

# **SRC ENERGY**

**WELD COUNTY (NAD83, TRUE NORTH)**

**5N-66W-29 SANFORD 21-29 PAD**

**SANFORD 8C-27-XR**

**Wellbore #1**

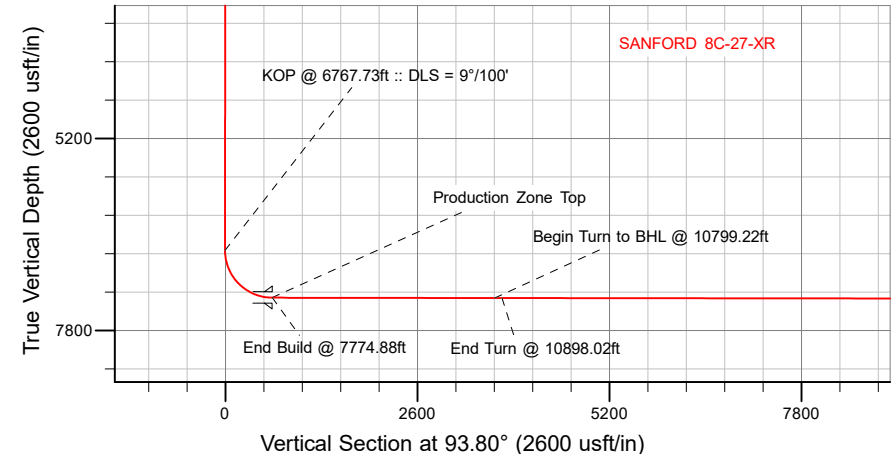
**Plan: Design #1**

## **Standard Planning Report**

**25 October, 2018**

# SRC ENERGY

CASING DETAILS		
TVD	MD	Name
1800.00	1810.89	9 5/8"
7357.00	7774.88	Production Zone Top



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	561.50	7.23	184.30	560.54	-22.71	-1.71	2.00	184.30	-0.20	
4	6767.73	7.23	184.30	6717.43	-801.59	-60.27	0.00	0.00	-7.00	
5	7774.88	89.92	88.56	7357.00	-866.17	577.26	9.00	-95.71	633.42	
6	10799.22	89.92	88.56	7361.14	-790.00	3600.64	0.00	0.00	3645.09	Sanford 8C-27-XR_target
7	10898.02	89.92	90.53	7361.27	-789.22	3699.43	2.00	89.95	3743.61	
8	20407.86	89.92	90.53	7374.00	-877.63	13208.85	0.00	0.00	13237.98	Sanford 8C-27-XR_BHL

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Sanford 8C-27-XR_BPZ	0.00	-877.68	13109.11	40.373162	-104.757860
Sanford 8C-27-XR_SHL	0.00	0.00	0.00	40.375581	-104.804910
Sanford 8C-27-XR_BHL	7374.00	-877.63	13208.85	40.373162	-104.757502

