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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS APR 6 11 10 AM '63
Revised 12-1-55

Pool Summit Formation Penrose Queen County Lea
 Initial _____ Annual _____ Special X Date of Test 3-25/3-29-63
 Company Tidewater Oil Company Lease Marshall Queen Well No. 1
 Unit G Sec. 13 Twp. 21 Rge. 36 Purchaser El Paso Nat. Gas Co.
 Casing 3-1/2 Wt. 17 I.D. _____ Set at 3691 Perf. _____ To _____
 Tubing 2 Wt. 4.7 I.D. _____ Set at 3521 Perf. _____ To _____
 Gas Pay: From 3568 To 3644 L 3521 xG .689 -GL 2426 Bar.Press. 13.2
 Producing Thru: Casing _____ Tubing X Type Well _____
 Date of Completion: Nov. 9, 1962 Packer None Reservoir Temp. _____

OBSERVED DATA

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

| No. | Flow Data | | | Tubing Data | | Casing Data | | Duration of Flow Hr. | |
|-----|-------------|----------------|-------------|----------------------|-----------|-------------|-----------|----------------------|-------------|
| | (Line) Size | (Orifice) Size | Press. psig | Diff. h _w | Temp. °F. | Press. psig | Temp. °F. | | Press. psig |
| SI | | | | | | 516 | | Bad Valve | 72 |
| 1. | 4" | 1.000 | 136 | 1.00 | 69 | 513 | | | 24 |
| 2. | 4" | 1.000 | 233 | 7.84 | 70 | 458 | | | 24 |
| 3. | 4" | 1.000 | 228 | 23.04 | 68 | 382 | | | 24 |
| 4. | 4" | 1.000 | 223 | 34.81 | 70 | 315 | | | 24 |
| 5. | | | | | | | | | |

FLOW CALCULATIONS

| No. | Coefficient (24-Hour) | $\sqrt{h_w P_f}$ | Pressure psia | Flow Temp. Factor F _t | Gravity Factor F _g | Compress. Factor F _{pv} | Rate of Flow Q-MCFPD @ 15.025 psia |
|-----|-----------------------|------------------|---------------|----------------------------------|-------------------------------|----------------------------------|------------------------------------|
| 1. | 6.135 | 12.22 | | .9915 | .9332 | 1.015 | 70.40 |
| 2. | 6.135 | 44.11 | | .9965 | .9332 | 1.024 | 256.1 |
| 3. | 6.135 | 74.54 | | .9924 | .9332 | 1.024 | 433.7 |
| 4. | 6.135 | 90.58 | | .9905 | .9332 | 1.023 | 524.9 |
| 5. | | | | | | | |

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
 Gravity of Liquid Hydrocarbons _____ deg.
 F_c 9.936 (1-e^{-S}) 0.154
 Specific Gravity Separator Gas _____
 Specific Gravity Flowing Fluid _____
 P_c 529.2 P_c² 280.0

| No. | P _w P _t (psia) | P _t ² | F _c Q | (F _c Q) ² | (F _c Q) ² (1-e ^{-S}) | P _w ² | P _c ² -P _w ² | Cal. P _w | P _w /P _c |
|-----|--------------------------------------|-----------------------------|------------------|---------------------------------|--|-----------------------------|--|---------------------|--------------------------------|
| 1. | 336.2 | 276.9 | | Negligible | | 276.9 | 3.1 | | 9943 |
| 2. | 471.2 | 223.0 | 2.545 | 6.477 | .9974 | 223.0 | 57.0 | 473.2 | 5623 |
| 3. | 394.2 | 156.2 | 4.309 | 18.57 | 2.860 | 159.1 | 129.9 | 379.9 | 7358 |
| 4. | 328.2 | 107.7 | 5.215 | 27.20 | 4.189 | 111.9 | 188.1 | 227.5 | 6927 |
| 5. | | | | | | | | | |

Absolute Potential: 750 MCFPD; n .677
 COMPANY Tidewater Oil Company
 ADDRESS Box 547, Hobbs, New Mexico
 AGENT and TITLE C. L. Wade, Area Supt. C.L. Wade
 WITNESSED R. A. Mikel
 COMPANY El Paso Nat. Gas Co.

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} = Supercompressibility 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 .

