

# Colorado Interstate Gas

## Totem 27

North American Datum 1983 , US State Plane 1983, Colorado Northern Zone  
Ground Elevation: 5173.5

+N/-S +E/-W Northing Easting Latitude Longitude  
0.0 0.0 1204312.92 3325000.44 39.888390 -104.341783  
Well @ 5193.5ft

### WELLBORE TARGET DETAILS

| Name     | TVD    | +N/-S   | +E/-W   | Latitude  | Longitude   | Shape |
|----------|--------|---------|---------|-----------|-------------|-------|
| 27 LPL - | 7249.0 | -565.7  | -292.4  | 39.886837 | -104.342825 | Point |
| 27 BHL - | 7285.0 | -3058.8 | -1580.6 | 39.879993 | -104.347415 | Point |



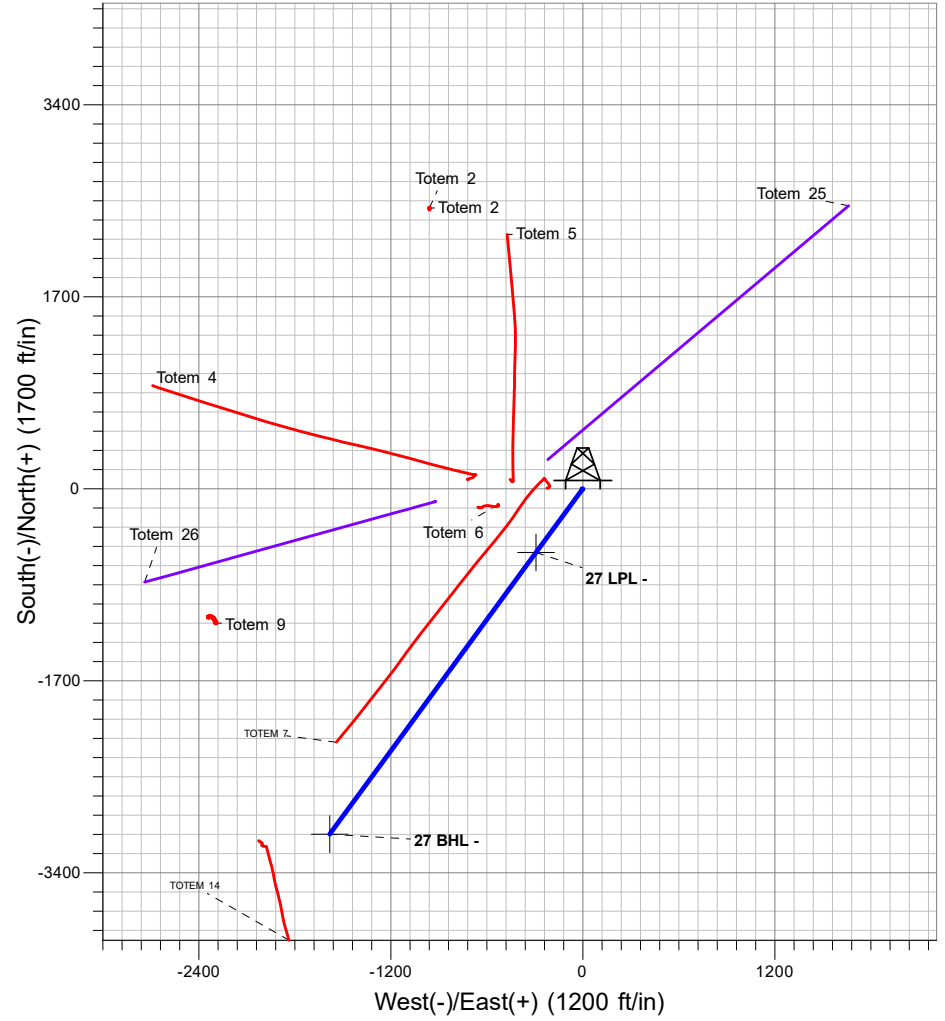
Azimuths to True North  
Magnetic North: 7.73°

Magnetic Field  
Strength: 51306.5nT  
Dip Angle: 66.22°  
Date: 06/03/2025  
Model: HRGM

**TOTEM 25-26-27**  
**Totem 27**  
**27 Design #5**  
**10:47, June 03 2025**

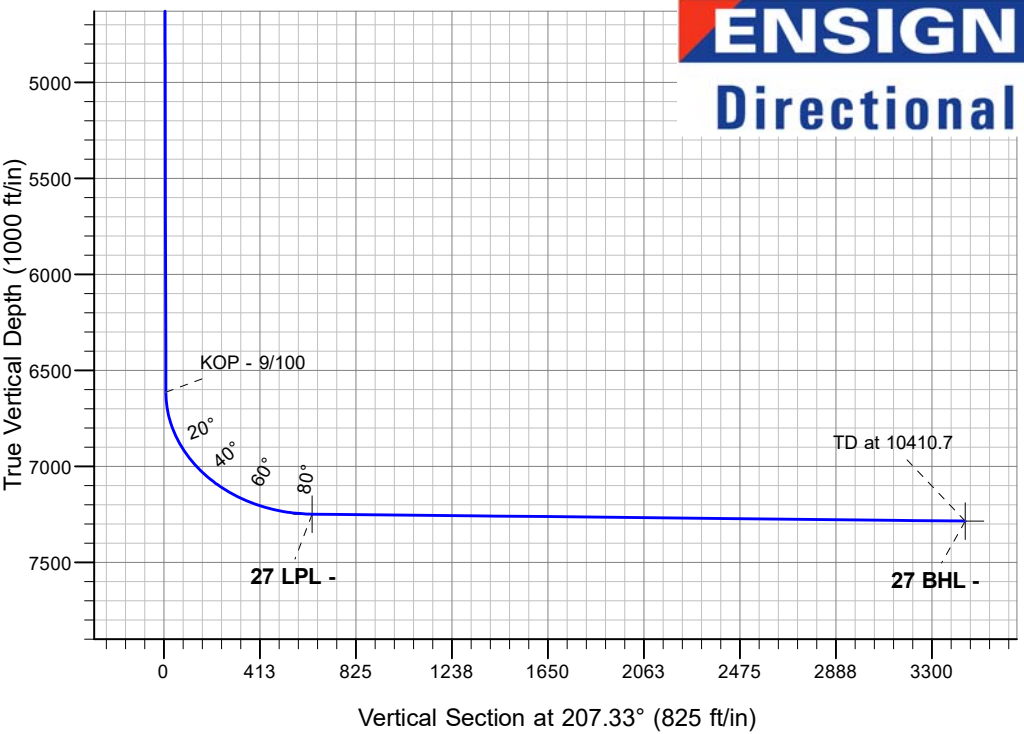
### ANNOTATIONS

| MD      | TVD    | Annotation                     |
|---------|--------|--------------------------------|
| 1800.0  | 1800.0 | Start Build 2.00               |
| 1805.0  | 1805.0 | Start 4808.5 hold at 1805.0 MD |
| 6613.6  | 6613.5 | KOP - 9/100                    |
| 7604.2  | 7249.0 | Start DLS 0.00 TFO -35.78      |
| 10410.7 | 7285.0 | TD at 10410.7                  |



### SECTION DETAILS

| Sec | MD      | Inc   | Azi    | TVD    | +N/-S   | +E/-W   | Dleg | TFace  | VSect  | Target   |
|-----|---------|-------|--------|--------|---------|---------|------|--------|--------|----------|
| 1   | 0.0     | 0.00  | 0.00   | 0.0    | 0.0     | 0.0     | 0.00 | 0.00   | 0.0    |          |
| 2   | 1800.0  | 0.00  | 0.00   | 1800.0 | 0.0     | 0.0     | 0.00 | 0.00   | 0.0    |          |
| 3   | 1805.0  | 0.10  | 207.60 | 1805.0 | 0.0     | 0.0     | 2.00 | 207.60 | 0.0    |          |
| 4   | 6613.6  | 0.10  | 207.60 | 6613.5 | -7.5    | -3.9    | 0.00 | 0.00   | 8.4    |          |
| 5   | 7604.2  | 89.26 | 207.33 | 7249.0 | -565.7  | -292.4  | 9.00 | -0.27  | 636.8  | 27 LPL - |
| 6   | 10410.7 | 89.27 | 207.32 | 7285.0 | -3058.8 | -1580.6 | 0.00 | -35.78 | 3443.1 | 27 BHL - |



# **Colorado Interstate Gas**

**SEC.8-T2S-R62W**

**TOTEM 25-26-27**

**Totem 27**

**Totem**

**Plan: 27 Design #5**

## **Standard Planning Report**

**03 June, 2025**

# Ensign

## Planning Report

|                  |                         |                                     |                   |
|------------------|-------------------------|-------------------------------------|-------------------|
| <b>Database:</b> | US_EDM                  | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Company:</b>  | Colorado Interstate Gas | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Project:</b>  | SEC.8-T2S-R62W          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site:</b>     | TOTEM 25-26-27          | <b>North Reference:</b>             | True              |
| <b>Well:</b>     | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Wellbore:</b> | Totem                   |                                     |                   |
| <b>Design:</b>   | 27 Design #5            |                                     |                   |

|                    |                           |                      |                             |
|--------------------|---------------------------|----------------------|-----------------------------|
| <b>Project</b>     | SEC.8-T2S-R62W            |                      |                             |
| <b>Map System:</b> | US State Plane 1983       | <b>System Datum:</b> | Mean Sea Level              |
| <b>Geo Datum:</b>  | North American Datum 1983 |                      |                             |
| <b>Map Zone:</b>   | Colorado Northern Zone    |                      | Using geodetic scale factor |

|                              |                |                     |                   |                          |             |
|------------------------------|----------------|---------------------|-------------------|--------------------------|-------------|
| <b>Site</b>                  | TOTEM 25-26-27 |                     |                   |                          |             |
| <b>Site Position:</b>        |                | <b>Northing:</b>    | 1,204,567.59 usft | <b>Latitude:</b>         | 39.889097   |
| <b>From:</b>                 | Lat/Long       | <b>Easting:</b>     | 3,324,778.79 usft | <b>Longitude:</b>        | -104.342561 |
| <b>Position Uncertainty:</b> | 0.0 ft         | <b>Slot Radius:</b> | 13-3/16 "         | <b>Grid Convergence:</b> | 0.75 °      |

|                             |              |           |                            |                   |                      |             |
|-----------------------------|--------------|-----------|----------------------------|-------------------|----------------------|-------------|
| <b>Well</b>                 | Totem 27     |           |                            |                   |                      |             |
| <b>Well Position</b>        | <b>+N/-S</b> | -257.6 ft | <b>Northing:</b>           | 1,204,312.91 usft | <b>Latitude:</b>     | 39.888390   |
|                             | <b>+E/-W</b> | 218.3 ft  | <b>Easting:</b>            | 3,325,000.44 usft | <b>Longitude:</b>    | -104.341783 |
| <b>Position Uncertainty</b> |              | 0.0 ft    | <b>Wellhead Elevation:</b> |                   | <b>Ground Level:</b> | 5,173.5 ft  |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Totem             |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | HRGM              | 06/03/2025         | 7.73                   | 66.22                | 51,306.52250302            |

|                          |                              |                   |                      |                      |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| <b>Design</b>            | 27 Design #5                 |                   |                      |                      |
| <b>Audit Notes:</b>      |                              |                   |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                | PLAN              | <b>Tie On Depth:</b> | 0.0                  |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b>    | <b>Direction (°)</b> |
|                          | 0.0                          | 0.0               | 0.0                  | 207.33               |

| <b>Plan Sections</b> |                 |             |                     |            |            |                         |                        |                       |         |          |
|----------------------|-----------------|-------------|---------------------|------------|------------|-------------------------|------------------------|-----------------------|---------|----------|
| Measured Depth (ft)  | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target   |
| 0.0                  | 0.00            | 0.00        | 0.0                 | 0.0        | 0.0        | 0.00                    | 0.00                   | 0.00                  | 0.00    |          |
| 1,800.0              | 0.00            | 0.00        | 1,800.0             | 0.0        | 0.0        | 0.00                    | 0.00                   | 0.00                  | 0.00    |          |
| 1,805.0              | 0.10            | 207.60      | 1,805.0             | 0.0        | 0.0        | 2.00                    | 2.00                   | 0.00                  | 207.60  |          |
| 6,613.6              | 0.10            | 207.60      | 6,613.5             | -7.5       | -3.9       | 0.00                    | 0.00                   | 0.00                  | 0.00    |          |
| 7,604.2              | 89.26           | 207.33      | 7,249.0             | -565.7     | -292.4     | 9.00                    | 9.00                   | -0.03                 | -0.27   | 27 LPL - |
| 10,410.7             | 89.27           | 207.32      | 7,285.0             | -3,058.8   | -1,580.6   | 0.00                    | 0.00                   | 0.00                  | -35.78  | 27 BHL - |

# Ensign

## Planning Report

|                  |                         |                                     |                   |
|------------------|-------------------------|-------------------------------------|-------------------|
| <b>Database:</b> | US_EDM                  | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Company:</b>  | Colorado Interstate Gas | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Project:</b>  | SEC.8-T2S-R62W          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site:</b>     | TOTEM 25-26-27          | <b>North Reference:</b>             | True              |
| <b>Well:</b>     | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Wellbore:</b> | Totem                   |                                     |                   |
| <b>Design:</b>   | 27 Design #5            |                                     |                   |

| Planned Survey                        |                 |             |                     |            |            |                       |                         |                        |                       |
|---------------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (ft)                   | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 0.0                                   | 0.00            | 0.00        | 0.0                 | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 100.0                                 | 0.00            | 0.00        | 100.0               | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 200.0                                 | 0.00            | 0.00        | 200.0               | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 300.0                                 | 0.00            | 0.00        | 300.0               | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 400.0                                 | 0.00            | 0.00        | 400.0               | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 500.0                                 | 0.00            | 0.00        | 500.0               | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 600.0                                 | 0.00            | 0.00        | 600.0               | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 700.0                                 | 0.00            | 0.00        | 700.0               | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 800.0                                 | 0.00            | 0.00        | 800.0               | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 900.0                                 | 0.00            | 0.00        | 900.0               | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 1,000.0                               | 0.00            | 0.00        | 1,000.0             | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 1,100.0                               | 0.00            | 0.00        | 1,100.0             | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 1,200.0                               | 0.00            | 0.00        | 1,200.0             | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 1,300.0                               | 0.00            | 0.00        | 1,300.0             | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 1,400.0                               | 0.00            | 0.00        | 1,400.0             | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 1,500.0                               | 0.00            | 0.00        | 1,500.0             | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 1,600.0                               | 0.00            | 0.00        | 1,600.0             | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 1,700.0                               | 0.00            | 0.00        | 1,700.0             | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| 1,800.0                               | 0.00            | 0.00        | 1,800.0             | 0.0        | 0.0        | 0.0                   | 0.00                    | 0.00                   | 0.00                  |
| <b>Start Build 2.00</b>               |                 |             |                     |            |            |                       |                         |                        |                       |
| 1,805.0                               | 0.10            | 207.60      | 1,805.0             | 0.0        | 0.0        | 0.0                   | 2.00                    | 2.00                   | 0.00                  |
| <b>Start 4808.5 hold at 1805.0 MD</b> |                 |             |                     |            |            |                       |                         |                        |                       |
| 1,900.0                               | 0.10            | 207.60      | 1,900.0             | -0.2       | -0.1       | 0.2                   | 0.00                    | 0.00                   | 0.00                  |
| 2,000.0                               | 0.10            | 207.60      | 2,000.0             | -0.3       | -0.2       | 0.3                   | 0.00                    | 0.00                   | 0.00                  |
| 2,100.0                               | 0.10            | 207.60      | 2,100.0             | -0.5       | -0.2       | 0.5                   | 0.00                    | 0.00                   | 0.00                  |
| 2,200.0                               | 0.10            | 207.60      | 2,200.0             | -0.6       | -0.3       | 0.7                   | 0.00                    | 0.00                   | 0.00                  |
| 2,300.0                               | 0.10            | 207.60      | 2,300.0             | -0.8       | -0.4       | 0.9                   | 0.00                    | 0.00                   | 0.00                  |
| 2,400.0                               | 0.10            | 207.60      | 2,400.0             | -0.9       | -0.5       | 1.0                   | 0.00                    | 0.00                   | 0.00                  |
| 2,500.0                               | 0.10            | 207.60      | 2,500.0             | -1.1       | -0.6       | 1.2                   | 0.00                    | 0.00                   | 0.00                  |
| 2,600.0                               | 0.10            | 207.60      | 2,600.0             | -1.2       | -0.6       | 1.4                   | 0.00                    | 0.00                   | 0.00                  |
| 2,700.0                               | 0.10            | 207.60      | 2,700.0             | -1.4       | -0.7       | 1.6                   | 0.00                    | 0.00                   | 0.00                  |
| 2,800.0                               | 0.10            | 207.60      | 2,800.0             | -1.5       | -0.8       | 1.7                   | 0.00                    | 0.00                   | 0.00                  |
| 2,900.0                               | 0.10            | 207.60      | 2,900.0             | -1.7       | -0.9       | 1.9                   | 0.00                    | 0.00                   | 0.00                  |
| 3,000.0                               | 0.10            | 207.60      | 3,000.0             | -1.9       | -1.0       | 2.1                   | 0.00                    | 0.00                   | 0.00                  |
| 3,100.0                               | 0.10            | 207.60      | 3,100.0             | -2.0       | -1.1       | 2.3                   | 0.00                    | 0.00                   | 0.00                  |
| 3,200.0                               | 0.10            | 207.60      | 3,200.0             | -2.2       | -1.1       | 2.4                   | 0.00                    | 0.00                   | 0.00                  |
| 3,300.0                               | 0.10            | 207.60      | 3,300.0             | -2.3       | -1.2       | 2.6                   | 0.00                    | 0.00                   | 0.00                  |
| 3,400.0                               | 0.10            | 207.60      | 3,400.0             | -2.5       | -1.3       | 2.8                   | 0.00                    | 0.00                   | 0.00                  |
| 3,500.0                               | 0.10            | 207.60      | 3,500.0             | -2.6       | -1.4       | 3.0                   | 0.00                    | 0.00                   | 0.00                  |
| 3,600.0                               | 0.10            | 207.60      | 3,600.0             | -2.8       | -1.5       | 3.1                   | 0.00                    | 0.00                   | 0.00                  |
| 3,700.0                               | 0.10            | 207.60      | 3,700.0             | -2.9       | -1.5       | 3.3                   | 0.00                    | 0.00                   | 0.00                  |
| 3,800.0                               | 0.10            | 207.60      | 3,800.0             | -3.1       | -1.6       | 3.5                   | 0.00                    | 0.00                   | 0.00                  |
| 3,900.0                               | 0.10            | 207.60      | 3,900.0             | -3.3       | -1.7       | 3.7                   | 0.00                    | 0.00                   | 0.00                  |
| 4,000.0                               | 0.10            | 207.60      | 4,000.0             | -3.4       | -1.8       | 3.8                   | 0.00                    | 0.00                   | 0.00                  |
| 4,100.0                               | 0.10            | 207.60      | 4,100.0             | -3.6       | -1.9       | 4.0                   | 0.00                    | 0.00                   | 0.00                  |
| 4,200.0                               | 0.10            | 207.60      | 4,200.0             | -3.7       | -1.9       | 4.2                   | 0.00                    | 0.00                   | 0.00                  |
| 4,300.0                               | 0.10            | 207.60      | 4,300.0             | -3.9       | -2.0       | 4.4                   | 0.00                    | 0.00                   | 0.00                  |
| 4,400.0                               | 0.10            | 207.60      | 4,400.0             | -4.0       | -2.1       | 4.5                   | 0.00                    | 0.00                   | 0.00                  |
| 4,500.0                               | 0.10            | 207.60      | 4,500.0             | -4.2       | -2.2       | 4.7                   | 0.00                    | 0.00                   | 0.00                  |
| 4,600.0                               | 0.10            | 207.60      | 4,600.0             | -4.3       | -2.3       | 4.9                   | 0.00                    | 0.00                   | 0.00                  |
| 4,700.0                               | 0.10            | 207.60      | 4,700.0             | -4.5       | -2.3       | 5.1                   | 0.00                    | 0.00                   | 0.00                  |
| 4,800.0                               | 0.10            | 207.60      | 4,800.0             | -4.6       | -2.4       | 5.2                   | 0.00                    | 0.00                   | 0.00                  |
| 4,900.0                               | 0.10            | 207.60      | 4,900.0             | -4.8       | -2.5       | 5.4                   | 0.00                    | 0.00                   | 0.00                  |
| 5,000.0                               | 0.10            | 207.60      | 5,000.0             | -5.0       | -2.6       | 5.6                   | 0.00                    | 0.00                   | 0.00                  |

# Ensign

## Planning Report

|                  |                         |                                     |                   |
|------------------|-------------------------|-------------------------------------|-------------------|
| <b>Database:</b> | US_EDM                  | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Company:</b>  | Colorado Interstate Gas | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Project:</b>  | SEC.8-T2S-R62W          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site:</b>     | TOTEM 25-26-27          | <b>North Reference:</b>             | True              |
| <b>Well:</b>     | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Wellbore:</b> | Totem                   |                                     |                   |
| <b>Design:</b>   | 27 Design #5            |                                     |                   |

| Planned Survey                   |                 |             |                     |            |            |                       |                         |                        |                       |  |
|----------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (ft)              | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |  |
| 5,100.0                          | 0.10            | 207.60      | 5,100.0             | -5.1       | -2.7       | 5.8                   | 0.00                    | 0.00                   | 0.00                  |  |
| 5,200.0                          | 0.10            | 207.60      | 5,200.0             | -5.3       | -2.8       | 5.9                   | 0.00                    | 0.00                   | 0.00                  |  |
| 5,300.0                          | 0.10            | 207.60      | 5,300.0             | -5.4       | -2.8       | 6.1                   | 0.00                    | 0.00                   | 0.00                  |  |
| 5,400.0                          | 0.10            | 207.60      | 5,400.0             | -5.6       | -2.9       | 6.3                   | 0.00                    | 0.00                   | 0.00                  |  |
| 5,500.0                          | 0.10            | 207.60      | 5,500.0             | -5.7       | -3.0       | 6.5                   | 0.00                    | 0.00                   | 0.00                  |  |
| 5,600.0                          | 0.10            | 207.60      | 5,600.0             | -5.9       | -3.1       | 6.6                   | 0.00                    | 0.00                   | 0.00                  |  |
| 5,700.0                          | 0.10            | 207.60      | 5,700.0             | -6.0       | -3.2       | 6.8                   | 0.00                    | 0.00                   | 0.00                  |  |
| 5,800.0                          | 0.10            | 207.60      | 5,800.0             | -6.2       | -3.2       | 7.0                   | 0.00                    | 0.00                   | 0.00                  |  |
| 5,900.0                          | 0.10            | 207.60      | 5,900.0             | -6.4       | -3.3       | 7.2                   | 0.00                    | 0.00                   | 0.00                  |  |
| 6,000.0                          | 0.10            | 207.60      | 6,000.0             | -6.5       | -3.4       | 7.3                   | 0.00                    | 0.00                   | 0.00                  |  |
| 6,100.0                          | 0.10            | 207.60      | 6,100.0             | -6.7       | -3.5       | 7.5                   | 0.00                    | 0.00                   | 0.00                  |  |
| 6,200.0                          | 0.10            | 207.60      | 6,200.0             | -6.8       | -3.6       | 7.7                   | 0.00                    | 0.00                   | 0.00                  |  |
| 6,300.0                          | 0.10            | 207.60      | 6,300.0             | -7.0       | -3.6       | 7.9                   | 0.00                    | 0.00                   | 0.00                  |  |
| 6,400.0                          | 0.10            | 207.60      | 6,400.0             | -7.1       | -3.7       | 8.0                   | 0.00                    | 0.00                   | 0.00                  |  |
| 6,500.0                          | 0.10            | 207.60      | 6,500.0             | -7.3       | -3.8       | 8.2                   | 0.00                    | 0.00                   | 0.00                  |  |
| 6,600.0                          | 0.10            | 207.60      | 6,600.0             | -7.4       | -3.9       | 8.4                   | 0.00                    | 0.00                   | 0.00                  |  |
| 6,613.6                          | 0.10            | 207.60      | 6,613.5             | -7.5       | -3.9       | 8.4                   | 0.00                    | 0.00                   | 0.00                  |  |
| <b>KOP - 9/100</b>               |                 |             |                     |            |            |                       |                         |                        |                       |  |
| 6,700.0                          | 7.88            | 207.33      | 6,699.7             | -12.8      | -6.7       | 14.4                  | 9.00                    | 9.00                   | -0.31                 |  |
| 6,800.0                          | 16.88           | 207.33      | 6,797.3             | -31.8      | -16.5      | 35.8                  | 9.00                    | 9.00                   | 0.00                  |  |
| 6,900.0                          | 25.88           | 207.33      | 6,890.3             | -64.2      | -33.2      | 72.3                  | 9.00                    | 9.00                   | 0.00                  |  |
| 7,000.0                          | 34.88           | 207.33      | 6,976.5             | -109.1     | -56.4      | 122.8                 | 9.00                    | 9.00                   | 0.00                  |  |
| 7,100.0                          | 43.88           | 207.33      | 7,053.7             | -165.4     | -85.5      | 186.2                 | 9.00                    | 9.00                   | 0.00                  |  |
| 7,200.0                          | 52.88           | 207.33      | 7,120.1             | -231.7     | -119.8     | 260.8                 | 9.00                    | 9.00                   | 0.00                  |  |
| 7,300.0                          | 61.88           | 207.33      | 7,173.9             | -306.5     | -158.4     | 345.0                 | 9.00                    | 9.00                   | 0.00                  |  |
| 7,400.0                          | 70.88           | 207.33      | 7,213.9             | -387.8     | -200.5     | 436.5                 | 9.00                    | 9.00                   | 0.00                  |  |
| 7,500.0                          | 79.88           | 207.33      | 7,239.1             | -473.6     | -244.8     | 533.2                 | 9.00                    | 9.00                   | 0.00                  |  |
| 7,600.0                          | 88.88           | 207.33      | 7,248.9             | -562.0     | -290.5     | 632.6                 | 9.00                    | 9.00                   | 0.00                  |  |
| 7,604.2                          | 89.26           | 207.33      | 7,249.0             | -565.7     | -292.4     | 636.8                 | 9.00                    | 9.00                   | 0.00                  |  |
| <b>Start DLS 0.00 TFO -35.78</b> |                 |             |                     |            |            |                       |                         |                        |                       |  |
| 7,700.0                          | 89.26           | 207.33      | 7,250.2             | -650.8     | -336.4     | 732.6                 | 0.00                    | 0.00                   | 0.00                  |  |
| 7,800.0                          | 89.26           | 207.33      | 7,251.5             | -739.6     | -382.3     | 832.6                 | 0.00                    | 0.00                   | 0.00                  |  |
| 7,900.0                          | 89.26           | 207.33      | 7,252.8             | -828.5     | -428.2     | 932.6                 | 0.00                    | 0.00                   | 0.00                  |  |
| 8,000.0                          | 89.26           | 207.33      | 7,254.1             | -917.3     | -474.1     | 1,032.6               | 0.00                    | 0.00                   | 0.00                  |  |
| 8,100.0                          | 89.26           | 207.33      | 7,255.4             | -1,006.1   | -520.0     | 1,132.6               | 0.00                    | 0.00                   | 0.00                  |  |
| 8,200.0                          | 89.26           | 207.33      | 7,256.7             | -1,094.9   | -565.9     | 1,232.5               | 0.00                    | 0.00                   | 0.00                  |  |
| 8,300.0                          | 89.26           | 207.33      | 7,258.0             | -1,183.8   | -611.8     | 1,332.5               | 0.00                    | 0.00                   | 0.00                  |  |
| 8,400.0                          | 89.26           | 207.33      | 7,259.3             | -1,272.6   | -657.7     | 1,432.5               | 0.00                    | 0.00                   | 0.00                  |  |
| 8,500.0                          | 89.26           | 207.33      | 7,260.5             | -1,361.4   | -703.6     | 1,532.5               | 0.00                    | 0.00                   | 0.00                  |  |
| 8,600.0                          | 89.26           | 207.33      | 7,261.8             | -1,450.3   | -749.5     | 1,632.5               | 0.00                    | 0.00                   | 0.00                  |  |
| 8,700.0                          | 89.26           | 207.33      | 7,263.1             | -1,539.1   | -795.4     | 1,732.5               | 0.00                    | 0.00                   | 0.00                  |  |
| 8,800.0                          | 89.26           | 207.33      | 7,264.4             | -1,627.9   | -841.3     | 1,832.5               | 0.00                    | 0.00                   | 0.00                  |  |
| 8,900.0                          | 89.26           | 207.33      | 7,265.7             | -1,716.8   | -887.2     | 1,932.5               | 0.00                    | 0.00                   | 0.00                  |  |
| 9,000.0                          | 89.26           | 207.33      | 7,267.0             | -1,805.6   | -933.1     | 2,032.5               | 0.00                    | 0.00                   | 0.00                  |  |
| 9,100.0                          | 89.27           | 207.33      | 7,268.2             | -1,894.4   | -979.0     | 2,132.5               | 0.00                    | 0.00                   | 0.00                  |  |
| 9,200.0                          | 89.27           | 207.33      | 7,269.5             | -1,983.3   | -1,024.9   | 2,232.5               | 0.00                    | 0.00                   | 0.00                  |  |
| 9,300.0                          | 89.27           | 207.33      | 7,270.8             | -2,072.1   | -1,070.8   | 2,332.5               | 0.00                    | 0.00                   | 0.00                  |  |
| 9,400.0                          | 89.27           | 207.33      | 7,272.1             | -2,160.9   | -1,116.7   | 2,432.4               | 0.00                    | 0.00                   | 0.00                  |  |
| 9,500.0                          | 89.27           | 207.33      | 7,273.4             | -2,249.8   | -1,162.6   | 2,532.4               | 0.00                    | 0.00                   | 0.00                  |  |
| 9,600.0                          | 89.27           | 207.32      | 7,274.7             | -2,338.6   | -1,208.5   | 2,632.4               | 0.00                    | 0.00                   | 0.00                  |  |
| 9,700.0                          | 89.27           | 207.32      | 7,275.9             | -2,427.4   | -1,254.4   | 2,732.4               | 0.00                    | 0.00                   | 0.00                  |  |
| 9,800.0                          | 89.27           | 207.32      | 7,277.2             | -2,516.3   | -1,300.3   | 2,832.4               | 0.00                    | 0.00                   | 0.00                  |  |
| 9,900.0                          | 89.27           | 207.32      | 7,278.5             | -2,605.1   | -1,346.2   | 2,932.4               | 0.00                    | 0.00                   | 0.00                  |  |
| 10,000.0                         | 89.27           | 207.32      | 7,279.8             | -2,694.0   | -1,392.1   | 3,032.4               | 0.00                    | 0.00                   | 0.00                  |  |

