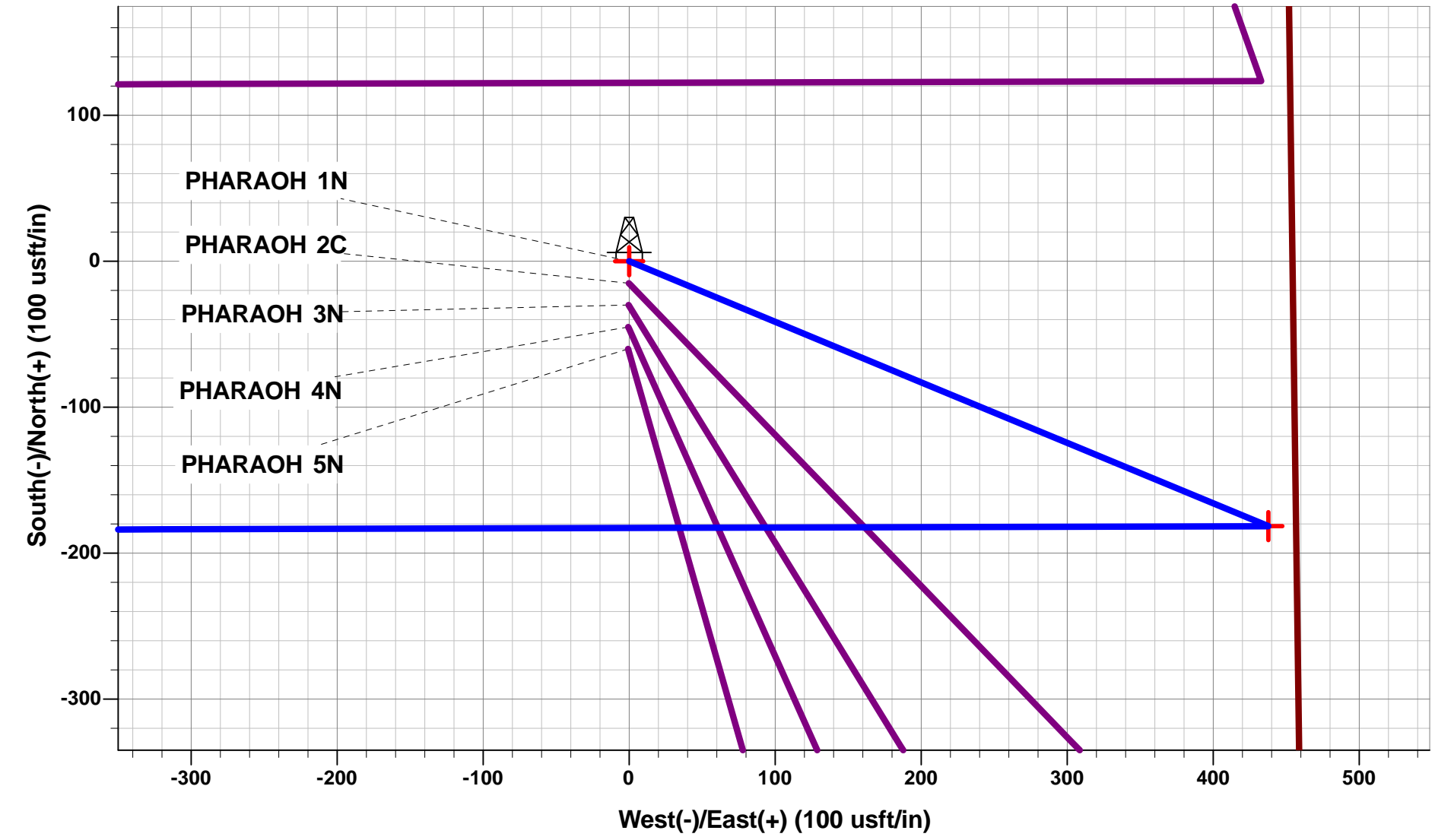




Project: WELD COUNTY, COLORADO (TRUE)
Site: NE SE SEC. 36 T5N R64W 6th P.M. (PHARAOH)
Well: PHARAOH 1N
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

| ANNOTATIONS | | | | | | | | | |
|-------------|----------|-------|--------|---------|----------|----------|----------|---------------------------------------|--|
| TVD | MD | Inc | Azi | +N/-S | +E/-W | VSection | Dep | Annotation | |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | SHL: 1713ft FSL & 455ft FEL of Sec 36 | |
| 1600.00 | 1600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | START NUDGE (2°/100ft BUR) | |
| 2195.62 | 2200.00 | 12.00 | 112.52 | -23.97 | 57.83 | -57.31 | 62.60 | EOB TO 12° INC | |
| 3836.47 | 3877.50 | 12.00 | 112.52 | -157.53 | 380.02 | -376.62 | 411.38 | END OF TANGENT | |
| 4432.09 | 4477.50 | 0.00 | 0.00 | -181.50 | 437.85 | -433.93 | 473.98 | EOD TO VERTICAL | |
| 5886.80 | 5932.21 | 0.00 | 0.00 | -181.50 | 437.85 | -433.93 | 473.98 | KOP (8°/100ft BUR) | |
| 6603.00 | 7058.84 | 90.13 | 269.84 | -183.50 | -279.97 | 283.77 | 1191.80 | EP: 1530ft FSL & 737ft FEL of Sec 36 | |
| 6581.00 | 16760.58 | 90.13 | 269.85 | -210.08 | -9981.65 | 9983.86 | 10893.52 | BHL: 1530ft FSL & 150ft FWL of Sec 35 | |

