

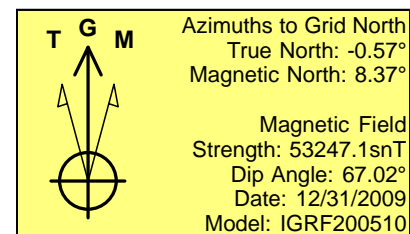
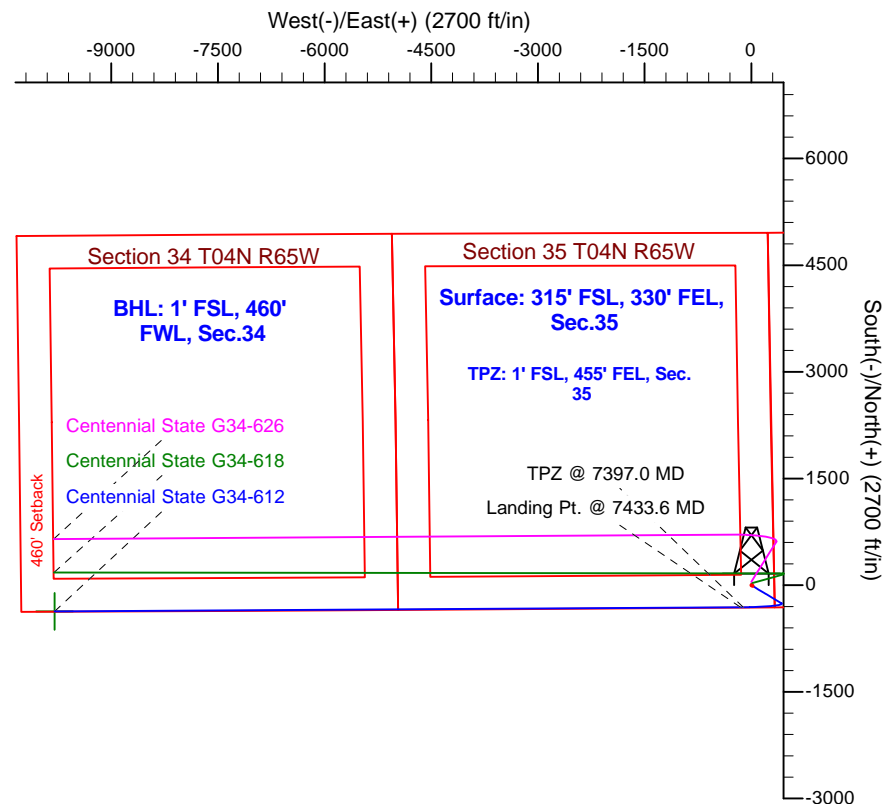
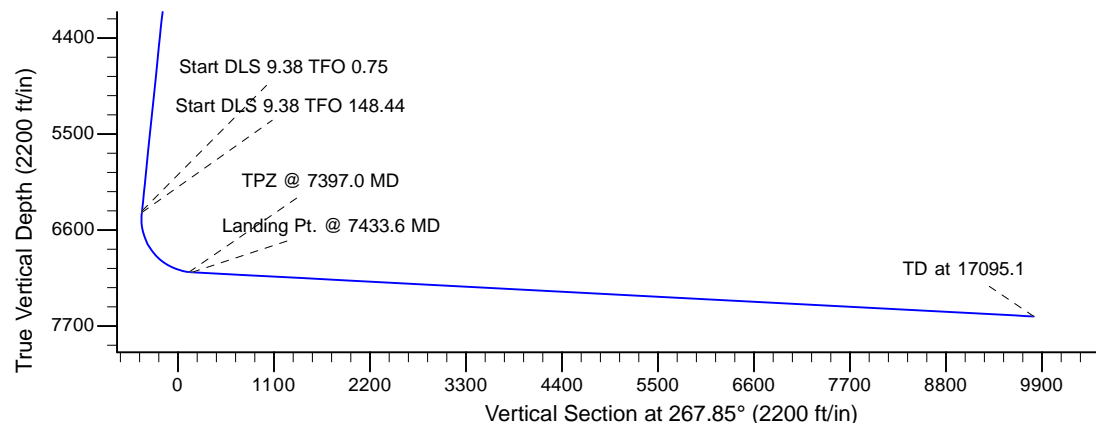
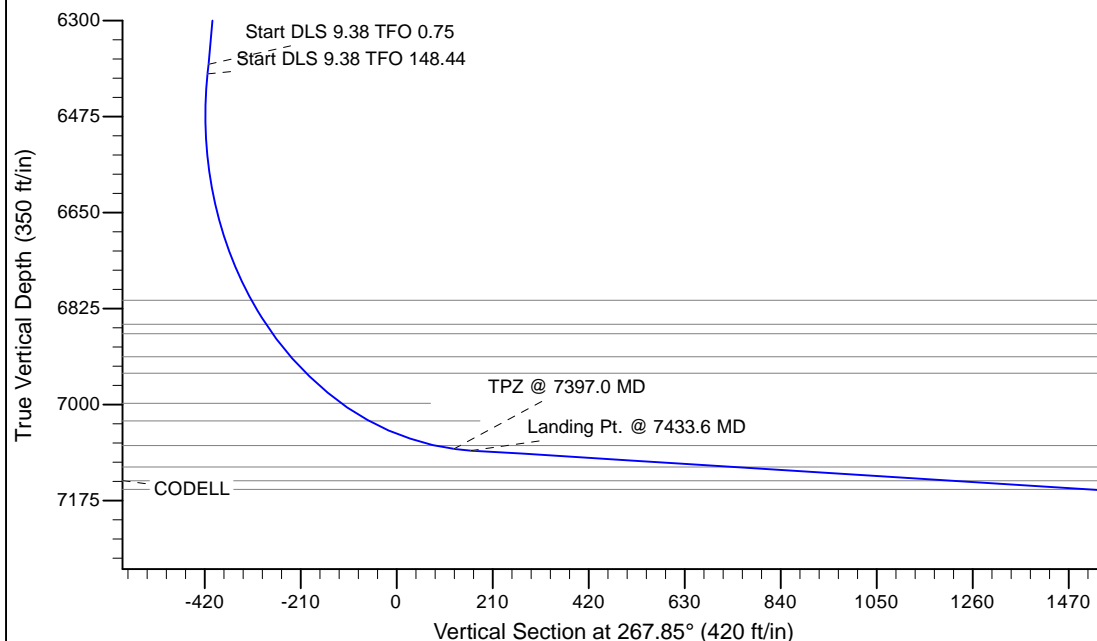
Project: Bronco
 Site: G Section 35-T4N-R65W Weld County, CO
 Well: Centennial State G34-612
 Wellbore: Original Drilling
 Design: APD - Rev 1

