

# Natural Gas Analysis Report SAN JUAN DIVISION

## Sample Information

30-045-32592

| Sample Information |                     |
|--------------------|---------------------|
| Sample Name        | STANOLIND GC B4 BH  |
| TECH               | Tim Doering         |
| GC Serial          | GC1008B621          |
| Operator           | XTO                 |
| Report Date        | 2017-09-08 08:42:03 |

## Component Results

| Component Name   | Raw Amount | Norm%    | Gross HV (Dry)<br>(BTU / Ideal cu.ft.) | Relative Gas<br>Density (Dry) | GPM (Dry)<br>(Gal / 1000 cu.ft.) |
|------------------|------------|----------|----------------------------------------|-------------------------------|----------------------------------|
| Nitrogen         | 0.9840     | 0.9705   | 0.0                                    | 0.00939                       | 0.107                            |
| Oxygen           | 0.0090     | 0.0089   | 0.0                                    | 0.00010                       | 0.001                            |
| Methane          | 84.4470    | 83.2926  | 843.2                                  | 0.46136                       | 14.161                           |
| Carbon Dioxide   | 0.1450     | 0.1430   | 0.0                                    | 0.00217                       | 0.024                            |
| Ethane           | 9.3210     | 9.1936   | 163.1                                  | 0.09545                       | 2.466                            |
| Propane          | 4.4220     | 4.3615   | 110.0                                  | 0.06640                       | 1.205                            |
| I-Butane         | 0.4080     | 0.4024   | 13.1                                   | 0.00808                       | 0.132                            |
| N-Butane         | 1.0030     | 0.9893   | 32.3                                   | 0.01985                       | 0.313                            |
| I-Pentane        | 0.2280     | 0.2249   | 9.0                                    | 0.00560                       | 0.082                            |
| N-Pentane        | 0.2130     | 0.2101   | 8.4                                    | 0.00523                       | 0.076                            |
| Hexanes          | 0.2060     | 0.2032   | 9.7                                    | 0.00605                       | 0.084                            |
| Heptanes         | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                            |
| Octanes          | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                            |
| Nonanes          | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                            |
| Hydrogen Sulfide | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                            |
| Water            | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                            |
| Total:           | 101.3860   | 100.0000 | 1188.9                                 | 0.67968                       | 18.651                           |

## Results Summary

| Result                                  | Dry      | Sat.     |
|-----------------------------------------|----------|----------|
| Total Normalized Mole%                  | 100.0000 | 100.0000 |
| Pressure Base (psia)                    | 14.730   |          |
| Flowing Temperature (Deg. F)            | 69.0     |          |
| Flowing Pressure (psia)                 | 5.0      |          |
| Gross Heating Value (BTU / Real cu.ft.) | 1192.6   | 1172.3   |
| Relative Density (G), Real              | 0.6815   | 0.6808   |
| Compressibility (Z) Factor              | 0.9969   | 0.9965   |
| Total GPM                               | 18.651   | 18.434   |



NEW MEXICO ENERGY, MINERALS  
AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
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<http://www.emnrd.state.nm.us/ocd/>

BRADENHEAD TEST REPORT

(Submit 2 copies to above address)

Date of Test 9-7-17 Operator XTO Energy, Inc. API # 3004532592

Property Name STANOLIND GAS COM B 004 Location: Unit K Section 9 Township 32 Range 12  
(Well Name and Number)

Pressure (Shut-in or Producing) Tubing 23 Intermediate 7 Casing 24 Bradenhead 38

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

| Time        | Bradenhead     |                   |                         | Intermediate             |                   | Bradenhead<br>Flowed | Intermediate<br>Flowed |
|-------------|----------------|-------------------|-------------------------|--------------------------|-------------------|----------------------|------------------------|
|             | BH<br>Blowdown | Casing<br>Monitor | Intermediate<br>Monitor | Intermediate<br>Blowdown | Casing<br>Monitor |                      |                        |
| 5 minutes   | 0              | 28                | 7                       | 0                        | 28                |                      |                        |
| 10 minutes  | 0              | 28                | 7                       | 0                        | 28                |                      |                        |
| 15 minutes  | 0              | 28                | 7                       | 0                        | 28                | X                    | X                      |
| 20 minutes  |                |                   |                         |                          |                   |                      |                        |
| 25 minutes  |                |                   |                         |                          |                   | X                    | X                      |
| 30 minutes  |                |                   |                         |                          |                   |                      |                        |
| 5 minute SI |                |                   |                         |                          |                   |                      |                        |
|             |                |                   |                         |                          |                   |                      |                        |

