OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

CASE File

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: ☒ Initial ☐ Annual ☐ Special — Test Date: 12-1-94

Company: Stevens & Tull Inc.	Connection: Pipeline (El Paso)		
Pool: Little Box Canyon - Morrow	Formation: Morrow	Unit	
Completion Date: 11-21-94	Total Depth: 8250	Plug Back TD: 8182	Elevation: 4367
Farm or Lease Name: Sweet Thing Fed			
Csg. Size: 5.5 / Wt.: 17.0 / d: 4.892 / Set At: 8250	Perforations: From 8084 To 8120	Well No.: #1	
Tbg. Size: 2.375 / Wt.: 4.7 / d: 1.995 / Set At: 7900	Perforations: From - To -	Unit: — Sec.: 6 Twp.: 21s Rge.: 22e	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single (gas)	Packer Set At: 7900	County: Eddy	
Producing Thru: Tbg. (gas)	Reservoir Temp. °F: 145 @ 8102	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2
State: New Mexico			

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
8102	8102	0.617	0.462	0.161	0.00	0.00	2.0	Flg.

FLOW DATA / TUBING DATA / BHP DATA

NO	Prover Line Size	x	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Tubing Press. p.s.i.g.	Tubing Temp. °F	BHP Press. p.s.i.g.	BHP Temp. °F	Duration of Flow
SI							2400	60	2865	145	72
1	2.0	x	1.25	7.25	2.0	60	2250	60	2730	145	1.0
2	2.0	x	1.25	7.40	2.4	60	2200	60	2672	145	1.0
3	2.0	x	1.25	7.90	5.0	60	1925	60	2349	145	1.0
4	2.0	x	1.25	8.10	6.6	60	1695	60	2085	145	1.0
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, Fpv	Rate of Flow Q, Mcfd
1	33.63	14.50	7.25	1.000	1.277	1.050	512
2	33.63	17.76	7.40	1.000	1.277	1.052	628
3	33.63	39.50	7.90	1.000	1.277	1.060	1408
4	33.63	53.46	8.10	1.000	1.277	1.063	1911
5							

NO	P_t	Temp. °R	T_r	Z
1	0.782	520	1.43	0.907
2	0.815	520	1.43	0.904
3	0.930	520	1.43	0.890
4	0.978	520	1.43	0.885
5				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas 0.617 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 671 P.S.I.A. _____ P.S.I.A.
Critical Temperature 364 R _____ R

P_c 2878 P_c^2 8284 x 10^3

NO	P_w	P_w^2	$P_c^2 - P_w^2$
1	2743.2	7525	759
2	2685.2	7210	1074
3	2362.2	5580	2704
4	2098.2	4402	3882
5			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.064$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.513$

