Caerus Oil and Gas LLC

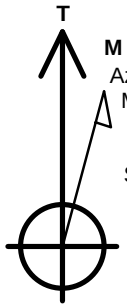
Well Name: **K&H Ranches 1-661-6004XAH**
Surface Location: K&H Ranches MN 1-661 North Half Pad Sec.1-T6N-R67W
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
Ground Elevation: 4750.0

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.0	0.0	1431548.30	3372148.53	40.510291	-104.161561	

Original Well Elev WELL @ 4780.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 100'FSL & 1414'FWL, Sec.1	1.0	0.0	0.0	Point
BHL 460'FNL & 2561'FWL, Sec.36	6147.0	9926.4	1043.7	Point
LPL 668'FSL & 2560'FWL, Sec.1	6171.5	574.4	1140.1	Point



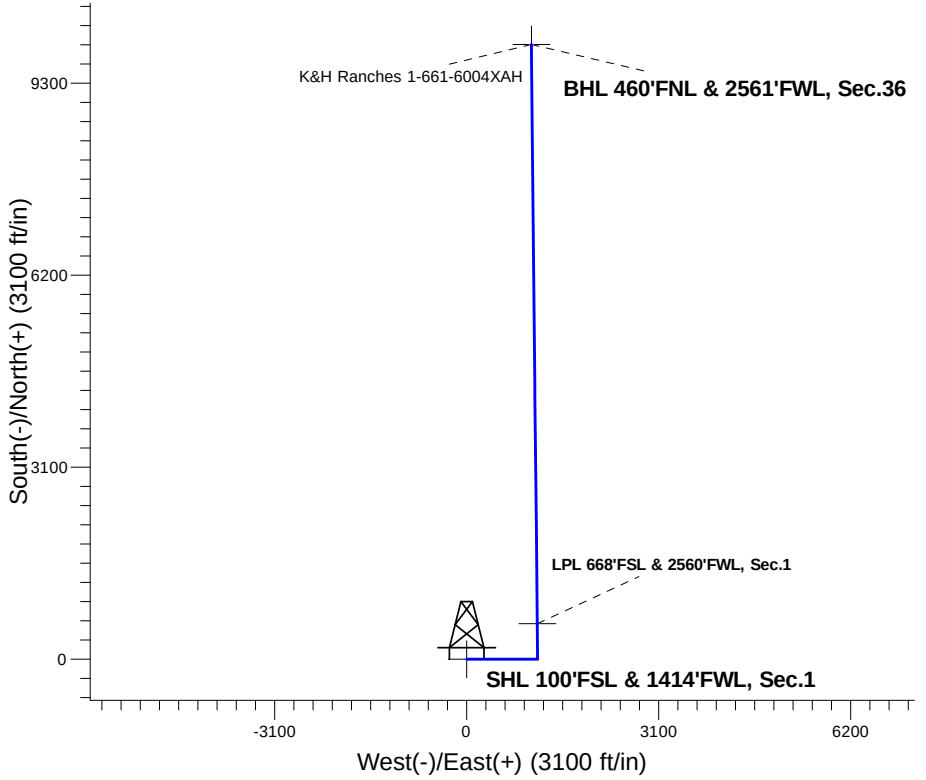
Azimuths to True North
Magnetic North: 7.91°

