



Project: WELD COUNTY
Site: Ottesen Pad
Well: OTTESEN FEDERAL 04N
Wellbore: OWB
Design: Plan #2
Lat: 40° 0' 15.569 N
Long: 104° 46' 41.380 W
GL: 5076.0
KB: KB 20' @ 5096.0usft



Azimuths to True North
Magnetic North: 7.73°

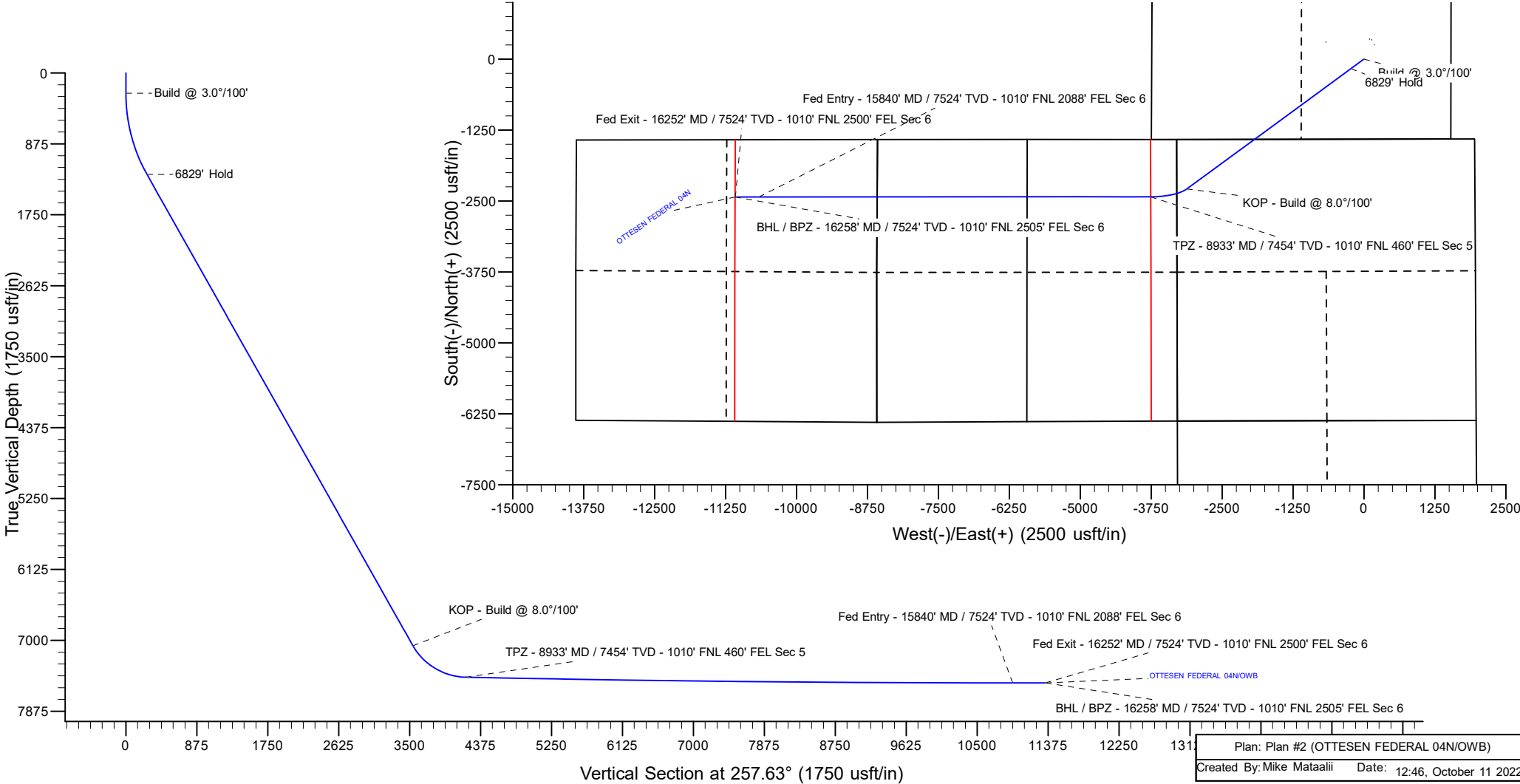
Magnetic Field
Strength: 51656.6nT
Dip Angle: 66.30°
Date: 4/12/2022
Model: IGRF2000

WELL DETAILS: OTTESEN FEDERAL 04N

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|-------|-------|------------|------------|-----------------|-------------------|
| 0.0 | 0.0 | 1245245.23 | 3202210.73 | 40° 0' 15.569 N | 104° 46' 41.380 W |

SECTION DETAILS

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSec | Annotation |
|---------|-------|--------|--------|---------|----------|------|--------|---------|---|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 250.0 | 0.00 | 0.00 | 250.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | Build @ 3.0°/100' |
| 1305.8 | 31.68 | 233.78 | 1252.9 | -168.1 | -229.5 | 3.00 | 233.78 | 260.2 | 6829' Hold |
| 8135.4 | 31.68 | 233.78 | 7065.1 | -2287.2 | -3122.7 | 0.00 | 0.00 | 3540.1 | KOP - Build @ 8.0°/100' |
| 8933.7 | 88.84 | 270.04 | 7454.0 | -2425.3 | -3758.0 | 8.00 | 41.20 | 4190.2 | TPZ - 8933' MD / 7454' TVD - 1010' FNL 460' FEL Sec 5 |
| 15840.8 | 90.00 | 269.89 | 7524.0 | -2429.4 | -10664.7 | 0.02 | -7.53 | 10937.5 | Fed Entry - 15840' MD / 7524' TVD - 1010' FNL 2088' FEL Sec 6 |
| 16252.8 | 90.00 | 270.04 | 7524.0 | -2429.7 | -11076.6 | 0.04 | 90.00 | 11340.0 | Fed Exit - 16252' MD / 7524' TVD - 1010' FNL 2500' FEL Sec 6 |
| 16258.2 | 90.00 | 270.04 | 7524.0 | -2429.7 | -11082.0 | 0.00 | 0.00 | 11345.2 | BHL / BPZ - 16258' MD / 7524' TVD - 1010' FNL 2505' FEL Sec 6 |



