

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

CISF
Form C-122
Revised 9-1-65
File

FEB 18 1983

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 2-27-82		O. C. D.	
Company STEVENS OPERATING COMPANY				Connection ATMOSPHERE				ARTESIA, OFFICE	
Pool <i>Picos 8 hrs 180 ✓</i>				Formation ABO				Unit	
Completion Date 2-22-82		Total Depth 4400 <i>4513</i>		Plug Back TD 4400 <i>4513</i>		Elevation 3550.9 GL.		Farm or Lease Name Cobie Ebeid Federal	
Csq. Size 4 1/2"	Wt. 9.5#	d 4.090	Set At 4400	Perforations: From 4143.5 to 4163.5		Well No. 1			
Tbg. Size 2 3/8"	Wt. 4.7#	d 1.995	Set At 4060	Perforations: From OPEN ENDED		Unit Sec. Twp. Rge. J 13 8S 25E			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At 4060		County Chaves	
Producing Thru Tubing		Reservoir Temp. °F 96 @ 4153'		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2		State New Mexico	
L 4153	H 4153	Gg .7042	% CO ₂ 3.34	% N ₂ 12.15	% H ₂ S -0-	Prover		Meter Run 4"	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	
SI							955		PKR	CHOKE	48 Hours
1.	4	x	1.250	320	8"	89°	927	62°		10/64	1 Hr.
2.	4	x	1.250	320	14"	95	835	62		12/64	1 Hr.
3.	4	x	1.250	320	22"	93	743	62		15/64	45 Min.
4.	4	x	1.250	320	64"	82	712	62		20/64	45 Min.
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	7.469	51.63	333.2	.9732	1.192	1.023	458
2	7.469	68.30	333.2	.9680	1.192	1.022	602
3	7.469	85.62	333.2	.9697	1.192	1.022	755
4	7.469	146.03	333.2	.9795	1.192	1.024	1304
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ TSTM	Mcf/bbl.
1.	.50	549	1.56	.956	A.P.I. Gravity of Liquid Hydrocarbons _____	Deg.
2.	.50	555	1.57	.957	Specific Gravity Separator Gas _____ .7042	XXXXXXX
3.	.50	553	1.57	.957	Specific Gravity Flowing Fluid _____ XXXXX	
4.	.50	542	1.54	.953	Critical Pressure _____ 661 _____ P.S.I.A.	P.S.I.A.
5.					Critical Temperature _____ 353 _____ R	R

P _c 970	P _c ² 940.9	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 6.7207$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5.49686$
NO.	P _t ²	P _w	P _w ²
1		945	897
2		937	878
3		927	859
4		895	801
5			

