

Denver Division- Colorado

DJ - Hereford Ranch

Randall Creek 02-29H

Randall Creek 2-29H

Sidetrack in Lateral

Plan: Plan to sidetrack

Standard Survey Report

12 April, 2011

EOG Resources Inc

Survey Report

Company:	Denver Division- Colorado	Local Co-ordinate Reference:	Site Randall Creek 02-29H
Project:	DJ - Hereford Ranch	TVD Reference:	RIG @ 5369.00ft (SST 53)
Site:	Randall Creek 02-29H	MD Reference:	RIG @ 5369.00ft (SST 53)
Well:	Randall Creek 2-29H	North Reference:	True
Wellbore:	Sidetrack in Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Plan to sidetrack	Database:	EDM

Project	DJ - Hereford Ranch, Weld County		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Colorado North 501		

Site		Randall Creek 02-29H			
Site Position:		Northing:	600,063.78 ft	Latitude:	40° 58' 29.179 N
From:	Lat/Long	Easting:	2,321,418.20 ft	Longitude:	104° 20' 9.841 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.75 deg

Well	Randall Creek 2-29H					
Well Position	+N/-S	0.00 ft	Northing:	600,063.78 ft	Latitude:	40° 58' 29.179 N
	+E/-W	0.00 ft	Easting:	2,321,418.20 ft	Longitude:	104° 20' 9.841 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,347.00 ft

Wellbore	Sidetrack in Lateral				
Magnetics	Model Name	Sample Date	Declination (deg)	Dip Angle (deg)	Field Strength (nT)
	IGRF200510	4/9/2011	8.66	67.60	53,510

Design	Plan to sidetrack			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	9,967.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (deg)
	0.00	0.00	0.00	317.40

Survey Tool Program	Date	4/12/2011		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
1,458.00	6,739.00	Vertical to KOP (Original Wellbore)	MWD	MWD - Standard
6,768.00	7,476.00	Curve (Original Wellbore)	MWD	MWD - Standard
7,535.00	9,967.00	Lateral (Original Wellbore)	MWD	MWD - Standard
9,967.00	12,706.75	Plan to sidetrack (Sidetrack in Lateral)		

Planned Survey										
Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (?/100ft)	Build Rate (?/100ft)	Turn Rate (?/100ft)	
1,500.00	0.40	355.66	1,500.00	0.37	-0.02	0.29	0.00	0.00	0.00	
1,600.00	0.65	353.30	1,599.99	1.28	-0.11	1.02	0.24	0.24	-2.36	
1,700.00	0.89	352.23	1,699.99	2.61	-0.28	2.11	0.24	0.24	-1.07	
1,800.00	1.02	355.85	1,799.97	4.27	-0.46	3.45	0.14	0.12	3.62	
1,900.00	1.14	358.85	1,899.95	6.14	-0.54	4.89	0.14	0.12	3.00	
2,000.00	1.25	0.66	1,999.93	8.23	-0.54	6.43	0.12	0.12	1.80	
2,100.00	1.36	1.63	2,099.91	10.51	-0.49	8.07	0.11	0.11	0.97	
2,200.00	1.47	2.45	2,199.88	12.98	-0.41	9.83	0.11	0.11	0.83	
2,300.00	1.60	4.41	2,299.84	15.64	-0.25	11.68	0.15	0.14	1.96	
2,400.00	1.76	6.58	2,399.80	18.56	0.03	13.64	0.17	0.16	2.17	

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Well:	Randall Creek 2-29H	North Reference:	True
Wellbore:	Sidetrack in Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Plan to sidetrack	Database:	EDM

