

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

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Form C-12
Revised 9-1-65

JUN 22 1984

O. C. D.

ARTESIA, OFFICE

Type Test 4 POINT ☐ Initial ☐ Annual ☒ Special				Test Date 6-14-84							
Company COSTA RESOURCES			Connection PIPELINE								
Pool S. Camp 2711			Formation MORROW		Unit B						
Completion Date 1-16-84		Total Depth 10985		Plug Back 10920	Elevation 36635646						
Form or Lease Name TWO FORKS STATE					Well No. #1						
Test Size 5.500	Wt. 20.0	d 4.778	Set At 10920	Perforations: From 10707 To 10711							
Test Size 2.875	Wt. 6.5	d 2.441	Set At 10624	Perforations: From 0 To 0							
Type Well - Single - Drivenhead - G.C. or G.O. Multiple SINGLE				Packer Set At 10624							
Producing Thru TUBING		Reservoir Temp. °F 185 @ 10709		Mean Annual Temp. °F 60.0							
L 10709		H 10709		Cg 0.636							
CO ₂ 0.54		N ₂ 0.35		H ₂ O 0							
Prover 0		Motor Run 3.1		Type FLANGE							
COUNTY EDDY											
STATE NEW MEXICO											
FLOW DATA											
NO.	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	B.H.P. DATA Press. p.s.i.g.	CHOKE	Duration of Flow
1	3.07 X 1.750			394.	15.2	78	1809	0	2481.	14/64	1.0
2	3.07 X 1.750			410.	29.2	80	1620	0	2231.	16/64	1.0
3	3.07 X 1.750			422.	41.0	73	1379	0	1927.	18/64	1.0
4	3.07 X 1.750			439.	50.4	61	1175	0	1677.	22/64	1.0
5											
RATE OF FLOW CALCULATIONS											
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor F _{sp}	Rate of Flow Q, Mc/d				
1	15.61	78.70	407.2	0.9831	1.2539	1.0357	1568.				
2	15.61	111.09	423.2	0.9813	1.2539	1.0365	2211.				
3	15.61	133.51	435.2	0.9877	1.2539	1.0395	2683.				
4	15.61	150.98	452.2	0.9990	1.2539	1.0439	3082.				
5											
NO.	P _t	Temp. °R	T _t	Z	Gas Liquid Hydrocarbon Ratio 70.7 Mcf/bbl.						
1	0.61	538.	1.46	0.932	A.P.I. Gravity of Liquid Hydrocarbons 57.0						
2	0.63	540.	1.47	0.931	Specific Gravity Separator Gas 0.636						
3	0.65	533.	1.45	0.926	Specific Gravity Flowing Fluid 0.674						
4	0.67	521.	1.42	0.918	Critical Pressure 672. P.S.I.A. 671. P.S.I.A.						
5					Critical Temperature 368. °R 380. °R						
$P_c = 2270.4$ $P_c^2 = 5155.$											
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.4570$						
1	6221.	1848.	3417.	1738.	$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.4263$						
2	5036.	1668.	2783.	2371.							
3	3764.	1451.	2104.	3050.							
4	2857.	1271.	1617.	3538.							
5											
$AOI = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4396.$											
Absolute Open Flow 4396.				Mcf @ 15.025				Angle of Slope 46.7		Slope, n 0.943	
Remarks: BOTTOM HOLE PRESSURES MEASURED WITH AMERADA PRESSURE ELEMENTS.											
Approved By Commission			Conducted By RICHARD TOWNLEY			Calculated By BENNETT & CATHEY			Checked By		