

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 6-4-81	
Company Dugan Production Corp.		Connection	
Pool Bisti		Formation Dakota & Mancos	
Completion Date 5-22-81	Total Depth 5800'	Plug Back TD 5761'	Elevation 6142 GL
Form or Lease Name Windfall		Well No. #10	
Csg. Size 5 1/2"	Wt. 20#	d 4.778	Set At 5800
Perforations: From 4704 To 5736	Well No.		
Trq. Size 2-3/8"	Wt. 4.7#	d 1.995	Set At
Perforations: From open end To	Unit Sec. Twp. Rge. F 31 26N 11W		
Type Well - Single - Bradenhead - G.C. or G.O. Multiple downhole comingled Dakota & Mancos gas		Packer Set At ---	
Producing Thru tubing		Reservoir Temp. °F 163° @ 5736'	Mean Annual Temp. °F 50
Baro. Press. - P _g 12.2		State NM	
L	H	G _g .65	% CO ₂ % N ₂ % H ₂ S
Prover		Meter Run	Taps

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.		Temp. °F
SI							1250	90	2510	90	305 hrs.
1.											
2.											
3.		3/4"					175	96	810	90	3 hrs.
4.											
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
1							
2							
3	12.365		187	.9671	.9608	1.01	2,170
4							
5							

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

NO.	P ₁	P _w	P ₁ ²	P _w ²	P ₁ ² - P _w ²	(1) $\frac{P_1^2}{P_1^2 - P_w^2} = 1.1189$	(2) $\left[\frac{P_1^2}{P_1^2 - P_w^2} \right]^n = 1.0879$
1							
2							
3		822	675,684	5,684,800			
4							
5							

Absolute Open Flow	2361	Mcfd @ 15.025	Angle of Slope	Slope, n = .85
Remarks: heavy mist of 60% wtr. & 40% oil				
Approved By Division Conducted By: Crane Calculated By: Donovan Checked By:				