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JUN 21 1982
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C-122 file

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

Form C-122
Revised 9-1-65

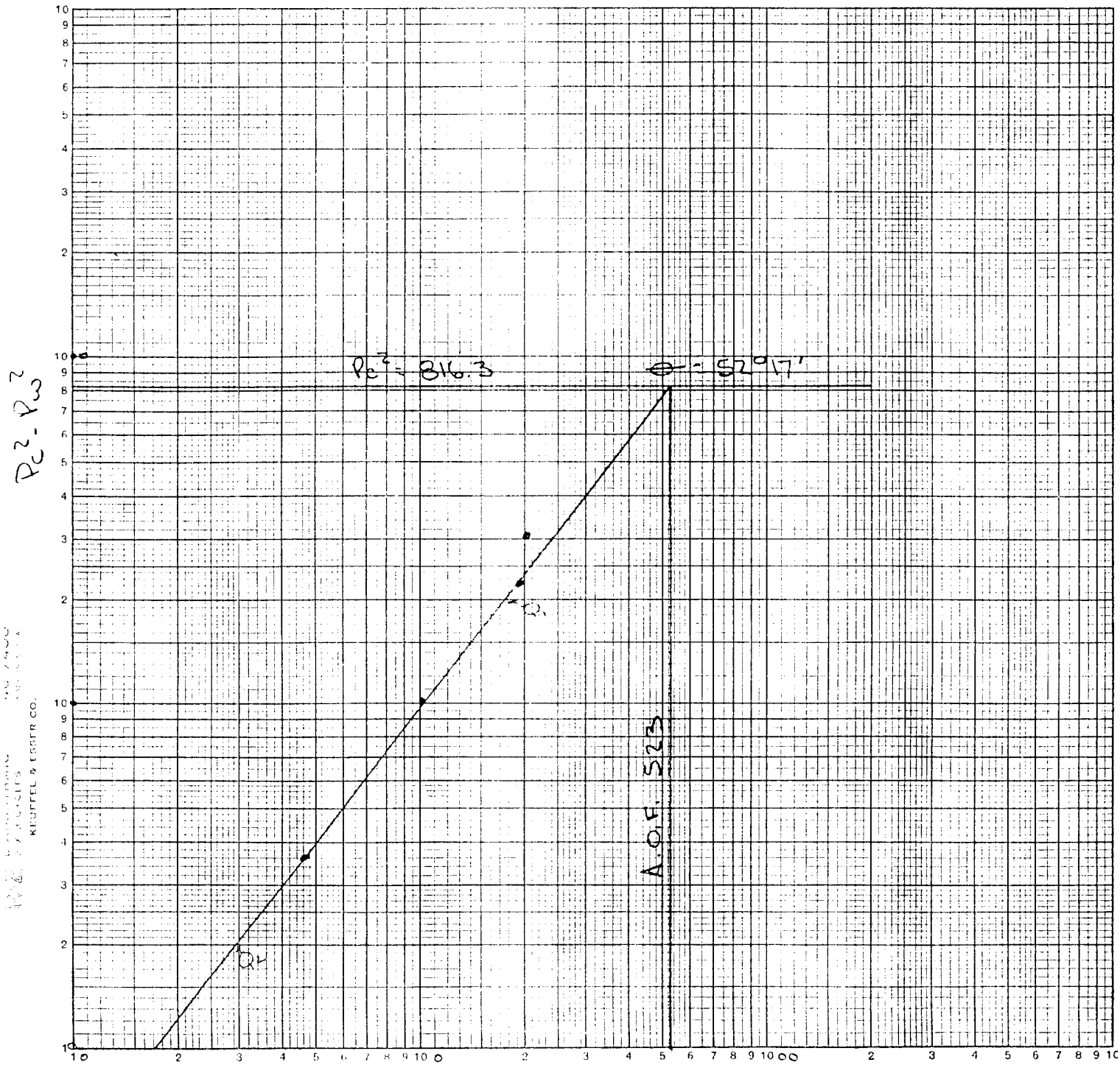
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 11-13-81						
Company STEVENS OPERATING COMPANY ✓						Atmosphere						
Pool WILDCAT						Unit						
Completion Date 10-3-81			Total Test P. 5000'			Flowback TD ABO		Elevation 4820.5 GL.		Farm or Lease Name SLAYTON FED.		
Csg. Size 4 1/2"		Wt. 10.5#		d 4.052		Set At 5000'		Perforations: From 4811.5 To 4820.5		Well No. 1		
Tbg. Size 2 3/8"		Wt. 4.7#		d 1.995		Set At 4753'		Perforations: From OPENENDED To		Unit Sec. Twp. Rge. 2D 1 8S 26E		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE						Packer Set At NONE		County CHAVES				
Producing Thru Tubing			Reservoir Temp. °F 97° @ 4817'			Mean Annual Temp. °F 60°			Baro. Press. - P _a 13.2		State New Mexico	
L 4817		H 4817		Gg .6573		% CO ₂		% N ₂		% H ₂ S		
Prover 2"		Meter Run		Taps								
FLOW DATA												
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	Duration of Flow	
SI							892		PKR	CHOKE	72 Hrs.	
1.	2	x	3/32	250		79°	874	84°		3/64	1 Hr.	
2.	2	x	1/8	310		79°	831	82°		6/64	1 Hr.	
3.	2	x	1/8	550		70°	757	75°		6.5/64	1 Hr.	
