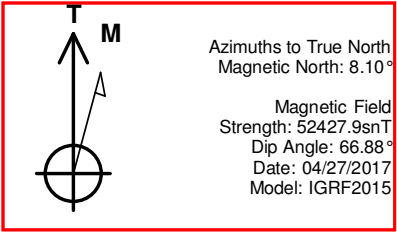


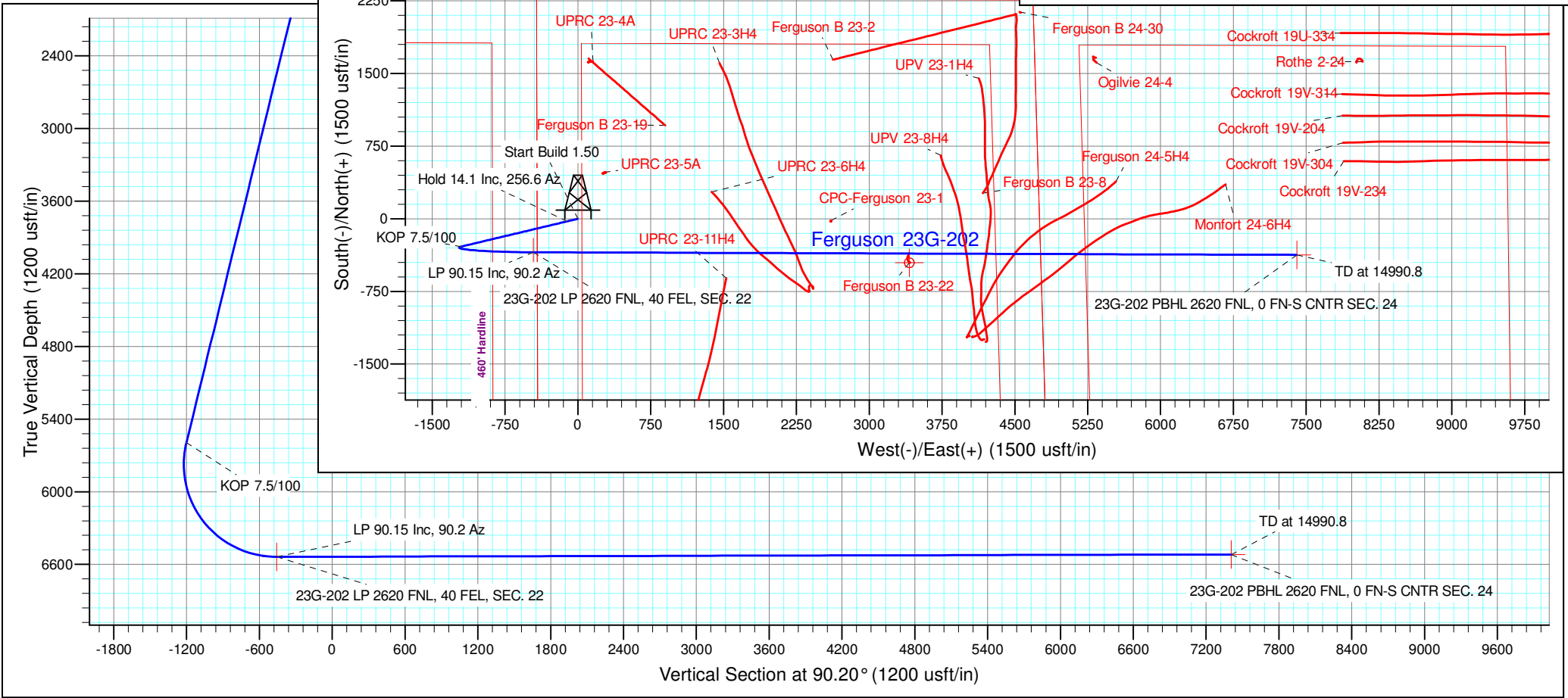
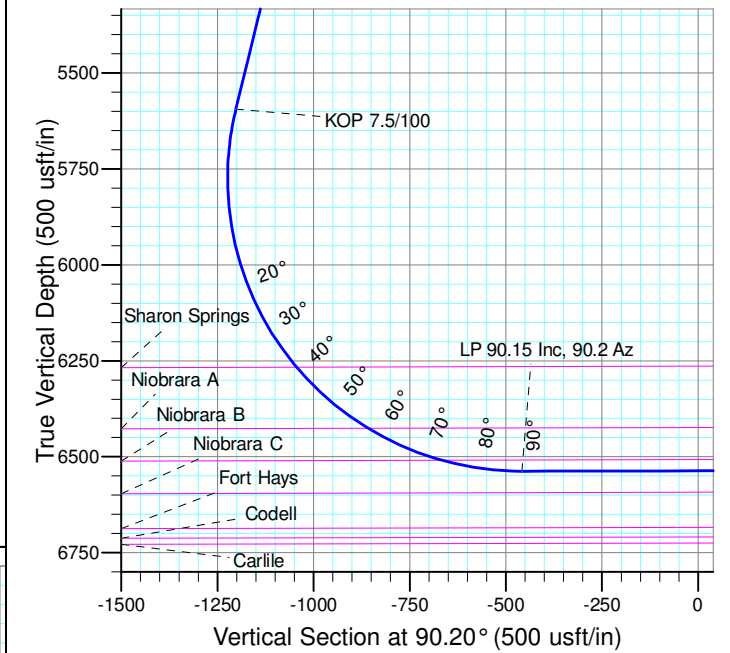