# Ensign

## Planning Report

|                  |                         |                                     |                   |
|------------------|-------------------------|-------------------------------------|-------------------|
| <b>Database:</b> | US_EDM                  | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Company:</b>  | Colorado Interstate Gas | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Project:</b>  | SEC.8-T2S-R62W          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site:</b>     | TOTEM 25-26-27          | <b>North Reference:</b>             | True              |
| <b>Well:</b>     | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Wellbore:</b> | Totem                   |                                     |                   |
| <b>Design:</b>   | 27 Design #5            |                                     |                   |

| Planned Survey       |                 |             |                     |            |            |                       |                         |                        |                       |  |
|----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (ft)  | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |  |
| 10,100.0             | 89.27           | 207.32      | 7,281.0             | -2,782.8   | -1,438.0   | 3,132.4               | 0.00                    | 0.00                   | 0.00                  |  |
| 10,200.0             | 89.27           | 207.32      | 7,282.3             | -2,871.6   | -1,483.9   | 3,232.4               | 0.00                    | 0.00                   | 0.00                  |  |
| 10,300.0             | 89.27           | 207.32      | 7,283.6             | -2,960.5   | -1,529.8   | 3,332.4               | 0.00                    | 0.00                   | 0.00                  |  |
| 10,400.0             | 89.27           | 207.32      | 7,284.9             | -3,049.3   | -1,575.7   | 3,432.4               | 0.00                    | 0.00                   | 0.00                  |  |
| 10,410.7             | 89.27           | 207.32      | 7,285.0             | -3,058.8   | -1,580.6   | 3,443.1               | 0.00                    | 0.00                   | 0.00                  |  |
| <b>TD at 10410.7</b> |                 |             |                     |            |            |                       |                         |                        |                       |  |

| Design Targets                                      |               |              |          |            |            |                 |                |           |             |  |
|---|---------------|--------------|----------|------------|------------|-----------------|----------------|-----------|-------------|--|
| Target Name   | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude  | Longitude   |  |
| 27 LPL -<br>- hit/miss target<br>- Shape<br>- Point | 0.00          | 0.00         | 7,249.0  | -565.7     | -292.4     | 1,203,743.44    | 3,324,715.45   | 39.886837 | -104.342825 |  |
| 27 BHL -<br>- plan hits target center<br>- Point    | 0.00          | 0.00         | 7,285.0  | -3,058.8   | -1,580.6   | 1,201,233.81    | 3,323,459.93   | 39.879993 | -104.347415 |  |

| Plan Annotations    |                     |                   |            |                                |  |
|---------------------|---------------------|-------------------|------------|--------------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment                        |  |
|                     |                     | +N/-S (ft)        | +E/-W (ft) |                                |  |
| 1,800.0             | 1,800.0             | 0.0               | 0.0        | Start Build 2.00               |  |
| 1,805.0             | 1,805.0             | 0.0               | 0.0        | Start 4808.5 hold at 1805.0 MD |  |
| 6,613.6             | 6,613.5             | -7.5              | -3.9       | KOP - 9/100                    |  |
| 7,604.2             | 7,249.0             | -565.7            | -292.4     | Start DLS 0.00 TFO -35.78      |  |
| 10,410.7            | 7,285.0             | -3,058.8          | -1,580.6   | TD at 10410.7                  |  |

# **Colorado Interstate Gas**

**SEC.8-T2S-R62W**

**TOTEM 25-26-27**

**Totem 27**

**Totem**

**27 Design #5**

## **Anticollision Report**

**03 June, 2025**

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

|                                     |   |                       |                     |
|-------------------------------------|---|-----------------------|---------------------|
| <b>Reference</b>                    | 27 Design #5  |                       |                     |
| <b>Filter type:</b>                 | NO GLOBAL FILTER: Using user defined selection & filtering criteria |                       |                     |
| <b>Interpolation Method:</b>        | MD Interval 100.0ft   | <b>Error Model:</b>   | ISCWSA              |
| <b>Depth Range:</b>                 | Unlimited   | <b>Scan Method:</b>   | Closest Approach 3D |
| <b>Results Limited by:</b>          | Maximum ellipse separation of 1,000.0 ft                            | <b>Error Surface:</b> | Pedal Curve         |
| <b>Warning Levels Evaluated at:</b> | 2.00 Sigma  | <b>Casing Method:</b> | Not applied         |

|                            |                |                          |                  |                    |
|----------------------------|----------------|--------------------------|------------------|--------------------|
| <b>Survey Tool Program</b> | Date           | 06/03/2025               |                  |                    |
| <b>From (ft)</b>           | <b>To (ft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b> |
| 0.0                        | 10,410.7       | 27 Design #5 (Totem)     | MWD              | MWD - Standard     |