Northern Region - DJ Basin

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Colorado Northern Zone
 System Datum: Mean Sea Level

SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSec | Target |
|-----|---------|-------|--------|--------|--------|---------|------|--------|--------|---|
| 1 | 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 2 | 2200.0 | 0.00 | 0.00 | 2200.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 2550.0 | 7.00 | 121.00 | 2549.1 | -11.0 | 18.3 | 2.00 | 121.00 | -17.9 | |
| 4 | 6409.6 | 7.00 | 121.00 | 6380.0 | -253.3 | 421.5 | 0.00 | 0.00 | -411.7 | |
| 5 | 6427.3 | 8.66 | 121.14 | 6397.5 | -254.5 | 423.6 | 9.38 | 0.75 | -413.7 | |
| 6 | 7433.6 | 87.00 | 269.64 | 7084.0 | -310.0 | -150.0 | 9.38 | 148.44 | 161.5 | |
| 7 | 17095.1 | 87.00 | 269.67 | 7589.9 | -368.3 | -9798.1 | 0.00 | 96.24 | 9805.0 | Centennial G34-612 State BHL 1'FSL, 460'FWL |



WELL DETAILS: Centennial State G34-612

| | Ground Level: 4816.0 | | | | |
|----------|----------------------|------------|------------|------------|--------------|
| Northing | Easting | Latitude | Longitude | | |
| 0.0 | 0.0 | 1339635.66 | 3244993.82 | 40.2623700 | -104.6221100 |

Plan: APD - Rev 1 (Centennial State G34-612/Original Drilling)

Created By: Shailey Jewell Date: 15:20, January 30 2017

**OK to submit with 2A as per Noble drilling
 1/30/2017 3:27**

Northern Region - DJ Basin

Bronco

G Section 35

Centennial State G34-612

Original Drilling

APD - Rev 1

Anticollision Summary Report

30 January, 2017

Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|--------------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Centennial State G34-612 |
| Project: | Bronco | TVD Reference: | WELL @ 4846.0ft (Original Well Elev) |
| Reference Site: | G Section 35 | MD Reference: | WELL @ 4846.0ft (Original Well Elev) |
| Site Error: | 0.0 ft | North Reference: | Grid |
| Reference Well: | Centennial State G34-612 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 ft | Output errors are at | 2.79 sigma |
| Reference Wellbore | Original Drilling | Database: | EDM Production |
| Reference Design: | APD - Rev 1 | Offset TVD Reference: | Offset Datum |

| | | | |
|-------------------------------------|---|-----------------------|---------------------|
| Reference | APD - Rev 1 | | |
| Filter type: | NO GLOBAL FILTER: Using user defined selection & filtering criteria | | |
| Interpolation Method: | Stations | Error Model: | ISCWSA |
| Depth Range: | Unlimited | Scan Method: | Closest Approach 3D |
| Results Limited by: | Maximum center-center distance of 10,000.0 ft | Error Surface: | Pedal Curve |
| Warning Levels Evaluated at: | 2.79 Sigma | Casing Method: | Not applied |

| | | | | |
|----------------------------|----------------|---------------------------------|------------------|---|
| Survey Tool Program | Date | 1/30/2017 | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
| 0.0 | 17,095.1 | APD - Rev 1 (Original Drilling) | MWD+IFR1+MS_WY | Fixed:v2:Rockies, crustal dec + 3-axis correction |

