

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Ocean Energy Resources, Inc.					Lease or Unit Name Panther Martin				
Test Type ☒ Initial ☐ Annual ☐ Special					Test Date May 9, 2000		Well No. #1		
Completion Date		Total Depth		Plug Back TD		Elevation		Unit Ltr - Sec - TWP - Rge. K 3-16-35	
Csg. Size 5.500	Wt. 23.000	d 4.670	Set At	Perforation: From 12374 To 12398			County Lea		
Tbg. Size 2.375	Wt. 4.700	d 1.995	Set At 12306	Perforation: From To			Pool Lovington		
Type Well-Single-Bradenhead-G.G. or G.O. Multiple Single						Packer Set At 12306		Formation Morrow	
Producing Thru Tubing		Reservoir Temp.F 186		Mean Annual Temp.F 60		Baro. Pressure 13.30		Connection	
L 12386	H 12386	Cg .689	X CO ₂ .43	X N ₂ .90	X H ₂ S	Prover		Meter Run 4.026	Taps Flange

FLOW DATA					TUBING DATA		CASING DATA		SIP/FLOW DURATION (HRS.)
NO.	(PROVER) LINE SIZE x ORIFICE SIZE	PRESS. PSIG	DIFF. h _w	TEMP. F	PRESS. PSIG	TEMP. F	PRESS. PSIG	TEMP. F	
SHUT-IN PRESSURE					3069	84	4840	186	270
1.	4.03 x 1.75	424.25	.63	77	2900	84	4787	186	1
2.	4.03 x 1.75	664.00	1.18	98	2853	84	4763	186	1
3.	4.03 x 1.75	694.00	3.63	98	2800	84	4677	186	1
4.	4.03 x 1.75	623.75	9.70	99	2800	84	4601	186	1

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.	15.310	16.609	437.5	.9840	1.2047	1.0425	314.3
2.	15.310	28.210	677.3	.9652	1.2047	1.0585	531.6
3.	15.310	50.636	707.3	.9647	1.2047	1.0610	955.9
4.	15.310	78.609	637.0	.9643	1.2047	1.0544	1474.2

NO.	P _r	TEMP.	T _r	Z
1.	.655	537	1.407	.9200
2.	1.014	558	1.462	.8926
3.	1.059	558	1.463	.8884
4.	.954	559	1.465	.8994

Gas-Liquid Hydrocarbon Ratio	7.3	Mcf/bbl
API Gravity of Liquid Hydrocarbons	37.000	Deg.
Specific Gravity Separator Gas	.689	
Specific Gravity Flowing Fluid	1.131	
Critical Pressure	668 PSIA	646 PSIA
Critical Temperature	381 R	522 R

$P_C = 4853.5$		$P_C^2 = 23556.1$	
NO.	P_w	P_w^2	$P_C^2 - P_w^2$
1.	4800.9	23049	507.049
2.	4776.5	22815	740.738
3.	4690.3	21999	1556.973
4.	4614.9	21296	2259.142

$$(1) \frac{P_C^2}{P_C^2 - P_W^2} = \frac{10.427}{10.357}$$

$$(2) \left[\frac{P_C^2}{P_C^2 - P_W^2} \right]^n = \frac{10.357}{15268}$$

$$AOF = Q$$

Absolute Open Flow	15268	Mcf/d @ 15.025	Angle of Slope -	45.1	Slope, n	.997
Remarks Plot uses measured bottomhole pressures (data listed in casing table).						
Test produced a total of 103.5 mscf and 18 Bbls of condensate.						
Approved By Division:		Conducted By: Charlie Taylor <i>CT</i>		Calculated By: BPT System/SCHLUMBERGER		Checked By: Dick Simper <i>DS</i>