PDC Energy Inc.
Anticollision Summary Report

| | | | |
|---------------------------|---------------------|-------------------------------------|----------------------------|
| Company: | GWP - PLANNING DB | Local Co-ordinate Reference: | Well OTTESEN FEDERAL 04N |
| Project: | WELD COUNTY | TVD Reference: | KB 20' @ 5096.0usft |
| Reference Site: | Ottesen Pad | MD Reference: | KB 20' @ 5096.0usft |
| Site Error: | 0.0 usft | North Reference: | True |
| Reference Well: | OTTESEN FEDERAL 04N | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | OWB | Database: | EDM 5000.15 Single User Db |
| Reference Design: | Plan #2 | Offset TVD Reference: | Offset Datum |

| | | | |
|-------------------------------------|---|-----------------------|---------------------|
| Reference | Plan #2 | | |
| 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 usft | Error Surface: | Pedal Curve |
| Warning Levels Evaluated at: | 2.00 Sigma | Casing Method: | Not applied |

| | | | | |
|----------------------------|------------------|--------------------------|------------------|---------------------|
| Survey Tool Program | Date | 10/11/2022 | | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
| 0.0 | 16,258.2 | Plan #2 (OWB) | MWD | OWSG MWD - Standard |

| Summary | | | | | | |
|------------------------------------|---------------------------------|------------------------------|---------------------------------|----------------------------------|-------------------|-------------------------------|
| Site Name | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design | | | | | | |
| Ottesen Offsets | | | | | | |
| Bailey #1 - OWB - OWB | 7,655.6 | 6,635.8 | 737.9 | 656.3 | 9.041 | CC |
| Bailey #1 - OWB - OWB | 7,700.0 | 6,673.6 | 738.3 | 656.2 | 8.992 | ES |
| Bailey #1 - OWB - OWB | 7,800.0 | 6,758.7 | 741.8 | 658.8 | 8.935 | SF |
| Great Western Sugar 3X - OWB - OWB | 16,258.2 | 7,400.0 | 965.5 | 788.9 | 5.468 | CC, ES, SF |
| Grein #1 - OWB - OWB | 10,080.1 | 7,398.3 | 242.3 | 124.1 | 2.050 | CC |
| Grein #1 - OWB - OWB | 10,100.0 | 7,398.6 | 243.1 | 121.8 | 2.005 | ES, SF |
| OTTESEN LE 06-290HN - OWB - OWB | 677.4 | 674.6 | 37.3 | 31.4 | 6.380 | CC, ES |
| OTTESEN LE 06-290HN - OWB - OWB | 16,258.2 | 17,919.6 | 2,361.5 | 1,842.9 | 4.554 | SF |
| OTTESEN LE 06-290HNN - OWB - OWB | 730.4 | 725.8 | 45.1 | 39.0 | 7.415 | CC, ES |
| OTTESEN LE 06-290HNN - OWB - OWB | 16,258.2 | 17,101.9 | 2,422.1 | 1,900.7 | 4.645 | SF |
| OTTESEN LE 06-311HC - OWB - OWB | 766.9 | 761.0 | 51.3 | 45.0 | 8.109 | CC, ES |
| OTTESEN LE 06-311HC - OWB - OWB | 16,252.8 | 17,816.3 | 2,753.7 | 2,230.4 | 5.262 | SF |
| OTTESEN LE 06-311HN - OWB - OWB | 826.9 | 818.9 | 61.6 | 54.9 | 9.134 | CC, ES |
| OTTESEN LE 06-311HN - OWB - OWB | 16,258.2 | 17,859.0 | 2,837.0 | 2,313.4 | 5.418 | SF |
| OTTESEN LE 06-351HN - OWB - OWB | 883.3 | 873.7 | 69.2 | 62.1 | 9.688 | CC |
| OTTESEN LE 06-351HN - OWB - OWB | 900.0 | 889.7 | 69.4 | 62.0 | 9.373 | ES |
| OTTESEN LE 06-351HN - OWB - OWB | 16,200.0 | 17,635.0 | 3,106.6 | 2,583.9 | 5.943 | SF |
| OTTESEN LE 06-351HNN - OWB - OWB | 1,101.9 | 1,088.3 | 62.1 | 50.2 | 5.208 | CC |
| OTTESEN LE 06-351HNN - OWB - OWB | 1,200.0 | 1,187.5 | 64.3 | 47.6 | 3.854 | ES |
| OTTESEN LE 06-351HNN - OWB - OWB | 1,305.8 | 1,293.8 | 74.3 | 53.5 | 3.575 | SF |
| OTTESEN LE 06-370HC - OWB - OWB | 1,056.7 | 1,043.3 | 80.4 | 70.6 | 8.228 | CC |
| OTTESEN LE 06-370HC - OWB - OWB | 1,100.0 | 1,085.9 | 81.2 | 69.9 | 7.210 | ES |
| OTTESEN LE 06-370HC - OWB - OWB | 1,305.8 | 1,289.4 | 106.3 | 87.8 | 5.738 | SF |
| OTTESEN LE 06-370HN - OWB - OWB | 1,418.5 | 1,384.8 | 10.8 | -11.7 | 0.480 | No-Go Zone - Stop Drilling, (|
| OTTESEN LE 09-362HC - OWB - OWB | 0.0 | 0.5 | 232.5 | | | |
| OTTESEN LE 09-362HC - OWB - OWB | 200.0 | 198.3 | 233.7 | 230.7 | 77.736 | ES |
| OTTESEN LE 09-362HC - OWB - OWB | 800.0 | 788.2 | 317.4 | 305.9 | 27.600 | SF |
| OTTESEN LE 09-363HN - OWB - OWB | 222.2 | 222.7 | 205.7 | 202.5 | 65.612 | CC |
| OTTESEN LE 09-363HN - OWB - OWB | 250.0 | 250.1 | 205.7 | 202.4 | 62.365 | ES |
| OTTESEN LE 09-363HN - OWB - OWB | 800.0 | 788.6 | 288.5 | 277.0 | 25.046 | SF |
| OTTESEN LE 09-365HC - OWB - OWB | 0.0 | 0.5 | 180.4 | | | |
| OTTESEN LE 09-365HC - OWB - OWB | 200.0 | 199.1 | 181.4 | 178.4 | 60.493 | ES |
| OTTESEN LE 09-365HC - OWB - OWB | 700.0 | 692.4 | 240.2 | 229.8 | 23.201 | SF |
| OTTESEN LE 09-365HN - OWB - OWB | 0.0 | 0.5 | 191.7 | | | |
| OTTESEN LE 09-365HN - OWB - OWB | 200.0 | 198.0 | 193.0 | 190.0 | 64.130 | ES |
| OTTESEN LE 09-365HN - OWB - OWB | 800.0 | 794.5 | 271.2 | 259.9 | 24.003 | SF |
| OTTESEN LE 09-366HN - OWB - OWB | 0.0 | 0.5 | 157.5 | | | |