| Summary | | | | | | |
|---|-------------------------------|----------------------------|-------------------------------|--------------------------------|-------------------|------------|
| Site Name | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design | | | | | | |
| G Section 34 | | | | | | |
| Aristocrat Angus Ranches #1 - Wellbore #1 - Wellbore # | 15,910.6 | 7,443.8 | 1,094.3 | 718.1 | 2.909 | CC, ES, SF |
| Beaman G34-17 - Wellbore #1 - Wellbore #1 - As Drilled | 13,735.9 | 7,257.0 | 3,824.0 | 3,678.6 | 26.293 | CC |
| Beaman G34-17 - Wellbore #1 - Wellbore #1 - As Drilled | 13,800.0 | 7,257.0 | 3,824.6 | 3,678.0 | 26.092 | ES |
| Beaman G34-17 - Wellbore #1 - Wellbore #1 - As Drilled | 14,700.0 | 7,257.0 | 3,943.7 | 3,785.0 | 24.856 | SF |
| Beaman G34-18 - Wellbore #1 - Wellbore #1 - As Drilled | 14,797.5 | 7,393.0 | 4,410.3 | 4,244.4 | 26.583 | CC |
| Beaman G34-18 - Wellbore #1 - Wellbore #1 - As Drilled | 14,900.0 | 7,397.6 | 4,411.5 | 4,243.8 | 26.299 | ES |
| Beaman G34-18 - Wellbore #1 - Wellbore #1 - As Drilled | 15,900.0 | 7,454.1 | 4,545.6 | 4,364.4 | 25.077 | SF |
| Beaman G34-99HZ - Original Drilling - Original Drilling - A | 15,317.4 | 9,462.0 | 4,115.7 | 3,826.9 | 14.252 | CC |
| Beaman G34-99HZ - Original Drilling - Original Drilling - A | 16,000.0 | 16,000.0 | 4,140.8 | 3,516.8 | 6.636 | ES, SF |
| Beaman G35-31 - Wellbore #1 - Wellbore #1 - As Drilled | 12,470.2 | 7,213.0 | 4,052.7 | 3,930.8 | 33.249 | CC |
| Beaman G35-31 - Wellbore #1 - Wellbore #1 - As Drilled | 12,500.0 | 7,213.0 | 4,052.8 | 3,930.4 | 33.105 | ES |
| Beaman G35-31 - Wellbore #1 - Wellbore #1 - As Drilled | 13,700.0 | 7,213.0 | 4,235.1 | 4,096.2 | 30.496 | SF |
| Beebe 10-34 - Wellbore #1 - Wellbore #1 - As Drilled | 14,130.8 | 7,340.3 | 2,129.8 | 1,972.1 | 13.501 | CC |
| Beebe 10-34 - Wellbore #1 - Wellbore #1 - As Drilled | 14,200.0 | 7,343.4 | 2,131.0 | 1,972.0 | 13.407 | ES |
| Beebe 10-34 - Wellbore #1 - Wellbore #1 - As Drilled | 14,400.0 | 7,352.1 | 2,146.7 | 1,985.1 | 13.285 | SF |
| Bochius Pooling Unit 1 - Wellbore #1 - Wellbore #1 - As | 12,980.7 | 7,257.1 | 4,616.6 | 4,484.9 | 35.051 | CC |
| Bochius Pooling Unit 1 - Wellbore #1 - Wellbore #1 - As | 13,100.0 | 7,263.9 | 4,618.2 | 4,484.3 | 34.496 | ES |
| Bochius Pooling Unit 1 - Wellbore #1 - Wellbore #1 - As | 14,500.0 | 7,340.6 | 4,859.4 | 4,706.4 | 31.756 | SF |
| Bockius 34-1G - Wellbore #1 - Wellbore #1 - As Drilled | 12,892.6 | 7,199.0 | 4,754.5 | 4,624.9 | 36.685 | CC |
| Bockius 34-1G - Wellbore #1 - Wellbore #1 - As Drilled | 13,000.0 | 7,199.0 | 4,755.7 | 4,624.2 | 36.160 | ES |
| Bockius 34-1G - Wellbore #1 - Wellbore #1 - As Drilled | 14,400.0 | 7,199.0 | 4,987.7 | 4,836.9 | 33.090 | SF |
| Bockius 34-2G - Wellbore #1 - Wellbore #1 - As Drilled | 14,194.6 | 7,204.0 | 4,785.0 | 4,631.2 | 31.109 | CC |
| Bockius 34-2G - Wellbore #1 - Wellbore #1 - As Drilled | 14,300.0 | 7,204.0 | 4,786.2 | 4,630.5 | 30.738 | ES |
| Bockius 34-2G - Wellbore #1 - Wellbore #1 - As Drilled | 15,500.0 | 7,204.0 | 4,959.9 | 4,787.6 | 28.789 | SF |
| Bockius 34-8G - Wellbore #1 - Wellbore #1 - As Drilled | 12,904.5 | 7,185.0 | 3,473.3 | 3,343.5 | 26.768 | CC |
| Bockius 34-8G - Wellbore #1 - Wellbore #1 - As Drilled | 13,000.0 | 7,185.0 | 3,474.6 | 3,343.1 | 26.436 | ES |
| Bockius 34-8G - Wellbore #1 - Wellbore #1 - As Drilled | 13,800.0 | 7,185.0 | 3,586.8 | 3,444.8 | 25.260 | SF |
| Bockius 37-07G - Wellbore #1 - Wellbore #1 - As Drilled | 14,556.2 | 7,226.0 | 3,485.5 | 3,325.0 | 21.712 | CC |
| Bockius 37-07G - Wellbore #1 - Wellbore #1 - As Drilled | 14,600.0 | 7,226.0 | 3,485.8 | 3,324.5 | 21.609 | ES |
| Bockius 37-07G - Wellbore #1 - Wellbore #1 - As Drilled | 15,300.0 | 7,226.0 | 3,564.0 | 3,393.3 | 20.879 | SF |
| Champ G34-06X - Wellbore #1 - Wellbore #1 - As Drilled | 15,568.5 | 7,413.2 | 3,182.4 | 3,002.1 | 17.651 | CC |
| Champ G34-06X - Wellbore #1 - Wellbore #1 - As Drilled | 15,600.0 | 7,414.7 | 3,182.6 | 3,001.7 | 17.596 | ES |
| Champ G34-06X - Wellbore #1 - Wellbore #1 - As Drilled | 16,100.0 | 7,438.6 | 3,226.4 | 3,038.7 | 17.185 | SF |
| Cornelius 23-34 - Wellbore #1 - Wellbore #1 - As Drilled | 14,794.1 | 7,459.9 | 1,320.9 | 1,150.6 | 7.757 | CC |
| Cornelius 23-34 - Wellbore #1 - Wellbore #1 - As Drilled | 14,800.0 | 7,460.3 | 1,320.9 | 1,150.5 | 7.752 | ES |
| Cornelius 23-34 - Wellbore #1 - Wellbore #1 - As Drilled | 14,900.0 | 7,466.7 | 1,325.1 | 1,153.4 | 7.717 | SF |
| HSR - Aristocrat 12-34A - Wellbore #1 - Wellbore #1 - As | 16,743.7 | 7,505.8 | 1,964.4 | 1,758.0 | 9.518 | CC |

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

Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|--------------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Centennial State G34-612 |
| Project: | Bronco | TVD Reference: | WELL @ 4846.0ft (Original Well Elev) |
| Reference Site: | G Section 35 | MD Reference: | WELL @ 4846.0ft (Original Well Elev) |
| Site Error: | 0.0 ft | North Reference: | Grid |
| Reference Well: | Centennial State G34-612 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 ft | Output errors are at | 2.79 sigma |
| Reference Wellbore | Original Drilling | Database: | EDM Produccction |
| Reference Design: | APD - Rev 1 | Offset TVD Reference: | Offset Datum |