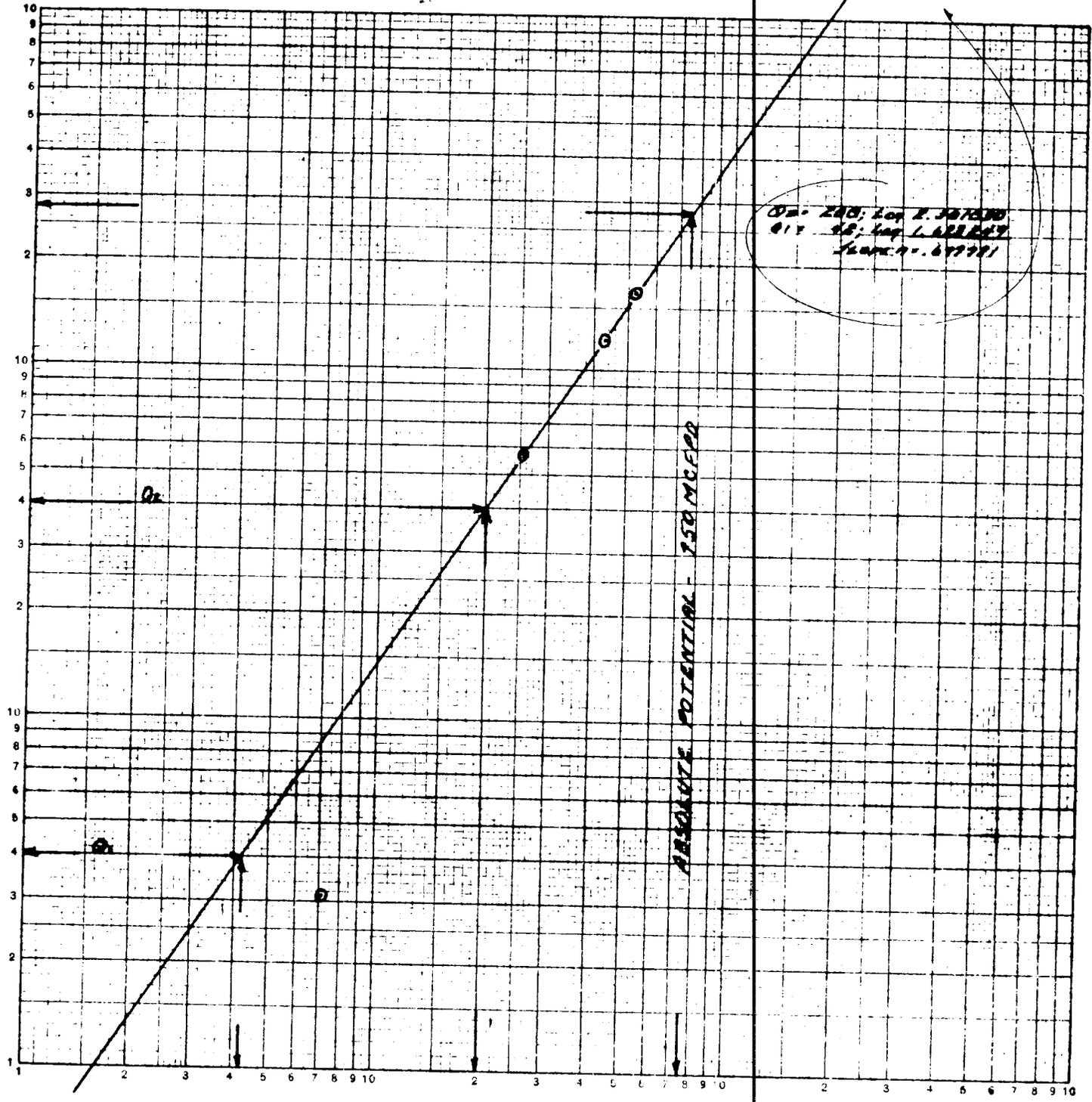
TIDEWATER OIL Co.
 MARSHALL QUEN #1
 6-13-21-36
 LEE COUNTY, N.M.

$Q_2 = 200, \log 2.301030$
 $Q_1 = 42, \log 1.623249$
 slope $n = .677781$

$Q_2 = 240; \log 2.380211$
 $Q_1 = 48; \log 1.680319$
 slope $n = .677781$

$R^2 R^2 (thousands)$

K&E LOGARITHMIC 359-120
 KEUPFER & LEISER CO. MADE IN U.S.A.
 3 X 3 CYCLES



Q-MCFPD

3 - OCC
1 - File

NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

MISCELLANEOUS NOTICES

Submit this notice in TRIPPLICATE to the District Office, Oil Conservation Commission, before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate Nature of Notice by Checking Below

| | | | | | |
|--------------------------------------|--|---|---|--------------------------------------|--|
| NOTICE OF INTENTION TO CHANGE PLANS | | NOTICE OF INTENTION TO TEMPORARILY ABANDON WELL | | NOTICE OF INTENTION TO DRILL DEEPER | |
| NOTICE OF INTENTION TO PLUG WELL | | NOTICE OF INTENTION TO PLUG BACK | X | NOTICE OF INTENTION TO SET LINER | |
| NOTICE OF INTENTION TO SQUEEZE | | NOTICE OF INTENTION TO ACIDIZE | | NOTICE OF INTENTION TO SHOOT (Nitro) | |
| NOTICE OF INTENTION TO GUN PERFORATE | | NOTICE OF INTENTION (OTHER) | | NOTICE OF INTENTION (OTHER) | |

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Hobbs, New Mexico
(Place)

November 5, 1962
(Date)

Gentlemen:

Following is a Notice of Intention to do certain work as described below at the

Tidewater Oil Company (Company or Operator) R. M. Marshall (Lease) Well No. 1 in G (Unit)
1/4 NE 1/4 of Sec. 13, T. 21, R. 36, NMPM, Roscoe Skelly Pool
Lea County.

FULL DETAILS OF PROPOSED PLAN OF WORK
(FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS)

We propose to pull tubing, set bridge at approximately 3660' in 5-1/2" casing. Run log & perforate Humont gas pay 3560-3630 (estimated) and sandfrac.

Approved _____, 19____
Except as follows:

IBP Capital Investment

Approved _____
OIL CONSERVATION COMMISSION

By _____

Title _____

Tidewater Oil Company

Original Signed By

By G. L. WADE

Position Area Supt.

Send Communications regarding well to:

Name C. L. Wade

Address Box 547, Hobbs, N. Mex.