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

PDC Energy Inc.
Anticollision Summary Report

| | | | |
|---------------------------|---------------------|-------------------------------------|----------------------------|
| Company: | GWP - PLANNING DB | Local Co-ordinate Reference: | Well OTTESEN FEDERAL 04N |
| Project: | WELD COUNTY | TVD Reference: | KB 20' @ 5096.0usft |
| Reference Site: | Ottesen Pad | MD Reference: | KB 20' @ 5096.0usft |
| Site Error: | 0.0 usft | North Reference: | True |
| Reference Well: | OTTESEN FEDERAL 04N | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | OWB | Database: | EDM 5000.15 Single User Db |
| Reference Design: | Plan #2 | Offset TVD Reference: | Offset Datum |

| Summary | | | | | | |
|----------------------------------|--|---------------------------------------|--|---|----------------------|---------|
| Site Name | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design | | | | | | |
| Ottesen Offsets | | | | | | |
| OTTESEN LE 09-366HN - OWB - OWB | 250.0 | 249.9 | 158.3 | 155.0 | 48.000 | ES |
| OTTESEN LE 09-366HN - OWB - OWB | 700.0 | 693.2 | 216.1 | 205.6 | 20.569 | SF |
| OTTESEN LE 09-366HNN - OWB - OWB | 0.0 | 0.5 | 169.1 | | | |
| OTTESEN LE 09-366HNN - OWB - OWB | 250.8 | 251.3 | 169.9 | 166.6 | 51.562 | ES |
| OTTESEN LE 09-366HNN - OWB - OWB | 700.0 | 696.6 | 222.6 | 212.5 | 21.935 | SF |
| OTTESEN LE 09-368HC - OWB - OWB | 0.0 | 0.5 | 135.1 | | | |
| OTTESEN LE 09-368HC - OWB - OWB | 200.0 | 199.1 | 136.0 | 133.0 | 45.177 | ES |
| OTTESEN LE 09-368HC - OWB - OWB | 700.0 | 694.4 | 195.8 | 185.4 | 18.912 | SF |
| OTTESEN LE 09-368HN - OWB - OWB | 0.0 | 0.5 | 145.3 | | | |
| OTTESEN LE 09-368HN - OWB - OWB | 250.0 | 249.6 | 145.9 | 142.6 | 44.047 | ES |
| OTTESEN LE 09-368HN - OWB - OWB | 700.0 | 699.5 | 198.0 | 187.8 | 19.401 | SF |

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Anticollision Summary Report

| | | | |
|---------------------------|---------------------|-------------------------------------|----------------------------|
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| Project: | WELD COUNTY | TVD Reference: | KB 20' @ 5096.0usft |
| Reference Site: | Ottesen Pad | MD Reference: | KB 20' @ 5096.0usft |
| Site Error: | 0.0 usft | North Reference: | True |
| Reference Well: | OTTESEN FEDERAL 04N | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | OWB | Database: | EDM 5000.15 Single User Db |
| Reference Design: | Plan #2 | Offset TVD Reference: | Offset Datum |

