STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RECEIVED
JUN 16 '88
O. C. D.
ARTESIA, OFFICE

Form C-122
Revised 10-1-78

cls. file

# MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Type Test: 4 POINT [X] Initial [ ] Annual [ ] Special | | | | | | Test Date: 6-2-88 | | | |
| Company: OXY USA INC. | | | | Connection: TO AIR | | | | | |
| Pool: ~~UNDES~~. LOVING ATOKA, N. | | | | Formation: ATOKA | | | | Unit | |
| Completion Date: 5-29-88 | | Total Depth: 12545' | | Plug Back TD: 11897' | | Elevation: 3038.9'GR | | Farm or Lease Name: BRANTLEY "A" COM | |
| Csg. Size: 5.500 | Wt.: 20 | d: 4.778 | Set At: 12545' | Perforations: From 11307 To 11347 | | | | Well No.: 1 | |
| Tbg. Size: 2.875 | Wt.: 6.5 | d: 2.441 | Set At: 11282 | Perforations: From OPEN To ENDED | | | | Unit: J Sec.: 7 Twp.: 23S Rge.: 28E | |
| Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE | | | | Packer Set At: 11250 | | | | County: EDDY | |
| Producing Thru: TUBING | Reservoir Temp. °F: 178 11327 | | Mean Annual Temp. °F: 60 | Baro. Press. – $P_a$: 13.2 | | | | State: NEW MEXICO | |
| L: 11327 | H: 11327 | Gg: 0.582 | % $CO_2$: 0.39 | % $N_2$: 0.61 | % $H_2S$: Ø | Prover: Ø | Meter Run: 4.026 | Taps: FLNG | |

| 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 | BHP DATA: Press. p.s.i.g. | Temp. °F | Duration of Flow |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SI | | | | | | | 5767 | 80 | 7071 | 178 | 88.5 |
| 1. | 4.026 | | 2.250 | 295 | 10.0 | 66 | 5406 | 84 | 6663 | 178 | 1.0 |
| 2. | 4.026 | | 2.250 | 300 | 20.0 | 66 | 5227 | 80 | 6477 | 178 | 1.0 |
| 3. | 4.026 | | 2.250 | 307 | 41.0 | 60 | 4944 | 80 | 6156 | 178 | 1.25 |
| 4. | 4.026 | | 2.250 | 450 | 60.0 | 33 | 3590 | 74 | 4796 | 178 | 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 | 32.64 | 55.52 | 308.2 | 0.9943 | 1.3108 | 1.0241 | 2419 |
| 2. | 32.64 | 79.15 | 313.2 | 0.9943 | 1.3108 | 1.0245 | 3449 |
| 3 | 32.64 | 114.58 | 320.2 | 1.0000 | 1.3108 | 1.0265 | 5032 |
| 4. | 32.64 | 166.71 | 463.2 | 1.0270 | 1.3108 | 1.0459 | 7661 |
| 5. | | | | | | | |

| NO. | $P_r$ | Temp. °R | $T_r$ | Z |
|---|---|---|---|---|
| 1 | 0.46 | 526 | 1.50 | 0.953 |
| 2. | 0.46 | 526 | 1.50 | 0.953 |
| 3. | 0.48 | 520 | 1.48 | 0.949 |
| 4. | 0.69 | 493 | 1.41 | 0.914 |
| 5 | | | | |

Gas Liquid Hydrocarbon Ratio 439.426 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 52 Deg.
Specific Gravity Separator Gas 0.582 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX 0.589
Critical Pressure 674 P.S.I.A. 674 P.S.I.A.
Critical Temperature 351 R 353 R

$P_c$ 5821.8 $P_c^2$ 33893

| NO | $P_t$ | $P_w$ | $P_w^2$ | $P_c^2 - P_w^2$ |
|---|---|---|---|---|
| 1 | | 5450 | 29702 | 4191 |
| 2 | | 5282 | 27901 | 5993 |
| 3 | | 4994 | 24936 | 8957 |
| 4 | | 3798 | 14421 | 19472 |
| 5 | | | | |

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.7839$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.6165$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 18198.6$

Post ID-2
6-24-88
comp & BK

Absolute Open Flow 18199 Mcfd @ 15.025 Angle of Slope θ 46° Slope, n 0.966

Remarks: BHP W/ AMARADA GAUGES

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