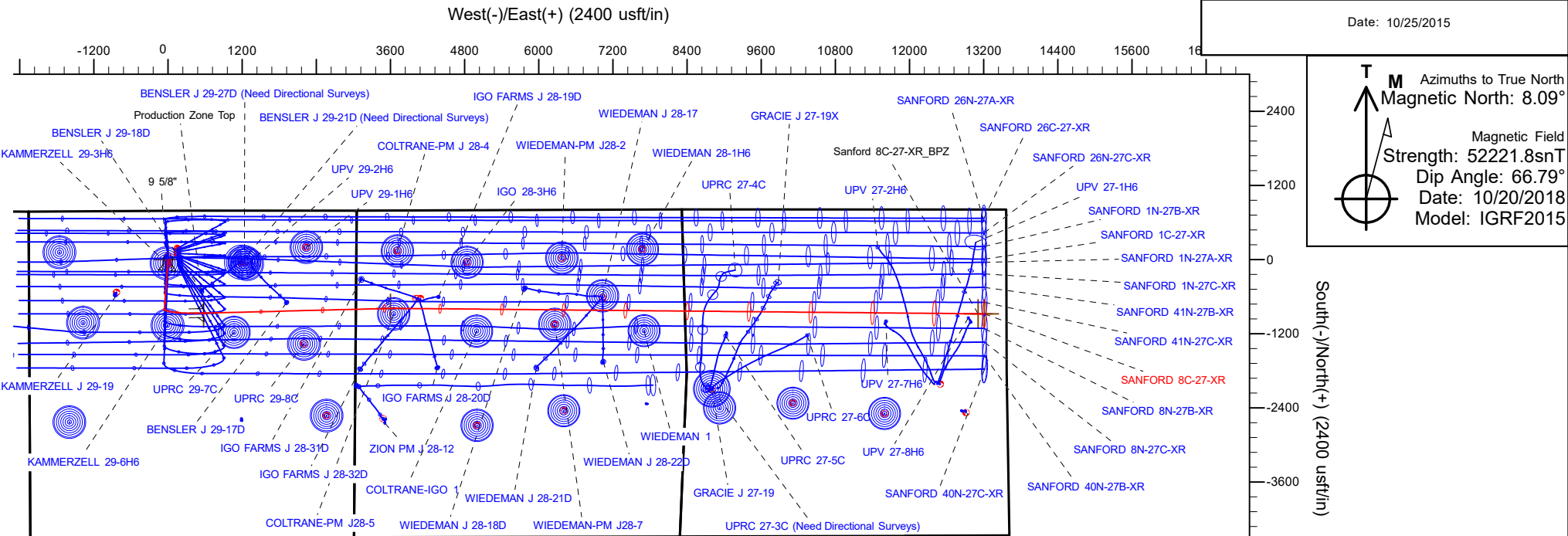
SHL  
791' FNL  
2243' FWL

LP  
1660' FNL  
2463' FEL  
40.373204° Lat  
-104.802844° Long

**BPZ**  
**1688' FNL**  
**460' FEL**

**BHL**  
**1688' FNL**  
**360' FEL**

WELL DETAILS: SANFORD 8C-27-XR
GL = 4905'
RKB = 4' @ 4909.00usft (RIG)
Plan: Design #1 (SANFORD 8C-27-XR/Wellbore #1)
Date: 10/25/2015



# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SANFORD 8C-27-XR
<b>Company:</b>	SRC ENERGY	<b>TVD Reference:</b>	RKB = 4' @ 4909.00usft (RIG)
<b>Project:</b>	WELD COUNTY (NAD83, TRUE NORTH)	<b>MD Reference:</b>	RKB = 4' @ 4909.00usft (RIG)
<b>Site:</b>	5N-66W-29 SANFORD 21-29 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SANFORD 8C-27-XR	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

<b>Project</b>	WELD COUNTY (NAD83, TRUE NORTH)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

<b>Site</b>	5N-66W-29 SANFORD 21-29 PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,380,603.61 usft	<b>Latitude:</b> 40.376075
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,193,654.99 usft	<b>Longitude:</b> -104.804914
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b> 0.45 °

<b>Well</b>	SANFORD 8C-27-XR			
<b>Well Position</b>	<b>+N/-S</b>	-179.97 usft	<b>Northing:</b>	1,380,423.65 usft
	<b>+E/-W</b>	1.11 usft	<b>Easting:</b>	3,193,657.51 usft
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>	<b>Latitude:</b> 40.375581
				<b>Longitude:</b> -104.804910
				<b>Ground Level:</b> 4,905.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	10/20/2018	8.09	66.79	52,221.75557905

<b>Design</b>	Design #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	93.80

<b>Plan Survey Tool Program</b>	<b>Date</b>	10/25/2018		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	1,800.00	Design #1 (Wellbore #1)	SRC Energy_ISCWSA REV 2
				Fixed:v2:crustal field declinatio
2	1,800.00	20,407.86	Design #1 (Wellbore #1)	SRC Energy_ISCWSA REV 2
				Fixed:v2:Rockies, crustal dec +

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SANFORD 8C-27-XR
<b>Company:</b>	SRC ENERGY	<b>TVD Reference:</b>	RKB = 4' @ 4909.00usft (RIG)
<b>Project:</b>	WELD COUNTY (NAD83, TRUE NORTH)	<b>MD Reference:</b>	RKB = 4' @ 4909.00usft (RIG)
<b>Site:</b>	5N-66W-29 SANFORD 21-29 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SANFORD 8C-27-XR	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
561.50	7.23	184.30	560.54	-22.71	-1.71	2.00	2.00	0.00	184.30	
6,767.73	7.23	184.30	6,717.43	-801.59	-60.27	0.00	0.00	0.00	0.00	
7,774.88	89.92	88.56	7,357.00	-866.17	577.26	9.00	8.21	-9.51	-95.71	
10,799.22	89.92	88.56	7,361.14	-790.00	3,600.64	0.00	0.00	0.00	0.00	Sanford 8C-27-XR_ta
10,898.02	89.92	90.53	7,361.27	-789.22	3,699.43	2.00	0.00	2.00	89.95	
20,407.86	89.92	90.53	7,374.00	-877.63	13,208.85	0.00	0.00	0.00	0.00	Sanford 8C-27-XR_BI

