

Dakota Exploration

Well Name: **Denny 2-11-11-59H**

Surface Location: Denny 2-11-11-59H Pad Sec.11-T11N-R59W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

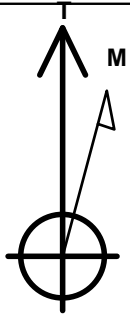
Ground Elevation: 5274.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1590922.46	3429297.18	40.945120	-103.946020	

RKB - 15' WELL @ 5289.0ft (RKB - 15')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
Setback 600'	1.0	-4332.1	-300.0	Polygon
BHL 600'FSL & 1945'FWL	6303.0	-4332.1	121.6	Point



Azimuths to True North
Magnetic North: 8.19°

Magnetic Field
Strength: 53287.5nT
Dip Angle: 67.55°
Date: 5/31/2013
Model: IGRF2010

Denny 2-11-11-59H Pad Sec.11-T11N-R59W
Denny 2-11-11-59H
Plan #1 (5-31-13)
9:27, June 03 2013

ANNOTATIONS

TVD	MD	Annotation
5730.0	5730.0	KOP
6303.0	6630.0	End of Build

South(-)/North(+) (1500 ft/in)

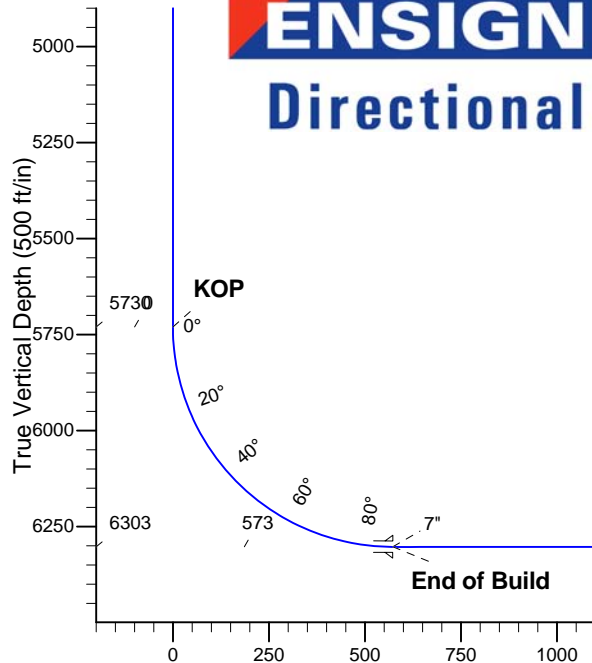
SHL 350'FNL & 1945'FWL

Denny 2-11-11-59H

West(-)/East(+) (1500 ft/in)

Setback 600'

BHL 600'FSL & 1945'FWL



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	5730.0	0.00	0.00	5730.0	0.0	0.0	0.00	0.00	0.0	
3	6630.0	90.00	178.39	6303.0	-572.7	16.1	10.00	178.39	573.0	
4	10390.9	90.00	178.39	6303.0	-4332.1	121.6	0.00	0.00	4333.8	BHL 600'FSL & 1945'FWL

BHL 600'FSL & 1945'FWL

Vertical Section at 178.39° (500 ft/in)



Dakota Exploration

SEC.11-T11N-R59W

Denny 2-11-11-59H Pad Sec.11-T11N-R59W

Denny 2-11-11-59H

Wellbore #1

Plan: Plan #1 (5-31-13)

Standard Planning Report

03 June, 2013

Database:	Landmark	Local Co-ordinate Reference:	Well Denny 2-11-11-59H
Company:	Dakota Exploration	TVD Reference:	WELL @ 5289.0ft (RKB - 15')
Project:	SEC.11-T11N-R59W	MD Reference:	WELL @ 5289.0ft (RKB - 15')
Site:	Denny 2-11-11-59H Pad Sec.11-T11N-R59W	North Reference:	True
Well:	Denny 2-11-11-59H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-31-13)		

Project	SEC.11-T11N-R59W, Weld County,CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site						Denny 2-11-11-59H Pad Sec.11-T11N-R59W											
Site Position:						Northing:			1,590,922.46ft			Latitude:			40.945120		
From:			Lat/Long			Easting:			3,429,297.18ft			Longitude:			-103.946020		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			1.00 °		

Well	Denny 2-11-11-59H					
Well Position	+N/-S	0.0 ft	Northing:	1,590,922.46 ft	Latitude:	40.945120
	+E/-W	0.0 ft	Easting:	3,429,297.18 ft	Longitude:	-103.946020
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,274.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/31/2013	8.19	67.55	53,288

Design	Plan #1 (5-31-13)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	178.39

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,730.0	0.00	0.00	5,730.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,630.0	90.00	178.39	6,303.0	-572.7	16.1	10.00	10.00	0.00	178.39	
10,390.9	90.00	178.39	6,303.0	-4,332.1	121.6	0.00	0.00	0.00	0.00	BHL 600'FSL & 194

Database:	Landmark	Local Co-ordinate Reference:	Well Denny 2-11-11-59H
Company:	Dakota Exploration	TVD Reference:	WELL @ 5289.0ft (RKB - 15')
Project:	SEC.11-T11N-R59W	MD Reference:	WELL @ 5289.0ft (RKB - 15')
Site:	Denny 2-11-11-59H Pad Sec.11-T11N-R59W	North Reference:	True
Well:	Denny 2-11-11-59H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-31-13)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
Setback 600'									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00