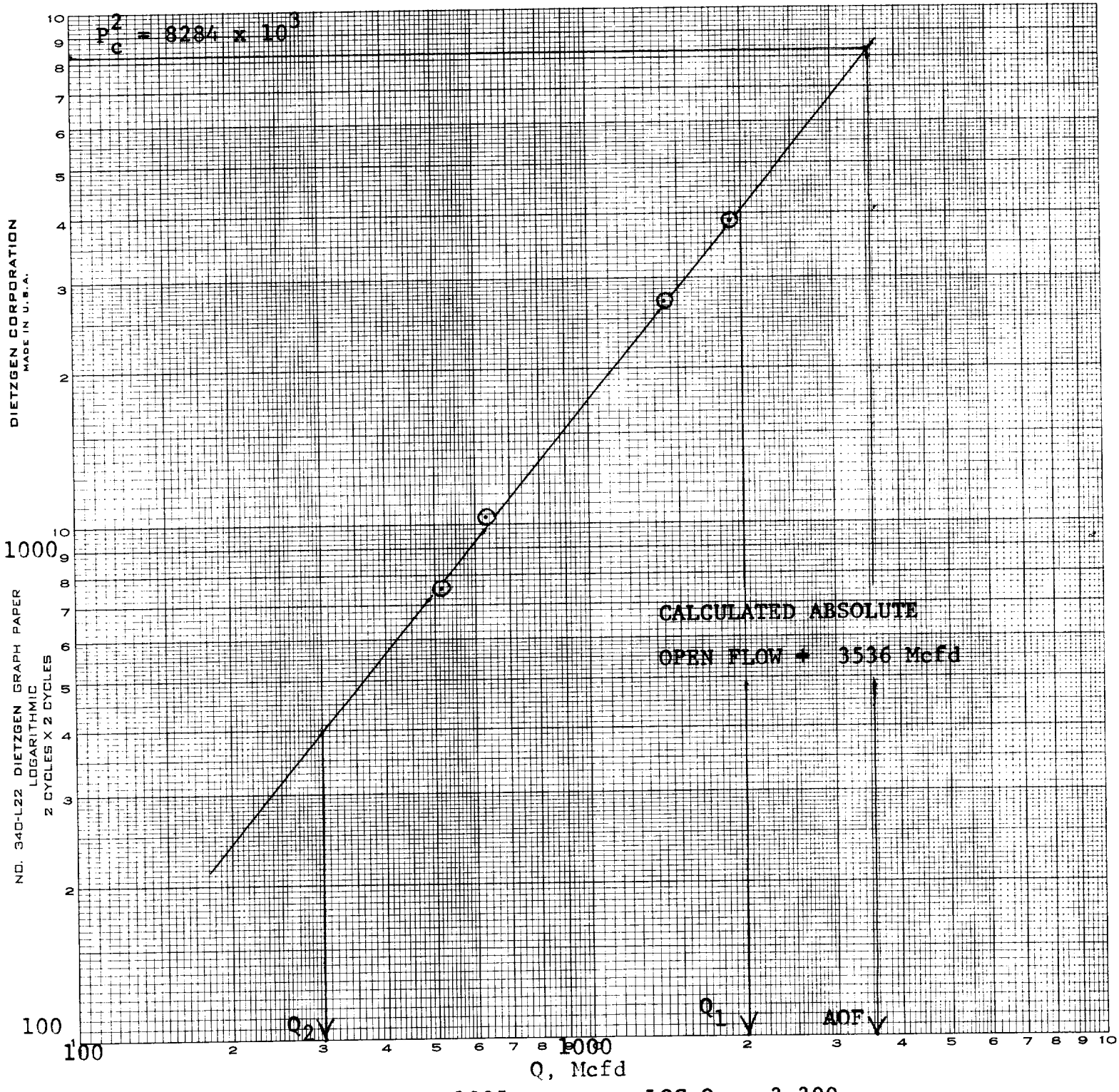
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3536$

Absolute Open Flow 3536 Mcfd @ 15.025 Angle of Slope θ _____ Slope, n 0.823

Remarks: Choke Sizes: First rate=6/64, Second=9/64, Third=13/64, Fourth=16/64
L-10 chart 1000# pressure spring, 100 differential

Approved By Division	Conducted By:	Calculated By:	Checked By:
	Keltic Services	Jim Smith	

COMPANY : STEVENS & TULL INC.
WELL : SWEET THING FED #1
LOCATION : S6-T21s-R22e
COUNTY : EDDY
DATE : 12-1-1994



P_1 = 4000 Q_1 = 1995 LOG Q_1 = 3.300
P_2^1 = 400 Q_2 = 300 LOG Q_2 = 2.477 n = 0.823

ildcat Measurement Service
PO Box 8034
Roswell, New Mexico 88202
Office #505-623-5790
"Quality and Service is our first concern"

DOS 2.0

Run No. 940212-02
Date Run 12/02/94
Date Sampled 12/01/94

Analysis for STEVENS & TULL, INC.
GPANGL.L60

Field:
Well Name: SWEET THING FEDERAL #1
Sta. Number:
Purpose: 4 POINT
Sampling Temp: DEG F
Volume/day:
Pressure on Cylinder: 1700 PSIG

Producer: STEVENS & TULL, INC.
County: EDDY State: NM
Sampled By: KELTIC SERVICES
Atmos Temp: DEG F
Formation: MORROW
Line Pressure: 1700 PSIA