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SANFORD 8C-27-XR
<b>Company:</b>	SRC ENERGY	<b>TVD Reference:</b>	RKB = 4' @ 4909.00usft (RIG)
<b>Project:</b>	WELD COUNTY (NAD83, TRUE NORTH)	<b>MD Reference:</b>	RKB = 4' @ 4909.00usft (RIG)
<b>Site:</b>	5N-66W-29 SANFORD 21-29 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SANFORD 8C-27-XR	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 200.00ft									
300.00	2.00	184.30	299.98	-1.74	-0.13	-0.02	2.00	2.00	0.00
400.00	4.00	184.30	399.84	-6.96	-0.52	-0.06	2.00	2.00	0.00
500.00	6.00	184.30	499.45	-15.65	-1.18	-0.14	2.00	2.00	0.00
561.50	7.23	184.30	560.54	-22.71	-1.71	-0.20	2.00	2.00	0.00
Hold Tangent @ 561.50ft									
600.00	7.23	184.30	598.74	-27.55	-2.07	-0.24	0.00	0.00	0.00
700.00	7.23	184.30	697.94	-40.10	-3.01	-0.35	0.00	0.00	0.00
800.00	7.23	184.30	797.15	-52.65	-3.96	-0.46	0.00	0.00	0.00
900.00	7.23	184.30	896.35	-65.20	-4.90	-0.57	0.00	0.00	0.00
1,000.00	7.23	184.30	995.55	-77.75	-5.85	-0.68	0.00	0.00	0.00
1,100.00	7.23	184.30	1,094.76	-90.29	-6.79	-0.79	0.00	0.00	0.00
1,200.00	7.23	184.30	1,193.96	-102.84	-7.73	-0.90	0.00	0.00	0.00
1,300.00	7.23	184.30	1,293.17	-115.39	-8.68	-1.01	0.00	0.00	0.00
1,400.00	7.23	184.30	1,392.37	-127.94	-9.62	-1.12	0.00	0.00	0.00
1,500.00	7.23	184.30	1,491.58	-140.49	-10.56	-1.23	0.00	0.00	0.00
1,600.00	7.23	184.30	1,590.78	-153.04	-11.51	-1.34	0.00	0.00	0.00
1,700.00	7.23	184.30	1,689.99	-165.59	-12.45	-1.45	0.00	0.00	0.00
1,800.00	7.23	184.30	1,789.19	-178.14	-13.39	-1.55	0.00	0.00	0.00
1,810.89	7.23	184.30	1,800.00	-179.51	-13.50	-1.57	0.00	0.00	0.00
9 5/8"									
1,900.00	7.23	184.30	1,888.40	-190.69	-14.34	-1.66	0.00	0.00	0.00
2,000.00	7.23	184.30	1,987.60	-203.24	-15.28	-1.77	0.00	0.00	0.00
2,100.00	7.23	184.30	2,086.81	-215.79	-16.23	-1.88	0.00	0.00	0.00
2,200.00	7.23	184.30	2,186.01	-228.34	-17.17	-1.99	0.00	0.00	0.00
2,300.00	7.23	184.30	2,285.22	-240.89	-18.11	-2.10	0.00	0.00	0.00
2,400.00	7.23	184.30	2,384.42	-253.44	-19.06	-2.21	0.00	0.00	0.00
2,500.00	7.23	184.30	2,483.63	-265.99	-20.00	-2.32	0.00	0.00	0.00
2,600.00	7.23	184.30	2,582.83	-278.54	-20.94	-2.43	0.00	0.00	0.00
2,700.00	7.23	184.30	2,682.04	-291.09	-21.89	-2.54	0.00	0.00	0.00
2,800.00	7.23	184.30	2,781.24	-303.64	-22.83	-2.65	0.00	0.00	0.00
2,900.00	7.23	184.30	2,880.45	-316.19	-23.77	-2.76	0.00	0.00	0.00
3,000.00	7.23	184.30	2,979.65	-328.74	-24.72	-2.87	0.00	0.00	0.00
3,100.00	7.23	184.30	3,078.86	-341.29	-25.66	-2.98	0.00	0.00	0.00
3,200.00	7.23	184.30	3,178.06	-353.84	-26.61	-3.09	0.00	0.00	0.00
3,300.00	7.23	184.30	3,277.27	-366.39	-27.55	-3.20	0.00	0.00	0.00
3,400.00	7.23	184.30	3,376.47	-378.94	-28.49	-3.31	0.00	0.00	0.00
3,500.00	7.23	184.30	3,475.68	-391.49	-29.44	-3.42	0.00	0.00	0.00
3,600.00	7.23	184.30	3,574.88	-404.04	-30.38	-3.53	0.00	0.00	0.00
3,700.00	7.23	184.30	3,674.09	-416.59	-31.32	-3.64	0.00	0.00	0.00
3,800.00	7.23	184.30	3,773.29	-429.14	-32.27	-3.75	0.00	0.00	0.00
3,900.00	7.23	184.30	3,872.50	-441.69	-33.21	-3.86	0.00	0.00	0.00
4,000.00	7.23	184.30	3,971.70	-454.24	-34.15	-3.96	0.00	0.00	0.00
4,100.00	7.23	184.30	4,070.91	-466.79	-35.10	-4.07	0.00	0.00	0.00
4,200.00	7.23	184.30	4,170.11	-479.34	-36.04	-4.18	0.00	0.00	0.00
4,300.00	7.23	184.30	4,269.32	-491.89	-36.99	-4.29	0.00	0.00	0.00
4,400.00	7.23	184.30	4,368.52	-504.44	-37.93	-4.40	0.00	0.00	0.00
4,500.00	7.23	184.30	4,467.73	-516.99	-38.87	-4.51	0.00	0.00	0.00
4,600.00	7.23	184.30	4,566.93	-529.54	-39.82	-4.62	0.00	0.00	0.00
4,700.00	7.23	184.30	4,666.14	-542.09	-40.76	-4.73	0.00	0.00	0.00