| Site Name<br>Offset Well - Wellbore - Design         | Reference<br>Measured<br>Depth<br>(ft) | Offset<br>Measured<br>Depth<br>(ft) | Distance<br>Between<br>Centres<br>(ft) | Distance<br>Between<br>Ellipses<br>(ft) | Separation<br>Factor | Warning      |
|--|--|-------------------------------------|--|---|----------------------|--------------|
| <b>HORIZONTAL PAD TOTEM 14 13 12 SEC.17-T2S-R62W</b> |  |                                     |  |   |                      |              |
| TOTEM 14 - TOTEM - TOTEM 14 Final Surveys            | 10,410.7                               | 7,123.9                             | 524.7                                  | 480.9                                   | 11.985               | CC, ES, SF   |
| <b>TOTEM 25-26-27</b>                                |  |                                     |  |   |                      |              |
| Totem 25 - Totem - 25 Design #4                      | 1,801.2                                | 1,805.0                             | 337.6                                  | 329.7                                   | 42.600               | CC           |
| Totem 25 - Totem - 25 Design #4                      | 6,600.0                                | 6,603.8                             | 340.8                                  | 312.1                                   | 11.852               | ES           |
| Totem 25 - Totem - 25 Design #4                      | 6,700.0                                | 6,694.0                             | 344.5                                  | 315.4                                   | 11.822               | SF           |
| Totem 26 - Totem - 26 Design #4                      | 7,500.0                                | 6,950.0                             | 882.4                                  | 849.7                                   | 27.035               | CC           |
| Totem 26 - Totem - 26 Design #4                      | 7,530.3                                | 6,962.7                             | 882.5                                  | 849.4                                   | 26.661               | ES           |
| Totem 26 - Totem - 26 Design #4                      | 7,900.0                                | 7,050.0                             | 941.5                                  | 903.2                                   | 24.606               | SF           |
| <b>Totem 4 SEC.8-T2S-R62W</b>                        |  |                                     |  |   |                      |              |
| Totem 4 - Totem - 4 Final Surveys                    | 6,666.6                                | 6,657.5                             | 675.5                                  | 648.6                                   | 25.100               | CC, ES       |
| Totem 4 - Totem - 4 Final Surveys                    | 6,800.0                                | 6,732.0                             | 678.6                                  | 651.3                                   | 24.892               | SF           |
| <b>Totem 5 Pad Sec.8-T2S-R62W</b>                    |  |                                     |  |   |                      |              |
| Totem 2 - Totem - 2 VERT                             |  |                                     |  |   |                      | Out of range |
| Totem 5 - Totem - 5 Final Surveys                    | 5,124.9                                | 5,130.5                             | 436.6                                  | 416.3                                   | 21.496               | CC           |
| Totem 5 - Totem - 5 Final Surveys                    | 6,736.1                                | 6,722.3                             | 438.6                                  | 411.4                                   | 16.159               | ES           |
| Totem 5 - Totem - 5 Final Surveys                    | 6,800.0                                | 6,773.1                             | 439.1                                  | 411.7                                   | 16.045               | SF           |
| Totem 6 - Totem - Totem 6                            | 7,326.0                                | 7,204.7                             | 406.1                                  | 374.0                                   | 12.638               | CC, ES       |
| Totem 6 - Totem - Totem 6                            | 7,400.0                                | 7,232.3                             | 411.9                                  | 379.1                                   | 12.545               | SF           |
| Totem 9 - totem - Totem 9                            | 9,075.2                                | 7,311.4                             | 1,488.3                                | 1,427.8                                 | 24.606               | CC           |
| Totem 9 - totem - Totem 9                            | 9,100.0                                | 7,311.7                             | 1,488.5                                | 1,427.6                                 | 24.418               | ES           |
| Totem 9 - totem - Totem 9                            | 9,500.0                                | 7,317.1                             | 1,547.7                                | 1,480.8                                 | 23.112               | SF           |
| <b>TOTEM 7 PAD SEC.8-T2S-R62W</b>                    |  |                                     |  |   |                      |              |
| Totem 2 - Totem - 2 VERT                             |  |                                     |  |   |                      | Out of range |
| TOTEM 7 - Totem - 7 Final Surveys                    | 3,233.7                                | 3,237.2                             | 206.2                                  | 193.9                                   | 16.680               | CC           |
| TOTEM 7 - Totem - 7 Final Surveys                    | 3,400.0                                | 3,402.7                             | 206.6                                  | 193.5                                   | 15.828               | ES           |
| TOTEM 7 - Totem - 7 Final Surveys                    | 9,700.0                                | 9,640.0                             | 338.9                                  | 229.7                                   | 3.105                | SF           |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design            |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.0 ft |        |
|--------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|--------|--------|
| Survey Program: 1149-MWD |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Well Error: |        | 0.0 ft |
| Reference                |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                   | Warning            |        |        |
| Measured Depth (ft)      | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |        |        |
| 8,300.0                  | 7,258.0             | 6,762.0             | 6,758.2             | 30.8            | 13.1        | 27.58                 | -3,196.5                          | -1,972.0   | 2,482.9              | 2,454.0               | 28.88                   | 85.975            |                    |        |        |
| 8,400.0                  | 7,259.3             | 6,762.0             | 6,758.2             | 32.6            | 13.1        | 27.58                 | -3,196.5                          | -1,972.0   | 2,386.1              | 2,357.1               | 28.97                   | 82.351            |                    |        |        |
| 8,500.0                  | 7,260.5             | 6,762.0             | 6,758.2             | 34.4            | 13.1        | 27.58                 | -3,196.5                          | -1,972.0   | 2,289.6              | 2,260.5               | 29.09                   | 78.710            |                    |        |        |
| 8,600.0                  | 7,261.8             | 6,779.1             | 6,774.6             | 36.3            | 13.1        | 28.05                 | -3,201.6                          | -1,971.1   | 2,193.2              | 2,163.9               | 29.27                   | 74.931            |                    |        |        |
| 8,700.0                  | 7,263.1             | 6,793.0             | 6,787.7             | 38.1            | 13.1        | 28.42                 | -3,206.0                          | -1,970.4   | 2,097.2              | 2,067.7               | 29.46                   | 71.185            |                    |        |        |
| 8,800.0                  | 7,264.4             | 6,793.0             | 6,787.7             | 40.0            | 13.1        | 28.43                 | -3,206.0                          | -1,970.4   | 2,001.3              | 1,971.7               | 29.65                   | 67.505            |                    |        |        |
| 8,900.0                  | 7,265.7             | 6,804.4             | 6,798.5             | 41.9            | 13.2        | 28.73                 | -3,209.8                          | -1,969.8   | 1,905.8              | 1,875.9               | 29.89                   | 63.762            |                    |        |        |
| 9,000.0                  | 7,267.0             | 6,824.0             | 6,816.7             | 43.8            | 13.2        | 29.24                 | -3,216.8                          | -1,968.5   | 1,810.7              | 1,780.5               | 30.18                   | 60.004            |                    |        |        |
| 9,100.0                  | 7,268.2             | 6,824.0             | 6,816.7             | 45.8            | 13.2        | 29.24                 | -3,216.8                          | -1,968.5   | 1,715.8              | 1,685.4               | 30.48                   | 56.293            |                    |        |        |
| 9,200.0                  | 7,269.5             | 6,837.9             | 6,829.5             | 47.7            | 13.3        | 29.60                 | -3,222.1                          | -1,967.6   | 1,621.4              | 1,590.6               | 30.85                   | 52.560            |                    |        |        |
| 9,300.0                  | 7,270.8             | 6,855.0             | 6,845.2             | 49.7            | 13.3        | 30.05                 | -3,228.9                          | -1,966.5   | 1,527.5              | 1,496.2               | 31.27                   | 48.848            |                    |        |        |
| 9,400.0                  | 7,272.1             | 6,870.8             | 6,859.5             | 51.6            | 13.4        | 30.47                 | -3,235.3                          | -1,965.4   | 1,433.9              | 1,402.2               | 31.75                   | 45.158            |                    |        |        |
| 9,500.0                  | 7,273.4             | 6,894.6             | 6,881.0             | 53.6            | 13.4        | 31.12                 | -3,245.4                          | -1,963.7   | 1,340.8              | 1,308.5               | 32.30                   | 41.514            |                    |        |        |
| 9,600.0                  | 7,274.7             | 6,917.0             | 6,901.1             | 55.6            | 13.5        | 31.74                 | -3,255.1                          | -1,961.9   | 1,248.0              | 1,215.0               | 32.92                   | 37.912            |                    |        |        |
| 9,700.0                  | 7,275.9             | 6,938.8             | 6,920.5             | 57.6            | 13.6        | 32.37                 | -3,265.0                          | -1,960.1   | 1,155.7              | 1,122.0               | 33.63                   | 34.359            |                    |        |        |
| 9,800.0                  | 7,277.2             | 6,963.6             | 6,942.2             | 59.5            | 13.7        | 33.07                 | -3,276.7                          | -1,957.8   | 1,064.0              | 1,029.5               | 34.44                   | 30.891            |                    |        |        |
| 9,900.0                  | 7,278.5             | 6,989.4             | 6,964.5             | 61.5            | 13.8        | 33.79                 | -3,289.5                          | -1,955.1   | 972.8                | 937.4                 | 35.36                   | 27.509            |                    |        |        |
| 10,000.0                 | 7,279.8             | 7,011.0             | 6,982.8             | 63.5            | 13.9        | 34.40                 | -3,300.7                          | -1,952.7   | 882.4                | 846.0                 | 36.50                   | 24.179            |                    |        |        |
| 10,100.0                 | 7,281.0             | 7,042.0             | 7,008.6             | 65.6            | 14.0        | 35.28                 | -3,317.5                          | -1,949.2   | 793.0                | 755.3                 | 37.70                   | 21.036            |                    |        |        |
| 10,200.0                 | 7,282.3             | 7,065.1             | 7,027.4             | 67.6            | 14.1        | 35.96                 | -3,330.6                          | -1,946.6   | 704.8                | 665.5                 | 39.30                   | 17.933            |                    |        |        |
| 10,300.0                 | 7,283.6             | 7,091.8             | 7,048.7             | 69.6            | 14.3        | 36.76                 | -3,346.5                          | -1,943.9   | 618.2                | 577.0                 | 41.20                   | 15.004            |                    |        |        |
| 10,400.0                 | 7,284.9             | 7,120.7             | 7,070.9             | 71.6            | 14.4        | 37.61                 | -3,364.8                          | -1,941.0   | 533.6                | 490.1                 | 43.51                   | 12.264            |                    |        |        |
| 10,410.7                 | 7,285.0             | 7,123.9             | 7,073.3             | 71.8            | 14.5        | 37.70                 | -3,366.9                          | -1,940.6   | 524.7                | 480.9                 | 43.78                   | 11.985            | CC, ES, SF         |        |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design         |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | TOTEM 25-26-27 - Totem 25 - Totem - 25 Design #4 |  | Offset Site Error: | 0.0 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--|--|--------------------|--------|
| Survey Program: 0-MWD |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   |  |  | Offset Well Error: | 0.0 ft |
| Reference             |                     | Offset              |                     | Semi Major Axis |             |                      | Distance                          |            |                      |                       |                         |                   | Warning  |  |                    |        |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Tooface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |  |  |                    |        |
| 0.0                   | 0.0                 | 3.8                 | 3.8                 | 0.0             | 0.0         | -40.29               | 257.5                             | -218.3     | 337.6                |                       |                         |                   |  |  |                    |        |
| 100.0                 | 100.0               | 103.8               | 103.8               | 0.2             | 0.1         | -40.29               | 257.5                             | -218.3     | 337.6                | 337.4                 | 0.28                    | 1,213.325         |  |  |                    |        |
| 200.0                 | 200.0               | 203.8               | 203.8               | 0.4             | 0.3         | -40.29               | 257.5                             | -218.3     | 337.6                | 336.9                 | 0.73                    | 463.902           |  |  |                    |        |
| 300.0                 | 300.0               | 303.8               | 303.8               | 0.6             | 0.5         | -40.29               | 257.5                             | -218.3     | 337.6                | 336.4                 | 1.18                    | 286.773           |  |  |                    |        |
| 400.0                 | 400.0               | 403.8               | 403.8               | 0.9             | 0.8         | -40.29               | 257.5                             | -218.3     | 337.6                | 336.0                 | 1.63                    | 207.532           |  |  |                    |        |
| 500.0                 | 500.0               | 503.8               | 503.8               | 1.1             | 1.0         | -40.29               | 257.5                             | -218.3     | 337.6                | 335.5                 | 2.08                    | 162.602           |  |  |                    |        |
| 600.0                 | 600.0               | 603.8               | 603.8               | 1.3             | 1.2         | -40.29               | 257.5                             | -218.3     | 337.6                | 335.1                 | 2.53                    | 133.663           |  |  |                    |        |
| 700.0                 | 700.0               | 703.8               | 703.8               | 1.5             | 1.4         | -40.29               | 257.5                             | -218.3     | 337.6                | 334.6                 | 2.98                    | 113.469           |  |  |                    |        |
| 800.0                 | 800.0               | 803.8               | 803.8               | 1.8             | 1.7         | -40.29               | 257.5                             | -218.3     | 337.6                | 334.2                 | 3.42                    | 98.576            |  |  |                    |        |
| 900.0                 | 900.0               | 903.8               | 903.8               | 2.0             | 1.9         | -40.29               | 257.5                             | -218.3     | 337.6                | 333.7                 | 3.87                    | 87.139            |  |  |                    |        |
| 1,000.0               | 1,000.0             | 1,003.8             | 1,003.8             | 2.2             | 2.1         | -40.29               | 257.5                             | -218.3     | 337.6                | 333.3                 | 4.32                    | 78.080            |  |  |                    |        |
| 1,100.0               | 1,100.0             | 1,103.8             | 1,103.8             | 2.4             | 2.3         | -40.29               | 257.5                             | -218.3     | 337.6                | 332.8                 | 4.77                    | 70.727            |  |  |                    |        |
| 1,200.0               | 1,200.0             | 1,203.8             | 1,203.8             | 2.7             | 2.6         | -40.29               | 257.5                             | -218.3     | 337.6                | 332.4                 | 5.22                    | 64.639            |  |  |                    |        |
| 1,300.0               | 1,300.0             | 1,303.8             | 1,303.8             | 2.9             | 2.8         | -40.29               | 257.5                             | -218.3     | 337.6                | 331.9                 | 5.67                    | 59.517            |  |  |                    |        |
| 1,400.0               | 1,400.0             | 1,403.8             | 1,403.8             | 3.1             | 3.0         | -40.29               | 257.5                             | -218.3     | 337.6                | 331.5                 | 6.12                    | 55.147            |  |  |                    |        |
| 1,500.0               | 1,500.0             | 1,503.8             | 1,503.8             | 3.3             | 3.2         | -40.29               | 257.5                             | -218.3     | 337.6                | 331.0                 | 6.57                    | 51.374            |  |  |                    |        |
| 1,600.0               | 1,600.0             | 1,603.8             | 1,603.8             | 3.6             | 3.5         | -40.29               | 257.5                             | -218.3     | 337.6                | 330.6                 | 7.02                    | 48.085            |  |  |                    |        |
| 1,700.0               | 1,700.0             | 1,703.8             | 1,703.8             | 3.8             | 3.7         | -40.29               | 257.5                             | -218.3     | 337.6                | 330.1                 | 7.47                    | 45.191            |  |  |                    |        |
| 1,800.0               | 1,800.0             | 1,803.8             | 1,803.8             | 4.0             | 3.9         | -40.29               | 257.5                             | -218.3     | 337.6                | 329.7                 | 7.92                    | 42.626            |  |  |                    |        |
| 1,801.2               | 1,801.2             | 1,805.0             | 1,805.0             | 4.0             | 3.9         | -40.29               | 257.5                             | -218.3     | 337.6                | 329.7                 | 7.93                    | 42.600 CC         |  |  |                    |        |
| 1,900.0               | 1,900.0             | 1,903.8             | 1,903.8             | 4.2             | 4.1         | 112.13               | 257.5                             | -218.3     | 337.7                | 329.4                 | 8.32                    | 40.597            |  |  |                    |        |
| 2,000.0               | 2,000.0             | 2,003.8             | 2,003.8             | 4.3             | 4.4         | 112.16               | 257.5                             | -218.3     | 337.7                | 329.0                 | 8.72                    | 38.737            |  |  |                    |        |
| 2,100.0               | 2,100.0             | 2,103.8             | 2,103.8             | 4.5             | 4.6         | 112.19               | 257.5                             | -218.3     | 337.8                | 328.7                 | 9.12                    | 37.023            |  |  |                    |        |
| 2,200.0               | 2,200.0             | 2,203.8             | 2,203.8             | 4.7             | 4.8         | 112.22               | 257.5                             | -218.3     | 337.9                | 328.3                 | 9.53                    | 35.441            |  |  |                    |        |
| 2,300.0               | 2,300.0             | 2,303.8             | 2,303.8             | 4.9             | 5.0         | 112.24               | 257.5                             | -218.3     | 337.9                | 328.0                 | 9.95                    | 33.978            |  |  |                    |        |
| 2,400.0               | 2,400.0             | 2,403.8             | 2,403.8             | 5.1             | 5.3         | 112.27               | 257.5                             | -218.3     | 338.0                | 327.6                 | 10.36                   | 32.621            |  |  |                    |        |
| 2,500.0               | 2,500.0             | 2,503.8             | 2,503.8             | 5.3             | 5.5         | 112.30               | 257.5                             | -218.3     | 338.1                | 327.3                 | 10.78                   | 31.362            |  |  |                    |        |
| 2,600.0               | 2,600.0             | 2,603.8             | 2,603.8             | 5.5             | 5.7         | 112.33               | 257.5                             | -218.3     | 338.1                | 326.9                 | 11.20                   | 30.190            |  |  |                    |        |
| 2,700.0               | 2,700.0             | 2,703.8             | 2,703.8             | 5.7             | 5.9         | 112.35               | 257.5                             | -218.3     | 338.2                | 326.6                 | 11.62                   | 29.097            |  |  |                    |        |
| 2,800.0               | 2,800.0             | 2,803.8             | 2,803.8             | 5.9             | 6.2         | 112.38               | 257.5                             | -218.3     | 338.3                | 326.2                 | 12.05                   | 28.077            |  |  |                    |        |
| 2,900.0               | 2,900.0             | 2,903.8             | 2,903.8             | 6.1             | 6.4         | 112.41               | 257.5                             | -218.3     | 338.3                | 325.9                 | 12.47                   | 27.123            |  |  |                    |        |
| 3,000.0               | 3,000.0             | 3,003.8             | 3,003.8             | 6.3             | 6.6         | 112.44               | 257.5                             | -218.3     | 338.4                | 325.5                 | 12.90                   | 26.228            |  |  |                    |        |
| 3,100.0               | 3,100.0             | 3,103.8             | 3,103.8             | 6.5             | 6.8         | 112.46               | 257.5                             | -218.3     | 338.5                | 325.1                 | 13.33                   | 25.388            |  |  |                    |        |
| 3,200.0               | 3,200.0             | 3,203.8             | 3,203.8             | 6.7             | 7.1         | 112.49               | 257.5                             | -218.3     | 338.5                | 324.8                 | 13.76                   | 24.598            |  |  |                    |        |
| 3,300.0               | 3,300.0             | 3,303.8             | 3,303.8             | 6.9             | 7.3         | 112.52               | 257.5                             | -218.3     | 338.6                | 324.4                 | 14.19                   | 23.854            |  |  |                    |        |
| 3,400.0               | 3,400.0             | 3,403.8             | 3,403.8             | 7.1             | 7.5         | 112.54               | 257.5                             | -218.3     | 338.7                | 324.0                 | 14.63                   | 23.153            |  |  |                    |        |
| 3,500.0               | 3,500.0             | 3,503.8             | 3,503.8             | 7.3             | 7.7         | 112.57               | 257.5                             | -218.3     | 338.7                | 323.7                 | 15.06                   | 22.490            |  |  |                    |        |
| 3,600.0               | 3,600.0             | 3,603.8             | 3,603.8             | 7.5             | 8.0         | 112.60               | 257.5                             | -218.3     | 338.8                | 323.3                 | 15.50                   | 21.863            |  |  |                    |        |
| 3,700.0               | 3,700.0             | 3,703.8             | 3,703.8             | 7.7             | 8.2         | 112.63               | 257.5                             | -218.3     | 338.9                | 322.9                 | 15.93                   | 21.269            |  |  |                    |        |
| 3,800.0               | 3,800.0             | 3,803.8             | 3,803.8             | 8.0             | 8.4         | 112.65               | 257.5                             | -218.3     | 338.9                | 322.6                 | 16.37                   | 20.706            |  |  |                    |        |
| 3,900.0               | 3,900.0             | 3,903.8             | 3,903.8             | 8.2             | 8.6         | 112.68               | 257.5                             | -218.3     | 339.0                | 322.2                 | 16.81                   | 20.172            |  |  |                    |        |
| 4,000.0               | 4,000.0             | 4,003.8             | 4,003.8             | 8.4             | 8.9         | 112.71               | 257.5                             | -218.3     | 339.1                | 321.8                 | 17.24                   | 19.663            |  |  |                    |        |
| 4,100.0               | 4,100.0             | 4,103.8             | 4,103.8             | 8.6             | 9.1         | 112.73               | 257.5                             | -218.3     | 339.1                | 321.4                 | 17.68                   | 19.180            |  |  |                    |        |
| 4,200.0               | 4,200.0             | 4,203.8             | 4,203.8             | 8.8             | 9.3         | 112.76               | 257.5                             | -218.3     | 339.2                | 321.1                 | 18.12                   | 18.719            |  |  |                    |        |
| 4,300.0               | 4,300.0             | 4,303.8             | 4,303.8             | 9.0             | 9.5         | 112.79               | 257.5                             | -218.3     | 339.3                | 320.7                 | 18.56                   | 18.279            |  |  |                    |        |
| 4,400.0               | 4,400.0             | 4,403.8             | 4,403.8             | 9.2             | 9.8         | 112.82               | 257.5                             | -218.3     | 339.3                | 320.3                 | 19.00                   | 17.859            |  |  |                    |        |
| 4,500.0               | 4,500.0             | 4,503.8             | 4,503.8             | 9.5             | 10.0        | 112.84               | 257.5                             | -218.3     | 339.4                | 320.0                 | 19.44                   | 17.458            |  |  |                    |        |
| 4,600.0               | 4,600.0             | 4,603.8             | 4,603.8             | 9.7             | 10.2        | 112.87               | 257.5                             | -218.3     | 339.5                | 319.6                 | 19.88                   | 17.074            |  |  |                    |        |
| 4,700.0               | 4,700.0             | 4,703.8             | 4,703.8             | 9.9             | 10.4        | 112.90               | 257.5                             | -218.3     | 339.5                | 319.2                 | 20.32                   | 16.707            |  |  |                    |        |
| 4,800.0               | 4,800.0             | 4,803.8             | 4,803.8             | 10.1            | 10.7        | 112.92               | 257.5                             | -218.3     | 339.6                | 318.8                 | 20.76                   | 16.355            |  |  |                    |        |
| 4,900.0               | 4,900.0             | 4,903.8             | 4,903.8             | 10.3            | 10.9        | 112.95               | 257.5                             | -218.3     | 339.7                | 318.5                 | 21.21                   | 16.017            |  |  |                    |        |
| 5,000.0               | 5,000.0             | 5,003.8             | 5,003.8             | 10.5            | 11.1        | 112.98               | 257.5                             | -218.3     | 339.7                | 318.1                 | 21.65                   | 15.693            |  |  |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design         |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Site Error:                               | 0.0 ft |                    |        |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--|--------|--------------------|--------|
| Survey Program: 0-MWD |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | TOTEM 25-26-27 - Totem 25 - Totem - 25 Design #4 |        | Offset Well Error: | 0.0 ft |
| Reference             |                     | Offset              |                     | Semi Major Axis |             |                      | Distance                          |            |                      |                       |                         |                   | Warning  |        |                    |        |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Tooface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |  |        |                    |        |
| 5,100.0               | 5,100.0             | 5,103.8             | 5,103.8             | 10.8            | 11.3        | 113.01               | 257.5                             | -218.3     | 339.8                | 317.7                 | 22.09                   | 15.382            |  |        |                    |        |
| 5,200.0               | 5,200.0             | 5,203.8             | 5,203.8             | 11.0            | 11.6        | 113.03               | 257.5                             | -218.3     | 339.9                | 317.3                 | 22.53                   | 15.082            |  |        |                    |        |
| 5,300.0               | 5,300.0             | 5,303.8             | 5,303.8             | 11.2            | 11.8        | 113.06               | 257.5                             | -218.3     | 339.9                | 317.0                 | 22.98                   | 14.794            |  |        |                    |        |
| 5,400.0               | 5,400.0             | 5,403.8             | 5,403.8             | 11.4            | 12.0        | 113.09               | 257.5                             | -218.3     | 340.0                | 316.6                 | 23.42                   | 14.517            |  |        |                    |        |
| 5,500.0               | 5,500.0             | 5,503.8             | 5,503.8             | 11.6            | 12.2        | 113.11               | 257.5                             | -218.3     | 340.1                | 316.2                 | 23.86                   | 14.250            |  |        |                    |        |
| 5,600.0               | 5,600.0             | 5,603.8             | 5,603.8             | 11.8            | 12.5        | 113.14               | 257.5                             | -218.3     | 340.1                | 315.8                 | 24.31                   | 13.993            |  |        |                    |        |
| 5,700.0               | 5,700.0             | 5,703.8             | 5,703.8             | 12.1            | 12.7        | 113.17               | 257.5                             | -218.3     | 340.2                | 315.5                 | 24.75                   | 13.745            |  |        |                    |        |
| 5,800.0               | 5,800.0             | 5,803.8             | 5,803.8             | 12.3            | 12.9        | 113.19               | 257.5                             | -218.3     | 340.3                | 315.1                 | 25.20                   | 13.505            |  |        |                    |        |
| 5,900.0               | 5,900.0             | 5,903.8             | 5,903.8             | 12.5            | 13.1        | 113.22               | 257.5                             | -218.3     | 340.3                | 314.7                 | 25.64                   | 13.273            |  |        |                    |        |
| 6,000.0               | 6,000.0             | 6,003.8             | 6,003.8             | 12.7            | 13.4        | 113.25               | 257.5                             | -218.3     | 340.4                | 314.3                 | 26.09                   | 13.050            |  |        |                    |        |
| 6,100.0               | 6,100.0             | 6,103.8             | 6,103.8             | 12.9            | 13.6        | 113.28               | 257.5                             | -218.3     | 340.5                | 313.9                 | 26.53                   | 12.834            |  |        |                    |        |
| 6,200.0               | 6,200.0             | 6,203.8             | 6,203.8             | 13.2            | 13.8        | 113.30               | 257.5                             | -218.3     | 340.5                | 313.6                 | 26.98                   | 12.624            |  |        |                    |        |
| 6,300.0               | 6,300.0             | 6,303.8             | 6,303.8             | 13.4            | 14.0        | 113.33               | 257.5                             | -218.3     | 340.6                | 313.2                 | 27.42                   | 12.422            |  |        |                    |        |
| 6,400.0               | 6,400.0             | 6,403.8             | 6,403.8             | 13.6            | 14.3        | 113.36               | 257.5                             | -218.3     | 340.7                | 312.8                 | 27.87                   | 12.226            |  |        |                    |        |
| 6,500.0               | 6,500.0             | 6,503.8             | 6,503.8             | 13.8            | 14.5        | 113.38               | 257.5                             | -218.3     | 340.8                | 312.4                 | 28.31                   | 12.036            |  |        |                    |        |
| 6,600.0               | 6,600.0             | 6,603.8             | 6,603.8             | 14.0            | 14.7        | 113.41               | 257.5                             | -218.3     | 340.8                | 312.1                 | 28.76                   | 11.852 ES         |  |        |                    |        |
| 6,700.0               | 6,699.7             | 6,694.0             | 6,693.8             | 14.3            | 14.9        | 115.02               | 261.4                             | -215.1     | 344.5                | 315.4                 | 29.14                   | 11.822 SF         |  |        |                    |        |
| 6,800.0               | 6,797.3             | 6,773.8             | 6,772.1             | 14.5            | 15.0        | 118.57               | 272.9                             | -205.4     | 359.7                | 330.3                 | 29.45                   | 12.213            |  |        |                    |        |
| 6,900.0               | 6,890.3             | 6,837.4             | 6,832.8             | 14.8            | 15.2        | 121.78               | 287.4                             | -193.3     | 391.1                | 361.5                 | 29.61                   | 13.212            |  |        |                    |        |
| 7,000.0               | 6,976.5             | 6,883.0             | 6,875.0             | 15.1            | 15.3        | 122.49               | 300.6                             | -182.2     | 441.3                | 411.8                 | 29.56                   | 14.928            |  |        |                    |        |
| 7,100.0               | 7,053.7             | 6,912.1             | 6,901.3             | 15.5            | 15.3        | 119.33               | 310.3                             | -174.2     | 508.4                | 479.0                 | 29.40                   | 17.293            |  |        |                    |        |
| 7,200.0               | 7,120.1             | 6,927.6             | 6,915.0             | 16.1            | 15.4        | 110.96               | 315.8                             | -169.6     | 588.1                | 558.8                 | 29.24                   | 20.114            |  |        |                    |        |
| 7,300.0               | 7,173.9             | 6,932.2             | 6,919.1             | 16.8            | 15.4        | 96.00                | 317.5                             | -168.2     | 675.5                | 646.3                 | 29.14                   | 23.177            |  |        |                    |        |
| 7,400.0               | 7,213.9             | 6,928.4             | 6,915.7             | 17.8            | 15.4        | 75.59                | 316.0                             | -169.4     | 766.5                | 737.4                 | 29.15                   | 26.300            |  |        |                    |        |
| 7,500.0               | 7,239.1             | 6,917.8             | 6,906.4             | 18.8            | 15.3        | 55.63                | 312.3                             | -172.5     | 858.0                | 828.8                 | 29.23                   | 29.349            |  |        |                    |        |
| 7,600.0               | 7,248.9             | 6,900.0             | 6,890.4             | 20.1            | 15.3        | 40.75                | 306.1                             | -177.6     | 947.4                | 918.0                 | 29.37                   | 32.254            |  |        |                    |        |
| 7,700.0               | 7,250.2             | 6,885.0             | 6,876.9             | 21.4            | 15.3        | 39.36                | 301.3                             | -181.7     | 1,035.7              | 1,006.1               | 29.59                   | 34.995            |  |        |                    |        |
| 7,800.0               | 7,251.5             | 6,869.8             | 6,862.9             | 22.8            | 15.2        | 38.43                | 296.6                             | -185.6     | 1,125.3              | 1,095.5               | 29.78                   | 37.785            |  |        |                    |        |
| 7,900.0               | 7,252.8             | 6,850.0             | 6,844.6             | 24.2            | 15.2        | 37.27                | 290.8                             | -190.4     | 1,216.2              | 1,186.3               | 29.91                   | 40.665            |  |        |                    |        |