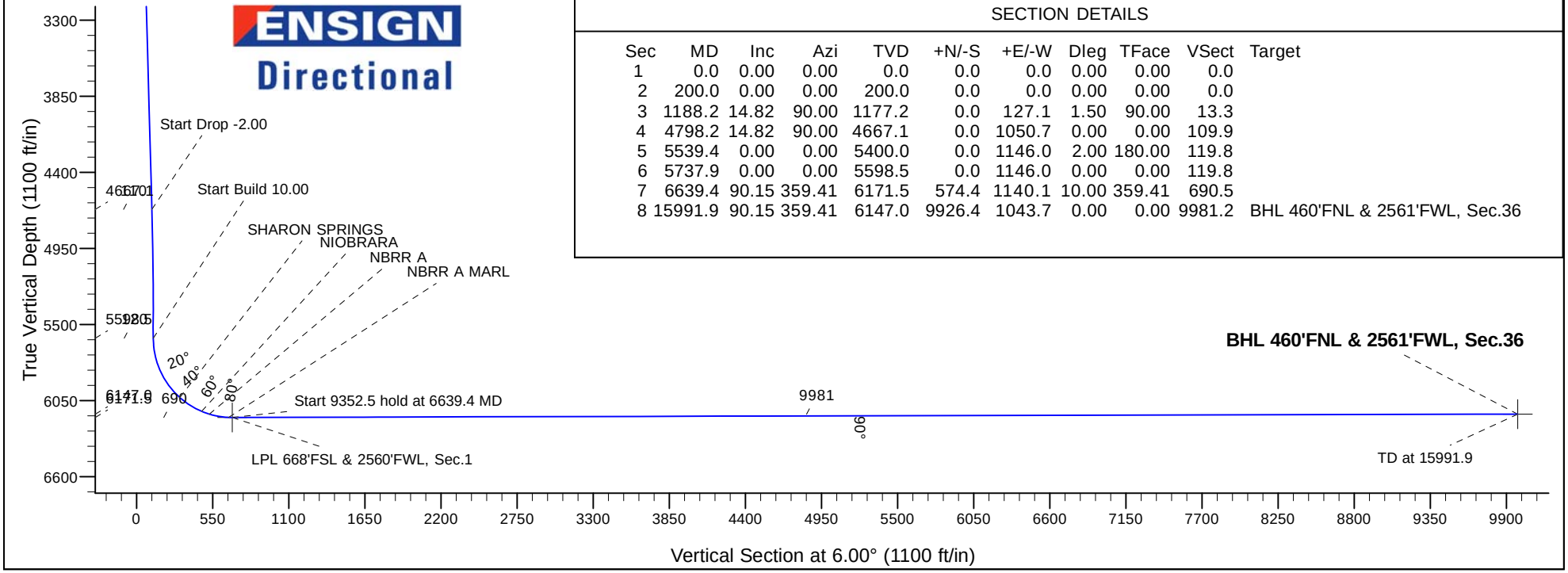
Magnetic Field
Strength: 52755.5snT
Dip Angle: 67.07°
Date: 2/23/2016
Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	Start Build 1.50
4667.1	4798.2	Start Drop -2.00
5598.5	5737.9	Start Build 10.00
6171.5	6639.4	Start 9352.5 hold at 6639.4 MD
6147.0	15991.9	TD at 15991.9

K&H Ranches MN 1-661 North Half Pad Sec.1-T6N-R67W
K&H Ranches 1-661-6004XAH
Plan #1 (2-23-16)
16:20, February 25 2016





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	1188.2	14.82	90.00	1177.2	0.0	127.1	1.50	90.00	13.3	
4	4798.2	14.82	90.00	4667.1	0.0	1050.7	0.00	0.00	109.9	
5	5539.4	0.00	0.00	5400.0	0.0	1146.0	2.00	180.00	119.8	
6	5737.9	0.00	0.00	5598.5	0.0	1146.0	0.00	0.00	119.8	
7	6639.4	90.15	359.41	6171.5	574.4	1140.1	10.00	359.41	690.5	
8	15991.9	90.15	359.41	6147.0	9926.4	1043.7	0.00	0.00	9981.2	BHL 460'FNL & 2561'FWL, Sec.36

ENSIGN Directional

Caerus Oil and Gas LLC

SEC.1-T6N-R61W
K&H Ranches MN 1-661 North Half Pad Sec.1-T6N-R67W
K&H Ranches 1-661-6004XAH

Wellbore #1

Plan: Plan #1 (2-23-16)

Standard Planning Report

25 February, 2016

Database:	US_EDM	**Local Co-ordinate Reference:**	Well K&H Ranches 1-661-6004XAH
Company:	Caerus Oil and Gas LLC	**TVD Reference:**	WELL @ 4780.0ft (Original Well Elev)
Project:	SEC.1-T6N-R61W	**MD Reference:**	WELL @ 4780.0ft (Original Well Elev)
Site:	K&H Ranches MN 1-661 North Half Pad Sec.1-T6N-R67W	**North Reference:**	True
Well:	K&H Ranches 1-661-6004XAH	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-23-16)		