Planned Survey

Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (?/100ft)	Build Rate (?/100ft)	Turn Rate (?/100ft)
2,500.00	1.81	8.15	2,499.75	21.73	0.45	15.69	0.07	0.05	1.57
2,600.00	1.09	7.44	2,599.71	24.24	0.80	17.31	0.72	-0.72	-0.71
2,700.00	0.37	3.96	2,699.70	25.51	0.94	18.14	0.72	-0.72	-3.47
2,800.00	0.24	27.84	2,799.70	25.97	1.04	18.41	0.18	-0.13	23.88
2,900.00	0.25	61.91	2,899.70	26.26	1.34	18.43	0.15	0.01	34.07
3,000.00	0.33	80.21	2,999.70	26.40	1.82	18.20	0.12	0.07	18.31
3,100.00	0.41	82.78	3,099.70	26.49	2.45	17.84	0.08	0.08	2.57
3,200.00	0.48	84.52	3,199.70	26.58	3.22	17.38	0.08	0.08	1.74
3,300.00	0.54	98.06	3,299.69	26.57	4.12	16.77	0.13	0.06	13.54
3,400.00	0.62	111.36	3,399.69	26.31	5.09	15.92	0.16	0.08	13.30
3,500.00	0.66	116.17	3,499.68	25.80	6.13	14.84	0.06	0.03	4.81
3,600.00	0.51	102.64	3,599.67	25.45	7.08	13.94	0.20	-0.15	-13.52
3,700.00	0.41	80.73	3,699.67	25.41	7.87	13.38	0.20	-0.10	-21.91
3,800.00	0.40	73.14	3,799.67	25.59	8.54	13.06	0.05	-0.01	-7.59
3,900.00	0.40	70.79	3,899.67	25.81	9.21	12.77	0.02	0.00	-2.35
4,000.00	0.37	65.06	3,999.66	26.05	9.85	12.51	0.05	-0.02	-5.73
4,100.00	0.30	42.40	4,099.66	26.38	10.32	12.43	0.15	-0.08	-22.66
4,200.00	0.29	12.30	4,199.66	26.82	10.55	12.60	0.15	-0.01	-30.10
4,300.00	0.30	7.33	4,299.66	27.34	10.61	12.94	0.03	0.01	-4.96
4,400.00	0.30	12.05	4,399.66	27.85	10.70	13.26	0.02	0.00	4.72
4,500.00	0.28	13.22	4,499.66	28.36	10.82	13.54	0.02	-0.01	1.17
4,600.00	0.21	351.61	4,599.66	28.78	10.85	13.84	0.12	-0.07	-21.61
4,700.00	0.19	318.42	4,699.66	29.09	10.72	14.16	0.12	-0.02	-33.19
4,800.00	0.35	313.41	4,799.65	29.37	10.39	14.58	0.16	0.16	-5.01
4,900.00	0.59	316.91	4,899.65	29.96	9.82	15.40	0.24	0.24	3.51
5,000.00	0.81	316.21	4,999.64	30.87	8.99	16.63	0.22	0.22	-0.71
5,100.00	0.97	298.64	5,099.63	31.78	7.76	18.14	0.31	0.16	-17.57
5,200.00	1.19	286.76	5,199.61	32.49	6.03	19.83	0.31	0.22	-11.88
5,300.00	1.34	282.36	5,299.59	33.01	3.84	21.69	0.18	0.15	-4.39
5,400.00	1.42	281.64	5,399.56	33.51	1.48	23.66	0.08	0.08	-0.73
5,500.00	1.50	280.99	5,499.53	34.01	-1.02	25.72	0.08	0.07	-0.65
5,600.00	1.34	280.54	5,599.50	34.47	-3.45	27.71	0.16	-0.16	-0.45
5,700.00	1.18	279.97	5,699.47	34.87	-5.62	29.46	0.16	-0.16	-0.57
5,800.00	1.04	272.71	5,799.45	35.14	-7.53	30.96	0.20	-0.14	-7.26
5,900.00	0.97	255.95	5,899.44	34.98	-9.26	32.01	0.30	-0.07	-16.76
6,000.00	1.00	238.41	5,999.42	34.32	-10.82	32.58	0.30	0.02	-17.54
6,100.00	0.76	229.65	6,099.41	33.42	-12.07	32.77	0.27	-0.24	-8.76
6,200.00	0.56	215.38	6,199.41	32.60	-12.84	32.69	0.25	-0.20	-14.27
6,300.00	0.49	195.10	6,299.40	31.80	-13.23	32.37	0.20	-0.07	-20.28
6,400.00	0.43	180.05	6,399.40	30.97	-13.31	31.81	0.13	-0.06	-15.05
6,500.00	0.27	173.53	6,499.40	30.36	-13.29	31.34	0.17	-0.16	-6.52
6,600.00	0.11	148.22	6,599.40	30.05	-13.21	31.06	0.17	-0.15	-25.31
6,700.00	0.22	81.56	6,699.40	30.00	-12.98	30.86	0.21	0.11	-66.66
6,800.00	2.41	341.33	6,799.38	30.82	-12.84	31.38	2.46	2.19	-100.23
6,900.00	14.29	333.79	6,898.16	43.81	-19.12	45.19	11.90	11.87	-7.54
7,000.00	26.54	331.65	6,991.59	74.95	-35.33	79.08	12.28	12.26	-2.14
7,100.00	38.00	328.65	7,075.61	121.72	-62.15	131.67	11.57	11.46	-3.00
7,200.00	48.22	326.33	7,148.83	178.83	-98.89	198.57	10.34	10.22	-2.32
7,300.00	60.63	327.20	7,206.80	246.82	-143.33	278.70	12.43	12.41	0.87
7,400.00	70.88	326.23	7,247.86	323.03	-193.14	368.51	10.28	10.25	-0.97
7,500.00	83.32	326.20	7,269.76	403.99	-247.21	464.70	12.44	12.44	-0.03
7,514.00	84.67	326.32	7,271.22	415.57	-254.94	478.46	9.70	9.66	0.85
7"									
7,600.00	87.46	325.03	7,276.39	486.84	-302.77	563.30	3.57	3.24	-1.50
7,700.00	88.71	320.20	7,280.36	566.41	-363.13	662.72	4.99	1.25	-4.83