| 8,000.0               | 7,254.1             | 6,850.0             | 6,844.6             | 25.8            | 15.2        | 37.27                | 290.8                             | -190.4     | 1,308.0              | 1,277.8               | 30.15                   | 43.380            |  |        |                    |        |
| 8,100.0               | 7,255.4             | 6,832.7             | 6,828.4             | 27.4            | 15.1        | 36.28                | 286.2                             | -194.3     | 1,400.6              | 1,370.3               | 30.25                   | 46.293            |  |        |                    |        |
| 8,200.0               | 7,256.7             | 6,822.7             | 6,818.9             | 29.1            | 15.1        | 35.73                | 283.6                             | -196.5     | 1,494.0              | 1,463.6               | 30.39                   | 49.166            |  |        |                    |        |
| 8,300.0               | 7,258.0             | 6,800.0             | 6,797.3             | 30.8            | 15.1        | 34.51                | 278.3                             | -200.9     | 1,588.2              | 1,557.7               | 30.44                   | 52.180            |  |        |                    |        |
| 8,400.0               | 7,259.3             | 6,800.0             | 6,797.3             | 32.6            | 15.1        | 34.51                | 278.3                             | -200.9     | 1,682.5              | 1,651.9               | 30.59                   | 54.999            |  |        |                    |        |
| 8,500.0               | 7,260.5             | 6,800.0             | 6,797.3             | 34.4            | 15.1        | 34.51                | 278.3                             | -200.9     | 1,777.5              | 1,746.8               | 30.73                   | 57.845            |  |        |                    |        |
| 8,600.0               | 7,261.8             | 6,800.0             | 6,797.3             | 36.3            | 15.1        | 34.51                | 278.3                             | -200.9     | 1,873.0              | 1,842.2               | 30.85                   | 60.713            |  |        |                    |        |
| 8,700.0               | 7,263.1             | 6,800.0             | 6,797.3             | 38.1            | 15.1        | 34.51                | 278.3                             | -200.9     | 1,969.0              | 1,938.0               | 30.96                   | 63.599            |  |        |                    |        |
| 8,800.0               | 7,264.4             | 6,777.6             | 6,775.7             | 40.0            | 15.0        | 33.36                | 273.6                             | -204.8     | 2,064.9              | 2,033.9               | 30.98                   | 66.651            |  |        |                    |        |
| 8,900.0               | 7,265.7             | 6,771.9             | 6,770.3             | 41.9            | 15.0        | 33.08                | 272.5                             | -205.7     | 2,161.3              | 2,130.2               | 31.06                   | 69.592            |  |        |                    |        |
| 9,000.0               | 7,267.0             | 6,750.0             | 6,749.0             | 43.8            | 15.0        | 32.02                | 268.7                             | -209.0     | 2,258.2              | 2,227.1               | 31.08                   | 72.668            |  |        |                    |        |
| 9,100.0               | 7,268.2             | 6,750.0             | 6,749.0             | 45.8            | 15.0        | 32.02                | 268.7                             | -209.0     | 2,354.9              | 2,323.8               | 31.16                   | 75.574            |  |        |                    |        |
| 9,200.0               | 7,269.5             | 6,750.0             | 6,749.0             | 47.7            | 15.0        | 32.02                | 268.7                             | -209.0     | 2,452.0              | 2,420.7               | 31.24                   | 78.488            |  |        |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design         |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.0 ft |        |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|--------|--------|
| Survey Program: 0-MWD |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Well Error: |        | 0.0 ft |
| Reference             |                     | Offset              |                     | Semi Major Axis |             |                      | Distance                          |            |                      |                       |                         |                   | Warning            |        |        |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Tooface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |        |        |
| 0.0                   | 0.0                 | 12.3                | 12.3                | 0.0             | 0.0         | -97.05               | -113.6                            | -918.8     | 925.8                |                       |                         |                   |                    |        |        |
| 100.0                 | 100.0               | 112.3               | 112.3               | 0.2             | 0.1         | -97.06               | -113.7                            | -919.0     | 926.0                | 925.7                 | 0.30                    | 3,112.176         |                    |        |        |
| 200.0                 | 200.0               | 212.3               | 212.3               | 0.4             | 0.3         | -97.06               | -113.8                            | -919.2     | 926.3                | 925.5                 | 0.75                    | 1,239.893         |                    |        |        |
| 300.0                 | 300.0               | 312.3               | 312.3               | 0.6             | 0.6         | -97.06               | -113.9                            | -919.5     | 926.5                | 925.3                 | 1.20                    | 774.276           |                    |        |        |
| 400.0                 | 400.0               | 412.3               | 412.3               | 0.9             | 0.8         | -97.07               | -114.0                            | -919.7     | 926.8                | 925.1                 | 1.65                    | 562.972           |                    |        |        |
| 500.0                 | 500.0               | 512.3               | 512.3               | 1.1             | 1.0         | -97.07               | -114.1                            | -920.0     | 927.0                | 924.9                 | 2.10                    | 442.323           |                    |        |        |
| 600.0                 | 600.0               | 612.3               | 612.3               | 1.3             | 1.2         | -97.07               | -114.2                            | -920.2     | 927.3                | 924.7                 | 2.55                    | 364.294           |                    |        |        |
| 700.0                 | 700.0               | 712.3               | 712.3               | 1.5             | 1.5         | -97.08               | -114.3                            | -920.4     | 927.5                | 924.5                 | 2.99                    | 309.691           |                    |        |        |
| 800.0                 | 800.0               | 812.3               | 812.3               | 1.8             | 1.7         | -97.08               | -114.4                            | -920.7     | 927.7                | 924.3                 | 3.44                    | 269.341           |                    |        |        |
| 900.0                 | 900.0               | 912.3               | 912.3               | 2.0             | 1.9         | -97.09               | -114.5                            | -920.9     | 928.0                | 924.1                 | 3.89                    | 238.308           |                    |        |        |
| 1,000.0               | 1,000.0             | 1,012.3             | 1,012.3             | 2.2             | 2.1         | -97.09               | -114.6                            | -921.1     | 928.2                | 923.9                 | 4.34                    | 213.700           |                    |        |        |
| 1,100.0               | 1,100.0             | 1,112.3             | 1,112.3             | 2.4             | 2.4         | -97.09               | -114.7                            | -921.4     | 928.5                | 923.7                 | 4.79                    | 193.707           |                    |        |        |
| 1,200.0               | 1,200.0             | 1,212.3             | 1,212.3             | 2.7             | 2.6         | -97.10               | -114.7                            | -921.6     | 928.7                | 923.5                 | 5.24                    | 177.144           |                    |        |        |
| 1,300.0               | 1,300.0             | 1,312.3             | 1,312.3             | 2.9             | 2.8         | -97.10               | -114.8                            | -921.9     | 929.0                | 923.3                 | 5.69                    | 163.196           |                    |        |        |
| 1,400.0               | 1,400.0             | 1,412.3             | 1,412.3             | 3.1             | 3.0         | -97.10               | -114.9                            | -922.1     | 929.2                | 923.1                 | 6.14                    | 151.291           |                    |        |        |
| 1,500.0               | 1,500.0             | 1,512.3             | 1,512.3             | 3.3             | 3.3         | -97.11               | -115.0                            | -922.3     | 929.5                | 922.9                 | 6.59                    | 141.009           |                    |        |        |
| 1,600.0               | 1,600.0             | 1,612.3             | 1,612.3             | 3.6             | 3.5         | -97.11               | -115.1                            | -922.6     | 929.7                | 922.7                 | 7.04                    | 132.041           |                    |        |        |
| 1,700.0               | 1,700.0             | 1,712.3             | 1,712.3             | 3.8             | 3.7         | -97.12               | -115.2                            | -922.8     | 930.0                | 922.5                 | 7.49                    | 124.149           |                    |        |        |
| 1,800.0               | 1,800.0             | 1,812.3             | 1,812.3             | 4.0             | 3.9         | -97.12               | -115.3                            | -923.0     | 930.2                | 922.3                 | 7.94                    | 117.151           |                    |        |        |
| 1,900.0               | 1,900.0             | 1,912.3             | 1,912.3             | 4.2             | 4.2         | 55.28                | -115.4                            | -923.3     | 930.4                | 922.0                 | 8.34                    | 111.583           |                    |        |        |
| 2,000.0               | 2,000.0             | 2,012.3             | 2,012.3             | 4.3             | 4.4         | 55.29                | -115.5                            | -923.5     | 930.5                | 921.8                 | 8.74                    | 106.479           |                    |        |        |
| 2,100.0               | 2,100.0             | 2,112.3             | 2,112.3             | 4.5             | 4.6         | 55.29                | -115.6                            | -923.7     | 930.7                | 921.5                 | 9.14                    | 101.775           |                    |        |        |
| 2,200.0               | 2,200.0             | 2,212.3             | 2,212.3             | 4.7             | 4.8         | 55.30                | -115.7                            | -924.0     | 930.8                | 921.2                 | 9.55                    | 97.431            |                    |        |        |
| 2,300.0               | 2,300.0             | 2,312.3             | 2,312.3             | 4.9             | 5.1         | 55.30                | -115.8                            | -924.2     | 930.9                | 921.0                 | 9.97                    | 93.413            |                    |        |        |
| 2,400.0               | 2,400.0             | 2,412.3             | 2,412.3             | 5.1             | 5.3         | 55.31                | -115.8                            | -924.5     | 931.1                | 920.7                 | 10.38                   | 89.688            |                    |        |        |
| 2,500.0               | 2,500.0             | 2,512.3             | 2,512.3             | 5.3             | 5.5         | 55.31                | -115.9                            | -924.7     | 931.2                | 920.4                 | 10.80                   | 86.228            |                    |        |        |
| 2,600.0               | 2,600.0             | 2,612.3             | 2,612.3             | 5.5             | 5.7         | 55.32                | -116.0                            | -924.9     | 931.4                | 920.2                 | 11.22                   | 83.009            |                    |        |        |
| 2,700.0               | 2,700.0             | 2,712.3             | 2,712.3             | 5.7             | 6.0         | 55.32                | -116.1                            | -925.2     | 931.5                | 919.9                 | 11.64                   | 80.007            |                    |        |        |
| 2,800.0               | 2,800.0             | 2,812.3             | 2,812.3             | 5.9             | 6.2         | 55.33                | -116.2                            | -925.4     | 931.7                | 919.6                 | 12.07                   | 77.203            |                    |        |        |
| 2,900.0               | 2,900.0             | 2,912.3             | 2,912.3             | 6.1             | 6.4         | 55.33                | -116.3                            | -925.6     | 931.8                | 919.3                 | 12.49                   | 74.580            |                    |        |        |
| 3,000.0               | 3,000.0             | 3,012.3             | 3,012.3             | 6.3             | 6.6         | 55.34                | -116.4                            | -925.9     | 932.0                | 919.1                 | 12.92                   | 72.121            |                    |        |        |
| 3,100.0               | 3,100.0             | 3,112.3             | 3,112.3             | 6.5             | 6.9         | 55.34                | -116.5                            | -926.1     | 932.1                | 918.8                 | 13.35                   | 69.812            |                    |        |        |
| 3,200.0               | 3,200.0             | 3,212.3             | 3,212.3             | 6.7             | 7.1         | 55.35                | -116.6                            | -926.4     | 932.3                | 918.5                 | 13.78                   | 67.641            |                    |        |        |
| 3,300.0               | 3,300.0             | 3,312.3             | 3,312.3             | 6.9             | 7.3         | 55.35                | -116.7                            | -926.6     | 932.4                | 918.2                 | 14.21                   | 65.596            |                    |        |        |
| 3,400.0               | 3,400.0             | 3,412.3             | 3,412.3             | 7.1             | 7.5         | 55.36                | -116.8                            | -926.8     | 932.6                | 917.9                 | 14.65                   | 63.667            |                    |        |        |
| 3,500.0               | 3,500.0             | 3,512.3             | 3,512.3             | 7.3             | 7.8         | 55.36                | -116.9                            | -927.1     | 932.7                | 917.6                 | 15.08                   | 61.844            |                    |        |        |
| 3,600.0               | 3,600.0             | 3,612.3             | 3,612.3             | 7.5             | 8.0         | 55.37                | -116.9                            | -927.3     | 932.9                | 917.3                 | 15.52                   | 60.120            |                    |        |        |
| 3,700.0               | 3,700.0             | 3,712.3             | 3,712.3             | 7.7             | 8.2         | 55.37                | -117.0                            | -927.5     | 933.0                | 917.1                 | 15.95                   | 58.487            |                    |        |        |
| 3,800.0               | 3,800.0             | 3,812.3             | 3,812.3             | 8.0             | 8.4         | 55.38                | -117.1                            | -927.8     | 933.2                | 916.8                 | 16.39                   | 56.938            |                    |        |        |
| 3,900.0               | 3,900.0             | 3,912.3             | 3,912.3             | 8.2             | 8.7         | 55.38                | -117.2                            | -928.0     | 933.3                | 916.5                 | 16.83                   | 55.467            |                    |        |        |
| 4,000.0               | 4,000.0             | 4,012.3             | 4,012.3             | 8.4             | 8.9         | 55.39                | -117.3                            | -928.2     | 933.4                | 916.2                 | 17.26                   | 54.069            |                    |        |        |
| 4,100.0               | 4,100.0             | 4,112.3             | 4,112.3             | 8.6             | 9.1         | 55.39                | -117.4                            | -928.5     | 933.6                | 915.9                 | 17.70                   | 52.738            |                    |        |        |
| 4,200.0               | 4,200.0             | 4,212.3             | 4,212.3             | 8.8             | 9.3         | 55.40                | -117.5                            | -928.7     | 933.7                | 915.6                 | 18.14                   | 51.470            |                    |        |        |
| 4,300.0               | 4,300.0             | 4,312.3             | 4,312.3             | 9.0             | 9.6         | 55.40                | -117.6                            | -929.0     | 933.9                | 915.3                 | 18.58                   | 50.260            |                    |        |        |
| 4,400.0               | 4,400.0             | 4,412.3             | 4,412.3             | 9.2             | 9.8         | 55.41                | -117.7                            | -929.2     | 934.0                | 915.0                 | 19.02                   | 49.105            |                    |        |        |
| 4,500.0               | 4,500.0             | 4,512.3             | 4,512.3             | 9.5             | 10.0        | 55.41                | -117.8                            | -929.4     | 934.2                | 914.7                 | 19.46                   | 48.001            |                    |        |        |
| 4,600.0               | 4,600.0             | 4,612.3             | 4,612.3             | 9.7             | 10.2        | 55.42                | -117.9                            | -929.7     | 934.3                | 914.4                 | 19.90                   | 46.945            |                    |        |        |
| 4,700.0               | 4,700.0             | 4,712.3             | 4,712.3             | 9.9             | 10.5        | 55.42                | -118.0                            | -929.9     | 934.5                | 914.1                 | 20.34                   | 45.934            |                    |        |        |
| 4,800.0               | 4,800.0             | 4,812.3             | 4,812.3             | 10.1            | 10.7        | 55.43                | -118.0                            | -930.1     | 934.6                | 913.8                 | 20.79                   | 44.965            |                    |        |        |
| 4,900.0               | 4,900.0             | 4,912.3             | 4,912.3             | 10.3            | 10.9        | 55.43                | -118.1                            | -930.4     | 934.8                | 913.5                 | 21.23                   | 44.036            |                    |        |        |
| 5,000.0               | 5,000.0             | 5,012.3             | 5,012.3             | 10.5            | 11.1        | 55.44                | -118.2                            | -930.6     | 934.9                | 913.2                 | 21.67                   | 43.144            |                    |        |        |
| 5,100.0               | 5,100.0             | 5,112.3             | 5,112.3             | 10.8            | 11.4        | 55.44                | -118.3                            | -930.9     | 935.1                | 912.9                 | 22.11                   | 42.287            |                    |        |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design         |                     |                     |                     |                 |             |                      |                        |            |                      |                       |                         |                   | Offset Site Error: | 0.0 ft |        |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|----------------------|------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|--------|--------|
| Survey Program: 0-MWD |                     |                     |                     |                 |             |                      |                        |            |                      |                       |                         |                   | Offset Well Error: |        | 0.0 ft |
| Reference             |                     | Offset              |                     | Semi Major Axis |             |                      | Distance               |            |                      |                       |                         |                   | Warning            |        |        |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Tooface (") | Offset Wellbore Centre |            | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |        |        |
|                       |                     |                     |                     |                 |             |                      | +N/-S (ft)             | +E/-W (ft) |                      |                       |                         |                   |                    |        |        |
| 5,200.0               | 5,200.0             | 5,212.3             | 5,212.3             | 11.0            | 11.6        | 55.45                | -118.4                 | -931.1     | 935.2                | 912.7                 | 22.56                   | 41.463            |                    |        |        |
| 5,300.0               | 5,300.0             | 5,312.3             | 5,312.3             | 11.2            | 11.8        | 55.45                | -118.5                 | -931.3     | 935.4                | 912.4                 | 23.00                   | 40.670            |                    |        |        |
| 5,400.0               | 5,400.0             | 5,412.3             | 5,412.3             | 11.4            | 12.0        | 55.46                | -118.6                 | -931.6     | 935.5                | 912.1                 | 23.44                   | 39.907            |                    |        |        |
| 5,500.0               | 5,500.0             | 5,512.3             | 5,512.3             | 11.6            | 12.3        | 55.46                | -118.7                 | -931.8     | 935.6                | 911.8                 | 23.89                   | 39.172            |                    |        |        |
| 5,600.0               | 5,600.0             | 5,612.3             | 5,612.3             | 11.8            | 12.5        | 55.47                | -118.8                 | -932.0     | 935.8                | 911.5                 | 24.33                   | 38.464            |                    |        |        |
| 5,700.0               | 5,700.0             | 5,712.3             | 5,712.3             | 12.1            | 12.7        | 55.47                | -118.9                 | -932.3     | 935.9                | 911.2                 | 24.77                   | 37.780            |                    |        |        |
| 5,800.0               | 5,800.0             | 5,812.3             | 5,812.3             | 12.3            | 12.9        | 55.48                | -119.0                 | -932.5     | 936.1                | 910.9                 | 25.22                   | 37.120            |                    |        |        |
| 5,900.0               | 5,900.0             | 5,912.3             | 5,912.3             | 12.5            | 13.2        | 55.48                | -119.1                 | -932.7     | 936.2                | 910.6                 | 25.66                   | 36.483            |                    |        |        |
| 6,000.0               | 6,000.0             | 6,012.3             | 6,012.3             | 12.7            | 13.4        | 55.49                | -119.1                 | -933.0     | 936.4                | 910.3                 | 26.11                   | 35.867            |                    |        |        |
| 6,100.0               | 6,100.0             | 6,112.3             | 6,112.3             | 12.9            | 13.6        | 55.49                | -119.2                 | -933.2     | 936.5                | 910.0                 | 26.55                   | 35.272            |                    |        |        |
| 6,200.0               | 6,200.0             | 6,212.3             | 6,212.3             | 13.2            | 13.8        | 55.50                | -119.3                 | -933.5     | 936.7                | 909.7                 | 27.00                   | 34.696            |                    |        |        |
| 6,300.0               | 6,300.0             | 6,312.3             | 6,312.3             | 13.4            | 14.1        | 55.50                | -119.4                 | -933.7     | 936.8                | 909.4                 | 27.44                   | 34.138            |                    |        |        |
| 6,400.0               | 6,400.0             | 6,412.3             | 6,412.3             | 13.6            | 14.3        | 55.51                | -119.5                 | -933.9     | 937.0                | 909.1                 | 27.89                   | 33.598            |                    |        |        |
| 6,500.0               | 6,500.0             | 6,512.3             | 6,512.3             | 13.8            | 14.5        | 55.51                | -119.6                 | -934.2     | 937.1                | 908.8                 | 28.33                   | 33.075            |                    |        |        |
| 6,600.0               | 6,600.0             | 6,612.3             | 6,612.3             | 14.0            | 14.7        | 55.52                | -119.7                 | -934.4     | 937.3                | 908.5                 | 28.78                   | 32.568            |                    |        |        |
| 6,700.0               | 6,699.7             | 6,674.0             | 6,674.0             | 14.3            | 14.9        | 56.05                | -120.0                 | -935.1     | 935.5                | 906.3                 | 29.12                   | 32.122            |                    |        |        |
| 6,800.0               | 6,797.3             | 6,714.8             | 6,714.7             | 14.5            | 15.0        | 56.79                | -121.1                 | -938.0     | 930.9                | 901.6                 | 29.35                   | 31.722            |                    |        |        |
| 6,900.0               | 6,890.3             | 6,750.0             | 6,749.5             | 14.8            | 15.1        | 57.87                | -122.8                 | -942.4     | 924.3                | 894.8                 | 29.48                   | 31.349            |                    |        |        |
| 7,000.0               | 6,976.5             | 6,800.0             | 6,798.5             | 15.1            | 15.2        | 59.70                | -126.5                 | -951.8     | 916.1                | 886.4                 | 29.72                   | 30.826            |                    |        |        |
| 7,100.0               | 7,053.7             | 6,831.0             | 6,828.4             | 15.5            | 15.3        | 61.38                | -129.5                 | -959.4     | 907.0                | 877.1                 | 29.88                   | 30.353            |                    |        |        |
| 7,200.0               | 7,120.1             | 6,866.3             | 6,861.8             | 16.1            | 15.3        | 63.42                | -133.5                 | -969.7     | 898.0                | 867.8                 | 30.22                   | 29.712            |                    |        |        |
| 7,244.7               | 7,145.7             | 6,881.2             | 6,875.9             | 16.4            | 15.4        | 64.34                | -135.5                 | -974.6     | 894.3                | 863.9                 | 30.46                   | 29.362            |                    |        |        |
| 7,300.0               | 7,173.9             | 6,900.0             | 6,893.3             | 16.8            | 15.4        | 65.52                | -138.0                 | -981.2     | 890.2                | 859.4                 | 30.79                   | 28.912            |                    |        |        |
| 7,338.0               | 7,190.8             | 6,900.0             | 6,893.3             | 17.2            | 15.4        | 65.71                | -138.0                 | -981.2     | 887.9                | 856.9                 | 30.95                   | 28.688            |                    |        |        |
| 7,400.0               | 7,213.9             | 6,929.0             | 6,919.7             | 17.8            | 15.5        | 67.41                | -142.4                 | -992.2     | 884.6                | 853.0                 | 31.61                   | 27.989            |                    |        |        |
| 7,432.8               | 7,223.9             | 6,950.0             | 6,938.5             | 18.1            | 15.6        | 68.62                | -145.8                 | -1,000.9   | 883.6                | 851.5                 | 32.09                   | 27.533            |                    |        |        |
| 7,478.1               | 7,234.9             | 6,950.0             | 6,938.5             | 18.6            | 15.6        | 68.72                | -145.8                 | -1,000.9   | 882.5                | 850.0                 | 32.45                   | 27.193            |                    |        |        |
| 7,500.0               | 7,239.1             | 6,950.0             | 6,938.5             | 18.8            | 15.6        | 68.73                | -145.8                 | -1,000.9   | 882.4                | 849.7                 | 32.64                   | 27.035            | CC                 |        |        |
| 7,530.3               | 7,243.8             | 6,962.7             | 6,949.7             | 19.2            | 15.6        | 69.43                | -148.0                 | -1,006.5   | 882.5                | 849.4                 | 33.10                   | 26.661            | ES                 |        |        |
| 7,600.0               | 7,248.9             | 6,977.8             | 6,962.9             | 20.1            | 15.7        | 70.16                | -150.7                 | -1,013.4   | 884.4                | 850.3                 | 34.04                   | 25.981            |                    |        |        |
| 7,700.0               | 7,250.2             | 7,000.0             | 6,982.0             | 21.4            | 15.8        | 71.46                | -154.8                 | -1,024.0   | 893.7                | 858.3                 | 35.47                   | 25.197            |                    |        |        |
| 7,800.0               | 7,251.5             | 7,022.0             | 7,000.4             | 22.8            | 15.9        | 72.75                | -159.2                 | -1,035.1   | 913.0                | 876.2                 | 36.86                   | 24.771            |                    |        |        |
| 7,900.0               | 7,252.8             | 7,050.0             | 7,023.3             | 24.2            | 16.0        | 74.35                | -165.1                 | -1,050.1   | 941.5                | 903.2                 | 38.26                   | 24.606            | SF                 |        |        |
| 8,000.0               | 7,254.1             | 7,077.1             | 7,044.8             | 25.8            | 16.1        | 75.85                | -171.1                 | -1,065.5   | 978.1                | 938.5                 | 39.56                   | 24.724            |                    |        |        |
| 8,100.0               | 7,255.4             | 7,109.8             | 7,069.8             | 27.4            | 16.3        | 77.59                | -178.8                 | -1,085.2   | 1,021.7              | 980.9                 | 40.83                   | 25.024            |                    |        |        |
| 8,200.0               | 7,256.7             | 7,150.0             | 7,098.8             | 29.1            | 16.5        | 79.60                | -188.9                 | -1,111.0   | 1,071.3              | 1,029.2               | 42.12                   | 25.432            |                    |        |        |
| 8,300.0               | 7,258.0             | 7,188.1             | 7,124.7             | 30.8            | 16.7        | 81.35                | -199.1                 | -1,136.9   | 1,125.7              | 1,082.3               | 43.33                   | 25.982            |                    |        |        |
| 8,400.0               | 7,259.3             | 7,234.6             | 7,154.1             | 32.6            | 17.1        | 83.30                | -212.3                 | -1,170.5   | 1,183.9              | 1,139.2               | 44.65                   | 26.517            |                    |        |        |
| 8,500.0               | 7,260.5             | 7,286.6             | 7,183.6             | 34.4            | 17.5        | 85.20                | -227.9                 | -1,210.4   | 1,245.0              | 1,198.9               | 46.09                   | 27.010            |                    |        |        |
| 8,600.0               | 7,261.8             | 7,344.4             | 7,212.3             | 36.3            | 18.1        | 86.95                | -246.2                 | -1,257.1   | 1,308.2              | 1,260.5               | 47.73                   | 27.410            |                    |        |        |
| 8,700.0               | 7,263.1             | 7,407.8             | 7,238.3             | 38.1            | 18.9        | 88.46                | -267.3                 | -1,310.8   | 1,372.8              | 1,323.2               | 49.61                   | 27.674            |                    |        |        |
| 8,800.0               | 7,264.4             | 7,476.2             | 7,259.8             | 40.0            | 19.8        | 89.63                | -291.0                 | -1,371.3   | 1,438.2              | 1,386.5               | 51.76                   | 27.785            |                    |        |        |
| 8,900.0               | 7,265.7             | 7,548.6             | 7,274.8             | 41.9            | 20.9        | 90.37                | -316.9                 | -1,437.2   | 1,504.0              | 1,449.9               | 54.18                   | 27.762            |                    |        |        |
| 9,000.0               | 7,267.0             | 7,623.3             | 7,281.8             | 43.8            | 22.2        | 90.66                | -344.0                 | -1,506.4   | 1,570.0              | 1,513.2               | 56.80                   | 27.639            |                    |        |        |
| 9,100.0               | 7,268.2             | 7,698.5             | 7,283.9             | 45.8            | 23.5        | 90.69                | -371.5                 | -1,576.3   | 1,635.9              | 1,576.4               | 59.56                   | 27.469            |                    |        |        |
| 9,200.0               | 7,269.5             | 7,773.7             | 7,285.8             | 47.7            | 25.0        | 90.72                | -398.9                 | -1,646.3   | 1,701.9              | 1,639.4               | 62.42                   | 27.266            |                    |        |        |
| 9,300.0               | 7,270.8             | 7,848.8             | 7,287.8             | 49.7            | 26.5        | 90.75                | -426.3                 | -1,716.3   | 1,767.8              | 1,702.5               | 65.35                   | 27.052            |                    |        |        |
| 9,400.0               | 7,272.1             | 7,924.0             | 7,289.8             | 51.6            | 28.1        | 90.77                | -453.8                 | -1,786.2   | 1,833.7              | 1,765.4               | 68.34                   | 26.831            |                    |        |        |
| 9,500.0               | 7,273.4             | 7,999.2             | 7,291.8             | 53.6            | 29.7        | 90.80                | -481.2                 | -1,856.2   | 1,899.7              | 1,828.3               | 71.40                   | 26.607            |                    |        |        |
| 9,600.0               | 7,274.7             | 8,074.4             | 7,293.8             | 55.6            | 31.4        | 90.82                | -508.7                 | -1,926.1   | 1,965.6              | 1,891.1               | 74.51                   | 26.380            |                    |        |        |
| 9,700.0               | 7,275.9             | 8,149.5             | 7,295.8             | 57.6            | 33.1        | 90.84                | -536.1                 | -1,996.1   | 2,031.6              | 1,953.9               | 77.67                   | 26.158            |                    |        |        |
| 9,800.0               | 7,277.2             | 8,224.7             | 7,297.8             | 59.5            | 34.8        | 90.86                | -563.5                 | -2,066.1   | 2,097.5              | 2,016.7               | 80.85                   | 25.942            |                    |        |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design                                    |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.0 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|--------|
| TOTEM 25-26-27 - Totem 26 - Totem - 26 Design #4 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.0 ft |
| Survey Program: 0-MWD                            |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                    |        |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         | Warning            |        |
| Measured Depth (ft)                              | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  |        |
| 9,900.0  | 7,278.5             | 8,299.9             | 7,299.8             | 61.5            | 36.5        | 90.88                 | -591.0                            | -2,136.0   | 2,163.5              | 2,079.4               | 84.07                   | 25.734             |        |
| 10,000.0   | 7,279.8             | 8,375.1             | 7,301.8             | 63.5            | 38.3        | 90.90                 | -618.4                            | -2,206.0   | 2,229.4              | 2,142.1               | 87.32                   | 25.530             |        |
| 10,100.0   | 7,281.0             | 8,450.2             | 7,303.8             | 65.6            | 40.1        | 90.91                 | -645.9                            | -2,275.9   | 2,295.3              | 2,204.7               | 90.60                   | 25.335             |        |
| 10,200.0   | 7,282.3             | 8,525.4             | 7,305.8             | 67.6            | 41.9        | 90.93                 | -673.3                            | -2,345.9   | 2,361.3              | 2,267.4               | 93.90                   | 25.148             |        |
| 10,300.0   | 7,283.6             | 8,600.6             | 7,307.8             | 69.6            | 43.7        | 90.94                 | -700.7                            | -2,415.9   | 2,427.2              | 2,330.0               | 97.21                   | 24.969             |        |
| 10,400.0   | 7,284.9             | 8,675.7             | 7,309.8             | 71.6            | 45.6        | 90.96                 | -728.2                            | -2,485.8   | 2,493.2              | 2,392.6               | 100.54                  | 24.797             |        |
| 10,410.7   | 7,285.0             | 8,683.8             | 7,310.0             | 71.8            | 45.8        | 90.96                 | -731.1                            | -2,493.3   | 2,500.2              | 2,399.3               | 100.90                  | 24.780             |        |