Project SEC.1-T6N-R61W, 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 K&H Ranches MN 1-661 North Half Pad Sec.1-T6N-R67W

Site Position:		**Northing:**	1,431,544.20 usft	**Latitude:**	40.510288
From:	Lat/Long	**Easting:**	3,371,953.57 usft	**Longitude:**	-104.162263
Position Uncertainty:	0.0 ft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.86 °

Well K&H Ranches 1-661-6004XAH

Well Position	**+N/-S**	1.2 ft	**Northing:**	1,431,548.30 usft	**Latitude:**	40.510291
	+E/-W	195.0 ft	**Easting:**	3,372,148.53 usft	**Longitude:**	-104.161561
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	0.0 ft	**Ground Level:**	4,750.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/23/2016	7.91	67.07	52,756

Design Plan #1 (2-23-16)

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	6.00

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,188.2	14.82	90.00	1,177.2	0.0	127.1	1.50	1.50	0.00	90.00	
4,798.2	14.82	90.00	4,667.1	0.0	1,050.7	0.00	0.00	0.00	0.00	
5,539.4	0.00	0.00	5,400.0	0.0	1,146.0	2.00	-2.00	0.00	180.00	
5,737.9	0.00	0.00	5,598.5	0.0	1,146.0	0.00	0.00	0.00	0.00	
6,639.4	90.15	359.41	6,171.5	574.4	1,140.1	10.00	10.00	0.00	359.41	
15,991.9	90.15	359.41	6,147.0	9,926.4	1,043.7	0.00	0.00	0.00	0.00	BHL 460'FNL & 2561'