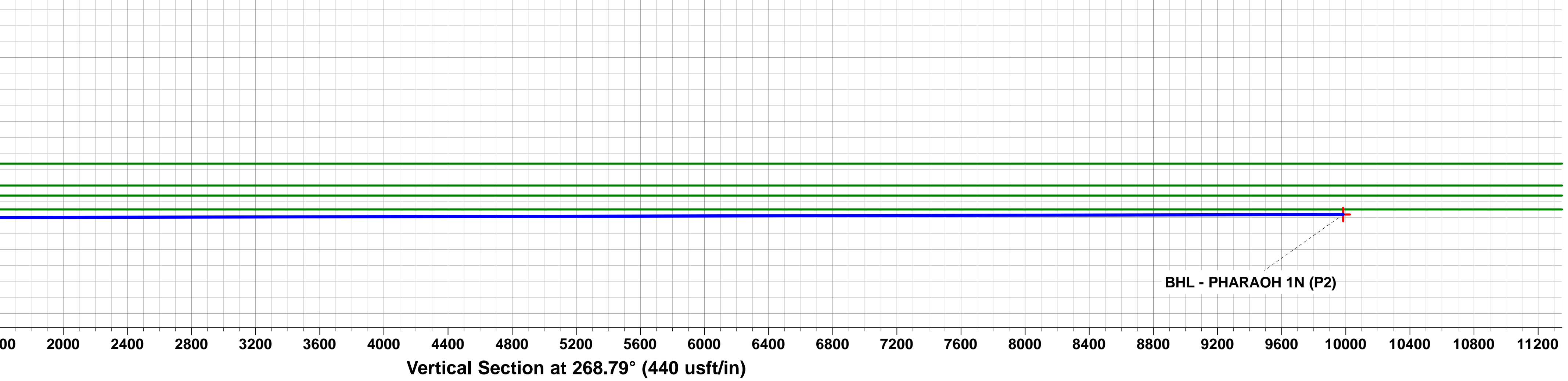
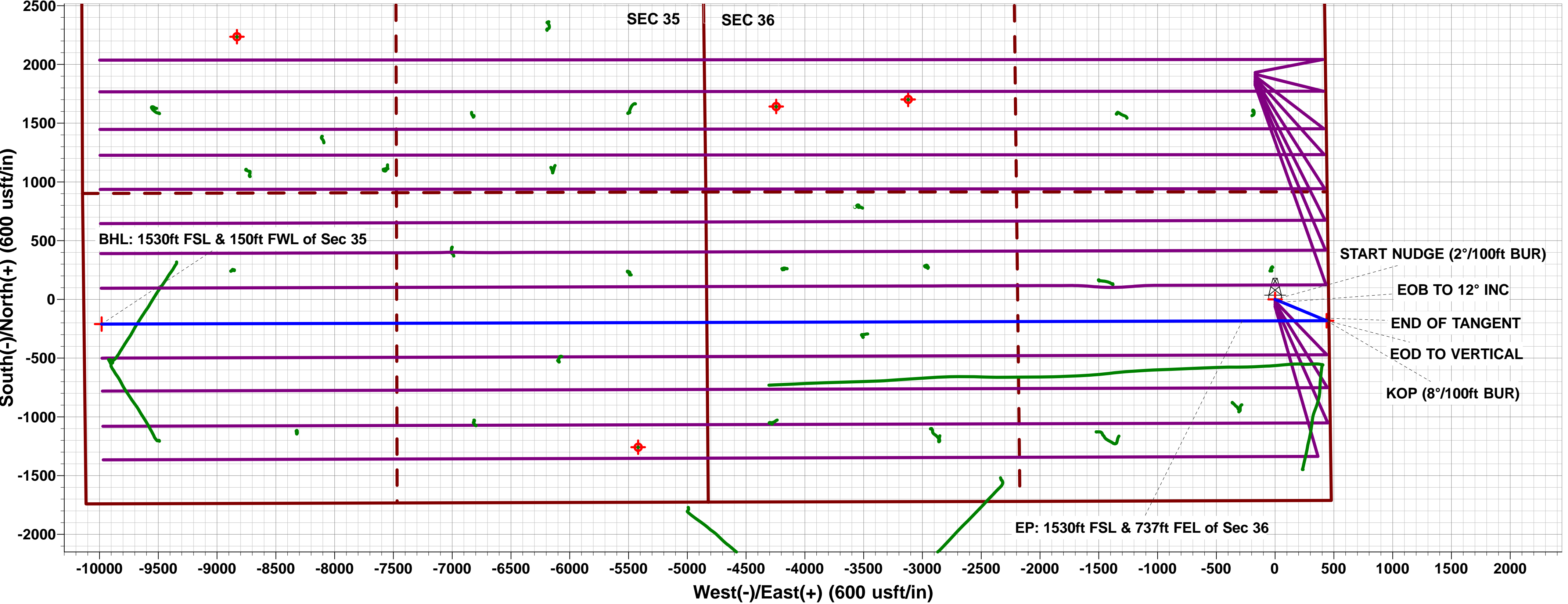
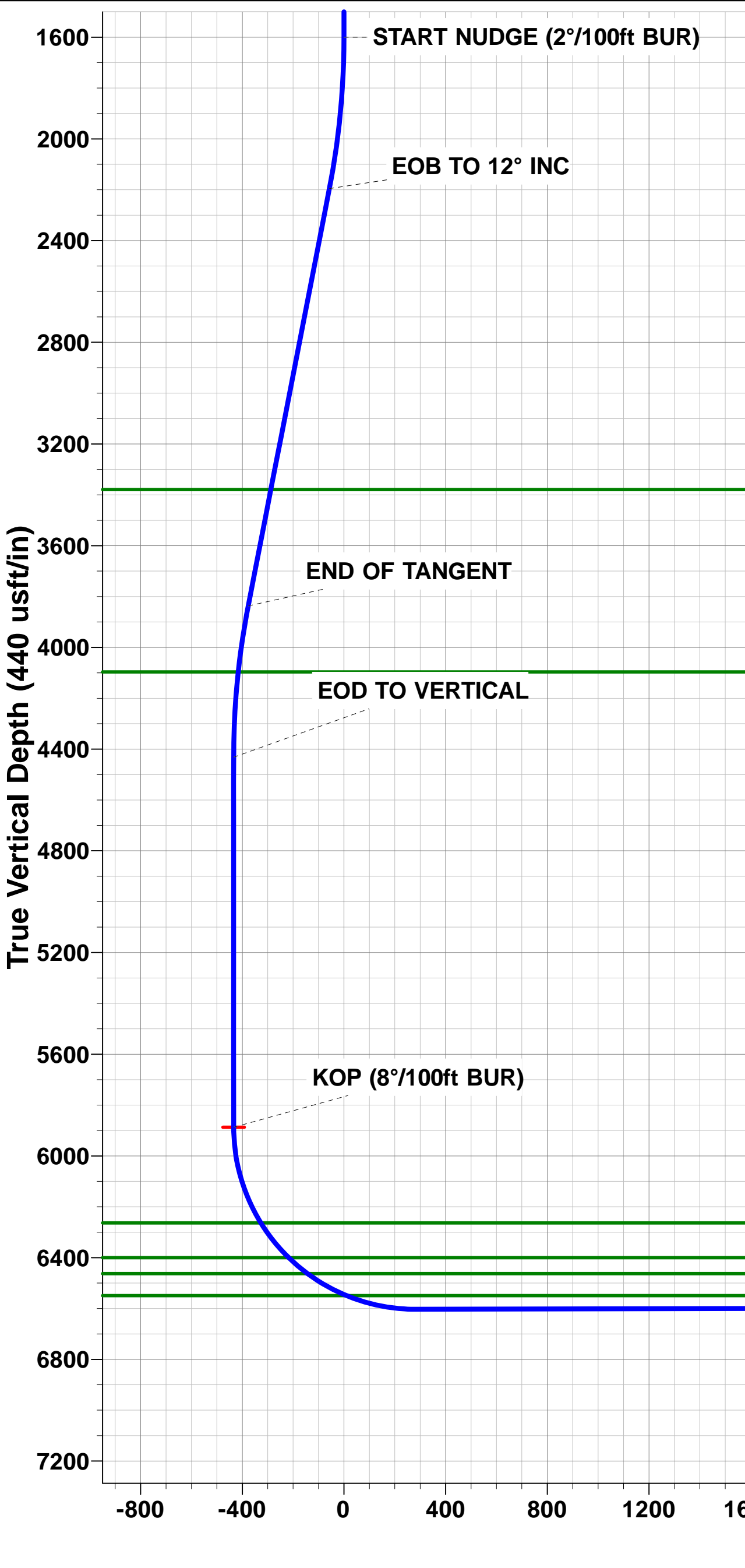
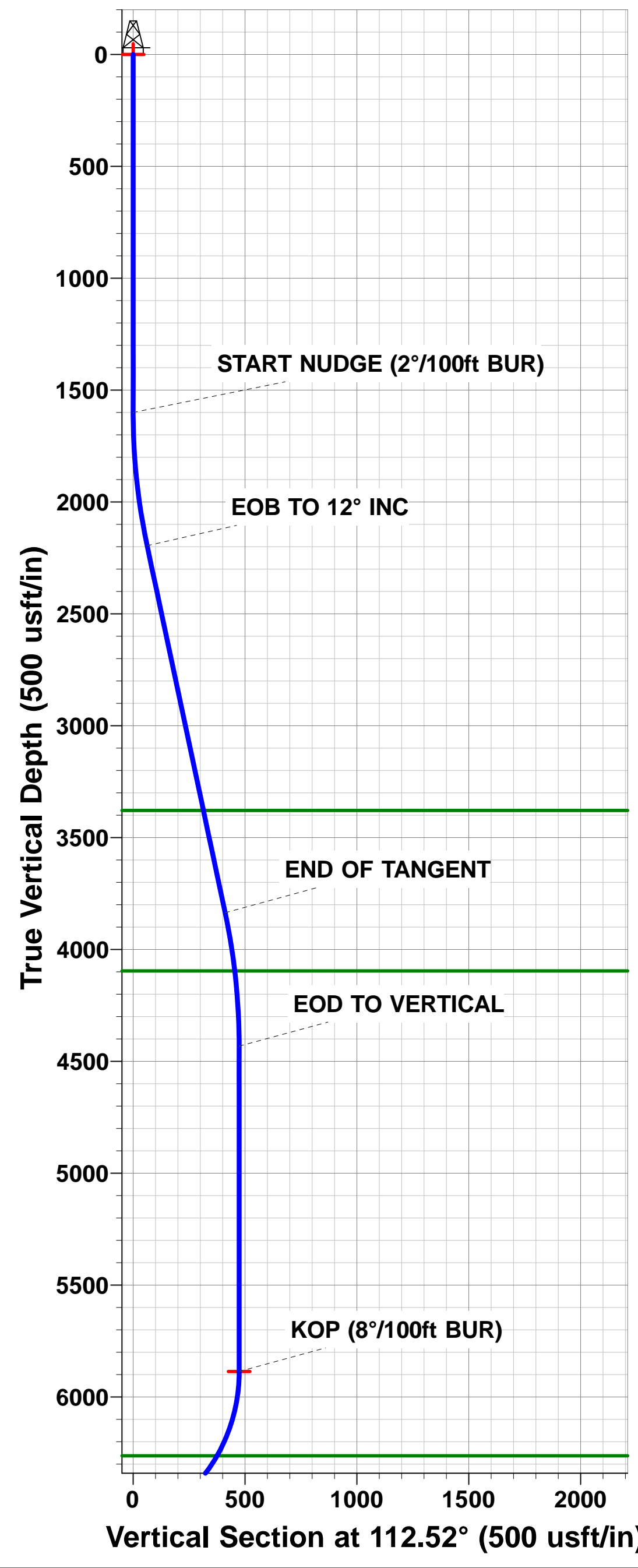
| WELLBORE TARGET DETAILS (LAT/LONG) | | | | | |
|------------------------------------|---------|---------|----------|-------------|--------------|
| Name | TVD | +N/-S | +E/-W | Latitude | Longitude |
| KOP - PHARAOH 1N | 5886.80 | -181.50 | 437.85 | 40.352887°N | 104.488341°W |
| EP - PHARAOH 1N | 6603.00 | -183.50 | -279.97 | 40.352881°N | 104.490917°W |
| BHL - PHARAOH 1N (P2) | 6581.00 | -210.08 | -9981.65 | 40.352803°N | 104.525725°W |
| SHL - PHARAOH 1N | 0.00 | 0.00 | 0.00 | 40.353385°N | 104.489912°W |