If bradenhead flowed water, check all of the descriptions that apply below:

Clear \_\_\_\_\_ Fresh \_\_\_\_\_ Salty \_\_\_\_\_ Sulfur \_\_\_\_\_ Black \_\_\_\_\_

5 Minute Shut-in Bradenhead 0 Intermediate 0

REMARKS:

Gas sample taken

By [Signature] Russ Mann Witness \_\_\_\_\_

Lease Operator

(Position)

NMOCD Test Area: A

1

# Natural Gas Analysis Report SAN JUAN DIVISION

## Sample Information

30-045-32592

| Sample Information |                         |
|--------------------|-------------------------|
| Sample Name        | STANOLIND GC B4 CASEING |
| TECH               | Tim Doering             |
| GC Serial          | GC1008B621              |
| Operator           | XTO                     |
| Report Date        | 2017-09-08 08:35:46     |

## Component Results

| Component Name   | Raw Amount | Norm%    | Gross HV (Dry)<br>(BTU / Ideal cu.ft.) | Relative Gas<br>Density (Dry) | GPM (Dry)<br>(Gal. / 1000 cu.ft.) |
|------------------|------------|----------|----------------------------------------|-------------------------------|-----------------------------------|
| Nitrogen         | 0.3120     | 0.3040   | 0.0                                    | 0.00294                       | 0.034                             |
| Oxygen           | 0.0020     | 0.0019   | 0.0                                    | 0.00002                       | 0.000                             |
| Methane          | 81.6310    | 79.5370  | 805.2                                  | 0.44056                       | 13.530                            |
| Carbon Dioxide   | 0.8650     | 0.8428   | 0.0                                    | 0.01281                       | 0.144                             |
| Ethane           | 11.0140    | 10.7314  | 190.4                                  | 0.11141                       | 2.880                             |
| Propane          | 4.7820     | 4.6593   | 117.5                                  | 0.07094                       | 1.288                             |
| I-Butane         | 0.7550     | 0.7356   | 24.0                                   | 0.01476                       | 0.242                             |
| N-Butane         | 1.5900     | 1.5492   | 50.7                                   | 0.03109                       | 0.490                             |
| I-Pentane        | 0.5880     | 0.5710   | 22.9                                   | 0.01422                       | 0.210                             |
| N-Pentane        | 0.5050     | 0.4920   | 19.8                                   | 0.01226                       | 0.179                             |
| Hexanes          | 0.5910     | 0.5758   | 27.4                                   | 0.01713                       | 0.238                             |
| Heptanes         | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                             |
| Octanes          | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                             |
| Nonanes          | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                             |
| Hydrogen Sulfide | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                             |
| Water            | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                             |
| Total:           | 102.6330   | 100.0000 | 1257.8                                 | 0.72814                       | 19.233                            |

## Results Summary

| Result                                  | Dry      | Sat.     |
|-----------------------------------------|----------|----------|
| Total Normalized Mole%                  | 100.0000 | 100.0000 |
| Pressure Base (psia)                    | 14.730   |          |
| Flowing Temperature (Deg. F)            | 69.0     |          |
| Flowing Pressure (psia)                 | 29.0     |          |
| Gross Heating Value (BTU / Real cu.ft.) | 1262.4   | 1240.9   |
| Relative Density (G), Real              | 0.7305   | 0.7289   |
| Compressibility (Z) Factor              | 0.9964   | 0.9960   |
| Total GPM                               | 19.233   | 19.006   |

## Natural Gas Analysis Report

### SAN JUAN DIVISION

#### Sample Information

| Sample Information |                     |
|--------------------|---------------------|
| Sample Name        | SANOLIND GC B4 INT  |
| TECH               | Tim Doering         |
| GC Serial          | GC1008B621          |
| Operator           | XTO                 |
| Report Date        | 2017-09-08 08:46:39 |