Well Name: Ferguson 23G-202  
Surface Location: Ferguson 5N64W23F Pad  
North American Datum 1983  
US State Plane 1983 , Colorado Northern Zone  
Ground Elevation: 4575.0  
WELL @ 4598.0usft (Original Well Elev)  
Northing Easting Latitude Longitude Slot  
0.0 0.0 1384891.04 3271629.50 40° 23' 8.980 N 104° 31' 29.604 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	1140.0	14.10	256.60	1130.5	-26.7	-111.9	1.50	256.60	-111.8	
4	5743.0	14.10	256.60	5594.8	-286.5	-1202.7	0.00	0.00	-1201.7	
5	7127.5	90.15	90.20	6538.0	-344.9	-458.8	7.50	-165.99	-457.6	23G-202 LP 2620 FNL, 40 FEL, SEC. 22
6	14990.8	90.15	90.20	6518.0	-372.3	7404.5	0.00	0.00	7405.7	23G-202 PBHL 2620 FNL, 0 FN-S CNTR SEC. 24



Project: SEC. 23-T5N-R64W  
Site: Ferguson 5N64W23F Pad  
Well: Ferguson 23G-202  
Wellbore: Wellbore #1  
Design: Design #1 27Apr17 jps



<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Ferguson 23G-202
<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 23G-202	<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	14,990.8	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 01May17	10,191.5	6,500.0	336.3	200.0	2.468	CC
CPC-Ferguson 23-1 - Wellbore #1 - Wellbore #1 01May17	10,200.0	6,500.0	336.4	199.9	2.464	ES, SF
Ferguson 24-5H4 - Wellbore #1 - Wellbore #1 01May17 j	12,893.8	6,976.7	602.9	364.4	2.528	CC
Ferguson 24-5H4 - Wellbore #1 - Wellbore #1 01May17 j	13,000.0	7,021.9	610.4	363.9	2.476	ES, SF
Ferguson B 23-19 - Wellbore #1 - Wellbore #1 01May17	8,480.9	6,642.0	1,314.3	1,221.2	14.112	CC
Ferguson B 23-19 - Wellbore #1 - Wellbore #1 01May17	8,500.0	6,642.0	1,314.5	1,220.7	14.028	ES
Ferguson B 23-19 - Wellbore #1 - Wellbore #1 01May17	9,100.0	6,640.4	1,452.8	1,340.4	12.921	SF
Ferguson B 23-2 - Wellbore #1 - Wellbore #1 01May17 jp						Out of range
Ferguson B 23-22 - Wellbore #1 - Wellbore #1 01May17	11,001.8	6,497.5	96.2	-69.3	0.581	Level 1, CC, ES, SF
Ferguson B 23-8 - Wellbore #1 - Wellbore #1 01May17 jp	11,765.3	6,955.8	644.2	445.9	3.249	CC
Ferguson B 23-8 - Wellbore #1 - Wellbore #1 01May17 jp	11,800.0	6,954.2	645.1	445.7	3.234	ES, SF
Ferguson B 24-30 - Wellbore #1 - Wellbore #1 28Apr17 j						Out of range
Monfort 24-6H4 - Wellbore #1 - Wellbore #1 01May17 jps	14,186.3	7,359.5	683.3	362.6	2.130	CC
Monfort 24-6H4 - Wellbore #1 - Wellbore #1 01May17 jps	14,200.0	7,362.8	683.5	362.0	2.126	ES
Monfort 24-6H4 - Wellbore #1 - Wellbore #1 01May17 jps	14,300.0	7,384.8	692.3	366.1	2.122	SF
UPRC 23-11H4 - Wellbore #1 - Wellbore #1 01May17 jps	9,100.9	7,474.2	437.8	347.6	4.854	CC, ES, SF
UPRC 23-3H4 - Wellbore #1 - Wellbore #1 01May17 jps						Out of range
UPRC 23-4A - Wellbore #1 - Wellbore #1 28Apr17 jps	240.6	217.8	1,623.5	1,622.6	1,729.338	CC
UPRC 23-4A - Wellbore #1 - Wellbore #1 28Apr17 jps	300.0	274.3	1,623.7	1,622.5	1,307.786	ES
UPRC 23-4A - Wellbore #1 - Wellbore #1 28Apr17 jps	1,400.0	1,367.0	1,681.8	1,673.0	192.258	SF
UPRC 23-5A - Wellbore #1 - Wellbore #1 28Apr17 jps	100.0	77.5	557.9	557.7	2,622.493	CC
UPRC 23-5A - Wellbore #1 - Wellbore #1 28Apr17 jps	201.6	179.8	557.9	557.2	760.513	ES
UPRC 23-5A - Wellbore #1 - Wellbore #1 28Apr17 jps	8,200.0	6,515.5	895.2	819.7	11.858	SF
UPRC 23-6H4 - Wellbore #1 - Wellbore #1 01May17 jps	9,051.3	6,791.5	549.7	439.2	4.973	CC, ES
UPRC 23-6H4 - Wellbore #1 - Wellbore #1 01May17 jps	9,100.0	6,779.3	551.7	440.3	4.952	SF
UPV 23-1H4 - Wellbore #1 - Wellbore #1 01May17 jps						Out of range
UPV 23-8H4 - Wellbore #1 - Wellbore #1 01May17 jps	11,335.6	6,887.1	966.3	783.5	5.287	CC, ES
UPV 23-8H4 - Wellbore #1 - Wellbore #1 01May17 jps	11,500.0	6,878.8	980.1	792.1	5.211	SF

