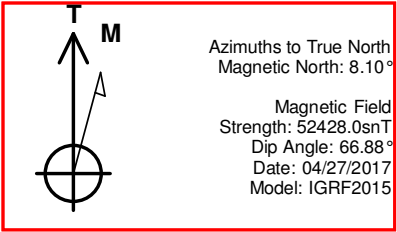


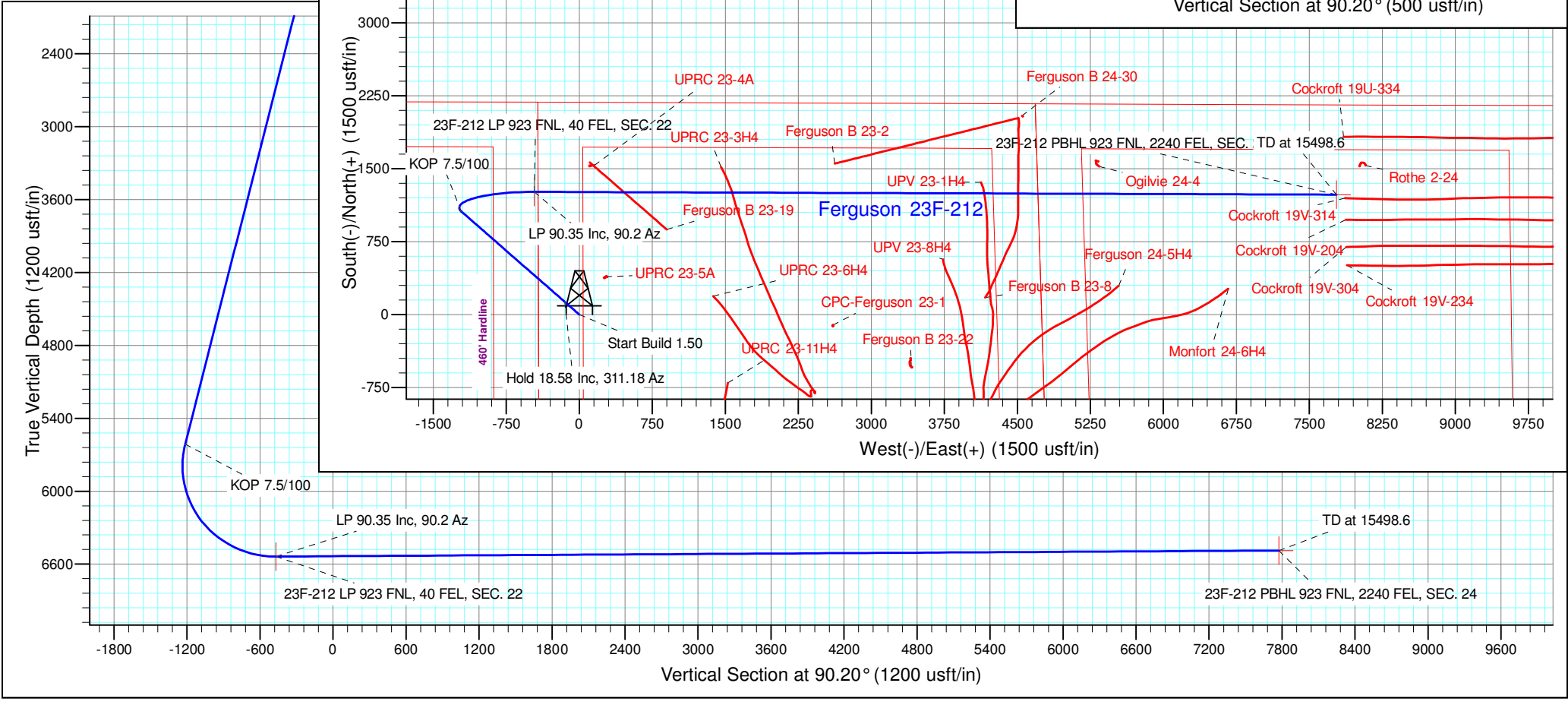
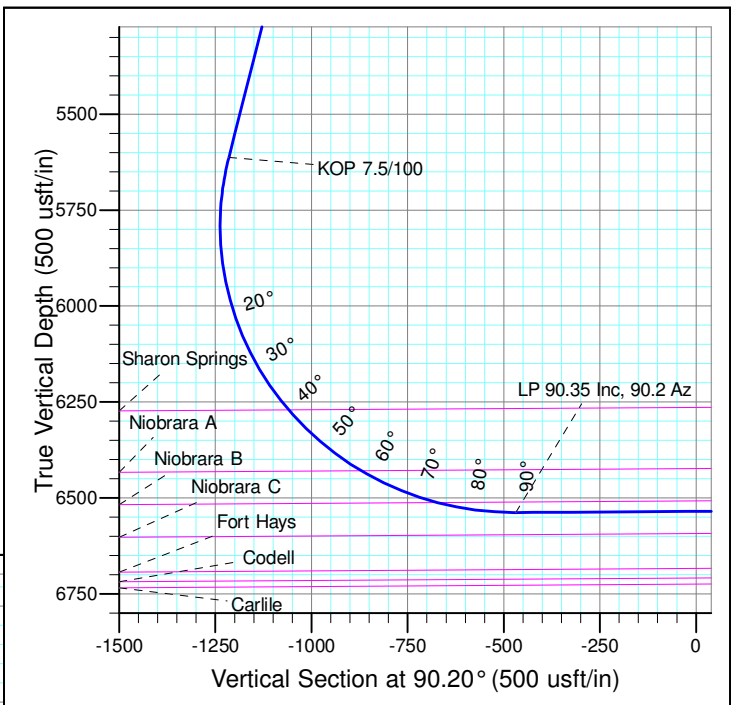


