

OCT 16 '89

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 10 5 89		O. C. D. ARTESIA, OFFICE	
Company YATES ENERGY					Connection AIR		Unit	
Pool Four Ranch Pre-Permian					Formation		Farm or Lease Name SEYMOUR STATE CO.	
Completion Date 9 29 89		Total Depth 6250		Plug Back TD 6116		Elevation 3822		Well No. 2
Coq. Size 5.500	Wt. 17.0	d 4.892	Set At 6250	Perforations: From 6012 To 6052		Well No. 2		
Trq. Size 2.375	Wt. 4.7	d 1.995	Set At 5911	Perforations: From To		Unit Sec. Twp. Rge. M 18 9 27		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE GAS					Packer Set At 5911		County CHAVES	
Producing Thru TUBING		Reservoir Temp. °F 134 @ 6032		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2		State NM
L 6032	H 6032	G _g .641	% CO ₂ .99	% N ₂ 3.45	% H ₂ S 0	Prover 0	Meter Run 4.0	Taps FLANGE

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
51							1640	62	PKR		72
1.	4.03X1.250			160	2.0	83	1476	61	PKR		1
2.	4.03X1.250			160	4.0	84	981	60	PKR		1
3.	4.03X1.250			160	9.5	84	800	60	PKR		1
4.	4.03X1.250			160	18.0	82	602	60	PKR		1
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 _{pv}	Rate of Flow Q, Mcfd
1	7.47	18.61	173.2	.9786	1.2490	1.0132	172
2	7.47	26.32	173.2	.9777	1.2490	1.0131	243
3	7.47	40.56	173.2	.9777	1.2490	1.0131	375
4	7.47	55.84	173.2	.9795	1.2490	1.0133	517
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	.26	543	1.51	.974	2.7	
2	.26	544	1.51	.974	46.4	
3	.26	544	1.51	.974	.641	
4	.26	542	1.50	.974	X X X X X	1.403
5						

NO.	P _r	P _w	P _w ²	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2}$	(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n$
1	2218	1492	2226	512	1.1609	1.1133
2	988	993	986	1752		
3	661	813	661	2077		
4	378	616	379	2359		
5						

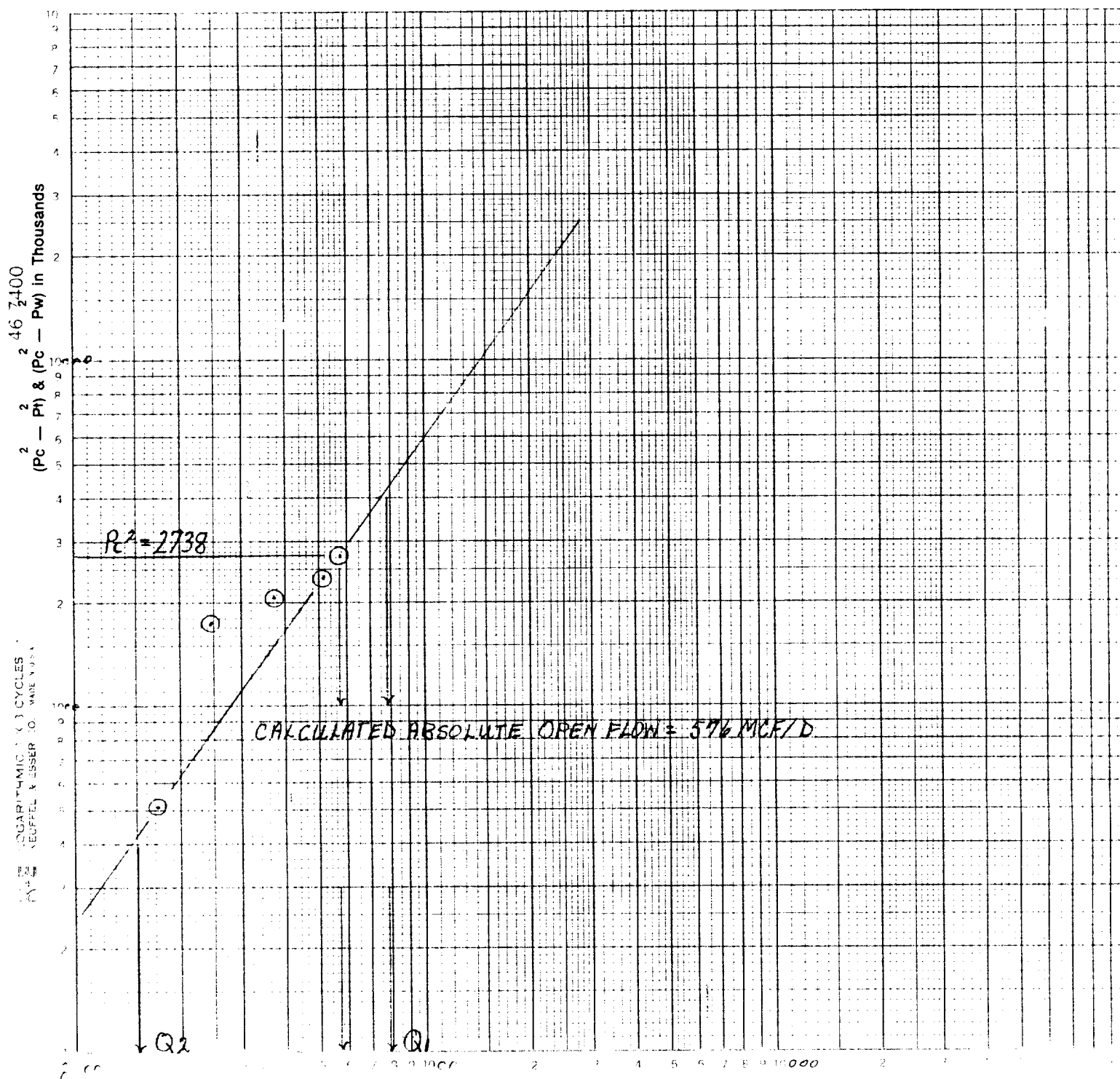
Absolute Open Flow		Mcf/d @ 15.025		Angle of Slope @		Slope, n	
576				54.3		719	

