

**CONFIDENTIAL****WELL COMPLETION FORM****WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # **34574**
 Name: **Shell Gulf of Mexico Inc.**
 Address 1: **150 N DAIRY-ASHFORD (77079)**
 Address 2: **PO BOX 576 (77001-0576)**
 City: **HOUSTON** State: **TX** Zip: **77001 + 0576**
 Contact Person: **Damonica Pierson**
 Phone: (**832**) **337-2172**
 CONTRACTOR: License # **34718**
 Name: **Nabors Drilling USA, LP**
 Wellsite Geologist: **Abby Woody**
 Purchaser:

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
 Gas D&A ENHR SIGW
 OG GSW Temp. Abd.
 CM (Coal Bed Methane)
 Cathodic Other (Core. Expl., etc.):

If Workover/Re-entry: Old Well Info as follows:

Operator: _____
 Well Name: _____
 Original Comp. Date: _____ Original Total Depth: _____
 Deepening Re-perf. Conv. to ENHR Conv. to SWD
 Conv. to GSW
 Plug Back: _____ Plug Back Total Depth _____
 Commingled Permit #: _____
 Dual Completion Permit #: _____
 SWD Permit #: _____
 ENHR Permit #: _____
 GSW Permit #: _____

10/07/2012	11/19/2012	01/05/2013
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - **15-077-21852-01-00**
 Spot Description: _____
W2 SW SE SE Sec. **10** Twp. **33** S. R. **7** East West
330 Feet from North / South Line of Section
1060 Feet from East / West Line of Section
 Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
 County: **Harper**
 Lease Name: **HUDGENS 3307** Well #: **10-1H**
 Field Name: **Wildcat**
 Producing Formation: **Mississippi**
 Elevation: Ground: **1365** Kelly Bushing: **1389**
 Total Depth: **8740** Plug Back Total Depth: _____
 Amount of Surface Pipe Set and Cemented at: **476** Feet
 Multiple Stage Cementing Collar Used? Yes No
 If yes, show depth set: _____ Feet
 If Alternate II completion, cement circulated from: _____
 feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: **0** ppm Fluid volume: **0** bbls
 Dewatering method used: **Hauled to Disposal**
 Location of fluid disposal if hauled offsite:
 Operator Name: **Plumb Thicket Landfill**
 Lease Name: **N/A** License #: **99999**
 Quarter **SW** Sec. **4** Twp. **31** S. R. **6** East West
 County: **Harper** Permit #: **KDHE Permit No. 0842**

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically**KCC Office Use ONLY**

Letter of Confidentiality Received
 Date: **07/19/2012**
 Confidential Release Date: _____
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
 ALT I II III Approved by: **NAOMI JAMES** Date: **01/23/2013**

Shell Exploration & Production Co. Inc.

Harper Co. KS (NAD-27)

Sec 10-T33S-R07W

Hudgens 3307 #10-1H

9858433

Wellbore #1

Design: Wellbore #1

Sperry Drilling Services

Combo Report With Grid North & True North

08 December, 2012

Surface UWI : 9858433

Well Coordinates: 187,889.07 N, 2,127,946.20 E (37° 10' 54.66" N, 098° 03' 39.04" W)

Ground Level: 1,363.00 ft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Centered on Well Hudgens 3307 #10-1H

WELL @ 1394.70R (Nabors 102 (31.7'))

