

EXTRACTION OIL & GAS

Weld County

Sec 18-T2N-R68W

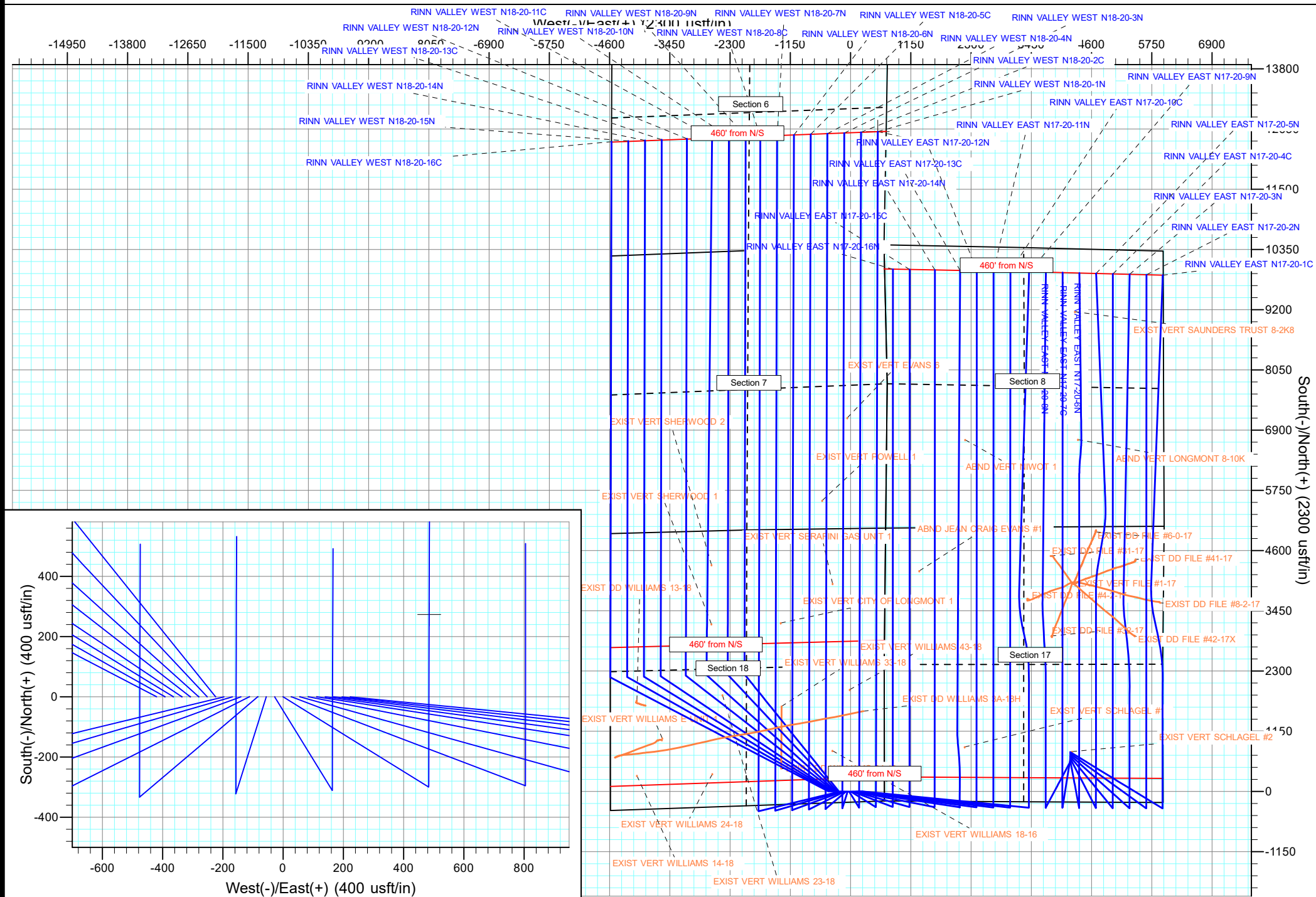
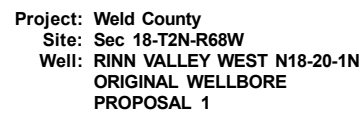
RINN VALLEY EAST N17-20-14N