Database:	US_EDM	**Local Co-ordinate Reference:**	Well K&H Ranches 1-661-6004XAH
Company:	Caerus Oil and Gas LLC	**TVD Reference:**	WELL @ 4780.0ft (Original Well Elev)
Project:	SEC.1-T6N-R61W	**MD Reference:**	WELL @ 4780.0ft (Original Well Elev)
Site:	K&H Ranches MN 1-661 North Half Pad Sec.1-T6N-R67W	**North Reference:**	True
Well:	K&H Ranches 1-661-6004XAH	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-23-16)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
SHL 100'FSL & 1414'FWL, Sec.1									
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
Start Build 1.50									
300.0	1.50	90.00	300.0	0.0	1.3	0.1	1.50	1.50	0.00
400.0	3.00	90.00	399.9	0.0	5.2	0.5	1.50	1.50	0.00
500.0	4.50	90.00	499.7	0.0	11.8	1.2	1.50	1.50	0.00
600.0	6.00	90.00	599.3	0.0	20.9	2.2	1.50	1.50	0.00
700.0	7.50	90.00	698.6	0.0	32.7	3.4	1.50	1.50	0.00
800.0	9.00	90.00	797.5	0.0	47.0	4.9	1.50	1.50	0.00
900.0	10.50	90.00	896.1	0.0	64.0	6.7	1.50	1.50	0.00
1,000.0	12.00	90.00	994.2	0.0	83.5	8.7	1.50	1.50	0.00
1,100.0	13.50	90.00	1,091.7	0.0	105.5	11.0	1.50	1.50	0.00
1,188.2	14.82	90.00	1,177.2	0.0	127.1	13.3	1.50	1.50	0.00
1,200.0	14.82	90.00	1,188.6	0.0	130.1	13.6	0.00	0.00	0.00
1,300.0	14.82	90.00	1,285.3	0.0	155.7	16.3	0.00	0.00	0.00
1,400.0	14.82	90.00	1,382.0	0.0	181.3	19.0	0.00	0.00	0.00
1,500.0	14.82	90.00	1,478.6	0.0	206.9	21.6	0.00	0.00	0.00
1,600.0	14.82	90.00	1,575.3	0.0	232.5	24.3	0.00	0.00	0.00
1,700.0	14.82	90.00	1,672.0	0.0	258.1	27.0	0.00	0.00	0.00
1,800.0	14.82	90.00	1,768.7	0.0	283.6	29.7	0.00	0.00	0.00
1,900.0	14.82	90.00	1,865.3	0.0	309.2	32.3	0.00	0.00	0.00
2,000.0	14.82	90.00	1,962.0	0.0	334.8	35.0	0.00	0.00	0.00
2,100.0	14.82	90.00	2,058.7	0.0	360.4	37.7	0.00	0.00	0.00
2,200.0	14.82	90.00	2,155.3	0.0	386.0	40.4	0.00	0.00	0.00
2,300.0	14.82	90.00	2,252.0	0.0	411.5	43.0	0.00	0.00	0.00
2,400.0	14.82	90.00	2,348.7	0.0	437.1	45.7	0.00	0.00	0.00
2,500.0	14.82	90.00	2,445.4	0.0	462.7	48.4	0.00	0.00	0.00
2,600.0	14.82	90.00	2,542.0	0.0	488.3	51.1	0.00	0.00	0.00
2,700.0	14.82	90.00	2,638.7	0.0	513.9	53.7	0.00	0.00	0.00
2,800.0	14.82	90.00	2,735.4	0.0	539.5	56.4	0.00	0.00	0.00
2,900.0	14.82	90.00	2,832.0	0.0	565.0	59.1	0.00	0.00	0.00
3,000.0	14.82	90.00	2,928.7	0.0	590.6	61.8	0.00	0.00	0.00
3,100.0	14.82	90.00	3,025.4	0.0	616.2	64.4	0.00	0.00	0.00
3,200.0	14.82	90.00	3,122.1	0.0	641.8	67.1	0.00	0.00	0.00
3,244.4	14.82	90.00	3,165.0	0.0	653.2	68.3	0.00	0.00	0.00
RICHARDS SD									
3,300.0	14.82	90.00	3,218.7	0.0	667.4	69.8	0.00	0.00	0.00
3,400.0	14.82	90.00	3,315.4	0.0	693.0	72.5	0.00	0.00	0.00
3,500.0	14.82	90.00	3,412.1	0.0	718.5	75.1	0.00	0.00	0.00
3,600.0	14.82	90.00	3,508.8	0.0	744.1	77.8	0.00	0.00	0.00
3,700.0	14.82	90.00	3,605.4	0.0	769.7	80.5	0.00	0.00	0.00
3,800.0	14.82	90.00	3,702.1	0.0	795.3	83.2	0.00	0.00	0.00
3,900.0	14.82	90.00	3,798.8	0.0	820.9	85.8	0.00	0.00	0.00
4,000.0	14.82	90.00	3,895.4	0.0	846.5	88.5	0.00	0.00	0.00
4,100.0	14.82	90.00	3,992.1	0.0	872.0	91.2	0.00	0.00	0.00
4,200.0	14.82	90.00	4,088.8	0.0	897.6	93.9	0.00	0.00	0.00
4,300.0	14.82	90.00	4,185.5	0.0	923.2	96.5	0.00	0.00	0.00
4,400.0	14.82	90.00	4,282.1	0.0	948.8	99.2	0.00	0.00	0.00
4,500.0	14.82	90.00	4,378.8	0.0	974.4	101.9	0.00	0.00	0.00
4,600.0	14.82	90.00	4,475.5	0.0	1,000.0	104.6	0.00	0.00	0.00

