NEW MEXICO OIL CONSERVATION COMMISSION

# MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
MAR - 1 1982
O. C. D.
ARTESIA, OFFICE

C/SF
C-122
4565

Type Test: ☒ Initial FOUR POINT ☐ Annual ☐ Special — Test Date: 1-20-82

Company: ~~Jack~~ Celeste C GRYNBURG & ~~ASSOC~~. — Connection: AIR NEW WELL — 1980 FWL 660 FSL

Pool: WILDCAT Wolfcamp — Formation: WOLFCAMP — Unit: N

| Completion Date | Total Depth | Plug Back TD | Elevation | Farm or Lease Name |
|---|---|---|---|---|
| 1-18-82 | 7083 | 4518 | 3691 gr. | SOUTH COTTONWOOD DRAW |

| Csg. Size | Wt. | d | Set At | Perforations: | Well No. |
|---|---|---|---|---|---|
| 4.50 | 10.5 | 4.052 | 4518 | From 4292 To 4350 | 1 |

| Tbg. Size | Wt. | d | Set At | Perforations: | Unit | Sec. | Twp. | Rge. |
|---|---|---|---|---|---|---|---|---|
| 2.375 | 4.7 | 1.995 | 4197 | From OPEN To ENDED | N | 29 | 16S | 24E |

| Type Well – Single – Bradenhead – G.G. or G.O. Multiple | Packer Set At | County |
|---|---|---|
| SINGLE | 4194 | EDDY |

| Producing Thru | Reservoir Temp. °F | Mean Annual Temp. °F | Baro. Press. – $P_a$ | State |
|---|---|---|---|---|
| TUBING | 117 @ 4321 | 60° | 13.2 | NEW MEXICO |

| L | H | Gg | % $CO_2$ | % $N_2$ | % $H_2S$ | Prover | Meter Run | Taps |
|---|---|---|---|---|---|---|---|---|
| 4321 | 4321 | .699 | 4.81 | 6.27 | | 2.00 | | |

| NO. | FLOW DATA: Prover Line Size | X | Orifice Size | Press. p.s.i.g. | Diff. $h_w$ | Temp. °F | TUBING DATA: Press. p.s.i.g. | Temp. °F | DATA: Press. p.s.i.g. | Temp. °F | Duration of Flow |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SI | | | | | | 42 | 1358 | 50 | 1545 | | 48 HRS. |
| 1. | 2.00 | X | .125 | 370 | 0 | 48 | 1269 | 49 | 1445 | | 1 |
| 2. | 2.00 | X | .250 | 175 | 0 | 55 | 1127 | 50 | 1283 | | 1 |
| 3. | 2.00 | X | .250 | 250 | 0 | 61 | 942 | 54 | 1076 | | 1 |
| 4. | 2.00 | X | .250 | 270 | 0 | 63 | 485 | 66 | 577 | | 1 |
| 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 | .2716 | .00 | 383.2 | 1.0117 | 1.1961 | 1.0375 | 131 |
| 2 | 1.1150 | .00 | 188.2 | 1.0048 | 1.1961 | 1.0181 | 257 |
| 3 | 1.1150 | .00 | 263.2 | .990 | 1.1961 | 1.0244 | 359 |
| 4 | 1.1150 | .00 | 283.2 | .9971 | 1.1961 | 1.0260 | 386 |
| 5 | | | | | | | |

| NO. | $P_t$ | Temp. °R | $T_r$ | Z |
|---|---|---|---|---|
| 1 | .56 | 508 | 1.40 | .929 |
| 2 | .28 | 515 | 1.42 | .965 |
| 3 | .39 | 521 | 1.43 | .953 |
| 4 | .42 | 523 | 1.44 | .950 |
| 5 | | | | |

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas .6990 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 679 P.S.I.A. _____ P.S.I.A.
Critical Temperature 363 R _____ R

$P_c$ 1558.2 $P_c^2$ 2428.0

| NO | $P_t^2$ | $P_w$ | $P_w^2$ | $P_c^2 - P_w^2$ |
|---|---|---|---|---|
| 1 | | 1458.2 | 2126.3 | 302.0 |
| 2 | | 1296.2 | 1680.1 | 748.0 |
| 3 | | 1089.2 | 1186.4 | 1242.0 |
| 4 | | 590.2 | 348.3 | 2080.8 |
| 5 | | | | |

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.9549$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.6165$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 580.3$

Absolute Open Flow 580.3 Mcfd @ 15.025 — Angle of Slope θ 54.4 — Slope, n .7165

Remarks: BOTTOM HOLE PRESSURES MEAASURED WITH AMERADA PRESSURE GUAGES

| Approved By Commission: | Conducted By: | Calculated By: | Checked By: |
|---|---|---|---|
| | RICHARD TOWNLEY | BENNETT-CATHEY | |