ORIGINAL WELLBORE

PROPOSAL 1

Anticollision Report

19 March, 2018



Anticollision Report

| | | | |
|---------------------------|-----------------------------|-------------------------------------|----------------------------------|
| Company: | EXTRACTION OIL & GAS | Local Co-ordinate Reference: | Well RINN VALLEY EAST N17-20-14N |
| Project: | Weld County | TVD Reference: | KB 25' @ 4964.00usft |
| Reference Site: | Sec 18-T2N-R68W | MD Reference: | KB 25' @ 4964.00usft |
| Site Error: | 0.00 usft | North Reference: | True |
| Reference Well: | RINN VALLEY EAST N17-20-14N | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | ORIGINAL WELLBORE | Database: | EDT_32Bit_ODBC |
| Reference Design: | PROPOSAL 1 | Offset TVD Reference: | Offset Datum |

| | | | |
|-------------------------------------|---|-----------------------|---------------------|
| Reference | PROPOSAL 1 | | |
| 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: | Pedal Curve |
| Warning Levels Evaluated at: | 2.00 Sigma | Casing Method: | Not applied |

| | | | | |
|----------------------------|------------------|--------------------------------|------------------|---------------------|
| Survey Tool Program | Date | 3/19/2018 | | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
| 0.00 | 17,504.41 | PROPOSAL 1 (ORIGINAL WELLBORE) | MWD OWSG | 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 | | | | | | |
| Sec 17-T2N-R68W | | | | | | |
| ABND JEAN CRAIG EVANS #1 - Wellbore #1 - Design # | 11,758.45 | 4,838.00 | 2,391.50 | 2,339.62 | 46.094 | CC |
| ABND JEAN CRAIG EVANS #1 - Wellbore #1 - Design # | 11,800.00 | 4,838.00 | 2,391.87 | 2,339.59 | 45.760 | ES |
| ABND JEAN CRAIG EVANS #1 - Wellbore #1 - Design # | 13,600.00 | 4,838.00 | 3,018.38 | 2,911.23 | 28.170 | SF |
| ABND VERT FILE 42-17 - Wellbore #1 - Design #1 | 2,031.64 | 1,020.00 | 5,672.69 | 5,644.62 | 202.127 | CC, ES |
| ABND VERT FILE 42-17 - Wellbore #1 - Design #1 | 15,700.00 | 1,020.00 | 7,950.77 | 7,851.88 | 80.400 | SF |
| EXIST DD FILE #31-17 - Wellbore #1 - Wellbore #1 | 12,040.79 | 7,314.07 | 2,225.74 | 2,113.10 | 19.758 | CC |
| EXIST DD FILE #31-17 - Wellbore #1 - Wellbore #1 | 12,100.00 | 7,313.89 | 2,226.53 | 2,112.53 | 19.531 | ES |
| EXIST DD FILE #31-17 - Wellbore #1 - Wellbore #1 | 12,600.00 | 7,312.42 | 2,294.92 | 2,171.74 | 18.631 | SF |
| EXIST DD FILE #32-17 - Wellbore #1 - Wellbore #1 | 10,517.30 | 7,325.01 | 2,242.61 | 2,150.63 | 24.383 | CC |
| EXIST DD FILE #32-17 - Wellbore #1 - Wellbore #1 | 10,600.00 | 7,326.77 | 2,244.13 | 2,150.21 | 23.894 | ES |
| EXIST DD FILE #32-17 - Wellbore #1 - Wellbore #1 | 11,300.00 | 7,341.01 | 2,375.21 | 2,268.05 | 22.165 | SF |
| EXIST DD FILE #41-17 - Wellbore #1 - Wellbore #1 | 11,958.74 | 7,269.79 | 3,830.50 | 3,718.64 | 34.245 | CC |
