

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Bluitt San Andres Formation San Andres Gas County Roosevelt
Initial X Annual _____ Special _____ Date of Test 11-15 to 22, 1964
Company Shell Oil Company Lease Federal "BL" Well No. 8-1
Unit A Sec. 3 Twp. 8-S Rge. 37-E Purchaser Presidio Operating Company
Bluitt Plant
Casing 4 1/2" Wt. 9.5 I.D. 4.090 Set at 4593 Perf. 4311 To 4445
Tubing 2" Wt. 4.7 I.D. 1.995 Set at 4539 Perf. _____ To _____
Gas Pay: From 4311 To 4445 L 4539 xG .720 -GL 3368 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 11-15-64 Packer 4254 Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(<u>Prover</u>) (Line) Size	(<u>Choke</u>) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1329				72
1.	3	1.500	270	1.0	52	1296				24
2.	3	1.500	309	12.25	50	1048				24
3.	3	1.500	311	24.01	50	800				24
4.	3	1.500	311	34.76	54	506				24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wP_f}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	14.36	16.83	283.7	1.3670	.9129	1.039	231.1
2.	14.36	62.82	322.2	1.0098	.9129	1.043	867.4
3.	14.36	68.22	324.2	1.0098	.9129	1.044	1219
4.	14.36	133.24	324.2	1.0058	.9129	1.044	1833
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.936 (1-e^{-s}) .201 ✓
Specific Gravity Separator Gas .720
Specific Gravity Flowing Fluid _____
P_c 1342.2 P_c 1301.5 ✓

No.	P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	F _w ²	P _c ² -P _w ²	Cal. P _w	P _w P _c
1.	1309.2	1714.0	2.296	5.272	1.060	1715.1	86.4	1309.6	97.6
2.	1061.2	1126.1	8.618	74.270	14.928	1141.0	660.5	1068.2	79.6
3.	813.2	661.3	12.112	146.701	29.487	690.8	1110.7	831.1	61.9
4.	519.2	269.6	18.213	331.713	66.674	336.3	1465.2	579.9	42.2
5.									

Absolute Potential: 2,160 MCFPD; n .573
COMPANY Shell Oil Company
ADDRESS P.O. Box 1858, Roswell, New Mexico
AGENT and TITLE A. L. Ellard - Gas Tester
WITNESSED _____
COMPANY _____

REMARKS

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

- Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w).
MCF/da. @ 15.025 psia and 60° F.
- P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.
psia
- P_w = Static wellhead working pressure as determined at the end of flow period.
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia
- P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if
flowing through casing.) psia
- P_f = Meter pressure, psia.
- h_w = Differential meter pressure, inches water.
- F_g = Gravity correction factor.
- F_t = Flowing temperature correction factor.
- F_{pv} = Supercompressability factor.
- n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t .

GAS WELL BACK PRESSURE CURVE

County TRAVIS Field PLUMMER S.A.