4.	2	x	3/16	250		60°	697	64°		8/64	1 Hr.	
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, F _{pv}	Rate of Flow Q, Mcfd					
1	.1410		263.2	.9822	1.234	1.021	46					
2	.2648		323.2	.9822	1.234	1.025	106					
3	.2648		563.2	.9905	1.234	1.048	191					
4	.6082		263.2	1.000	1.234	1.024	202					
5												
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio T.S.T.M. Mcf/bbl.							
1	.4	539	1.51	.960	A.P.L. Gravity of Liquid Hydrocarbons _____ Deg.							
2	.491	539	1.51	.951	Specific Gravity Separator Gas .6573 X X X X X X X X							
3	.856	530	1.48	.911	Specific Gravity Flowing Fluid X X X X X							
4	.4	520	1.45	.953	Critical Pressure 658 P.S.I.A. P.S.I.A.							
5					Critical Temperature 358 R R							
P _c * 903.5 P _c 2816.3												
NO.	P _c ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.677$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.73685$							
1		884.5	782.3	34								
2		846.1	715.9	100.4								
3		770.9	594.3	222								
4		713.0	508.4	307.9	[$\frac{P_c^2}{P_c^2 - P_w^2} $] ⁿ = 523							
5												
Absolute Open Flow 523 Mcfd @ 15.025						Angle of Slope @ 52° 17'			Slope, n .77322			
Remarks: * Calculated from known Bottom Hole Pressures.												
Approved By Commission:				Conducted By: T.B.				Calculated By: M.K.				
								Checked By: M.K.				