| EXIST DD FILE #41-17 - Wellbore #1 - Wellbore #1 | 12,000.00 | 7,269.17 | 3,830.72 | 3,717.95 | 33.971 | ES |
| EXIST DD FILE #41-17 - Wellbore #1 - Wellbore #1 | 13,500.00 | 7,246.79 | 4,128.84 | 3,989.42 | 29.613 | SF |
| EXIST DD FILE #4-2-17 - Wellbore #1 - Wellbore #1 | 11,226.42 | 7,277.94 | 1,767.69 | 1,668.68 | 17.854 | CC |
| EXIST DD FILE #4-2-17 - Wellbore #1 - Wellbore #1 | 11,300.00 | 7,278.33 | 1,769.22 | 1,668.27 | 17.526 | ES |
| EXIST DD FILE #4-2-17 - Wellbore #1 - Wellbore #1 | 11,700.00 | 7,280.27 | 1,830.03 | 1,720.33 | 16.682 | SF |
| EXIST DD FILE #42-17X - Wellbore #1 - Wellbore #1 | 10,519.20 | 7,356.48 | 3,815.35 | 3,722.20 | 40.957 | CC |
| EXIST DD FILE #42-17X - Wellbore #1 - Wellbore #1 | 10,600.00 | 7,355.71 | 3,816.21 | 3,721.69 | 40.377 | ES |
| EXIST DD FILE #42-17X - Wellbore #1 - Wellbore #1 | 12,100.00 | 7,344.83 | 4,129.85 | 4,013.95 | 35.632 | SF |
| EXIST DD FILE #6-0-17 - Wellbore #1 - Wellbore #1 | 12,523.61 | 7,457.74 | 3,076.23 | 2,951.87 | 24.736 | CC |
| EXIST DD FILE #6-0-17 - Wellbore #1 - Wellbore #1 | 12,600.00 | 7,451.82 | 3,077.17 | 2,951.04 | 24.397 | ES |
| EXIST DD FILE #6-0-17 - Wellbore #1 - Wellbore #1 | 13,500.00 | 7,394.06 | 3,226.89 | 3,084.69 | 22.692 | SF |
| EXIST DD FILE #8-2-17 - Wellbore #1 - Wellbore #1 | 11,161.31 | 7,379.98 | 4,288.61 | 4,189.05 | 43.075 | CC |
| EXIST DD FILE #8-2-17 - Wellbore #1 - Wellbore #1 | 11,200.00 | 7,379.50 | 4,288.79 | 4,188.52 | 42.772 | ES |
| EXIST DD FILE #8-2-17 - Wellbore #1 - Wellbore #1 | 13,200.00 | 7,360.25 | 4,748.40 | 4,616.83 | 36.091 | SF |
| EXIST VERT FILE #1-17 - Wellbore #1 - Design #1 | 11,514.98 | 7,211.00 | 2,650.96 | 2,548.27 | 25.815 | CC |
| EXIST VERT FILE #1-17 - Wellbore #1 - Design #1 | 11,600.00 | 7,211.00 | 2,652.32 | 2,547.75 | 25.363 | ES |
| EXIST VERT FILE #1-17 - Wellbore #1 - Design #1 | 12,400.00 | 7,211.00 | 2,794.79 | 2,676.18 | 23.563 | SF |
| EXIST VERT SCHLAGEL #1 - Wellbore #1 - Design #1 | 8,395.26 | 7,226.00 | 571.97 | 394.52 | 3.223 | CC |
| EXIST VERT SCHLAGEL #1 - Wellbore #1 - Design #1 | 8,400.00 | 7,226.00 | 571.99 | 394.45 | 3.222 | ES, SF |
| EXIST VERT SCHLAGEL #2 - Wellbore #1 - Design #1 | 8,308.93 | 7,237.00 | 2,622.35 | 2,445.43 | 14.822 | CC, ES |
| EXIST VERT SCHLAGEL #2 - Wellbore #1 - Design #1 | 8,900.00 | 7,237.00 | 2,688.14 | 2,503.14 | 14.530 | SF |
| RINN VALLEY EAST N17-20-1C - ORIGINAL WELLBOR | 5,271.17 | 4,152.58 | 4,111.93 | 4,070.28 | 98.744 | CC |
| RINN VALLEY EAST N17-20-1C - ORIGINAL WELLBOR | 11,600.00 | 11,914.56 | 4,140.93 | 3,989.97 | 27.430 | ES |
| RINN VALLEY EAST N17-20-1C - ORIGINAL WELLBOR | 17,504.45 | 17,761.54 | 4,357.73 | 4,007.41 | 12.439 | SF |
| RINN VALLEY EAST N17-20-2N - ORIGINAL WELLBOR | 6,166.24 | 5,195.12 | 3,927.25 | 3,877.31 | 78.641 | CC |