| Summary | | | | | | |
|---------------------------------|---------------------------------|------------------------------|---------------------------------|----------------------------------|-------------------|---------|
| Site Name | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design | | | | | | |
| Ottesen Pad | | | | | | |
| OTTESEN 14NA - OWB - Plan #2 | 250.0 | 250.0 | 149.3 | 146.5 | 53.450 | CC |
| OTTESEN 14NA - OWB - Plan #2 | 500.0 | 513.0 | 151.6 | 143.8 | 19.530 | ES |
| OTTESEN 14NA - OWB - Plan #2 | 16,258.2 | 16,938.3 | 1,759.3 | 1,224.8 | 3.292 | SF |
| OTTESEN 15C - OWB - OWB | 0.0 | 0.0 | 164.7 | | | |
| OTTESEN 15C - OWB - OWB | 251.8 | 252.0 | 165.6 | 162.7 | 56.434 | ES |
| OTTESEN 15C - OWB - OWB | 1,600.0 | 1,693.3 | 493.0 | 470.6 | 21.955 | SF |
| OTTESEN 15C - OWB - Plan #2 | 0.0 | 0.0 | 164.7 | | | |
| OTTESEN 15C - OWB - Plan #2 | 251.8 | 252.0 | 165.6 | 162.7 | 56.434 | ES |
| OTTESEN 15C - OWB - Plan #2 | 16,258.2 | 17,559.8 | 1,938.8 | 1,409.5 | 3.663 | SF |
| OTTESEN 16N - OWB - OWB | 255.3 | 255.7 | 178.8 | 175.8 | 59.407 | CC, ES |
| OTTESEN 16N - OWB - OWB | 800.0 | 792.3 | 247.0 | 236.3 | 23.143 | SF |
| OTTESEN 16N - OWB - Plan #2 | 255.3 | 255.7 | 178.8 | 175.8 | 59.407 | CC, ES |
| OTTESEN 16N - OWB - Plan #2 | 16,258.2 | 17,562.1 | 2,099.4 | 1,563.7 | 3.919 | SF |
| OTTESEN 17N - OWB - OWB | 726.8 | 721.0 | 169.7 | 164.0 | 29.406 | CC, ES |
| OTTESEN 17N - OWB - OWB | 1,200.0 | 1,162.4 | 241.3 | 228.8 | 19.292 | SF |
| OTTESEN 17N - OWB - Plan #2 | 726.8 | 721.0 | 169.7 | 164.0 | 29.406 | CC |
| OTTESEN 17N - OWB - Plan #2 | 8,450.0 | 9,263.2 | 225.0 | 114.9 | 2.045 | ES, SF |
| OTTESEN 18C - OWB - Plan #2 | 250.0 | 250.0 | 168.3 | 165.5 | 60.261 | CC |
| OTTESEN 18C - OWB - Plan #2 | 500.0 | 491.0 | 170.2 | 164.7 | 31.330 | ES |
| OTTESEN 18C - OWB - Plan #2 | 8,550.0 | 9,159.0 | 560.6 | 444.0 | 4.805 | SF |
| OTTESEN 19NA - OWB - Plan #2 | 250.0 | 250.0 | 156.5 | 153.7 | 56.031 | CC |
| OTTESEN 19NA - OWB - Plan #2 | 400.0 | 395.4 | 157.3 | 153.2 | 38.274 | ES |
| OTTESEN 19NA - OWB - Plan #2 | 8,200.0 | 8,766.1 | 428.7 | 311.5 | 3.657 | SF |
| OTTESEN 20N - OWB - Plan #2 | 250.0 | 250.0 | 145.4 | 142.6 | 52.035 | CC |
| OTTESEN 20N - OWB - Plan #2 | 400.0 | 396.7 | 146.0 | 142.1 | 36.775 | ES |
| OTTESEN 20N - OWB - Plan #2 | 8,300.0 | 8,923.3 | 708.7 | 591.3 | 6.034 | SF |
| OTTESEN 21N - OWB - OWB | 510.5 | 510.4 | 134.2 | 129.7 | 29.926 | CC, ES |
| OTTESEN 21N - OWB - OWB | 1,000.0 | 983.2 | 188.9 | 178.1 | 17.483 | SF |
| OTTESEN 21N - OWB - Plan #2 | 510.5 | 510.4 | 134.2 | 129.7 | 29.926 | CC, ES |
| OTTESEN 21N - OWB - Plan #2 | 8,200.0 | 8,965.6 | 832.8 | 720.1 | 7.391 | SF |
| OTTESEN 22C - OWB - Plan #2 | 250.0 | 250.0 | 125.4 | 122.6 | 44.884 | CC |
| OTTESEN 22C - OWB - Plan #2 | 500.0 | 498.8 | 126.3 | 121.8 | 27.937 | ES |
| OTTESEN 22C - OWB - Plan #2 | 1,700.0 | 1,685.0 | 192.0 | 170.4 | 8.895 | SF |
| OTTESEN 23NA - OWB - Plan #2 | 250.0 | 250.0 | 117.0 | 114.2 | 41.872 | CC |
| OTTESEN 23NA - OWB - Plan #2 | 1,000.0 | 1,002.8 | 119.4 | 110.5 | 13.434 | ES |
| OTTESEN 23NA - OWB - Plan #2 | 1,600.0 | 1,593.3 | 167.1 | 146.1 | 7.945 | SF |
| OTTESEN 24N - OWB - OWB | 0.0 | 0.0 | 110.7 | | | |
| OTTESEN 24N - OWB - OWB | 300.0 | 299.7 | 112.0 | 108.9 | 36.217 | ES |
| OTTESEN 24N - OWB - OWB | 800.0 | 784.7 | 163.9 | 154.4 | 17.223 | SF |
| OTTESEN 24N - OWB - Plan #2 | 0.0 | 0.0 | 110.7 | | | |
| OTTESEN 24N - OWB - Plan #2 | 300.0 | 299.7 | 112.0 | 108.9 | 36.217 | ES |
| OTTESEN 24N - OWB - Plan #2 | 8,150.0 | 8,832.6 | 1,382.8 | 1,273.3 | 12.623 | SF |
| OTTESEN 25N - OWB - Plan #2 | 926.4 | 938.7 | 96.4 | 86.2 | 9.387 | CC |
| OTTESEN 25N - OWB - Plan #2 | 1,000.0 | 1,012.1 | 97.1 | 85.6 | 8.405 | ES |
| OTTESEN 25N - OWB - Plan #2 | 1,305.8 | 1,312.8 | 125.1 | 106.1 | 6.598 | SF |
| OTTESEN 26C - OWB - Plan #2 | 868.1 | 883.3 | 90.7 | 79.3 | 7.977 | CC |
| OTTESEN 26C - OWB - Plan #2 | 900.0 | 915.1 | 90.9 | 79.0 | 7.629 | ES |
| OTTESEN 26C - OWB - Plan #2 | 1,100.0 | 1,113.3 | 102.0 | 85.8 | 6.313 | SF |
| OTTESEN 27NA - OWB - OWB | 252.0 | 252.1 | 100.0 | 97.2 | 35.171 | CC, ES |
| OTTESEN 27NA - OWB - OWB | 700.0 | 694.4 | 140.3 | 131.5 | 16.002 | SF |
| OTTESEN 27NA - OWB - Plan #2 | 252.0 | 252.1 | 100.0 | 97.2 | 35.171 | CC, ES |
| OTTESEN 27NA - OWB - Plan #2 | 700.0 | 694.4 | 140.3 | 131.5 | 16.002 | SF |
| OTTESEN 28N - OWB - Plan #2 | 786.3 | 806.9 | 89.1 | 75.1 | 6.356 | CC |