STEVENS OPERATING COMPANY

SLAYTON FED. NO. 1

NOVEMBER 13, 1981

$$191 \left(\frac{816.3}{222} \right)^{.77322} = 523$$



WCF/DY in 1,000's.

FROM KNOWN BOTTOM HOLE PRESSURE (P_b or P_s)

COMPANY Stevens Operating Co.

LEASE Slayton Fed

WELL NO. 1

DATE 11-13-81

LOCATION: Unit P

Section 1

Township 8 S

Range 26 E

4817 H 4817

L/H 1000 G 6573

% CO₂ —

SS N₂ 7.219

% H₂S —

GH —

P_{cr} 658

T_{cr} 358

ST

RAT1

RAT2

RAT3

RAT4

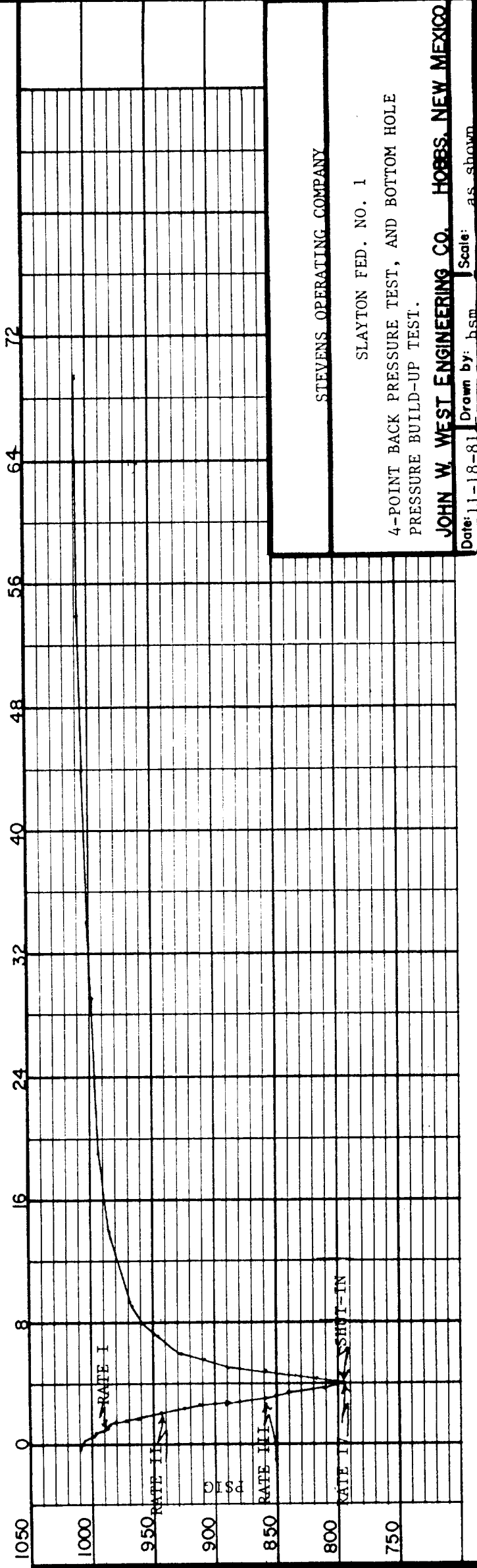
LINE	1	2	3	4	5	6	7	8
1	T _{wh} (H ₂ O)	544	539	539	530	520		
2	T _s (B.H. OR)	557	557	557	557	557		
3	T _{cr}	550.5	548	548	543.5	538.5		
4	T _{wh}	574	574	578	585	588		
5	P _b	481.137	478.352	481.144	480.997	478.19		
6	P _{wh}	655069	661071	65805	655259	662127		
7	P _{wh} (Table X)	1,27989	1,28133	1,27988	1,27998	1,28184		
8	P _{wh} or P _{ws}	1022.2	1061.2	957.2	872.2	807.2		
9	P _{wh} or P _{ws}	1044.89	1002.40	916.23	760.73	651.57		
10	P _{wh} - P _{wh} /65 or P _{wh} = P _{wh} /65	816.39	782.31	715.87	594.33	508.31		
11	P _{wh} or P _{ws}	903.5	884.5	846.1	770.9	713		
12	P _{wh} (F _{wh} + P _{wh}) or (P _{wh} + P _{wh})	962.85	942.85	901.65	821.55	760.1		
13	P _{wh} = (P _{wh} /P _{wh})	1.46	1.43	1.37	1.25	1.15		
14	T _{wh} = (T _{wh} /T _{wh})	1.54	1.53	1.53	1.52	1.50		
15	Z (Table XI)	.874	.874	.878	.885	.888		

TEST DATE: NOVEMBER 13-16, 1981
TEST DEPTH: 4817 FEET

ELEMENT NO: 18129
RANGE: 0-2500 psi
CLOCK NO: E-6532
RANGE: 0-72 Hour

NOTE: See tabulation of Times and Pressures on attached sheet.

TIME IN HOURS



STEVENS OPERATING COMPANY

SLAYTON FED. NO. 1

4-POINT BACK PRESSURE TEST, AND BOTTOM HOLE
PRESSURE BUILD-UP TEST.

JOHN W. WEST ENGINEERING CO. HOBBS, NEW MEXICO

Date: 11-18-81 Drawn by: hsm Scale: as shown

STEVENS OPERATING COMPANY
 SLAYTON FEDERAL NO. 1
 4-POINT BACK PRESSURE TEST, AND
 BOTTOM HOLE PRESSURE BUILD-UP TEST.
 TABULATION OF TIMES AND PRESSURES.