N

True

API US New

Version: 2003.21 Build: 46

HALLIBURTON

HALLIBURTON**Design Report for Hudgens 3307 #10-1H - Wellbore #1**

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	True Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates		Map Coordinates		Dogleg Rate (°/100ft)	Vertical Section (ft)	Comments
						Northing (ft)	Easting (ft)	Northing (ft)	Easting (ft)			
0.00	0.00	359.73	0.00	-1,394.70	0.00	0.00 N	0.00 E	187,889.07	2,127,948.20	0.00	0.00	
157.00	1.42	12.60	12.87	-1,237.72	156.98	1.90 N	0.43 E	187,890.97	2,127,946.62	0.90	1.94	Start MWD
191.00	1.94	9.93	10.20	-1,203.73	190.97	2.87 N	0.63 E	187,891.95	2,127,946.82	1.55	2.93	
250.00	3.55	10.77	11.04	-1,144.80	249.90	5.65 N	1.16 E	187,894.72	2,127,947.33	2.73	5.76	
280.00	4.20	9.23	9.50	-1,114.87	279.83	7.64 N	1.51 E	187,896.72	2,127,947.68	2.19	7.78	
311.00	5.16	10.74	11.01	-1,083.97	310.73	10.13 N	1.97 E	187,899.21	2,127,948.12	3.12	10.31	
341.00	5.91	10.05	10.32	-1,054.11	340.59	12.98 N	2.50 E	187,902.06	2,127,948.64	2.51	13.20	
423.00	6.69	7.09	7.36	-972.61	422.09	21.87 N	3.87 E	187,910.95	2,127,949.97	1.03	22.20	
544.00	6.92	6.42	6.69	-852.46	542.24	36.10 N	5.62 E	187,925.19	2,127,951.85	0.20	36.53	
605.00	7.90	12.68	12.95	-791.97	602.73	43.83 N	6.99 E	187,932.93	2,127,952.98	2.08	44.38	
695.00	9.25	32.42	32.69	-702.96	691.74	55.95 N	12.28 E	187,945.08	2,127,958.22	3.57	57.14	
786.00	10.24	46.88	47.15	-613.26	781.44	67.61 N	22.17 E	187,956.78	2,127,968.05	2.89	70.10	
884.00	11.24	57.80	58.07	-516.97	877.73	78.59 N	36.66 E	187,967.83	2,127,982.49	2.31	83.06	
976.00	12.47	63.96	64.23	-426.93	967.77	87.65 N	53.22 E	187,976.97	2,127,999.00	1.92	94.42	
1,070.00	14.00	66.62	66.89	-335.43	1,059.27	96.52 N	72.82 E	187,985.93	2,128,018.56	1.75	106.03	
1,164.00	16.28	69.96	70.23	-244.69	1,150.01	105.44 N	95.68 E	187,994.96	2,128,041.38	2.60	118.16	
1,259.00	16.00	71.11	71.38	-153.44	1,241.26	114.13 N	120.61 E	188,003.76	2,128,066.27	0.45	130.36	
1,353.00	14.64	67.94	68.21	-82.78	1,331.92	122.67 N	143.92 E	188,012.42	2,128,089.54	1.70	142.19	
1,448.00	14.53	66.73	67.00	29.16	1,423.86	131.79 N	166.04 E	188,021.64	2,128,111.62	0.34	154.40	
1,637.00	15.42	64.30	64.57	211.74	1,606.44	151.84 N	210.56 E	188,041.90	2,128,156.04	0.58	180.68	
1,826.00	16.68	73.71	73.98	393.40	1,788.10	170.12 N	259.33 E	188,060.41	2,128,204.73	1.53	205.81	
2,015.00	14.07	72.93	73.20	575.62	1,970.32	184.25 N	307.40 E	188,074.76	2,128,252.73	1.39	226.74	
2,204.00	13.79	72.33	72.60	759.06	2,153.76	197.62 N	350.89 E	188,088.34	2,128,296.16	0.17	246.26	
2,393.00	12.46	71.41	71.68	943.12	2,337.82	210.77 N	391.74 E	188,101.68	2,128,336.95	0.71	265.18	
2,582.00	11.89	68.04	68.31	1,127.87	2,522.57	224.37 N	429.19 E	188,115.46	2,128,374.33	0.48	284.05	
2,676.00	14.16	69.15	69.42	1,219.45	2,614.15	232.00 N	448.96 E	188,123.18	2,128,394.06	2.43	294.45	
2,771.00	16.63	69.45	69.72	1,311.03	2,705.73	240.79 N	472.59 E	188,132.09	2,128,417.65	2.60	306.57	
2,959.00	16.27	68.62	68.89	1,491.34	2,886.04	259.60 N	522.39 E	188,151.13	2,128,467.36	0.23	332.38	
3,148.00	13.33	66.95	67.22	1,674.05	3,068.75	277.58 N	567.19 E	188,169.32	2,128,512.07	1.57	356.64	
3,242.00	12.47	64.82	65.09	1,765.68	3,160.38	286.05 N	586.38 E	188,177.88	2,128,531.23	1.05	367.80	
3,337.00	11.03	62.80	63.07	1,858.68	3,253.38	294.49 N	603.79 E	188,186.40	2,128,548.60	1.58	378.66	
3,431.00	9.98	64.00	64.27	1,951.11	3,345.81	302.09 N	619.15 E	188,194.08	2,128,563.91	1.14	388.41	
3,526.00	9.56	71.20	71.47	2,044.73	3,439.43	308.18 N	634.04 E	188,200.23	2,128,578.78	1.36	396.58	
3,620.00	5.91	75.42	75.69	2,137.86	3,532.56	311.85 N	646.14 E	188,203.96	2,128,590.86	3.93	401.97	
3,714.00	3.30	63.34	63.61	2,231.55	3,626.25	314.25 N	653.25 E	188,206.40	2,128,597.96	2.95	405.37	
3,809.00	2.10	60.62	60.89	2,326.44	3,721.14	316.32 N	657.22 E	188,208.48	2,128,601.92	1.27	407.98	
3,903.00	1.68	61.32	61.59	2,420.39	3,815.09	317.81 N	659.94 E	188,209.98	2,128,604.63	0.45	409.85	