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

PDC Energy Inc.
Anticollision Summary Report

| | | | |
|---------------------------|---------------------|-------------------------------------|----------------------------|
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| Project: | WELD COUNTY | TVD Reference: | KB 20' @ 5096.0usft |
| Reference Site: | Ottesen Pad | MD Reference: | KB 20' @ 5096.0usft |
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| Reference Design: | Plan #2 | Offset TVD Reference: | Offset Datum |

| Summary | | | | | | |
|--------------------------------------|---------------------------------|------------------------------|---------------------------------|----------------------------------|-------------------|------------------------------------|
| Site Name | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design | | | | | | |
| Ottesen Pad | | | | | | |
| OTTESEN 28N - OWB - Plan #2 | 800.0 | 820.6 | 89.2 | 74.9 | 6.260 | ES |
| OTTESEN 28N - OWB - Plan #2 | 900.0 | 920.0 | 92.6 | 76.7 | 5.830 | SF |
| OTTESEN 29C - OWB - Plan #2 | 724.0 | 745.3 | 94.9 | 81.2 | 6.921 | CC, ES |
| OTTESEN 29C - OWB - Plan #2 | 900.0 | 920.2 | 103.9 | 87.7 | 6.418 | SF |
| OTTESEN 30N - OWB - OWB | 177.8 | 177.8 | 109.8 | 107.5 | 48.851 | CC |
| OTTESEN 30N - OWB - OWB | 200.0 | 199.4 | 109.9 | 107.4 | 43.964 | ES |
| OTTESEN 30N - OWB - OWB | 700.0 | 691.3 | 158.6 | 148.4 | 15.513 | SF |
| OTTESEN 30N - OWB - Plan #2 | 177.8 | 177.8 | 109.8 | 107.5 | 48.851 | CC |
| OTTESEN 30N - OWB - Plan #2 | 200.0 | 199.4 | 109.9 | 107.4 | 43.964 | ES |
| OTTESEN 30N - OWB - Plan #2 | 700.0 | 691.3 | 158.6 | 148.4 | 15.513 | SF |
| OTTESEN 31N - OWB - Plan #2 | 630.3 | 652.9 | 114.0 | 101.6 | 9.160 | CC, ES |
| OTTESEN 31N - OWB - Plan #2 | 800.0 | 821.1 | 123.1 | 108.7 | 8.578 | SF |
| OTTESEN 32NA - OWB - OWB | 182.9 | 182.9 | 125.0 | 122.7 | 54.014 | CC |
| OTTESEN 32NA - OWB - OWB | 250.0 | 249.5 | 125.3 | 122.5 | 44.801 | ES |
| OTTESEN 32NA - OWB - OWB | 700.0 | 695.7 | 176.3 | 166.3 | 17.696 | SF |
| OTTESEN 32NA - OWB - Plan #2 | 182.9 | 182.9 | 125.0 | 122.7 | 54.014 | CC |
| OTTESEN 32NA - OWB - Plan #2 | 250.0 | 249.5 | 125.3 | 122.5 | 44.801 | ES |
| OTTESEN 32NA - OWB - Plan #2 | 700.0 | 695.7 | 176.3 | 166.3 | 17.696 | SF |
| OTTESEN FEDERAL 01N - OWB - Plan #2 | 250.0 | 250.0 | 45.1 | 42.3 | 16.145 | CC |
| OTTESEN FEDERAL 01N - OWB - Plan #2 | 16,256.8 | 16,150.7 | 529.5 | -0.4 | 0.999 | No-Go Zone - Stop Drilling, ES |
| OTTESEN FEDERAL 02NA - OWB - Plan #2 | 250.0 | 250.0 | 30.3 | 27.5 | 10.830 | CC |
| OTTESEN FEDERAL 02NA - OWB - Plan #2 | 16,257.3 | 16,016.3 | 395.8 | -75.9 | 0.839 | No-Go Zone - Stop Drilling, ES |
| OTTESEN FEDERAL 03C - OWB - Plan #2 | 250.0 | 250.0 | 15.7 | 12.9 | 5.616 | CC |
| OTTESEN FEDERAL 03C - OWB - Plan #2 | 16,258.0 | 16,420.5 | 289.0 | -72.4 | 0.800 | No-Go Zone - Stop Drilling, ES |
| OTTESEN FEDERAL 05N - OWB - Plan #2 | 250.0 | 250.0 | 14.8 | 12.1 | 5.315 | CC |
| OTTESEN FEDERAL 05N - OWB - Plan #2 | 16,258.2 | 16,389.2 | 188.4 | -305.3 | 0.382 | No-Go Zone - Stop Drilling, ES |
| OTTESEN FEDERAL 06NA - OWB - Plan #2 | 250.0 | 250.0 | 29.4 | 26.6 | 10.530 | CC |
| OTTESEN FEDERAL 06NA - OWB - Plan #2 | 16,258.2 | 16,269.5 | 395.8 | -90.6 | 0.814 | No-Go Zone - Stop Drilling, ES |
| OTTESEN FEDERAL 07C - OWB - Plan #2 | 250.0 | 250.0 | 45.1 | 42.3 | 16.145 | CC |
| OTTESEN FEDERAL 07C - OWB - Plan #2 | 700.0 | 708.0 | 47.7 | 36.5 | 4.249 | ES |
| OTTESEN FEDERAL 07C - OWB - Plan #2 | 16,258.2 | 16,682.7 | 589.6 | 100.0 | 1.204 | Collision Avoidance Req., SF |
| OTTESEN FEDERAL 08N - OWB - Plan #2 | 250.0 | 250.0 | 59.9 | 57.2 | 21.460 | CC |
| OTTESEN FEDERAL 08N - OWB - Plan #2 | 700.0 | 710.4 | 63.2 | 52.0 | 5.639 | ES |
| OTTESEN FEDERAL 08N - OWB - Plan #2 | 16,258.2 | 16,533.8 | 699.8 | 165.8 | 1.310 | Collision Avoidance Req., SF |
| OTTESEN FEDERAL 09N - OWB - Plan #2 | 250.0 | 250.0 | 74.8 | 72.0 | 26.775 | CC |
| OTTESEN FEDERAL 09N - OWB - Plan #2 | 600.0 | 610.0 | 77.2 | 67.4 | 7.914 | ES |
| OTTESEN FEDERAL 09N - OWB - Plan #2 | 16,258.2 | 16,675.5 | 878.0 | 347.1 | 1.654 | Collision Risk Procedures Req., ES |
| OTTESEN FEDERAL 10NA - OWB - Plan #2 | 250.0 | 250.0 | 89.4 | 86.6 | 31.990 | CC |
| OTTESEN FEDERAL 10NA - OWB - Plan #2 | 600.0 | 611.7 | 92.2 | 82.5 | 9.515 | ES |
| OTTESEN FEDERAL 10NA - OWB - Plan #2 | 16,258.2 | 16,581.0 | 1,065.9 | 535.5 | 2.010 | SF |
| OTTESEN FEDERAL 11C - OWB - OWB | 252.6 | 252.7 | 104.7 | 101.8 | 35.431 | CC, ES |
| OTTESEN FEDERAL 11C - OWB - OWB | 700.0 | 696.4 | 152.0 | 142.5 | 16.032 | SF |
| OTTESEN FEDERAL 11C - OWB - Plan #2 | 252.6 | 252.7 | 104.7 | 101.8 | 35.431 | CC, ES |
| OTTESEN FEDERAL 11C - OWB - Plan #2 | 16,258.2 | 17,124.7 | 1,247.0 | 724.0 | 2.384 | SF |
| OTTESEN FEDERAL 12N - OWB - OWB | 0.0 | 0.0 | 119.6 | | | |
| OTTESEN FEDERAL 12N - OWB - OWB | 250.0 | 249.9 | 120.8 | 118.1 | 43.984 | ES |
| OTTESEN FEDERAL 12N - OWB - OWB | 700.0 | 696.0 | 165.4 | 156.0 | 17.694 | SF |
| OTTESEN FEDERAL 12N - OWB - Plan #2 | 0.0 | 0.0 | 119.6 | | | |
| OTTESEN FEDERAL 12N - OWB - Plan #2 | 250.0 | 249.9 | 120.8 | 118.1 | 43.984 | ES |
| OTTESEN FEDERAL 12N - OWB - Plan #2 | 16,258.2 | 17,150.1 | 1,399.6 | 863.7 | 2.611 | SF |
| OTTESEN FEDERAL 13HN - OWB - Plan #2 | 250.0 | 250.0 | 134.5 | 131.7 | 48.136 | CC |
| OTTESEN FEDERAL 13HN - OWB - Plan #2 | 500.0 | 511.9 | 136.5 | 128.7 | 17.496 | ES |
| OTTESEN FEDERAL 13HN - OWB - Plan #2 | 16,258.2 | 17,007.9 | 1,576.4 | 1,043.1 | 2.956 | SF |