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7,800.00	88.75	319.55	7,282.02	642.91	-427.52	762.61	0.66	0.05	-0.65
7,900.00	88.25	318.60	7,284.80	718.37	-493.08	862.53	1.07	-0.50	-0.95
8,000.00	91.61	317.72	7,286.70	792.99	-559.58	962.48	3.48	3.36	-0.88
8,100.00	91.64	317.87	7,283.54	867.38	-626.34	1,062.42	0.15	0.02	0.15
8,200.00	89.56	318.66	7,282.49	942.30	-692.54	1,162.38	2.22	-2.08	0.79
8,300.00	89.15	321.35	7,283.14	1,018.89	-756.81	1,262.26	2.72	-0.40	2.69
8,400.00	91.80	323.82	7,282.74	1,098.90	-816.76	1,361.74	3.62	2.64	2.47
8,500.00	91.70	322.78	7,279.48	1,179.09	-876.42	1,461.14	1.04	-0.10	-1.04
8,600.00	89.04	323.65	7,277.71	1,258.86	-936.67	1,560.65	2.80	-2.66	0.87
8,700.00	89.46	322.24	7,279.12	1,338.76	-996.79	1,660.14	1.47	0.42	-1.41
8,800.00	90.98	321.84	7,279.56	1,417.21	-1,058.78	1,759.86	1.58	1.53	-0.40
8,900.00	90.78	319.39	7,276.47	1,495.16	-1,121.33	1,859.57	2.47	-0.21	-2.46
9,000.00	87.75	315.10	7,278.48	1,567.57	-1,190.21	1,959.50	5.25	-3.03	-4.29
9,100.00	86.34	316.01	7,282.05	1,639.44	-1,259.64	2,059.39	1.68	-1.41	0.91
9,200.00	87.34	314.48	7,289.22	1,710.52	-1,329.60	2,159.07	1.83	1.00	-1.53
9,300.00	91.44	313.83	7,291.84	1,779.32	-1,402.08	2,258.78	4.16	4.11	-0.65
9,400.00	87.69	314.40	7,291.58	1,848.83	-1,473.93	2,358.57	3.79	-3.75	0.57
9,500.00	87.56	314.24	7,295.75	1,918.48	-1,545.56	2,458.33	0.21	-0.14	-0.16
9,600.00	91.98	314.65	7,297.16	1,988.62	-1,616.77	2,558.16	4.44	4.42	0.41
9,700.00	89.10	314.10	7,295.83	2,058.60	-1,688.16	2,657.99	2.93	-2.88	-0.55
9,800.00	89.67	314.26	7,297.01	2,128.53	-1,759.63	2,757.85	0.59	0.57	0.16
9,900.00	89.80	313.56	7,297.35	2,198.02	-1,831.54	2,857.67	0.71	0.13	-0.69
9,967.00	89.50	313.50	7,297.94	2,244.22	-1,880.06	2,924.52	0.46	-0.45	-0.10
10,000.00	86.88	313.21	7,298.98	2,266.86	-1,904.04	2,957.42	8.00	-7.95	-0.88
10,023.60	85.00	313.00	7,300.65	2,282.94	-1,921.23	2,980.89	8.00	-7.95	-0.89
10,100.00	87.29	313.00	7,305.79	2,334.93	-1,976.98	3,056.89	3.00	3.00	0.00
10,123.60	88.00	313.00	7,306.76	2,351.00	-1,994.22	3,080.40	3.00	3.00	0.00
