

PDC ENERGY

**WELD COUNTY, COLORADO
SW NW SEC. 10 T5N R64W 6th P.M.
WACKER 10G-212**

ORIGINAL WELLBORE

04 February, 2016

Plan: PROPOSAL #1





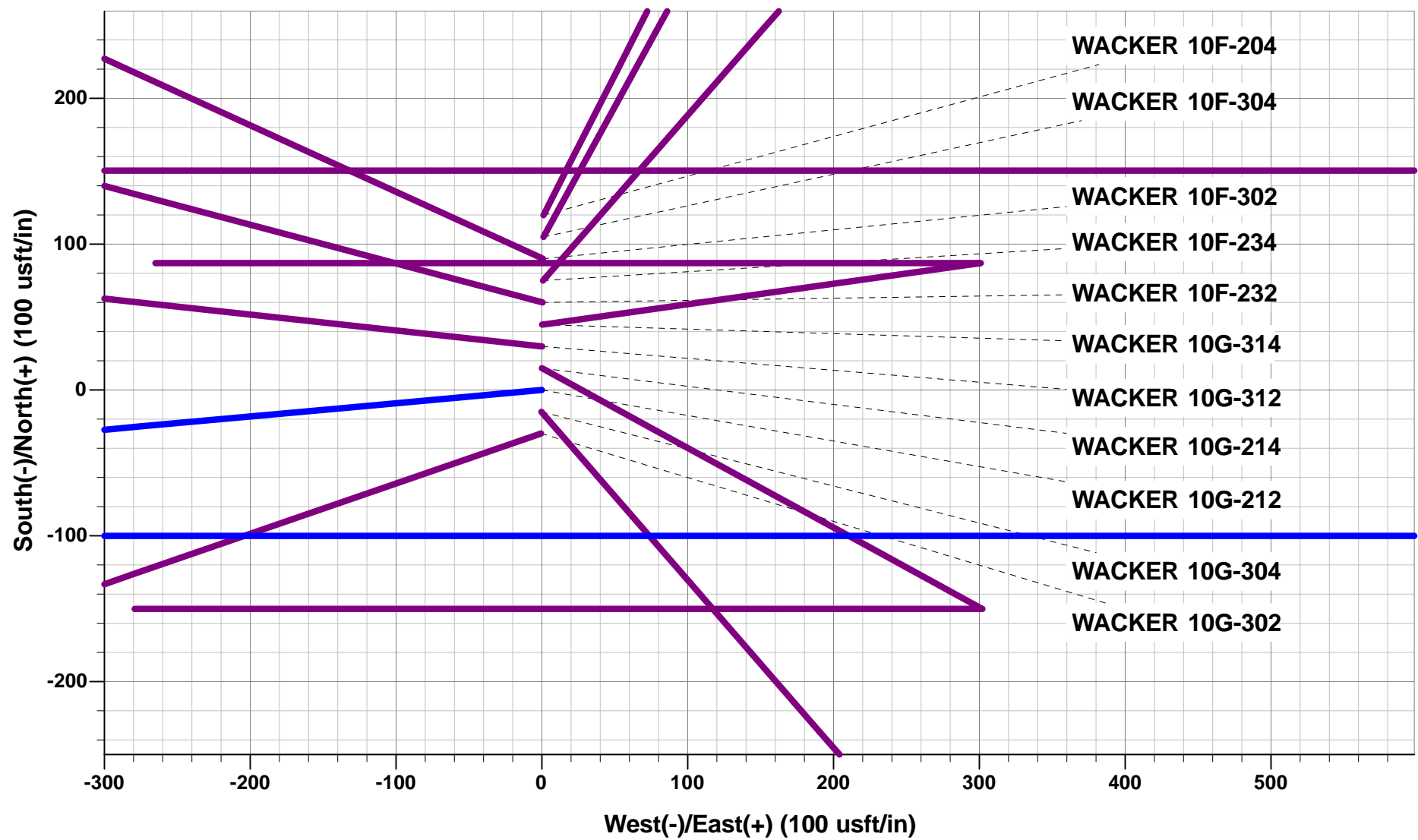
Project: WELD COUNTY, COLORADO
Site: SW NW SEC. 10 T5N R64W 6th P.M.
Well: WACKER 10G-212
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 2137ft FNL & 396ft FWL of Sec 10
1200.0	1200.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1982.4	1992.4	15.85	264.81	-9.9	-108.5	-108.2	108.9	EOB TO 15.85° INC
5106.5	5240.0	15.85	264.81	-90.1	-991.7	-989.4	995.8	END OF TANGENT
5888.9	6032.5	0.00	0.00	-100.0	-1100.2	-1097.6	1104.7	EOD TO VERTICAL
5918.9	6062.5	0.00	0.00	-100.0	-1100.2	-1097.6	1104.7	KOP (8°/100ft BUR)
6635.0	7196.6	90.73	90.00	-100.0	-374.9	-372.5	1830.0	LANDING PNT *NEW*: 2235.5ft FNL & 20ft FWL of Sec 10
6575.0	11858.8	90.74	90.00	-100.0	4286.9	4288.1	6491.8	BHL *NEW*: 2260.6ft FNL & 500ft FEL of Sec 10