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

PDC Energy Inc.
Anticollision Summary Report

| | | | |
|---------------------------|---------------------|-------------------------------------|----------------------------|
| Company: | GWP - PLANNING DB | Local Co-ordinate Reference: | Well OTTESEN FEDERAL 04N |
| Project: | WELD COUNTY | TVD Reference: | KB 20' @ 5096.0usft |
| Reference Site: | Ottesen Pad | MD Reference: | KB 20' @ 5096.0usft |
| Site Error: | 0.0 usft | North Reference: | True |
| Reference Well: | OTTESEN FEDERAL 04N | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | OWB | Database: | EDM 5000.15 Single User Db |
| Reference Design: | Plan #2 | Offset TVD Reference: | Offset Datum |

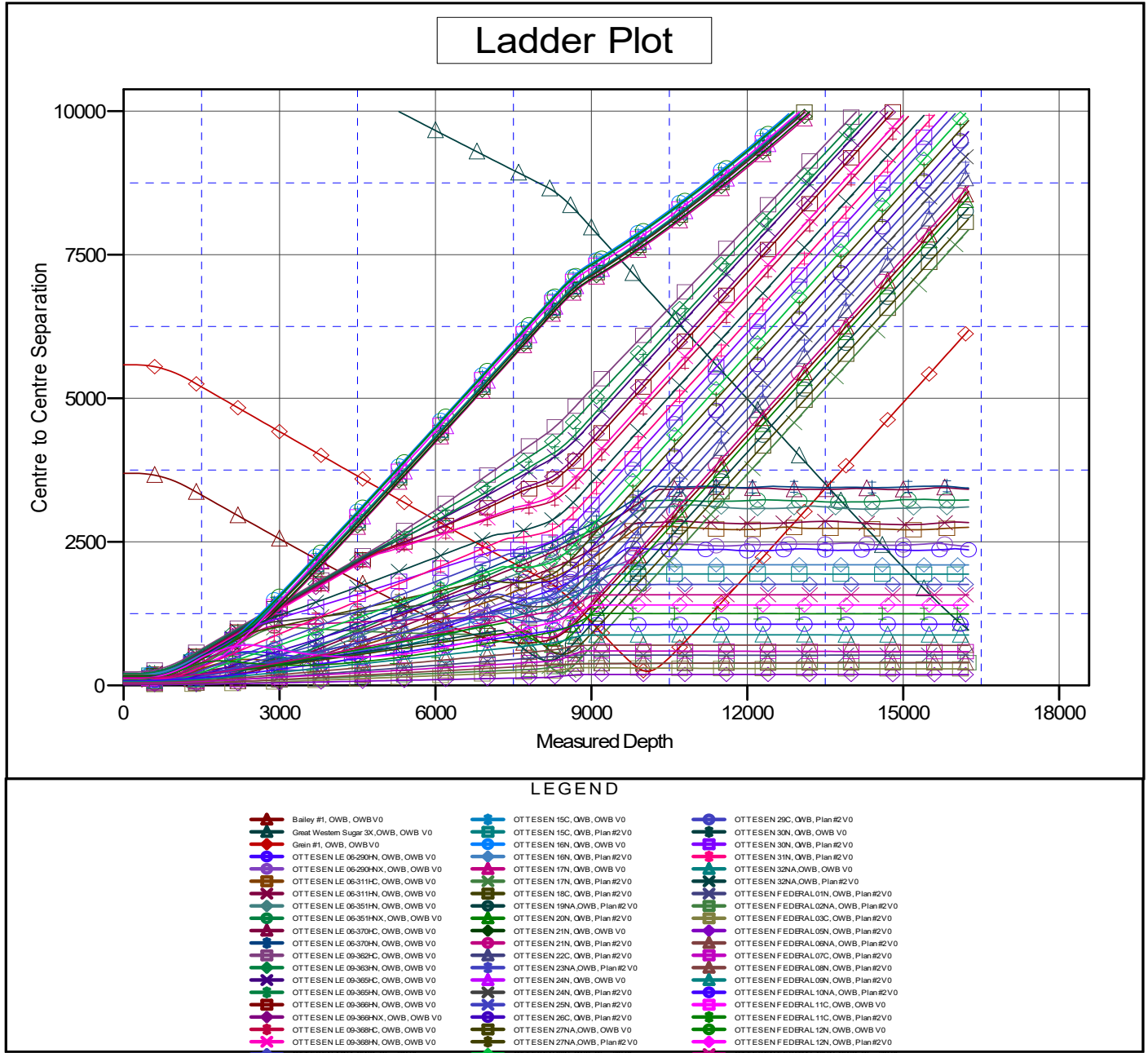
| Summary | | | | | | |
|---------------------------------|--|---------------------------------------|--|---|----------------------|---------|
| Site Name | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design | | | | | | |