HALLIBURTON**Design Report for Hudgens 3307 #10-1H - Wellbore #1**

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	True Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates Northing (ft) Easting (ft)		Map Coordinates Northing (ft) Easting (ft)		Dogleg Rate (°/100ft)	Vertical Section (ft)	Comments
3,998.00	1.29	60.18	60.45	2,515.36	3,910.08	319.00 N	662.09 E	188,211.18	2,128,606.78	0.41	411.34	
4,029.00	1.36	63.68	63.95	2,546.35	3,941.05	319.33 N	662.73 E	188,211.52	2,128,607.41	0.35	411.76	
4,061.00	1.20	61.34	61.61	2,578.34	3,973.04	319.66 N	663.36 E	188,211.85	2,128,608.05	0.53	412.18	
4,092.00	2.34	25.93	26.20	2,609.33	4,004.03	320.38 N	663.93 E	188,212.57	2,128,608.61	4.93	412.97	
4,124.00	5.49	10.41	10.68	2,641.25	4,035.95	322.47 N	664.50 E	188,214.67	2,128,609.17	10.30	415.13	
4,155.00	8.53	4.07	4.34	2,672.02	4,066.72	326.22 N	664.95 E	188,218.42	2,128,609.60	10.10	418.90	
4,186.00	11.90	1.61	1.88	2,702.52	4,097.22	331.71 N	665.23 E	188,223.91	2,128,609.86	10.96	424.37	
4,218.00	14.76	0.15	0.42	2,733.66	4,128.36	339.09 N	665.37 E	188,231.29	2,128,609.96	9.00	431.69	
4,249.00	17.81	358.13	358.40	2,763.41	4,158.11	347.78 N	665.26 E	188,239.98	2,128,609.82	10.01	440.27	
4,281.00	20.68	357.18	357.45	2,793.62	4,188.32	358.32 N	664.87 E	188,250.51	2,128,609.38	9.02	450.65	
4,312.00	23.26	358.99	359.26	2,822.37	4,217.07	369.91 N	664.55 E	188,262.10	2,128,609.00	8.60	462.07	
4,344.00	25.77	0.51	0.78	2,851.48	4,246.18	383.18 N	664.57 E	188,275.38	2,128,608.95	8.09	475.21	
4,375.00	29.03	0.60	0.87	2,879.00	4,273.70	397.44 N	664.77 E	188,289.64	2,128,609.09	10.52	489.35	
4,407.00	32.41	0.83	1.10	2,906.50	4,301.20	413.79 N	665.05 E	188,305.98	2,128,609.30	10.57	505.56	
4,438.00	35.42	1.12	1.39	2,932.23	4,326.93	431.08 N	665.43 E	188,323.28	2,128,609.59	9.72	522.73	
4,470.00	38.37	1.10	1.37	2,957.81	4,352.51	450.28 N	665.89 E	188,342.48	2,128,609.96	9.22	541.79	
4,501.00	41.75	0.76	1.03	2,981.54	4,378.24	470.22 N	666.31 E	188,362.43	2,128,610.29	10.93	561.59	