TEST CONDUCTED BY:
 JOHN WEST ENGINEERING COMPANY

TEST DATE: NOVEMBER 13-16, 1981
 TEST DEPTH: 4817 FEET
 ELEMENT NO: 18129 (0-2500 psi)
 OPERATOR: T.B.

<u>DATE</u>	<u>TIME</u>	<u>CUM HRS. / MIN.</u>	<u>PSIG @ 4817 FEET</u>
11-13, 81	12:45 P.M.		1009 gauge reached 4817'
	1:00 P.M.	00 Hrs. 00 Min.	1009 Shut-In, Begin Test
	1:15 P.M.	00 15	1008
	1:30 P.M.	00 30	999
	1:45 P.M.	00 45	998
	2:00 P.M.	01 00	988 End Rate I
	2:15 P.M.	01 15	986
	2:30 P.M.	01 30	981
	2:45 P.M.	01 45	963
	3:00 P.M.	02 00	944 End Rate II
	3:15 P.M.	02 15	926
	3:30 P.M.	02 30	913
	3:45 P.M.	02 45	890
	4:00 P.M.	03 00	859 End Rate III
	4:15 P.M.	03 15	851
	4:30 P.M.	03 30	840
	4:45 P.M.	03 45	811
	5:00 P.M.	04 00	794 End Rate IV
	5:00 P.M.	00 Hrs. 00 Min.	794 Shut-In, Begin Build-Up
	5:15 P.M.	00 15	818
	5:30 P.M.	00 30	835
	5:45 P.M.	00 45	859
	6:00 P.M.	01 00	889
	6:30 P.M.	01 30	908
	7:00 P.M.	02 00	928
	8:00 P.M.	03 00	946
	9:00 P.M.	04 00	959
11-13-81	10:00 P.M.	05 00	968
11-14-81	3:00 A.M.	10 00	985
	8:00 A.M.	15 00	993
	1:00 P.M.	20 00	995
	6:00 P.M.	25 00	999
11-14-81	11:00 P.M.	30 00	1001
11-15-81	9:00 A.M.	40 00	1004
11-15-81	7:00 P.M.	50 00	1008
11-16-81	5:00 A.M.	60 00	1009
11-16-81	10:30 A.M.	65 30	1009 Chart ran down, End Test.

NEW-TEX LAB
P.O. BOX 1161
HOBBBS NM 88241-1161
505-393-3561

ANALYSIS NUMBER: 6045
DATE OF RUN: 11 17 81
DATE SECURED: 11 13 81

ANALYSIS CERTIFICATE

SAMPLE IDENT: STEVENS OPERATING-SLAYTON FEDERAL #1

CLIENT: LLOYD WEST ENGINEERING
ADDRESS: 412 NORTH DAL PASO
CITY, STATE: HOBBBS

SAMPLING PRESS: 0 PSIG SAMPLING TEMP: 0 DEG F
STATION NUMBER:

***** GAS ANALYSIS *****

	MOLE PERCENT	GAL/ TCF
NITROGEN	7.2194333	
CARBON DIOXIDE	0.0000272	
METHANE	84.9658726	
ETHANE	4.2257290	1.1276000
PROPANE	1.6387083	0.4476300
ISO-BUTANE	0.2847258	0.0929063
NORMAL BUTANE	0.5917321	0.1862410
ISO-PENTANE	0.2104059	0.0768192
NORMAL PENTANE	0.2494479	0.0901505
HEXANES	0.2576442	0.1056860
HEPTANES PLUS	0.3851200	0.1680290
TOTAL	100.0000000	2.2942600

PROPANE GPM:	0.45	BUTANES GPM:	0.28
ETHANE GPM:	1.13	PENTANES PLUS GPM:	0.44

SPECIFIC GRAV (CALC): .6573
MOLE WEIGHT: 19.07

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
14.696		1035	1054
14.650		1032	1051
14.730		1038	1056
14.735		1038	1057

ANALYZED BY:

APPROVED BY:

[Signature]