NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLS

RECEIVED

OCT 12 1971

O. C. C.
ARTESIA, OFFICE

Type Test: ☒ Initial ☐ Annual ☐ Special			Test Date: 10-7-71		
Company: SUBSEANS PETROLEUM CORP.	Connection: ✓ PENDING				
Pool: WILDCAT	Formation: MORROW			Unit:	
Completion Date: 9-2-71	Total Depth: 8933'		Plug Back TD: 8895'	Elevation: 3591 KB	Farm or Lease Name: STATE "I"
Csg. Size: 4.500	Wt.: 11.6	d: 4.000	Set At: 8933'	Perforations: From 8802' To 8848'	Well No.: 1
Tbg. Size: 2.375	Wt.: 4.7	d: 1.995	Set At: 8784'	Perforations: From NONE To OPEN ENDED	Unit: F Sec.: 33 Twp.: 18S Rge.: 25E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE			Packer Set At: 8715'		County: EDDY
Producing Thru: TUBING	Reservoir Temp. °F: 154° 8950'		Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2	State: NEW MEXICO

L: 8802	H: 8802	Gg: 0.59	% CO_2: 0.74	% N_2: 0.26	% H_2S: -0-	Prover: –	Meter Run: 3.068	FLGE

NO.	FLOW DATA: Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI	—		—	—	—	—	2522	103	PKR	—	5 Days
1.	3.068		1.375	370	15	88	2410	72	–	–	15 min
2.	3.068		1.375	388	28	70	2312	71	–	–	45 min
3.	3.068		1.375	340	58	67	2194	70	–	–	1 Hr 30 min
4.	3.068		1.375	390	88	68	2086	70	–	–	1 Hr
5.	3.068		1.375	570	80	68	2037	70	–	–	1 Hr

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 Q, Mcfd
1	9.249	75.816	383.2	0.9741	1.302	1.027	973
2	9.249	105.989	401.2	0.9905	1.302	1.031	1,363
3	9.249	152.924	403.2	0.9933	1.302	1.033	1,990
4	9.249	188.366	403.2	0.9924	1.302	1.033	2,425
5	9.249	216.000	583.2	0.9924	1.302	1.047	2,703

NO.	P_t	Temp. °R	T_r	Z
1	0.57	548	1.55	0.948
2.	0.59	530	1.50	0.940
3.	0.60	527	1.49	0.937
4.	0.60	528	1.49	0.937
5	0.86	528	1.49	0.913

Gas Liquid Hydrocarbon Ratio 393,250 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 54 deg.
Specific Gravity Separator Gas 0.59 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX 0.59
Critical Pressure 675 P.S.I.A. 676 P.S.I.A.
Critical Temperature 354 R 354 R

P_c 2535.2 P_c^2 6427

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	–	2423.2	5872	555
2	–	2325.2	5407	1020
3	–	2207.2	4872	1555
4	–	2099.2	4407	2020
5	–	2050.2	4203	2224

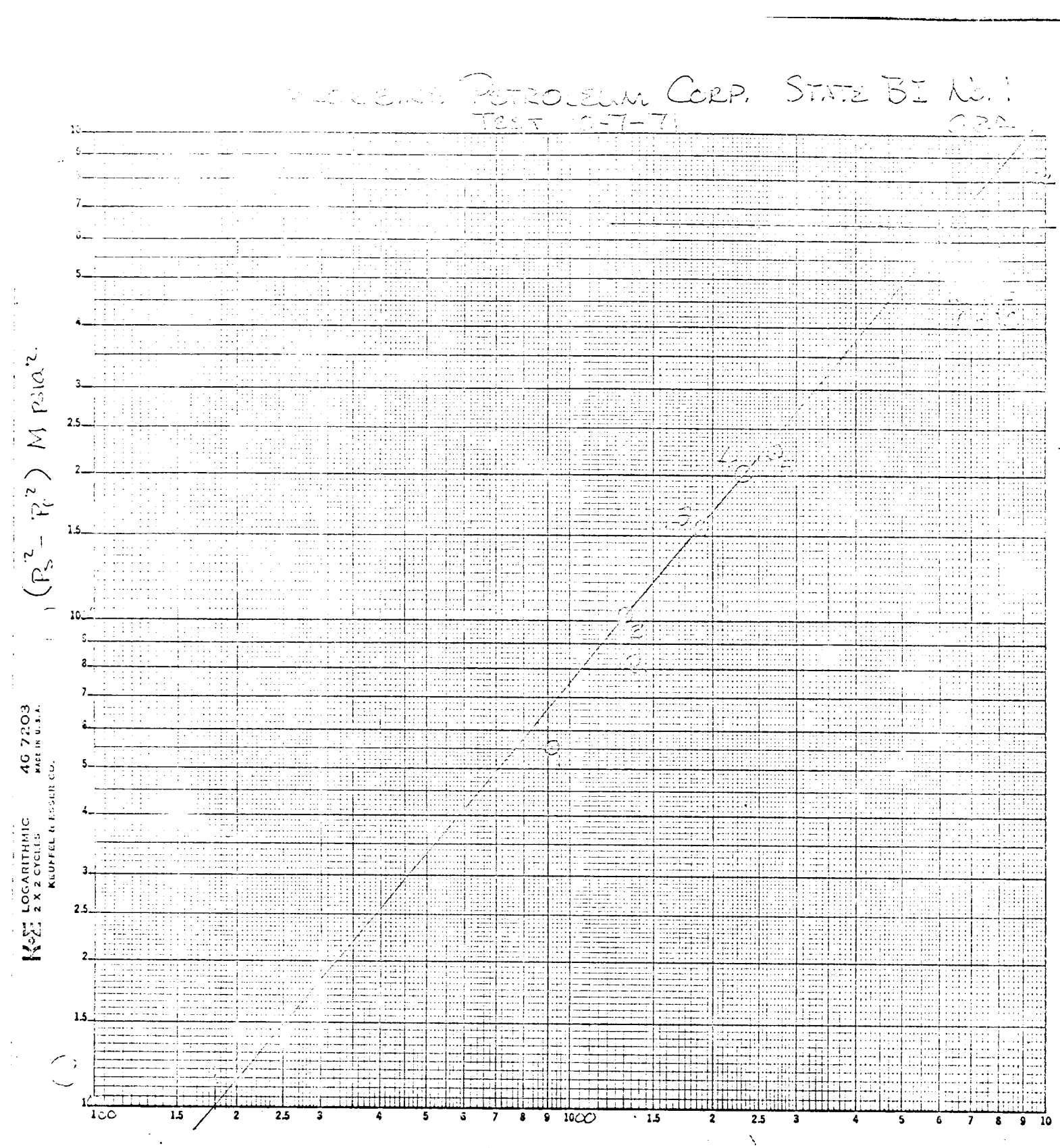
(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{6427}{1555}$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.341$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 6,314$

Absolute Open Flow 6,300 Mcfd @ 15.025 Angle of Slope θ – Slope, n 0.85

Remarks: 4" BHP GAUGE (KUSTER) SET AT 8835' DURING TEST.
GAS ANALYSIS (CHROMATOGRAPH) AT WELL DURING TEST.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	M. B. MORRIS	C. R. APPLEDORN	–



$\log Q_2$ 9200 = 3.9638

$\log Q_1$ 1280 = 3.1096

n = 0.8542

Q_{AOF} = 6300 MCF/D