

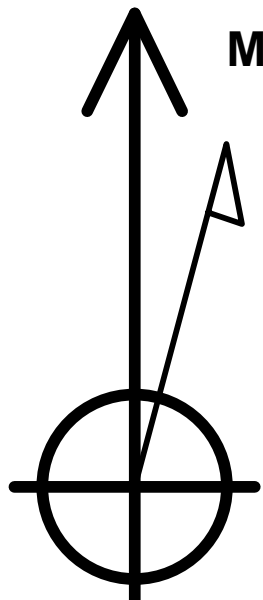


PROPOSED LOCAL COORDINATES:

SHL: 2047ft FNL & 397ft FWL of Sec 10

HZ LP *NEW*: 1720ft FNL & 20ft FEL of Sec 9

BHL: 1695ft FNL & 2645ft FWL of Sec 8



Azimuths to True North
Magnetic North: 8.12°

Magnetic Field
Strength: 52451.6snT
Dip Angle: 66.91°
Date: 24/03/2017
Model: IGRF2015

The figure consists of three vertical section plots showing well paths and geological data.

Left Plot: Vertical Section at 42.53° (500 usft/in)

- Y-axis: True Vertical Depth (500 usft/in) from 0 to 6000.
- X-axis: Vertical Section at 42.53° (500 usft/in) from 0 to 2000.
- Key features:
 - START NUDGE (2°/100ft BUR)
 - EOB TO 12° INC
 - END OF TANGENT
 - EOD TO VERTICAL
 - KOP (8°/100ft BUR)
 - Landing point: WACKER 10F-234 (P2)

Middle Plot: Vertical Section at 272.23° (360 usft/in)

- Y-axis: True Vertical Depth (360 usft/in) from 2400 to 6900.
- X-axis: Vertical Section at 272.23° (360 usft/in) from -300 to 9300.
- Key features:
 - END OF TANGENT
 - EOD TO VERTICAL
 - KOP (8°/100ft BUR)
 - Landing PNT - WACKER 10F-234 (P2)

Right Plot: Horizontal Section

- Y-axis: South(-)/North(+) (500 usft/in) from -2000 to 2500.
- X-axis: West(-)/East(+) (500 usft/in) from -8500 to 9300.
- Key features:
 - 1/2 SECTION LINE - HARD BOUNDARY
 - SEC 8, SEC 9, SEC 10
 - EXIST VERT HECKENDORF #1
 - EXIST VERT BLOSKAS #1
 - EXIST VERT BOND #21-9
 - EXIST VERT OGRADY #31-9
 - EXIST VERT MILLAGE #11-10
 - EXIST VERT WACKER #2
 - EXIST VERT WACKER #1
 - EXIST VERT WACKER #10D
 - KOP (8°/100ft BUR)
 - EOB TO 12° INC
 - START NUDGE (2°/100ft BUR)
 - EXIST VERT WACKER #22-10
 - EXIST VERT TREBOR #B10-11
 - EXIST HZ SEYLOR STATE #B15-79HNM
 - EXIST HZ SEYLOR #B10-64-1HN
 - EXIST VERT DR B #10-12
 - ABDN VERT OGRADY #3
 - EXIST VERT HEINRICH #41-9
 - EXIST VERT BLOSKAS #12-9
 - ABDN VERT HEINRICH #1
 - EXIST VERT BLOSKAS 9-23
 - EXIST VERT WILLIAMS #
 - EXIST VERT BAUER #9-1
 - ABDN VERT BLOSKAS #13-9
 - EXIST VERT JURGENSEN #8-1
 - EXIST DD JURGENSEN PC #B8-22D
 - EXIST VERT JURGENSEN PC #B8-23
 - EXIST DD JURGENSEN STATE #B16-30D
 - EXIST DD JURGENSEN PC #B8-24D
 - EXIST VERT JURGENSEN-PM B #B8-10
 - ABDN VERT OGRADY #3
 - LANDING PNT: 1720ft FNL & 20ft FEL of Sec 9
 - BHL: 1695ft FNL & 2645ft FWL of Sec 8
 - BHL - WACKER 10F-234 (P2)