PROPOSED LOCAL COORDINATES:
SHL: 1713ft FSL & 455ft FEL of Sec 36
EP: 1530ft FSL & 737ft FEL of Sec 36
BHL: 1530ft FSL & 150ft FWL of Sec 35

Azimuths to True North
Magnetic North: 7.99°

Magnetic Field
Strength: 52321.3snT
Dip Angle: 66.84°
Date: 19/02/2018
Model: IGRF2015



PDC ENERGY

WELD COUNTY, COLORADO (TRUE)

NE SE SEC. 36 T5N R64W 6th P.M. (PHARAOH)

PHARAOH 1N

ORIGINAL WELLBORE

PROPOSAL #2

Anticollision Report

01 February, 2019



Anticollision Report



| | | | |
|---------------------------|---|-------------------------------------|---|
| Company: | PDC ENERGY | Local Co-ordinate Reference: | Well PHARAOH 1N - Slot PHARAOH 1N |
| Project: | WELD COUNTY, COLORADO (TRUE) | TVD Reference: | KB-EST @ 4616.00usft (Original Well Elev) |
| Reference Site: | NE SE SEC. 36 T5N R64W 6th P.M. (PHARAOH) | MD Reference: | KB-EST @ 4616.00usft (Original Well Elev) |
| Site Error: | 0.00 usft | North Reference: | True |
| Reference Well: | PHARAOH 1N | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | ORIGINAL WELLBORE | Database: | Database 1 |
| Reference Design: | PROPOSAL #2 | Offset TVD Reference: | Offset Datum |

| | | | |
|-------------------------------------|---|-----------------------|---------------------|
| Reference | PROPOSAL #2 | | |
| Filter type: | NO GLOBAL FILTER: Using user defined selection & filtering criteria | | |
| Interpolation Method: | MD + Stations Interval 100.00usft | Error Model: | ISCWSA |
| Depth Range: | Unlimited | Scan Method: | Closest Approach 3D |
| Results Limited by: | Maximum center-center distance of 9,999.98 usft | Error Surface: | Elliptical Conic |
| Warning Levels Evaluated at: | 2.00 Sigma | Casing Method: | Not applied |

| | | | | |
|----------------------------|------------------|---------------------------------|------------------|--------------------|
| Survey Tool Program | Date | 01/02/2019 | | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
| 0.00 | 16,760.58 | PROPOSAL #2 (ORIGINAL WELLBORE) | MWD | MWD - Standard |

| Summary | | | | | | |
|---|---------------------------------|------------------------------|---------------------------------|----------------------------------|-----------------------|---------|
| Site Name | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning |
| NE SE SEC. 36 T5N R64W 6th P.M. (PHARAOH) | | | | | | |
| PHARAOH 2C - ORIGINAL WELLBORE - PROPOSAL # | 600.00 | 600.00 | 15.02 | 12.60 | 6.204 CC | |
| PHARAOH 2C - ORIGINAL WELLBORE - PROPOSAL # | 16,760.58 | 16,834.83 | 299.55 | -257.85 | 0.537 Level 1, ES, SF | |
| PHARAOH 3N - ORIGINAL WELLBORE - PROPOSAL # | 500.00 | 500.00 | 29.99 | 28.02 | 15.216 CC | |
| PHARAOH 3N - ORIGINAL WELLBORE - PROPOSAL # | 16,760.58 | 16,729.39 | 573.87 | 3.14 | 1.005 Level 2, ES, SF | |
| PHARAOH 4N - ORIGINAL WELLBORE - PROPOSAL # | 400.00 | 400.00 | 45.01 | 43.49 | 29.578 CC, ES | |
| PHARAOH 4N - ORIGINAL WELLBORE - PROPOSAL # | 16,760.58 | 16,837.62 | 870.08 | 296.15 | 1.516 SF | |
| PHARAOH 5N - ORIGINAL WELLBORE - PROPOSAL # | 300.00 | 300.00 | 60.02 | 58.95 | 55.980 CC, ES | |
| PHARAOH 5N - ORIGINAL WELLBORE - PROPOSAL # | 16,760.58 | 16,732.69 | 1,157.13 | 585.64 | 2.025 SF | |
| SE NE SEC. 36 T5N R64W 6th P.M. (PYRAMID) | | | | | | |
| ABDN VERT HOSHIKO #1 - Wellbore #1 - Wellbore #1 | 12,255.57 | 6,587.40 | 406.29 | 243.73 | 2.499 CC, ES | |
| ABDN VERT HOSHIKO #1 - Wellbore #1 - Wellbore #1 | 12,300.00 | 6,587.22 | 408.71 | 244.91 | 2.495 SF | |
| ABDN VERT ROTHE STATE B #36-15 - Wellbore #1 - W | 8,110.27 | 6,550.00 | 977.26 | 929.03 | 20.263 CC, ES | |
| ABDN VERT ROTHE STATE B #36-15 - Wellbore #1 - W | 8,600.00 | 6,550.00 | 1,093.11 | 1,031.78 | 17.824 SF | |
| ABDN VERT ROTHE STATE B #36-16 - Wellbore #1 - W | 7,063.78 | 6,550.00 | 713.97 | 690.67 | 30.642 CC, ES | |
| ABDN VERT ROTHE STATE B #36-16 - Wellbore #1 - W | 7,600.00 | 6,550.00 | 892.91 | 857.67 | 25.340 SF | |
| ABDN VERT STATE #1-36 - Wellbore #1 - Design #1 | 11,017.82 | 6,568.03 | 1,835.96 | 1,578.64 | 7.135 CC | |
| ABDN VERT STATE #1-36 - Wellbore #1 - Design #1 | 11,100.00 | 6,567.85 | 1,837.80 | 1,578.19 | 7.079 ES | |
| ABDN VERT STATE #1-36 - Wellbore #1 - Design #1 | 11,400.00 | 6,567.17 | 1,875.32 | 1,607.35 | 6.998 SF | |
| EXIST DD ECKHARDT B #35-12 - Wellbore #1 - Wellbor | 16,122.03 | 6,713.84 | 522.48 | 250.06 | 1.918 CC, ES, SF | |
| EXIST DD ECKHARDT B #35-13 - Wellbore #1 - Wellbor | 16,272.96 | 6,671.00 | 992.86 | 716.56 | 3.593 CC | |
| EXIST DD ECKHARDT B #35-13 - Wellbore #1 - Wellbor | 16,300.00 | 6,671.00 | 993.23 | 716.17 | 3.585 ES | |
| EXIST DD ECKHARDT B #35-13 - Wellbore #1 - Wellbor | 16,400.00 | 6,671.00 | 1,000.96 | 721.09 | 3.577 SF | |
| EXIST DD MARLEY C #1-28D - Wellbore #1 - Wellbore # | 9,115.04 | 6,787.86 | 1,339.72 | 1,246.65 | 14.395 CC, ES | |
| EXIST DD MARLEY C #1-28D - Wellbore #1 - Wellbore # | 9,600.00 | 6,792.73 | 1,424.79 | 1,318.37 | 13.389 SF | |
| EXIST DD MARLEY C #1-30D - Wellbore #1 - Wellbore # | 11,775.01 | 6,682.67 | 1,575.20 | 1,410.83 | 9.583 CC | |
| EXIST DD MARLEY C #1-30D - Wellbore #1 - Wellbore # | 11,800.00 | 6,682.64 | 1,575.40 | 1,410.33 | 9.544 ES | |
| EXIST DD MARLEY C #1-30D - Wellbore #1 - Wellbore # | 12,200.00 | 6,682.12 | 1,631.53 | 1,455.27 | 9.257 SF | |
| EXIST HZ SOONER STATE B #36-63HN - Wellbore #1 - | 6,108.39 | 6,172.64 | 372.09 | 343.27 | 12.908 CC | |
| EXIST HZ SOONER STATE B #36-63HN - Wellbore #1 - | 11,100.00 | 11,043.52 | 537.63 | 282.05 | 2.104 ES, SF | |
| EXIST VERT BAKER STATE B #36-11 - Wellbore #1 - W | 9,731.90 | 6,583.04 | 455.36 | 363.14 | 4.938 CC, ES | |
| EXIST VERT BAKER STATE B #36-11 - Wellbore #1 - W | 9,800.00 | 6,582.45 | 460.42 | 366.32 | 4.893 SF | |
| EXIST VERT BAKER STATE B #36-12 - Wellbore #1 - W | 10,928.46 | 6,583.74 | 454.80 | 329.33 | 3.625 CC, ES | |
| EXIST VERT BAKER STATE B #36-12 - Wellbore #1 - W | 11,000.00 | 6,583.43 | 460.39 | 332.92 | 3.612 SF | |
| EXIST VERT BAKER STATE B #36-13 - Wellbore #1 - W | 11,016.37 | 6,600.00 | 832.50 | 704.48 | 6.503 CC, ES | |
| EXIST VERT BAKER STATE B #36-13 - Wellbore #1 - W | 11,200.00 | 6,593.33 | 852.48 | 719.33 | 6.402 SF | |