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design Totem 4 SEC.8-T2S-R62W - Totem 4 - Totem - 4 Final Surveys |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.0 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|--------|
| Survey Program: 1185-MWD   |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.0 ft |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                      | Distance                          |            |                      |                       |                         |                   | Warning            |        |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Tooface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |        |
| 0.0  | 0.0                 | 7.5                 | 7.5                 | 0.0             | 0.0         | -83.60               | 80.2                              | -714.7     | 719.2                |                       |                         |                   |                    |        |
| 100.0  | 100.0               | 107.1               | 107.1               | 0.2             | 0.1         | -83.60               | 80.2                              | -714.8     | 719.2                | 719.0                 | 0.30                    | 2,409.517         |                    |        |
| 200.0  | 200.0               | 206.6               | 206.6               | 0.4             | 0.2         | -83.60               | 80.2                              | -714.9     | 719.3                | 718.7                 | 0.63                    | 1,135.188         |                    |        |
| 300.0  | 300.0               | 306.2               | 306.2               | 0.6             | 0.3         | -83.60               | 80.2                              | -715.0     | 719.5                | 718.5                 | 0.97                    | 742.626           |                    |        |
| 400.0  | 400.0               | 405.8               | 405.8               | 0.9             | 0.5         | -83.60               | 80.3                              | -715.2     | 719.7                | 718.4                 | 1.30                    | 551.910           |                    |        |
| 500.0  | 500.0               | 505.4               | 505.4               | 1.1             | 0.6         | -83.59               | 80.3                              | -715.5     | 720.0                | 718.3                 | 1.64                    | 439.222           |                    |        |
| 600.0  | 600.0               | 605.0               | 605.0               | 1.3             | 0.7         | -83.59               | 80.4                              | -715.8     | 720.3                | 718.3                 | 1.97                    | 364.824           |                    |        |
| 700.0  | 700.0               | 704.5               | 704.5               | 1.5             | 0.8         | -83.58               | 80.5                              | -716.2     | 720.7                | 718.4                 | 2.31                    | 312.045           |                    |        |
| 800.0  | 800.0               | 804.1               | 804.1               | 1.8             | 0.9         | -83.58               | 80.6                              | -716.6     | 721.1                | 718.5                 | 2.64                    | 272.666           |                    |        |
| 900.0  | 900.0               | 903.7               | 903.7               | 2.0             | 1.0         | -83.57               | 80.8                              | -717.1     | 721.6                | 718.6                 | 2.98                    | 242.165           |                    |        |
| 1,000.0  | 1,000.0             | 1,003.3             | 1,003.3             | 2.2             | 1.1         | -83.57               | 80.9                              | -717.6     | 722.2                | 718.8                 | 3.31                    | 217.849           |                    |        |
| 1,100.0  | 1,100.0             | 1,102.9             | 1,102.9             | 2.4             | 1.2         | -83.56               | 81.1                              | -718.2     | 722.8                | 719.1                 | 3.65                    | 198.014           |                    |        |
| 1,200.0  | 1,200.0             | 1,202.6             | 1,202.6             | 2.7             | 1.4         | -83.55               | 81.2                              | -718.9     | 723.4                | 719.4                 | 4.00                    | 180.787           |                    |        |
| 1,300.0  | 1,300.0             | 1,303.1             | 1,303.1             | 2.9             | 1.6         | -83.54               | 81.4                              | -719.5     | 724.1                | 719.7                 | 4.43                    | 163.440           |                    |        |
| 1,400.0  | 1,400.0             | 1,403.6             | 1,403.6             | 3.1             | 1.8         | -83.53               | 81.6                              | -720.0     | 724.7                | 719.8                 | 4.86                    | 149.140           |                    |        |
| 1,500.0  | 1,500.0             | 1,504.1             | 1,504.1             | 3.3             | 2.0         | -83.52               | 81.8                              | -720.5     | 725.2                | 719.9                 | 5.29                    | 137.145           |                    |        |
| 1,600.0  | 1,600.0             | 1,604.6             | 1,604.6             | 3.6             | 2.2         | -83.51               | 82.0                              | -721.0     | 725.6                | 719.9                 | 5.72                    | 126.938           |                    |        |
| 1,700.0  | 1,700.0             | 1,705.1             | 1,705.1             | 3.8             | 2.4         | -83.50               | 82.2                              | -721.3     | 726.0                | 719.8                 | 6.14                    | 118.143           |                    |        |
| 1,800.0  | 1,800.0             | 1,805.7             | 1,805.7             | 4.0             | 2.6         | -83.48               | 82.4                              | -721.6     | 726.3                | 719.7                 | 6.57                    | 110.495           |                    |        |
| 1,900.0  | 1,900.0             | 1,906.7             | 1,906.7             | 4.2             | 2.8         | 68.94                | 82.6                              | -721.7     | 726.4                | 719.5                 | 6.95                    | 104.553           |                    |        |
| 2,000.0  | 2,000.0             | 2,007.6             | 2,007.6             | 4.3             | 3.0         | 68.96                | 82.8                              | -721.8     | 726.4                | 719.1                 | 7.33                    | 99.154            |                    |        |
| 2,100.0  | 2,100.0             | 2,108.6             | 2,108.5             | 4.5             | 3.2         | 68.98                | 82.8                              | -721.7     | 726.2                | 718.5                 | 7.71                    | 94.216            |                    |        |
| 2,200.0  | 2,200.0             | 2,209.5             | 2,209.5             | 4.7             | 3.4         | 69.00                | 82.9                              | -721.5     | 726.0                | 717.9                 | 8.09                    | 89.687            |                    |        |
| 2,300.0  | 2,300.0             | 2,311.1             | 2,311.1             | 4.9             | 3.6         | 69.02                | 82.8                              | -721.1     | 725.6                | 717.1                 | 8.49                    | 85.455            |                    |        |
| 2,400.0  | 2,400.0             | 2,413.6             | 2,413.6             | 5.1             | 3.8         | 69.05                | 83.0                              | -720.4     | 724.8                | 715.9                 | 8.90                    | 81.457            |                    |        |
| 2,500.0  | 2,500.0             | 2,516.1             | 2,516.0             | 5.3             | 4.0         | 69.10                | 83.4                              | -719.3     | 723.8                | 714.5                 | 9.31                    | 77.751            |                    |        |
| 2,600.0  | 2,600.0             | 2,618.5             | 2,618.5             | 5.5             | 4.2         | 69.17                | 84.0                              | -717.9     | 722.3                | 712.6                 | 9.72                    | 74.305            |                    |        |
| 2,700.0  | 2,700.0             | 2,721.0             | 2,720.9             | 5.7             | 4.5         | 69.27                | 84.8                              | -716.0     | 720.6                | 710.5                 | 10.14                   | 71.093            |                    |        |
| 2,800.0  | 2,800.0             | 2,823.4             | 2,823.3             | 5.9             | 4.7         | 69.38                | 85.8                              | -713.8     | 718.5                | 707.9                 | 10.55                   | 68.089            |                    |        |
| 2,900.0  | 2,900.0             | 2,925.4             | 2,925.3             | 6.1             | 4.9         | 69.52                | 87.0                              | -711.2     | 716.1                | 705.1                 | 10.97                   | 65.280            |                    |        |
| 3,000.0  | 3,000.0             | 3,023.8             | 3,023.7             | 6.3             | 5.1         | 69.65                | 88.2                              | -708.7     | 713.6                | 702.3                 | 11.38                   | 62.714            |                    |        |
| 3,100.0  | 3,100.0             | 3,122.3             | 3,122.1             | 6.5             | 5.3         | 69.78                | 89.4                              | -706.4     | 711.4                | 699.6                 | 11.79                   | 60.338            |                    |        |
| 3,200.0  | 3,200.0             | 3,220.8             | 3,220.6             | 6.7             | 5.5         | 69.91                | 90.5                              | -704.3     | 709.4                | 697.2                 | 12.20                   | 58.134            |                    |        |
| 3,300.0  | 3,300.0             | 3,319.3             | 3,319.0             | 6.9             | 5.7         | 70.02                | 91.6                              | -702.5     | 707.6                | 695.0                 | 12.62                   | 56.084            |                    |        |
| 3,400.0  | 3,400.0             | 3,417.8             | 3,417.5             | 7.1             | 5.9         | 70.14                | 92.6                              | -700.8     | 706.0                | 693.0                 | 13.03                   | 54.176            |                    |        |
| 3,500.0  | 3,500.0             | 3,517.2             | 3,516.9             | 7.3             | 6.1         | 70.24                | 93.5                              | -699.4     | 704.6                | 691.2                 | 13.45                   | 52.393            |                    |        |
| 3,600.0  | 3,600.0             | 3,617.6             | 3,617.3             | 7.5             | 6.3         | 70.34                | 94.4                              | -697.9     | 703.2                | 689.4                 | 13.87                   | 50.708            |                    |        |
| 3,700.0  | 3,700.0             | 3,718.0             | 3,717.7             | 7.7             | 6.6         | 70.43                | 95.1                              | -696.3     | 701.7                | 687.5                 | 14.29                   | 49.115            |                    |        |
| 3,800.0  | 3,800.0             | 3,818.4             | 3,818.1             | 8.0             | 6.8         | 70.51                | 95.7                              | -694.7     | 700.2                | 685.5                 | 14.71                   | 47.606            |                    |        |
| 3,900.0  | 3,900.0             | 3,918.9             | 3,918.5             | 8.2             | 7.0         | 70.59                | 96.2                              | -693.1     | 698.6                | 683.5                 | 15.13                   | 46.174            |                    |        |
| 4,000.0  | 4,000.0             | 4,019.3             | 4,019.0             | 8.4             | 7.2         | 70.65                | 96.6                              | -691.4     | 696.9                | 681.4                 | 15.55                   | 44.814            |                    |        |
| 4,100.0  | 4,100.0             | 4,119.3             | 4,118.9             | 8.6             | 7.4         | 70.70                | 96.8                              | -689.7     | 695.2                | 679.2                 | 15.97                   | 43.522            |                    |        |
| 4,200.0  | 4,200.0             | 4,218.1             | 4,217.7             | 8.8             | 7.6         | 70.77                | 97.2                              | -688.1     | 693.6                | 677.2                 | 16.40                   | 42.302            |                    |        |
| 4,300.0  | 4,300.0             | 4,317.0             | 4,316.6             | 9.0             | 7.8         | 70.86                | 97.9                              | -686.6     | 692.1                | 675.3                 | 16.82                   | 41.152            |                    |        |
| 4,400.0  | 4,400.0             | 4,415.8             | 4,415.4             | 9.2             | 8.0         | 70.97                | 99.0                              | -685.2     | 690.8                | 673.6                 | 17.24                   | 40.066            |                    |        |
| 4,500.0  | 4,500.0             | 4,514.7             | 4,514.2             | 9.5             | 8.2         | 71.11                | 100.3                             | -683.9     | 689.7                | 672.1                 | 17.67                   | 39.042            |                    |        |
| 4,600.0  | 4,600.0             | 4,613.5             | 4,613.1             | 9.7             | 8.4         | 71.27                | 101.9                             | -682.8     | 688.8                | 670.7                 | 18.09                   | 38.074            |                    |        |
| 4,700.0  | 4,700.0             | 4,712.4             | 4,711.9             | 9.9             | 8.6         | 71.45                | 103.7                             | -681.8     | 688.0                | 669.5                 | 18.52                   | 37.158            |                    |        |
| 4,800.0  | 4,800.0             | 4,811.3             | 4,810.8             | 10.1            | 8.9         | 71.65                | 105.9                             | -680.9     | 687.4                | 668.4                 | 18.94                   | 36.289            |                    |        |
| 4,900.0  | 4,900.0             | 4,910.2             | 4,909.6             | 10.3            | 9.1         | 71.86                | 108.1                             | -680.1     | 686.9                | 667.6                 | 19.37                   | 35.465            |                    |        |
| 5,000.0  | 5,000.0             | 5,009.0             | 5,008.5             | 10.5            | 9.3         | 72.09                | 110.6                             | -679.5     | 686.7                | 666.9                 | 19.80                   | 34.685            |                    |        |
| 5,100.0  | 5,100.0             | 5,107.9             | 5,107.3             | 10.8            | 9.5         | 72.32                | 113.2                             | -678.9     | 686.5                | 666.3                 | 20.22                   | 33.946            |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design Totem 4 SEC.8-T2S-R62W - Totem 4 - Totem - 4 Final Surveys |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.0 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|--------|
| Survey Program: 1185-MWD   |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.0 ft |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                      | Distance                          |            |                      |                       |                         |                   | Warning            |        |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Tooface (") | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |        |
| 5,116.5  | 5,116.5             | 5,124.2             | 5,123.6             | 10.8            | 9.5         | 72.36                | 113.7                             | -678.9     | 686.5                | 666.2                 | 20.30                   | 33.828            |                    |        |
| 5,200.0  | 5,200.0             | 5,206.8             | 5,206.2             | 11.0            | 9.7         | 72.57                | 116.0                             | -678.6     | 686.6                | 666.0                 | 20.65                   | 33.245            |                    |        |
| 5,300.0  | 5,300.0             | 5,307.1             | 5,306.4             | 11.2            | 9.9         | 72.82                | 118.8                             | -678.3     | 686.8                | 665.7                 | 21.08                   | 32.573            |                    |        |
| 5,400.0  | 5,400.0             | 5,408.0             | 5,407.2             | 11.4            | 10.1        | 73.04                | 121.3                             | -677.9     | 686.8                | 665.3                 | 21.52                   | 31.922            |                    |        |
| 5,500.0  | 5,500.0             | 5,508.9             | 5,508.1             | 11.6            | 10.3        | 73.23                | 123.3                             | -677.5     | 686.7                | 664.8                 | 21.95                   | 31.289            |                    |        |
| 5,600.0  | 5,600.0             | 5,609.8             | 5,609.0             | 11.8            | 10.5        | 73.39                | 125.0                             | -677.0     | 686.5                | 664.1                 | 22.38                   | 30.675            |                    |        |
| 5,700.0  | 5,700.0             | 5,710.7             | 5,710.0             | 12.1            | 10.8        | 73.51                | 126.1                             | -676.5     | 686.2                | 663.4                 | 22.81                   | 30.079            |                    |        |
| 5,800.0  | 5,800.0             | 5,811.7             | 5,810.9             | 12.3            | 11.0        | 73.59                | 126.9                             | -675.9     | 685.7                | 662.5                 | 23.24                   | 29.501            |                    |        |
| 5,900.0  | 5,900.0             | 5,912.7             | 5,911.9             | 12.5            | 11.2        | 73.66                | 127.4                             | -675.2     | 685.1                | 661.4                 | 23.67                   | 28.938            |                    |        |
| 6,000.0  | 6,000.0             | 6,013.6             | 6,012.9             | 12.7            | 11.4        | 73.69                | 127.5                             | -674.4     | 684.3                | 660.2                 | 24.10                   | 28.389            |                    |        |
| 6,100.0  | 6,100.0             | 6,114.6             | 6,113.8             | 12.9            | 11.6        | 73.70                | 127.3                             | -673.6     | 683.4                | 658.9                 | 24.54                   | 27.854            |                    |        |
| 6,200.0  | 6,200.0             | 6,215.6             | 6,214.8             | 13.2            | 11.8        | 73.68                | 126.7                             | -672.7     | 682.4                | 657.4                 | 24.97                   | 27.332            |                    |        |
| 6,300.0  | 6,300.0             | 6,316.9             | 6,316.1             | 13.4            | 12.0        | 73.63                | 125.7                             | -671.7     | 681.1                | 655.7                 | 25.40                   | 26.819            |                    |        |
| 6,400.0  | 6,400.0             | 6,418.2             | 6,417.4             | 13.6            | 12.2        | 73.53                | 124.1                             | -670.6     | 679.7                | 653.9                 | 25.83                   | 26.316            |                    |        |
| 6,500.0  | 6,500.0             | 6,520.6             | 6,519.8             | 13.8            | 12.4        | 73.39                | 121.9                             | -669.4     | 678.1                | 651.8                 | 26.26                   | 25.820            |                    |        |
| 6,600.0  | 6,600.0             | 6,617.2             | 6,616.4             | 14.0            | 12.7        | 73.30                | 120.4                             | -667.7     | 676.1                | 649.4                 | 26.69                   | 25.334            |                    |        |
| 6,666.6  | 6,666.5             | 6,657.5             | 6,656.6             | 14.2            | 12.7        | 73.73                | 120.1                             | -667.9     | 675.5                | 648.6                 | 26.91                   | 25.100            | CC, ES             |        |
| 6,700.0  | 6,699.7             | 6,670.0             | 6,669.1             | 14.3            | 12.8        | 73.75                | 120.2                             | -668.3     | 675.9                | 649.0                 | 26.99                   | 25.048            |                    |        |
| 6,800.0  | 6,797.3             | 6,732.0             | 6,730.9             | 14.5            | 12.9        | 74.64                | 121.6                             | -673.4     | 678.6                | 651.3                 | 27.26                   | 24.892            | SF                 |        |
| 6,900.0  | 6,890.3             | 6,772.7             | 6,771.1             | 14.8            | 13.0        | 75.37                | 123.4                             | -679.3     | 684.6                | 657.3                 | 27.38                   | 25.004            |                    |        |
| 7,000.0  | 6,976.5             | 6,811.9             | 6,809.3             | 15.1            | 13.1        | 76.02                | 125.8                             | -687.6     | 695.7                | 668.2                 | 27.49                   | 25.312            |                    |        |
| 7,100.0  | 7,053.7             | 6,854.0             | 6,849.7             | 15.5            | 13.1        | 76.68                | 129.1                             | -699.2     | 712.8                | 685.1                 | 27.72                   | 25.715            |                    |        |
| 7,200.0  | 7,120.1             | 6,886.0             | 6,879.7             | 16.1            | 13.2        | 76.51                | 132.4                             | -709.7     | 736.2                | 708.2                 | 28.03                   | 26.264            |                    |        |
| 7,300.0  | 7,173.9             | 6,904.7             | 6,897.0             | 16.8            | 13.2        | 75.01                | 134.6                             | -716.4     | 766.0                | 737.6                 | 28.41                   | 26.960            |                    |        |
| 7,400.0  | 7,213.9             | 6,917.0             | 6,908.3             | 17.8            | 13.3        | 72.50                | 136.2                             | -721.1     | 802.3                | 773.4                 | 28.94                   | 27.720            |                    |        |
| 7,500.0  | 7,239.1             | 6,936.8             | 6,926.2             | 18.8            | 13.3        | 70.00                | 139.0                             | -728.9     | 844.0                | 814.2                 | 29.76                   | 28.358            |                    |        |
| 7,600.0  | 7,248.9             | 6,948.0             | 6,936.3             | 20.1            | 13.3        | 66.47                | 140.6                             | -733.7     | 890.3                | 859.7                 | 30.60                   | 29.097            |                    |        |
| 7,700.0  | 7,250.2             | 6,948.0             | 6,936.3             | 21.4            | 13.3        | 66.28                | 140.6                             | -733.7     | 942.1                | 910.8                 | 31.27                   | 30.124            |                    |        |
| 7,800.0  | 7,251.5             | 6,948.0             | 6,936.3             | 22.8            | 13.3        | 66.28                | 140.6                             | -733.7     | 1,001.2              | 969.4                 | 31.86                   | 31.430            |                    |        |
| 7,900.0  | 7,252.8             | 6,948.0             | 6,936.3             | 24.2            | 13.3        | 66.28                | 140.6                             | -733.7     | 1,066.5              | 1,034.2               | 32.36                   | 32.957            |                    |        |
| 8,000.0  | 7,254.1             | 6,957.9             | 6,945.0             | 25.8            | 13.4        | 67.00                | 142.1                             | -738.0     | 1,136.8              | 1,103.9               | 32.91                   | 34.547            |                    |        |
| 8,100.0  | 7,255.4             | 6,961.9             | 6,948.6             | 27.4            | 13.4        | 67.29                | 142.8                             | -739.8     | 1,211.2              | 1,177.9               | 33.31                   | 36.362            |                    |        |
| 8,200.0  | 7,256.7             | 6,966.1             | 6,952.3             | 29.1            | 13.4        | 67.59                | 143.4                             | -741.7     | 1,289.1              | 1,255.4               | 33.66                   | 38.301            |                    |        |
| 8,300.0  | 7,258.0             | 6,970.4             | 6,956.1             | 30.8            | 13.4        | 67.91                | 144.1                             | -743.6     | 1,369.8              | 1,335.8               | 33.95                   | 40.342            |                    |        |
| 8,400.0  | 7,259.3             | 6,979.0             | 6,963.5             | 32.6            | 13.4        | 68.52                | 145.5                             | -747.6     | 1,452.9              | 1,418.7               | 34.26                   | 42.408            |                    |        |
| 8,500.0  | 7,260.5             | 6,979.0             | 6,963.5             | 34.4            | 13.4        | 68.52                | 145.5                             | -747.6     | 1,538.0              | 1,503.6               | 34.44                   | 44.663            |                    |        |
| 8,600.0  | 7,261.8             | 6,979.0             | 6,963.5             | 36.3            | 13.4        | 68.52                | 145.5                             | -747.6     | 1,624.8              | 1,590.2               | 34.59                   | 46.979            |                    |        |
| 8,700.0  | 7,263.1             | 6,990.1             | 6,973.1             | 38.1            | 13.5        | 69.32                | 147.3                             | -752.9     | 1,712.9              | 1,678.1               | 34.84                   | 49.169            |                    |        |
| 8,800.0  | 7,264.4             | 6,995.6             | 6,977.8             | 40.0            | 13.5        | 69.71                | 148.2                             | -755.5     | 1,802.3              | 1,767.3               | 35.01                   | 51.482            |                    |        |
| 8,900.0  | 7,265.7             | 7,001.3             | 6,982.7             | 41.9            | 13.5        | 70.11                | 149.1                             | -758.3     | 1,892.8              | 1,857.6               | 35.17                   | 53.821            |                    |        |
| 9,000.0  | 7,267.0             | 7,009.0             | 6,989.3             | 43.8            | 13.5        | 70.66                | 150.4                             | -762.2     | 1,984.1              | 1,948.7               | 35.34                   | 56.145            |                    |        |
| 9,100.0  | 7,268.2             | 7,009.0             | 6,989.3             | 45.8            | 13.5        | 70.66                | 150.4                             | -762.2     | 2,076.2              | 2,040.8               | 35.41                   | 58.631            |                    |        |
| 9,200.0  | 7,269.5             | 7,017.5             | 6,996.4             | 47.7            | 13.5        | 71.25                | 151.9                             | -766.5     | 2,168.9              | 2,133.4               | 35.58                   | 60.967            |                    |        |
| 9,300.0  | 7,270.8             | 7,022.7             | 7,000.8             | 49.7            | 13.6        | 71.61                | 152.8                             | -769.2     | 2,262.3              | 2,226.6               | 35.70                   | 63.378            |                    |        |
| 9,400.0  | 7,272.1             | 7,028.1             | 7,005.3             | 51.6            | 13.6        | 71.98                | 153.7                             | -772.0     | 2,356.2              | 2,320.4               | 35.81                   | 65.794            |                    |        |
| 9,500.0  | 7,273.4             | 7,040.0             | 7,015.1             | 53.6            | 13.6        | 72.80                | 155.9                             | -778.4     | 2,450.6              | 2,414.6               | 36.00                   | 68.062            |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design            |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Site Error:   | 0.0 ft |                    |        |
|--------------------------|---------------------|---------------------|---------------------|-----------------|-------------|----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--|--------|--------------------|--------|
| Survey Program: 1217-MWD |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Totem 5 Pad Sec.8-T2S-R62W - Totem 5 - Totem - 5 Final Surveys |        | Offset Well Error: | 0.0 ft |
| Reference                |                     | Offset              |                     | Semi Major Axis |             |                      | Distance                          |            |                      |                       |                         |                   | Warning  |        |                    |        |
| Measured Depth (ft)      | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Tooface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |  |        |                    |        |
| 0.0                      | 0.0                 | 5.6                 | 5.6                 | 0.0             | 0.0         | -79.98               | 80.2                              | -453.8     | 460.8                |                       |                         |                   |  |        |                    |        |
| 100.0                    | 100.0               | 106.5               | 106.5               | 0.2             | 0.1         | -79.99               | 80.1                              | -453.6     | 460.7                | 460.4                 | 0.30                    | 1,539.300         |  |        |                    |        |
| 200.0                    | 200.0               | 207.5               | 207.5               | 0.4             | 0.2         | -80.00               | 79.9                              | -453.3     | 460.3                | 459.7                 | 0.64                    | 722.410           |  |        |                    |        |
| 300.0                    | 300.0               | 308.5               | 308.5               | 0.6             | 0.4         | -80.03               | 79.6                              | -452.8     | 459.8                | 458.8                 | 0.98                    | 471.507           |  |        |                    |        |
| 400.0                    | 400.0               | 409.5               | 409.5               | 0.9             | 0.5         | -80.07               | 79.2                              | -452.1     | 459.0                | 457.7                 | 1.31                    | 349.591           |  |        |                    |        |
| 500.0                    | 500.0               | 510.4               | 510.4               | 1.1             | 0.6         | -80.12               | 78.6                              | -451.2     | 458.1                | 456.4                 | 1.65                    | 277.455           |  |        |                    |        |
| 600.0                    | 600.0               | 611.4               | 611.4               | 1.3             | 0.7         | -80.17               | 78.0                              | -450.1     | 456.9                | 454.9                 | 1.99                    | 229.726           |  |        |                    |        |
| 700.0                    | 700.0               | 712.4               | 712.3               | 1.5             | 0.8         | -80.24               | 77.2                              | -448.8     | 455.5                | 453.2                 | 2.33                    | 195.768           |  |        |                    |        |
| 800.0                    | 800.0               | 813.3               | 813.3               | 1.8             | 0.9         | -80.32               | 76.3                              | -447.3     | 453.9                | 451.2                 | 2.66                    | 170.344           |  |        |                    |        |
| 900.0                    | 900.0               | 914.3               | 914.2               | 2.0             | 1.0         | -80.42               | 75.2                              | -445.7     | 452.1                | 449.0                 | 3.00                    | 150.571           |  |        |                    |        |
| 1,000.0                  | 1,000.0             | 1,015.2             | 1,015.1             | 2.2             | 1.2         | -80.52               | 74.1                              | -443.8     | 450.0                | 446.7                 | 3.34                    | 134.736           |  |        |                    |        |
| 1,100.0                  | 1,100.0             | 1,116.1             | 1,116.0             | 2.4             | 1.3         | -80.64               | 72.8                              | -441.7     | 447.8                | 444.1                 | 3.68                    | 121.753           |  |        |                    |        |
| 1,200.0                  | 1,200.0             | 1,217.0             | 1,216.9             | 2.7             | 1.4         | -80.76               | 71.5                              | -439.4     | 445.3                | 441.3                 | 4.02                    | 110.901           |  |        |                    |        |
| 1,300.0                  | 1,300.0             | 1,313.7             | 1,313.5             | 2.9             | 1.6         | -80.89               | 70.2                              | -437.5     | 443.1                | 438.7                 | 4.44                    | 99.885            |  |        |                    |        |
| 1,400.0                  | 1,400.0             | 1,410.3             | 1,410.1             | 3.1             | 1.8         | -81.01               | 69.0                              | -436.3     | 441.7                | 436.9                 | 4.86                    | 90.944            |  |        |                    |        |
| 1,500.0                  | 1,500.0             | 1,507.0             | 1,506.8             | 3.3             | 2.0         | -81.13               | 68.0                              | -435.8     | 441.0                | 435.8                 | 5.28                    | 83.573            |  |        |                    |        |
| 1,539.3                  | 1,539.3             | 1,545.0             | 1,544.8             | 3.4             | 2.1         | -81.17               | 67.7                              | -435.8     | 441.0                | 435.5                 | 5.44                    | 81.024            |  |        |                    |        |
| 1,600.0                  | 1,600.0             | 1,603.7             | 1,603.5             | 3.6             | 2.2         | -81.24               | 67.2                              | -436.0     | 441.1                | 435.4                 | 5.70                    | 77.424            |  |        |                    |        |
| 1,700.0                  | 1,700.0             | 1,700.4             | 1,700.2             | 3.8             | 2.4         | -81.34               | 66.6                              | -436.9     | 442.0                | 435.8                 | 6.12                    | 72.246            |  |        |                    |        |
| 1,800.0                  | 1,800.0             | 1,798.2             | 1,798.0             | 4.0             | 2.6         | -81.43               | 66.1                              | -438.5     | 443.5                | 437.0                 | 6.54                    | 67.816            |  |        |                    |        |
| 1,900.0                  | 1,900.0             | 1,899.4             | 1,899.1             | 4.2             | 2.8         | 70.90                | 65.7                              | -440.2     | 445.0                | 438.1                 | 6.92                    | 64.318            |  |        |                    |        |
| 2,000.0                  | 2,000.0             | 2,000.6             | 2,000.3             | 4.3             | 3.0         | 70.87                | 65.4                              | -441.5     | 446.3                | 439.0                 | 7.30                    | 61.117            |  |        |                    |        |
| 2,100.0                  | 2,100.0             | 2,101.8             | 2,101.5             | 4.5             | 3.2         | 70.85                | 65.3                              | -442.6     | 447.2                | 439.5                 | 7.69                    | 58.168            |  |        |                    |        |
| 2,200.0                  | 2,200.0             | 2,203.0             | 2,202.7             | 4.7             | 3.4         | 70.86                | 65.3                              | -443.4     | 447.9                | 439.8                 | 8.08                    | 55.442            |  |        |                    |        |
| 2,300.0                  | 2,300.0             | 2,304.2             | 2,303.9             | 4.9             | 3.6         | 70.89                | 65.4                              | -443.8     | 448.3                | 439.9                 | 8.47                    | 52.915            |  |        |                    |        |
| 2,400.0                  | 2,400.0             | 2,405.4             | 2,405.1             | 5.1             | 3.8         | 70.94                | 65.7                              | -444.0     | 448.5                | 439.6                 | 8.87                    | 50.565            |  |        |                    |        |
| 2,500.0                  | 2,500.0             | 2,505.8             | 2,505.6             | 5.3             | 4.0         | 71.00                | 66.0                              | -444.0     | 448.5                | 439.2                 | 9.28                    | 48.337            |  |        |                    |        |
| 2,600.0                  | 2,600.0             | 2,606.1             | 2,605.9             | 5.5             | 4.2         | 71.06                | 66.3                              | -443.9     | 448.4                | 438.7                 | 9.69                    | 46.271            |  |        |                    |        |
| 2,700.0                  | 2,700.0             | 2,706.5             | 2,706.2             | 5.7             | 4.4         | 71.10                | 66.4                              | -443.7     | 448.2                | 438.1                 | 10.10                   | 44.358            |  |        |                    |        |
| 2,800.0                  | 2,800.0             | 2,806.8             | 2,806.5             | 5.9             | 4.7         | 71.13                | 66.5                              | -443.5     | 447.9                | 437.4                 | 10.52                   | 42.580            |  |        |                    |        |
| 2,900.0                  | 2,900.0             | 2,907.1             | 2,906.8             | 6.1             | 4.9         | 71.16                | 66.5                              | -443.3     | 447.6                | 436.7                 | 10.94                   | 40.925            |  |        |                    |        |
| 3,000.0                  | 3,000.0             | 3,007.1             | 3,006.9             | 6.3             | 5.1         | 71.17                | 66.4                              | -443.0     | 447.2                | 435.9                 | 11.35                   | 39.391            |  |        |                    |        |
| 3,100.0                  | 3,100.0             | 3,106.6             | 3,106.3             | 6.5             | 5.3         | 71.18                | 66.2                              | -442.7     | 446.9                | 435.2                 | 11.77                   | 37.988            |  |        |                    |        |
| 3,200.0                  | 3,200.0             | 3,206.1             | 3,205.8             | 6.7             | 5.5         | 71.19                | 66.1                              | -442.6     | 446.8                | 434.6                 | 12.18                   | 36.686            |  |        |                    |        |
| 3,300.0                  | 3,300.0             | 3,305.5             | 3,305.3             | 6.9             | 5.7         | 71.19                | 65.9                              | -442.7     | 446.7                | 434.1                 | 12.59                   | 35.476            |  |        |                    |        |
| 3,304.0                  | 3,304.0             | 3,309.5             | 3,309.2             | 6.9             | 5.7         | 71.19                | 65.9                              | -442.7     | 446.7                | 434.1                 | 12.61                   | 35.430            |  |        |                    |        |
| 3,400.0                  | 3,400.0             | 3,405.0             | 3,404.7             | 7.1             | 5.9         | 71.18                | 65.7                              | -442.8     | 446.7                | 433.7                 | 13.01                   | 34.349            |  |        |                    |        |
| 3,500.0                  | 3,500.0             | 3,505.0             | 3,504.7             | 7.3             | 6.1         | 71.17                | 65.5                              | -443.0     | 446.9                | 433.5                 | 13.42                   | 33.294            |  |        |                    |        |
| 3,600.0                  | 3,600.0             | 3,605.9             | 3,605.6             | 7.5             | 6.3         | 71.17                | 65.4                              | -443.2     | 446.9                | 433.1                 | 13.84                   | 32.286            |  |        |                    |        |
| 3,700.0                  | 3,700.0             | 3,706.8             | 3,706.5             | 7.7             | 6.5         | 71.18                | 65.3                              | -443.0     | 446.7                | 432.5                 | 14.26                   | 31.322            |  |        |                    |        |
| 3,800.0                  | 3,800.0             | 3,807.7             | 3,807.4             | 8.0             | 6.7         | 71.20                | 65.2                              | -442.7     | 446.4                | 431.7                 | 14.68                   | 30.397            |  |        |                    |        |
| 3,900.0                  | 3,900.0             | 3,908.6             | 3,908.3             | 8.2             | 6.9         | 71.23                | 65.2                              | -442.2     | 445.8                | 430.7                 | 15.11                   | 29.510            |  |        |                    |        |
| 4,000.0                  | 4,000.0             | 4,009.3             | 4,009.0             | 8.4             | 7.2         | 71.26                | 65.1                              | -441.4     | 445.0                | 429.5                 | 15.53                   | 28.645            |  |        |                    |        |
| 4,100.0                  | 4,100.0             | 4,109.9             | 4,109.7             | 8.6             | 7.4         | 71.29                | 65.1                              | -440.6     | 444.1                | 428.1                 | 15.97                   | 27.814            |  |        |                    |        |
| 4,200.0                  | 4,200.0             | 4,210.6             | 4,210.3             | 8.8             | 7.6         | 71.31                | 64.9                              | -439.6     | 443.0                | 426.6                 | 16.40                   | 27.016            |  |        |                    |        |
| 4,300.0                  | 4,300.0             | 4,311.2             | 4,310.9             | 9.0             | 7.8         | 71.32                | 64.6                              | -438.5     | 441.8                | 425.0                 | 16.83                   | 26.251            |  |        |                    |        |
| 4,400.0                  | 4,400.0             | 4,411.1             | 4,410.8             | 9.2             | 8.0         | 71.33                | 64.3                              | -437.2     | 440.5                | 423.2                 | 17.26                   | 25.524            |  |        |                    |        |
| 4,500.0                  | 4,500.0             | 4,510.2             | 4,509.9             | 9.5             | 8.2         | 71.35                | 64.1                              | -436.2     | 439.3                | 421.7                 | 17.68                   | 24.849            |  |        |                    |        |
| 4,600.0                  | 4,600.0             | 4,609.2             | 4,608.9             | 9.7             | 8.4         | 71.39                | 64.2                              | -435.3     | 438.4                | 420.3                 | 18.10                   | 24.218            |  |        |                    |        |
| 4,700.0                  | 4,700.0             | 4,708.3             | 4,708.0             | 9.9             | 8.7         | 71.45                | 64.4                              | -434.5     | 437.7                | 419.1                 | 18.52                   | 23.626            |  |        |                    |        |
| 4,800.0                  | 4,800.0             | 4,807.4             | 4,807.0             | 10.1            | 8.9         | 71.53                | 64.7                              | -434.0     | 437.1                | 418.2                 | 18.95                   | 23.071            |  |        |                    |        |