Well Name: Ferguson 23F-212  
Surface Location: Ferguson 5N64W23F Pad  
North American Datum 1983  
US State Plane 1983 , Colorado Northern Zone  
Ground Elevation: 4575.0  
WELL @ 4598.0usft (Original Well Elev)  
Northing Easting Latitude Longitude Slot  
0.0 0.0 1384981.02 3271629.52 40° 23' 9.870 N 104° 31' 29.591 W

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1438.4	18.58	311.18	1416.8	131.0	-149.8	1.50	311.18	-150.2	
4	5865.0	18.58	311.18	5612.8	1059.4	-1211.2	0.00	0.00	-1214.9	
5	7255.1	90.35	90.20	6538.0	1262.1	-464.4	7.50	137.42	-468.8	23F-212 LP 923 FNL, 40 FEL, SEC. 22
6	15498.6	90.35	90.20	6488.0	1233.6	7778.9	0.00	0.00	7774.5	23F-212 PBHL 923 FNL, 2240 FEL, SEC. 24



Project: SEC. 23-T5N-R64W  
Site: Ferguson 5N64W23F Pad  
Well: Ferguson 23F-212  
Wellbore: Wellbore #1  
Design: Design #1 27Apr17 jps



<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Ferguson 23F-212
<b>Project:</b>	SEC. 23-T5N-R64W	<b>TVD Reference:</b>	WELL @ 4598.0usft (Original Well Elev)
<b>Reference Site:</b>	Ferguson 5N64W23F Pad	<b>MD Reference:</b>	WELL @ 4598.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Ferguson 23F-212	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.45 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Design #1 27Apr17 jps	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Design #1 27Apr17 jps		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 1,682.5 usft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.45 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	05/02/17		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	15,498.6	Design #1 27Apr17 jps (Wellbore #1)	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						
Existing Wells Sec. 23-T5N-R64W						
CPC-Ferguson 23-1 - Wellbore #1 - Wellbore #1 01May1	10,329.4	6,514.0	1,360.7	1,223.0	9.882	CC
CPC-Ferguson 23-1 - Wellbore #1 - Wellbore #1 01May1	10,400.0	6,513.1	1,362.5	1,222.5	9.730	ES
CPC-Ferguson 23-1 - Wellbore #1 - Wellbore #1 01May1	10,800.0	6,507.4	1,439.8	1,286.4	9.391	SF
Ferguson 24-5H4 - Wellbore #1 - Wellbore #1 01May17 j	13,235.6	7,521.1	1,017.0	763.6	4.013	CC, ES
Ferguson 24-5H4 - Wellbore #1 - Wellbore #1 01May17 j	13,300.0	7,542.0	1,018.9	764.4	4.005	SF
Ferguson B 23-19 - Wellbore #1 - Wellbore #1 01May17	8,619.1	6,637.2	382.7	287.9	4.036	CC, ES
Ferguson B 23-19 - Wellbore #1 - Wellbore #1 01May17	8,700.0	6,636.7	391.2	293.9	4.022	SF
Ferguson B 23-2 - Wellbore #1 - Wellbore #1 01May17 jp	10,345.5	6,890.5	302.4	128.5	1.739	CC, ES, SF
Ferguson B 23-22 - Wellbore #1 - Wellbore #1 01May17						Out of range
Ferguson B 23-8 - Wellbore #1 - Wellbore #1 01May17 jp	11,909.4	6,831.8	1,048.4	849.4	5.267	CC, ES
Ferguson B 23-8 - Wellbore #1 - Wellbore #1 01May17 jp	12,100.0	6,822.3	1,065.6	860.2	5.188	SF
Ferguson B 24-30 - Wellbore #1 - Wellbore #1 28Apr17 j						Out of range
Monfort 24-6H4 - Wellbore #1 - Wellbore #1 01May17 jps	14,358.8	7,563.8	1,001.2	675.2	3.071	CC
Monfort 24-6H4 - Wellbore #1 - Wellbore #1 01May17 jps	14,400.0	7,568.6	1,002.1	674.8	3.062	ES
Monfort 24-6H4 - Wellbore #1 - Wellbore #1 01May17 jps	14,500.0	7,580.0	1,011.0	680.6	3.060	SF
UPRC 23-11H4 - Wellbore #1 - Wellbore #1 01May17 jps						Out of range
UPRC 23-3H4 - Wellbore #1 - Wellbore #1 01May17 jps	9,223.0	7,230.1	173.9	55.4	1.468	Level 3, CC, ES, SF
UPRC 23-4A - Wellbore #1 - Wellbore #1 28Apr17 jps	7,874.5	6,507.5	275.6	210.6	4.241	CC, ES
UPRC 23-4A - Wellbore #1 - Wellbore #1 28Apr17 jps	7,900.0	6,507.2	276.8	211.2	4.219	SF
UPRC 23-5A - Wellbore #1 - Wellbore #1 28Apr17 jps	738.9	715.0	481.0	477.2	128.139	CC
UPRC 23-5A - Wellbore #1 - Wellbore #1 28Apr17 jps	800.0	774.4	481.1	477.0	116.115	ES
UPRC 23-5A - Wellbore #1 - Wellbore #1 28Apr17 jps	8,300.0	6,521.9	924.1	847.8	12.114	SF
UPRC 23-6H4 - Wellbore #1 - Wellbore #1 01May17 jps	9,126.6	7,127.2	1,111.6	997.1	9.713	CC, ES
UPRC 23-6H4 - Wellbore #1 - Wellbore #1 01May17 jps	9,500.0	7,078.0	1,171.3	1,044.9	9.267	SF
UPV 23-1H4 - Wellbore #1 - Wellbore #1 01May17 jps	11,860.0	7,195.9	80.6	-120.4	0.401	Level 1, CC, ES, SF
UPV 23-8H4 - Wellbore #1 - Wellbore #1 01May17 jps	11,464.5	7,093.9	718.2	533.0	3.879	CC
UPV 23-8H4 - Wellbore #1 - Wellbore #1 01May17 jps	11,500.0	7,092.8	719.0	532.7	3.858	ES
UPV 23-8H4 - Wellbore #1 - Wellbore #1 01May17 jps	11,600.0	7,089.5	730.8	541.1	3.852	SF

