

# CONE & KERLEY, INC.

PHONE EM 8-8442

PETROLEUM ENGINEERING SERVICES

ODESSA, TEXAS - 79760

P. O. BOX 2982

For: Morris R. Antweil  
P. O. Box 2010  
Hobbs, New Mexico 88240

Date of Test: April 20, 1971  
Field: South Carlsbad (Strawn)

Well No.: Little Jewell No. 1-U.T. Separator Gas Flow Rate 3415 MCF/Day

## A. YIELD AND CHARACTERISTICS OF SEPARATOR EFFLUENTS AT 878 PSIG AND 54 °F

- Separator condensate GPM, Gal/MCF separator gas 2.303 GPM
- Yields per MCF of full wellstream: (Dry Sep. Gas + Vap. Cond.)
  - Stock tank condensate ( 58.0 ° API ) ( 41.53 Bbls/MM ) 1.744 GPM
  - Separator Gas 92.96 %
  - Water (Cl = --- ppm) 0.00 Bbls/MM
- Separator Condensate Shrinkage Factor:
 

Percent recovered by 2 - stage Flash Vaporization from separator pressure  
and weathered to 70 °F 75.73 %
- Separator Condensate Vapor Equivalent: 32.89 Cu. Ft./Gal.

## B. COMPOSITION OF SEPARATOR EFFLUENTS

|                  | GAS    |       | CONDENSATE |             |
|------------------|--------|-------|------------|-------------|
|                  | Mol %  | GPM   | Mol %      | Liq. Vol. % |
| Hydrogen Sulfide | Nil    |       | Nil        | Nil         |
| Oxygen           |        |       |            |             |
| Nitrogen         | .51    |       |            |             |
| Carbon Dioxide   | .37    |       |            |             |
| Methane          | 88.39  |       | 29.35      | 16.31       |
| Ethane           | 7.30   |       | 15.46      | 12.91       |
| Propane          | 2.16   | .592  | 20.01      | 10.83       |
| Iso-Butane       | .37    | .121  | 4.27       | 4.58        |
| N-Butane         | .50    | .157  | 7.76       | 8.01        |
| Iso-Pentane      | .15    | .055  | 4.16       | 4.98        |
| N-Pentane        | .11    | .040  | 3.84       | 4.55        |
| Iso-Hexanes      |        |       |            |             |
| N-Hexane         |        |       |            |             |
| Pentanes Plus    |        |       |            |             |
| Hexanes Plus     | .14    | .061  | 23.15      | 37.83       |
| Heptanes Plus    |        |       |            |             |
| TOTALS           | 100.00 | 1.026 | 100.00     | 100.00      |

## C. FULL WELL STREAM COMPOSITION:

|                  | Mol %  | GPM   |
|------------------|--------|-------|
| Hydrogen Sulfide | Nil    |       |
| Oxygen           |        |       |
| Nitrogen         | .47    |       |
| Carbon Dioxide   | .34    |       |
| Methane          | 84.26  |       |
| Ethane           | 7.87   |       |
| Propane          | 2.85   | .782  |
| Iso-Butane       | .64    | .209  |
| N-Butane         | 1.01   | .317  |
| Iso-Pentane      | .43    | .156  |
| N-Pentane        | .37    | .133  |
| Iso-Hexanes      |        |       |
| N-Hexane         |        |       |
| Pentanes Plus    |        |       |
| Hexanes Plus     | 1.76   | .868  |
| Heptanes Plus    |        |       |
| TOTALS           | 100.00 | 2.465 |

## D. MISCELLANEOUS DATA:

### SEPARATOR GAS

|             |      |                        |                   |           |           |
|-------------|------|------------------------|-------------------|-----------|-----------|
| Sp. Gr.     | .642 | (Measured) (Air = 1)   | Gasoline Content: |           |           |
| Sp. Gr.     | .637 | (Calculated) (Air = 1) | 26#               | Gasoline  | .205 GPM  |
| BTU/Cu. Ft. | 1119 | (Dry Basis)            | 100               | % Propane | .592 GPM  |
| BTU/Cu. Ft. | 1090 | (Wet Basis)            | XS                | Butanes   | .229 GPM  |
|             |      |                        |                   | TOTAL     | 1.026 GPM |

### SEPARATOR CONDENSATE

|                                                    |        |                          |
|----------------------------------------------------|--------|--------------------------|
| Characteristics of Hexanes plus in liquid residue: |        | Stock Tank Condensate    |
| Specific Gravity                                   | .7512  | (Water = 1)              |
| Molecular Weight                                   | 118.50 | Butanes & Lighter 18.70% |
| Cu. Ft. Vapor per gallon                           | 20.12  | Pentanes Plus 81.30%     |
|                                                    |        | 100.00%                  |

### FULL WELL STREAM

|                                                      |           |             |
|------------------------------------------------------|-----------|-------------|
| Characteristics of Hexanes plus in full well stream: |           |             |
| Specific Gravity                                     | .7461     | (Water = 1) |
| Molecular Weight                                     | 116.76    |             |
| Cu. Ft. Vapor per gallon                             | 20.28     |             |
| Full Well Stream Sp. Gr. = .725                      | (Air = 1) |             |

Volumes = 14.65 psi & 60° F.

REMARKS: Stabilized Separator G.P.M.  
Stabilized Wellhead Pressures: Tbg. 3747 Psig - Csg. 3922 Psig

Certified:

CONE & KERLEY, INC.

By

*Bill Kerley*  
Bill Kerley