| Summary | | | | | | |
|--|-------------------------------|----------------------------|-------------------------------|--------------------------------|-------------------|------------|
| Site Name | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design | | | | | | |
| G Section 34 | | | | | | |
| HSR - Aristocrat 12-34A - Wellbore #1 - Wellbore #1 - As | 16,800.0 | 7,509.0 | 1,965.2 | 1,757.8 | 9.478 | ES |
| HSR - Aristocrat 12-34A - Wellbore #1 - Wellbore #1 - As | 16,900.0 | 7,514.7 | 1,970.6 | 1,761.9 | 9.442 | SF |
| HSR - Carney 15-34 - Wellbore #1 - Wellbore #1 - As Dri | 14,061.7 | 7,345.8 | 755.9 | 601.6 | 4.900 | CC, ES |
| HSR - Carney 15-34 - Wellbore #1 - Wellbore #1 - As Dri | 14,100.0 | 7,346.9 | 756.8 | 602.1 | 4.892 | SF |
| HSR - Gun Club 09-34 - Wellbore #1 - Wellbore #1 - As D | 13,120.8 | 7,550.7 | 2,094.0 | 1,948.8 | 14.421 | CC, ES |
| HSR - Gun Club 09-34 - Wellbore #1 - Wellbore #1 - As D | 13,300.0 | 7,555.0 | 2,101.6 | 1,954.5 | 14.289 | SF |
| HSR - Gun Club 16-34 - Wellbore #1 - Wellbore #1 - As D | 13,081.4 | 7,514.0 | 751.5 | 617.4 | 5.602 | CC |
| HSR - Gun Club 16-34 - Wellbore #1 - Wellbore #1 - As D | 13,100.0 | 7,514.0 | 751.8 | 617.3 | 5.591 | ES, SF |
| HSR - Houston 13-34A - Wellbore #1 - Wellbore #1 - As | 16,835.9 | 7,498.7 | 817.7 | 609.5 | 3.929 | CC, ES, SF |
| HSR - Kemper 10-34 - Wellbore #1 - Wellbore #1 - As Dr | 13,857.1 | 7,337.1 | 1,540.2 | 1,392.3 | 10.415 | CC |
| HSR - Kemper 10-34 - Wellbore #1 - Wellbore #1 - As Dr | 13,900.0 | 7,340.0 | 1,540.8 | 1,392.2 | 10.370 | ES |
| HSR - Kemper 10-34 - Wellbore #1 - Wellbore #1 - As Dr | 14,000.0 | 7,346.8 | 1,546.8 | 1,396.9 | 10.324 | SF |
| HSR - Merritt 11-34A - Wellbore #1 - Wellbore #1 - As Dr | 15,667.7 | 7,428.9 | 2,153.0 | 1,967.7 | 11.616 | CC |
| HSR - Merritt 11-34A - Wellbore #1 - Wellbore #1 - As Dr | 15,700.0 | 7,430.6 | 2,153.3 | 1,967.3 | 11.581 | ES |
| HSR - Merritt 11-34A - Wellbore #1 - Wellbore #1 - As Dr | 15,900.0 | 7,441.3 | 2,165.5 | 1,976.8 | 11.477 | SF |
| HSR - Owens 14-34 - Wellbore #1 - Wellbore #1 - As Dri | 15,791.7 | 7,248.0 | 717.4 | 537.4 | 3.985 | CC |
| HSR - Owens 14-34 - Wellbore #1 - Wellbore #1 - As Dri | 15,800.0 | 7,248.0 | 717.4 | 537.3 | 3.983 | ES, SF |
| Moser 34-3G - Wellbore #1 - Wellbore #1 - As Drilled | 15,626.8 | 7,221.0 | 4,632.3 | 4,451.7 | 25.656 | CC |
| Moser 34-3G - Wellbore #1 - Wellbore #1 - As Drilled | 15,700.0 | 7,221.0 | 4,632.9 | 4,451.0 | 25.474 | ES |
| Moser 34-3G - Wellbore #1 - Wellbore #1 - As Drilled | 16,700.0 | 7,221.0 | 4,755.0 | 4,559.3 | 24.309 | SF |
| Moser 34-4G - Wellbore #1 - Wellbore #1 - As Drilled | 16,744.3 | 7,520.3 | 4,822.6 | 4,615.5 | 23.294 | CC |
| Moser 34-4G - Wellbore #1 - Wellbore #1 - As Drilled | 16,800.0 | 7,523.1 | 4,822.9 | 4,614.8 | 23.178 | ES |
| Moser 34-4G - Wellbore #1 - Wellbore #1 - As Drilled | 17,095.1 | 7,537.9 | 4,835.3 | 4,622.1 | 22.679 | SF |
| Moser 34-5G - Wellbore #1 - Wellbore #1 - As Drilled | 16,862.5 | 7,222.0 | 3,071.8 | 2,868.4 | 15.101 | CC |
| Moser 34-5G - Wellbore #1 - Wellbore #1 - As Drilled | 16,900.0 | 7,222.0 | 3,072.1 | 2,868.0 | 15.053 | ES |
| Moser 34-5G - Wellbore #1 - Wellbore #1 - As Drilled | 17,095.1 | 7,222.0 | 3,080.6 | 2,873.5 | 14.875 | SF |
| Moser 34-6G - Wellbore #1 - Wellbore #1 - As Drilled | 16,053.8 | 7,000.0 | 3,771.4 | 3,584.1 | 20.135 | CC |
| Moser 34-6G - Wellbore #1 - Wellbore #1 - As Drilled | 16,100.0 | 7,000.0 | 3,771.7 | 3,583.6 | 20.048 | ES |
| Moser 34-6G - Wellbore #1 - Wellbore #1 - As Drilled | 16,800.0 | 7,000.0 | 3,844.5 | 3,647.1 | 19.467 | SF |
| Moser G34-30 - Wellbore #1 - Wellbore #1 - As Drilled | 17,095.1 | 7,295.0 | 5,141.2 | 4,933.1 | 24.709 | CC, ES, SF |
| Moser PC G34-65HN - Original Drilling - As Drilled | 7,517.9 | 16,402.0 | 2,805.6 | 2,782.5 | 121.212 | CC |
| Moser PC G34-65HN - Original Drilling - As Drilled | 12,400.0 | 11,542.6 | 2,838.2 | 2,735.9 | 27.735 | ES |
| Moser PC G34-65HN - Original Drilling - As Drilled | 17,095.1 | 7,105.0 | 2,967.8 | 2,781.2 | 15.903 | SF |

Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|--------------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Centennial State G34-612 |
| Project: | Bronco | TVD Reference: | WELL @ 4846.0ft (Original Well Elev) |
| Reference Site: | G Section 35 | MD Reference: | WELL @ 4846.0ft (Original Well Elev) |
| Site Error: | 0.0 ft | North Reference: | Grid |
| Reference Well: | Centennial State G34-612 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 ft | Output errors are at | 2.79 sigma |
| Reference Wellbore | Original Drilling | Database: | EDM Production |
| Reference Design: | APD - Rev 1 | Offset TVD Reference: | Offset Datum |

