

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

☒ Initial ☐ Annual ☐ Special				Test Date: 12-1-94	
Company: STEVENS & TULL INC.				Location: PIPELINE (EL PASO)	
Field: Indian Loafer Draw- Upper Penn				Formation: Cisco/Canyon	
Completion Date: 10-3-94		Total Length: 8250		Plug Back TD: 7778	
Elevation: 4425'		Form or Lease Name: NASSER FEDERAL			
Csg. Size: 5.5	Wt.: 17.0	d: 4.892	Set At: 8250	Perforations: From 5772 To 7156	
Well No.: #1					
Tbg. Size: 2.375	Wt.: 4.7	d: 1.995	Set At: 7778	Perforations: From To	
Unit: Sec. 1 Twp. 21S Rge. 21E					
Type Well - Single - Blindhead - G.G. or G.O. Multiple: dual (Tbg. & Csg.)				Packer Set At: 7778	
Producing Thru: CSG (GAS)		Reservoir Temp. °F: 118# 5836		Mean Annual Temp. °F: 60	
Baro. Press. P ₀ : 13.2		State: NEW MEXICO			
L: 5836	H: 5836	G _g : 0.658	% CO ₂ : 0.176	% N ₂ : 0.600	% H ₂ S: 0.00
Prover: 0.00		Meter Run: 3.0		Taps: Flg	

FLOW DATA						TUBING DATA		BHP 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	Duration of Flow
51							1480		1735	118	72.0
1	2.0 x 1.75			7.70	2.9	60	1445	60	1689	118	2.0
2	3.0 x 1.75			8.15	4.0	60	1400	60	1634	118	1.25
3	3.0 x 1.75			7.85	5.75	60	1355	60	1580	118	1.0
4	3.0 x 1.75			8.20	7.0	60	1295	60	1508	118	1.0
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 _{sp}	Rate of Flow Q, Mcf
1	65.001	22.33	7.70	1.00	1.233	1.065	1546
2	65.001	37.49	8.15	1.00	1.233	1.073	2615
3	65.001	45.14	7.85	1.00	1.233	1.067	3131
4	65.001	57.40	8.20	1.00	1.233	1.073	4003
5							

NO	P ₀	Temp. °R	T _g	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	0.885	520	1.38	0.881	A P.L. Gravity of Liquid Hydrocarbons	
2	0.991	520	1.38	0.860	Specific Gravity Separator Gas	0.658
3	0.919	520	1.38	0.878	Specific Gravity Flowing Fluid	X X X X X
4	1.002	520	1.38	0.868	Critical Pressure	670 P.S.I.A.
5					Critical Temperature	377 °R

NO	P _w	P _w ²	P _w 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	1702	2897	159	4.124	2.363
2	1647	2713	342		
3	1503	2538	517		
4	1521	2314	744		
5					

Absolute Open Flow: 9457		Angle of Slope θ: 0.607	
Remarks: choke sizes: 1st 13.5/64. 2nd 16/64 3rd 18/64 4th 21/64 L-10 chart 1000# pressure spring. 100 differential			
Approved By Division:	Conducted By: KEUTIC SERVICES.	Calculated By: JIM SMITH	Checked By:

Wildcat Measurement Service

DOS 2.0

PO Box 8034

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Office #505-623-5790

"Quality and Service is our first concern"

Run No. 940212-01

Date Run 12/02/94

Date Sampled 12/01/94

Analysis for STEVENS & TULL, INC.

GPANGL.L60

Field:

Well Name: MASSER FEDERAL #1 (Csg.)

Producer: STEVENS & TULL, INC.

Sta. Number:

County: EDDY

State: NM

Purpose: 4 POINT

Sampled By: KELTIC SERVICES

Sampling Temp: DEG F

Atmos Temp: DEG F

Volume/day:

Formation: CISCO

Pressure on Cylinder: 1300 PSIG

Line Pressure: 1300 PSIA

GAS COMPONENT ANALYSIS

Pressure Base: 14.730

		Mol %	GPM
Carbon Dioxide	CO2	0.176	
Nitrogen	N2	0.600	
Methane	C1	89.527	15.174
Ethane	C2	5.047	1.350
Propane	C3	1.763	0.486
Iso-Butane	IC4	0.363	0.119
Nor-Butane	NC4	0.726	0.229
Iso-Pentane	IC5	0.373	0.136
Nor-Pentane	NC5	0.444	0.161
Hexanes Plus	C6+	0.981	0.422
TOTAL		100.000	18.077

Real BTU Dry:	1158
Real BTU Wet:	1138
Real Calc. Specific Gravity:	0.658
Field Specific Gravity:	0.000