#### Component Results

| Component Name   | Raw Amount | Norm%    | Gross HV (Dry)<br>(BTU / Ideal cu.ft.) | Relative Gas<br>Density (Dry) | GPM (Dry)<br>(Gal / 1000 cu.ft.) |
|------------------|------------|----------|----------------------------------------|-------------------------------|----------------------------------|
| Nitrogen         | 1.0790     | 1.0525   | 0.0                                    | 0.01018                       | 0.116                            |
| Oxygen           | 0.1370     | 0.1336   | 0.0                                    | 0.00148                       | 0.012                            |
| Methane          | 88.3790    | 86.2067  | 872.7                                  | 0.47750                       | 14.654                           |
| Carbon Dioxide   | 0.1500     | 0.1463   | 0.0                                    | 0.00222                       | 0.025                            |
| Ethane           | 6.3270     | 6.1715   | 109.5                                  | 0.06407                       | 1.655                            |
| Propane          | 3.9050     | 3.8090   | 96.1                                   | 0.05799                       | 1.052                            |
| I-Butane         | 0.8020     | 0.7823   | 25.5                                   | 0.01570                       | 0.257                            |
| N-Butane         | 1.0520     | 1.0261   | 33.6                                   | 0.02059                       | 0.324                            |
| I-Pentane        | 0.3080     | 0.3004   | 12.0                                   | 0.00748                       | 0.110                            |
| N-Pentane        | 0.2200     | 0.2146   | 8.6                                    | 0.00535                       | 0.078                            |
| Hexanes          | 0.1610     | 0.1570   | 7.5                                    | 0.00467                       | 0.065                            |
| Heptanes         | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                            |
| Octanes          | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                            |
| Nonanes          | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                            |
| Hydrogen Sulfide | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                            |
| Water            | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                            |
| Total:           | 102.5200   | 100.0000 | 1165.4                                 | 0.66723                       | 18.348                           |

#### Results Summary

| Result                                  | Dry      | Sat.     |
|-----------------------------------------|----------|----------|
| Total Normalized Mole%                  | 100.0000 | 100.0000 |
| Pressure Base (psia)                    | 14.730   |          |
| Flowing Temperature (Deg. F)            | 69.0     |          |
| Flowing Pressure (psia)                 | 5.0      |          |
| Gross Heating Value (BTU / Real cu.ft.) | 1168.9   | 1149.0   |
| Relative Density (G), Real              | 0.6689   | 0.6684   |
| Compressibility (Z) Factor              | 0.9971   | 0.9967   |
| Total GPM                               | 18.348   | 18.135   |

# Natural Gas Analysis Report SAN JUAN DIVISION

## Sample Information

| Sample Information |                        |
|--------------------|------------------------|
| Sample Name        | STANOLING GC B4 TUBING |
| TECH               | Tim Doering            |
| GC Serial          | GC1008B621             |
| Operator           | XTO                    |
| Report Date        | 2017-09-08 08:37:16    |

## Component Results

| Component Name   | Raw Amount | Norm%    | Gross HV (Dry)<br>(BTU / Ideal cu.ft.) | Relative Gas<br>Density (Dry) | GPM (Dry)<br>(Gal. / 1000 cu.ft.) |
|------------------|------------|----------|----------------------------------------|-------------------------------|-----------------------------------|
| Nitrogen         | 0.3170     | 0.3075   | 0.0                                    | 0.00297                       | 0.034                             |
| Oxygen           | 0.0060     | 0.0058   | 0.0                                    | 0.00006                       | 0.001                             |
| Methane          | 82.6080    | 80.1303  | 811.2                                  | 0.44384                       | 13.628                            |
| Carbon Dioxide   | 0.9200     | 0.8924   | 0.0                                    | 0.01356                       | 0.153                             |
| Ethane           | 11.2110    | 10.8748  | 192.9                                  | 0.11290                       | 2.918                             |
| Propane          | 4.7380     | 4.5959   | 115.9                                  | 0.06997                       | 1.270                             |
| I-Butane         | 0.7030     | 0.6819   | 22.2                                   | 0.01368                       | 0.224                             |
| N-Butane         | 1.4050     | 1.3629   | 44.6                                   | 0.02735                       | 0.431                             |
| I-Pentane        | 0.4600     | 0.4462   | 17.9                                   | 0.01112                       | 0.164                             |
| N-Pentane        | 0.3740     | 0.3628   | 14.6                                   | 0.00904                       | 0.132                             |
| Hexanes          | 0.3500     | 0.3395   | 16.2                                   | 0.01010                       | 0.140                             |
| Heptanes         | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                             |
| Octanes          | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                             |
| Nonanes          | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                             |
| Hydrogen Sulfide | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                             |
| Water            | 0.0000     | 0.0000   | 0.0                                    | 0.00000                       | 0.000                             |
| Total:           | 103.0920   | 100.0000 | 1235.4                                 | 0.71460                       | 19.094                            |