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4634.0usft
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4634.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
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 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 us	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date 24/03/2017			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	15,003.7	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
Offset Well - Wellbore - Design						
SW NW SEC. 10 T5N R64W 6th P.M.						
ABDN VERT BLOSKAS #13-9 - Wellbore #1 - Design #1	11,602.8	6,606.3	1,598.0	1,324.4	5.841	CC, ES
ABDN VERT BLOSKAS #13-9 - Wellbore #1 - Design #1	11,900.0	6,605.9	1,625.4	1,343.5	5.766	SF
ABDN VERT HEINRICH #1 - Wellbore #1 - Design #1	7,942.1	6,622.9	274.3	102.2	1.594	CC, ES, SF
ABDN VERT OGRADY #3 - Wellbore #1 - Design #1	9,072.5	6,647.5	1,037.3	834.6	5.116	CC
ABDN VERT OGRADY #3 - Wellbore #1 - Design #1	9,100.0	6,647.5	1,037.7	834.2	5.099	ES
ABDN VERT OGRADY #3 - Wellbore #1 - Design #1	9,200.0	6,647.4	1,045.1	838.9	5.067	SF
ABDN VERT PLUMB #2 - Wellbore #1 - Design #1	15,004.0	6,610.0	1,190.3	821.4	3.227	CC, ES, SF
EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellb	13,543.0	6,790.7	1,032.1	819.4	4.853	CC
EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellb	13,600.0	6,790.8	1,033.7	819.4	4.824	ES
EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellb	13,700.0	6,791.0	1,044.0	826.9	4.809	SF
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	14,833.4	6,766.1	2,252.6	1,996.2	8.786	CC
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	14,900.0	6,766.1	2,253.6	1,995.4	8.726	ES
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	15,004.0	6,766.1	2,259.1	1,997.9	8.649	SF
EXIST DD JURGENS STATE #B16-30D - Wellbore #1 -	12,403.8	6,910.6	3,463.3	3,268.6	17.793	CC
EXIST DD JURGENS STATE #B16-30D - Wellbore #1 -	12,500.0	6,908.8	3,464.6	3,267.3	17.557	ES
EXIST DD JURGENS STATE #B16-30D - Wellbore #1 -	14,100.0	6,876.4	3,856.1	3,614.0	15.928	SF
EXIST DD PETERSON B #10-24D - Wellbore #1 - Wellb	1,037.8	939.0	2,323.5	2,320.0	658.504	CC, ES
EXIST DD PETERSON B #10-24D - Wellbore #1 - Wellb	14,300.0	6,614.2	9,996.2	9,764.9	43.223	SF
EXIST DD PJ #81 - Wellbore #1 - Wellbore #1	15,004.0	6,696.7	1,623.2	1,367.9	6.359	CC, ES, SF
EXIST DD WACKER B #10-20D - Wellbore #1 - Wellbore	5,958.2	6,070.0	1,167.7	1,131.3	32.044	CC, ES
EXIST DD WACKER B #10-20D - Wellbore #1 - Wellbore	5,980.7	6,086.1	1,167.8	1,131.3	31.994	SF
EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore	1,994.9	1,684.0	4,081.0	4,071.9	449.097	CC
EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore	2,100.0	1,733.3	4,081.5	4,071.9	421.551	ES
EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore	12,400.0	5,938.0	9,955.8	9,785.9	58.613	SF
EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #	2,634.9	2,333.0	4,000.4	3,987.4	306.862	CC
EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #	2,700.0	2,380.4	4,000.8	3,987.4	298.528	ES
EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #	12,500.0	5,937.0	9,917.7	9,749.4	58.918	SF
EXIST HZ SEYLR #B10-64-1HN - Wellbore #1 - Wellbc	504.7	481.9	1,012.4	1,010.8	634.832	CC, ES
EXIST HZ SEYLR #B10-64-1HN - Wellbore #1 - Wellbc	11,000.0	6,041.0	4,491.0	4,358.3	33.841	SF
EXIST HZ SEYLR STATE #B15-79HNM - Wellbore #1	500.0	477.0	993.6	992.2	698.758	CC, ES
EXIST HZ SEYLR STATE #B15-79HNM - Wellbore #1	8,700.0	6,236.0	2,097.3	2,023.3	28.321	SF
EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1	9,229.2	6,608.3	1,779.0	1,700.8	22.768	CC
EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1	9,300.0	6,608.6	1,780.4	1,700.3	22.232	ES
EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1	10,400.0	6,612.9	2,129.6	2,019.1	19.263	SF
EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1	11,691.5	6,617.2	988.6	713.5	3.593	CC
EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1	11,700.0	6,617.2	988.7	713.3	3.590	ES
EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1	11,800.0	6,617.1	994.6	716.4	3.575	SF