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## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SANFORD 8C-27-XR
<b>Company:</b>	SRC ENERGY	<b>TVD Reference:</b>	RKB = 4' @ 4909.00usft (RIG)
<b>Project:</b>	WELD COUNTY (NAD83, TRUE NORTH)	<b>MD Reference:</b>	RKB = 4' @ 4909.00usft (RIG)
<b>Site:</b>	5N-66W-29 SANFORD 21-29 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SANFORD 8C-27-XR	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.00	7.23	184.30	4,765.34	-554.64	-41.70	-4.84	0.00	0.00	0.00
4,900.00	7.23	184.30	4,864.55	-567.19	-42.65	-4.95	0.00	0.00	0.00
5,000.00	7.23	184.30	4,963.75	-579.74	-43.59	-5.06	0.00	0.00	0.00
5,100.00	7.23	184.30	5,062.96	-592.29	-44.53	-5.17	0.00	0.00	0.00
5,200.00	7.23	184.30	5,162.16	-604.84	-45.48	-5.28	0.00	0.00	0.00
5,300.00	7.23	184.30	5,261.37	-617.39	-46.42	-5.39	0.00	0.00	0.00
5,400.00	7.23	184.30	5,360.57	-629.94	-47.37	-5.50	0.00	0.00	0.00
5,500.00	7.23	184.30	5,459.78	-642.49	-48.31	-5.61	0.00	0.00	0.00
5,600.00	7.23	184.30	5,558.98	-655.04	-49.25	-5.72	0.00	0.00	0.00
5,700.00	7.23	184.30	5,658.18	-667.59	-50.20	-5.83	0.00	0.00	0.00
5,800.00	7.23	184.30	5,757.39	-680.14	-51.14	-5.94	0.00	0.00	0.00
5,900.00	7.23	184.30	5,856.59	-692.69	-52.08	-6.05	0.00	0.00	0.00
6,000.00	7.23	184.30	5,955.80	-705.24	-53.03	-6.16	0.00	0.00	0.00
6,100.00	7.23	184.30	6,055.00	-717.79	-53.97	-6.27	0.00	0.00	0.00
6,200.00	7.23	184.30	6,154.21	-730.34	-54.91	-6.37	0.00	0.00	0.00
6,300.00	7.23	184.30	6,253.41	-742.89	-55.86	-6.48	0.00	0.00	0.00
6,400.00	7.23	184.30	6,352.62	-755.44	-56.80	-6.59	0.00	0.00	0.00
6,500.00	7.23	184.30	6,451.82	-767.99	-57.75	-6.70	0.00	0.00	0.00
6,600.00	7.23	184.30	6,551.03	-780.54	-58.69	-6.81	0.00	0.00	0.00
6,700.00	7.23	184.30	6,650.23	-793.09	-59.63	-6.92	0.00	0.00	0.00
6,767.73	7.23	184.30	6,717.43	-801.59	-60.27	-7.00	0.00	0.00	0.00
<b>KOP @ 6767.73ft :: DLS = 9°/100'</b>									
6,800.00	7.52	161.63	6,749.44	-805.61	-59.76	-6.22	9.00	0.89	-70.26
6,900.00	13.27	120.90	6,847.87	-817.74	-47.82	6.49	9.00	5.76	-40.73
7,000.00	21.37	107.36	6,943.29	-829.10	-20.53	34.48	9.00	8.10	-13.54
7,100.00	29.98	101.19	7,033.35	-839.40	21.46	77.06	9.00	8.60	-6.18
7,200.00	38.75	97.59	7,115.82	-848.40	77.11	133.19	9.00	8.77	-3.59
7,300.00	47.60	95.17	7,188.68	-855.88	145.04	201.47	9.00	8.85	-2.43
7,400.00	56.48	93.34	7,250.14	-861.65	223.59	280.22	9.00	8.89	-1.82
7,500.00	65.39	91.86	7,298.67	-865.56	310.82	367.52	9.00	8.91	-1.48
7,600.00	74.31	90.58	7,333.08	-867.53	404.58	461.21	9.00	8.92	-1.28
7,700.00	83.24	89.40	7,352.53	-867.50	502.57	558.97	9.00	8.93	-1.17
7,774.88	89.92	88.56	7,357.00	-866.17	577.26	633.41	9.00	8.93	-1.13
<b>End Build @ 7774.88ft - Production Zone Top</b>									
7,800.00	89.92	88.56	7,357.04	-865.54	602.37	658.43	0.00	0.00	0.00
7,900.00	89.92	88.56	7,357.17	-863.02	702.34	758.01	0.00	0.00	0.00
8,000.00	89.92	88.56	7,357.31	-860.50	802.31	857.59	0.00	0.00	0.00
8,100.00	89.92	88.56	7,357.45	-857.98	902.28	957.17	0.00	0.00	0.00
8,200.00	89.92	88.56	7,357.58	-855.46	1,002.24	1,056.75	0.00	0.00	0.00
8,300.00	89.92	88.56	7,357.72	-852.94	1,102.21	1,156.33	0.00	0.00	0.00
8,400.00	89.92	88.56	7,357.86	-850.43	1,202.18	1,255.92	0.00	0.00	0.00
8,500.00	89.92	88.56	7,357.99	-847.91	1,302.15	1,355.50	0.00	0.00	0.00
8,600.00	89.92	88.56	7,358.13	-845.39	1,402.12	1,455.08	0.00	0.00	0.00
8,700.00	89.92	88.56	7,358.27	-842.87	1,502.08	1,554.66	0.00	0.00	0.00
8,800.00	89.92	88.56	7,358.40	-840.35	1,602.05	1,654.24	0.00	0.00	0.00
8,900.00	89.92	88.56	7,358.54	-837.83	1,702.02	1,753.82	0.00	0.00	0.00
9,000.00	89.92	88.56	7,358.68	-835.31	1,801.99	1,853.40	0.00	0.00	0.00
9,100.00	89.92	88.56	7,358.81	-832.80	1,901.96	1,952.98	0.00	0.00	0.00
9,200.00	89.92	88.56	7,358.95	-830.28	2,001.93	2,052.57	0.00	0.00	0.00
9,300.00	89.92	88.56	7,359.09	-827.76	2,101.89	2,152.15	0.00	0.00	0.00
9,400.00	89.92	88.56	7,359.23	-825.24	2,201.86	2,251.73	0.00	0.00	0.00
9,500.00	89.92	88.56	7,359.36	-822.72	2,301.83	2,351.31	0.00	0.00	0.00
9,600.00	89.92	88.56	7,359.50	-820.20	2,401.80	2,450.89	0.00	0.00	0.00
9,700.00	89.92	88.56	7,359.64	-817.68	2,501.77	2,550.47	0.00	0.00	0.00