4,533.00	44.81	359.09	359.36	3,004.83	4,399.53	492.16 N	666.37 E	188,384.36	2,128,610.25	10.21	583.30	
4,564.00	47.53	359.16	359.43	3,026.30	4,421.00	514.52 N	666.14 E	188,406.72	2,128,609.91	8.78	605.39	
4,596.00	49.66	359.89	0.16	3,047.46	4,442.16	538.52 N	666.06 E	188,430.72	2,128,609.71	6.87	629.13	
4,627.00	52.63	0.60	0.87	3,066.91	4,461.61	562.66 N	666.28 E	188,454.86	2,128,609.82	9.75	653.04	
4,659.00	55.56	0.71	0.98	3,085.67	4,480.37	588.57 N	666.69 E	188,480.77	2,128,610.11	9.16	678.75	
4,690.00	59.67	0.91	1.18	3,102.27	4,496.97	614.74 N	667.19 E	188,506.94	2,128,610.48	13.27	704.71	
4,721.00	63.16	0.40	0.67	3,117.10	4,511.80	641.95 N	667.63 E	188,534.16	2,128,610.79	11.35	731.70	
4,753.00	65.87	0.43	0.70	3,130.87	4,525.57	670.83 N	667.97 E	188,563.04	2,128,611.00	8.47	760.33	
4,784.00	67.95	0.13	0.40	3,143.03	4,537.73	699.35 N	668.24 E	188,591.55	2,128,611.14	6.77	788.58	
4,816.00	70.67	359.36	359.63	3,154.33	4,549.03	729.28 N	668.25 E	188,621.49	2,128,611.01	8.79	818.20	
4,847.00	73.89	359.16	359.43	3,163.76	4,558.46	758.80 N	668.01 E	188,651.01	2,128,610.63	10.41	847.38	
4,879.00	78.13	358.90	359.17	3,171.50	4,566.20	789.84 N	667.63 E	188,682.05	2,128,610.10	13.27	878.04	
4,910.00	83.00	359.11	359.38	3,176.58	4,571.28	820.41 N	667.24 E	188,712.62	2,128,609.57	15.72	908.24	
4,979.00	88.98	359.85	0.12	3,181.40	4,576.10	889.21 N	666.94 E	188,781.41	2,128,608.95	8.73	976.27	
5,083.00	90.95	359.95	0.22	3,181.47	4,576.17	993.21 N	667.25 E	188,885.41	2,128,608.77	1.90	1,079.22	
5,144.00	90.22	0.46	0.73	3,180.84	4,575.54	1,054.20 N	667.76 E	188,946.40	2,128,608.98	1.46	1,139.64	
5,234.00	90.12	0.76	1.03	3,180.58	4,575.28	1,144.19 N	669.14 E	189,036.40	2,128,609.94	0.35	1,228.89	
5,325.00	90.03	0.94	1.21	3,180.46	4,575.16	1,235.17 N	670.92 E	189,127.39	2,128,611.29	0.22	1,319.17	
5,416.00	90.55	0.94	1.21	3,180.00	4,574.70	1,326.15 N	672.84 E	189,218.37	2,128,612.79	0.57	1,409.47	
5,507.00	89.45	359.45	359.72	3,180.00	4,574.70	1,417.14 N	673.58 E	189,309.37	2,128,613.10	2.04	1,499.62	