Standard Pressure: 14.696

BTU Dry: 1156

BTU Wet: 1136

I Factor: 0.9972

N Value: 1.2923

Avg Mol Weight: 19.0263

Avg CuFt/Gal: 56.7909

26 Lb Product: 1.1274

Methane+ GPM: 18.077

Ethane+ GPM: 2.902

Propane+ GPM: 1.552

Butane+ GPM: 1.067

Pentane+ GPM: 0.719

REMARKS:

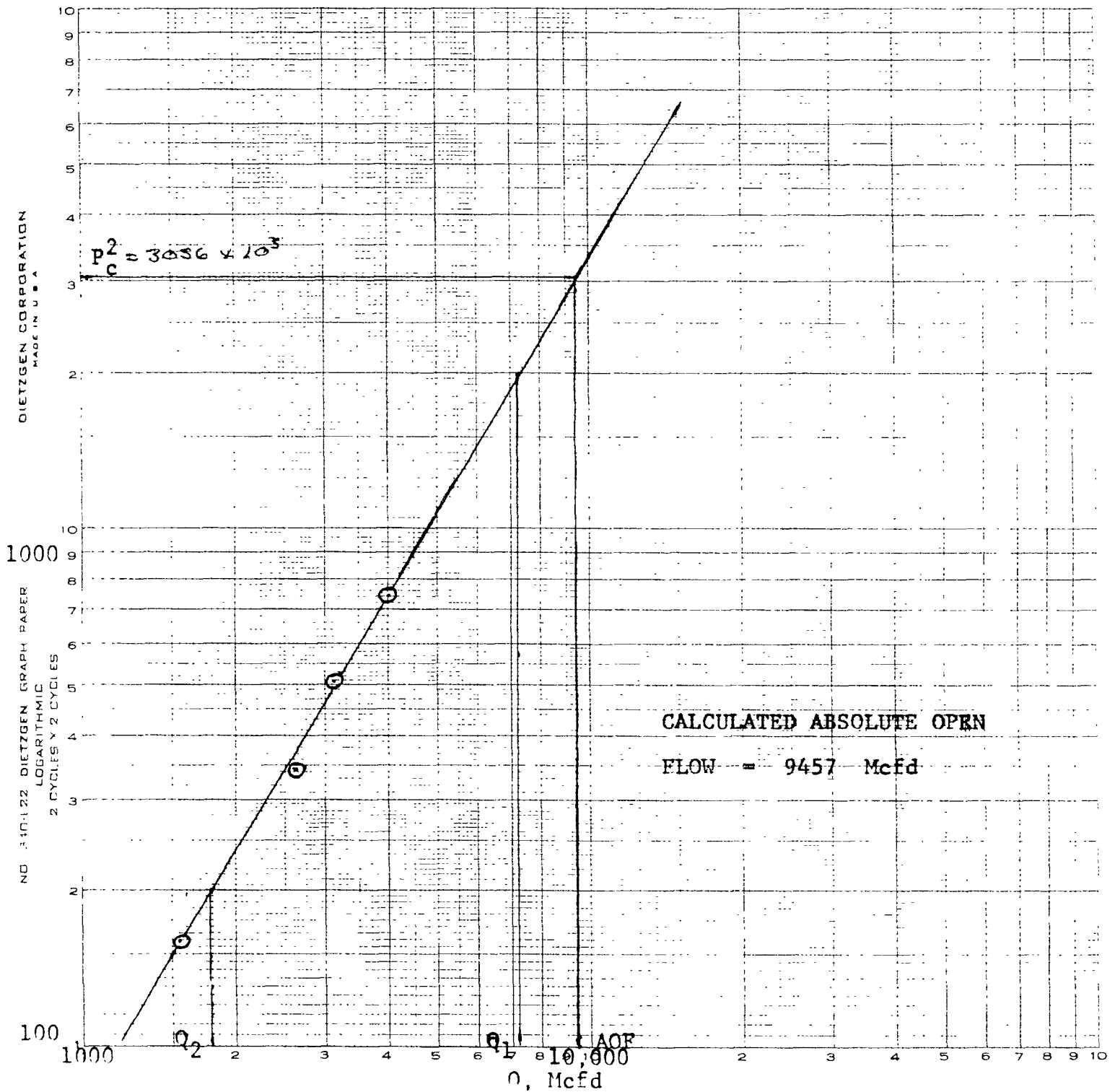
SEC.1-T21S-R21E

SAMPLE: CASING SIDE

Approved by: DON NORMAN

Fri Dec 02 16:34:57 1994

COMPANY : STEVEI & TULL INC.
 WELL : NASSER FED #1
 LOCATION : S1 T21s-R21e
 COUNTY : EDDY
 DATE : 12-1-1994



$P_1 = 2000$
 $P_2 = 200$

$Q_1 = 7250$
 $Q_2 = 1790$

$\log Q_1 = 3.860$
 $\log Q_2 = 3.253$

$n = 0.607$