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SANFORD 8C-27-XR
<b>Company:</b>	SRC ENERGY	<b>TVD Reference:</b>	RKB = 4' @ 4909.00usft (RIG)
<b>Project:</b>	WELD COUNTY (NAD83, TRUE NORTH)	<b>MD Reference:</b>	RKB = 4' @ 4909.00usft (RIG)
<b>Site:</b>	5N-66W-29 SANFORD 21-29 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SANFORD 8C-27-XR	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,800.00	89.92	88.56	7,359.77	-815.17	2,601.73	2,650.05	0.00	0.00	0.00	
9,900.00	89.92	88.56	7,359.91	-812.65	2,701.70	2,749.63	0.00	0.00	0.00	
10,000.00	89.92	88.56	7,360.05	-810.13	2,801.67	2,849.22	0.00	0.00	0.00	
10,100.00	89.92	88.56	7,360.18	-807.61	2,901.64	2,948.80	0.00	0.00	0.00	
10,200.00	89.92	88.56	7,360.32	-805.09	3,001.61	3,048.38	0.00	0.00	0.00	
10,300.00	89.92	88.56	7,360.46	-802.57	3,101.58	3,147.96	0.00	0.00	0.00	
10,400.00	89.92	88.56	7,360.59	-800.05	3,201.54	3,247.54	0.00	0.00	0.00	
10,500.00	89.92	88.56	7,360.73	-797.54	3,301.51	3,347.12	0.00	0.00	0.00	
10,600.00	89.92	88.56	7,360.87	-795.02	3,401.48	3,446.70	0.00	0.00	0.00	
10,700.00	89.92	88.56	7,361.00	-792.50	3,501.45	3,546.28	0.00	0.00	0.00	
10,799.22	89.92	88.56	7,361.14	-790.00	3,600.64	3,645.09	0.00	0.00	0.00	
Begin Turn to BHL @ 10799.22ft										
10,800.00	89.92	88.57	7,361.14	-789.98	3,601.42	3,645.87	2.00	0.00	2.00	
10,898.02	89.92	90.53	7,361.27	-789.22	3,699.43	3,743.61	2.00	0.00	2.00	
End Turn @ 10898.02ft										
10,900.00	89.92	90.53	7,361.28	-789.23	3,701.41	3,745.59	0.00	0.00	0.00	
11,000.00	89.92	90.53	7,361.41	-790.16	3,801.40	3,845.43	0.00	0.00	0.00	
11,100.00	89.92	90.53	7,361.54	-791.09	3,901.40	3,945.26	0.00	0.00	0.00	
11,200.00	89.92	90.53	7,361.68	-792.02	4,001.40	4,045.10	0.00	0.00	0.00	
11,300.00	89.92	90.53	7,361.81	-792.95	4,101.39	4,144.94	0.00	0.00	0.00	
11,400.00	89.92	90.53	7,361.95	-793.88	4,201.39	4,244.77	0.00	0.00	0.00	
11,500.00	89.92	90.53	7,362.08	-794.81	4,301.38	4,344.61	0.00	0.00	0.00	
11,600.00	89.92	90.53	7,362.21	-795.74	4,401.38	4,444.45	0.00	0.00	0.00	
11,700.00	89.92	90.53	7,362.35	-796.67	4,501.37	4,544.29	0.00	0.00	0.00	
11,800.00	89.92	90.53	7,362.48	-797.60	4,601.37	4,644.12	0.00	0.00	0.00	
11,900.00	89.92	90.53	7,362.61	-798.53	4,701.36	4,743.96	0.00	0.00	0.00	
12,000.00	89.92	90.53	7,362.75	-799.46	4,801.36	4,843.80	0.00	0.00	0.00	
12,100.00	89.92	90.53	7,362.88	-800.39	4,901.36	4,943.64	0.00	0.00	0.00	
12,200.00	89.92	90.53	7,363.02	-801.32	5,001.35	5,043.47	0.00	0.00	0.00	
12,300.00	89.92	90.53	7,363.15	-802.25	5,101.35	5,143.31	0.00	0.00	0.00	
12,400.00	89.92	90.53	7,363.28	-803.18	5,201.34	5,243.15	0.00	0.00	0.00	
12,500.00	89.92	90.53	7,363.42	-804.11	5,301.34	5,342.98	0.00	0.00	0.00	
12,600.00	89.92	90.53	7,363.55	-805.04	5,401.33	5,442.82	0.00	0.00	0.00	
12,700.00	89.92	90.53	7,363.69	-805.97	5,501.33	5,542.66	0.00	0.00	0.00	
12,800.00	89.92	90.53	7,363.82	-806.90	5,601.32	5,642.50	0.00	0.00	0.00	
12,900.00	89.92	90.53	7,363.95	-807.83	5,701.32	5,742.33	0.00	0.00	0.00	
13,000.00	89.92	90.53	7,364.09	-808.76	5,801.32	5,842.17	0.00	0.00	0.00	
13,100.00	89.92	90.53	7,364.22	-809.69	5,901.31	5,942.01	0.00	0.00	0.00	
13,200.00	89.92	90.53	7,364.35	-810.62	6,001.31	6,041.84	0.00	0.00	0.00	
13,300.00	89.92	90.53	7,364.49	-811.55	6,101.30	6,141.68	0.00	0.00	0.00	
13,400.00	89.92	90.53	7,364.62	-812.48	6,201.30	6,241.52	0.00	0.00	0.00	
13,500.00	89.92	90.53	7,364.76	-813.41	6,301.29	6,341.36	0.00	0.00	0.00	
13,600.00	89.92	90.53	7,364.89	-814.34	6,401.29	6,441.19	0.00	0.00	0.00	
13,700.00	89.92	90.53	7,365.02	-815.27	6,501.28	6,541.03	0.00	0.00	0.00	
13,800.00	89.92	90.53	7,365.16	-816.20	6,601.28	6,640.87	0.00	0.00	0.00	
13,900.00	89.92	90.53	7,365.29	-817.13	6,701.28	6,740.71	0.00	0.00	0.00	
14,000.00	89.92	90.53	7,365.43	-818.05	6,801.27	6,840.54	0.00	0.00	0.00	
14,100.00	89.92	90.53	7,365.56	-818.98	6,901.27	6,940.38	0.00	0.00	0.00	
14,200.00	89.92	90.53	7,365.69	-819.91	7,001.26	7,040.22	0.00	0.00	0.00	
14,300.00	89.92	90.53	7,365.83	-820.84	7,101.26	7,140.05	0.00	0.00	0.00	
14,400.00	89.92	90.53	7,365.96	-821.77	7,201.25	7,239.89	0.00	0.00	0.00	
14,500.00	89.92	90.53	7,366.09	-822.70	7,301.25	7,339.73	0.00	0.00	0.00	
14,600.00	89.92	90.53	7,366.23	-823.63	7,401.25	7,439.57	0.00	0.00	0.00	
14,700.00	89.92	90.53	7,366.36	-824.56	7,501.24	7,539.40	0.00	0.00	0.00	