Summary

| Site Name | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Between Ellipses (ft) | Separation Factor | Warning |
|---|--|-------------------------------------|--|-----------------------------|----------------------|---------|
| G Section 35 | | | | | | |
| Centennial State G34-618 - Original Drilling - APD - Rev | 2,000.0 | 2,000.0 | 25.5 | 13.4 | 2.101 | CC |
| Centennial State G34-618 - Original Drilling - APD - Rev | 2,100.0 | 2,099.7 | 26.0 | 13.3 | 2.040 | ES, SF |
| Centennial State G34-626 - Original Drilling - APD - Rev | 2,200.0 | 2,200.0 | 47.3 | 34.0 | 3.537 | CC, ES |
| Centennial State G34-626 - Original Drilling - APD - Rev | 17,095.1 | 17,026.6 | 1,142.5 | 788.2 | 3.224 | SF |
| Centennial State G34-635 - Original Drilling - APD - Rev | 7,262.3 | 7,261.1 | 1,665.6 | 1,621.5 | 37.816 | CC |
| Centennial State G34-635 - Original Drilling - APD - Rev | 17,095.1 | 17,018.0 | 1,770.7 | 1,406.4 | 4.860 | ES, SF |
| Centennial State G34-645 - Original Drilling - APD - Rev | 2,200.0 | 2,180.0 | 2,029.2 | 2,015.9 | 152.278 | CC |
| Centennial State G34-645 - Original Drilling - APD - Rev | 17,095.1 | 17,033.7 | 2,376.7 | 2,002.8 | 6.356 | ES, SF |
| Centennial State G34-660 - Original Drilling - APD - Rev | 6,916.4 | 7,123.2 | 3,173.2 | 3,130.5 | 74.221 | CC |
| Centennial State G34-660 - Original Drilling - APD - Rev | 17,095.1 | 17,110.8 | 3,346.5 | 2,966.0 | 8.795 | ES, SF |
| Centennial State G34-666 - Original Drilling - APD - Rev | 2,222.1 | 2,203.7 | 3,384.1 | 3,370.7 | 251.777 | CC |
| Centennial State G34-666 - Original Drilling - APD - Rev | 2,300.0 | 2,293.3 | 3,384.5 | 3,370.6 | 243.318 | ES |
| Centennial State G34-666 - Original Drilling - APD - Rev | 17,095.1 | 16,939.2 | 3,820.6 | 3,442.4 | 10.103 | SF |
| Centennial State G34-675 - Original Drilling - APD - Rev | 1,900.0 | 1,868.0 | 3,406.1 | 3,394.7 | 298.600 | CC |
| Centennial State G34-675 - Original Drilling - APD - Rev | 2,000.0 | 1,940.6 | 3,406.4 | 3,394.4 | 285.175 | ES |
| Centennial State G34-675 - Original Drilling - APD - Rev | 13,200.0 | 12,287.6 | 4,224.6 | 4,007.0 | 19.408 | SF |
| Centennial State G34-679 - Original Drilling - APD - Rev | 4,901.1 | 5,130.1 | 4,391.8 | 4,360.7 | 141.256 | CC |
| Centennial State G34-679 - Original Drilling - APD - Rev | 17,095.1 | 16,981.4 | 4,573.9 | 4,194.4 | 12.051 | ES, SF |
| Centennial State G34-684 - Original Drilling - APD - Rev | 2,200.0 | 2,155.0 | 4,433.5 | 4,420.3 | 334.670 | CC, ES |
| Centennial State G34-684 - Original Drilling - APD - Rev | 17,095.1 | 16,840.1 | 4,972.9 | 4,594.0 | 13.126 | SF |
| Centennial State G34-689 - Original Drilling - APD - Rev | 2,004.2 | 1,960.2 | 4,455.4 | 4,443.4 | 370.572 | CC |
| Centennial State G34-689 - Original Drilling - APD - Rev | 2,100.0 | 2,024.3 | 4,455.6 | 4,443.1 | 355.782 | ES |
| Centennial State G34-689 - Original Drilling - APD - Rev | 17,095.1 | 16,844.7 | 5,256.9 | 4,877.9 | 13.870 | SF |
| CPC Mark 35-01 - Wellbore #1 - Wellbore #1 - As Drilled | 830.7 | 740.7 | 4,449.9 | 4,445.8 | 1,075.282 | CC |
| CPC Mark 35-01 - Wellbore #1 - Wellbore #1 - As Drilled | 8,900.0 | 7,120.0 | 4,457.0 | 4,398.9 | 76.725 | ES |
| CPC Mark 35-01 - Wellbore #1 - Wellbore #1 - As Drilled | 11,400.0 | 7,181.0 | 5,129.1 | 5,038.1 | 56.354 | SF |
| CPC Mark 35-02 - Wellbore #1 - Wellbore #1 - As Drilled | 2,215.1 | 2,171.1 | 2,982.2 | 2,970.0 | 243.790 | CC, ES |
| CPC Mark 35-02 - Wellbore #1 - Wellbore #1 - As Drilled | 9,700.0 | 7,146.7 | 3,853.5 | 3,789.6 | 60.350 | SF |
| Mark 11-35 - Wellbore #1 - 150' Drift | 10,376.7 | 7,054.9 | 1,984.8 | 1,896.7 | 22.530 | CC |
| Mark 11-35 - Wellbore #1 - 150' Drift | 10,400.0 | 7,056.1 | 1,985.0 | 1,896.5 | 22.430 | ES |
| Mark 11-35 - Wellbore #1 - 150' Drift | 10,800.0 | 7,076.5 | 2,029.3 | 1,935.3 | 21.592 | SF |
| Mark 11-35 - Wellbore #1 - Wellbore #1 - As Drilled | 10,442.4 | 7,164.8 | 1,820.2 | 1,735.5 | 21.493 | CC |
| Mark 11-35 - Wellbore #1 - Wellbore #1 - As Drilled | 10,500.0 | 7,167.2 | 1,821.1 | 1,735.4 | 21.265 | ES |
| Mark 11-35 - Wellbore #1 - Wellbore #1 - As Drilled | 10,800.0 | 7,179.8 | 1,854.9 | 1,765.3 | 20.711 | SF |
| Mark 12-35 - Wellbore #1 - Wellbore #1 - As Drilled | 11,344.3 | 7,187.2 | 1,976.5 | 1,875.4 | 19.548 | CC |
| Mark 12-35 - Wellbore #1 - Wellbore #1 - As Drilled | 11,400.0 | 7,189.6 | 1,977.3 | 1,875.2 | 19.376 | ES |
| Mark 12-35 - Wellbore #1 - Wellbore #1 - As Drilled | 11,700.0 | 7,202.4 | 2,008.2 | 1,902.2 | 18.944 | SF |
| Mark 14-35 - Wellbore #1 - Wellbore #1 - As Drilled | 10,325.6 | 7,145.6 | 738.8 | 656.2 | 8.940 | CC, ES |
| Mark 14-35 - Wellbore #1 - Wellbore #1 - As Drilled | 10,400.0 | 7,149.4 | 742.5 | 659.0 | 8.891 | SF |
| Mark 35-11 - Original Drilling - Original Drilling - As Drilled | 2,352.2 | 2,420.6 | 4,417.7 | 4,404.7 | 339.306 | CC, ES |
| Mark 35-11 - Original Drilling - Original Drilling - As Drilled | 11,200.0 | 7,222.4 | 5,954.8 | 5,872.5 | 72.436 | SF |
| Mark 35-13 - Wellbore #1 - Wellbore #1 - As Drilled | 8,916.5 | 7,079.2 | 3,412.2 | 3,353.6 | 58.197 | CC |
| Mark 35-13 - Wellbore #1 - Wellbore #1 - As Drilled | 9,000.0 | 7,082.0 | 3,413.2 | 3,353.3 | 56.928 | ES |
| Mark 35-13 - Wellbore #1 - Wellbore #1 - As Drilled | 10,600.0 | 7,135.4 | 3,804.4 | 3,723.6 | 47.084 | SF |
| Mark 35-15 - Wellbore #1 - Wellbore #1 - As Drilled | 2,254.6 | 2,225.9 | 4,037.6 | 4,025.5 | 331.898 | CC, ES |
| Mark 35-15 - Wellbore #1 - Wellbore #1 - As Drilled | 11,000.0 | 7,185.4 | 4,989.9 | 4,906.8 | 60.033 | SF |
| Mark E Unit 1 - Wellbore #1 - Wellbore #1 - As Drilled | 11,173.2 | 7,177.4 | 943.4 | 843.6 | 9.455 | CC |
| Mark E Unit 1 - Wellbore #1 - Wellbore #1 - As Drilled | 11,200.0 | 7,178.2 | 943.8 | 843.6 | 9.419 | ES |
| Mark E Unit 1 - Wellbore #1 - Wellbore #1 - As Drilled | 11,300.0 | 7,181.1 | 951.9 | 850.6 | 9.405 | SF |
| Ocoma G35-03 - Wellbore #1 - Wellbore #1 - As Drilled | 10,447.5 | 7,112.0 | 4,722.2 | 4,637.5 | 55.777 | CC |
| Ocoma G35-03 - Wellbore #1 - Wellbore #1 - As Drilled | 10,500.0 | 7,112.0 | 4,722.5 | 4,636.9 | 55.181 | ES |
| Ocoma G35-03 - Wellbore #1 - Wellbore #1 - As Drilled | 12,600.0 | 7,112.0 | 5,189.5 | 5,075.2 | 45.400 | SF |
| Ocoma G35-04 - Wellbore #1 - Wellbore #1 - As Drilled | 11,677.6 | 7,220.9 | 4,389.9 | 4,282.7 | 40.939 | CC |