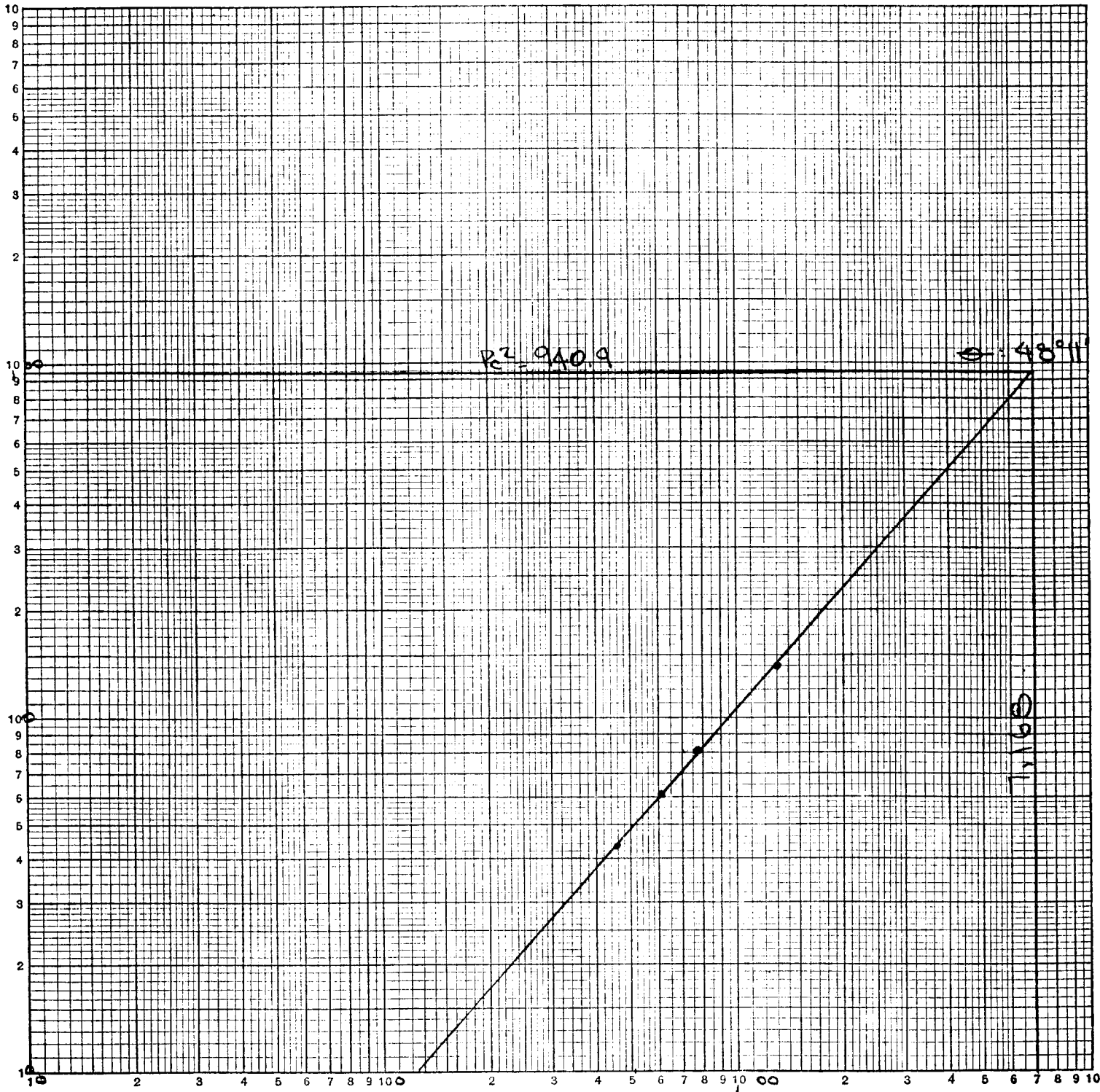
Absolute Open Flow <u>7,168</u> Mcfd @ 15.025		Angle of Slope Θ <u>48° 11'</u>		Slope, n <u>.89449</u>	
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Remarks: <u>Calculated from known Bottom Hole Pressures.</u>			
<u>Well made 2 Barrels of water during test.</u>			

Approved By Commission:	Conducted By: W.S.	Calculated By: M.K.	Checked By: M.K.
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$$1304 \left(\frac{940.9}{140} \right)^{.8945} = 7168$$

KEUFFEL & ESSER CO.
MADE IN U.S.A.



WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (P_c or P_w)
FROM KNOWN BOTTOM HOLE PRESSURE (P_f or P_s)