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SANFORD 8C-27-XR
<b>Company:</b>	SRC ENERGY	<b>TVD Reference:</b>	RKB = 4' @ 4909.00usft (RIG)
<b>Project:</b>	WELD COUNTY (NAD83, TRUE NORTH)	<b>MD Reference:</b>	RKB = 4' @ 4909.00usft (RIG)
<b>Site:</b>	5N-66W-29 SANFORD 21-29 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SANFORD 8C-27-XR	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,800.00	89.92	90.53	7,366.50	-825.49	7,601.24	7,639.24	0.00	0.00	0.00
14,900.00	89.92	90.53	7,366.63	-826.42	7,701.23	7,739.08	0.00	0.00	0.00
15,000.00	89.92	90.53	7,366.76	-827.35	7,801.23	7,838.92	0.00	0.00	0.00
15,100.00	89.92	90.53	7,366.90	-828.28	7,901.22	7,938.75	0.00	0.00	0.00
15,200.00	89.92	90.53	7,367.03	-829.21	8,001.22	8,038.59	0.00	0.00	0.00
15,300.00	89.92	90.53	7,367.16	-830.14	8,101.21	8,138.43	0.00	0.00	0.00
15,400.00	89.92	90.53	7,367.30	-831.07	8,201.21	8,238.26	0.00	0.00	0.00
15,500.00	89.92	90.53	7,367.43	-832.00	8,301.21	8,338.10	0.00	0.00	0.00
15,600.00	89.92	90.53	7,367.57	-832.93	8,401.20	8,437.94	0.00	0.00	0.00
15,700.00	89.92	90.53	7,367.70	-833.86	8,501.20	8,537.78	0.00	0.00	0.00
15,800.00	89.92	90.53	7,367.83	-834.79	8,601.19	8,637.61	0.00	0.00	0.00
15,900.00	89.92	90.53	7,367.97	-835.72	8,701.19	8,737.45	0.00	0.00	0.00
16,000.00	89.92	90.53	7,368.10	-836.65	8,801.18	8,837.29	0.00	0.00	0.00
16,100.00	89.92	90.53	7,368.24	-837.58	8,901.18	8,937.12	0.00	0.00	0.00
16,200.00	89.92	90.53	7,368.37	-838.51	9,001.17	9,036.96	0.00	0.00	0.00
16,300.00	89.92	90.53	7,368.50	-839.44	9,101.17	9,136.80	0.00	0.00	0.00
16,400.00	89.92	90.53	7,368.64	-840.37	9,201.17	9,236.64	0.00	0.00	0.00
16,500.00	89.92	90.53	7,368.77	-841.30	9,301.16	9,336.47	0.00	0.00	0.00
16,600.00	89.92	90.53	7,368.90	-842.23	9,401.16	9,436.31	0.00	0.00	0.00
16,700.00	89.92	90.53	7,369.04	-843.16	9,501.15	9,536.15	0.00	0.00	0.00
16,800.00	89.92	90.53	7,369.17	-844.09	9,601.15	9,635.99	0.00	0.00	0.00
16,900.00	89.92	90.53	7,369.31	-845.02	9,701.14	9,735.82	0.00	0.00	0.00
17,000.00	89.92	90.53	7,369.44	-845.95	9,801.14	9,835.66	0.00	0.00	0.00
17,100.00	89.92	90.53	7,369.57	-846.88	9,901.14	9,935.50	0.00	0.00	0.00
17,200.00	89.92	90.53	7,369.71	-847.81	10,001.13	10,035.33	0.00	0.00	0.00