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4634.0usft
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4634.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 10 T5N R64W 6th P.M.						
EXIST VERT BLOSKAS #12-9 - Wellbore #1 - Wellbore #1	11,629.8	6,598.1	159.5	15.1	1.105	Level 2, CC, ES, SF
EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore #1	10,514.4	6,588.8	1,456.9	1,343.6	12.862	CC, ES
EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore #1	11,000.0	6,588.2	1,535.7	1,408.9	12.111	SF
EXIST VERT BLOSKAS BOND #9D - Wellbore #1 - Wellbore #1	11,072.9	6,617.0	360.1	231.3	2.796	CC, ES
EXIST VERT BLOSKAS BOND #9D - Wellbore #1 - Wellbore #1	11,100.0	6,615.5	361.1	231.6	2.787	SF
EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1	10,455.1	6,593.7	296.5	185.0	2.660	CC, ES, SF
EXIST VERT BOND #21-9 - Wellbore #1 - Design #1	10,377.0	6,626.9	1,016.4	777.8	4.260	CC
EXIST VERT BOND #21-9 - Wellbore #1 - Design #1	10,400.0	6,626.8	1,016.7	777.4	4.249	ES
EXIST VERT BOND #21-9 - Wellbore #1 - Design #1	10,500.0	6,626.7	1,023.8	781.8	4.230	SF
EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1	9,062.8	6,600.0	299.5	226.8	4.118	CC, ES
EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1	9,100.0	6,600.0	301.8	228.1	4.092	SF
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	100.0	59.9	1,060.8	1,060.7	10,000.000	CC
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	500.0	460.4	1,061.2	1,059.9	837.911	ES
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	15,004.0	6,500.0	8,634.2	8,396.0	36.253	SF
EXIST VERT HECKENDORF #1 - Wellbore #1 - Design #1	13,061.0	6,616.5	1,193.4	880.0	3.807	CC
EXIST VERT HECKENDORF #1 - Wellbore #1 - Design #1	13,100.0	6,616.4	1,194.1	879.5	3.796	ES
EXIST VERT HECKENDORF #1 - Wellbore #1 - Design #1	13,200.0	6,616.3	1,201.5	884.1	3.786	SF
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	7,676.6	6,648.3	1,058.3	892.7	6.391	CC
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	7,700.0	6,648.3	1,058.6	892.4	6.370	ES
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	7,900.0	6,648.0	1,081.6	910.4	6.315	SF
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #1	12,959.4	6,575.7	1,658.8	1,477.4	9.142	CC
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #1	13,000.0	6,575.0	1,659.3	1,476.8	9.088	ES
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #1	13,400.0	6,567.8	1,716.3	1,522.6	8.858	SF
EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore #1	14,301.1	6,606.4	252.3	33.1	1.151	Level 2, CC, ES, SF
EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore #1	13,250.7	6,600.0	487.0	296.8	2.561	CC, ES
EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore #1	13,300.0	6,600.0	489.5	297.9	2.555	SF