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

Anticollision Report

| | | | |
|---------------------------|-----------------------------|-------------------------------------|----------------------------------|
| Company: | EXTRACTION OIL & GAS | Local Co-ordinate Reference: | Well RINN VALLEY EAST N17-20-14N |
| Project: | Weld County | TVD Reference: | KB 25' @ 4964.00usft |
| Reference Site: | Sec 18-T2N-R68W | MD Reference: | KB 25' @ 4964.00usft |
| Site Error: | 0.00 usft | North Reference: | True |
| Reference Well: | RINN VALLEY EAST N17-20-14N | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | ORIGINAL WELLBORE | Database: | EDT_32Bit_ODBC |
| Reference Design: | PROPOSAL 1 | 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 | | | | | | |
| Sec 17-T2N-R68W | | | | | | |
| RINN VALLEY EAST N17-20-2N - ORIGINAL WELLBOR | 17,499.97 | 17,489.99 | 4,038.20 | 3,685.67 | 11.455 | ES |
| RINN VALLEY EAST N17-20-2N - ORIGINAL WELLBOR | 17,504.45 | 17,489.99 | 4,038.46 | 3,685.82 | 11.452 | SF |
| RINN VALLEY EAST N17-20-3N - ORIGINAL WELLBOR | 11,194.21 | 11,200.00 | 3,602.78 | 3,463.87 | 25.936 | CC |
| RINN VALLEY EAST N17-20-3N - ORIGINAL WELLBOR | 17,499.97 | 17,430.94 | 3,718.08 | 3,365.26 | 10.538 | ES |
| RINN VALLEY EAST N17-20-3N - ORIGINAL WELLBOR | 17,504.45 | 17,430.94 | 3,718.33 | 3,365.41 | 10.536 | SF |
| RINN VALLEY EAST N17-20-4C - ORIGINAL WELLBOR | 6,503.85 | 5,949.57 | 3,347.03 | 3,294.73 | 63.996 | CC |
| RINN VALLEY EAST N17-20-4C - ORIGINAL WELLBOR | 17,499.97 | 17,618.90 | 3,408.68 | 3,056.81 | 9.687 | ES |
| RINN VALLEY EAST N17-20-4C - ORIGINAL WELLBOR | 17,504.45 | 17,618.90 | 3,408.93 | 3,056.96 | 9.685 | SF |
| RINN VALLEY EAST N17-20-5N - ORIGINAL WELLBOR | 17,439.62 | 17,358.43 | 3,077.23 | 2,724.82 | 8.732 | CC |
| RINN VALLEY EAST N17-20-5N - ORIGINAL WELLBOR | 17,499.97 | 17,358.43 | 3,077.82 | 2,723.99 | 8.699 | ES |
| RINN VALLEY EAST N17-20-5N - ORIGINAL WELLBOR | 17,504.45 | 17,358.43 | 3,078.08 | 2,724.15 | 8.697 | SF |
| RINN VALLEY EAST N17-20-6N - ORIGINAL WELLBOR | 17,447.38 | 17,327.22 | 2,757.20 | 2,403.93 | 7.805 | CC |
| RINN VALLEY EAST N17-20-6N - ORIGINAL WELLBOR | 17,499.97 | 17,327.22 | 2,757.70 | 2,403.21 | 7.779 | ES |
| RINN VALLEY EAST N17-20-6N - ORIGINAL WELLBOR | 17,504.45 | 17,327.22 | 2,757.95 | 2,403.36 | 7.778 | SF |
| RINN VALLEY EAST N17-20-7C - ORIGINAL WELLBOR | 7,074.88 | 6,923.72 | 2,439.51 | 2,383.72 | 43.729 | CC |
| RINN VALLEY EAST N17-20-7C - ORIGINAL WELLBOR | 17,499.97 | 17,574.73 | 2,451.87 | 2,099.13 | 6.951 | ES |
| RINN VALLEY EAST N17-20-7C - ORIGINAL WELLBOR | 17,504.45 | 17,574.73 | 2,452.12 | 2,099.28 | 6.950 | SF |
| RINN VALLEY EAST N17-20-8N - ORIGINAL WELLBOR | 11,113.26 | 11,000.00 | 2,057.67 | 1,921.14 | 15.071 | CC |
| RINN VALLEY EAST N17-20-8N - ORIGINAL WELLBOR | 17,499.97 | 17,350.72 | 2,117.45 | 1,762.81 | 5.971 | ES |
| RINN VALLEY EAST N17-20-8N - ORIGINAL WELLBOR | 17,504.45 | 17,350.72 | 2,117.70 | 1,762.96 | 5.970 | SF |