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

Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|--------------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Centennial State G34-612 |
| Project: | Bronco | TVD Reference: | WELL @ 4846.0ft (Original Well Elev) |
| Reference Site: | G Section 35 | MD Reference: | WELL @ 4846.0ft (Original Well Elev) |
| Site Error: | 0.0 ft | North Reference: | Grid |
| Reference Well: | Centennial State G34-612 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 ft | Output errors are at | 2.79 sigma |
| Reference Wellbore | Original Drilling | Database: | EDM Produccion |
| Reference Design: | APD - Rev 1 | Offset TVD Reference: | Offset Datum |

| Summary | | | | | | |
|--|-------------------------------|----------------------------|-------------------------------|--------------------------------|-------------------|---------|
| Site Name | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design | | | | | | |
| G Section 35 | | | | | | |
| Ocoma G35-04 - Wellbore #1 - Wellbore #1 - As Drilled | 11,800.0 | 7,226.0 | 4,391.6 | 4,282.2 | 40.141 | ES |
| Ocoma G35-04 - Wellbore #1 - Wellbore #1 - As Drilled | 13,300.0 | 7,211.0 | 4,680.2 | 4,550.8 | 36.156 | SF |
| Ocoma G35-05 - Wellbore #1 - Wellbore #1 - As Drilled | 11,694.7 | 7,208.9 | 3,378.8 | 3,271.3 | 31.414 | CC |
| Ocoma G35-05 - Wellbore #1 - Wellbore #1 - As Drilled | 11,800.0 | 7,212.6 | 3,380.5 | 3,271.1 | 30.900 | ES |
| Ocoma G35-05 - Wellbore #1 - Wellbore #1 - As Drilled | 12,700.0 | 7,244.5 | 3,525.0 | 3,403.6 | 29.045 | SF |
| Ocoma G35-06 - Wellbore #1 - Wellbore #1 - As Drilled | 10,415.8 | 7,124.6 | 3,305.9 | 3,221.9 | 39.312 | CC |
| Ocoma G35-06 - Wellbore #1 - Wellbore #1 - As Drilled | 10,500.0 | 7,128.4 | 3,307.0 | 3,221.5 | 38.657 | ES |
| Ocoma G35-06 - Wellbore #1 - Wellbore #1 - As Drilled | 11,600.0 | 7,177.0 | 3,511.2 | 3,410.9 | 34.984 | SF |
| Ocoma G35-09 - Wellbore #1 - 150' Drift | 100.0 | 61.4 | 1,646.6 | 1,646.4 | 7,988.332 | CC |
| Ocoma G35-09 - Wellbore #1 - 150' Drift | 1,100.0 | 1,051.7 | 1,649.9 | 1,643.5 | 258.362 | ES |
| Ocoma G35-09 - Wellbore #1 - 150' Drift | 8,400.0 | 7,010.0 | 2,288.1 | 2,235.1 | 43.169 | SF |
| Ocoma G35-09 - Wellbore #1 - Wellbore #1 - As Drilled | 2,324.1 | 2,331.5 | 1,592.7 | 1,579.8 | 123.374 | CC, ES |
| Ocoma G35-09 - Wellbore #1 - Wellbore #1 - As Drilled | 8,600.0 | 7,111.5 | 2,121.8 | 2,070.5 | 41.361 | SF |
| Ocoma G35-10 - Wellbore #1 - Wellbore #1 - As Drilled | 286.9 | 227.9 | 2,484.2 | 2,483.1 | 2,147.674 | CC |
| Ocoma G35-10 - Wellbore #1 - Wellbore #1 - As Drilled | 300.0 | 237.6 | 2,484.2 | 2,483.0 | 2,029.568 | ES |
| Ocoma G35-10 - Wellbore #1 - Wellbore #1 - As Drilled | 9,800.0 | 7,182.5 | 2,854.9 | 2,784.5 | 40.588 | SF |
| Ocoma G35-15 - Wellbore #1 - Wellbore #1 - As Drilled | 8,840.2 | 7,100.3 | 539.5 | 482.2 | 9.411 | CC, ES |
| Ocoma G35-15 - Wellbore #1 - Wellbore #1 - As Drilled | 8,900.0 | 7,101.2 | 542.8 | 484.8 | 9.353 | SF |
| Ocoma G35-16 - Wellbore #1 - Wellbore #1 - As Drilled | 2,346.5 | 2,328.0 | 347.8 | 335.1 | 27.311 | CC, ES |
| Ocoma G35-16 - Wellbore #1 - Wellbore #1 - As Drilled | 7,400.0 | 7,052.5 | 574.1 | 534.5 | 14.488 | SF |
| Ocoma G35-23 - Wellbore #1 - Wellbore #1 - As Drilled | 8,248.2 | 7,083.1 | 1,378.9 | 1,330.7 | 28.589 | CC, ES |
| Ocoma G35-23 - Wellbore #1 - Wellbore #1 - As Drilled | 8,600.0 | 7,093.8 | 1,423.1 | 1,370.8 | 27.209 | SF |
| Staind G35-19 - Wellbore #1 - Wellbore #1 - As Drilled | 10,976.8 | 7,246.2 | 3,946.6 | 3,850.8 | 41.193 | CC |
| Staind G35-19 - Wellbore #1 - Wellbore #1 - As Drilled | 11,000.0 | 7,247.3 | 3,946.6 | 3,850.4 | 41.016 | ES |
| Staind G35-19 - Wellbore #1 - Wellbore #1 - As Drilled | 12,400.0 | 7,316.0 | 4,194.7 | 4,078.8 | 36.205 | SF |
| G Section 36 | | | | | | |
| Mark State PC G36-79HN - Original Drilling - Original Dri | 6,941.3 | 11,313.0 | 537.5 | 516.5 | 25.624 | CC, ES |
| Mark State PC G36-79HN - Original Drilling - Original Dri | 7,000.0 | 11,313.0 | 541.3 | 520.0 | 25.495 | SF |
| Pedro State H01-30D - Wellbore #1 - Wellbore #1 - As D | 6,430.6 | 6,485.7 | 61.3 | 24.7 | 1.675 | CC, ES |
| Pedro State H01-30D - Wellbore #1 - Wellbore #1 - As D | 6,450.0 | 6,505.0 | 61.5 | 24.8 | 1.674 | SF |
| H Section 03 | | | | | | |
| Aristocrat Angus 02-00-03 - Original Drilling - Design #1 | 16,451.6 | 7,319.0 | 987.8 | 788.8 | 4.962 | CC, ES |
| Aristocrat Angus 02-00-03 - Original Drilling - Design #1 | 16,500.0 | 7,319.0 | 989.0 | 789.1 | 4.948 | SF |
| Aristocrat Angus 04-02-03 - Original Drilling - Original Dri | 14,941.0 | 7,452.7 | 1,330.6 | 1,155.1 | 7.583 | CC, ES |
| Aristocrat Angus 04-02-03 - Original Drilling - Original Dri | 15,000.0 | 7,454.6 | 1,331.9 | 1,155.5 | 7.554 | SF |

Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|--------------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Centennial State G34-612 |
| Project: | Bronco | TVD Reference: | WELL @ 4846.0ft (Original Well Elev) |
| Reference Site: | G Section 35 | MD Reference: | WELL @ 4846.0ft (Original Well Elev) |
| Site Error: | 0.0 ft | North Reference: | Grid |
| Reference Well: | Centennial State G34-612 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 ft | Output errors are at | 2.79 sigma |
| Reference Wellbore | Original Drilling | Database: | EDM Production |
| Reference Design: | APD - Rev 1 | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to WELL @ 4846.0ft (Original Well Elev)

Coordinates are relative to: Centennial State G34-612

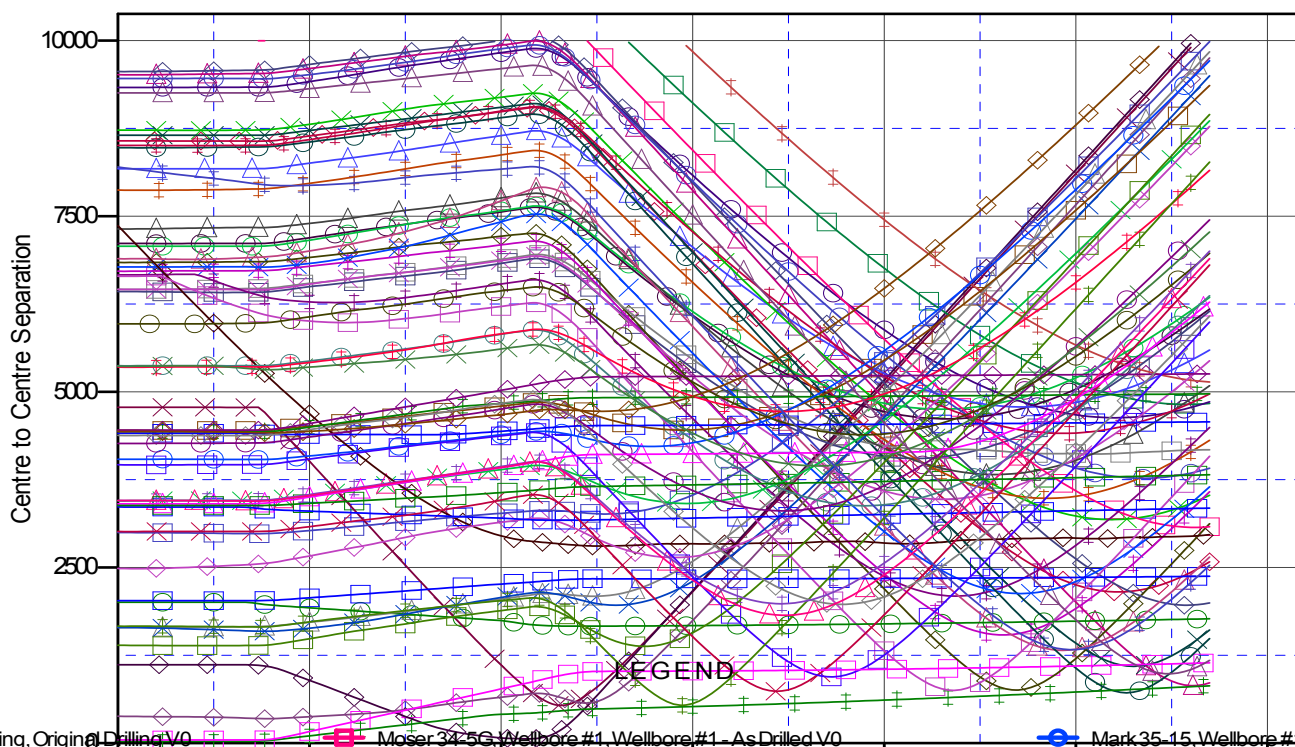
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.5000000

