

OIL CONSERVATION DIVISION

P. O. BOX 2088

Form C-122
Revised 10-1-78

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

SANTA FE, NEW MEXICO 87501

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special		Test Date 1-15-86	
Company Ross Carbonics Inc.		Connection	
Pool Bravo Dome		Formation Tubb	
Completion Date 1-24-84		Total Depth 2273	Plug Back TD 2077
		Elevation 4540	Farm or Lease Name Hayoz
Csq. Size 5 1/2	Wt. 20	d	Set At 2136
		Perforations: From 2028 To 2071	
Well No. 2			
Tsq. Size 2 7/8	Wt. 6.5	d	Set At 2010
		Perforations: From To	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single		Packer Set At 2010 to 2018	County Harding
Producing Thru Tubing 2049		Reservoir Temp. °F 90 @ 2049	Mean Annual Temp. °F 50
		Baro. Press. - P ₀ 12.2	State New Mexico
L 2049	H 2049	C _q 1.529	% CO ₂ 100
		% N ₂ 0	% H ₂ S 0
		Prover	Meter Run 4.0
		Taps Flange	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover 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	
SI	4.026	X	1.750	448							
1.	"	"	"	180	34	49	192.2	50			1 hr
2.	"	"	"	150	34	50	162.2	50			1 hr
3.	"	"	"	121	39	51	133.2	50			1 hr
4.	"	"	"	91	48	52	103.2	50			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, Fpv	Rate of Flow O, Mcfd
							1012
1.							931
2.							901
3.							877
4.							
5.							

NO.	R _f	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.					0	
2.						
3.						
4.						
5.						

A.P.I. Gravity of Liquid Hydrocarbons		Deg.	
Specific Gravity Separator Gas		1.529	XXXXXX
Specific Gravity Flowing Fluid		XXXXX	
Critical Pressure		1072	P.S.I.A.
Critical Temperature		547	R

NO.	P _i ²	P _w	P _w ²	P _e ² - P _w ²
1		192.2	36.94	174.86
2		162.2	26.30	185.50
3		133.2	17.74	194.06
4		103.2	10.65	201.15
5				

$$(1) \frac{P_e^2}{P_e^2 - P_w^2} = 1.0529$$

$$(2) \left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = .9627$$

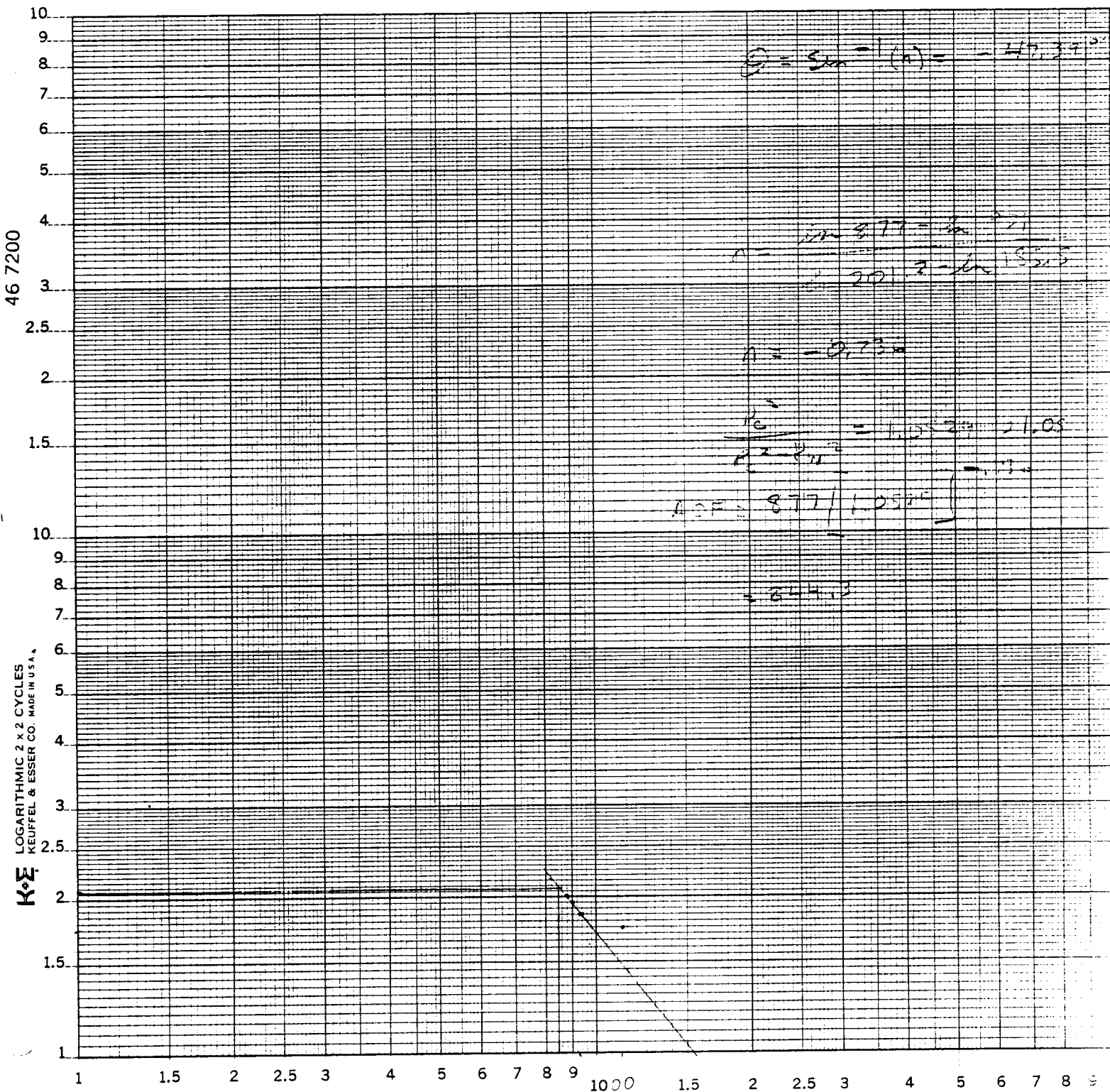
$$AOF = Q \left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 844$$

Absolute Open Flow	844	Mcfd @ 15.025	Angle of Slope ϕ	Slope, n = 736
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Approved By Division	Inspected By: Mock Well Testing	Calculated By:	Checked By:
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Diagram #2

ILLEGIBLE



$$\theta = \sin^{-1}(a) = -47.34^\circ$$

$$a = \frac{\sin 87.7^\circ - \sin 21^\circ}{20.2 - \sin 15.21^\circ}$$

$$A = -0.732$$

$$\frac{P_0}{P_2 - P_{11}^2} = 1.052 \times 1.05 = 1.105$$

$$AOF = 877 / 1.052$$

$$= 844.3$$

$$AOF = 844.3$$