Anticollision Report

| | | | |
|---------------------------|-----------------------------|-------------------------------------|----------------------------------|
| Company: | EXTRACTION OIL & GAS | Local Co-ordinate Reference: | Well RINN VALLEY EAST N17-20-14N |
| Project: | Weld County | TVD Reference: | KB 25' @ 4964.00usft |
| Reference Site: | Sec 18-T2N-R68W | MD Reference: | KB 25' @ 4964.00usft |
| Site Error: | 0.00 usft | North Reference: | True |
| Reference Well: | RINN VALLEY EAST N17-20-14N | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | ORIGINAL WELLBORE | Database: | EDT_32Bit_ODBC |
| Reference Design: | PROPOSAL 1 | 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 | | | | | | |
| Sec 18-T2N-R68W | | | | | | |
| EXIST DD WILLIAMS 13-18 - Wellbore #1 - Wellbore #1 | 0.00 | 0.00 | 4,319.71 | | | |
| EXIST DD WILLIAMS 13-18 - Wellbore #1 - Wellbore #1 | 100.00 | 79.69 | 4,319.92 | 4,319.65 | 10,000.000 | ES |
| EXIST DD WILLIAMS 13-18 - Wellbore #1 - Wellbore #1 | 12,400.00 | 7,336.83 | 6,489.24 | 6,388.73 | 64.562 | SF |
| EXIST DD WILLIAMS 34-18 - Wellbore #1 - Design #1 | 665.14 | 674.54 | 2,136.20 | 2,131.83 | 488.857 | CC |
| EXIST DD WILLIAMS 34-18 - Wellbore #1 - Design #1 | 700.00 | 711.48 | 2,136.35 | 2,131.73 | 462.012 | ES |
| EXIST DD WILLIAMS 34-18 - Wellbore #1 - Design #1 | 8,900.00 | 7,156.68 | 3,000.75 | 2,935.76 | 46.175 | SF |
| EXIST DD WILLIAMS 3A-18H - Wellbore #1 - Wellbore # | 8,200.00 | 12,015.00 | 1,617.56 | 1,495.01 | 13.199 | SF |
| EXIST DD WILLIAMS 3A-18H - Wellbore #1 - Wellbore # | 9,000.00 | 12,015.00 | 1,359.27 | 1,281.14 | 17.398 | ES |
| EXIST DD WILLIAMS 3A-18H - Wellbore #1 - Wellbore # | 9,080.55 | 12,015.00 | 1,356.88 | 1,283.41 | 18.470 | CC |
| EXIST VERT CITY OF LONGMONT 1 - Wellbore #1 - De | 10,760.22 | 7,222.00 | 2,941.65 | 2,732.03 | 14.033 | CC |
| EXIST VERT CITY OF LONGMONT 1 - Wellbore #1 - De | 10,800.00 | 7,222.00 | 2,941.92 | 2,731.87 | 14.006 | ES |
| EXIST VERT CITY OF LONGMONT 1 - Wellbore #1 - De | 11,100.00 | 7,222.00 | 2,961.21 | 2,748.23 | 13.904 | SF |
| EXIST VERT SERAFINI GAS UNIT 1 - Wellbore #1 - De | 11,513.37 | 7,214.00 | 1,949.03 | 1,727.30 | 8.790 | CC, ES |
| EXIST VERT SERAFINI GAS UNIT 1 - Wellbore #1 - De | 11,600.00 | 7,214.00 | 1,950.95 | 1,728.56 | 8.772 | SF |
| EXIST VERT SHERWOOD 1 - Wellbore #1 - Design #1 | 600.00 | 547.00 | 4,211.54 | 4,199.05 | 337.062 | CC |
| EXIST VERT SHERWOOD 1 - Wellbore #1 - Design #1 | 10,800.00 | 7,227.00 | 4,264.43 | 4,054.29 | 20.293 | ES |
| EXIST VERT SHERWOOD 1 - Wellbore #1 - Design #1 | 11,600.00 | 7,227.00 | 4,349.63 | 4,130.58 | 19.857 | SF |
| EXIST VERT SHERWOOD 2 - Wellbore #1 - Design #1 | 11,870.60 | 7,219.00 | 4,261.77 | 4,034.01 | 18.711 | CC |
| EXIST VERT SHERWOOD 2 - Wellbore #1 - Design #1 | 11,900.00 | 7,219.00 | 4,261.88 | 4,033.73 | 18.681 | ES |
| EXIST VERT SHERWOOD 2 - Wellbore #1 - Design #1 | 12,600.00 | 7,219.00 | 4,323.74 | 4,087.66 | 18.315 | SF |
| EXIST VERT WILLIAMS 14-18 - Wellbore #1 - Design #1 | 600.00 | 647.00 | 4,173.33 | 4,158.85 | 288.294 | CC |
| EXIST VERT WILLIAMS 14-18 - Wellbore #1 - Design #1 | 700.00 | 746.98 | 4,175.06 | 4,158.22 | 247.887 | ES |
| EXIST VERT WILLIAMS 14-18 - Wellbore #1 - Design #1 | 9,600.00 | 7,327.00 | 5,948.55 | 5,759.06 | 31.393 | SF |