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

| | | | |
|---------------------------|---|-------------------------------------|---|
| Company: | PDC ENERGY | Local Co-ordinate Reference: | Well PHARAOH 1N - Slot PHARAOH 1N |
| Project: | WELD COUNTY, COLORADO (TRUE) | TVD Reference: | KB-EST @ 4616.00usft (Original Well Elev) |
| Reference Site: | NE SE SEC. 36 T5N R64W 6th P.M. (PHARAOH) | MD Reference: | KB-EST @ 4616.00usft (Original Well Elev) |
| Site Error: | 0.00 usft | North Reference: | True |
| Reference Well: | PHARAOH 1N | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | ORIGINAL WELLBORE | Database: | Database 1 |
| Reference Design: | PROPOSAL #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 |
|---|---------------------------------|------------------------------|---------------------------------|----------------------------------|-------------------|---------------------|
| SE NE SEC. 36 T5N R64W 6th P.M. (PYRAMID) | | | | | | |
| EXIST VERT BAKER STATE B #36-14 - Wellbore #1 - W | 9,633.20 | 6,600.00 | 970.50 | 880.89 | 10.830 | CC, ES |
| EXIST VERT BAKER STATE B #36-14 - Wellbore #1 - W | 9,900.00 | 6,600.00 | 1,006.51 | 909.51 | 10.377 | SF |
| EXIST VERT CLYNCKE STATE B #36-20 - Wellbore #1 | 10,285.62 | 6,550.00 | 969.84 | 862.26 | 9.015 | CC |
| EXIST VERT CLYNCKE STATE B #36-20 - Wellbore #1 | 10,300.00 | 6,550.00 | 969.95 | 861.96 | 8.982 | ES |
| EXIST VERT CLYNCKE STATE B #36-20 - Wellbore #1 | 10,500.00 | 6,550.00 | 993.25 | 879.71 | 8.748 | SF |
| EXIST VERT CLYNCKE STATE B #36-25 - Wellbore #1 | 10,244.63 | 6,550.00 | 106.30 | 3.02 | 1.029 | Level 2, CC, ES, SF |
| EXIST VERT CPC-HOSHIKO #35-1 - Wellbore #1 - Well | 15,645.23 | 6,591.82 | 462.12 | 204.36 | 1.793 | CC, ES, SF |
| EXIST VERT ECKHARDT B #35-33 - Wellbore #1 - Well | 16,671.94 | 6,588.71 | 327.55 | 41.18 | 1.144 | Level 2, CC, ES, SF |
| EXIST VERT HOSHIKO #2 - Wellbore #1 - Wellbore #1 | 13,593.52 | 6,617.76 | 828.08 | 627.81 | 4.135 | CC |
| EXIST VERT HOSHIKO #2 - Wellbore #1 - Wellbore #1 | 13,600.00 | 6,617.80 | 828.11 | 627.66 | 4.131 | ES |
| EXIST VERT HOSHIKO #2 - Wellbore #1 - Wellbore #1 | 13,700.00 | 6,618.36 | 834.90 | 631.65 | 4.108 | SF |
| EXIST VERT HOSHIKO #35-10H4 - Wellbore #1 - Wellb | 13,764.08 | 6,600.00 | 570.76 | 365.68 | 2.783 | CC, ES |
| EXIST VERT HOSHIKO #35-10H4 - Wellbore #1 - Wellb | 13,800.00 | 6,600.00 | 571.89 | 365.81 | 2.775 | SF |
| EXIST VERT HOSHIKO #35-16H4 - Wellbore #1 - Desig | 12,199.71 | 6,610.35 | 1,060.48 | 770.75 | 3.660 | CC |
| EXIST VERT HOSHIKO #35-16H4 - Wellbore #1 - Desig | 12,200.00 | 6,610.35 | 1,060.48 | 770.75 | 3.660 | ES |
| EXIST VERT HOSHIKO #35-16H4 - Wellbore #1 - Desig | 12,300.00 | 6,610.13 | 1,065.21 | 772.68 | 3.641 | SF |
| EXIST VERT HOSHIKO B #35-14 - Wellbore #1 - Wellbo | 15,102.96 | 6,618.70 | 912.44 | 670.06 | 3.764 | CC, ES |
| EXIST VERT HOSHIKO B #35-14 - Wellbore #1 - Wellbo | 15,200.00 | 6,617.45 | 917.59 | 672.48 | 3.744 | SF |
| EXIST VERT HOSHIKO B #35-23 - Wellbore #1 - Wellbo | 12,870.49 | 6,614.87 | 329.16 | 149.19 | 1.829 | CC, ES |
| EXIST VERT HOSHIKO B #35-23 - Wellbore #1 - Wellbo | 12,900.00 | 6,614.95 | 330.48 | 149.69 | 1.828 | SF |
| EXIST VERT LOLOFF #35-6 - Wellbore #1 - Wellbore #1 | 14,866.78 | 6,569.51 | 1,546.00 | 1,310.08 | 6.553 | CC |
| EXIST VERT LOLOFF #35-6 - Wellbore #1 - Wellbore #1 | 14,900.00 | 6,569.40 | 1,546.36 | 1,309.51 | 6.529 | ES |