| 4,900.0                  | 4,900.0             | 4,906.5             | 4,906.2             | 10.3            | 9.1         | 71.63                | 65.3                              | -433.7     | 436.8                | 417.5                 | 19.37                   | 22.552            |  |        |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design Totem 5 Pad Sec.8-T2S-R62W - Totem 5 - Totem - 5 Final Surveys |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.0 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|--------|
| Survey Program: 1217-MWD   |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.0 ft |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                      | Distance                          |            |                      |                       |                         |                   | Warning            |        |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Tooface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |        |
| 5,000.0  | 5,000.0             | 5,006.1             | 5,005.8             | 10.5            | 9.3         | 71.75                | 66.0                              | -433.5     | 436.7                | 416.9                 | 19.79                   | 22.067            |                    |        |
| 5,100.0  | 5,100.0             | 5,105.7             | 5,105.4             | 10.8            | 9.5         | 71.88                | 66.8                              | -433.3     | 436.6                | 416.4                 | 20.21                   | 21.607            |                    |        |
| 5,124.9  | 5,124.9             | 5,130.5             | 5,130.2             | 10.8            | 9.5         | 71.92                | 67.0                              | -433.3     | 436.6                | 416.3                 | 20.31                   | 21.496            | CC                 |        |
| 5,200.0  | 5,200.0             | 5,205.3             | 5,205.0             | 11.0            | 9.7         | 72.02                | 67.7                              | -433.2     | 436.6                | 416.0                 | 20.63                   | 21.169            |                    |        |
| 5,300.0  | 5,300.0             | 5,304.9             | 5,304.5             | 11.2            | 9.9         | 72.17                | 68.7                              | -433.2     | 436.7                | 415.7                 | 21.04                   | 20.754            |                    |        |
| 5,400.0  | 5,400.0             | 5,404.5             | 5,404.1             | 11.4            | 10.1        | 72.34                | 69.8                              | -433.3     | 437.0                | 415.5                 | 21.46                   | 20.358            |                    |        |
| 5,500.0  | 5,500.0             | 5,504.2             | 5,503.9             | 11.6            | 10.3        | 72.49                | 70.9                              | -433.5     | 437.2                | 415.4                 | 21.89                   | 19.976            |                    |        |
| 5,600.0  | 5,600.0             | 5,603.9             | 5,603.6             | 11.8            | 10.5        | 72.64                | 71.9                              | -433.7     | 437.6                | 415.3                 | 22.31                   | 19.612            |                    |        |
| 5,700.0  | 5,700.0             | 5,703.7             | 5,703.3             | 12.1            | 10.7        | 72.77                | 72.8                              | -434.0     | 438.0                | 415.3                 | 22.74                   | 19.264            |                    |        |
| 5,800.0  | 5,800.0             | 5,803.4             | 5,803.0             | 12.3            | 10.9        | 72.88                | 73.6                              | -434.4     | 438.5                | 415.3                 | 23.16                   | 18.931            |                    |        |
| 5,900.0  | 5,900.0             | 5,903.9             | 5,903.6             | 12.5            | 11.1        | 72.98                | 74.3                              | -434.8     | 439.0                | 415.4                 | 23.59                   | 18.607            |                    |        |
| 6,000.0  | 6,000.0             | 6,005.2             | 6,004.8             | 12.7            | 11.3        | 73.08                | 74.9                              | -435.0     | 439.2                | 415.2                 | 24.03                   | 18.282            |                    |        |
| 6,100.0  | 6,100.0             | 6,106.4             | 6,106.1             | 12.9            | 11.5        | 73.17                | 75.4                              | -434.9     | 439.2                | 414.7                 | 24.46                   | 17.956            |                    |        |
| 6,200.0  | 6,200.0             | 6,207.7             | 6,207.3             | 13.2            | 11.7        | 73.27                | 75.9                              | -434.5     | 438.9                | 414.0                 | 24.89                   | 17.630            |                    |        |
| 6,300.0  | 6,300.0             | 6,309.0             | 6,308.6             | 13.4            | 11.9        | 73.35                | 76.3                              | -433.9     | 438.2                | 412.9                 | 25.33                   | 17.304            |                    |        |
| 6,377.4  | 6,377.4             | 6,383.1             | 6,382.7             | 13.6            | 12.1        | 73.42                | 76.6                              | -433.6     | 437.9                | 412.3                 | 25.65                   | 17.072            |                    |        |
| 6,400.0  | 6,400.0             | 6,404.6             | 6,404.3             | 13.6            | 12.1        | 73.44                | 76.7                              | -433.6     | 438.0                | 412.2                 | 25.75                   | 17.010            |                    |        |
| 6,500.0  | 6,500.0             | 6,503.4             | 6,503.1             | 13.8            | 12.4        | 73.52                | 77.3                              | -434.1     | 438.6                | 412.4                 | 26.17                   | 16.756            |                    |        |
| 6,600.0  | 6,600.0             | 6,603.8             | 6,603.4             | 14.0            | 12.6        | 73.65                | 78.2                              | -434.4     | 438.9                | 412.3                 | 26.60                   | 16.498            |                    |        |
| 6,700.0  | 6,699.7             | 6,693.0             | 6,692.3             | 14.3            | 12.8        | 75.44                | 84.9                              | -434.1     | 438.7                | 411.7                 | 27.00                   | 16.244            |                    |        |
| 6,736.1  | 6,735.3             | 6,722.3             | 6,721.3             | 14.4            | 12.8        | 76.65                | 89.5                              | -434.1     | 438.6                | 411.4                 | 27.14                   | 16.159            | ES                 |        |
| 6,800.0  | 6,797.3             | 6,773.1             | 6,770.8             | 14.5            | 12.9        | 79.49                | 100.6                             | -433.9     | 439.1                | 411.7                 | 27.37                   | 16.045            | SF                 |        |
| 6,900.0  | 6,890.3             | 6,832.9             | 6,827.8             | 14.8            | 13.0        | 83.63                | 118.5                             | -433.6     | 445.3                | 417.7                 | 27.58                   | 16.145            |                    |        |
| 7,000.0  | 6,976.5             | 6,874.9             | 6,866.8             | 15.1            | 13.2        | 86.05                | 134.2                             | -434.1     | 463.8                | 436.2                 | 27.60                   | 16.801            |                    |        |
| 7,100.0  | 7,053.7             | 6,912.0             | 6,900.4             | 15.5            | 13.2        | 87.00                | 149.9                             | -434.9     | 496.7                | 469.1                 | 27.63                   | 17.976            |                    |        |
| 7,200.0  | 7,120.1             | 6,927.9             | 6,914.5             | 16.1            | 13.3        | 84.13                | 157.2                             | -435.2     | 543.4                | 515.9                 | 27.54                   | 19.734            |                    |        |
| 7,300.0  | 7,173.9             | 6,936.3             | 6,921.9             | 16.8            | 13.3        | 78.80                | 161.1                             | -435.4     | 601.4                | 573.8                 | 27.57                   | 21.816            |                    |        |
| 7,400.0  | 7,213.9             | 6,934.7             | 6,920.5             | 17.8            | 13.3        | 71.03                | 160.4                             | -435.3     | 667.1                | 639.4                 | 27.69                   | 24.093            |                    |        |
| 7,500.0  | 7,239.1             | 6,925.2             | 6,912.1             | 18.8            | 13.3        | 61.92                | 156.0                             | -435.2     | 737.0                | 709.1                 | 27.90                   | 26.417            |                    |        |
| 7,600.0  | 7,248.9             | 6,912.0             | 6,900.4             | 20.1            | 13.2        | 53.00                | 149.9                             | -434.9     | 808.1                | 779.9                 | 28.21                   | 28.642            |                    |        |
| 7,700.0  | 7,250.2             | 6,892.1             | 6,882.4             | 21.4            | 13.2        | 51.02                | 141.3                             | -434.5     | 881.1                | 852.6                 | 28.48                   | 30.943            |                    |        |
| 7,800.0  | 7,251.5             | 6,881.0             | 6,872.4             | 22.8            | 13.2        | 50.11                | 136.6                             | -434.2     | 958.4                | 929.6                 | 28.79                   | 33.285            |                    |        |
| 7,900.0  | 7,252.8             | 6,863.9             | 6,856.7             | 24.2            | 13.1        | 48.72                | 129.8                             | -433.9     | 1,039.1              | 1,010.1               | 28.99                   | 35.837            |                    |        |
| 8,000.0  | 7,254.1             | 6,850.0             | 6,843.8             | 25.8            | 13.1        | 47.63                | 124.6                             | -433.7     | 1,122.5              | 1,093.3               | 29.19                   | 38.454            |                    |        |
| 8,100.0  | 7,255.4             | 6,850.0             | 6,843.8             | 27.4            | 13.1        | 47.63                | 124.6                             | -433.7     | 1,208.3              | 1,178.8               | 29.48                   | 40.992            |                    |        |
| 8,200.0  | 7,256.7             | 6,830.1             | 6,825.2             | 29.1            | 13.0        | 46.12                | 117.6                             | -433.6     | 1,295.6              | 1,266.1               | 29.55                   | 43.840            |                    |        |
| 8,300.0  | 7,258.0             | 6,819.0             | 6,814.7             | 30.8            | 13.0        | 45.30                | 113.9                             | -433.6     | 1,384.6              | 1,354.9               | 29.68                   | 46.646            |                    |        |
| 8,400.0  | 7,259.3             | 6,819.0             | 6,814.7             | 32.6            | 13.0        | 45.30                | 113.9                             | -433.6     | 1,474.8              | 1,445.0               | 29.87                   | 49.376            |                    |        |
| 8,500.0  | 7,260.5             | 6,803.7             | 6,800.2             | 34.4            | 13.0        | 44.21                | 109.1                             | -433.7     | 1,566.0              | 1,536.1               | 29.93                   | 52.322            |                    |        |
| 8,600.0  | 7,261.8             | 6,788.0             | 6,785.2             | 36.3            | 13.0        | 43.13                | 104.6                             | -433.8     | 1,658.2              | 1,628.3               | 29.98                   | 55.311            |                    |        |
| 8,700.0  | 7,263.1             | 6,788.0             | 6,785.2             | 38.1            | 13.0        | 43.13                | 104.6                             | -433.8     | 1,751.1              | 1,720.9               | 30.11                   | 58.152            |                    |        |
| 8,800.0  | 7,264.4             | 6,788.0             | 6,785.2             | 40.0            | 13.0        | 43.13                | 104.6                             | -433.8     | 1,844.6              | 1,814.4               | 30.23                   | 61.025            |                    |        |
| 8,900.0  | 7,265.7             | 6,788.0             | 6,785.2             | 41.9            | 13.0        | 43.13                | 104.6                             | -433.8     | 1,938.8              | 1,908.5               | 30.33                   | 63.924            |                    |        |
| 9,000.0  | 7,267.0             | 6,771.7             | 6,769.5             | 43.8            | 12.9        | 42.05                | 100.3                             | -433.9     | 2,033.4              | 2,003.0               | 30.34                   | 67.010            |                    |        |
| 9,100.0  | 7,268.2             | 6,758.0             | 6,756.2             | 45.8            | 12.9        | 41.17                | 96.9                              | -434.0     | 2,128.5              | 2,098.1               | 30.37                   | 70.091            |                    |        |
| 9,200.0  | 7,269.5             | 6,758.0             | 6,756.2             | 47.7            | 12.9        | 41.17                | 96.9                              | -434.0     | 2,223.9              | 2,193.4               | 30.45                   | 73.035            |                    |        |
| 9,300.0  | 7,270.8             | 6,758.0             | 6,756.2             | 49.7            | 12.9        | 41.16                | 96.9                              | -434.0     | 2,319.7              | 2,289.1               | 30.52                   | 75.994            |                    |        |
| 9,400.0  | 7,272.1             | 6,758.0             | 6,756.2             | 51.6            | 12.9        | 41.16                | 96.9                              | -434.0     | 2,415.8              | 2,385.2               | 30.59                   | 78.964            |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design           |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Totem 5 Pad Sec.8-T2S-R62W - Totem 6 - Totem - Totem 6 |  | Offset Site Error: | 0.0 ft |
|-------------------------|---------------------|---------------------|---------------------|-----------------|-------------|----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--|--|--------------------|--------|
| Survey Program: 100-MWD |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   |  |  | Offset Well Error: | 0.0 ft |
| Reference               |                     | Offset              |                     | Semi Major Axis |             |                      | Distance                          |            |                      |                       |                         |                   | Warning  |  |                    |        |
| Measured Depth (ft)     | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Tooface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |  |  |                    |        |
| 0.0                     | 0.0                 | 13.3                | 13.3                | 0.0             | 0.0         | -104.03              | -163.9                            | -655.8     | 676.0                |                       |                         |                   |  |  |                    |        |
| 100.0                   | 100.0               | 118.6               | 118.6               | 0.2             | 0.1         | -104.11              | -164.6                            | -655.0     | 675.4                | 675.1                 | 0.32                    | 2,113.663         |  |  |                    |        |
| 200.0                   | 200.0               | 219.1               | 219.1               | 0.4             | 0.4         | -104.21              | -165.5                            | -653.8     | 674.4                | 673.7                 | 0.76                    | 890.394           |  |  |                    |        |
| 300.0                   | 300.0               | 318.1               | 318.1               | 0.6             | 0.6         | -104.27              | -166.1                            | -652.7     | 673.5                | 672.4                 | 1.19                    | 567.240           |  |  |                    |        |
| 400.0                   | 400.0               | 417.9               | 417.9               | 0.9             | 0.8         | -104.35              | -166.7                            | -651.7     | 672.7                | 671.1                 | 1.62                    | 415.750           |  |  |                    |        |
| 500.0                   | 500.0               | 518.3               | 518.3               | 1.1             | 1.0         | -104.43              | -167.4                            | -650.7     | 671.9                | 669.8                 | 2.06                    | 326.810           |  |  |                    |        |
| 600.0                   | 600.0               | 618.3               | 618.3               | 1.3             | 1.2         | -104.50              | -168.0                            | -649.7     | 671.1                | 668.6                 | 2.49                    | 269.103           |  |  |                    |        |
| 700.0                   | 700.0               | 719.7               | 719.6               | 1.5             | 1.4         | -104.54              | -168.3                            | -648.6     | 670.1                | 667.2                 | 2.94                    | 228.240           |  |  |                    |        |
| 800.0                   | 800.0               | 821.4               | 821.3               | 1.8             | 1.6         | -104.57              | -168.2                            | -647.3     | 668.9                | 665.5                 | 3.38                    | 197.702           |  |  |                    |        |
| 900.0                   | 900.0               | 922.8               | 922.7               | 2.0             | 1.9         | -104.58              | -168.1                            | -645.9     | 667.4                | 663.6                 | 3.83                    | 174.372           |  |  |                    |        |
| 1,000.0                 | 1,000.0             | 1,021.6             | 1,021.5             | 2.2             | 2.1         | -104.61              | -167.9                            | -644.4     | 666.0                | 661.7                 | 4.25                    | 156.535           |  |  |                    |        |
| 1,100.0                 | 1,100.0             | 1,120.3             | 1,120.2             | 2.4             | 2.3         | -104.60              | -167.6                            | -643.3     | 664.8                | 660.1                 | 4.68                    | 142.073           |  |  |                    |        |
| 1,200.0                 | 1,200.0             | 1,221.6             | 1,221.5             | 2.7             | 2.5         | -104.64              | -167.7                            | -641.9     | 663.5                | 658.4                 | 5.11                    | 129.758           |  |  |                    |        |
| 1,300.0                 | 1,300.0             | 1,320.6             | 1,320.5             | 2.9             | 2.7         | -104.68              | -167.8                            | -640.6     | 662.2                | 656.7                 | 5.54                    | 119.451           |  |  |                    |        |
| 1,400.0                 | 1,400.0             | 1,420.5             | 1,420.3             | 3.1             | 2.9         | -104.71              | -167.8                            | -639.3     | 661.0                | 655.1                 | 5.98                    | 110.592           |  |  |                    |        |
| 1,500.0                 | 1,500.0             | 1,520.6             | 1,520.5             | 3.3             | 3.1         | -104.74              | -167.9                            | -638.0     | 659.8                | 653.4                 | 6.41                    | 102.942           |  |  |                    |        |
| 1,600.0                 | 1,600.0             | 1,619.5             | 1,619.3             | 3.6             | 3.3         | -104.79              | -168.1                            | -636.8     | 658.7                | 651.9                 | 6.84                    | 96.337            |  |  |                    |        |
| 1,700.0                 | 1,700.0             | 1,718.7             | 1,718.6             | 3.8             | 3.5         | -104.84              | -168.4                            | -635.8     | 657.7                | 650.5                 | 7.27                    | 90.517            |  |  |                    |        |
| 1,800.0                 | 1,800.0             | 1,818.7             | 1,818.5             | 4.0             | 3.7         | -104.89              | -168.8                            | -634.7     | 656.8                | 649.1                 | 7.70                    | 85.296            |  |  |                    |        |
| 1,900.0                 | 1,900.0             | 1,917.3             | 1,917.2             | 4.2             | 3.9         | 47.47                | -169.1                            | -633.8     | 655.9                | 647.8                 | 8.08                    | 81.175            |  |  |                    |        |
| 2,000.0                 | 2,000.0             | 2,017.2             | 2,017.0             | 4.3             | 4.1         | 47.43                | -169.5                            | -633.0     | 655.0                | 646.6                 | 8.47                    | 77.369            |  |  |                    |        |
| 2,100.0                 | 2,100.0             | 2,117.1             | 2,117.0             | 4.5             | 4.3         | 47.39                | -169.8                            | -632.2     | 654.3                | 645.4                 | 8.86                    | 73.844            |  |  |                    |        |
| 2,200.0                 | 2,200.0             | 2,217.9             | 2,217.7             | 4.7             | 4.6         | 47.38                | -169.9                            | -631.4     | 653.4                | 644.1                 | 9.26                    | 70.565            |  |  |                    |        |
| 2,300.0                 | 2,300.0             | 2,318.2             | 2,318.1             | 4.9             | 4.8         | 47.41                | -169.5                            | -630.6     | 652.5                | 642.8                 | 9.66                    | 67.526            |  |  |                    |        |
| 2,400.0                 | 2,400.0             | 2,420.0             | 2,419.8             | 5.1             | 5.0         | 47.47                | -168.7                            | -629.8     | 651.3                | 641.3                 | 10.07                   | 64.672            |  |  |                    |        |
| 2,500.0                 | 2,500.0             | 2,521.1             | 2,520.9             | 5.3             | 5.2         | 47.60                | -167.1                            | -629.0     | 650.0                | 639.5                 | 10.48                   | 62.011            |  |  |                    |        |
| 2,600.0                 | 2,600.0             | 2,622.1             | 2,621.8             | 5.5             | 5.4         | 47.79                | -164.8                            | -628.1     | 648.5                | 637.6                 | 10.89                   | 59.526            |  |  |                    |        |
| 2,700.0                 | 2,700.0             | 2,723.6             | 2,723.4             | 5.7             | 5.6         | 48.00                | -162.2                            | -627.2     | 646.9                | 635.6                 | 11.31                   | 57.204            |  |  |                    |        |
| 2,800.0                 | 2,800.0             | 2,826.2             | 2,825.9             | 5.9             | 5.9         | 48.17                | -160.0                            | -625.8     | 644.9                | 633.2                 | 11.72                   | 55.033            |  |  |                    |        |
| 2,900.0                 | 2,900.0             | 2,928.8             | 2,928.4             | 6.1             | 6.1         | 48.30                | -158.2                            | -623.8     | 642.5                | 630.3                 | 12.13                   | 52.965            |  |  |                    |        |
| 3,000.0                 | 3,000.0             | 3,031.8             | 3,031.4             | 6.3             | 6.3         | 48.42                | -156.3                            | -621.5     | 639.7                | 627.2                 | 12.55                   | 50.975            |  |  |                    |        |
| 3,100.0                 | 3,100.0             | 3,138.2             | 3,137.8             | 6.5             | 6.5         | 48.53                | -154.4                            | -618.2     | 636.2                | 623.2                 | 12.98                   | 49.026            |  |  |                    |        |
| 3,200.0                 | 3,200.0             | 3,249.1             | 3,248.5             | 6.7             | 6.8         | 48.58                | -152.8                            | -613.2     | 631.4                | 618.0                 | 13.41                   | 47.089            |  |  |                    |        |
| 3,300.0                 | 3,300.0             | 3,359.1             | 3,358.3             | 6.9             | 7.0         | 48.55                | -151.5                            | -605.9     | 624.5                | 610.7                 | 13.84                   | 45.133            |  |  |                    |        |
| 3,400.0                 | 3,400.0             | 3,459.9             | 3,458.8             | 7.1             | 7.2         | 48.45                | -150.8                            | -598.3     | 616.9                | 602.6                 | 14.26                   | 43.271            |  |  |                    |        |
| 3,500.0                 | 3,500.0             | 3,557.6             | 3,556.2             | 7.3             | 7.5         | 48.31                | -150.7                            | -590.9     | 609.4                | 594.7                 | 14.67                   | 41.545            |  |  |                    |        |
| 3,600.0                 | 3,600.0             | 3,655.3             | 3,653.6             | 7.5             | 7.7         | 48.10                | -151.2                            | -583.7     | 602.3                | 587.2                 | 15.08                   | 39.935            |  |  |                    |        |
| 3,700.0                 | 3,700.0             | 3,753.1             | 3,751.2             | 7.7             | 7.9         | 47.83                | -152.5                            | -576.7     | 595.5                | 580.0                 | 15.50                   | 38.425            |  |  |                    |        |
| 3,800.0                 | 3,800.0             | 3,852.4             | 3,850.2             | 8.0             | 8.1         | 47.49                | -154.4                            | -569.6     | 589.0                | 573.1                 | 15.92                   | 36.997            |  |  |                    |        |
| 3,900.0                 | 3,900.0             | 3,950.4             | 3,947.9             | 8.2             | 8.3         | 47.14                | -156.3                            | -562.6     | 582.5                | 566.2                 | 16.34                   | 35.642            |  |  |                    |        |
| 4,000.0                 | 4,000.0             | 4,045.5             | 4,042.9             | 8.4             | 8.5         | 46.85                | -157.9                            | -556.6     | 576.7                | 559.9                 | 16.76                   | 34.402            |  |  |                    |        |
| 4,100.0                 | 4,100.0             | 4,141.8             | 4,139.0             | 8.6             | 8.8         | 46.62                | -158.9                            | -551.4     | 571.7                | 554.5                 | 17.18                   | 33.270            |  |  |                    |        |
| 4,200.0                 | 4,200.0             | 4,239.0             | 4,236.1             | 8.8             | 9.0         | 46.45                | -159.4                            | -546.8     | 567.2                | 549.5                 | 17.61                   | 32.212            |  |  |                    |        |
| 4,300.0                 | 4,300.0             | 4,334.0             | 4,331.0             | 9.0             | 9.2         | 46.36                | -159.4                            | -543.0     | 563.3                | 545.2                 | 18.03                   | 31.247            |  |  |                    |        |
| 4,400.0                 | 4,400.0             | 4,428.8             | 4,425.8             | 9.2             | 9.4         | 46.32                | -159.2                            | -540.4     | 560.4                | 542.0                 | 18.44                   | 30.387            |  |  |                    |        |
| 4,500.0                 | 4,500.0             | 4,526.8             | 4,523.8             | 9.5             | 9.6         | 46.29                | -158.9                            | -538.2     | 558.0                | 539.2                 | 18.86                   | 29.583            |  |  |                    |        |
| 4,600.0                 | 4,600.0             | 4,624.0             | 4,621.0             | 9.7             | 9.8         | 46.30                | -158.6                            | -536.6     | 556.2                | 536.9                 | 19.28                   | 28.842            |  |  |                    |        |
| 4,700.0                 | 4,700.0             | 4,723.4             | 4,720.3             | 9.9             | 10.0        | 46.32                | -158.1                            | -535.2     | 554.6                | 534.9                 | 19.71                   | 28.138            |  |  |                    |        |
| 4,800.0                 | 4,800.0             | 4,822.9             | 4,819.8             | 10.1            | 10.2        | 46.35                | -157.5                            | -534.0     | 553.1                | 533.0                 | 20.14                   | 27.469            |  |  |                    |        |
| 4,900.0                 | 4,900.0             | 4,922.6             | 4,919.5             | 10.3            | 10.4        | 46.39                | -157.0                            | -532.8     | 551.7                | 531.2                 | 20.56                   | 26.829            |  |  |                    |        |
| 5,000.0                 | 5,000.0             | 5,022.4             | 5,019.3             | 10.5            | 10.6        | 46.44                | -156.3                            | -531.7     | 550.3                | 529.3                 | 20.99                   | 26.214            |  |  |                    |        |
| 5,100.0                 | 5,100.0             | 5,121.5             | 5,118.4             | 10.8            | 10.8        | 46.51                | -155.4                            | -530.7     | 549.1                | 527.7                 | 21.42                   | 25.632            |  |  |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design Totem 5 Pad Sec.8-T2S-R62W - Totem 6 - Totem - Totem 6 |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.0 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|--------|
| Survey Program: 100-MWD  |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.0 ft |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                      | Distance                          |            |                      |                       |                         |                   | Warning            |        |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Tooface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |        |
| 5,200.0  | 5,200.0             | 5,222.3             | 5,219.2             | 11.0            | 11.1        | 46.60                | -154.4                            | -529.8     | 547.8                | 525.9                 | 21.85                   | 25.067            |                    |        |
| 5,300.0  | 5,300.0             | 5,321.3             | 5,318.2             | 11.2            | 11.3        | 46.70                | -153.3                            | -528.9     | 546.5                | 524.2                 | 22.28                   | 24.531            |                    |        |
| 5,400.0  | 5,400.0             | 5,419.7             | 5,416.6             | 11.4            | 11.5        | 46.79                | -152.3                            | -528.3     | 545.5                | 522.8                 | 22.70                   | 24.029            |                    |        |
| 5,500.0  | 5,500.0             | 5,519.2             | 5,516.1             | 11.6            | 11.7        | 46.87                | -151.5                            | -527.8     | 544.7                | 521.6                 | 23.13                   | 23.553            |                    |        |
| 5,600.0  | 5,600.0             | 5,617.6             | 5,614.5             | 11.8            | 11.9        | 46.93                | -151.0                            | -527.3     | 544.0                | 520.4                 | 23.55                   | 23.102            |                    |        |
| 5,644.4  | 5,644.4             | 5,659.4             | 5,656.2             | 11.9            | 12.0        | 46.95                | -150.8                            | -527.3     | 543.9                | 520.1                 | 23.73                   | 22.919            |                    |        |
| 5,700.0  | 5,700.0             | 5,712.4             | 5,709.2             | 12.1            | 12.1        | 46.99                | -150.6                            | -527.6     | 544.0                | 520.1                 | 23.96                   | 22.704            |                    |        |
| 5,800.0  | 5,800.0             | 5,811.9             | 5,808.8             | 12.3            | 12.3        | 47.09                | -149.9                            | -528.5     | 544.5                | 520.2                 | 24.39                   | 22.325            |                    |        |
| 5,900.0  | 5,900.0             | 5,910.9             | 5,907.7             | 12.5            | 12.5        | 47.25                | -148.8                            | -529.6     | 545.2                | 520.4                 | 24.82                   | 21.967            |                    |        |
| 6,000.0  | 6,000.0             | 6,011.8             | 6,008.6             | 12.7            | 12.7        | 47.44                | -147.4                            | -530.8     | 545.9                | 520.7                 | 25.25                   | 21.621            |                    |        |
| 6,100.0  | 6,100.0             | 6,116.3             | 6,113.1             | 12.9            | 12.9        | 47.60                | -146.1                            | -531.5     | 546.1                | 520.4                 | 25.69                   | 21.261            |                    |        |
| 6,200.0  | 6,200.0             | 6,217.7             | 6,214.5             | 13.2            | 13.1        | 47.69                | -145.4                            | -531.3     | 545.6                | 519.5                 | 26.11                   | 20.896            |                    |        |
| 6,300.0  | 6,300.0             | 6,315.0             | 6,311.8             | 13.4            | 13.3        | 47.78                | -144.7                            | -531.4     | 545.5                | 518.9                 | 26.54                   | 20.557            |                    |        |
| 6,343.7  | 6,343.7             | 6,359.4             | 6,356.2             | 13.5            | 13.4        | 47.82                | -144.3                            | -531.6     | 545.4                | 518.7                 | 26.72                   | 20.410            |                    |        |
| 6,400.0  | 6,400.0             | 6,416.4             | 6,413.2             | 13.6            | 13.5        | 47.87                | -143.9                            | -531.6     | 545.3                | 518.4                 | 26.97                   | 20.222            |                    |        |
| 6,500.0  | 6,500.0             | 6,516.5             | 6,513.3             | 13.8            | 13.7        | 47.98                | -143.0                            | -531.7     | 545.0                | 517.6                 | 27.40                   | 19.895            |                    |        |
| 6,556.5  | 6,556.5             | 6,571.5             | 6,568.3             | 14.0            | 13.8        | 48.04                | -142.5                            | -531.8     | 545.0                | 517.3                 | 27.64                   | 19.719            |                    |        |
| 6,600.0  | 6,600.0             | 6,614.9             | 6,611.7             | 14.0            | 13.9        | 48.09                | -142.1                            | -532.0     | 545.0                | 517.2                 | 27.82                   | 19.588            |                    |        |
| 6,700.0  | 6,699.7             | 6,717.9             | 6,714.7             | 14.3            | 14.1        | 49.21                | -141.3                            | -532.0     | 540.8                | 512.5                 | 28.26                   | 19.135            |                    |        |
| 6,800.0  | 6,797.3             | 6,814.7             | 6,811.5             | 14.5            | 14.3        | 51.97                | -141.0                            | -531.6     | 526.6                | 497.9                 | 28.69                   | 18.352            |                    |        |
| 6,900.0  | 6,890.3             | 6,907.2             | 6,904.0             | 14.8            | 14.5        | 56.84                | -140.5                            | -531.5     | 504.1                | 474.9                 | 29.14                   | 17.299            |                    |        |
| 7,000.0  | 6,976.5             | 6,996.0             | 6,992.8             | 15.1            | 14.7        | 63.97                | -139.8                            | -531.1     | 475.7                | 446.1                 | 29.63                   | 16.055            |                    |        |
| 7,100.0  | 7,053.7             | 7,073.6             | 7,070.3             | 15.5            | 14.9        | 72.57                | -139.5                            | -530.4     | 445.7                | 415.5                 | 30.21                   | 14.755            |                    |        |
| 7,200.0  | 7,120.1             | 7,139.7             | 7,136.5             | 16.1            | 15.0        | 81.48                | -139.3                            | -529.8     | 420.3                | 389.3                 | 30.94                   | 13.581            |                    |        |
| 7,300.0  | 7,173.9             | 7,193.1             | 7,189.9             | 16.8            | 15.1        | 89.00                | -139.2                            | -529.2     | 406.8                | 374.9                 | 31.86                   | 12.766            |                    |        |
| 7,326.0  | 7,185.7             | 7,204.7             | 7,201.5             | 17.1            | 15.1        | 90.52                | -139.1                            | -529.1     | 406.1                | 374.0                 | 32.13                   | 12.638            | CC, ES             |        |
| 7,400.0  | 7,213.9             | 7,232.3             | 7,229.1             | 17.8            | 15.2        | 93.60                | -139.1                            | -528.8     | 411.9                | 379.1                 | 32.84                   | 12.545            | SF                 |        |
| 7,500.0  | 7,239.1             | 7,256.8             | 7,253.6             | 18.8            | 15.3        | 94.40                | -139.0                            | -528.6     | 438.7                | 405.1                 | 33.62                   | 13.049            |                    |        |
| 7,600.0  | 7,248.9             | 7,265.9             | 7,262.7             | 20.1            | 15.3        | 90.91                | -139.0                            | -528.5     | 485.3                | 451.2                 | 34.09                   | 14.237            |                    |        |
| 7,700.0  | 7,250.2             | 7,266.6             | 7,263.4             | 21.4            | 15.3        | 90.76                | -139.0                            | -528.5     | 546.6                | 512.4                 | 34.27                   | 15.952            |                    |        |
| 7,800.0  | 7,251.5             | 7,267.3             | 7,264.1             | 22.8            | 15.3        | 90.86                | -139.0                            | -528.5     | 618.1                | 583.8                 | 34.30                   | 18.020            |                    |        |
| 7,900.0  | 7,252.8             | 7,268.0             | 7,264.8             | 24.2            | 15.3        | 90.95                | -139.0                            | -528.5     | 696.7                | 662.4                 | 34.28                   | 20.325            |                    |        |
| 8,000.0  | 7,254.1             | 7,268.7             | 7,265.4             | 25.8            | 15.3        | 91.05                | -139.0                            | -528.5     | 780.2                | 745.9                 | 34.23                   | 22.794            |                    |        |
| 8,100.0  | 7,255.4             | 7,269.4             | 7,266.1             | 27.4            | 15.3        | 91.15                | -139.0                            | -528.5     | 867.1                | 833.0                 | 34.17                   | 25.379            |                    |        |
| 8,200.0  | 7,256.7             | 7,270.0             | 7,266.8             | 29.1            | 15.3        | 91.24                | -139.0                            | -528.5     | 956.7                | 922.6                 | 34.11                   | 28.048            |                    |        |
| 8,300.0  | 7,258.0             | 7,270.7             | 7,267.5             | 30.8            | 15.3        | 91.34                | -139.0                            | -528.5     | 1,048.1              | 1,014.0               | 34.05                   | 30.778            |                    |        |
| 8,400.0  | 7,259.3             | 7,271.4             | 7,268.2             | 32.6            | 15.3        | 91.44                | -139.0                            | -528.4     | 1,141.0              | 1,107.0               | 34.00                   | 33.553            |                    |        |
| 8,500.0  | 7,260.5             | 7,272.1             | 7,268.9             | 34.4            | 15.3        | 91.53                | -139.0                            | -528.4     | 1,234.9              | 1,201.0               | 33.96                   | 36.362            |                    |        |
| 8,600.0  | 7,261.8             | 7,272.8             | 7,269.6             | 36.3            | 15.3        | 91.63                | -139.0                            | -528.4     | 1,329.8              | 1,295.9               | 33.93                   | 39.198            |                    |        |
| 8,700.0  | 7,263.1             | 7,273.5             | 7,270.3             | 38.1            | 15.3        | 91.73                | -139.0                            | -528.4     | 1,425.3              | 1,391.5               | 33.89                   | 42.053            |                    |        |
| 8,800.0  | 7,264.4             | 7,274.2             | 7,271.0             | 40.0            | 15.3        | 91.82                | -139.0                            | -528.4     | 1,521.5              | 1,487.6               | 33.87                   | 44.924            |                    |        |
| 8,900.0  | 7,265.7             | 7,274.9             | 7,271.7             | 41.9            | 15.3        | 91.92                | -139.0                            | -528.4     | 1,618.1              | 1,584.2               | 33.85                   | 47.806            |                    |        |
| 9,000.0  | 7,267.0             | 7,275.6             | 7,272.4             | 43.8            | 15.3        | 92.02                | -139.0                            | -528.4     | 1,715.1              | 1,681.2               | 33.83                   | 50.698            |                    |        |
| 9,100.0  | 7,268.2             | 7,276.3             | 7,273.1             | 45.8            | 15.3        | 92.11                | -139.0                            | -528.4     | 1,812.4              | 1,778.6               | 33.82                   | 53.596            |                    |        |
| 9,200.0  | 7,269.5             | 7,277.0             | 7,273.7             | 47.7            | 15.3        | 92.21                | -139.0                            | -528.4     | 1,910.0              | 1,876.2               | 33.81                   | 56.499            |                    |        |
| 9,300.0  | 7,270.8             | 7,277.7             | 7,274.4             | 49.7            | 15.3        | 92.31                | -139.0                            | -528.4     | 2,007.8              | 1,974.0               | 33.80                   | 59.406            |                    |        |
| 9,400.0  | 7,272.1             | 7,278.4             | 7,275.1             | 51.6            | 15.3        | 92.40                | -139.0                            | -528.4     | 2,105.8              | 2,072.0               | 33.79                   | 62.314            |                    |        |
| 9,500.0  | 7,273.4             | 7,279.1             | 7,275.8             | 53.6            | 15.3        | 92.50                | -139.0                            | -528.4     | 2,204.0              | 2,170.3               | 33.79                   | 65.223            |                    |        |
| 9,600.0  | 7,274.7             | 7,279.8             | 7,276.5             | 55.6            | 15.3        | 92.60                | -139.0                            | -528.4     | 2,302.4              | 2,268.6               | 33.79                   | 68.133            |                    |        |
| 9,700.0  | 7,275.9             | 7,280.5             | 7,277.2             | 57.6            | 15.3        | 92.69                | -139.0                            | -528.4     | 2,400.9              | 2,367.1               | 33.80                   | 71.042            |                    |        |