## Anticollision Summary Report














<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Ferguson 23F-212
<b>Project:</b>	SEC. 23-T5N-R64W	<b>TVD Reference:</b>	WELL @ 4598.0usft (Original Well Elev)
<b>Reference Site:</b>	Ferguson 5N64W23F Pad	<b>MD Reference:</b>	WELL @ 4598.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Ferguson 23F-212	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.45 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Design #1 27Apr17 jps	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
Existing Wells Sec. 24-T5N-R64W						
Cockroft 19U-334 - Wellbore #1 - Wellbore #1 28Apr17 jp	15,498.6	13,742.0	601.1	62.5	1.116	Level 2, CC, ES, SF
Cockroft 19V-204 - Wellbore #1 - Wellbore #1 28Apr17 jp	15,498.6	13,816.0	276.4	-263.0	0.512	Level 1, CC, ES, SF
Cockroft 19V-234 - Wellbore #1 - Wellbore #1 28Apr17 jp	15,498.6	13,759.0	734.8	193.3	1.357	Level 3, CC, ES, SF
Cockroft 19V-304 - Wellbore #1 - Wellbore #1 28Apr17 jp	15,498.6	13,797.0	550.2	9.9	1.018	Level 2, CC, ES, SF
Cockroft 19V-314 - Wellbore #1 - Wellbore #1 28Apr17 jp	15,498.6	13,756.0	98.4	-360.2	0.215	Level 1, CC, ES, SF
Ogilvie 24-4 - Wellbore #1 - Wellbore #1 28Apr17 jps	13,059.2	6,487.0	281.9	52.1	1.227	Level 2, CC, ES, SF
Rothe 2-24 - Wellbore #1 - Wellbore #1 28Apr17 jps	15,498.6	6,200.0	496.2	246.0	1.983	CC, ES, SF
Ferguson 5N64W23F Pad						
Ferguson 23E-232 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	30.0	29.3	39.371	CC
Ferguson 23E-232 - Wellbore #1 - Design #1 27Apr17 jp	400.0	398.8	30.7	28.9	16.536	ES
Ferguson 23E-232 - Wellbore #1 - Design #1 27Apr17 jp	15,498.6	15,660.7	673.1	75.6	1.126	Level 2, SF
Ferguson 23E-332 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	15.0	14.2	19.675	CC
Ferguson 23E-332 - Wellbore #1 - Design #1 27Apr17 jp	15,498.6	15,644.6	381.5	-201.9	0.654	Level 1, ES, SF
Ferguson 23F-202 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	30.0	29.2	39.318	CC
Ferguson 23F-202 - Wellbore #1 - Design #1 27Apr17 jp	15,498.6	15,414.4	577.1	-20.0	0.967	Level 1, ES, SF
Ferguson 23F-302 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	15.1	14.3	19.798	CC
Ferguson 23F-302 - Wellbore #1 - Design #1 27Apr17 jp	15,498.6	15,514.5	283.5	-293.3	0.492	Level 1, ES, SF
Ferguson 23F-332 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	45.0	44.2	59.004	CC, ES