| EXIST VERT LOLOFF #35-6 - Wellbore #1 - Wellbore #1 | 15,200.00 | 6,568.42 | 1,581.50 | 1,336.24 | 6.448 | SF |
| EXIST VERT LOLOFF #35-8 - Wellbore #1 - Wellbore #1 | 12,215.12 | 6,577.70 | 1,861.75 | 1,700.29 | 11.531 | CC |
| EXIST VERT LOLOFF #35-8 - Wellbore #1 - Wellbore #1 | 12,300.00 | 6,577.44 | 1,863.68 | 1,699.85 | 11.376 | ES |
| EXIST VERT LOLOFF #35-8 - Wellbore #1 - Wellbore #1 | 12,800.00 | 6,575.91 | 1,951.46 | 1,773.63 | 10.974 | SF |
| EXIST VERT LOLOFF #4 - Wellbore #1 - Wellbore #1 | 13,608.56 | 6,554.92 | 1,792.66 | 1,591.92 | 8.930 | CC |
| EXIST VERT LOLOFF #4 - Wellbore #1 - Wellbore #1 | 13,700.00 | 6,554.60 | 1,794.99 | 1,591.69 | 8.829 | ES |
| EXIST VERT LOLOFF #4 - Wellbore #1 - Wellbore #1 | 14,100.00 | 6,553.18 | 1,858.80 | 1,644.29 | 8.665 | SF |
| EXIST VERT LOLOFF B #35-17 - Wellbore #1 - Wellbore | 12,966.09 | 6,589.53 | 2,490.30 | 2,307.53 | 13.626 | CC |
| EXIST VERT LOLOFF B #35-17 - Wellbore #1 - Wellbore | 13,000.00 | 6,589.30 | 2,490.53 | 2,306.82 | 13.557 | ES |
| EXIST VERT LOLOFF B #35-17 - Wellbore #1 - Wellbore | 13,900.00 | 6,583.15 | 2,659.65 | 2,450.72 | 12.730 | SF |
| EXIST VERT LOLOFF B #35-19 - Wellbore #1 - Design # | 15,603.11 | 6,611.63 | 2,442.77 | 2,057.73 | 6.344 | CC |
| EXIST VERT LOLOFF B #35-19 - Wellbore #1 - Design # | 15,700.00 | 6,611.41 | 2,444.69 | 2,056.93 | 6.305 | ES |
| EXIST VERT LOLOFF B #35-19 - Wellbore #1 - Design # | 16,000.00 | 6,610.73 | 2,474.80 | 2,078.64 | 6.247 | SF |
| EXIST VERT LOLOFF B #35-20 - Wellbore #1 - Wellbore | 15,493.80 | 6,603.76 | 1,254.56 | 1,000.83 | 4.944 | CC |
| EXIST VERT LOLOFF B #35-20 - Wellbore #1 - Wellbore | 15,500.00 | 6,603.71 | 1,254.58 | 1,000.67 | 4.941 | ES |
| EXIST VERT LOLOFF B #35-20 - Wellbore #1 - Wellbore | 15,700.00 | 6,600.00 | 1,271.39 | 1,011.87 | 4.899 | SF |
| EXIST VERT LOLOFF B #35-21 - Wellbore #1 - Wellbore | 14,325.50 | 6,544.40 | 1,347.43 | 1,127.00 | 6.113 | CC |
| EXIST VERT LOLOFF B #35-21 - Wellbore #1 - Wellbore | 14,400.00 | 6,544.00 | 1,349.49 | 1,126.97 | 6.065 | ES |
| EXIST VERT LOLOFF B #35-21 - Wellbore #1 - Wellbore | 14,600.00 | 6,542.94 | 1,375.11 | 1,146.99 | 6.028 | SF |
| EXIST VERT LOLOFF B #35-22 - Wellbore #1 - Wellbore | 12,901.21 | 6,547.90 | 1,338.08 | 1,157.36 | 7.404 | CC, ES |
| EXIST VERT LOLOFF B #35-22 - Wellbore #1 - Wellbore | 13,200.00 | 6,543.21 | 1,371.02 | 1,181.95 | 7.251 | SF |
| EXIST VERT ROTHE STATE B #36-10 - Wellbore #1 - W | 8,159.16 | 6,550.00 | 321.68 | 272.43 | 6.532 | CC, ES |
| EXIST VERT ROTHE STATE B #36-10 - Wellbore #1 - W | 8,200.00 | 6,550.00 | 324.26 | 273.94 | 6.444 | SF |
| EXIST VERT ROTHE STATE B #36-7 - Wellbore #1 - We | 8,035.19 | 6,500.00 | 1,731.95 | 1,685.89 | 37.603 | CC |
| EXIST VERT ROTHE STATE B #36-7 - Wellbore #1 - We | 8,100.00 | 6,500.00 | 1,733.16 | 1,685.40 | 36.291 | ES |
| EXIST VERT ROTHE STATE B #36-7 - Wellbore #1 - We | 9,900.00 | 6,500.00 | 2,545.01 | 2,448.22 | 26.292 | SF |
| EXIST VERT ROTHE STATE B #36-8 - Wellbore #1 - We | 100.00 | 70.48 | 1,612.15 | 1,612.05 | 10,000.000 | CC |
| EXIST VERT ROTHE STATE B #36-8 - Wellbore #1 - We | 1,500.00 | 1,469.11 | 1,614.89 | 1,610.95 | 409.915 | ES |
| EXIST VERT ROTHE STATE B #36-8 - Wellbore #1 - We | 12,800.00 | 6,500.00 | 6,084.59 | 5,906.95 | 34.252 | SF |
| EXIST VERT ROTHE STATE B #36-9 - Wellbore #1 - We | 415.00 | 390.01 | 245.27 | 244.19 | 226.573 | CC |