WELLBORE TARGET DETAILS (LAT/LONG)

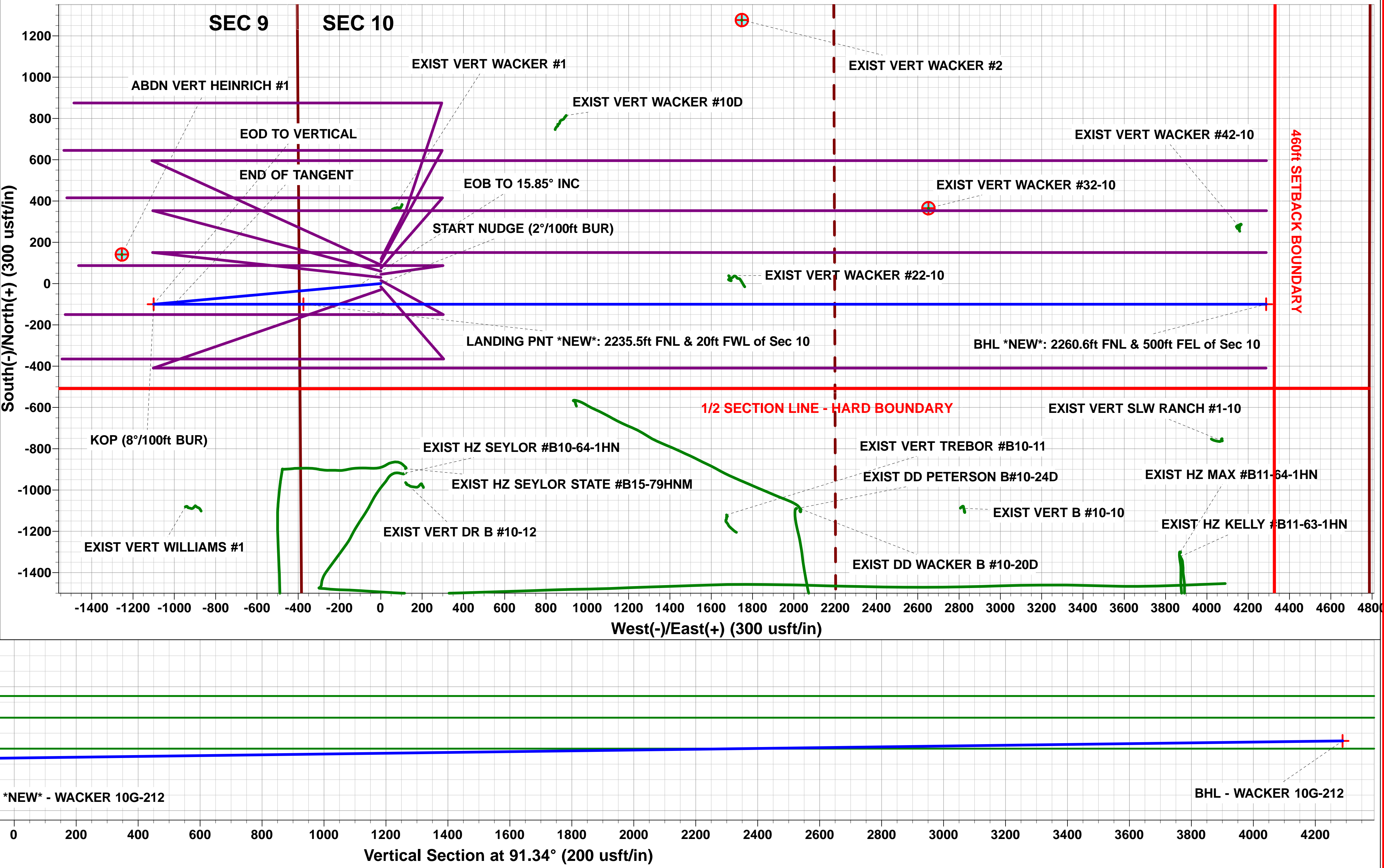
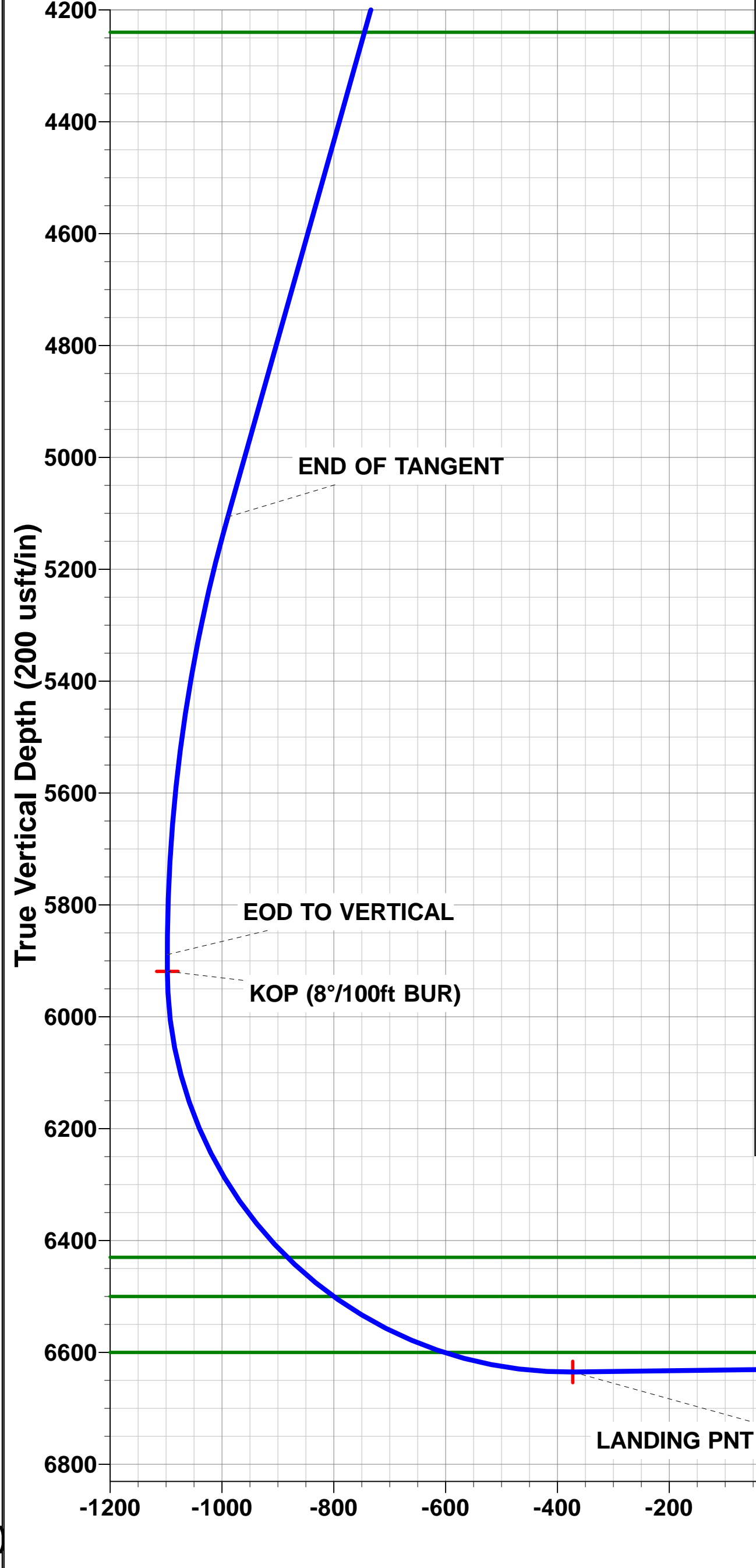
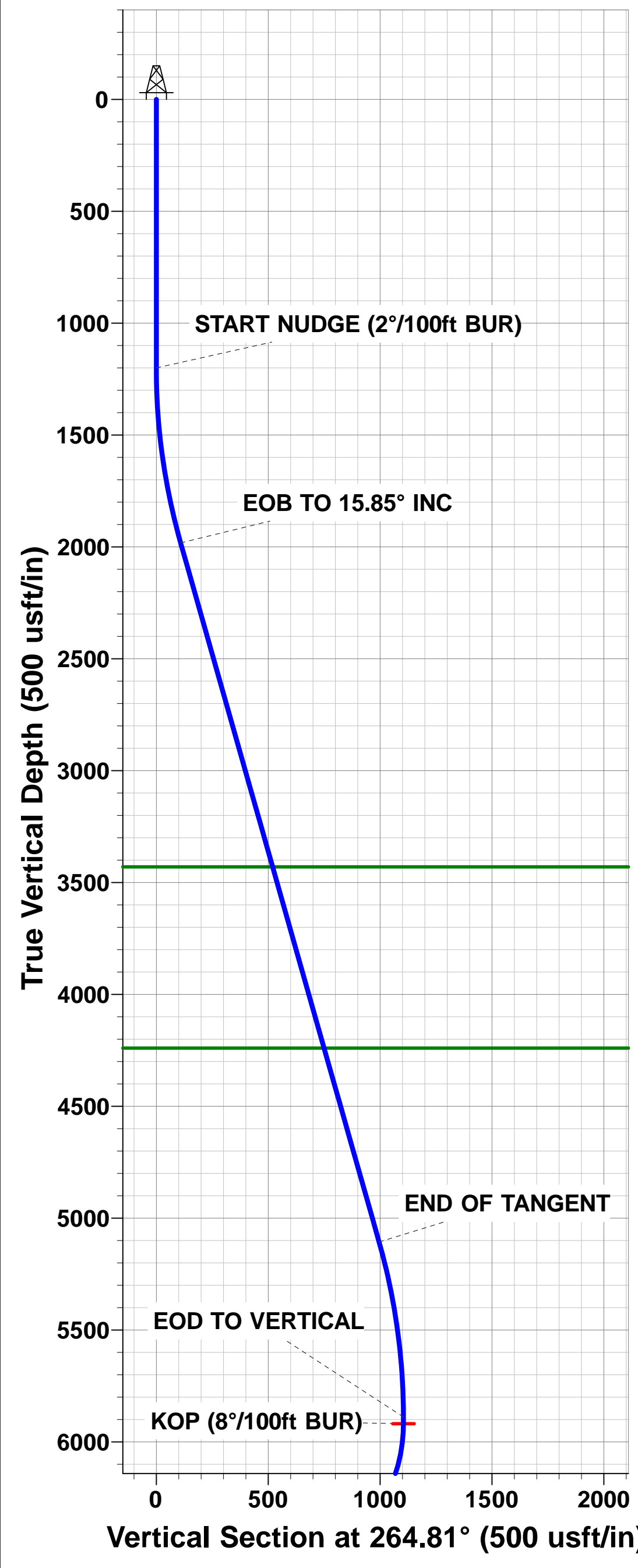
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - WACKER 10G-212	5918.9	-100.0	-1100.2	40.414863	-104.548193
LANDING PNT *NEW* - WACKER 10G-212	6635.0	-100.0	-374.9	40.414863	-104.545588
BHL - WACKER 10G-212	6575.0	-100.0	4286.9	40.414862	-104.528847