Database:	US_EDM	**Local Co-ordinate Reference:**	Well K&H Ranches 1-661-6004XAH
Company:	Caerus Oil and Gas LLC	**TVD Reference:**	WELL @ 4780.0ft (Original Well Elev)
Project:	SEC.1-T6N-R61W	**MD Reference:**	WELL @ 4780.0ft (Original Well Elev)
Site:	K&H Ranches MN 1-661 North Half Pad Sec.1-T6N-R67W	**North Reference:**	True
Well:	K&H Ranches 1-661-6004XAH	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-23-16)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,700.0	14.82	90.00	4,572.1	0.0	1,025.5	107.2	0.00	0.00	0.00
4,798.2	14.82	90.00	4,667.1	0.0	1,050.7	109.9	0.00	0.00	0.00
Start Drop -2.00									
4,800.0	14.79	90.00	4,668.8	0.0	1,051.1	109.9	1.97	-1.97	0.00
4,900.0	12.79	90.00	4,765.9	0.0	1,074.9	112.4	2.00	-2.00	0.00
5,000.0	10.79	90.00	4,863.8	0.0	1,095.4	114.5	2.00	-2.00	0.00
5,100.0	8.79	90.00	4,962.4	0.0	1,112.4	116.3	2.00	-2.00	0.00
5,200.0	6.79	90.00	5,061.4	0.0	1,125.9	117.7	2.00	-2.00	0.00
5,300.0	4.79	90.00	5,160.9	0.0	1,136.0	118.8	2.00	-2.00	0.00
5,400.0	2.79	90.00	5,260.7	0.0	1,142.6	119.5	2.00	-2.00	0.00
5,500.0	0.79	90.00	5,360.6	0.0	1,145.7	119.8	2.00	-2.00	0.00
5,539.4	0.00	0.00	5,400.0	0.0	1,146.0	119.8	2.00	-2.00	0.00
5,600.0	0.00	0.00	5,460.6	0.0	1,146.0	119.8	0.00	0.00	0.00
5,700.0	0.00	0.00	5,560.6	0.0	1,146.0	119.8	0.00	0.00	0.00
5,737.9	0.00	0.00	5,598.5	0.0	1,146.0	119.8	0.00	0.00	0.00
Start Build 10.00									
5,800.0	6.21	359.41	5,660.5	3.4	1,146.0	123.2	10.00	10.00	0.00
5,900.0	16.21	359.41	5,758.5	22.8	1,145.8	142.5	10.00	10.00	0.00
6,000.0	26.21	359.41	5,851.6	58.9	1,145.4	178.4	10.00	10.00	0.00
6,100.0	36.21	359.41	5,937.0	110.7	1,144.9	229.8	10.00	10.00	0.00
6,200.0	46.21	359.41	6,012.1	176.5	1,144.2	295.1	10.00	10.00	0.00
6,221.9	48.40	359.41	6,027.0	192.6	1,144.0	311.1	10.00	10.00	0.00
SHARON SPRINGS									
6,300.0	56.21	359.41	6,074.7	254.3	1,143.4	372.5	10.00	10.00	0.00
6,400.0	66.21	359.41	6,122.8	341.8	1,142.5	459.4	10.00	10.00	0.00
6,410.6	67.27	359.41	6,127.0	351.6	1,142.4	469.1	10.00	10.00	0.00
NIOBRARA									
6,469.8	73.19	359.41	6,147.0	407.2	1,141.8	524.4	10.00	10.00	0.00
NBRR A									
6,500.0	76.21	359.41	6,155.0	436.4	1,141.5	553.3	10.00	10.00	0.00
6,600.0	86.21	359.41	6,170.2	535.1	1,140.5	651.4	10.00	10.00	0.00
6,614.3	87.64	359.41	6,171.0	549.3	1,140.3	665.5	10.00	10.00	0.00
NBRR A MARL									
6,639.4	90.15	359.41	6,171.5	574.4	1,140.1	690.5	10.00	10.00	0.00
Start 9352.5 hold at 6639.4 MD - LPL 668'FSL & 2560'FWL, Sec.1									
6,700.0	90.15	359.41	6,171.3	635.0	1,139.5	750.7	0.01	0.01	0.00
6,800.0	90.15	359.41	6,171.1	735.0	1,138.4	850.0	0.00	0.00	0.00
6,900.0	90.15	359.41	6,170.8	835.0	1,137.4	949.4	0.00	0.00	0.00
7,000.0	90.15	359.41	6,170.5	935.0	1,136.4	1,048.7	0.00	0.00	0.00
7,100.0	90.15	359.41	6,170.3	1,035.0	1,135.3	1,148.1	0.00	0.00	0.00
7,200.0	90.15	359.41	6,170.0	1,135.0	1,134.3	1,247.4	0.00	0.00	0.00
7,300.0	90.15	359.41	6,169.8	1,235.0	1,133.3	1,346.7	0.00	0.00	0.00
7,400.0	90.15	359.41	6,169.5	1,335.0	1,132.2	1,446.1	0.00	0.00	0.00
7,500.0	90.15	359.41	6,169.2	1,435.0	1,131.2	1,545.4	0.00	0.00	0.00
7,600.0	90.15	359.41	6,169.0	1,535.0	1,130.2	1,644.7	0.00	0.00	0.00
7,700.0	90.15	359.41	6,168.7	1,635.0	1,129.1	1,744.1	0.00	0.00	0.00
7,800.0	90.15	359.41	6,168.4	1,735.0	1,128.1	1,843.4	0.00	0.00	0.00
7,900.0	90.15	359.41	6,168.2	1,835.0	1,127.1	1,942.8	0.00	0.00	0.00
8,000.0	90.15	359.41	6,167.9	1,935.0	1,126.0	2,042.1	0.00	0.00	0.00
8,100.0	90.15	359.41	6,167.7	2,035.0	1,125.0	2,141.4	0.00	0.00	0.00
8,200.0	90.15	359.41	6,167.4	2,135.0	1,124.0	2,240.8	0.00	0.00	0.00
8,300.0	90.15	359.41	6,167.1	2,234.9	1,123.0	2,340.1	0.00	0.00	0.00