17,300.00	89.92	90.53	7,369.84	-848.74	10,101.13	10,135.17	0.00	0.00	0.00
17,400.00	89.92	90.53	7,369.97	-849.67	10,201.12	10,235.01	0.00	0.00	0.00
17,500.00	89.92	90.53	7,370.11	-850.60	10,301.12	10,334.85	0.00	0.00	0.00
17,600.00	89.92	90.53	7,370.24	-851.52	10,401.11	10,434.68	0.00	0.00	0.00
17,700.00	89.92	90.53	7,370.38	-852.45	10,501.11	10,534.52	0.00	0.00	0.00
17,800.00	89.92	90.53	7,370.51	-853.38	10,601.10	10,634.36	0.00	0.00	0.00
17,900.00	89.92	90.53	7,370.64	-854.31	10,701.10	10,734.19	0.00	0.00	0.00
18,000.00	89.92	90.53	7,370.78	-855.24	10,801.10	10,834.03	0.00	0.00	0.00
18,100.00	89.92	90.53	7,370.91	-856.17	10,901.09	10,933.87	0.00	0.00	0.00
18,200.00	89.92	90.53	7,371.05	-857.10	11,001.09	11,033.71	0.00	0.00	0.00
18,300.00	89.92	90.53	7,371.18	-858.03	11,101.08	11,133.54	0.00	0.00	0.00
18,400.00	89.92	90.53	7,371.31	-858.96	11,201.08	11,233.38	0.00	0.00	0.00
18,500.00	89.92	90.53	7,371.45	-859.89	11,301.07	11,333.22	0.00	0.00	0.00
18,600.00	89.92	90.53	7,371.58	-860.82	11,401.07	11,433.06	0.00	0.00	0.00
18,700.00	89.92	90.53	7,371.71	-861.75	11,501.06	11,532.89	0.00	0.00	0.00
18,800.00	89.92	90.53	7,371.85	-862.68	11,601.06	11,632.73	0.00	0.00	0.00
18,900.00	89.92	90.53	7,371.98	-863.61	11,701.06	11,732.57	0.00	0.00	0.00
19,000.00	89.92	90.53	7,372.12	-864.54	11,801.05	11,832.40	0.00	0.00	0.00
19,100.00	89.92	90.53	7,372.25	-865.47	11,901.05	11,932.24	0.00	0.00	0.00
19,200.00	89.92	90.53	7,372.38	-866.40	12,001.04	12,032.08	0.00	0.00	0.00
19,300.00	89.92	90.53	7,372.52	-867.33	12,101.04	12,131.92	0.00	0.00	0.00
19,400.00	89.92	90.53	7,372.65	-868.26	12,201.03	12,231.75	0.00	0.00	0.00
19,500.00	89.92	90.53	7,372.79	-869.19	12,301.03	12,331.59	0.00	0.00	0.00
19,600.00	89.92	90.53	7,372.92	-870.12	12,401.02	12,431.43	0.00	0.00	0.00
19,700.00	89.92	90.53	7,373.05	-871.05	12,501.02	12,531.27	0.00	0.00	0.00
19,800.00	89.92	90.53	7,373.19	-871.98	12,601.02	12,631.10	0.00	0.00	0.00
19,900.00	89.92	90.53	7,373.32	-872.91	12,701.01	12,730.94	0.00	0.00	0.00
20,000.00	89.92	90.53	7,373.45	-873.84	12,801.01	12,830.78	0.00	0.00	0.00
20,100.00	89.92	90.53	7,373.59	-874.77	12,901.00	12,930.61	0.00	0.00	0.00

