

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

Form C-122
Revised 9-1-65

MAY - 7 1980

RECEIVED

Type Test ☒ Initial ☐ Annual O. C. D. ☐ Special					Test Date 3/4/80		MAY - 5 1980	
Company PETROLEUM DEVELOPMENT CORP.					CONTRACT NO. None		U.S. GEOLOGICAL SURVEY ARTESIA, NEW MEXICO	
Pool <u>West Indian Basin</u> <u>Undesignated</u> <u>Morrow</u>					Formation Morrow		--	
Completion Date 3/4/80		Total Depth 9300		Plug Back TD 9149		Elevation 4164 KB		Farm or Lease Name Arroyo Federal
Csg. Size 4 1/2	Wt. 11.6	d 4"	Set At 9216	Perforations From 9038-52 To 8962-70; From 9083-88 To			Well No. 2	
Tub. Size 2-3/8	Wt. 4.7	d 1.995	Set At 8885	Perforations From None To			Unit Sec. Twp. Rge. C 24 21S 22E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single					Packer Set At 8885		County Eddy	
Producing Thru tubing		Reservoir Temp. °F 8962		Mean Annual Temp. °F 600		Baro. Press. - P _a 13.2		State New Mexico
L 8962	H 8962	Gg 0.617	% CO ₂ 0.69	% N ₂ 1.82	% H ₂ S 0.57	Prover 2"	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. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							2463				
1.	2"		5/16				395	600	pk.		2 hrs.
2.											
3.											
4.											
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.							
2.							900 MCFPD
3.							
4.							
5.							

NO.	P _t	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.					Specific Gravity Separator Gas <u>0.617</u> <u>XXXXXXXXXX</u>
3.					Specific Gravity Flowing Fluid <u>XXXXXX</u> _____
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ R _____ R

NO.	P _t ²	P _w ²	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.						
2.						
3.						
4.						
5.						

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

Absolute Open Flow _____ Mcfd @ 15.025		Angle of Slope θ _____	Slope, n _____
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Remarks: Preparing to commence selling gas to EPNG. Well is still cleaning up frac. water. Unable to get 4 pt. test. Will attempt to run regular 4 pt. test at a later time after well has had time to clean-up by production

Approved By Commission:	Conducted By: Joe B. Murray, EPNG	Calculated By: Joe B. Murray	Checked By:
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Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 3/4/80	
Company PETROLEUM DEVELOPMENT CORP.		Connection None	
Pool <i>West Indian Basin</i> Undesignated		Formation Morrow	
Completion Date 3/4/80		Total Depth 9300	Plug Back TD 9149
Elevation 4164 KB		Farm or Lease Name Arroyo Federal	
Csg. Size 4 1/2	Wt. 11.6	d 4"	Set At 9216
Perforations From 9038-52 To 8962-70;		Well No. 2	
Thg. Size 2-3/8	Wt. 4.7	d 1.995	Set At 8885
Perforations From None To		Unit C	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single		Packer Set At 8885	County Eddy
Producing Thru tubing	Reservoir Temp. °F 8962	Mean Annual Temp. °F 60°	Baro. Press. - P _a 13.2
State New Mexico			
L 8962	H 8962	G _g 0.617	% CO ₂ 0.69
% N ₂ 1.82		% H ₂ S 0.57	Prover 2"
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. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
1.	2"		5/16				2463				
2.							395	600	pkc.		2 hrs.
3.											
4.											
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.							
2.							900 MCFPD
3.							
4.							
5.							

NO.	P _t	Temp. °R	T _t	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.					Specific Gravity Separator Gas 0.617 XXXXXXXXXX
3.					Specific Gravity Flowing Fluid XXXXX
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ R _____ R

NO.	P _t ²	P _w ²	P _c ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$ _____	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$ _____
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2.						
3.						
4.						
5.						

Absolute Open Flow _____ Mcfd @ 15.025		Angle of Slope θ _____	Slope, n _____
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Company PETROLEUM DEVELOPMENT CORP. ✓						Connection None		ARTESIA, OKLA.	
Pool Undesignated						Formation Morrow		Unit --	
Completion Date 3/4/80			Total Depth 9300		Plug Back TD 9149		Elevation 4164 KB		Farm or Lease Name Arroyo Federal
Csg. Size 4 1/2	Wt. 11.6	d 4"	Set At 9216	Perforations 9038-52; 8962-70; From 9083-88. To			Well No. 2		
Thg. Size 2-3/8	Wt. 4.7	d 1.995	Set At 8885	Perforations None To			Unit C	Sec. 24	Twp. 21S
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 8885			County Eddy		
Producing Thru tubing		Reservoir Temp. °F 8962		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2		State New Mexico	
L 8962	H 8962	G _g 0.617	% CO ₂ 0.69	% N ₂ 1.82	% H ₂ S 0.57	Prover 2"	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
1.	2"		5/16				395	60°	pk.		2 hrs.
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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.							
2.							900 MCFPD
3.							
4.							
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcft/bbl.
1.					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.					Specific Gravity Separator Gas 0.617 XXXXXXXXXX
3.					Specific Gravity Flowing Fluid XXXXX
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ R _____ R

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$ _____	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$ _____
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$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$ _____

Absolute Open Flow _____ Mcfd @ 15.025		Angle of Slope θ _____	Slope, n _____
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