| 9,800.0  | 7,277.2             | 7,281.2             | 7,277.9             | 59.5            | 15.3        | 92.79                | -139.0                            | -528.4     | 2,499.5              | 2,465.7               | 33.80                   | 73.950            |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design Totem 5 Pad Sec.8-T2S-R62W - Totem 9 - totem - Totem 9 |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.0 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|--------|
| Survey Program: 100-MWD  |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.0 ft |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                      | Distance                          |            |                      |                       |                         |                   | Warning            |        |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Tooface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |        |
| 7,000.0  | 6,976.5             | 7,019.3             | 7,018.3             | 15.1            | 14.6        | 42.55                | -1,187.9                          | -2,290.9   | 2,481.4              | 2,451.7               | 29.62                   | 83.786            |                    |        |
| 7,100.0  | 7,053.7             | 7,093.0             | 7,092.0             | 15.5            | 14.8        | 47.16                | -1,188.1                          | -2,290.6   | 2,430.8              | 2,400.7               | 30.05                   | 80.887            |                    |        |
| 7,200.0  | 7,120.1             | 7,156.1             | 7,155.1             | 16.1            | 14.9        | 53.22                | -1,188.3                          | -2,290.4   | 2,372.1              | 2,341.6               | 30.52                   | 77.726            |                    |        |
| 7,300.0  | 7,173.9             | 7,208.9             | 7,207.9             | 16.8            | 15.0        | 60.86                | -1,188.6                          | -2,290.3   | 2,307.2              | 2,276.1               | 31.04                   | 74.324            |                    |        |
| 7,400.0  | 7,213.9             | 7,253.5             | 7,252.6             | 17.8            | 15.1        | 69.98                | -1,188.9                          | -2,290.2   | 2,238.0              | 2,206.3               | 31.65                   | 70.703            |                    |        |
| 7,500.0  | 7,239.1             | 7,281.6             | 7,280.6             | 18.8            | 15.2        | 79.76                | -1,189.0                          | -2,290.0   | 2,166.7              | 2,134.3               | 32.36                   | 66.955            |                    |        |
| 7,600.0  | 7,248.9             | 7,292.5             | 7,291.5             | 20.1            | 15.2        | 89.24                | -1,189.1                          | -2,290.0   | 2,095.5              | 2,062.3               | 33.18                   | 63.156            |                    |        |
| 7,700.0  | 7,250.2             | 7,294.0             | 7,293.1             | 21.4            | 15.2        | 89.68                | -1,189.1                          | -2,289.9   | 2,026.4              | 1,992.3               | 34.12                   | 59.392            |                    |        |
| 7,800.0  | 7,251.5             | 7,295.5             | 7,294.6             | 22.8            | 15.2        | 89.73                | -1,189.1                          | -2,289.9   | 1,959.9              | 1,924.7               | 35.22                   | 55.647            |                    |        |
| 7,900.0  | 7,252.8             | 7,297.1             | 7,296.1             | 24.2            | 15.2        | 89.79                | -1,189.1                          | -2,289.9   | 1,896.4              | 1,859.8               | 36.51                   | 51.937            |                    |        |
| 8,000.0  | 7,254.1             | 7,298.6             | 7,297.6             | 25.8            | 15.2        | 89.85                | -1,189.1                          | -2,289.9   | 1,836.1              | 1,798.1               | 37.99                   | 48.327            |                    |        |
| 8,100.0  | 7,255.4             | 7,300.1             | 7,299.1             | 27.4            | 15.2        | 89.91                | -1,189.1                          | -2,289.9   | 1,779.4              | 1,739.7               | 39.65                   | 44.872            |                    |        |
| 8,200.0  | 7,256.7             | 7,301.5             | 7,300.6             | 29.1            | 15.2        | 89.97                | -1,189.1                          | -2,289.9   | 1,726.6              | 1,685.1               | 41.48                   | 41.621            |                    |        |
| 8,300.0  | 7,258.0             | 7,303.0             | 7,302.0             | 30.8            | 15.2        | 90.02                | -1,189.1                          | -2,289.9   | 1,678.1              | 1,634.6               | 43.46                   | 38.609            |                    |        |
| 8,400.0  | 7,259.3             | 7,300.0             | 7,299.0             | 32.6            | 15.2        | 89.91                | -1,189.1                          | -2,289.9   | 1,634.3              | 1,588.8               | 45.56                   | 35.869            |                    |        |
| 8,500.0  | 7,260.5             | 7,300.0             | 7,299.0             | 34.4            | 15.2        | 89.91                | -1,189.1                          | -2,289.9   | 1,595.6              | 1,547.9               | 47.77                   | 33.404            |                    |        |
| 8,600.0  | 7,261.8             | 7,305.6             | 7,304.6             | 36.3            | 15.2        | 90.12                | -1,189.1                          | -2,289.9   | 1,562.4              | 1,512.3               | 50.05                   | 31.217            |                    |        |
| 8,700.0  | 7,263.1             | 7,306.8             | 7,305.8             | 38.1            | 15.2        | 90.17                | -1,189.1                          | -2,289.9   | 1,534.9              | 1,482.5               | 52.35                   | 29.322            |                    |        |
| 8,800.0  | 7,264.4             | 7,308.0             | 7,307.0             | 40.0            | 15.2        | 90.21                | -1,189.1                          | -2,289.9   | 1,513.6              | 1,458.9               | 54.63                   | 27.706            |                    |        |
| 8,900.0  | 7,265.7             | 7,309.2             | 7,308.2             | 41.9            | 15.2        | 90.26                | -1,189.1                          | -2,289.9   | 1,498.6              | 1,441.8               | 56.85                   | 26.359            |                    |        |
| 9,000.0  | 7,267.0             | 7,310.5             | 7,309.5             | 43.8            | 15.2        | 90.31                | -1,189.1                          | -2,289.8   | 1,490.2              | 1,431.2               | 58.98                   | 25.268            |                    |        |
| 9,075.2  | 7,267.9             | 7,311.4             | 7,310.4             | 45.3            | 15.2        | 90.35                | -1,189.1                          | -2,289.8   | 1,488.3              | 1,427.8               | 60.49                   | 24.606            | CC                 |        |
| 9,100.0  | 7,268.2             | 7,311.7             | 7,310.8             | 45.8            | 15.2        | 90.36                | -1,189.1                          | -2,289.8   | 1,488.5              | 1,427.6               | 60.96                   | 24.418            | ES                 |        |
| 9,200.0  | 7,269.5             | 7,313.0             | 7,312.1             | 47.7            | 15.3        | 90.41                | -1,189.1                          | -2,289.8   | 1,493.5              | 1,430.8               | 62.77                   | 23.794            |                    |        |
| 9,300.0  | 7,270.8             | 7,314.3             | 7,313.4             | 49.7            | 15.3        | 90.46                | -1,189.2                          | -2,289.8   | 1,505.2              | 1,440.8               | 64.38                   | 23.378            |                    |        |
| 9,400.0  | 7,272.1             | 7,315.7             | 7,314.7             | 51.6            | 15.3        | 90.51                | -1,189.2                          | -2,289.8   | 1,523.3              | 1,457.6               | 65.78                   | 23.156            |                    |        |
| 9,500.0  | 7,273.4             | 7,317.1             | 7,316.1             | 53.6            | 15.3        | 90.56                | -1,189.2                          | -2,289.8   | 1,547.7              | 1,480.8               | 66.97                   | 23.112            | SF                 |        |
| 9,600.0  | 7,274.7             | 7,318.5             | 7,317.5             | 55.6            | 15.3        | 90.62                | -1,189.2                          | -2,289.8   | 1,578.1              | 1,510.2               | 67.94                   | 23.229            |                    |        |
| 9,700.0  | 7,275.9             | 7,319.9             | 7,318.9             | 57.6            | 15.3        | 90.67                | -1,189.2                          | -2,289.8   | 1,614.1              | 1,545.4               | 68.70                   | 23.495            |                    |        |
| 9,800.0  | 7,277.2             | 7,321.4             | 7,320.4             | 59.5            | 15.3        | 90.73                | -1,189.2                          | -2,289.8   | 1,655.4              | 1,586.1               | 69.28                   | 23.895            |                    |        |
| 9,900.0  | 7,278.5             | 7,322.9             | 7,321.9             | 61.5            | 15.3        | 90.79                | -1,189.2                          | -2,289.8   | 1,701.5              | 1,631.9               | 69.68                   | 24.418            |                    |        |
| 10,000.0   | 7,279.8             | 7,324.4             | 7,323.4             | 63.5            | 15.3        | 90.85                | -1,189.2                          | -2,289.8   | 1,752.2              | 1,682.2               | 69.94                   | 25.052            |                    |        |
| 10,100.0   | 7,281.0             | 7,326.0             | 7,325.0             | 65.6            | 15.3        | 90.91                | -1,189.2                          | -2,289.8   | 1,807.0              | 1,736.9               | 70.07                   | 25.786            |                    |        |
| 10,200.0   | 7,282.3             | 7,327.6             | 7,326.6             | 67.6            | 15.3        | 90.97                | -1,189.2                          | -2,289.8   | 1,865.5              | 1,795.4               | 70.10                   | 26.612            |                    |        |
| 10,300.0   | 7,283.6             | 7,329.2             | 7,328.2             | 69.6            | 15.3        | 91.03                | -1,189.2                          | -2,289.8   | 1,927.4              | 1,857.4               | 70.03                   | 27.521            |                    |        |
| 10,400.0   | 7,284.9             | 7,330.9             | 7,329.9             | 71.6            | 15.3        | 91.09                | -1,189.2                          | -2,289.8   | 1,992.4              | 1,922.5               | 69.90                   | 28.506            |                    |        |
| 10,410.7   | 7,285.0             | 7,331.0             | 7,330.1             | 71.8            | 15.3        | 91.10                | -1,189.2                          | -2,289.8   | 1,999.6              | 1,929.7               | 69.87                   | 28.617            |                    |        |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design            |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Site Error:   | 0.0 ft |                    |        |
|--------------------------|---------------------|---------------------|---------------------|-----------------|-------------|----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--|--------|--------------------|--------|
| Survey Program: 1185-MWD |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | TOTEM 7 PAD SEC.8-T2S-R62W - TOTEM 7 - Totem - 7 Final Surveys |        | Offset Well Error: | 0.0 ft |
| Reference                |                     | Offset              |                     | Semi Major Axis |             |                      | Distance                          |            |                      |                       |                         |                   | Warning  |        |                    |        |
| Measured Depth (ft)      | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Tooface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |  |        |                    |        |
| 0.0                      | 0.0                 | 3.5                 | 3.5                 | 0.0             | 0.0         | -89.06               | 3.7                               | -223.7     | 223.7                |                       |                         |                   |  |        |                    |        |
| 100.0                    | 100.0               | 103.7               | 103.7               | 0.2             | 0.1         | -89.06               | 3.7                               | -223.6     | 223.6                | 223.4                 | 0.29                    | 758.610           |  |        |                    |        |
| 200.0                    | 200.0               | 203.8               | 203.8               | 0.4             | 0.2         | -89.05               | 3.7                               | -223.5     | 223.5                | 222.9                 | 0.63                    | 354.446           |  |        |                    |        |
| 300.0                    | 300.0               | 304.0               | 304.0               | 0.6             | 0.3         | -89.03               | 3.8                               | -223.3     | 223.4                | 222.4                 | 0.97                    | 231.101           |  |        |                    |        |
| 400.0                    | 400.0               | 404.1               | 404.1               | 0.9             | 0.4         | -89.00               | 3.9                               | -223.1     | 223.1                | 221.8                 | 1.30                    | 171.320           |  |        |                    |        |
| 500.0                    | 500.0               | 504.3               | 504.3               | 1.1             | 0.6         | -88.97               | 4.0                               | -222.8     | 222.8                | 221.2                 | 1.64                    | 136.010           |  |        |                    |        |
| 600.0                    | 600.0               | 604.4               | 604.4               | 1.3             | 0.7         | -88.93               | 4.2                               | -222.4     | 222.4                | 220.5                 | 1.97                    | 112.680           |  |        |                    |        |
| 700.0                    | 700.0               | 704.6               | 704.6               | 1.5             | 0.8         | -88.88               | 4.3                               | -222.0     | 222.0                | 219.7                 | 2.31                    | 96.105            |  |        |                    |        |
| 800.0                    | 800.0               | 804.7               | 804.7               | 1.8             | 0.9         | -88.83               | 4.5                               | -221.4     | 221.5                | 218.8                 | 2.65                    | 83.713            |  |        |                    |        |
| 900.0                    | 900.0               | 904.9               | 904.9               | 2.0             | 1.0         | -88.76               | 4.8                               | -220.9     | 220.9                | 217.9                 | 2.98                    | 74.090            |  |        |                    |        |
| 1,000.0                  | 1,000.0             | 1,005.0             | 1,005.0             | 2.2             | 1.1         | -88.69               | 5.0                               | -220.2     | 220.3                | 216.9                 | 3.32                    | 66.394            |  |        |                    |        |
| 1,100.0                  | 1,100.0             | 1,105.2             | 1,105.1             | 2.4             | 1.2         | -88.61               | 5.3                               | -219.5     | 219.6                | 215.9                 | 3.65                    | 60.096            |  |        |                    |        |
| 1,200.0                  | 1,200.0             | 1,205.3             | 1,205.3             | 2.7             | 1.4         | -88.52               | 5.6                               | -218.7     | 218.8                | 214.8                 | 4.01                    | 54.538            |  |        |                    |        |
| 1,300.0                  | 1,300.0             | 1,305.4             | 1,305.3             | 2.9             | 1.6         | -88.41               | 6.1                               | -217.9     | 217.9                | 213.5                 | 4.46                    | 48.906            |  |        |                    |        |
| 1,400.0                  | 1,400.0             | 1,405.3             | 1,405.3             | 3.1             | 1.8         | -88.26               | 6.6                               | -217.0     | 217.1                | 212.2                 | 4.89                    | 44.363            |  |        |                    |        |
| 1,500.0                  | 1,500.0             | 1,504.9             | 1,504.9             | 3.3             | 2.0         | -88.18               | 6.9                               | -216.3     | 216.4                | 211.0                 | 5.32                    | 40.705            |  |        |                    |        |
| 1,600.0                  | 1,600.0             | 1,604.6             | 1,604.6             | 3.6             | 2.2         | -88.19               | 6.8                               | -215.7     | 215.8                | 210.1                 | 5.74                    | 37.617            |  |        |                    |        |
| 1,700.0                  | 1,700.0             | 1,704.3             | 1,704.3             | 3.8             | 2.4         | -88.19               | 6.8                               | -215.3     | 215.4                | 209.2                 | 6.16                    | 34.986            |  |        |                    |        |
| 1,800.0                  | 1,800.0             | 1,804.2             | 1,804.2             | 4.0             | 2.6         | -88.15               | 6.9                               | -214.9     | 215.1                | 208.5                 | 6.58                    | 32.679            |  |        |                    |        |
| 1,900.0                  | 1,900.0             | 1,904.4             | 1,904.4             | 4.2             | 2.8         | 64.37                | 7.2                               | -214.6     | 214.6                | 207.6                 | 6.97                    | 30.800            |  |        |                    |        |
| 2,000.0                  | 2,000.0             | 2,004.6             | 2,004.5             | 4.3             | 3.0         | 64.54                | 7.7                               | -214.1     | 214.1                | 206.7                 | 7.36                    | 29.094            |  |        |                    |        |
| 2,100.0                  | 2,100.0             | 2,104.6             | 2,104.5             | 4.5             | 3.2         | 64.72                | 8.2                               | -213.6     | 213.5                | 205.8                 | 7.75                    | 27.543            |  |        |                    |        |
| 2,200.0                  | 2,200.0             | 2,205.0             | 2,205.0             | 4.7             | 3.4         | 64.90                | 8.7                               | -213.0     | 212.9                | 204.8                 | 8.15                    | 26.123            |  |        |                    |        |
| 2,300.0                  | 2,300.0             | 2,305.9             | 2,305.8             | 4.9             | 3.7         | 65.11                | 9.2                               | -212.1     | 211.9                | 203.4                 | 8.55                    | 24.782            |  |        |                    |        |
| 2,400.0                  | 2,400.0             | 2,405.7             | 2,405.6             | 5.1             | 3.9         | 65.34                | 9.9                               | -210.9     | 210.7                | 201.8                 | 8.95                    | 23.535            |  |        |                    |        |
| 2,500.0                  | 2,500.0             | 2,504.9             | 2,504.9             | 5.3             | 4.1         | 65.63                | 10.7                              | -210.0     | 209.8                | 200.5                 | 9.36                    | 22.424            |  |        |                    |        |
| 2,600.0                  | 2,600.0             | 2,604.7             | 2,604.6             | 5.5             | 4.3         | 65.98                | 11.8                              | -209.4     | 209.2                | 199.4                 | 9.76                    | 21.423            |  |        |                    |        |
| 2,700.0                  | 2,700.0             | 2,704.6             | 2,704.5             | 5.7             | 4.5         | 66.40                | 13.2                              | -208.8     | 208.6                | 198.4                 | 10.17                   | 20.503            |  |        |                    |        |
| 2,800.0                  | 2,800.0             | 2,804.6             | 2,804.5             | 5.9             | 4.7         | 66.82                | 14.5                              | -208.3     | 208.1                | 197.5                 | 10.58                   | 19.665            |  |        |                    |        |
| 2,900.0                  | 2,900.0             | 2,904.6             | 2,904.5             | 6.1             | 4.9         | 67.16                | 15.5                              | -207.7     | 207.5                | 196.5                 | 10.99                   | 18.885            |  |        |                    |        |
| 3,000.0                  | 3,000.0             | 3,004.5             | 3,004.4             | 6.3             | 5.1         | 67.54                | 16.7                              | -207.1     | 207.0                | 195.6                 | 11.40                   | 18.157            |  |        |                    |        |
| 3,100.0                  | 3,100.0             | 3,104.3             | 3,104.2             | 6.5             | 5.3         | 68.05                | 18.3                              | -206.5     | 206.5                | 194.7                 | 11.81                   | 17.483            |  |        |                    |        |
| 3,200.0                  | 3,200.0             | 3,203.7             | 3,203.6             | 6.7             | 5.5         | 68.55                | 19.9                              | -206.2     | 206.2                | 194.0                 | 12.22                   | 16.871            |  |        |                    |        |
| 3,233.7                  | 3,233.7             | 3,237.2             | 3,237.0             | 6.8             | 5.6         | 68.69                | 20.4                              | -206.1     | 206.2                | 193.9                 | 12.36                   | 16.680            | CC   |        |                    |        |
| 3,300.0                  | 3,300.0             | 3,303.2             | 3,303.0             | 6.9             | 5.7         | 68.95                | 21.2                              | -206.1     | 206.3                | 193.6                 | 12.64                   | 16.323            |  |        |                    |        |
| 3,400.0                  | 3,400.0             | 3,402.7             | 3,402.6             | 7.1             | 5.9         | 69.36                | 22.6                              | -206.3     | 206.6                | 193.5                 | 13.05                   | 15.828            | ES   |        |                    |        |
| 3,500.0                  | 3,500.0             | 3,502.5             | 3,502.3             | 7.3             | 6.1         | 69.81                | 24.1                              | -206.7     | 207.0                | 193.6                 | 13.47                   | 15.375            |  |        |                    |        |
| 3,600.0                  | 3,600.0             | 3,602.4             | 3,602.2             | 7.5             | 6.4         | 70.26                | 25.6                              | -207.1     | 207.6                | 193.7                 | 13.88                   | 14.949            |  |        |                    |        |
| 3,700.0                  | 3,700.0             | 3,701.9             | 3,701.8             | 7.7             | 6.6         | 70.70                | 27.1                              | -207.5     | 208.2                | 193.9                 | 14.30                   | 14.556            |  |        |                    |        |
| 3,800.0                  | 3,800.0             | 3,801.1             | 3,800.9             | 8.0             | 6.8         | 71.12                | 28.6                              | -208.3     | 209.2                | 194.4                 | 14.72                   | 14.209            |  |        |                    |        |
| 3,900.0                  | 3,900.0             | 3,901.3             | 3,901.1             | 8.2             | 7.0         | 71.57                | 30.3                              | -209.4     | 210.4                | 195.2                 | 15.14                   | 13.890            |  |        |                    |        |
| 4,000.0                  | 4,000.0             | 4,002.0             | 4,001.8             | 8.4             | 7.2         | 72.12                | 32.3                              | -210.0     | 211.3                | 195.7                 | 15.57                   | 13.567            |  |        |                    |        |
| 4,100.0                  | 4,100.0             | 4,101.6             | 4,101.3             | 8.6             | 7.4         | 72.74                | 34.5                              | -210.5     | 212.1                | 196.1                 | 16.00                   | 13.256            |  |        |                    |        |
| 4,200.0                  | 4,200.0             | 4,200.9             | 4,200.6             | 8.8             | 7.6         | 73.38                | 36.9                              | -211.3     | 213.2                | 196.8                 | 16.43                   | 12.981            |  |        |                    |        |
| 4,300.0                  | 4,300.0             | 4,300.5             | 4,300.2             | 9.0             | 7.8         | 74.03                | 39.4                              | -212.2     | 214.6                | 197.8                 | 16.86                   | 12.733            |  |        |                    |        |
| 4,400.0                  | 4,400.0             | 4,400.2             | 4,399.8             | 9.2             | 8.1         | 74.69                | 42.0                              | -213.3     | 216.2                | 198.9                 | 17.29                   | 12.506            |  |        |                    |        |
| 4,500.0                  | 4,500.0             | 4,499.5             | 4,499.1             | 9.5             | 8.3         | 75.38                | 44.8                              | -214.6     | 218.0                | 200.3                 | 17.72                   | 12.303            |  |        |                    |        |
| 4,600.0                  | 4,600.0             | 4,498.7             | 4,498.2             | 9.7             | 8.5         | 76.11                | 47.8                              | -216.1     | 220.2                | 202.0                 | 18.15                   | 12.129            |  |        |                    |        |
| 4,700.0                  | 4,700.0             | 4,498.7             | 4,498.1             | 9.9             | 8.7         | 76.81                | 50.9                              | -217.9     | 222.6                | 204.0                 | 18.58                   | 11.979            |  |        |                    |        |
| 4,800.0                  | 4,800.0             | 4,498.8             | 4,498.2             | 10.1            | 8.9         | 77.37                | 53.5                              | -219.6     | 224.9                | 205.9                 | 19.01                   | 11.833            |  |        |                    |        |
| 4,900.0                  | 4,900.0             | 4,498.4             | 4,497.8             | 10.3            | 9.1         | 77.89                | 55.9                              | -221.5     | 227.3                | 207.9                 | 19.43                   | 11.696            |  |        |                    |        |
| 5,000.0                  | 5,000.0             | 4,498.1             | 4,497.4             | 10.5            | 9.3         | 78.42                | 58.5                              | -223.5     | 229.9                | 210.0                 | 19.86                   | 11.573            |  |        |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design            |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | Offset Site Error:   | 0.0 ft |                    |        |
|--------------------------|---------------------|---------------------|---------------------|-----------------|-------------|----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--|--------|--------------------|--------|
| Survey Program: 1185-MWD |                     |                     |                     |                 |             |                      |                                   |            |                      |                       |                         |                   | TOTEM 7 PAD SEC.8-T2S-R62W - TOTEM 7 - Totem - 7 Final Surveys |        | Offset Well Error: | 0.0 ft |
| Reference                |                     | Offset              |                     | Semi Major Axis |             |                      | Distance                          |            |                      |                       |                         |                   | Warning  |        |                    |        |
| Measured Depth (ft)      | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Tooface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |  |        |                    |        |
| 5,100.0                  | 5,100.0             | 5,098.3             | 5,097.5             | 10.8            | 9.6         | 79.02                | 61.4                              | -225.3     | 232.4                | 212.1                 | 20.30                   | 11.450            |  |        |                    |        |
| 5,200.0                  | 5,200.0             | 5,198.4             | 5,197.6             | 11.0            | 9.8         | 79.72                | 64.7                              | -227.0     | 234.9                | 214.2                 | 20.74                   | 11.330            |  |        |                    |        |
| 5,300.0                  | 5,300.0             | 5,299.1             | 5,298.2             | 11.2            | 10.0        | 80.45                | 68.1                              | -228.4     | 237.3                | 216.1                 | 21.17                   | 11.210            |  |        |                    |        |
| 5,400.0                  | 5,400.0             | 5,399.8             | 5,398.9             | 11.4            | 10.2        | 81.11                | 71.2                              | -229.6     | 239.3                | 217.7                 | 21.60                   | 11.081            |  |        |                    |        |
| 5,500.0                  | 5,500.0             | 5,500.3             | 5,499.4             | 11.6            | 10.4        | 81.69                | 73.9                              | -230.6     | 241.1                | 219.1                 | 22.02                   | 10.950            |  |        |                    |        |
| 5,600.0                  | 5,600.0             | 5,600.5             | 5,599.5             | 11.8            | 10.6        | 82.20                | 76.3                              | -231.4     | 242.7                | 220.3                 | 22.44                   | 10.816            |  |        |                    |        |
| 5,700.0                  | 5,700.0             | 5,699.7             | 5,698.7             | 12.1            | 10.8        | 82.64                | 78.5                              | -232.5     | 244.5                | 221.7                 | 22.87                   | 10.693            |  |        |                    |        |
| 5,800.0                  | 5,800.0             | 5,799.1             | 5,798.1             | 12.3            | 11.0        | 83.03                | 80.7                              | -234.0     | 246.6                | 223.3                 | 23.29                   | 10.588            |  |        |                    |        |
| 5,900.0                  | 5,900.0             | 5,899.0             | 5,897.9             | 12.5            | 11.2        | 83.38                | 82.7                              | -235.6     | 248.8                | 225.1                 | 23.72                   | 10.490            |  |        |                    |        |
| 6,000.0                  | 6,000.0             | 5,999.7             | 5,998.5             | 12.7            | 11.4        | 83.72                | 84.7                              | -237.2     | 251.0                | 226.9                 | 24.15                   | 10.394            |  |        |                    |        |
| 6,100.0                  | 6,100.0             | 6,101.3             | 6,100.1             | 12.9            | 11.7        | 84.06                | 86.6                              | -238.3     | 252.7                | 228.1                 | 24.58                   | 10.278            |  |        |                    |        |
| 6,200.0                  | 6,200.0             | 6,201.9             | 6,200.7             | 13.2            | 11.9        | 84.39                | 88.2                              | -238.9     | 253.8                | 228.8                 | 25.01                   | 10.148            |  |        |                    |        |
| 6,300.0                  | 6,300.0             | 6,302.0             | 6,300.8             | 13.4            | 12.1        | 84.63                | 89.4                              | -239.5     | 254.8                | 229.4                 | 25.43                   | 10.020            |  |        |                    |        |
| 6,400.0                  | 6,400.0             | 6,402.3             | 6,401.1             | 13.6            | 12.3        | 84.83                | 90.5                              | -240.2     | 255.8                | 230.0                 | 25.86                   | 9.892             |  |        |                    |        |
| 6,500.0                  | 6,500.0             | 6,502.5             | 6,501.2             | 13.8            | 12.5        | 85.10                | 91.8                              | -240.6     | 256.7                | 230.4                 | 26.29                   | 9.764             |  |        |                    |        |
| 6,600.0                  | 6,600.0             | 6,606.2             | 6,604.9             | 14.0            | 12.7        | 85.25                | 92.4                              | -240.9     | 257.2                | 230.5                 | 26.73                   | 9.622             |  |        |                    |        |
| 6,691.5                  | 6,691.2             | 6,693.6             | 6,691.9             | 14.3            | 12.9        | 84.92                | 84.8                              | -244.0     | 256.7                | 229.6                 | 27.10                   | 9.472             |  |        |                    |        |
| 6,700.0                  | 6,699.7             | 6,701.2             | 6,699.4             | 14.3            | 12.9        | 84.63                | 83.5                              | -244.7     | 256.8                | 229.6                 | 27.13                   | 9.464             |  |        |                    |        |
| 6,800.0                  | 6,797.3             | 6,781.9             | 6,777.3             | 14.5            | 13.0        | 83.62                | 66.2                              | -256.4     | 260.2                | 232.8                 | 27.43                   | 9.488             |  |        |                    |        |
| 6,900.0                  | 6,890.3             | 6,877.9             | 6,866.4             | 14.8            | 13.2        | 83.24                | 38.2                              | -278.3     | 267.0                | 239.1                 | 27.85                   | 9.588             |  |        |                    |        |
| 7,000.0                  | 6,976.5             | 6,980.2             | 6,956.4             | 15.1            | 13.4        | 83.86                | -1.9                              | -305.1     | 271.9                | 243.4                 | 28.43                   | 9.564             |  |        |                    |        |
| 7,100.0                  | 7,053.7             | 7,075.2             | 7,031.0             | 15.5            | 13.7        | 84.09                | -52.3                             | -335.0     | 275.1                | 246.0                 | 29.13                   | 9.444             |  |        |                    |        |
| 7,200.0                  | 7,120.1             | 7,181.4             | 7,101.0             | 16.1            | 14.2        | 83.88                | -122.4                            | -372.9     | 276.6                | 246.5                 | 30.19                   | 9.164             |  |        |                    |        |
| 7,300.0                  | 7,173.9             | 7,282.7             | 7,156.2             | 16.8            | 14.8        | 84.11                | -199.1                            | -409.5     | 273.9                | 242.3                 | 31.53                   | 8.685             |  |        |                    |        |
| 7,345.2                  | 7,193.8             | 7,325.9             | 7,177.3             | 17.3            | 15.1        | 84.70                | -232.8                            | -426.2     | 272.9                | 240.7                 | 32.27                   | 8.458             |  |        |                    |        |
| 7,400.0                  | 7,213.9             | 7,379.5             | 7,200.9             | 17.8            | 15.6        | 85.72                | -276.2                            | -447.0     | 271.1                | 237.9                 | 33.24                   | 8.157             |  |        |                    |        |
| 7,444.9                  | 7,227.1             | 7,417.4             | 7,215.1             | 18.2            | 15.9        | 86.46                | -307.7                            | -462.7     | 270.3                | 236.2                 | 34.10                   | 7.926             |  |        |                    |        |
| 7,457.6                  | 7,230.3             | 7,427.7             | 7,218.6             | 18.4            | 16.0        | 86.67                | -316.3                            | -467.2     | 270.2                | 235.9                 | 34.35                   | 7.867             |  |        |                    |        |
| 7,500.0                  | 7,239.1             | 7,462.1             | 7,229.1             | 18.8            | 16.4        | 87.37                | -345.0                            | -482.7     | 270.8                | 235.6                 | 35.19                   | 7.695             |  |        |                    |        |
| 7,600.0                  | 7,248.9             | 7,552.7             | 7,249.4             | 20.1            | 17.4        | 89.44                | -421.4                            | -526.9     | 275.1                | 237.6                 | 37.49                   | 7.338             |  |        |                    |        |
| 7,700.0                  | 7,250.2             | 7,656.6             | 7,260.6             | 21.4            | 18.8        | 91.45                | -510.7                            | -578.7     | 280.0                | 239.9                 | 40.10                   | 6.982             |  |        |                    |        |
| 7,800.0                  | 7,251.5             | 7,757.7             | 7,262.0             | 22.8            | 20.1        | 91.43                | -598.3                            | -629.0     | 284.4                | 241.6                 | 42.79                   | 6.647             |  |        |                    |        |
| 7,900.0                  | 7,252.8             | 7,858.8             | 7,261.1             | 24.2            | 21.5        | 90.99                | -685.9                            | -679.4     | 288.9                | 243.2                 | 45.69                   | 6.323             |  |        |                    |        |
| 8,000.0                  | 7,254.1             | 7,959.7             | 7,260.5             | 25.8            | 22.8        | 90.60                | -773.9                            | -729.1     | 292.6                | 244.0                 | 48.61                   | 6.019             |  |        |                    |        |
| 8,100.0                  | 7,255.4             | 8,063.3             | 7,260.7             | 27.4            | 24.4        | 90.38                | -864.2                            | -779.6     | 295.9                | 244.1                 | 51.77                   | 5.716             |  |        |                    |        |
| 8,200.0                  | 7,256.7             | 8,160.6             | 7,261.6             | 29.1            | 25.9        | 90.30                | -949.4                            | -826.7     | 298.6                | 243.6                 | 54.99                   | 5.430             |  |        |                    |        |
| 8,300.0                  | 7,258.0             | 8,257.6             | 7,262.0             | 30.8            | 27.5        | 90.14                | -1,034.3                          | -873.7     | 301.6                | 243.3                 | 58.34                   | 5.170             |  |        |                    |        |
| 8,400.0                  | 7,259.3             | 8,359.4             | 7,262.3             | 32.6            | 29.2        | 89.95                | -1,122.9                          | -923.8     | 305.3                | 243.6                 | 61.76                   | 4.944             |  |        |                    |        |
| 8,500.0                  | 7,260.5             | 8,460.7             | 7,262.9             | 34.4            | 30.9        | 89.82                | -1,211.4                          | -973.0     | 308.3                | 243.1                 | 65.25                   | 4.725             |  |        |                    |        |
| 8,600.0                  | 7,261.8             | 8,563.1             | 7,262.8             | 36.3            | 32.6        | 89.55                | -1,300.8                          | -1,022.9   | 311.6                | 242.7                 | 68.85                   | 4.525             |  |        |                    |        |
| 8,700.0                  | 7,263.1             | 8,674.5             | 7,261.3             | 38.1            | 34.5        | 89.01                | -1,399.4                          | -1,074.7   | 312.3                | 239.7                 | 72.59                   | 4.302             |  |        |                    |        |
| 8,782.7                  | 7,264.2             | 8,753.2             | 7,261.2             | 39.7            | 35.9        | 88.81                | -1,469.9                          | -1,109.6   | 310.9                | 235.5                 | 75.48                   | 4.119             |  |        |                    |        |
| 8,800.0                  | 7,264.4             | 8,766.1             | 7,261.2             | 40.0            | 36.1        | 88.79                | -1,481.4                          | -1,115.7   | 311.1                | 235.0                 | 76.05                   | 4.091             |  |        |                    |        |
| 8,900.0                  | 7,265.7             | 8,870.3             | 7,264.0             | 41.9            | 37.9        | 89.04                | -1,573.3                          | -1,164.6   | 312.3                | 232.6                 | 79.71                   | 3.918             |  |        |                    |        |
| 9,000.0                  | 7,267.0             | 8,960.5             | 7,267.8             | 43.8            | 39.5        | 89.54                | -1,652.7                          | -1,207.2   | 313.8                | 230.6                 | 83.26                   | 3.769             |  |        |                    |        |
| 9,100.0                  | 7,268.2             | 9,063.0             | 7,269.9             | 45.8            | 41.3        | 89.68                | -1,742.6                          | -1,256.4   | 316.2                | 229.2                 | 87.00                   | 3.634             |  |        |                    |        |
| 9,200.0                  | 7,269.5             | 9,164.7             | 7,269.2             | 47.7            | 43.1        | 89.33                | -1,831.8                          | -1,305.1   | 318.5                | 227.7                 | 90.81                   | 3.507             |  |        |                    |        |
| 9,300.0                  | 7,270.8             | 9,261.7             | 7,268.1             | 49.7            | 44.9        | 88.91                | -1,917.0                          | -1,351.5   | 320.7                | 226.2                 | 94.49                   | 3.394             |  |        |                    |        |
| 9,400.0                  | 7,272.1             | 9,351.6             | 7,269.1             | 51.6            | 46.5        | 88.89                | -1,995.1                          | -1,395.9   | 324.8                | 226.8                 | 98.01                   | 3.314             |  |        |                    |        |
| 9,500.0                  | 7,273.4             | 9,454.6             | 7,273.0             | 53.6            | 48.4        | 89.37                | -2,083.9                          | -1,448.0   | 330.1                | 228.2                 | 101.91                  | 3.239             |  |        |                    |        |
| 9,600.0                  | 7,274.7             | 9,554.6             | 7,272.7             | 55.6            | 50.3        | 89.10                | -2,170.5                          | -1,498.1   | 334.8                | 229.1                 | 105.77                  | 3.166             |  |        |                    |        |
| 9,700.0                  | 7,275.9             | 9,640.0             | 7,274.0             | 57.6            | 51.8        | 89.14                | -2,244.9                          | -1,539.9   | 338.9                | 229.7                 | 109.12                  | 3.105 SF          |  |        |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Ensign

