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DEC 7 - 1979

O. C. D.
ARTESIA, OFFICE

NEW MEXICO OIL CONSERVATION COMMSSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

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NOV 29 1979
U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

| | | | | | |
|---|---|---|---|---|---|
| Type Test: [X] Initial [ ] Annual [ ] Special | | | | Test Date: 11-19-79 | |
| Company: BOYD OPERATING COMPANY | | | Connection: TO AIR | | |
| Pool: ~~WILDCAT~~ E. Bitter Lake | | | Formation: WOLFCAMP | | Unit |
| Completion Date: 11-15-79 | Total Depth: 5700 | | Plug Back TD: ~~5560~~ 5525 | Elevation: 3744 GL | Farm or Lease Name: BLAKEMORE FEDERAL |
| Csg. Size: 4 1/2" / Wt.: 9.50 / d: 4.090 / Set At: 5700 | | | Perforations: From 5334 To 5380 | | Well No.: 1 |
| Tbg. Size: 2 3/8" / Wt.: 4.60 / d: 2.375 / Set At: 5290 | | | Perforations: From OPEN To END | | Unit: D / Sec.: 20 / Twp.: 9S / Rge.: ~~26~~ 25E |
| Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE | | | Packer Set At: NONE | | County: CHAVES |
| Producing Thru: TUBING | Reservoir Temp. °F: 128 @ 5357 | 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 |
|---|---|---|---|---|---|---|---|---|
| 5357 | 5357 | .652 | 3.116 | 4.304 | | 2" | | |

| 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 | CASING DATA: Press. p.s.i.g. | Temp. °F | Duration of Flow |
|---|---|---|---|---|---|---|---|---|---|
| SI | | | | | 1102 | | | | |
| 1. | 2 x 1/8 | 850 | | 61 | 961 | | | | 1 HR. |
| 2. | 2 x 3/16 | 680 | | 61 | 729 | | | | 1 HR. |
| 3. | 2 x 1/4 | 425 | | 62 | 483 | | | | 1 HR. |
| 4. | 2 x 3/8 | 130 | | 64 | 315 | | | | 1 HR. |
| 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 | .2648 | | 863.2 | .9990 | 1.238 | 1.077 | 304 |
| 2. | .6082 | | 693.2 | .9990 | 1.238 | 1.061 | 769 |
| 3. | 1.087 | | 438.2 | .9981 | 1.238 | 1.039 | 612 |
| 4. | 2.378 | | 143.2 | .9962 | 1.238 | 1.012 | 425 |
| 5. | | | | | | | |

| NO. | $P_t$ | Temp. °R | $T_t$ | Z |
|---|---|---|---|---|
| 1 | 1.23 | 521 | 1.44 | .862 |
| 2. | .99 | 521 | 1.44 | .888 |
| 3. | .63 | 522 | 1.44 | .926 |
| 4 | .20 | 524 | 1.44 | .977 |
| 5 | | | | |

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas _____ XXXXXXXXX.
Specific Gravity Flowing Fluid XXXXX _____
Critical Pressure 699 P.S.I.A. _____ P.S.I.A.
Critical Temperature 363 R _____ R

$P_c$ 1147.8 $P_c^2$ 1317.4

| NO | $P_t^2$ | $P_w$ | $P_w^2$ | $P_c^2 - P_w^2$ |
|---|---|---|---|---|
| 1 | | 969.3 | 939.5 | 377.9 |
| 2 | | 744.8 | 554.7 | 762.7 |
| 3 | | 529.5 | 280.4 | 1037.0 |
| 4 | | 407.2 | 165.8 | 1151.6 |
| 5 | | | | |

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.486$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.867$

Answer $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = .568$

Absolute Open Flow 568 MCF / DAY Mcfd @ 15.025 Angle of Slope θ 63.5 Slope, n .500

Remarks: CALCULATED FROM KNOWN BHP. BHP MEASURED WITH KUSTER GAUGE.

| Approved By Commission: | Conducted By: | Calculated By: | Checked By: |
|---|---|---|---|
| | | | |