Operator SHELL OIL COMPANY

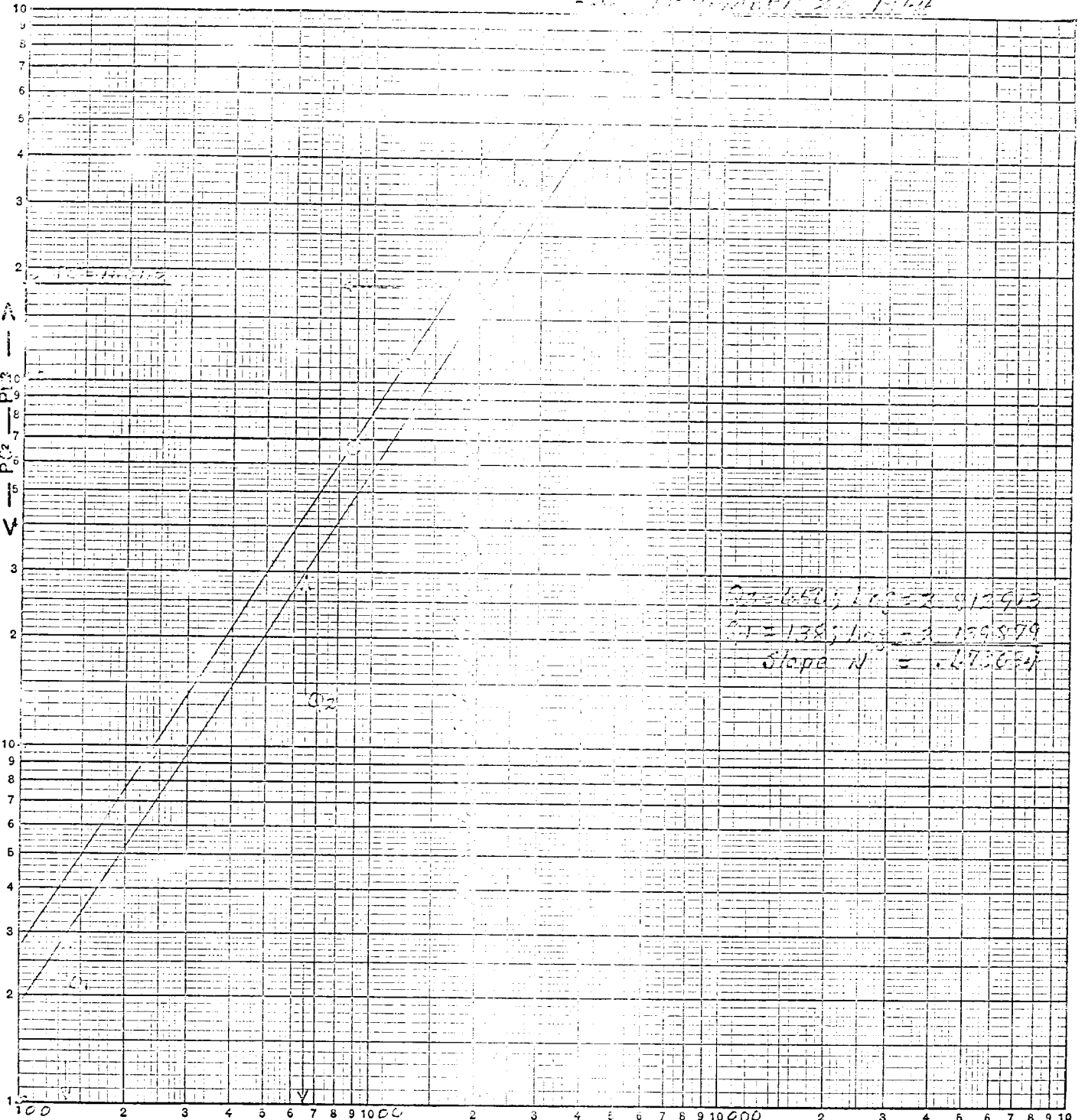
Well FARREL "B1" Well No. 101

Volume 2, 11-0 MOF/24 hr.

Date NOVEMBER 22, 1944

THOUSANDS

LOGARITHMIC 359-120
KLUFFEL & ESSER CO. MADE IN U.S.A.
3 X 3 CYCLES



$Q_1 = 1.38; P_1 = 2.912913$
 $Q_2 = 1.38; P_2 = 2.912913$
 Slope $N = .670654$

← Q in MOF per DAY →

15.025 psia

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPlicate
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☒ OTHER ☐ Oct 19 1964		5. LEASE DESIGNATION AND SERIAL NO. MI-0474-B
2. NAME OF OPERATOR Shell Oil Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME -
3. ADDRESS OF OPERATOR P. O. Box 1858, Roswell, New Mexico		7. UNIT AGREEMENT NAME -
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 660' FNL & 660' FNL (NE/4) Section 8, T-8-S, R-37-E, NMPL, Roosevelt County, New Mexico		8. FARM OR LEASE NAME Federal "BL"
14. PERMIT NO.		9. WELL NO. 8-1
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 4040' DF		10. FIELD AND POOL, OR WILDCAT Wildcat
		11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA Sec. 8, T-8-S, R-37-E, NMPL
		12. COUNTY OR PARISH Roosevelt
		13. STATE New Mexico

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐	PULL OR ALTER CASING ☐
FRACTURE TREAT ☐	MULTIPLE COMPLETE ☐
SHOOT OR ACIDIZE ☐	ABANDON* ☐
REPAIR WELL ☐	CHANGE PLANS ☐
(Other) ☐	

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☒	REPAIRING WELL ☐
FRACTURE TREATMENT ☐	ALTERING CASING ☐
SHOOTING OR ACIDIZING ☐	ABANDONMENT* ☐
(Other) ☐	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Spudded at 7:30 p.m. (MST), September 25, 1964.

Ran 465' of 7 5/8" (24#, H-40) casing and cemented at 472' with 250 sx Regular plus 2% CaCl₂. Circulated cement. Plug down at 5:15 a.m., September 26, 1964. After WOC 12 hours, tested casing with 1000 psi for 30 minutes - no pressure drop.

Option Two:

1. 295.0 cu. ft.
2. 250 sx Portland plus 2% Calcium Chloride.
3. 60 degrees.
4. 65 degrees.
5. 500 psi.

18. I hereby certify that the foregoing is true and correct

SIGNED Original Signed By

R. J. L. R. J. Doubek

(This space for Federal or State office use)

Division

TITLE Mechanical Engineer

DATE October 5, 1964

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

APPROVED

DATE

1001 6 1964

*See Instructions on Reverse Side. GORDON
ACTING DISTRICT ENGINEER

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.