PDC Energy Inc.
Anticollision Summary Report

| | | | |
|---------------------------|---------------------|-------------------------------------|----------------------------|
| Company: | GWP - PLANNING DB | Local Co-ordinate Reference: | Well OTTESEN FEDERAL 04N |
| Project: | WELD COUNTY | TVD Reference: | KB 20' @ 5096.0usft |
| Reference Site: | Ottesen Pad | MD Reference: | KB 20' @ 5096.0usft |
| Site Error: | 0.0 usft | North Reference: | True |
| Reference Well: | OTTESEN FEDERAL 04N | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | OWB | Database: | EDM 5000.15 Single User Db |
| Reference Design: | Plan #2 | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to KB 20' @ 5096.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: OTTESEN FEDERAL 04N
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.47°



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

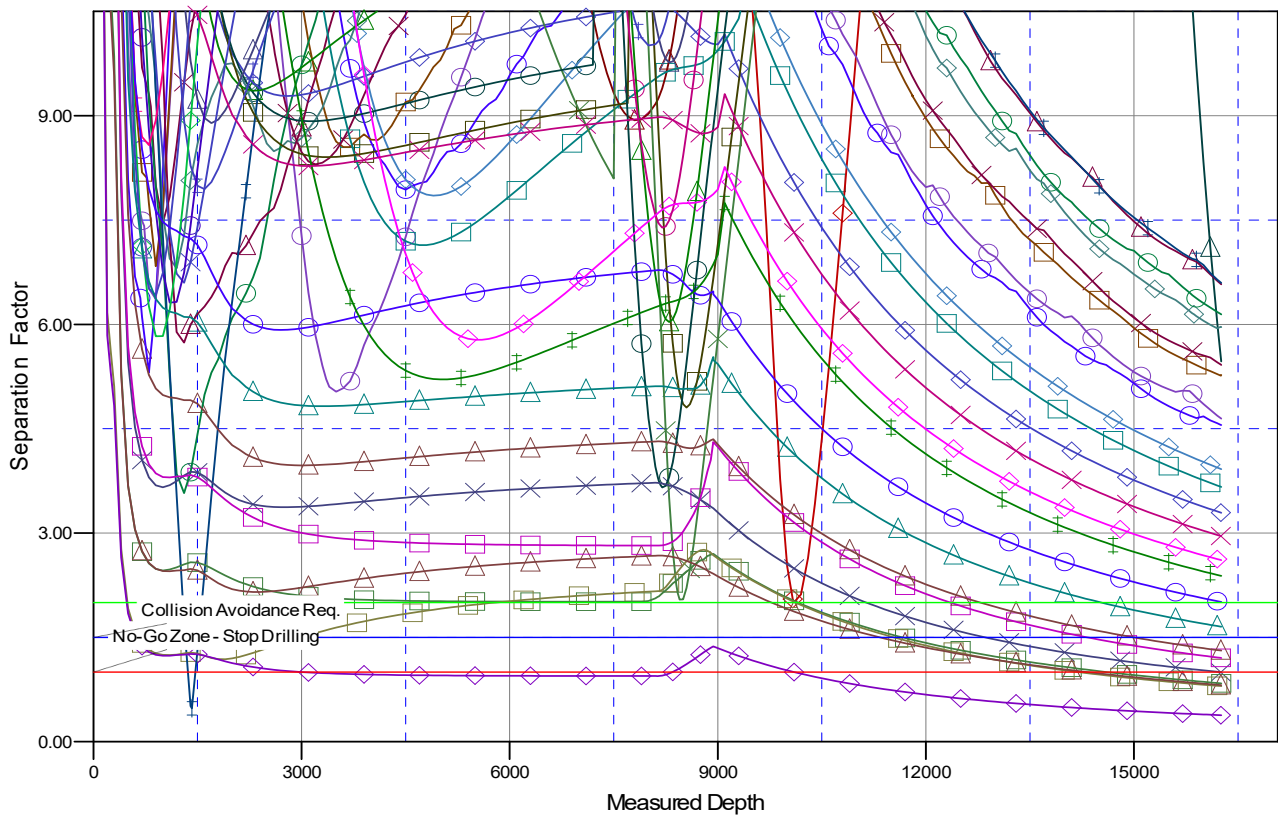
PDC Energy Inc.
Anticollision Summary Report