| EXIST VERT WILLIAMS 18-16 - Wellbore #1 - Design #1 | 600.00 | 565.00 | 888.51 | 875.64 | 69.043 | CC |
| EXIST VERT WILLIAMS 18-16 - Wellbore #1 - Design #1 | 700.00 | 664.98 | 889.64 | 874.40 | 58.383 | ES |
| EXIST VERT WILLIAMS 18-16 - Wellbore #1 - Design #1 | 8,400.00 | 7,245.00 | 1,954.91 | 1,777.29 | 11.006 | SF |
| EXIST VERT WILLIAMS 23-18 - Wellbore #1 - Design #1 | 600.00 | 572.00 | 3,127.49 | 3,114.53 | 241.309 | CC |
| EXIST VERT WILLIAMS 23-18 - Wellbore #1 - Design #1 | 700.00 | 671.98 | 3,129.07 | 3,113.74 | 204.125 | ES |
| EXIST VERT WILLIAMS 23-18 - Wellbore #1 - Design #1 | 10,200.00 | 7,252.00 | 4,131.54 | 3,933.57 | 20.870 | SF |
| EXIST VERT WILLIAMS 24-18 - Wellbore #1 - Design #1 | 600.00 | 627.00 | 2,741.92 | 2,727.84 | 194.848 | CC |
| EXIST VERT WILLIAMS 24-18 - Wellbore #1 - Design #1 | 700.00 | 726.98 | 2,743.66 | 2,727.22 | 166.898 | ES |
| EXIST VERT WILLIAMS 24-18 - Wellbore #1 - Design #1 | 8,600.00 | 7,307.00 | 4,303.75 | 4,123.96 | 23.938 | SF |
| EXIST VERT WILLIAMS 33-18 - Wellbore #1 - Design #1 | 600.00 | 572.00 | 2,146.12 | 2,133.16 | 165.589 | CC |
| EXIST VERT WILLIAMS 33-18 - Wellbore #1 - Design #1 | 700.00 | 671.98 | 2,147.49 | 2,132.16 | 140.090 | ES |
| EXIST VERT WILLIAMS 33-18 - Wellbore #1 - Design #1 | 9,600.00 | 7,252.00 | 2,952.42 | 2,761.97 | 15.502 | SF |
| EXIST VERT WILLIAMS 43-18 - Wellbore #1 - Design #1 | 9,489.62 | 7,241.00 | 1,621.31 | 1,430.61 | 8.502 | CC |
| EXIST VERT WILLIAMS 43-18 - Wellbore #1 - Design #1 | 9,500.00 | 7,241.00 | 1,621.34 | 1,430.57 | 8.499 | ES |
| EXIST VERT WILLIAMS 43-18 - Wellbore #1 - Design #1 | 9,600.00 | 7,241.00 | 1,625.06 | 1,433.70 | 8.492 | SF |
| EXIST VERT WILLIAMS E UNIT 1 - Wellbore #1 - Desig | 600.00 | 460.00 | 3,814.73 | 3,803.99 | 355.437 | CC |
| EXIST VERT WILLIAMS E UNIT 1 - Wellbore #1 - Desig | 700.00 | 559.98 | 3,816.47 | 3,803.36 | 291.195 | ES |
| EXIST VERT WILLIAMS E UNIT 1 - Wellbore #1 - Desig | 10,100.00 | 7,140.00 | 5,422.83 | 5,230.36 | 28.175 | SF |
| RINN VALLEY EAST N17-20-10C - ORIGINAL WELLBO | 200.00 | 198.00 | 111.85 | 110.87 | 114.288 | CC, ES |
| RINN VALLEY EAST N17-20-10C - ORIGINAL WELLBO | 17,504.45 | 18,190.90 | 1,462.94 | 1,108.35 | 4.126 | SF |
| RINN VALLEY EAST N17-20-11N - ORIGINAL WELLBO | 300.00 | 298.00 | 83.88 | 82.19 | 49.472 | CC, ES |
| RINN VALLEY EAST N17-20-11N - ORIGINAL WELLBO | 17,504.45 | 17,849.98 | 1,120.71 | 759.36 | 3.101 | SF |
| RINN VALLEY EAST N17-20-12N - ORIGINAL WELLBO | 400.00 | 399.00 | 55.92 | 53.51 | 23.146 | CC, ES |
| RINN VALLEY EAST N17-20-12N - ORIGINAL WELLBO | 17,504.45 | 17,737.60 | 800.63 | 439.41 | 2.216 | SF |
| RINN VALLEY EAST N17-20-13C - ORIGINAL WELLBO | 500.00 | 499.00 | 27.96 | 24.83 | 8.925 | CC, ES |
| RINN VALLEY EAST N17-20-13C - ORIGINAL WELLBO | 17,504.45 | 17,878.72 | 541.87 | 219.00 | 1.678 | SF |
| RINN VALLEY EAST N17-20-15C - ORIGINAL WELLBO | 600.00 | 600.00 | 28.24 | 24.39 | 7.328 | CC, ES |
| RINN VALLEY EAST N17-20-15C - ORIGINAL WELLBO | 17,504.45 | 17,643.22 | 541.40 | 208.18 | 1.625 | SF |
| RINN VALLEY EAST N17-20-16N - ORIGINAL WELLBO | 600.00 | 601.00 | 56.20 | 52.34 | 14.571 | CC, ES |
| RINN VALLEY EAST N17-20-16N - ORIGINAL WELLBO | 17,504.45 | 17,350.24 | 800.55 | 440.37 | 2.223 | SF |