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

| | | | |
|---------------------------|---|-------------------------------------|---|
| Company: | PDC ENERGY | Local Co-ordinate Reference: | Well PHARAOH 1N - Slot PHARAOH 1N |
| Project: | WELD COUNTY, COLORADO (TRUE) | TVD Reference: | KB-EST @ 4616.00usft (Original Well Elev) |
| Reference Site: | NE SE SEC. 36 T5N R64W 6th P.M. (PHARAOH) | MD Reference: | KB-EST @ 4616.00usft (Original Well Elev) |
| Site Error: | 0.00 usft | North Reference: | True |
| Reference Well: | PHARAOH 1N | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | ORIGINAL WELLBORE | Database: | Database 1 |
| Reference Design: | PROPOSAL #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 |
|---|---------------------------------|------------------------------|---------------------------------|----------------------------------|-------------------|-----------------|
| SE NE SEC. 36 T5N R64W 6th P.M. (PYRAMID) | | | | | | |
| EXIST VERT ROTHE STATE B #36-9 - Wellbore #1 - We | 500.00 | 473.84 | 245.48 | 244.15 | 185.439 | ES |
| EXIST VERT ROTHE STATE B #36-9 - Wellbore #1 - We | 7,000.00 | 6,550.00 | 498.86 | 476.95 | 22.775 | SF |
| EXIST VERT STATE #22-36 - Wellbore #1 - Design #1 | 9,894.76 | 6,584.58 | 1,893.17 | 1,667.91 | 8.404 | CC |
| EXIST VERT STATE #22-36 - Wellbore #1 - Design #1 | 9,900.00 | 6,584.57 | 1,893.18 | 1,667.77 | 8.399 | ES |
| EXIST VERT STATE #22-36 - Wellbore #1 - Design #1 | 10,300.00 | 6,583.66 | 1,936.06 | 1,699.56 | 8.186 | SF |
| EXIST VERT STROH #1 - Wellbore #1 - Wellbore #1 | 16,288.52 | 6,400.00 | 1,845.48 | 1,571.07 | 6.725 | CC |
| EXIST VERT STROH #1 - Wellbore #1 - Wellbore #1 | 16,300.00 | 6,400.00 | 1,845.51 | 1,570.79 | 6.718 | ES |
| EXIST VERT STROH #1 - Wellbore #1 - Wellbore #1 | 16,600.00 | 6,400.00 | 1,871.58 | 1,588.47 | 6.611 | SF |
| PYRAMID 1N - ORIGINAL WELLBORE - PROPOSAL #2 | 1,600.00 | 1,595.00 | 1,938.52 | 1,931.62 | 280.750 | CC |
| PYRAMID 1N - ORIGINAL WELLBORE - PROPOSAL #2 | 16,760.58 | 16,732.46 | 2,246.71 | 1,673.93 | 3.922 | ES, SF |
| PYRAMID 2N - ORIGINAL WELLBORE - PROPOSAL #2 | 1,600.00 | 1,595.00 | 1,923.58 | 1,916.68 | 278.586 | CC |
| PYRAMID 2N - ORIGINAL WELLBORE - PROPOSAL #2 | 16,760.58 | 16,659.11 | 1,978.03 | 1,405.45 | 3.455 | ES, SF |
| PYRAMID 3N - ORIGINAL WELLBORE - PROPOSAL #2 | 5,916.65 | 5,939.37 | 1,633.52 | 1,604.58 | 56.454 | CC |
| PYRAMID 3N - ORIGINAL WELLBORE - PROPOSAL #2 | 16,760.58 | 16,751.05 | 1,656.53 | 1,083.80 | 2.892 | ES, SF |
| PYRAMID 4N - ORIGINAL WELLBORE - PROPOSAL #2 | 5,830.23 | 5,867.90 | 1,413.49 | 1,382.20 | 45.178 | CC |
| PYRAMID 4N - ORIGINAL WELLBORE - PROPOSAL #2 | 16,760.58 | 16,691.99 | 1,438.44 | 866.62 | 2.516 | ES, SF |
| PYRAMID 5N - ORIGINAL WELLBORE - PROPOSAL #2 | 5,912.20 | 5,991.80 | 1,123.44 | 1,087.87 | 31.589 | CC |
| PYRAMID 5N - ORIGINAL WELLBORE - PROPOSAL #2 | 16,760.58 | 16,809.56 | 1,146.49 | 573.83 | 2.002 | ES, SF |
| PYRAMID 6N - ORIGINAL WELLBORE - PROPOSAL #2 | 5,835.17 | 5,974.23 | 855.08 | 815.72 | 21.725 | CC |
| PYRAMID 6N - ORIGINAL WELLBORE - PROPOSAL #2 | 16,760.58 | 16,804.53 | 858.17 | 287.39 | 1.504 | ES, SF |
| PYRAMID 7N - ORIGINAL WELLBORE - PROPOSAL #2 | 13,605.24 | 13,783.11 | 599.80 | 203.82 | 1.515 | CC |
| PYRAMID 7N - ORIGINAL WELLBORE - PROPOSAL #2 | 16,760.58 | 16,938.46 | 600.04 | 27.10 | 1.047 | Level 2, ES, SF |
| PYRAMID 8N - ORIGINAL WELLBORE - PROPOSAL #2 | 8,159.55 | 8,374.08 | 298.59 | 207.18 | 3.266 | CC |
| PYRAMID 8N - ORIGINAL WELLBORE - PROPOSAL #2 | 16,760.58 | 16,975.78 | 311.79 | -249.13 | 0.556 | Level 1, ES, SF |