Ferguson 23F-332 - Wellbore #1 - Design #1 27Apr17 jp	15,498.6	15,452.8	877.8	283.6	1.477	Level 3, SF
Ferguson 23G-202 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	90.0	89.2	117.986	CC, ES
Ferguson 23G-202 - Wellbore #1 - Design #1 27Apr17 jp	5,800.0	5,618.4	1,417.5	1,351.6	21.492	SF
Ferguson 23G-212 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	60.0	59.2	78.679	CC, ES
Ferguson 23G-212 - Wellbore #1 - Design #1 27Apr17 jp	15,498.6	15,355.6	1,195.4	598.8	2.004	SF
Ferguson 23G-312 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	75.0	74.3	98.359	CC, ES
Ferguson 23G-312 - Wellbore #1 - Design #1 27Apr17 jp	15,498.6	15,425.5	1,460.7	864.6	2.450	SF
Ferguson 23G-332 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	105.0	104.2	137.672	CC, ES
Ferguson 23G-332 - Wellbore #1 - Design #1 27Apr17 jp	5,800.0	5,562.6	1,608.8	1,543.8	24.743	SF



Reference Depths are relative to WELL @ 4598.0usft (Original Well Ele	Coordinates are relative to: Ferguson 23F-212
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W	Grid Convergence at Surface is: 0.63°



Wellbore #1, Wellbore #1 01May17 jps V0	 Ferguson 24-5H4, Wellbore #1, Wellbore #1 01May17 jps V0	 Ferguson 23E-332, Wellbore #1, Design
Wellbore #1, Wellbore #1 01May17 jps V0	 UPRC 23-4A, Wellbore #1, Wellbore #1 28Apr17 jps V0	 Ferguson 23F-202, Wellbore #1, Design
Wellbore #1, Wellbore #1 01May17 jps V0	 Oglivie 24-4, Wellbore #1, Wellbore #1 28Apr17 jps V0	 Ferguson 23F-302, Wellbore #1, Design
Wellbore #1, Wellbore #1 01May17 jps V0	 Cockroft 19V-304, Wellbore #1, Wellbore #1 28Apr17 jps V0	 Ferguson 23F-332, Wellbore #1, Design
Wellbore #1, Wellbore #1 01May17 jps V0	 Cockroft 19V-204, Wellbore #1, Wellbore #1 28Apr17 jps V0	 Ferguson 23G-202, Wellbore #1, Design
Wellbore #1, Wellbore #1 01May17 jps V0	 Cockroft 19V-314, Wellbore #1, Wellbore #1 28Apr17 jps V0	 Ferguson 23G-212, Wellbore #1, Design
Wellbore #1, Wellbore #1 01May17 jps V0	 Cockroft 19U-334, Wellbore #1, Wellbore #1 28Apr17 jps V0	 Ferguson 23G-312, Wellbore #1, Design
Wellbore #1, Wellbore #1 01May17 jps V0	 Cockroft 19V-234, Wellbore #1, Wellbore #1 28Apr17 jps V0	 Ferguson 23G-332, Wellbore #1, Design
Wellbore #1, Wellbore #1 01May17 jps V0	 Rothe 2-24, Wellbore #1, Wellbore #1 28Apr17 jps V0	