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Well:	Denny 2-11-11-59H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-31-13)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,730.0	0.00	0.00	5,730.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP									
5,800.0	7.00	178.39	5,799.8	-4.3	0.1	4.3	9.99	9.99	0.00
5,900.0	17.00	178.39	5,897.5	-25.0	0.7	25.0	10.00	10.00	0.00
6,000.0	27.00	178.39	5,990.1	-62.4	1.8	62.4	10.00	10.00	0.00
6,100.0	37.00	178.39	6,074.8	-115.3	3.2	115.3	10.00	10.00	0.00
6,200.0	47.00	178.39	6,149.0	-182.1	5.1	182.2	10.00	10.00	0.00
6,300.0	57.00	178.39	6,210.5	-260.8	7.3	260.9	10.00	10.00	0.00
6,400.0	67.00	178.39	6,257.4	-348.9	9.8	349.0	10.00	10.00	0.00
6,500.0	77.00	178.39	6,288.3	-443.9	12.5	444.0	10.00	10.00	0.00
6,600.0	87.00	178.39	6,302.2	-542.7	15.2	542.9	10.00	10.00	0.00
6,630.0	90.00	178.39	6,303.0	-572.7	16.1	572.9	10.00	10.00	0.00
End of Build - 7"									
6,700.0	90.00	178.39	6,303.0	-642.7	18.0	642.9	0.01	0.01	0.00
6,800.0	90.00	178.39	6,303.0	-742.6	20.8	742.9	0.00	0.00	0.00
6,900.0	90.00	178.39	6,303.0	-842.6	23.6	842.9	0.00	0.00	0.00
7,000.0	90.00	178.39	6,303.0	-942.5	26.5	942.9	0.00	0.00	0.00
7,100.0	90.00	178.39	6,303.0	-1,042.5	29.3	1,042.9	0.00	0.00	0.00
7,200.0	90.00	178.39	6,303.0	-1,142.5	32.1	1,142.9	0.00	0.00	0.00
7,300.0	90.00	178.39	6,303.0	-1,242.4	34.9	1,242.9	0.00	0.00	0.00
7,400.0	90.00	178.39	6,303.0	-1,342.4	37.7	1,342.9	0.00	0.00	0.00
7,500.0	90.00	178.39	6,303.0	-1,442.3	40.5	1,442.9	0.00	0.00	0.00
7,600.0	90.00	178.39	6,303.0	-1,542.3	43.3	1,542.9	0.00	0.00	0.00
7,700.0	90.00	178.39	6,303.0	-1,642.3	46.1	1,642.9	0.00	0.00	0.00
7,800.0	90.00	178.39	6,303.0	-1,742.2	48.9	1,742.9	0.00	0.00	0.00
7,900.0	90.00	178.39	6,303.0	-1,842.2	51.7	1,842.9	0.00	0.00	0.00
8,000.0	90.00	178.39	6,303.0	-1,942.2	54.5	1,942.9	0.00	0.00	0.00
8,100.0	90.00	178.39	6,303.0	-2,042.1	57.3	2,042.9	0.00	0.00	0.00
8,200.0	90.00	178.39	6,303.0	-2,142.1	60.1	2,142.9	0.00	0.00	0.00
8,300.0	90.00	178.39	6,303.0	-2,242.0	62.9	2,242.9	0.00	0.00	0.00
8,400.0	90.00	178.39	6,303.0	-2,342.0	65.7	2,342.9	0.00	0.00	0.00
8,500.0	90.00	178.39	6,303.0	-2,442.0	68.5	2,442.9	0.00	0.00	0.00
8,600.0	90.00	178.39	6,303.0	-2,541.9	71.3	2,542.9	0.00	0.00	0.00
8,700.0	90.00	178.39	6,303.0	-2,641.9	74.1	2,642.9	0.00	0.00	0.00
8,800.0	90.00	178.39	6,303.0	-2,741.8	76.9	2,742.9	0.00	0.00	0.00
8,900.0	90.00	178.39	6,303.0	-2,841.8	79.8	2,842.9	0.00	0.00	0.00
9,000.0	90.00	178.39	6,303.0	-2,941.8	82.6	2,942.9	0.00	0.00	0.00
9,100.0	90.00	178.39	6,303.0	-3,041.7	85.4	3,042.9	0.00	0.00	0.00
9,200.0	90.00	178.39	6,303.0	-3,141.7	88.2	3,142.9	0.00	0.00	0.00
9,300.0	90.00	178.39	6,303.0	-3,241.6	91.0	3,242.9	0.00	0.00	0.00
9,400.0	90.00	178.39	6,303.0	-3,341.6	93.8	3,342.9	0.00	0.00	0.00
9,500.0	90.00	178.39	6,303.0	-3,441.6	96.6	3,442.9	0.00	0.00	0.00
9,600.0	90.00	178.39	6,303.0	-3,541.5	99.4	3,542.9	0.00	0.00	0.00
9,700.0	90.00	178.39	6,303.0	-3,641.5	102.2	3,642.9	0.00	0.00	0.00
9,800.0	90.00	178.39	6,303.0	-3,741.4	105.0	3,742.9	0.00	0.00	0.00
9,900.0	90.00	178.39	6,303.0	-3,841.4	107.8	3,842.9	0.00	0.00	0.00
10,000.0	90.00	178.39	6,303.0	-3,941.4	110.6	3,942.9	0.00	0.00	0.00
10,100.0	90.00	178.39	6,303.0	-4,041.3	113.4	4,042.9	0.00	0.00	0.00

Plan Annotations					
	Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
			+N/-S (ft)	+E/-W (ft)	
	5,730.0	5,730.0	0.0	0.0	KOP
	6,630.0	6,303.0	-572.7	16.1	End of Build