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Wellbore #1	13,805.5	6,579.9	2,318.3	2,112.8	11.279	CC
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Wellbore #1	13,900.0	6,580.9	2,320.2	2,112.1	11.145	ES
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Wellbore #1	14,500.0	6,586.9	2,420.1	2,195.1	10.755	SF
EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - Design #1	14,135.5	6,625.1	1,521.7	1,178.1	4.428	CC
EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - Design #1	14,200.0	6,625.0	1,523.1	1,177.6	4.409	ES
EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - Design #1	14,300.0	6,624.9	1,530.6	1,182.3	4.395	SF
EXIST VERT LOWER LATHAM #8-15 - Wellbore #1 - Wellbore #1	13,689.1	6,603.6	36.9	-165.3	0.182	Level 1, CC, ES, SF
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	6,419.4	6,335.5	1,393.5	1,251.9	9.841	CC
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	6,500.0	6,398.7	1,394.4	1,251.4	9.754	ES
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	6,800.0	6,575.7	1,423.2	1,275.2	9.617	SF
EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1	8,872.2	6,638.8	1,246.8	1,049.6	6.323	CC
EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1	8,900.0	6,638.7	1,247.1	1,049.1	6.300	ES
EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1	9,100.0	6,638.5	1,267.4	1,064.0	6.231	SF
EXIST VERT PAULINE #5 - Wellbore #1 - Wellbore #1	15,004.0	6,606.5	978.8	739.9	4.097	CC, ES, SF
EXIST VERT PJ #2 - Wellbore #1 - Wellbore #1	15,004.0	6,400.0	1,461.8	1,225.2	6.179	CC, ES, SF
EXIST VERT PJ #3 - Wellbore #1 - Wellbore #1	15,004.0	6,500.0	2,084.0	1,851.0	8.943	CC, ES, SF
EXIST VERT PJ #5 - Wellbore #1 - Design #1	15,004.0	6,618.0	1,384.9	1,017.0	3.764	CC, ES, SF
EXIST VERT SLW RANCH #1-10 - Wellbore #1 - Wellbore #1	5,999.0	6,029.0	3,910.7	3,894.4	239.309	CC
EXIST VERT SLW RANCH #1-10 - Wellbore #1 - Wellbore #1	6,000.0	6,029.8	3,910.7	3,894.4	239.287	ES
EXIST VERT SLW RANCH #1-10 - Wellbore #1 - Wellbore #1	12,500.0	6,661.9	9,902.5	9,733.8	58.725	SF
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore #1	2,023.5	1,971.7	2,058.4	2,051.0	279.190	CC
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore #1	2,100.0	2,037.4	2,058.6	2,050.9	266.516	ES
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore #1	14,800.0	6,200.0	9,946.5	9,719.9	43.895	SF
EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbore #1	3,136.0	3,048.9	2,935.7	2,924.3	256.192	CC, ES
EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbore #1	13,700.0	6,557.1	9,956.5	9,754.5	49.279	SF
EXIST VERT WACKER #1 - Wellbore #1 - Wellbore #1	6,524.3	6,409.1	32.0	15.6	1.949	CC, ES, SF
EXIST VERT WACKER #10D - Wellbore #1 - Wellbore #1	5,980.7	5,924.0	653.3	636.5	38.972	ES