PROPOSED LOCAL COORDINATES:
SHL: 2137ft FNL & 396ft FWL of Sec 10
HZ LP *NEW*: 2235.5ft FNL & 20ft FWL of Sec 10
BHL: 2260.6ft FNL & 500ft FEL of Sec 10

Azimuths to True North
Magnetic North: 8.24°

Magnetic Field
Strength: 52580.9snT
Dip Angle: 66.94°
Date: 04/02/2016
Model: IGRF2015



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WACKER 10G-212
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site:	SW NW SEC. 10 T5N R64W 6th P.M.	North Reference:	True
Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Project	WELD COUNTY, COLORADO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	SW NW SEC. 10 T5N R64W 6th P.M.		
Site Position:		Northing:	1,395,629.17 usft
From:	Lat/Long	Easting:	3,266,123.73 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.415467
		Longitude:	-104.544238
		Grid Convergence:	0.62 °

Well	WACKER 10G-212		
Well Position	+N/-S	-119.9 usft	Northing:
	+E/-W	-1.1 usft	Easting:
Position Uncertainty	0.0 usft		Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	04/02/2016	8.24	66.94	52,581

Design	PROPOSAL #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	91.34

Plan Sections											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	-4,624.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	-3,424.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,992.4	15.85	264.81	1,982.4	-2,641.6	-9.9	-108.5	2.00	2.00	0.00	264.81	
5,240.0	15.85	264.81	5,106.5	482.5	-90.1	-991.7	0.00	0.00	0.00	0.00	
6,032.5	0.00	0.00	5,888.9	1,264.9	-100.0	-1,100.2	2.00	-2.00	0.00	180.00	
6,062.5	0.00	0.00	5,918.9	1,294.9	-100.0	-1,100.2	0.00	0.00	0.00	0.00	KOP - WACKER 1C
7,196.6	90.73	90.00	6,635.0	2,011.0	-100.0	-374.9	8.00	8.00	7.94	90.00	LANDING PNT *NE
11,858.8	90.74	90.00	6,575.0	1,951.0	-100.0	4,286.9	0.00	0.00	0.00	0.00	BHL - WACKER 10