10,200.00	88.82	313.00	7,308.87	2,403.09	-2,050.07	3,156.55	1.08	1.08	0.00
10,300.00	89.90	313.00	7,309.99	2,471.29	-2,123.20	3,256.25	1.08	1.08	0.00
10,309.52	90.00	313.00	7,310.00	2,477.78	-2,130.17	3,265.74	1.08	1.08	0.00
10,400.00	90.00	313.00	7,310.00	2,539.49	-2,196.34	3,355.95	0.00	0.00	0.00
10,500.00	90.00	313.00	7,310.00	2,607.69	-2,269.47	3,455.66	0.00	0.00	0.00
10,525.65	90.00	313.00	7,310.00	2,625.18	-2,288.23	3,481.23	0.00	0.00	0.00
10,591.99	90.00	314.99	7,310.00	2,671.25	-2,335.95	3,547.45	3.00	0.00	3.00
10,600.00	90.00	314.99	7,310.00	2,676.92	-2,341.62	3,555.45	0.00	0.00	0.00
10,700.00	90.00	314.99	7,310.00	2,747.62	-2,412.34	3,655.37	0.00	0.00	0.00
10,800.00	90.00	314.99	7,310.00	2,818.32	-2,483.07	3,755.28	0.00	0.00	0.00
10,900.00	90.00	314.99	7,310.00	2,889.01	-2,553.79	3,855.19	0.00	0.00	0.00
11,000.00	90.00	314.99	7,310.00	2,959.71	-2,624.51	3,955.10	0.00	0.00	0.00
11,100.00	90.00	314.99	7,310.00	3,030.41	-2,695.24	4,055.01	0.00	0.00	0.00
11,200.00	90.00	314.99	7,310.00	3,101.11	-2,765.96	4,154.93	0.00	0.00	0.00
11,300.00	90.00	314.99	7,310.00	3,171.81	-2,836.68	4,254.84	0.00	0.00	0.00
11,400.00	90.00	314.99	7,310.00	3,242.51	-2,907.40	4,354.75	0.00	0.00	0.00
11,500.00	90.00	314.99	7,310.00	3,313.21	-2,978.13	4,454.66	0.00	0.00	0.00
11,600.00	90.00	314.99	7,310.00	3,383.90	-3,048.85	4,554.57	0.00	0.00	0.00
11,700.00	90.00	314.99	7,310.00	3,454.60	-3,119.57	4,654.48	0.00	0.00	0.00
11,800.00	90.00	314.99	7,310.00	3,525.30	-3,190.30	4,754.40	0.00	0.00	0.00
11,900.00	90.00	314.99	7,310.00	3,596.00	-3,261.02	4,854.31	0.00	0.00	0.00
12,000.00	90.00	314.99	7,310.00	3,666.70	-3,331.74	4,954.22	0.00	0.00	0.00
12,100.00	90.00	314.99	7,310.00	3,737.40	-3,402.47	5,054.13	0.00	0.00	0.00
12,200.00	90.00	314.99	7,310.00	3,808.09	-3,473.19	5,154.04	0.00	0.00	0.00
12,300.00	90.00	314.99	7,310.00	3,878.79	-3,543.91	5,253.96	0.00	0.00	0.00
12,400.00	90.00	314.99	7,310.00	3,949.49	-3,614.63	5,353.87	0.00	0.00	0.00
12,500.00	90.00	314.99	7,310.00	4,020.19	-3,685.36	5,453.78	0.00	0.00	0.00