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

Anticollision Report

| | | | |
|---------------------------|-----------------------------|-------------------------------------|----------------------------------|
| Company: | EXTRACTION OIL & GAS | Local Co-ordinate Reference: | Well RINN VALLEY EAST N17-20-14N |
| Project: | Weld County | TVD Reference: | KB 25' @ 4964.00usft |
| Reference Site: | Sec 18-T2N-R68W | MD Reference: | KB 25' @ 4964.00usft |
| Site Error: | 0.00 usft | North Reference: | True |
| Reference Well: | RINN VALLEY EAST N17-20-14N | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | ORIGINAL WELLBORE | Database: | EDT_32Bit_ODBC |
| Reference Design: | PROPOSAL 1 | 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 | | | | | | |
| Sec 18-T2N-R68W | | | | | | |
| RINN VALLEY EAST N17-20-9N - ORIGINAL WELLBOR | 100.00 | 97.00 | 139.81 | 139.54 | 527.926 | CC, ES |
| RINN VALLEY EAST N17-20-9N - ORIGINAL WELLBOR | 17,504.45 | 18,123.10 | 1,797.39 | 1,435.65 | 4.969 | SF |
| RINN VALLEY WEST N18-20-10N - ORIGINAL WELLBO | 600.00 | 603.00 | 336.09 | 332.23 | 86.973 | CC, ES |
| RINN VALLEY WEST N18-20-10N - ORIGINAL WELLBO | 17,504.45 | 15,658.53 | 3,938.65 | 3,579.91 | 10.979 | SF |
| RINN VALLEY WEST N18-20-11C - ORIGINAL WELLBO | 600.00 | 604.00 | 364.05 | 360.19 | 94.122 | CC, ES |
| RINN VALLEY WEST N18-20-11C - ORIGINAL WELLBO | 17,504.45 | 15,967.70 | 4,265.97 | 3,907.49 | 11.900 | SF |
| RINN VALLEY WEST N18-20-12N - ORIGINAL WELLBO | 500.00 | 504.00 | 392.01 | 388.86 | 124.411 | CC, ES |
| RINN VALLEY WEST N18-20-12N - ORIGINAL WELLBO | 17,504.45 | 15,976.26 | 4,739.07 | 4,379.32 | 13.173 | SF |
| RINN VALLEY WEST N18-20-13C - ORIGINAL WELLBO | 400.00 | 404.00 | 419.98 | 417.54 | 172.544 | CC, ES |
| RINN VALLEY WEST N18-20-13C - ORIGINAL WELLBO | 17,504.45 | 16,389.88 | 5,224.84 | 4,865.11 | 14.524 | SF |
| RINN VALLEY WEST N18-20-14N - ORIGINAL WELLBO | 300.00 | 304.00 | 448.22 | 446.50 | 261.034 | CC, ES |
| RINN VALLEY WEST N18-20-14N - ORIGINAL WELLBO | 17,504.45 | 16,363.22 | 5,538.92 | 5,178.30 | 15.359 | SF |
| RINN VALLEY WEST N18-20-15N - ORIGINAL WELLBO | 200.00 | 205.00 | 476.18 | 475.17 | 474.413 | CC, ES |
| RINN VALLEY WEST N18-20-15N - ORIGINAL WELLBO | 17,504.45 | 16,522.28 | 5,859.15 | 5,498.24 | 16.234 | SF |
| RINN VALLEY WEST N18-20-16C - ORIGINAL WELLBO | 100.00 | 106.00 | 504.14 | 503.86 | 1,820.524 | CC, ES |
| RINN VALLEY WEST N18-20-16C - ORIGINAL WELLBO | 17,504.45 | 16,852.90 | 6,183.59 | 5,822.91 | 17.144 | SF |
| RINN VALLEY WEST N18-20-1N - ORIGINAL WELLBOR | 600.00 | 601.00 | 84.16 | 80.31 | 21.820 | CC, ES |
| RINN VALLEY WEST N18-20-1N - ORIGINAL WELLBOR | 17,504.45 | 17,327.86 | 1,098.07 | 737.89 | 3.049 | SF |
| RINN VALLEY WEST N18-20-2C - ORIGINAL WELLBOR | 600.00 | 602.00 | 112.12 | 108.26 | 29.042 | CC, ES |
| RINN VALLEY WEST N18-20-2C - ORIGINAL WELLBOR | 17,504.45 | 17,569.48 | 1,439.36 | 1,081.61 | 4.023 | SF |
| RINN VALLEY WEST N18-20-3N - ORIGINAL WELLBOR | 600.00 | 602.00 | 140.09 | 136.22 | 36.285 | CC, ES |