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WACKER 10G-212
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site:	SW NW SEC. 10 T5N R64W 6th P.M.	North Reference:	True
Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
SHL: 2137ft FNL & 396ft FWL of Sec 10										
0.0	0.00	0.00	0.0	4,624.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,524.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,424.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,324.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,224.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,124.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,024.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	3,924.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,824.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,724.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,624.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,524.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
1,200.0	0.00	0.00	1,200.0	3,424.00	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	2.00	264.81	1,300.0	3,324.02	-0.2	-1.7	-1.7	2.00	2.00	0.00
1,400.0	4.00	264.81	1,399.8	3,224.16	-0.6	-6.9	-6.9	2.00	2.00	0.00
1,500.0	6.00	264.81	1,499.5	3,124.55	-1.4	-15.6	-15.6	2.00	2.00	0.00
1,600.0	8.00	264.81	1,598.7	3,025.30	-2.5	-27.8	-27.7	2.00	2.00	0.00
1,700.0	10.00	264.81	1,697.5	2,926.53	-3.9	-43.3	-43.2	2.00	2.00	0.00
1,800.0	12.00	264.81	1,795.6	2,828.38	-5.7	-62.3	-62.2	2.00	2.00	0.00
1,900.0	14.00	264.81	1,893.1	2,730.94	-7.7	-84.7	-84.5	2.00	2.00	0.00
EOB TO 15.85° INC										
1,992.4	15.85	264.81	1,982.4	2,641.62	-9.9	-108.5	-108.2	2.00	2.00	0.00
2,000.0	15.85	264.81	1,989.6	2,634.35	-10.0	-110.5	-110.2	0.00	0.00	0.00
2,100.0	15.85	264.81	2,085.8	2,538.16	-12.5	-137.7	-137.4	0.00	0.00	0.00
2,200.0	15.85	264.81	2,182.0	2,441.96	-15.0	-164.9	-164.5	0.00	0.00	0.00
2,300.0	15.85	264.81	2,278.2	2,345.76	-17.5	-192.1	-191.6	0.00	0.00	0.00
2,400.0	15.85	264.81	2,374.4	2,249.56	-19.9	-219.3	-218.8	0.00	0.00	0.00
2,500.0	15.85	264.81	2,470.6	2,153.36	-22.4	-246.5	-245.9	0.00	0.00	0.00
2,600.0	15.85	264.81	2,566.8	2,057.16	-24.9	-273.7	-273.0	0.00	0.00	0.00
2,700.0	15.85	264.81	2,663.0	1,960.96	-27.3	-300.9	-300.2	0.00	0.00	0.00
2,800.0	15.85	264.81	2,759.2	1,864.77	-29.8	-328.1	-327.3	0.00	0.00	0.00
2,900.0	15.85	264.81	2,855.4	1,768.57	-32.3	-355.3	-354.4	0.00	0.00	0.00
3,000.0	15.85	264.81	2,951.6	1,672.37	-34.8	-382.5	-381.6	0.00	0.00	0.00
3,100.0	15.85	264.81	3,047.8	1,576.17	-37.2	-409.7	-408.7	0.00	0.00	0.00
3,200.0	15.85	264.81	3,144.0	1,479.97	-39.7	-436.9	-435.8	0.00	0.00	0.00
3,300.0	15.85	264.81	3,240.2	1,383.77	-42.2	-464.1	-463.0	0.00	0.00	0.00
3,400.0	15.85	264.81	3,336.4	1,287.58	-44.7	-491.3	-490.1	0.00	0.00	0.00
PARKMAN SANDSTONE										
3,497.3	15.85	264.81	3,430.0	1,194.00	-47.1	-517.7	-516.5	0.00	0.00	0.00