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4634.0usft
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4634.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 10 T5N R64W 6th P.M.						
EXIST VERT WACKER #10D - Wellbore #1 - Wellbore #	5,990.6	5,933.9	653.2	637.7	42.089	CC
EXIST VERT WACKER #10D - Wellbore #1 - Wellbore #	15,004.0	6,700.0	9,166.3	8,930.9	38.935	SF
EXIST VERT WACKER #2 - Wellbore #1 - Wellbore #1	5,980.7	5,924.4	1,681.2	1,663.9	97.200	ES
EXIST VERT WACKER #2 - Wellbore #1 - Wellbore #1	5,982.0	5,925.6	1,681.2	1,666.2	112.540	CC
EXIST VERT WACKER #2 - Wellbore #1 - Wellbore #1	14,800.0	6,370.4	9,936.0	9,712.9	44.535	SF
EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore	3,191.9	3,125.3	1,440.5	1,429.4	130.356	CC
EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore	3,200.0	3,132.3	1,440.5	1,429.4	130.202	ES
EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore	13,500.0	6,328.5	8,569.0	8,408.4	53.340	SF
EXIST VERT WACKER #31-10 - Wellbore #1 - Wellbore	5,739.5	5,644.1	2,617.7	2,601.7	163.436	CC
EXIST VERT WACKER #31-10 - Wellbore #1 - Wellbore	5,800.0	5,700.0	2,617.7	2,601.6	162.229	ES
EXIST VERT WACKER #31-10 - Wellbore #1 - Wellbore	13,900.0	6,400.0	9,943.1	9,737.7	48.409	SF
EXIST VERT WACKER #32-10 - Wellbore #1 - Wellbore	3,945.9	3,890.3	2,369.5	2,358.0	205.873	CC
EXIST VERT WACKER #32-10 - Wellbore #1 - Wellbore	4,000.0	3,937.2	2,369.6	2,358.0	203.972	ES
EXIST VERT WACKER #32-10 - Wellbore #1 - Wellbore	13,900.0	6,300.0	9,927.8	9,856.4	139.132	SF
EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore	5,980.7	6,039.3	4,169.2	4,152.9	255.058	ES
EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore	6,003.4	6,059.8	4,168.9	4,153.7	274.639	CC
EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore	12,300.0	6,730.0	9,954.2	9,791.5	61.167	SF
EXIST VERT WACKER #42-10 - Wellbore #1 - Wellbore	3,167.3	3,052.8	3,847.4	3,837.1	372.591	CC, ES
EXIST VERT WACKER #42-10 - Wellbore #1 - Wellbore	12,500.0	6,500.0	9,972.8	9,836.8	73.341	SF
EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1	526.2	489.9	1,505.7	1,504.3	1,089.078	CC
EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1	7,600.0	6,568.0	1,515.4	1,481.2	44.317	ES
EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1	9,600.0	6,534.3	2,540.9	2,453.2	28.966	SF
WACKER 10F-204 - ORIGINAL WELLBORE - PROPOS.	300.0	300.0	29.9	28.8	27.871	CC
WACKER 10F-204 - ORIGINAL WELLBORE - PROPOS.	15,004.0	15,039.7	460.1	-14.0	0.971	Level 1, ES, SF
WACKER 10F-232 - ORIGINAL WELLBORE - PROPOS.	6,979.6	7,285.2	61.6	15.1	1.324	Level 3, CC, ES, SF
WACKER 10F-302 - ORIGINAL WELLBORE - PROPOS.	500.0	500.0	60.1	58.1	30.498	CC, ES
WACKER 10F-302 - ORIGINAL WELLBORE - PROPOS.	7,410.1	6,953.2	180.2	127.9	3.441	SF
WACKER 10F-304 - ORIGINAL WELLBORE - PROPOS.	400.0	400.0	14.9	13.4	9.816	CC
WACKER 10F-304 - ORIGINAL WELLBORE - PROPOS.	15,004.0	15,091.2	239.2	-217.7	0.524	Level 1, ES, SF
WACKER 10G-212 - ORIGINAL WELLBORE - PROPOS.	400.0	400.0	104.9	103.4	68.956	CC
WACKER 10G-212 - ORIGINAL WELLBORE - PROPOS.	500.0	499.6	105.1	103.1	53.684	ES
WACKER 10G-212 - ORIGINAL WELLBORE - PROPOS.	7,500.0	6,790.8	531.1	478.6	10.110	SF
WACKER 10G-214 - ORIGINAL WELLBORE - PROPOS.	300.0	300.0	30.2	29.2	28.205	CC
WACKER 10G-214 - ORIGINAL WELLBORE - PROPOS.	400.0	399.9	30.3	28.8	20.062	ES
WACKER 10G-214 - ORIGINAL WELLBORE - PROPOS.	15,004.0	14,996.6	565.3	90.7	1.191	Level 2, SF
WACKER 10G-302 - ORIGINAL WELLBORE - PROPOS.	300.0	300.0	120.2	119.2	112.143	CC, ES
WACKER 10G-302 - ORIGINAL WELLBORE - PROPOS.	7,900.0	6,615.3	887.0	824.3	14.149	SF
WACKER 10G-304 - ORIGINAL WELLBORE - PROPOS.	356.5	356.5	45.2	43.9	34.227	CC
WACKER 10G-304 - ORIGINAL WELLBORE - PROPOS.	500.0	499.7	45.6	43.7	23.375	ES
WACKER 10G-304 - ORIGINAL WELLBORE - PROPOS.	15,004.0	15,094.5	785.0	312.6	1.662	SF
WACKER 10G-312 - ORIGINAL WELLBORE - PROPOS.	500.0	500.0	90.0	88.0	45.650	CC, ES
WACKER 10G-312 - ORIGINAL WELLBORE - PROPOS.	7,500.0	6,850.0	269.0	215.7	5.044	SF
WACKER 10G-314 - ORIGINAL WELLBORE - PROPOS.	500.0	500.0	15.0	13.0	7.589	CC
WACKER 10G-314 - ORIGINAL WELLBORE - PROPOS.	15,004.0	15,059.2	334.3	-131.9	0.717	Level 1, ES, SF