| RINN VALLEY WEST N18-20-3N - ORIGINAL WELLBOR | 17,504.45 | 17,330.15 | 1,737.98 | 1,376.96 | 4.814 | SF |
| RINN VALLEY WEST N18-20-4N - ORIGINAL WELLBOR | 600.00 | 603.00 | 168.05 | 164.18 | 43.487 | CC, ES |
| RINN VALLEY WEST N18-20-4N - ORIGINAL WELLBOR | 17,504.45 | 17,356.36 | 2,058.19 | 1,697.56 | 5.707 | SF |
| RINN VALLEY WEST N18-20-5C - ORIGINAL WELLBOR | 600.00 | 605.00 | 196.01 | 192.14 | 50.628 | CC, ES |
| RINN VALLEY WEST N18-20-5C - ORIGINAL WELLBOR | 17,504.45 | 17,646.39 | 2,391.43 | 2,032.03 | 6.654 | SF |
| RINN VALLEY WEST N18-20-6N - ORIGINAL WELLBOR | 600.00 | 606.00 | 223.97 | 220.09 | 57.797 | CC, ES |
| RINN VALLEY WEST N18-20-6N - ORIGINAL WELLBOR | 17,504.45 | 17,458.01 | 2,699.04 | 2,338.76 | 7.491 | SF |
| RINN VALLEY WEST N18-20-7N - ORIGINAL WELLBOR | 600.00 | 606.00 | 252.21 | 248.33 | 65.085 | CC, ES |
| RINN VALLEY WEST N18-20-7N - ORIGINAL WELLBOR | 17,504.45 | 17,532.39 | 3,019.21 | 2,658.95 | 8.381 | SF |
| RINN VALLEY WEST N18-20-8C - ORIGINAL WELLBOR | 600.00 | 607.00 | 280.17 | 276.29 | 72.234 | CC, ES |
| RINN VALLEY WEST N18-20-8C - ORIGINAL WELLBOR | 17,504.45 | 17,859.67 | 3,348.42 | 2,988.72 | 9.309 | SF |
| RINN VALLEY WEST N18-20-9N - ORIGINAL WELLBOR | 600.00 | 602.00 | 308.13 | 304.27 | 79.812 | CC, ES |
| RINN VALLEY WEST N18-20-9N - ORIGINAL WELLBOR | 17,504.45 | 15,559.72 | 3,618.69 | 3,260.34 | 10.098 | SF |
| Sec 8-T2N-R68W | | | | | | |
| ABND VERT LONGMONT 8-10K - Wellbore #1 - Design | 14,267.91 | 7,208.01 | 2,731.61 | 2,463.23 | 10.178 | CC |
| ABND VERT LONGMONT 8-10K - Wellbore #1 - Design | 14,300.00 | 7,208.01 | 2,731.80 | 2,462.67 | 10.151 | ES |
| ABND VERT LONGMONT 8-10K - Wellbore #1 - Design | 14,700.00 | 7,208.01 | 2,765.57 | 2,488.53 | 9.982 | SF |
| ABND VERT NIWOT 1 - Wellbore #1 - Design #1 | 14,263.09 | 7,202.00 | 578.35 | 310.17 | 2.157 | CC |
| ABND VERT NIWOT 1 - Wellbore #1 - Design #1 | 14,300.00 | 7,201.99 | 579.53 | 309.85 | 2.149 | ES, SF |
| EXIST VERT SAUNDERS TRUST 8-2K8 - Wellbore #1 - | 16,710.00 | 7,287.99 | 2,671.33 | 2,358.87 | 8.549 | CC |
| EXIST VERT SAUNDERS TRUST 8-2K8 - Wellbore #1 - | 16,800.00 | 7,287.99 | 2,672.85 | 2,358.32 | 8.498 | ES |
| EXIST VERT SAUNDERS TRUST 8-2K8 - Wellbore #1 - | 17,100.00 | 7,287.99 | 2,699.65 | 2,379.57 | 8.434 | SF |

| | | | | | | | | | | | |
|---|-----------------------|-----------------------|-----------------------|------------------|---------------|-----------------------|-------------------------------------|--------------|---------------------------------|----------------------------------|---------------------------|
| Offset Design Sec 17-T2N-R68W - ABND JEAN CRAIG EVANS #1 - Wellbore #1 - Design #1 | | | | | | | | | | | |
| Survey Program: 0-INC | | | | | | | | | | Offset Site Error: | 0.00 usft |
| Reference | | | | | | | | | | Offset Well Error: | 0.00 usft |
| Measured Depth (usft) | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | 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) |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 16.23 | 4,211.83 | 1,226.17 | 4,387.23 | | |

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