3,500.0	15.85	264.81	3,432.6	1,191.38	-47.1	-518.5	-517.2	0.00	0.00	0.00
3,600.0	15.85	264.81	3,528.8	1,095.18	-49.6	-545.7	-544.4	0.00	0.00	0.00
3,700.0	15.85	264.81	3,625.0	998.98	-52.1	-572.9	-571.5	0.00	0.00	0.00
3,800.0	15.85	264.81	3,721.2	902.78	-54.5	-600.1	-598.6	0.00	0.00	0.00
3,900.0	15.85	264.81	3,817.4	806.58	-57.0	-627.3	-625.8	0.00	0.00	0.00
4,000.0	15.85	264.81	3,913.6	710.38	-59.5	-654.5	-652.9	0.00	0.00	0.00
4,100.0	15.85	264.81	4,009.8	614.19	-62.0	-681.7	-680.0	0.00	0.00	0.00
4,200.0	15.85	264.81	4,106.0	517.99	-64.4	-708.9	-707.2	0.00	0.00	0.00
4,300.0	15.85	264.81	4,202.2	421.79	-66.9	-736.1	-734.3	0.00	0.00	0.00
SUSSEX SANDSTONE										
4,339.3	15.85	264.81	4,240.0	384.00	-67.9	-746.8	-745.0	0.00	0.00	0.00
4,400.0	15.85	264.81	4,298.4	325.59	-69.4	-763.3	-761.4	0.00	0.00	0.00
4,500.0	15.85	264.81	4,394.6	229.39	-71.8	-790.5	-788.6	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WACKER 10G-212
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site:	SW NW SEC. 10 T5N R64W 6th P.M.	North Reference:	True
Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.0	15.85	264.81	4,490.8	133.19	-74.3	-817.7	-815.7	0.00	0.00	0.00
4,700.0	15.85	264.81	4,587.0	36.99	-76.8	-844.9	-842.8	0.00	0.00	0.00
4,800.0	15.85	264.81	4,683.2	-59.20	-79.3	-872.1	-870.0	0.00	0.00	0.00
4,900.0	15.85	264.81	4,779.4	-155.40	-81.7	-899.3	-897.1	0.00	0.00	0.00
5,000.0	15.85	264.81	4,875.6	-251.60	-84.2	-926.5	-924.2	0.00	0.00	0.00
5,100.0	15.85	264.81	4,971.8	-347.80	-86.7	-953.7	-951.4	0.00	0.00	0.00
5,200.0	15.85	264.81	5,068.0	-444.00	-89.2	-980.9	-978.5	0.00	0.00	0.00
END OF TANGENT										
5,240.0	15.85	264.81	5,106.5	-482.52	-90.1	-991.7	-989.4	0.00	0.00	0.00
5,300.0	14.65	264.81	5,164.4	-540.36	-91.6	-1,007.4	-1,005.0	2.00	-2.00	0.00
5,400.0	12.65	264.81	5,261.5	-637.53	-93.7	-1,030.9	-1,028.5	2.00	-2.00	0.00
5,500.0	10.65	264.81	5,359.5	-735.47	-95.5	-1,051.1	-1,048.5	2.00	-2.00	0.00
5,600.0	8.65	264.81	5,458.0	-834.05	-97.1	-1,067.7	-1,065.2	2.00	-2.00	0.00
5,700.0	6.65	264.81	5,557.2	-933.15	-98.3	-1,081.0	-1,078.4	2.00	-2.00	0.00
5,800.0	4.65	264.81	5,656.7	-1,032.66	-99.1	-1,090.8	-1,088.2	2.00	-2.00	0.00
5,900.0	2.65	264.81	5,756.5	-1,132.46	-99.7	-1,097.1	-1,094.5	2.00	-2.00	0.00
6,000.0	0.65	264.81	5,856.4	-1,232.41	-100.0	-1,100.0	-1,097.4	2.00	-2.00	0.00
EOD TO VERTICAL										
6,032.5	0.00	0.00	5,888.9	-1,264.90	-100.0	-1,100.2	-1,097.6	2.00	-2.00	0.00
KOP (8°/100ft BUR)										
6,062.5	0.00	0.00	5,918.9	-1,294.90	-100.0	-1,100.2	-1,097.6	0.00	0.00	0.00
6,100.0	3.00	90.00	5,956.4	-1,332.39	-100.0	-1,099.2	-1,096.6	8.00	8.00	0.00
6,200.0	11.00	90.00	6,055.6	-1,431.56	-100.0	-1,087.0	-1,084.4	8.00	8.00	0.00
6,300.0	19.00	90.00	6,152.1	-1,528.08	-100.0	-1,061.2	-1,058.6	8.00	8.00	0.00
6,400.0	27.00	90.00	6,244.1	-1,620.05	-100.0	-1,022.1	-1,019.5	8.00	8.00	0.00