| | | | |
|---------------------------|---------------------|-------------------------------------|----------------------------|
| Company: | GWP - PLANNING DB | Local Co-ordinate Reference: | Well OTTESEN FEDERAL 04N |
| Project: | WELD COUNTY | TVD Reference: | KB 20' @ 5096.0usft |
| Reference Site: | Ottesen Pad | MD Reference: | KB 20' @ 5096.0usft |
| Site Error: | 0.0 usft | North Reference: | True |
| Reference Well: | OTTESEN FEDERAL 04N | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | OWB | Database: | EDM 5000.15 Single User Db |
| Reference Design: | Plan #2 | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to KB 20' @ 5096.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: OTTESEN FEDERAL 04N
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.47°

Separation Factor Plot



LEGEND

| | | |
|---------------------------------------|--------------------------------|--|
| ● Bailey #1, OWB, OWB V0 | ● OTTESEN 15C, OWB, OWB V0 | ● OTTESEN 29C, OWB, Plan#2 V0 |
| ● Great Western Sugar 3X, OWB, OWB V0 | ● OTTESEN 15C, OWB, Plan#2 V0 | ● OTTESEN 30N, OWB, OWB V0 |
| ● Grain #1, OWB, OWB V0 | ● OTTESEN 16N, OWB, OWB V0 | ● OTTESEN 30N, OWB, Plan#2 V0 |
| ● OTTESEN LE 06-290HN, OWB, OWB V0 | ● OTTESEN 16N, OWB, Plan#2 V0 | ● OTTESEN 31N, OWB, Plan#2 V0 |
| ● OTTESEN LE 06-290HN, OWB, OWB V0 | ● OTTESEN 17N, OWB, OWB V0 | ● OTTESEN 32NA, OWB, OWB V0 |
| ● OTTESEN LE 06-311HC, OWB, OWB V0 | ● OTTESEN 17N, OWB, Plan#2 V0 | ● OTTESEN 32NA, OWB, Plan#2 V0 |
| ● OTTESEN LE 06-311HN, OWB, OWB V0 | ● OTTESEN 18C, OWB, Plan#2 V0 | ● OTTESEN FEDERAL 01N, OWB, Plan#2 V0 |
| ● OTTESEN LE 06-351HN, OWB, OWB V0 | ● OTTESEN 18NA, OWB, Plan#2 V0 | ● OTTESEN FEDERAL 02NA, OWB, Plan#2 V0 |
| ● OTTESEN LE 06-351HN, OWB, OWB V0 | ● OTTESEN 20N, OWB, Plan#2 V0 | ● OTTESEN FEDERAL 03C, OWB, Plan#2 V0 |
| ● OTTESEN LE 06-370HC, OWB, OWB V0 | ● OTTESEN 21N, OWB, OWB V0 | ● OTTESEN FEDERAL 05N, OWB, Plan#2 V0 |
| ● OTTESEN LE 06-370HN, OWB, OWB V0 | ● OTTESEN 21N, OWB, Plan#2 V0 | ● OTTESEN FEDERAL 06NA, OWB, Plan#2 V0 |
| ● OTTESEN LE 06-362HC, OWB, OWB V0 | ● OTTESEN 22C, OWB, Plan#2 V0 | ● OTTESEN FEDERAL 07C, OWB, Plan#2 V0 |
| ● OTTESEN LE 06-363HN, OWB, OWB V0 | ● OTTESEN 23NA, OWB, Plan#2 V0 | ● OTTESEN FEDERAL 08N, OWB, Plan#2 V0 |
| ● OTTESEN LE 06-363HN, OWB, OWB V0 | ● OTTESEN 24N, OWB, OWB V0 | ● OTTESEN FEDERAL 09N, OWB, Plan#2 V0 |
| ● OTTESEN LE 06-363HN, OWB, OWB V0 | ● OTTESEN 24N, OWB, Plan#2 V0 | ● OTTESEN FEDERAL 10NA, OWB, Plan#2 V0 |
| ● OTTESEN LE 06-366HN, OWB, OWB V0 | ● OTTESEN 25N, OWB, Plan#2 V0 | ● OTTESEN FEDERAL 11C, OWB, OWB V0 |
| ● OTTESEN LE 06-366HN, OWB, OWB V0 | ● OTTESEN 26C, OWB, Plan#2 V0 | ● OTTESEN FEDERAL 11C, OWB, Plan#2 V0 |
| ● OTTESEN LE 06-368HC, OWB, OWB V0 | ● OTTESEN 27NA, OWB, OWB V0 | ● OTTESEN FEDERAL 12N, OWB, OWB V0 |
| ● OTTESEN LE 06-368HC, OWB, OWB V0 | ● OTTESEN 27NA, OWB, Plan#2 V0 | ● OTTESEN FEDERAL 12N, OWB, Plan#2 V0 |
| ● OTTESEN 18NA, OWB, Plan#2 V0 | ● OTTESEN 28N, OWB, Plan#2 V0 | ● OTTESEN FEDERAL 13HN, OWB, Plan#2 V0 |

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