GAS COMPONENT ANALYSIS

		Mol %	GPM
Carbon Dioxide	CO2	0.462	
Nitrogen	N2	0.161	
Methane	C1	93.394	15.830
Ethane	C2	3.751	1.003
Propane	C3	0.869	0.239
Iso-Butane	IC4	0.155	0.051
Nor-Butane	NC4	0.181	0.057
Iso-Pentane	IC5	0.098	0.036
Nor-Pentane	NC5	0.071	0.026
Hexanes Plus	C6+	0.858	0.369
TOTAL		100.000	17.611

Pressure Base:	14.730
Real BTU Dry:	1095
Real BTU Wet:	1076
Real Calc. Specific Gravity:	0.617
Field Specific Gravity:	0.000
Standard Pressure:	14.696
BTU Dry:	1093
BTU Wet:	1074
Z Factor:	0.9976
N Value:	1.2983
Avg Mol Weight:	17.8475
Avg CuFt/Gal:	57.5876
26 Lb Product:	0.7173
Methane+ GPM:	17.611
Ethane+ GPM:	1.781
Propane+ GPM:	0.778
Butane+ GPM:	0.538
Pentane+ GPM:	0.430

REMARKS:
SEC.6-T21S-R22E

Approved by: DON NORMAN

Fri Dec 02 16:35:02 1994

Form 3160-4
(October 1990)

OIL CONS COMMISSION
Drawer DD
Artesia, NM 88210

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0137
Expires: December 31, 1991

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

BUREAU OF LAND MANAGEMENT RECEIVED DEC 13 1994 Carlsbad, New Mexico

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

2. NAME OF OPERATOR
Stevens & Tull, Inc.

3. ADDRESS AND TELEPHONE NO.
P. O. Box 11005, Midland, TX 79702 915/699-1430

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface 1980' FNL & 1320' FWL
At top prod. interval reported below 1980' FNL & 1320' FWL
At total depth 1980' FNL & 1320' FWL

5. LEASE DESIGNATION AND SERIAL NO.
NM-88085

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME, WELL NO.
Sweet Thing Federal Unit #1

9. API WELL NO.
30-015-28130

10. FIELD AND POOL, OR WILDCAT
Little Box Canyon-Morrow

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA
Sec. 6, T-21-S, R-22-E

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
N/A	9/21/94	Eddy	NM

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
10/24/94	11/14/94	11/21/94	4367 GR	4372

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
8250	8182	N/A	→	X	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
8084 - 8120 - Morrow

DEC 16 '94

25. WAS DIRECTIONAL SURVEY MADE
Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN
FMI, CNL, Array Induction Imager Log

27. WAS WELL CORED
No

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13 3/8-K55	54.50	248	17 1/2	Circ - 820 sx Total	0
9 5/8-J55	36.00	1200	12 1/4	Circ - 500 sx	0
5 1/2-N80	17.00	8250	7 7/8	TOC - 4000', 525 sx	0

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8	7900	7904

31. PERFORATION RECORD (*Interval, size and number*)
8084-8120 - 0.45" hole
2 SPF - Total 70 holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
8084-8120	200 gals 10% MCA

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
11/21/94	Flowing	Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
11/26/94	24	12/64	→	0	2500	0	N/A

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
1750	0	→	0	2500	0	N/A

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)
Sold - El Paso Pipeline

TEST WITNESSED BY
Roy Peugh

35. LIST OF ATTACHMENTS
Deviation Survey, 4 pt Test, Electric Log

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Michael A. Mahoney TITLE Petroleum Engineer DATE 12/9/94

ACCEPTED FOR RECORD
DEC 14 1994
BLM
CARLSBAD, NEW MEXICO

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Cisco	5586	6498	No cores or tests
Canyon	6498	7796	No cores or tests
Morrow	7796	8250	No cores or tests

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
ABO	3446	3446
CISCO	5586	5586
CANYON	6498	6498
MORROW	7796	7796