Database:	US_EDM	**Local Co-ordinate Reference:**	Well K&H Ranches 1-661-6004XAH
Company:	Caerus Oil and Gas LLC	**TVD Reference:**	WELL @ 4780.0ft (Original Well Elev)
Project:	SEC.1-T6N-R61W	**MD Reference:**	WELL @ 4780.0ft (Original Well Elev)
Site:	K&H Ranches MN 1-661 North Half Pad Sec.1-T6N-R67W	**North Reference:**	True
Well:	K&H Ranches 1-661-6004XAH	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-23-16)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,400.0	90.15	359.41	6,166.9	2,334.9	1,121.9	2,439.5	0.00	0.00	0.00
8,500.0	90.15	359.41	6,166.6	2,434.9	1,120.9	2,538.8	0.00	0.00	0.00
8,600.0	90.15	359.41	6,166.4	2,534.9	1,119.9	2,638.1	0.00	0.00	0.00
8,700.0	90.15	359.41	6,166.1	2,634.9	1,118.8	2,737.5	0.00	0.00	0.00
8,800.0	90.15	359.41	6,165.8	2,734.9	1,117.8	2,836.8	0.00	0.00	0.00
8,900.0	90.15	359.41	6,165.6	2,834.9	1,116.8	2,936.1	0.00	0.00	0.00
9,000.0	90.15	359.41	6,165.3	2,934.9	1,115.7	3,035.5	0.00	0.00	0.00
9,100.0	90.15	359.41	6,165.0	3,034.9	1,114.7	3,134.8	0.00	0.00	0.00
9,200.0	90.15	359.41	6,164.8	3,134.9	1,113.7	3,234.2	0.00	0.00	0.00
9,300.0	90.15	359.41	6,164.5	3,234.9	1,112.6	3,333.5	0.00	0.00	0.00
9,400.0	90.15	359.41	6,164.3	3,334.9	1,111.6	3,432.8	0.00	0.00	0.00
9,500.0	90.15	359.41	6,164.0	3,434.9	1,110.6	3,532.2	0.00	0.00	0.00
9,600.0	90.15	359.41	6,163.7	3,534.9	1,109.6	3,631.5	0.00	0.00	0.00
9,700.0	90.15	359.41	6,163.5	3,634.9	1,108.5	3,730.8	0.00	0.00	0.00
9,800.0	90.15	359.41	6,163.2	3,734.9	1,107.5	3,830.2	0.00	0.00	0.00
9,900.0	90.15	359.41	6,162.9	3,834.9	1,106.5	3,929.5	0.00	0.00	0.00
10,000.0	90.15	359.41	6,162.7	3,934.8	1,105.4	4,028.9	0.00	0.00	0.00
10,100.0	90.15	359.41	6,162.4	4,034.8	1,104.4	4,128.2	0.00	0.00	0.00
10,200.0	90.15	359.41	6,162.2	4,134.8	1,103.4	4,227.5	0.00	0.00	0.00
10,300.0	90.15	359.41	6,161.9	4,234.8	1,102.3	4,326.9	0.00	0.00	0.00
10,400.0	90.15	359.41	6,161.6	4,334.8	1,101.3	4,426.2	0.00	0.00	0.00
10,500.0	90.15	359.41	6,161.4	4,434.8	1,100.3	4,525.6	0.00	0.00	0.00
10,600.0	90.15	359.41	6,161.1	4,534.8	1,099.2	4,624.9	0.00	0.00	0.00