Form C-122F
Adopted 9-1-65

COMPANY STENEWS OEE. LEASE Gobia Field Fed. WELL NO. #1 DATE 2-27-82

LOCATION: Unit 4/53 Section 13 Township 8s Range 25E

L 4/53 H 4/53 L/H 1000 G 7042 % CO₂ 3.34 % H₂ 12.15 % H₂S —

5.96
4.60
55.6

GH

P_{CT} 461

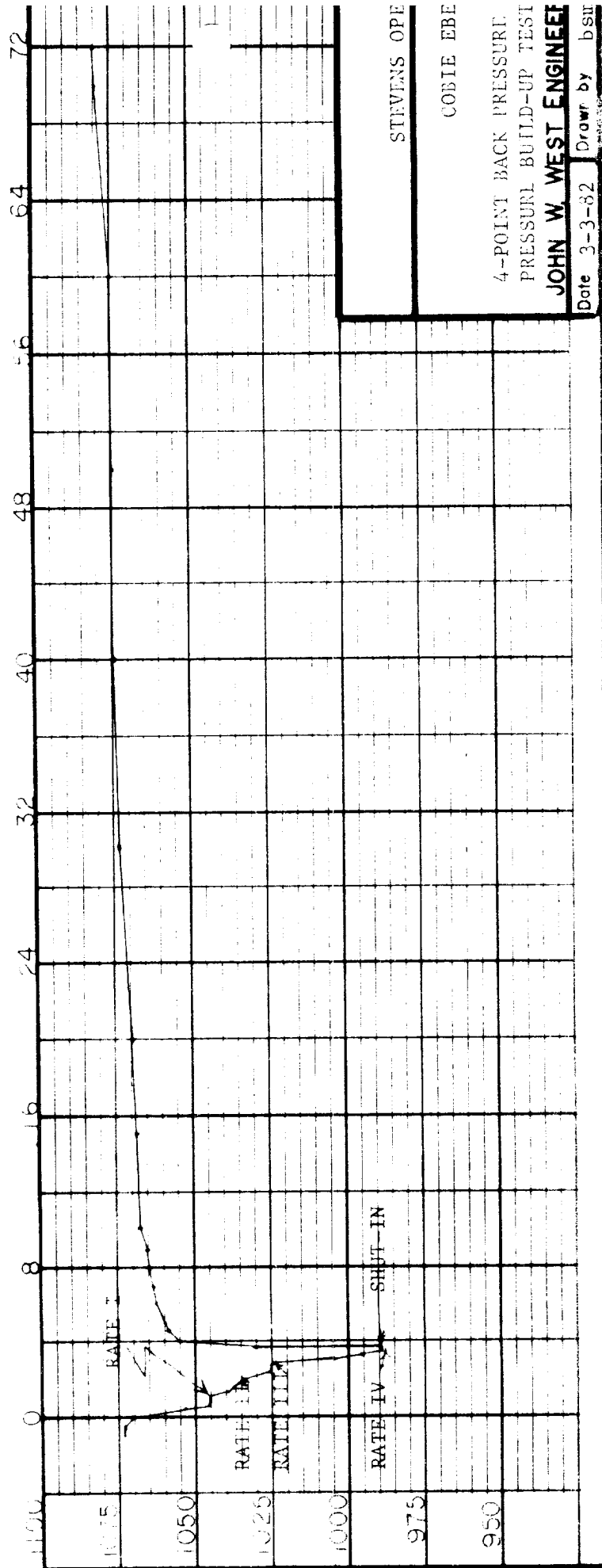
T_{CT} 353

5.1. 1 2 3 4

LINE	1	2	3	4	5	6	7	8
1	T _w (W.H. °R)	549	549	555	553	542		
2	T _s (B.H. °R)	556	556	556	556	556		
3	$T \left(\frac{T_w + T_s}{2} \right)$	552.5	552.5	555.5	554.5	549		
4	Z (Eqn.)	.817	.819	.860	.881	.882		
5	TZ	484.543	485.65	488.84	488.51	484.22		
6	GH/TZ	6.03567	6.02194	5.98261	5.9866	6.03947		
7	es (Table XIV)	1.75399	1.75335	1.75150	1.75169	1.7541		
8	P _f or P _s	1086.2	1058.2	1048.2	1037.2	1002.2		
9	P _f ² or P _s ²	1179.83	1119.8	1098.7	1075.78	1004.4		
10	P _c ² - P _f ² /es or P _s ² - P _s ² /es	940.85	893.4	871.9	859.46	800.84		
11	P _c or P _w	970	945	937	927	895		
12	P $\left(\frac{F_w + P_s}{2} \right)$ or $\left(\frac{P_c + P_f}{2} \right)$	1028.1	1001.6	992.6	982.1	948.6		
13	P _c = (P/P _{CT})	1.56	1.52	1.50	1.49	1.44		
14	T _f = (T/T _{CT})	1.57	1.57	1.57	1.57	1.56		
15	Z (Table XI)	.817	.819	.880	.881	.882		

TEST DATE: FEBRUARY 27 to MARCH 2, 1982
 TEST DEPTH: 4153 FEET
 ELEMENT NO: 18129
 RANGE: 0-2500 PSI
 CLOCK NO: 2145
 RANGE: 0-72 Hours
 NOTE: See tabulation of Times and Pressures on attached sheet.

TIME IN HOURS



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

ANALYSIS NUMBER: 6782
DATE OF RUN: 3/01/82
DATE SECURED: 2/27/82

ANALYSIS CERTIFICATE

SAMPLE IDENT: STEVEN OPERATING CORPORATION - #1 COBIE-EBEID FEDERAL
CLIENT: JOHN WEST ENGINEERING
ADDRESS: 412 NO. DAL PASO ST.
CITY, STATE: HOBBS NM 88240

SAMPLING PRESS: 0 PSIG SAMPLING TEMP: 0 DEG F
STATION NUMBER: SEC.13 T8S R25E

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

	MOLE PERCENT	GAL/ MCF
NITROGEN	12.1471309	
CARBON DIOXIDE	3.3403065	
METHANE	76.5247345	
ETHANE	4.6155653	1.2309700
PROPANE	1.8075116	0.4961620
ISO-BUTANE	0.2924231	0.0954177
NORMAL BUTANE	0.5939849	3.1867490
ISO-PENTANE	0.1738096	0.0634579
NORMAL PENTANE	0.1783331	0.0644496
HEXANES	0.1440487	0.0590888
HEPTANES PLUS	0.1821519	0.0838263
TOTAL	100.0000000	2.2801200

PROPANE GPM:	0.50	BUTANES GPM:	0.28
ETHANE GPM:	1.23	PENTANES PLUS GPM:	0.27

SPECIFIC GRAV (CALC): .7042
MOLE WEIGHT: 20.41

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
	14.696	943	960
	14.650	940	957
	14.730	946	962
	14.735	946	963

ANALYZED BY:

APPROVED BY: