

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 7-15-98			
Company KCS MADELLION Resources, Inc.				Connection PIPE LINE			
Pool Burton Flat				Formation MARROW			
Completion Date 6-12-98		Total Depth 11,600 ft.		Plug Back TD 11,466 ft.		Elevation 3523	
Casing Size 4.5		ID 11.6		Set At 4.0		Perforations: From 11,196 To 11,401	
Thq. Size 2 3/8		WT. 5.95		ID 1.867		Set At 11,176	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE		Packer Set At NA		County EDDY		State NEW MEXICO	
Producing Thru Tubing		Reservoir Temp. °F 8		Mean Annual Temp. °F 13.2		Baro. Press. - P _a	
L		H		C _g 0.601		% CO ₂ 1.097	
				% N ₂ 0.268		% H ₂ S	
				Prover		Meter Run 2"	
						Taps PIPE	

FLOW DATA						TUBING DATA		CASING 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.	
SI							2260			
1.	2" x 1.500		200	7	60	1200				1.0 HR
2.	2" x 1.500		200	26	60	680				1.0 HR
3.	2" x 1.500		205	30	60	477				1.0 HR
4.	2" x 1.500		215	30	60	335				1.0 HR
5.										

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 _{pv}	Rate of Flow Q, Mcfd
1	15.338	38.63	213.2	1.000	1.2899	1.0179	778
2	15.338	74.45	213.2	1.000	1.2899	1.0179	1499
3	15.338	80.91	218.2	1.000	1.2899	1.0163	1630
4	15.338	82.74	228.2	1.000	1.2899	1.0192	1668
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/ubbl.
1					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2					Specific Gravity Separator Gas _____ X X X X X X X X
3					Specific Gravity Flowing Fluid _____ X X X X X
4					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5					Critical Temperature _____ R _____ R

P _c 2825.5 P _c ² 7983.7						
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$
1		1347.1	1814.8	6168.9		
2		737.5	544.0	7439.7		
3		507.9	258.0	7725.7		
4		352.6	124.3	7859.3		
5						

Absolute Open Flow 1720 Mcfd @ 15.025		Angle of Slope 0		Slope, n 1.95	
Remarks:					
Approved By Division _____ Conducted By: KELTIC SERVICES					
Calculated By: MIKE KELLY					
Checked By:					