Offset Design												SW NW SEC. 10 T5N R64W 6th P.M. - ABDN VERT BLOSKAS #13-9 - Wellbore #1 - Design #1		Offset Site Error:		0.0 usft	
Survey Program: 0-INC														Offset Well Error:		0.0 usft	
Reference		Offset		Semi Major Axis			Distance										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning				

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

Header Information	measured depth (ft)	inclination (°)	azimuth (°)	true vertical depth (ft)
Operator Name	0	0	0	0
PDC ENERGY	100	0	0	100
Operator Number	200	0	0	200
69175	300	0	0	300
Well Name and Number	400	0	0	400
WACKER 10F-234	500	0	0	500
API Number (if available)	600	2	42.53	599.98
	700	4	42.53	699.84
Location: QQ SEC TWP RGE	800	6	42.53	799.45
SW NW SEC. 10 T5N R64W	900	8	42.53	898.7
Citing Type: Planned or Actual	1000	10	42.53	997.47
Planned	1100.04	12	42.53	1095.66
Deviation Indicator	1200	12	42.53	1193.44
Horizontal	1300	12	42.53	1291.25
North Reference	1400	12	42.53	1389.07
True	1500	12	42.53	1486.88
Grid Type	1600	12	42.53	1584.7
	1700	12	42.53	1682.51
	1800	12	42.53	1780.32
	1900	12	42.53	1878.14
	2000	12	42.53	1975.95
	2100	12	42.53	2073.77
	2200	12	42.53	2171.58
	2300	12	42.53	2269.4
	2400	12	42.53	2367.21
	2500	12	42.53	2465.03
	2600	12	42.53	2562.84
	2618.71	12	42.53	2581.14
	2700	10.37	42.53	2660.88
	2800	8.37	42.53	2759.54
	2900	6.37	42.53	2858.71
	3000	4.37	42.53	2958.27
	3100	2.37	42.53	3058.09
	3200	0.37	42.53	3158.05
	3218.75	0	0	3176.8
	3300	0	0	3258.05
	3400	0	0	3358.05
	3500	0	0	3458.05
	3600	0	0	3558.05
	3700	0	0	3658.05
	3800	0	0	3758.05
	3900	0	0	3858.05