## Results Summary

| Result                                  | Dry      | Sat.     |
|-----------------------------------------|----------|----------|
| Total Normalized Mole%                  | 100.0000 | 100.0000 |
| Pressure Base (psia)                    | 14.730   |          |
| Flowing Temperature (Deg. F)            | 69.0     |          |
| Flowing Pressure (psia)                 | 25.0     |          |
| Gross Heating Value (BTU / Real cu.ft.) | 1239.7   | 1218.6   |
| Relative Density (G), Real              | 0.7168   | 0.7155   |
| Compressibility (Z) Factor              | 0.9965   | 0.9961   |
| Total GPM                               | 19.094   | 18.869   |



## Well Name: Stanolind Gas Com B 04

|                              |                             |                                        |                              |                                  |
|------------------------------|-----------------------------|----------------------------------------|------------------------------|----------------------------------|
| API/UWI<br>30045325920000    | Accounting ID<br>68759      | Permit Number                          | State/Province<br>New Mexico | County<br>San Juan               |
| Location<br>T32N-R12W-S09    | Spud Date<br>8/1/2007 13:00 | Original KB Elevation (ft)<br>6,131.00 | Gr Elev (ft)<br>6,116.00     | KB-Ground Distance (ft)<br>15.00 |
| Casing Flange Elevation (ft) |                             |                                        |                              |                                  |

| MD (ftKB) | TVD (ftKB) | Incl (°) | Vertical schematic (actual) |
|-----------|------------|----------|-----------------------------|
| 15.1      |            |          |                             |
| 342.5     |            |          |                             |
| 388.1     |            |          |                             |
| 389.1     |            |          |                             |
| 399.9     |            |          |                             |
| 1,072.5   |            |          |                             |
| 1,075.5   |            |          |                             |
| 1,077.1   |            |          |                             |
| 1,089.6   |            |          |                             |
| 1,538.7   |            |          |                             |
| 1,539.7   |            |          |                             |
| 1,585.0   |            |          |                             |
| 1,586.0   |            |          |                             |
| 1,734.9   |            |          |                             |
| 2,706.4   |            |          |                             |
| 2,715.6   |            |          |                             |
| 3,515.7   |            |          |                             |
| 3,524.9   |            |          |                             |
| 3,934.1   |            |          |                             |
| 4,131.2   |            |          |                             |
| 4,132.2   |            |          |                             |
| 4,132.5   |            |          |                             |
| 4,216.9   |            |          |                             |
| 4,367.1   |            |          |                             |
| 4,367.8   |            |          |                             |
| 4,412.4   |            |          |                             |
| 4,413.1   |            |          |                             |
| 4,424.9   |            |          |                             |

Vertical schematic (actual)

- SURFAC; 14 3/4 in; 400.0 ftKB
- Surface; 11 3/4 in; 389.0 ftKB
- INTRM1; 10 5/8 in; 1,735.0 ftKB
- Intermediate; 8 5/8 in; 1,586.0 ftKB
- PROD1; 7 7/8 in; 4,425.0 ftKB
- N2 Energized Frac Perforated; 3,934.0-4,217.0 ftKB
- PBTD; 4,367.0 ftKB
- Production; 5 1/2 in; 4,413.0 ftKB
- TD - Original Hole; 4,425.0 ftKB

