.	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
1	0.41	519.	1.52	0.961	Specific Gravity Separator Gas: 0.693	XXXXXXXXXX
2	0.41	519.	1.52	0.961	Specific Gravity Flowing Fluid: XXXXXX	
3	0.41	519.	1.52	0.960	Critical Pressure: 647. P.S.I.A	P.S.I.A.
4	0.41	519.	1.52	0.960	Critical Temperature: 341. R	R
5						

NO.	P ₁ ²	P ₂ ²	R ₁ ²	P ₂ ² - R ₁ ²	(1) $\frac{P_2^2}{R_2^2 - R_1^2} = 1.5785$	(2) $\left[\frac{P_2^2}{R_2^2 - R_1^2} \right]^n = 1.2578$
1	548.	741.	549.	86.	AOF = O $\left[\frac{P_2^2}{R_2^2 - R_1^2} \right]^n = 302.$	Post IO-2 11-5-82 Bennett BR
2	471.	687.	472.	163.		
3	374.	612.	375.	260.		
4	232.	482.	233.	402.		
5						

Absolute Open Flow: 302. Mcfd @ 15.025	Angle of Slope: 63.3	Slope, n: 0.503
--	----------------------	-----------------

Remarks: Well shut in for several months to allow frac water to dissipate.
Too weak to take potential test previously.

Approved By Commission:	Conducted By: DON BENNETT	Calculated By: BENNETT-CATHEY	Checked By: <i>[Signature]</i>
-------------------------	---------------------------	-------------------------------	--------------------------------