Remarks:			

Approved By Division	Conducted By: BENNETT-CATHEY	Calculated By: MATT LEE	Checked By:
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BENNETT & CATHEY PRODUCTION TESTING BACK PRESSURE CURVE

Operator Yates ENERGY Lease SEYMOUR STATE Well No. 2
 County CHADWICK Field _____ Location _____
 Date of Test 10-5-89 Slope "n" .719 Angle of Slope 54.3
 Calc. Abs. Potential 576 MCF/D



$$\overline{\Delta P}_1^2 \quad P_c^2 - P_w^2 = 4200$$

$$\overline{\Delta P}_2^2 \quad P_c^2 - P_w^2 = 420$$

$$Q_1 = 785$$

$$Q_2 = 155$$

$$\text{LOG } Q_1 = 2.895$$

$$\text{LOG } Q_2 = 2.176$$

$$n = 0.719$$

HALLIBURTON DIVISION LABORATORY**HALLIBURTON SERVICES****ARTESIA DISTRICT****LABORATORY REPORT**No. W511, W512 & W513-89TO Yates EnergyDate October 3, 1989Suite 919 - Sunwest CentreRoswell, NM 88201

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Submitted by _____ Date Rec. October 3, 1989Well No. Seymour State #1 Depth _____ Formation _____

Field _____ County _____ Source _____

	#1	#2	#3
Resistivity	0.081 @ 70°	0.091 @ 70°	0.100 @ 70°
Specific Gravity ..	1.0750 @ 70°	1.064 @ 70°	1.0573 @ 70°
pH	6.8	6.7	6.7
Calcium	11,783	7,855	6,764
Magnesium	4,502	3,045	2,780
Chlorides	64,000	54,000	49,000
Sulfates	1,600	1,600	1,500
Bicarbonates	458	397	458
Soluble Iron	600	300	250
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Remarks:


Respectfully submittedAnalyst: Eric Jacobson - EIT**HALLIBURTON SERVICES**

NOTICE:

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HALLIBURTON DIVISION LABORATORY
HALLIBURTON SERVICES
ARTESIA DISTRICT
LABORATORY REPORT

No. W509 & W510-89

Date October 3, 1989

TO Yates Energy
Suite 919 - Sunwest Centre
Roswell, NM 88201

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Submitted by _____ Date Rec. October 3, 1989

Well No. Seymour State #1 Depth _____ Formation _____

Field _____ County _____ Sources _____

	#4		#5
Resistivity	0.128		0.098
Specific Gravity ..	1.0415		1.0584
pH	6.6		6.8
Calcium	8,728		7,528
Magnesium	397		1,059
Chlorides	36,000		50,000
Sulfates	1,000		1,400
Bicarbonates	549		570
Soluble Iron	0		150

Remarks:



LABORATORY SERVICES

1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: Bennett & Cathey
Attention: Mr. Monty Randolph
P. O. Box 787
Artesia, New Mexico 88210

SAMPLE
IDENTIFICATION: Seymour State Com #1
COMPANY: Yates Energy Inc.
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 10/3/89 5:36 AM
ANALYSIS DATE: 10/4/89
PRESSURE — PSIG 160
TEMPERATURE — °F:
Atmos. Temp. 80

GAS (xx) LIQUID ()
SAMPLED BY: Monty Randolph
ANALYSIS BY: Rolland Perry

REMARKS:

COMPONENT ANALYSIS

COMPONENT		MOL PERCENT	GPM	LIQ. VOL. PERCENT
Hydrogen Sulfide	(H2S)	--		
Nitrogen	(N2)	3.45		
Carbon Dioxide	(CO2)	0.99		
Methane	(C1)	87.53		
Ethane	(C2)	4.93	1.258	
Propane	(C3)	1.71	0.471	
I-Butane	(IC4)	0.27	0.088	
N-Butane	(NC4)	0.52	0.164	
I-Pentane	(IC5)	0.16	0.059	
N-Pentane	(NC5)	0.15	0.054	
Hexane	(C6)	0.15	0.069	
Heptanes Plus	(C7 +)	0.14	0.078	
		100.00	2.241	

BTU/CU. FT.—DRY 1070
AT 14.650 WET 1049

SPECIFIC GRAVITY—CALCULATED 0.641
MEASURED

VAPOR PRESSURE (ABSOLUTE)—CALCULATED

26# GASOLINE— 0.317

CU. FT./GAL. —