4000	0	0	3958.05
4100	0	0	4058.05
4200	0	0	4158.05
4300	0	0	4258.05
4400	0	0	4358.05
4500	0	0	4458.05
4600	0	0	4558.05
4700	0	0	4658.05
4800	0	0	4758.05
4900	0	0	4858.05
5000	0	0	4958.05
5100	0	0	5058.05
5200	0	0	5158.05
5300	0	0	5258.05
5400	0	0	5358.05
5500	0	0	5458.05
5600	0	0	5558.05
5700	0	0	5658.05
5800	0	0	5758.05
5900	0	0	5858.05
5980.75	0	0	5938.8
6000	1.54	270	5958.05
6100	9.54	270	6057.5
6200	17.54	270	6154.65
6300	25.54	270	6247.59
6400	33.54	270	6334.52
6500	41.54	270	6413.74
6600	49.54	270	6483.73
6700	57.54	270	6543.11
6800	65.54	270	6590.72
6900	73.54	270	6625.65
7000	81.54	270	6647.21
7100	89.54	270	6654.98
7106.65	90.07	270	6655
7200	90.07	270	6654.88
7300	90.07	270	6654.76
7400	90.07	270	6654.63
7500	90.07	270	6654.51
7600	90.07	270	6654.38
7700	90.07	270	6654.25
7800	90.07	270	6654.13
7900	90.07	270	6654
8000	90.07	270	6653.88
8100	90.07	270	6653.75
8200	90.07	270	6653.63
8300	90.07	270	6653.5
8400	90.07	270	6653.37

8500	90.07	270	6653.25
8600	90.07	270	6653.12
8700	90.07	270	6653
8800	90.07	270	6652.87
8900	90.07	270	6652.74
9000	90.07	270	6652.62
9100	90.07	270	6652.49
9200	90.07	270	6652.37
9300	90.07	270	6652.24
9400	90.07	270	6652.11
9500	90.07	270	6651.99
9600	90.07	270	6651.86
9700	90.07	270	6651.73
9800	90.07	270	6651.61
9900	90.07	270	6651.48
10000	90.07	270	6651.36
10100	90.07	270	6651.23
10200	90.07	270	6651.1
10300	90.07	270	6650.98
10400	90.07	270	6650.85
10500	90.07	270	6650.72
10600	90.07	270	6650.6
10700	90.07	270	6650.47
10800	90.07	270	6650.34
10900	90.07	270	6650.22
11000	90.07	270	6650.09
11100	90.07	270	6649.96
11200	90.07	270	6649.84
11300	90.07	270	6649.71
11400	90.07	270	6649.58
11500	90.07	270	6649.46
11600	90.07	270	6649.33
11700	90.07	270	6649.2
11800	90.07	270	6649.08
11900	90.07	270	6648.95
12000	90.07	270	6648.82
12100	90.07	270	6648.7
12200	90.07	270	6648.57
12300	90.07	270	6648.44
12400	90.07	270	6648.32
12500	90.07	270	6648.19
12600	90.07	270	6648.06
12700	90.07	270	6647.93
12800	90.07	270	6647.81
12900	90.07	270	6647.68
13000	90.07	270	6647.55
13100	90.07	270	6647.43

13200	90.07	270	6647.3
13300	90.07	269.99	6647.17
13400	90.07	269.99	6647.04
13500	90.07	269.99	6646.92
13600	90.07	269.99	6646.79
13700	90.07	269.99	6646.66
13800	90.07	269.99	6646.54
13900	90.07	269.99	6646.41
14000	90.07	269.99	6646.28
14100	90.07	269.99	6646.15
14200	90.07	269.99	6646.03
14300	90.07	269.99	6645.9
14400	90.07	269.99	6645.77
14500	90.07	269.99	6645.64
14600	90.07	269.99	6645.52
14700	90.07	269.99	6645.39
14800	90.07	269.99	6645.26
14900	90.07	269.99	6645.13
15000	90.07	269.99	6645.01
15003.96	90.07	269.99	6645