Grid Convergence at Surface is: 0.57°

Ladder Plot



| | | |
|---|--|-------------------------------------|
| al Drilling, Original Drilling V0 | Moser 34-5G, Wellbore #1, Wellbore #1 - As Drilled V0 | Mark 35-15, Wellbore #1, Wellbore |
| 1, Wellbore #1 - As Drilled V0 | HSR - Gun Club 09-34, Wellbore #1, Wellbore #1 - As Drilled V0 | Ocoma G35-23, Wellbore #1, Wellb |
| #1, Wellbore #1 - As Drilled V0 | Cornelius 23-34, Wellbore #1, Wellbore #1 - As Drilled V0 | Ocoma G35-03, Wellbore #1, Well |
| re #1 - As Drilled V0 | Beebe 10-34, Wellbore #1, Wellbore #1 - As Drilled V0 | Centennial State G34-645, Original |
| ore #1 - As Drilled V0 | Moser PC G34-65HN, Original Drilling, As Drilled V0 | Mark 14-35, Wellbore #1, Wellbore |
| bore #1 - As Drilled V0 | HSR - Owens 14-34, Wellbore #1, Wellbore #1 - As Drilled V0 | Centennial State G34-689, Original |
| ellbore #1 - As Drilled V0 | HSR - Gun Club 16-34, Wellbore #1, Wellbore #1 - As Drilled V0 | Ocoma G35-06, Wellbore #1, Well |
| , Wellbore #1 - As Drilled V0 | Beaman G34-18, Wellbore #1, Wellbore #1 - As Drilled V0 | Mark E Unit 1, Wellbore #1, Wellbo |
| re #1 - As Drilled V0 | Ocoma G35-16, Wellbore #1, Wellbore #1 - As Drilled V0 | Ocoma G35-15, Wellbore #1, Well |
| ellbore #1 - As Drilled V0 | Centennial State G34-635, Original Drilling, APD - Rev 1 V0 | Centennial State G34-675, Original |
| illbore #1 - As Drilled V0 | CPC Mark 35-02, Wellbore #1, Wellbore #1 - As Drilled V0 | Staind G35-19, Wellbore #1, Wellb |
| #1, Wellbore #1 - As Drilled V0 | Centennial State G34-618, Original Drilling, APD - Rev 1 V0 | Mark 12-35, Wellbore #1, Wellbore |
| ellbore #1, Wellbore #1 - As Drilled V0 | Ocoma G35-09, Wellbore #1, 150' Drift V0 | Ocoma G35-04, Wellbore #1, Well |
| , Wellbore #1 - As Drilled V0 | Ocoma G35-09, Wellbore #1, Wellbore #1 - As Drilled V0 | Centennial State G34-626, Original |
| bore #1 - As Drilled V0 | Ocoma G35-10, Wellbore #1, Wellbore #1 - As Drilled V0 | Mark 11-35, Wellbore #1, 150' Drift |

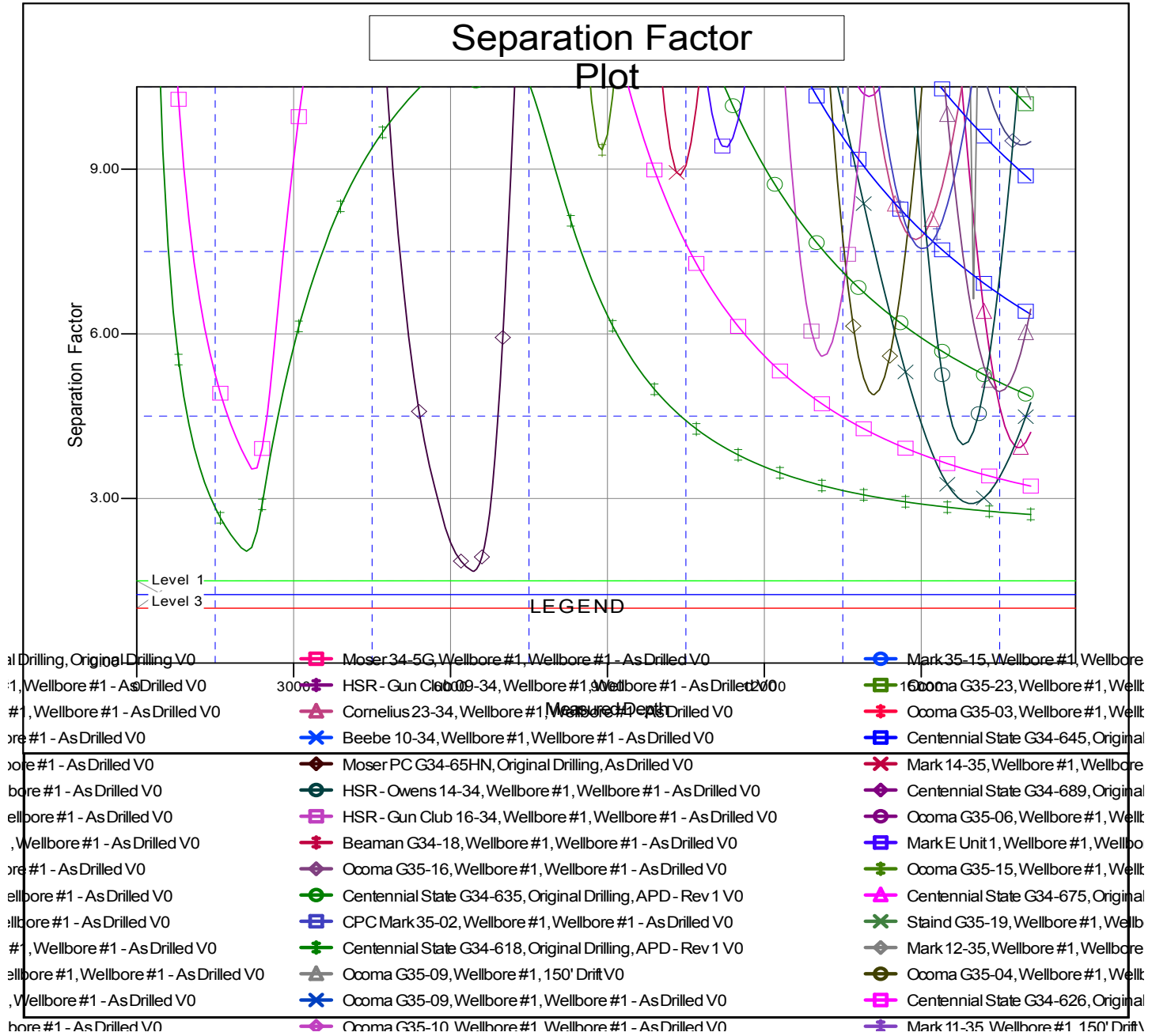
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|--------------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Centennial State G34-612 |
| Project: | Bronco | TVD Reference: | WELL @ 4846.0ft (Original Well Elev) |
| Reference Site: | G Section 35 | MD Reference: | WELL @ 4846.0ft (Original Well Elev) |
| Site Error: | 0.0 ft | North Reference: | Grid |
| Reference Well: | Centennial State G34-612 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 ft | Output errors are at | 2.79 sigma |
| Reference Wellbore | Original Drilling | Database: | EDM Production |
| Reference Design: | APD - Rev 1 | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to WELL @ 4846.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.5000000

Coordinates are relative to: Centennial State G34-612
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.57°



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