| Offset Design NE SE SEC. 36 T5N R64W 6th P.M. (PHARAOH) - PHARAOH 2C - ORIGINAL WELLBORE - PROPO | | | | | | | | | | | | | Offset Site Error: | 0.00 usft |
|--|-----------------------|------------------------------|-----------------------|----------------------------------|---------------|-----------------------|-------------------------------------|--------------|---------------------------------|----------------------------------|---------------------------|-------------------|--------------------|-----------|
| Survey Program: 0-MWD | | | | | | | | | | | | | Offset Well Error: | 0.00 usft |
| Reference Measured Depth (usft) | Vertical Depth (usft) | Offset Measured Depth (usft) | Vertical Depth (usft) | Semi Major Axis Reference (usft) | Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning | |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -179.26 | -15.02 | -0.20 | 15.02 | 14.85 | 0.17 | 86.780 | | |
| 100.00 | 100.00 | 100.00 | 100.00 | 0.09 | 0.09 | -179.26 | -15.02 | -0.20 | 15.02 | 14.40 | 0.62 | 24.123 | | |
| 200.00 | 200.00 | 200.00 | 200.00 | 0.31 | 0.31 | -179.26 | -15.02 | -0.20 | 15.02 | 13.95 | 1.07 | 14.008 | | |
| 300.00 | 300.00 | 300.00 | 300.00 | 0.54 | 0.54 | -179.26 | -15.02 | -0.20 | 15.02 | 13.50 | 1.52 | 9.870 | | |
| 400.00 | 400.00 | 400.00 | 400.00 | 0.76 | 0.76 | -179.26 | -15.02 | -0.20 | 15.02 | 13.05 | 1.97 | 7.619 | | |
| 500.00 | 500.00 | 500.00 | 500.00 | 0.99 | 0.99 | -179.26 | -15.02 | -0.20 | 15.02 | 12.60 | 2.42 | 6.204 | CC | |
| 600.00 | 600.00 | 600.00 | 600.00 | 1.21 | 1.21 | -179.26 | -15.02 | -0.20 | 15.02 | 13.45 | 2.85 | 5.727 | | |
| 700.00 | 700.00 | 699.59 | 699.57 | 1.44 | 1.41 | 176.46 | -16.26 | 1.01 | 16.30 | 17.28 | 3.26 | 6.299 | | |
| 800.00 | 800.00 | 798.94 | 798.78 | 1.66 | 1.60 | 167.04 | -19.99 | 4.60 | 20.54 | 24.62 | 3.70 | 7.655 | | |
| 900.00 | 900.00 | 897.81 | 897.27 | 1.88 | 1.82 | 158.03 | -26.14 | 10.55 | 28.32 | 35.62 | 4.17 | 9.546 | | |
| 1,000.00 | 1,000.00 | 995.97 | 994.72 | 2.11 | 2.06 | 151.56 | -34.68 | 18.78 | 39.79 | 50.17 | 4.67 | 11.741 | | |
| 1,100.00 | 1,100.00 | 1,093.21 | 1,090.78 | 2.33 | 2.34 | 147.29 | -45.49 | 29.22 | 54.85 | 68.15 | 5.21 | 14.071 | | |
| 1,200.00 | 1,200.00 | 1,189.32 | 1,185.17 | 2.56 | 2.67 | 144.47 | -58.47 | 41.75 | 73.37 | 88.17 | 5.80 | 16.213 | | |
| 1,300.00 | 1,300.00 | 1,286.86 | 1,280.59 | 2.78 | 3.04 | 142.61 | -73.05 | 55.83 | 93.97 | 108.25 | 6.40 | 17.924 | | |
| 1,400.00 | 1,400.00 | 1,384.68 | 1,376.26 | 3.01 | 3.43 | 141.42 | -87.68 | 69.95 | 114.65 | 128.36 | 7.01 | 19.314 | | |
| 1,500.00 | 1,500.00 | 1,482.49 | 1,471.94 | 3.23 | 3.84 | 140.59 | -102.32 | 84.07 | 135.37 | 156.10 | 7.63 | 20.460 | | |
| 1,600.00 | 1,600.00 | 1,580.31 | 1,567.62 | 3.46 | 4.25 | 139.98 | -116.95 | 98.20 | 156.10 | 168.05 | 7.28 | 24.075 | | |
| 1,700.00 | 1,699.98 | 1,678.43 | 1,663.60 | 3.66 | 4.68 | 27.08 | -131.63 | 112.37 | 175.33 | 183.78 | 7.72 | 24.821 | | |
| 1,800.00 | 1,799.84 | 1,777.11 | 1,760.12 | 3.86 | 5.12 | 27.25 | -146.39 | 126.62 | 191.50 | | | | | |

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