6,500.0	35.00	90.00	6,329.7	-1,705.70	-100.0	-970.7	-968.1	8.00	8.00	0.00
6,600.0	43.00	90.00	6,407.3	-1,783.35	-100.0	-907.8	-905.2	8.00	8.00	0.00
SHARON SPRINGS										
6,631.6	45.53	90.00	6,430.0	-1,806.00	-100.0	-885.7	-883.1	8.00	8.00	0.00
6,700.0	51.00	90.00	6,475.5	-1,851.49	-100.0	-834.7	-832.1	8.00	8.00	0.00
NIORARA A										
6,740.4	54.23	90.00	6,500.0	-1,876.00	-100.0	-802.6	-800.1	8.00	8.00	0.00
6,800.0	59.00	90.00	6,532.8	-1,908.79	-100.0	-752.8	-750.3	8.00	8.00	0.00
6,900.0	67.00	90.00	6,578.1	-1,954.15	-100.0	-663.8	-661.3	8.00	8.00	0.00
NIORARA B										
6,962.4	72.00	90.00	6,600.0	-1,976.00	-100.0	-605.4	-602.9	8.00	8.00	0.00
7,000.0	75.00	90.00	6,610.7	-1,986.67	-100.0	-569.3	-566.9	8.00	8.00	0.00
7,100.0	83.01	90.00	6,629.7	-2,005.73	-100.0	-471.3	-468.8	8.00	8.00	0.00
LANDING PNT *NEW*: 2235.5ft FNL & 20ft FWL of Sec 10										
7,196.6	90.73	90.00	6,635.0	-2,011.00	-100.0	-374.9	-372.5	8.00	8.00	0.00
7,200.0	90.73	90.00	6,635.0	-2,010.96	-100.0	-371.5	-369.0	0.00	0.00	0.00
7,300.0	90.73	90.00	6,633.7	-2,009.68	-100.0	-271.5	-269.1	0.00	0.00	0.00
7,400.0	90.73	90.00	6,632.4	-2,008.40	-100.0	-171.5	-169.1	0.00	0.00	0.00
7,500.0	90.73	90.00	6,631.1	-2,007.12	-100.0	-71.5	-69.1	0.00	0.00	0.00
7,600.0	90.73	90.00	6,629.8	-2,005.85	-100.0	28.5	30.8	0.00	0.00	0.00
7,700.0	90.73	90.00	6,628.6	-2,004.57	-100.0	128.5	130.8	0.00	0.00	0.00
7,800.0	90.73	90.00	6,627.3	-2,003.29	-100.0	228.5	230.7	0.00	0.00	0.00
7,900.0	90.73	90.00	6,626.0	-2,002.01	-100.0	328.5	330.7	0.00	0.00	0.00
8,000.0	90.73	90.00	6,624.7	-2,000.73	-100.0	428.5	430.7	0.00	0.00	0.00
8,100.0	90.73	90.00	6,623.4	-1,999.45	-100.0	528.5	530.6	0.00	0.00	0.00
8,200.0	90.73	90.00	6,622.2	-1,998.17	-100.0	628.4	630.6	0.00	0.00	0.00
8,300.0	90.73	90.00	6,620.9	-1,996.89	-100.0	728.4	730.6	0.00	0.00	0.00
8,400.0	90.73	90.00	6,619.6	-1,995.61	-100.0	828.4	830.5	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WACKER 10G-212
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site:	SW NW SEC. 10 T5N R64W 6th P.M.	North Reference:	True
Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,500.0	90.73	90.00	6,618.3	-1,994.32	-100.0	928.4	930.5	0.00	0.00	0.00
8,600.0	90.74	90.00	6,617.0	-1,993.04	-100.0	1,028.4	1,030.5	0.00	0.00	0.00
8,700.0	90.74	90.00	6,615.8	-1,991.76	-100.0	1,128.4	1,130.4	0.00	0.00	0.00
8,800.0	90.74	90.00	6,614.5	-1,990.47	-100.0	1,228.4	1,230.4	0.00	0.00	0.00
8,900.0	90.74	90.00	6,613.2	-1,989.19	-100.0	1,328.4	1,330.4	0.00	0.00	0.00
9,000.0	90.74	90.00	6,611.9	-1,987.91	-100.0	1,428.4	1,430.3	0.00	0.00	0.00
9,100.0	90.74	90.00	6,610.6	-1,986.62	-100.0	1,528.4	1,530.3	0.00	0.00	0.00
9,200.0	90.74	90.00	6,609.3	-1,985.34	-100.0	1,628.4	1,630.3	0.00	0.00	0.00
9,300.0	90.74	90.00	6,608.1	-1,984.05	-100.0	1,728.4	1,730.2	0.00	0.00	0.00
9,400.0	90.74	90.00	6,606.8	-1,982.76	-100.0	1,828.3	1,830.2	0.00	0.00	0.00