|                                      |                 |                    |                 |                |           |                            |            |
|--------------------------------------|-----------------|--------------------|-----------------|----------------|-----------|----------------------------|------------|
| <b>Wellbores</b>                     |                 |                    |                 |                |           |                            |            |
| Wellbore Name                        |                 |                    | Parent Wellbore |                |           | Wellbore API/UWI           |            |
| Original Hole                        |                 |                    | Original Hole   |                |           |                            |            |
| Start Depth (ftKB)                   |                 |                    | Profile Type    |                |           | Kick Off Depth (MD) (ftKB) |            |
|                                      |                 |                    |                 |                |           |                            |            |
| Section Des                          |                 | Size (in)          |                 | Act Top (ftKB) |           | Act Btm (ftKB)             |            |
| SURFAC                               |                 | 14 3/4             |                 | 15.0           |           | 400.0                      |            |
| INTRM1                               |                 | 10 5/8             |                 | 400.0          |           | 1,735.0                    |            |
| PROD1                                |                 | 7 7/8              |                 | 1,735.0        |           | 4,425.0                    |            |
| <b>Zones</b>                         |                 |                    |                 |                |           |                            |            |
| Zone Name                            |                 | Top (ftKB)         |                 | Btm (ftKB)     |           | Current Status             |            |
| Mesaverde                            |                 | 3,934.0            |                 | 4,217.0        |           |                            |            |
| <b>Casing Strings</b>                |                 |                    |                 |                |           |                            |            |
| Csg Des                              |                 | Set Depth (ftKB)   |                 | OD (in)        |           | W/Len (lb/ft)              |            |
| Surface                              |                 | 389.0              |                 | 11 3/4         |           | 42.00 H-40                 |            |
| Intermediate                         |                 | 1,586.0            |                 | 8 5/8          |           | 24.00 J-55                 |            |
| Production                           |                 | 4,413.0            |                 | 5 1/2          |           | 15.50 J-55                 |            |
| <b>Cement</b>                        |                 |                    |                 |                |           |                            |            |
| Des                                  |                 | Type               |                 |                |           | String                     |            |
| Surface Casing Cement                |                 | Casing             |                 |                |           | Surface, 389.0ftKB         |            |
| Intermediate Casing Cement           |                 | Casing             |                 |                |           | Intermediate, 1,586.0ftKB  |            |
| Production Casing Cement             |                 | Casing             |                 |                |           | Production, 4,413.0ftKB    |            |
| <b>Tubing Strings</b>                |                 |                    |                 |                |           |                            |            |
| Tubing Description                   |                 |                    | Run Date        |                |           | Set Depth (ftKB)           |            |
| Tubing - Production                  |                 |                    | 10/12/2007      |                |           | 4,132.6                    |            |
| Item Des                             |                 | OD (in)            | Wt (lb/ft)      | Grade          | Jts       | Len (ft)                   | Top (ftKB) |
| Tubing                               |                 | 2 3/8              | 4.70            | J-55           | 125       | 4,116.08                   | 15.0       |
| Seat Nipple                          |                 | 2 3/8              |                 |                | 1         | 1.10                       | 4,131.1    |
| Notched Collar                       |                 | 2 3/8              |                 |                | 1         | 0.43                       | 4,132.2    |
| <b>Rod Strings</b>                   |                 |                    |                 |                |           |                            |            |
| Rod Description                      |                 |                    | Run Date        |                |           | Set Depth (ftKB)           |            |
|                                      |                 |                    |                 |                |           |                            |            |
| Item Des                             |                 | OD (in)            | Wt (lb/ft)      | Grade          | Jts       | Len (ft)                   | Top (ftKB) |
|                                      |                 |                    |                 |                |           |                            |            |
| <b>Other In Hole</b>                 |                 |                    |                 |                |           |                            |            |
| Run Date                             |                 | Des                |                 | OD (in)        |           | Top (ftKB)                 |            |
|                                      |                 |                    |                 |                |           |                            |            |
|                                      |                 |                    |                 |                |           |                            |            |
| <b>Perforations</b>                  |                 |                    |                 |                |           |                            |            |
| Date                                 |                 | Top (ftKB)         |                 | Btm (ftKB)     |           | Zone                       |            |
| 9/19/2007                            |                 | 3,934.0            |                 | 4,217.0        |           | Mesaverde, Original Hole   |            |
| <b>Stimulations &amp; Treatments</b> |                 |                    |                 |                |           |                            |            |
| Frac #                               | Top Perf (ftKB) | Bottom Perf (ftKB) | AIR (bbl/min)   | MIR (bbl/min)  | TWP (bbl) | Total Proppant (lb)        |            |
| 3934                                 | 4217            |                    |                 |                |           |                            |            |
|                                      |                 |                    |                 |                |           |                            |            |