## Anticollision Report

|                           |                         |                                     |                   |
|---------------------------|-------------------------|-------------------------------------|-------------------|
| <b>Company:</b>           | Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> | Well Totem 27     |
| <b>Project:</b>           | SEC.8-T2S-R62W          | <b>TVD Reference:</b>               | Well @ 5193.5ft   |
| <b>Reference Site:</b>    | TOTEM 25-26-27          | <b>MD Reference:</b>                | Well @ 5193.5ft   |
| <b>Site Error:</b>        | 0.0 ft                  | <b>North Reference:</b>             | True              |
| <b>Reference Well:</b>    | Totem 27                | <b>Survey Calculation Method:</b>   | Minimum Curvature |
| <b>Well Error:</b>        | 0.0 ft                  | <b>Output errors are at</b>         | 2.00 sigma        |
| <b>Reference Wellbore</b> | Totem                   | <b>Database:</b>                    | US_EDM            |
| <b>Reference Design:</b>  | 27 Design #5            | <b>Offset TVD Reference:</b>        | Offset Datum      |

| Offset Design  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.0 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|--------|
| TOTEM 7 PAD SEC.8-T2S-R62W - TOTEM 7 - Totem - 7 Final Surveys |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.0 ft |
| Survey Program: 1185-MWD                                       |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                    |        |
| Reference  |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         | Warning            |        |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  |        |
| 9,800.0  | 7,277.2             | 9,640.0             | 7,274.0             | 59.5            | 51.8        | 89.14                 | -2,244.9                          | -1,539.9   | 362.1                | 256.8                 | 105.22                  | 3.441              |        |
| 9,900.0  | 7,278.5             | 9,640.0             | 7,274.0             | 61.5            | 51.8        | 89.14                 | -2,244.9                          | -1,539.9   | 409.1                | 312.6                 | 96.42                   | 4.243              |        |
| 10,000.0   | 7,279.8             | 9,640.0             | 7,274.0             | 63.5            | 51.8        | 89.14                 | -2,244.9                          | -1,539.9   | 472.8                | 386.1                 | 86.69                   | 5.455              |        |
| 10,100.0   | 7,281.0             | 9,640.0             | 7,274.0             | 65.6            | 51.8        | 89.14                 | -2,244.9                          | -1,539.9   | 547.6                | 469.5                 | 78.02                   | 7.018              |        |
| 10,200.0   | 7,282.3             | 9,640.0             | 7,274.0             | 67.6            | 51.8        | 89.14                 | -2,244.9                          | -1,539.9   | 629.3                | 558.4                 | 70.90                   | 8.876              |        |
| 10,300.0   | 7,283.6             | 9,640.0             | 7,274.0             | 69.6            | 51.8        | 89.14                 | -2,244.9                          | -1,539.9   | 715.8                | 650.6                 | 65.20                   | 10.978             |        |
| 10,400.0   | 7,284.9             | 9,640.0             | 7,274.0             | 71.6            | 51.8        | 89.14                 | -2,244.9                          | -1,539.9   | 805.3                | 744.7                 | 60.65                   | 13.279             |        |
| 10,410.7   | 7,285.0             | 9,640.0             | 7,274.0             | 71.8            | 51.8        | 89.14                 | -2,244.9                          | -1,539.9   | 815.1                | 754.8                 | 60.21                   | 13.536             |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

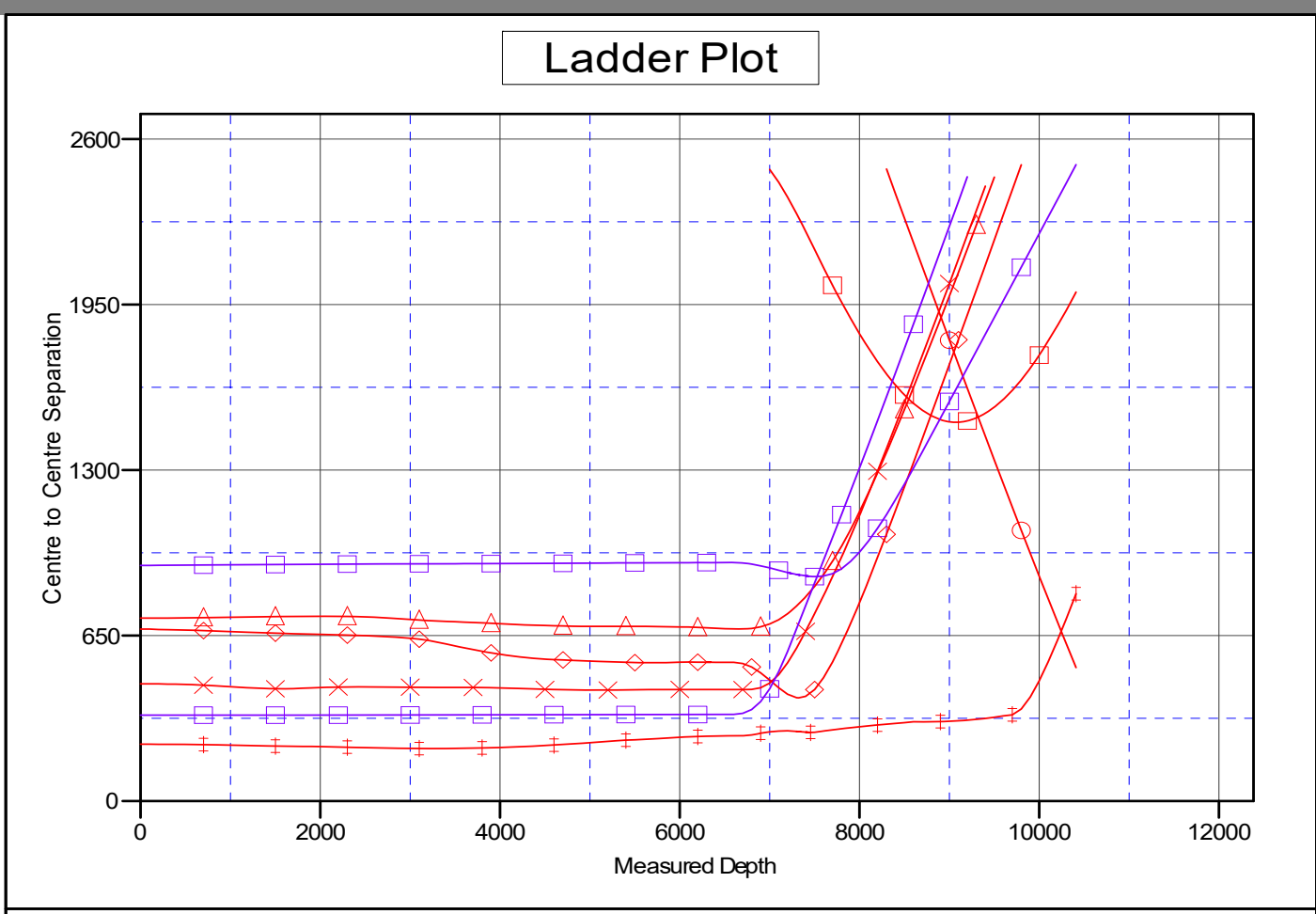
# Ensign

## Anticollision Report

|   |   |                          |
|---|---|--------------------------|
| <b>Company:</b> Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> Well Totem 27   | <b>Well @ 5193.5ft</b>   |
| <b>Project:</b> SEC.8-T2S-R62W          | <b>TVD Reference:</b> Well @ 5193.5ft               | <b>Well @ 5193.5ft</b>   |
| <b>Reference Site:</b> TOTEM 25-26-27   | <b>MD Reference:</b> Well @ 5193.5ft                | <b>True</b>              |
| <b>Site Error:</b> 0.0 ft               | <b>North Reference:</b> True                        | <b>Minimum Curvature</b> |
| <b>Reference Well:</b> Totem 27         | <b>Survey Calculation Method:</b> Minimum Curvature | <b>2.00 sigma</b>        |
| <b>Well Error:</b> 0.0 ft               | <b>Output errors are at</b> 2.00 sigma              | <b>US_EDM</b>            |
| <b>Reference Wellbore</b> Totem         | <b>Database:</b> US_EDM                             | <b>Offset Datum</b>      |
| <b>Reference Design:</b> 27 Design #5   | <b>Offset TVD Reference:</b> Offset Datum           |                          |

Reference Depths are relative to Well @ 5193.5ft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000

Coordinates are relative to: Totem 27  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.75°



### LEGEND

- Totem 4, Totem, 4 Final Surveys V0
- Totem 6, Totem, Totem 6 V0
- Totem 5, Totem, 5 Final Surveys V0
- Totem 9, totem, Totem 9 V0
- TOTEM 7, Totem, 7 Final Surveys V0
- TOTEM 14, TOTEM, TOTEM 14 Final Surveys V0
- Totem 26, Totem, 26 Design #4 V0
- Totem 25, Totem, 25 Design #4 V0

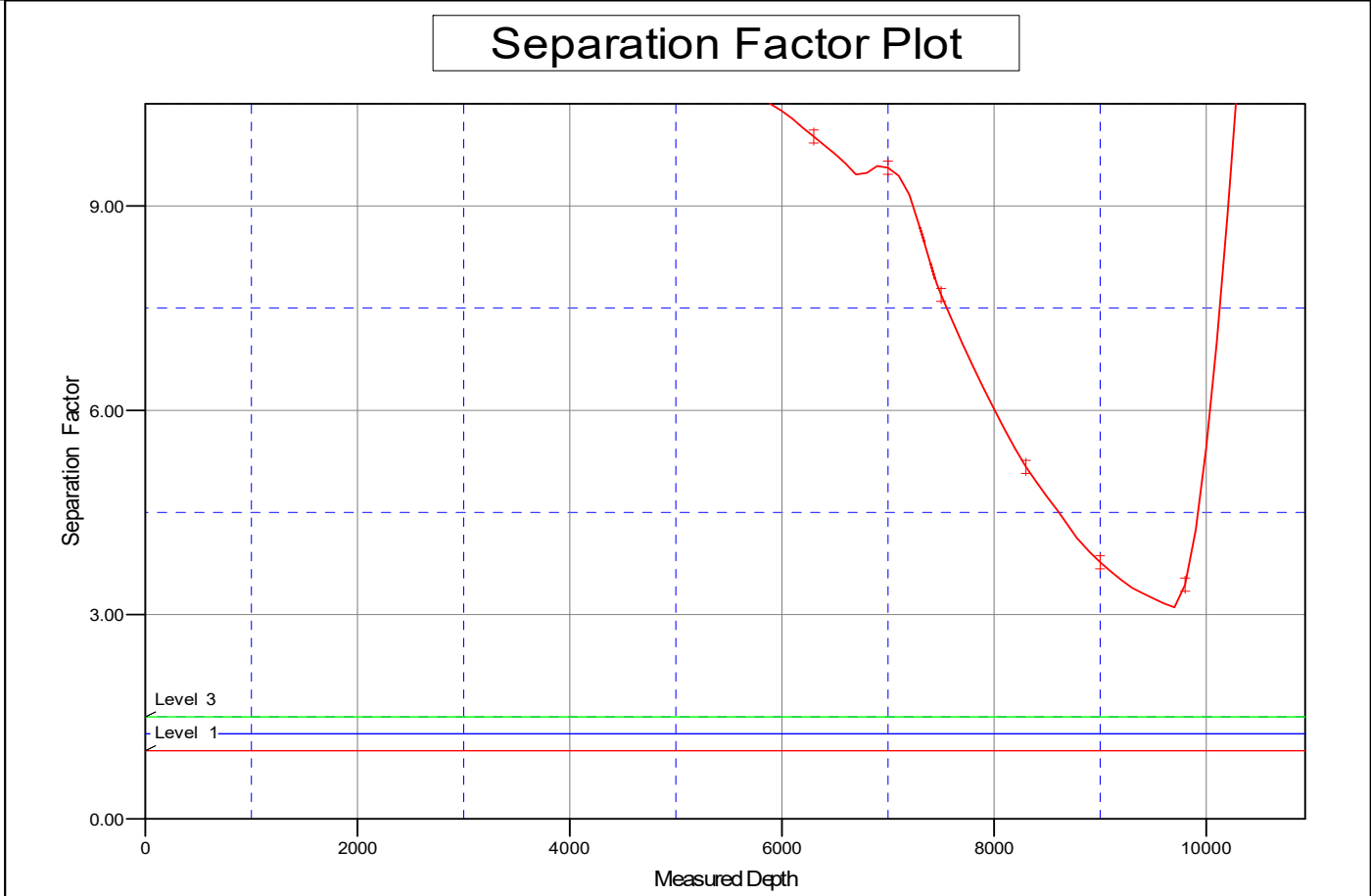
# Ensign

## Anticollision Report

|   |   |                          |
|---|---|--------------------------|
| <b>Company:</b> Colorado Interstate Gas | <b>Local Co-ordinate Reference:</b> Well Totem 27   | <b>Well Totem 27</b>     |
| <b>Project:</b> SEC.8-T2S-R62W          | <b>TVD Reference:</b> Well @ 5193.5ft               | <b>Well @ 5193.5ft</b>   |
| <b>Reference Site:</b> TOTEM 25-26-27   | <b>MD Reference:</b> Well @ 5193.5ft                | <b>Well @ 5193.5ft</b>   |
| <b>Site Error:</b> 0.0 ft               | <b>North Reference:</b> True                        | <b>True</b>              |
| <b>Reference Well:</b> Totem 27         | <b>Survey Calculation Method:</b> Minimum Curvature | <b>Minimum Curvature</b> |
| <b>Well Error:</b> 0.0 ft               | <b>Output errors are at</b> 2.00 sigma              | <b>2.00 sigma</b>        |
| <b>Reference Wellbore</b> Totem         | <b>Database:</b> US_EDM                             | <b>US_EDM</b>            |
| <b>Reference Design:</b> 27 Design #5   | <b>Offset TVD Reference:</b> Offset Datum           | <b>Offset Datum</b>      |

Reference Depths are relative to Well @ 5193.5ft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000

Coordinates are relative to: Totem 27  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.75°



### LEGEND

- |                                      |  |                                    |
|--------------------------------------|--|------------------------------------|
| - Totem 4, Totem, 4 Final Surveys V0 | - Totem 9, totem, Totem 9 V0                 | - Totem 26, Totem, 26 Design #4 V0 |
| - Totem 6, Totem, Totem 6 V0         | - TOTEM 7, Totem, 7 Final Surveys V0         | - Totem 25, Totem, 25 Design #4 V0 |
| - Totem 5, Totem, 5 Final Surveys V0 | - TOTEM 14, TOTEM, TOTEM 14 Final Surveys V0 |                                    |