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Wellbore:	Sidetrack in Lateral	Survey Calculation Method:	Minimum Curvature
Design:	Plan to sidetrack	Database:	EDM

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Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (?/100ft)	Build Rate (?/100ft)	Turn Rate (?/100ft)
12,600.00	90.00	314.99	7,310.00	4,090.89	-3,756.08	5,553.69	0.00	0.00	0.00
12,700.00	90.00	314.99	7,310.00	4,161.59	-3,826.80	5,653.60	0.00	0.00	0.00
12,706.75	90.00	314.99	7,310.00	4,166.36	-3,831.58	5,660.35	0.00	0.00	0.00

Targets

Target Name

- hit/miss target	Dip Angle (deg)	Dip Dir. (deg)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
Randall Creek 2-29H (BI	0.00	0.00	7,290.00	4,166.36	-3,831.58	604,179.48	2,317,532.27	40° 59' 10.342 N	104° 20' 59.798 W
- plan misses target center by 20.00ft at 12706.75ft MD (7310.00 TVD, 4166.36 N, -3831.58 E)									
- Circle (radius 200.00)									

Casing Points

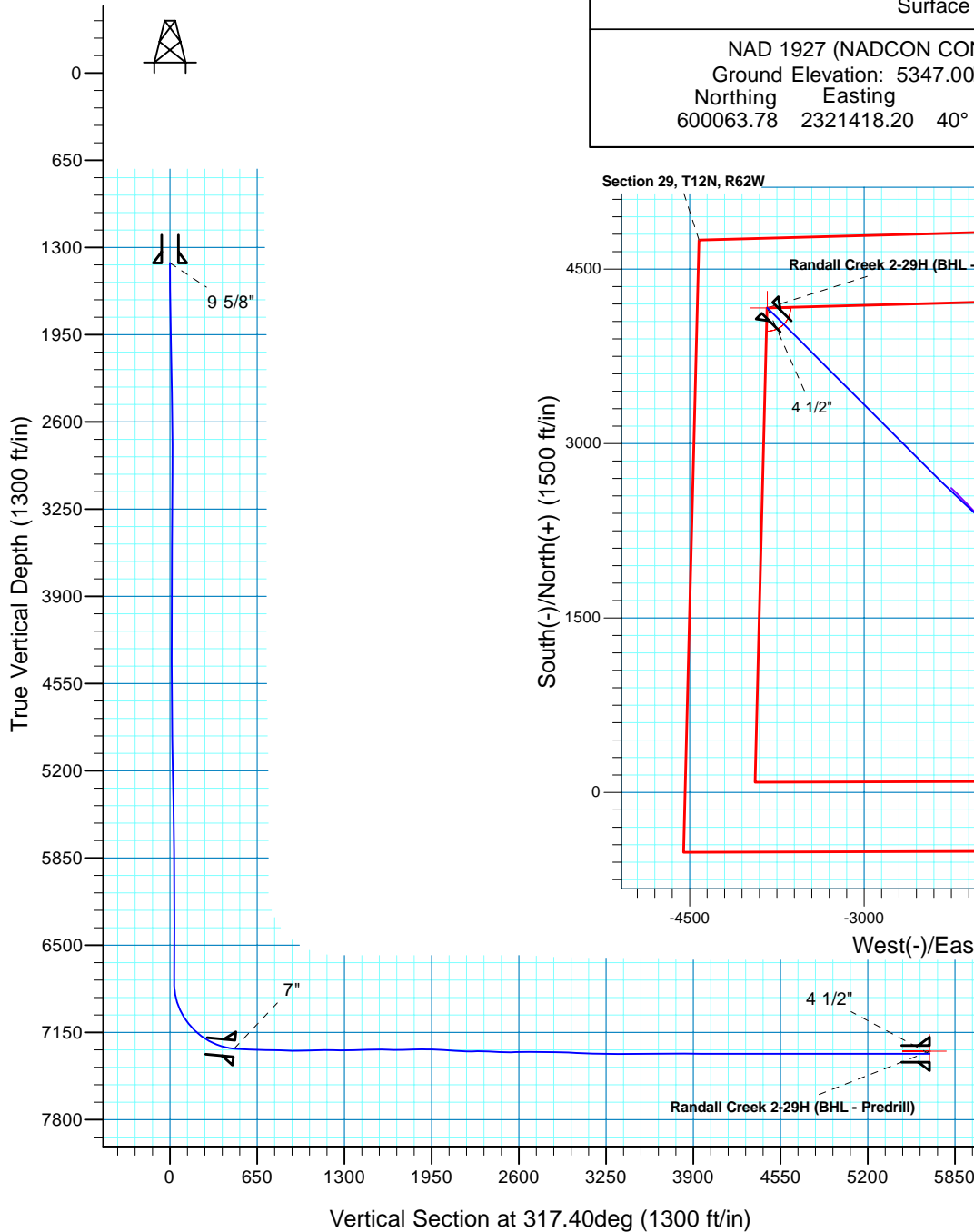
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
1,415.00	1,415.00	9 5/8"	9-5/8	13-1/2
7,514.00	7,271.22	7"	7	8-3/4
12,706.75	7,310.00	4 1/2"	4-1/2	6

Checked By: _____ Approved By: _____ Date: _____

Randall Creek 2-29H

Section 29 T12N R62W

Weld County, CO