# Hewlett-Packard

## Planning Report

<b>Database:</b>	EDM 5000.14 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SANFORD 8C-27-XR
<b>Company:</b>	SRC ENERGY	<b>TVD Reference:</b>	RKB = 4' @ 4909.00usft (RIG)
<b>Project:</b>	WELD COUNTY (NAD83, TRUE NORTH)	<b>MD Reference:</b>	RKB = 4' @ 4909.00usft (RIG)
<b>Site:</b>	5N-66W-29 SANFORD 21-29 PAD	<b>North Reference:</b>	True
<b>Well:</b>	SANFORD 8C-27-XR	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
20,200.00	89.92	90.53	7,373.72	-875.70	13,001.00	13,030.45	0.00	0.00	0.00
20,300.00	89.92	90.53	7,373.86	-876.63	13,100.99	13,130.29	0.00	0.00	0.00
20,400.00	89.92	90.53	7,373.99	-877.56	13,200.99	13,230.13	0.00	0.00	0.00
20,407.86	89.92	90.53	7,374.00	-877.63	13,208.85	13,237.98	0.00	0.00	0.00
TD Well @ 20407.86ft									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,810.89	1,800.00	9 5/8"	9-5/8	13-1/2
7,774.88	7,357.00	Production Zone Top	5-1/2	8-1/2

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
200.00	200.00	0.00	0.00	Begin Nudge @ 200.00ft
561.50	560.54	-22.71	-1.71	Hold Tangent @ 561.50ft
6,767.73	6,717.43	-801.59	-60.27	KOP @ 6767.73ft :: DLS = 9°/100'
7,774.88	7,357.00	-866.17	577.26	End Build @ 7774.88ft
10,799.22	7,361.14	-790.00	3,600.64	Begin Turn to BHL @ 10799.22ft
10,898.02	7,361.27	-789.22	3,699.43	End Turn @ 10898.02ft
20,407.86	7,374.00	-877.63	13,208.85	TD Well @ 20407.86ft