10,700.0	90.15	359.41	6,160.9	4,634.8	1,098.2	4,724.2	0.00	0.00	0.00
10,800.0	90.15	359.41	6,160.6	4,734.8	1,097.2	4,823.6	0.00	0.00	0.00
10,900.0	90.15	359.41	6,160.3	4,834.8	1,096.1	4,922.9	0.00	0.00	0.00
11,000.0	90.15	359.41	6,160.1	4,934.8	1,095.1	5,022.2	0.00	0.00	0.00
11,100.0	90.15	359.41	6,159.8	5,034.8	1,094.1	5,121.6	0.00	0.00	0.00
11,200.0	90.15	359.41	6,159.5	5,134.8	1,093.1	5,220.9	0.00	0.00	0.00
11,300.0	90.15	359.41	6,159.3	5,234.8	1,092.0	5,320.3	0.00	0.00	0.00
11,400.0	90.15	359.41	6,159.0	5,334.8	1,091.0	5,419.6	0.00	0.00	0.00
11,500.0	90.15	359.41	6,158.8	5,434.8	1,090.0	5,518.9	0.00	0.00	0.00
11,600.0	90.15	359.41	6,158.5	5,534.8	1,088.9	5,618.3	0.00	0.00	0.00
11,700.0	90.15	359.41	6,158.2	5,634.8	1,087.9	5,717.6	0.00	0.00	0.00
11,800.0	90.15	359.41	6,158.0	5,734.7	1,086.9	5,817.0	0.00	0.00	0.00
11,900.0	90.15	359.41	6,157.7	5,834.7	1,085.8	5,916.3	0.00	0.00	0.00
12,000.0	90.15	359.41	6,157.5	5,934.7	1,084.8	6,015.6	0.00	0.00	0.00
12,100.0	90.15	359.41	6,157.2	6,034.7	1,083.8	6,115.0	0.00	0.00	0.00
12,200.0	90.15	359.41	6,156.9	6,134.7	1,082.7	6,214.3	0.00	0.00	0.00
12,300.0	90.15	359.41	6,156.7	6,234.7	1,081.7	6,313.6	0.00	0.00	0.00
12,400.0	90.15	359.41	6,156.4	6,334.7	1,080.7	6,413.0	0.00	0.00	0.00
12,500.0	90.15	359.41	6,156.1	6,434.7	1,079.7	6,512.3	0.00	0.00	0.00
12,600.0	90.15	359.41	6,155.9	6,534.7	1,078.6	6,611.7	0.00	0.00	0.00
12,700.0	90.15	359.41	6,155.6	6,634.7	1,077.6	6,711.0	0.00	0.00	0.00
12,800.0	90.15	359.41	6,155.4	6,734.7	1,076.6	6,810.3	0.00	0.00	0.00
12,900.0	90.15	359.41	6,155.1	6,834.7	1,075.5	6,909.7	0.00	0.00	0.00
13,000.0	90.15	359.41	6,154.8	6,934.7	1,074.5	7,009.0	0.00	0.00	0.00
13,100.0	90.15	359.41	6,154.6	7,034.7	1,073.5	7,108.4	0.00	0.00	0.00
13,200.0	90.15	359.41	6,154.3	7,134.7	1,072.4	7,207.7	0.00	0.00	0.00
13,300.0	90.15	359.41	6,154.0	7,234.7	1,071.4	7,307.0	0.00	0.00	0.00
13,400.0	90.15	359.41	6,153.8	7,334.7	1,070.4	7,406.4	0.00	0.00	0.00
13,500.0	90.15	359.41	6,153.5	7,434.7	1,069.3	7,505.7	0.00	0.00	0.00
13,600.0	90.15	359.41	6,153.3	7,534.6	1,068.3	7,605.0	0.00	0.00	0.00