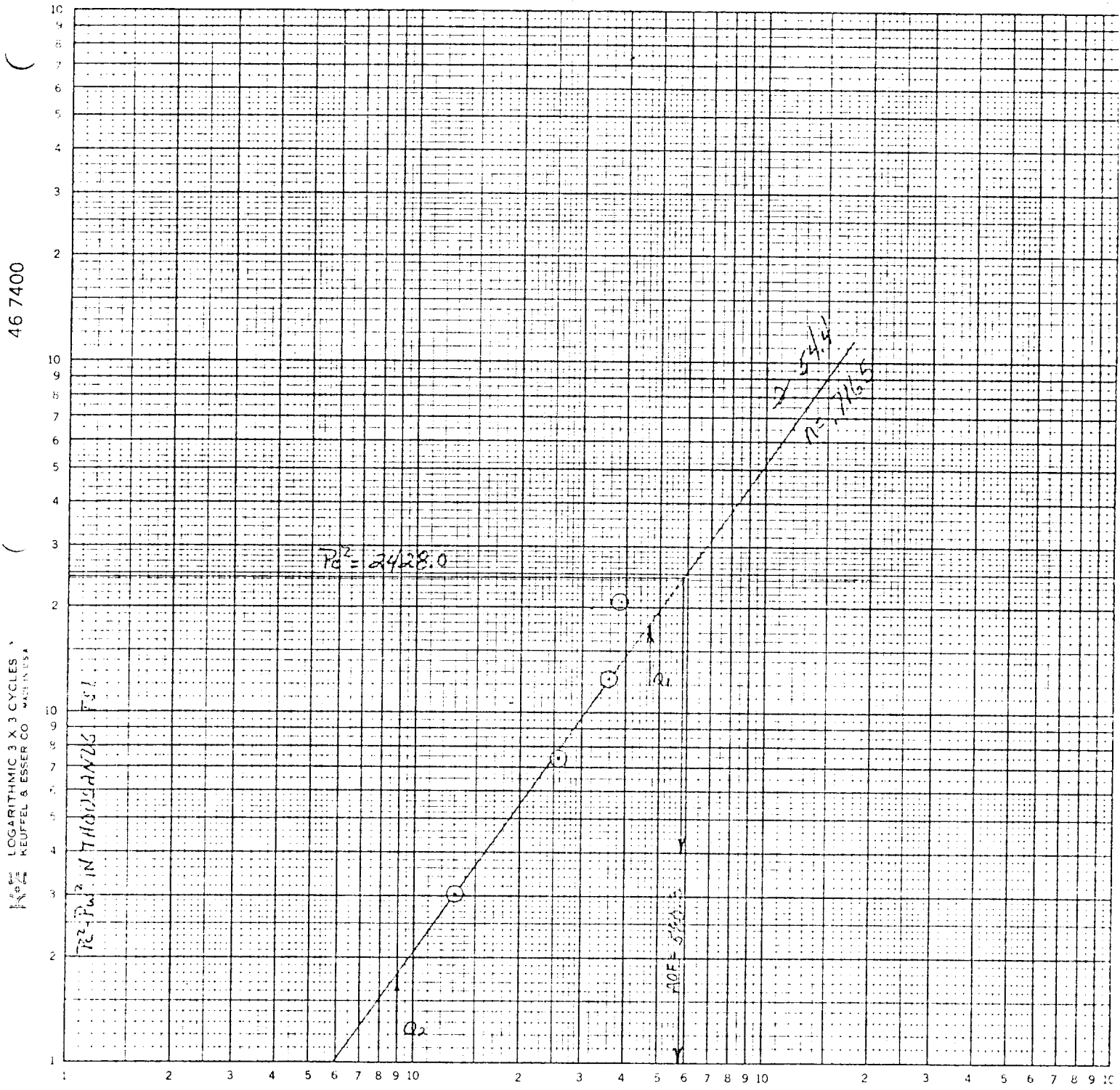
Celeste C ~~[illegible]~~ CANYON ~~[illegible]~~

SOUTH COTTONWOOD DRAW #1

N -29- 16S - 24E

EDDY COUNTY

1-20-82




$\Delta P^2 = P_a^2 - P_{w1}^2 = 1810$

$\Delta P^2 = P_a^2 - P_{w2}^2 = 1744$

$Q_1 = 410$

$Q_2 = 403.5$

LOG $Q_1$ = [illegible]

LOG $Q_2$ = 1.6424

n = .7165