9,500.0	90.74	90.00	6,605.5	-1,981.48	-100.0	1,928.3	1,930.1	0.00	0.00	0.00
9,600.0	90.74	90.00	6,604.2	-1,980.19	-100.0	2,028.3	2,030.1	0.00	0.00	0.00
9,700.0	90.74	90.00	6,602.9	-1,978.90	-100.0	2,128.3	2,130.1	0.00	0.00	0.00
9,800.0	90.74	90.00	6,601.6	-1,977.62	-100.0	2,228.3	2,230.0	0.00	0.00	0.00
9,900.0	90.74	90.00	6,600.3	-1,976.33	-100.0	2,328.3	2,330.0	0.00	0.00	0.00
10,000.0	90.74	90.00	6,599.0	-1,975.04	-100.0	2,428.3	2,430.0	0.00	0.00	0.00
10,100.0	90.74	90.00	6,597.7	-1,973.75	-100.0	2,528.3	2,529.9	0.00	0.00	0.00
10,200.0	90.74	90.00	6,596.5	-1,972.46	-100.0	2,628.3	2,629.9	0.00	0.00	0.00
10,300.0	90.74	90.00	6,595.2	-1,971.17	-100.0	2,728.3	2,729.9	0.00	0.00	0.00
10,400.0	90.74	90.00	6,593.9	-1,969.88	-100.0	2,828.3	2,829.8	0.00	0.00	0.00
10,500.0	90.74	90.00	6,592.6	-1,968.59	-100.0	2,928.3	2,929.8	0.00	0.00	0.00
10,600.0	90.74	90.00	6,591.3	-1,967.30	-100.0	3,028.2	3,029.8	0.00	0.00	0.00
10,700.0	90.74	90.00	6,590.0	-1,966.00	-100.0	3,128.2	3,129.7	0.00	0.00	0.00
10,800.0	90.74	90.00	6,588.7	-1,964.71	-100.0	3,228.2	3,229.7	0.00	0.00	0.00
10,900.0	90.74	90.00	6,587.4	-1,963.42	-100.0	3,328.2	3,329.6	0.00	0.00	0.00
11,000.0	90.74	90.00	6,586.1	-1,962.13	-100.0	3,428.2	3,429.6	0.00	0.00	0.00
11,100.0	90.74	90.00	6,584.8	-1,960.83	-100.0	3,528.2	3,529.6	0.00	0.00	0.00
11,200.0	90.74	90.00	6,583.5	-1,959.54	-100.0	3,628.2	3,629.5	0.00	0.00	0.00
11,300.0	90.74	90.00	6,582.2	-1,958.24	-100.0	3,728.2	3,729.5	0.00	0.00	0.00
11,400.0	90.74	90.00	6,580.9	-1,956.95	-100.0	3,828.2	3,829.5	0.00	0.00	0.00
11,500.0	90.74	90.00	6,579.7	-1,955.65	-100.0	3,928.2	3,929.4	0.00	0.00	0.00
11,600.0	90.74	90.00	6,578.4	-1,954.36	-100.0	4,028.2	4,029.4	0.00	0.00	0.00
11,700.0	90.74	90.00	6,577.1	-1,953.06	-100.0	4,128.2	4,129.4	0.00	0.00	0.00
11,800.0	90.74	90.00	6,575.8	-1,951.76	-100.0	4,228.1	4,229.3	0.00	0.00	0.00
BHL *NEW*: 2260.6ft FNL & 500ft FEL of Sec 10										
11,858.8	90.74	90.00	6,575.0	-1,951.00	-100.0	4,286.9	4,288.1	0.00	0.00	0.00

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,497.3	3,430.0	PARKMAN SANDSTONE			
4,339.3	4,240.0	SUSSEX SANDSTONE			
6,631.6	6,430.0	SHARON SPRINGS			
6,740.4	6,500.0	NIOBRARA A			
6,962.4	6,600.0	NIOBRARA B			

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WACKER 10G-212
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site:	SW NW SEC. 10 T5N R64W 6th P.M.	North Reference:	True
Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	SHL: 2137ft FNL & 396ft FWL of Sec 10
1,200.0	1,200.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,992.4	1,982.4	-9.9	-108.5	EOB TO 15.85° INC
5,240.0	5,106.5	-90.1	-991.7	END OF TANGENT
6,032.5	5,888.9	-100.0	-1,100.2	EOD TO VERTICAL
6,062.5	5,918.9	-100.0	-1,100.2	KOP (8°/100ft BUR)
7,196.6	6,635.0	-100.0	-374.9	LANDING PNT *NEW*: 2235.5ft FNL & 20ft FWL of Sec 10
11,858.8	6,575.0	-100.0	4,286.9	BHL *NEW*: 2260.6ft FNL & 500ft FEL of Sec 10