Database:	US_EDM	**Local Co-ordinate Reference:**	Well K&H Ranches 1-661-6004XAH
Company:	Caerus Oil and Gas LLC	**TVD Reference:**	WELL @ 4780.0ft (Original Well Elev)
Project:	SEC.1-T6N-R61W	**MD Reference:**	WELL @ 4780.0ft (Original Well Elev)
Site:	K&H Ranches MN 1-661 North Half Pad Sec.1-T6N-R67W	**North Reference:**	True
Well:	K&H Ranches 1-661-6004XAH	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-23-16)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,700.0	90.15	359.41	6,153.0	7,634.6	1,067.3	7,704.4	0.00	0.00	0.00
13,800.0	90.15	359.41	6,152.7	7,734.6	1,066.3	7,803.7	0.00	0.00	0.00
13,900.0	90.15	359.41	6,152.5	7,834.6	1,065.2	7,903.1	0.00	0.00	0.00
14,000.0	90.15	359.41	6,152.2	7,934.6	1,064.2	8,002.4	0.00	0.00	0.00
14,100.0	90.15	359.41	6,152.0	8,034.6	1,063.2	8,101.7	0.00	0.00	0.00
14,200.0	90.15	359.41	6,151.7	8,134.6	1,062.1	8,201.1	0.00	0.00	0.00
14,300.0	90.15	359.41	6,151.4	8,234.6	1,061.1	8,300.4	0.00	0.00	0.00
14,400.0	90.15	359.41	6,151.2	8,334.6	1,060.1	8,399.8	0.00	0.00	0.00
14,500.0	90.15	359.41	6,150.9	8,434.6	1,059.0	8,499.1	0.00	0.00	0.00
14,600.0	90.15	359.41	6,150.6	8,534.6	1,058.0	8,598.4	0.00	0.00	0.00
14,700.0	90.15	359.41	6,150.4	8,634.6	1,057.0	8,697.8	0.00	0.00	0.00
14,800.0	90.15	359.41	6,150.1	8,734.6	1,055.9	8,797.1	0.00	0.00	0.00
14,900.0	90.15	359.41	6,149.9	8,834.6	1,054.9	8,896.4	0.00	0.00	0.00
15,000.0	90.15	359.41	6,149.6	8,934.6	1,053.9	8,995.8	0.00	0.00	0.00
15,100.0	90.15	359.41	6,149.3	9,034.6	1,052.8	9,095.1	0.00	0.00	0.00
15,200.0	90.15	359.41	6,149.1	9,134.6	1,051.8	9,194.5	0.00	0.00	0.00
15,300.0	90.15	359.41	6,148.8	9,234.5	1,050.8	9,293.8	0.00	0.00	0.00
15,400.0	90.15	359.41	6,148.5	9,334.5	1,049.8	9,393.1	0.00	0.00	0.00
15,500.0	90.15	359.41	6,148.3	9,434.5	1,048.7	9,492.5	0.00	0.00	0.00
15,600.0	90.15	359.41	6,148.0	9,534.5	1,047.7	9,591.8	0.00	0.00	0.00
15,700.0	90.15	359.41	6,147.8	9,634.5	1,046.7	9,691.2	0.00	0.00	0.00
15,800.0	90.15	359.41	6,147.5	9,734.5	1,045.6	9,790.5	0.00	0.00	0.00
15,900.0	90.15	359.41	6,147.2	9,834.5	1,044.6	9,889.8	0.00	0.00	0.00
15,991.9	90.15	359.41	6,147.0	9,926.4	1,043.7	9,981.1	0.00	0.00	0.00
TD at 15991.9 - BHL 460'FNL & 2561'FWL, Sec.36									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL 100'FSL & 1414'FW - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,431,548.31	3,372,148.53	40.510291	-104.161561
BHL 460'FNL & 2561'FW - plan hits target center - Point	0.00	0.00	6,147.0	9,926.4	1,043.7	1,441,489.02	3,373,042.21	40.537538	-104.157807
LPL 668'FSL & 2560'FW - plan hits target center - Point	0.00	0.00	6,171.5	574.4	1,140.1	1,432,139.82	3,373,279.79	40.511868	-104.157461