## Anticollision Summary Report

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Ferguson 23G-202
<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 23G-202	<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						Out of range
Cockroft 19V-204 - Wellbore #1 - Wellbore #1 28Apr17 jp	14,990.8	13,816.0	1,512.6	985.2	2.868	CC, ES, SF
Cockroft 19V-234 - Wellbore #1 - Wellbore #1 28Apr17 jp	14,990.8	13,759.0	1,083.9	556.5	2.055	CC, ES, SF
Cockroft 19V-304 - Wellbore #1 - Wellbore #1 28Apr17 jp	14,990.8	13,797.0	1,251.1	722.9	2.369	CC, ES, SF
Cockroft 19V-314 - Wellbore #1 - Wellbore #1 28Apr17 jp						Out of range
Ogilvie 24-4 - Wellbore #1 - Wellbore #1 28Apr17 jps						Out of range
Rothe 2-24 - Wellbore #1 - Wellbore #1 28Apr17 jps						Out of range
Ferguson 5N64W23F Pad						
Ferguson 23E-232 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	120.0	119.3	157.358	CC, ES
Ferguson 23E-232 - Wellbore #1 - Design #1 27Apr17 jp	5,100.0	4,758.8	1,650.7	1,594.8	29.538	SF
Ferguson 23E-332 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	105.0	104.2	137.661	CC, ES
Ferguson 23E-332 - Wellbore #1 - Design #1 27Apr17 jp	5,700.0	5,412.4	1,651.1	1,587.3	25.867	SF
Ferguson 23F-202 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	60.0	59.2	78.668	CC, ES
Ferguson 23F-202 - Wellbore #1 - Design #1 27Apr17 jp	14,990.8	15,044.7	1,120.3	549.6	1.963	SF
Ferguson 23F-212 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	90.0	89.2	117.986	CC, ES
Ferguson 23F-212 - Wellbore #1 - Design #1 27Apr17 jp	5,800.0	5,599.9	1,415.1	1,349.2	21.482	SF
Ferguson 23F-302 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	74.9	74.1	98.188	CC, ES
Ferguson 23F-302 - Wellbore #1 - Design #1 27Apr17 jp	14,990.8	15,144.8	1,426.1	855.7	2.500	SF
Ferguson 23F-332 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	45.0	44.2	58.982	CC, ES
Ferguson 23F-332 - Wellbore #1 - Design #1 27Apr17 jp	14,990.8	15,083.1	823.2	254.1	1.446	Level 3, SF
Ferguson 23G-212 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	30.0	29.2	39.307	CC
Ferguson 23G-212 - Wellbore #1 - Design #1 27Apr17 jp	14,990.8	14,986.0	502.1	-68.2	0.880	Level 1, ES, SF
Ferguson 23G-312 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	15.0	14.2	19.627	CC
Ferguson 23G-312 - Wellbore #1 - Design #1 27Apr17 jp	14,990.8	15,055.8	241.9	-320.2	0.430	Level 1, ES, SF
Ferguson 23G-332 - Wellbore #1 - Design #1 27Apr17 jp	200.0	200.0	15.0	14.3	19.686	CC
Ferguson 23G-332 - Wellbore #1 - Design #1 27Apr17 jp	14,990.8	15,075.7	270.7	-290.1	0.483	Level 1, ES, SF

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Ferguson 23G-202
<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 23G-202	<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

Reference Depths are relative to WELL @ 4598.0usft (Original Well Ele

Offset Depths are relative to Offset Datum

Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Ferguson 23G-202

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.63°