Surface Location				
NAD 1927 (NADCON CONUS) Colorado North 501				
Ground Elevation: 5347.00RIG @ 5369.00ft (SST 53)				
Northing	Easting	Latitude	Longitude	
600063.78	2321418.20	40° 58' 29.179 N	104° 20' 9.841 W	

T M
 Azimuths to True North
 Magnetic North: 8.66°
 Magnetic Field
 Strength: 53510.4snT
 Dip Angle: 67.60°
 Date: 4/9/2011
 Model: IGRF200510

Project: DJ - Hereford Ranch
 Site: Randall Creek 02-29H
 Well: Randall Creek 2-29H
 Plan: Plan to sidetrack

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	9967.00	89.50	313.50	7297.94	2244.22	-1880.06	0.00	0.00	2924.52	
2	10023.60	85.00	313.00	7300.65	2282.94	-1921.23	8.00	-173.68	2980.89	
3	10123.60	88.00	313.00	7306.76	2351.00	-1994.22	3.00	0.00	3080.40	
4	10309.52	90.00	313.00	7310.00	2477.78	-2130.17	1.08	0.00	3265.74	
5	10525.65	90.00	313.00	7310.00	2625.18	-2288.23	0.00	0.00	3481.23	
6	10591.99	90.00	314.99	7310.00	2671.25	-2335.95	3.00	90.00	3547.45	Randall Creek 2-29H (BHL - Predrill)
7	12706.75	90.00	314.99	7310.00	4166.36	-3831.58	0.00	0.00	5660.35	Randall Creek 2-29H (BHL - Predrill)

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Randall Creek 2-29H (BHL - Predrill)	7290.00	4166.36	-3831.58	604179.48	2317532.27	40° 59' 10.342 N	104° 20' 59.798 W	Circle (Radius: 200.00)