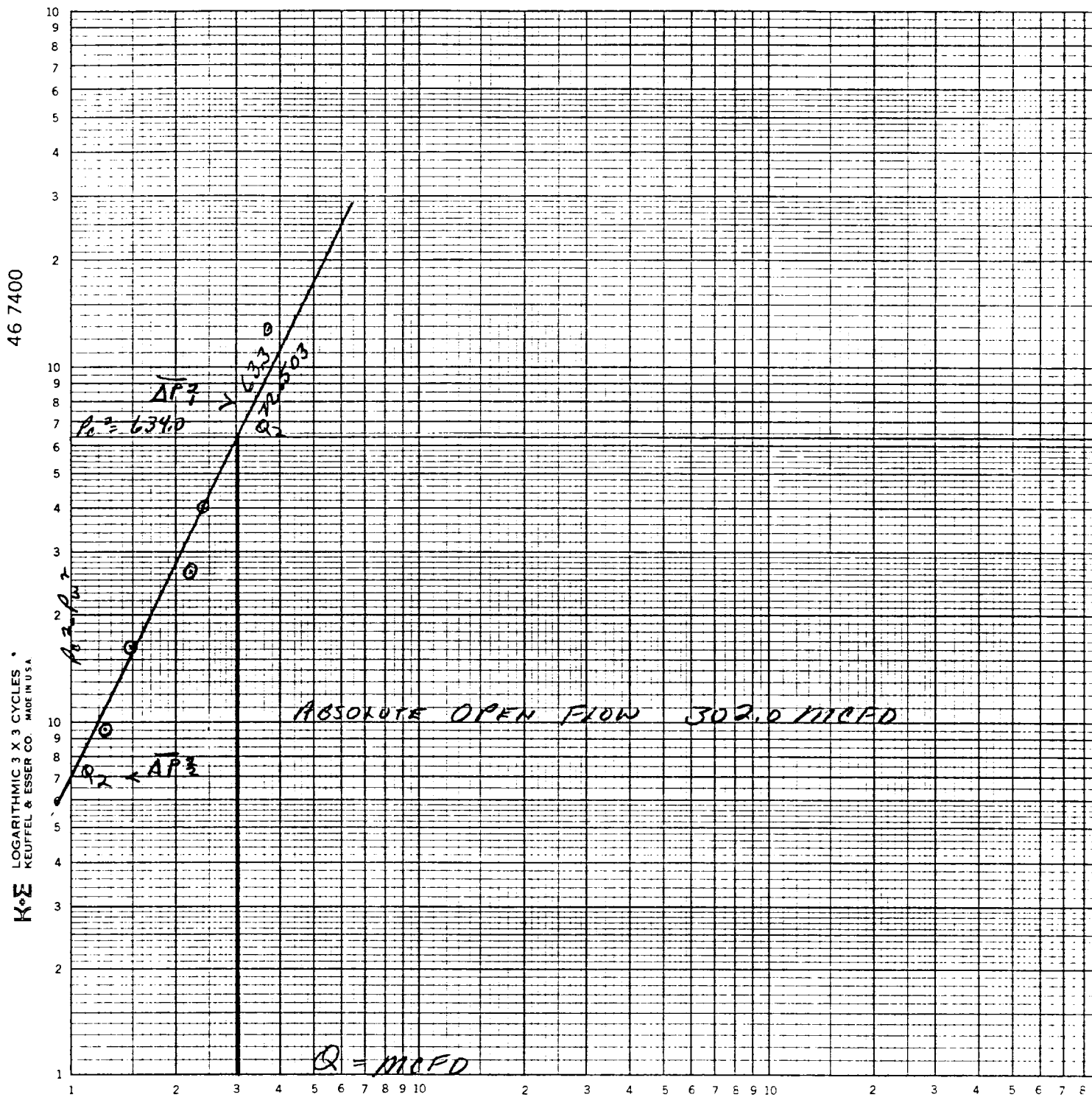
RECEIVED

NOV 1 1982

O. C. D.
ARTESIA, OFFICE

SANDERS PERCELEVIN
Huggins Dunn Well No 1
Unit A, S 31, T 55, R 24E
Chaves County

10-14-82



$$\Delta P_1^2 \quad P_c^2 - P_w^2 = 700$$

$$\Delta P_2^2 \quad P_c^2 - P_w^2 = 70$$

$$Q_1 = 318.4 \text{ mcf/d}$$

$$Q_2 = 100.0 \text{ mcf/d}$$

$$\log Q_1 = 2.5030$$

$$\log Q_2 = 2.0000$$

$$72 = .5030$$

**NEW-TEX
LAB**

PHONE 505/393-3561

P. O. BOX 1161

611 W. SNYDER

HOBBS, NEW MEXICO 88240

RECEIVED

NOV 1 1982

O. C. D.
ARTESIA, OFFICE

ANALYSIS CERTIFICATE

CLIENT: BENNETT & CATHEY
ADDRESS: BOX 787
CITY, STATE: ARTESIA NM 88210

ANALYSIS NUMBER: 8492
DATE OF RUN: 10/15/82
DATE SECURED: 10/14/82

SAMPLE IDENT: SANDERS OIL - HUGGINS DRAW #2
SAMPLING PRESS: SAMPLING TEMP:

REMARKS: SAMPLED AT 4:45 PM

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

	MOLE PERCENT	GAL/ MCF
NITROGEN	16.202	
CARBON DIOXIDE	1.595	
METHANE	75.612	
ETHANE	3.491	0.931
PROPANE	1.708	0.469
ISO-BUTANE	0.300	0.098
NORMAL BUTANE	0.610	0.192
ISO-PENTANE	0.170	0.062
NORMAL PENTANE	0.182	0.066
HEXANES	0.096	0.039
HEPTANES PLUS	0.034	0.016
TOTAL	100.000	1.873

PROPANE GPM:	0.47	BUTANES GPM:	0.29
ETHANE GPM:	0.93	PENTANES PLUS GPM:	0.18

SPECIFIC GRAV (CALC): 0.6930
MOLE WEIGHT: 20.07

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
14.696		903	919
14.650		900	916
14.730		905	921
14.735		905	921

ANALYZED BY: R H HAMILTON

APPROVED BY 