HALLIBURTON**Design Report for Hudgens 3307 #10-1H - Wellbore #1**

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	True Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates (ft)		Map Coordinates (ft)		Dogleg Rate (°/100ft)	Vertical Section (ft)	Comments
						Northing	Easting	Northing	Easting			
5,597.00	89.39	359.47	359.74	3,180.91	4,575.61	1,507.14 N	673.15 E	189,399.36	2,128,612.25	0.07	1,588.60	
5,688.00	89.11	359.35	359.62	3,182.10	4,576.80	1,598.13 N	672.65 E	189,490.35	2,128,611.31	0.33	1,678.57	
5,779.00	89.57	0.08	0.35	3,183.15	4,577.85	1,689.12 N	672.62 E	189,581.34	2,128,610.86	0.95	1,768.60	
5,870.00	91.11	1.14	1.41	3,182.61	4,577.31	1,780.11 N	674.02 E	189,672.33	2,128,611.83	2.05	1,858.83	
5,964.00	89.20	359.98	0.25	3,182.35	4,577.05	1,874.09 N	675.38 E	189,766.32	2,128,612.75	2.38	1,952.02	
6,059.00	89.85	359.80	0.07	3,183.14	4,577.84	1,969.08 N	675.65 E	189,861.31	2,128,612.56	0.71	2,046.06	
6,153.00	88.30	359.50	359.77	3,184.66	4,579.36	2,063.07 N	675.52 E	189,955.29	2,128,611.99	1.68	2,139.04	
6,247.00	91.32	0.22	0.49	3,184.97	4,579.67	2,157.06 N	675.73 E	190,049.28	2,128,611.76	3.30	2,232.07	
6,341.00	92.93	0.92	1.19	3,181.48	4,576.18	2,250.98 N	677.11 E	190,143.21	2,128,612.69	1.87	2,325.21	
6,436.00	90.65	0.76	1.03	3,178.52	4,573.22	2,345.91 N	678.95 E	190,238.15	2,128,614.09	2.41	2,419.40	
6,530.00	89.94	0.47	0.74	3,178.03	4,572.73	2,439.90 N	680.40 E	190,332.14	2,128,615.10	0.82	2,512.61	
6,625.00	90.40	359.48	359.75	3,177.75	4,572.45	2,534.89 N	680.80 E	190,427.14	2,128,615.05	1.15	2,606.67	
6,719.00	90.22	359.68	359.95	3,177.24	4,571.94	2,628.89 N	680.56 E	190,521.13	2,128,614.37	0.29	2,699.65	
6,814.00	90.62	359.54	359.81	3,176.55	4,571.25	2,723.89 N	680.36 E	190,616.13	2,128,613.72	0.45	2,793.62	
6,908.00	89.78	359.73	0.00	3,176.22	4,570.92	2,817.89 N	680.20 E	190,710.12	2,128,613.12	0.92	2,886.61	
7,002.00	90.90	359.25	359.52	3,175.66	4,570.36	2,911.88 N	679.81 E	190,804.12	2,128,612.28	1.30	2,979.56	
7,097.00	90.40	359.52	359.79	3,174.58	4,569.28	3,006.87 N	679.24 E	190,899.10	2,128,611.26	0.60	3,073.47	
7,191.00	91.23	359.60	359.87	3,173.24	4,567.94	3,100.86 N	678.96 E	190,993.09	2,128,610.54	0.89	3,166.43	
7,286.00	91.14	358.21	358.48	3,171.28	4,565.98	3,195.83 N	677.59 E	191,088.05	2,128,608.73	1.47	3,260.21	
7,380.00	89.85	357.53	357.80	3,170.47	4,565.17	3,289.77 N	674.54 E	191,181.98	2,128,605.24	1.55	3,352.72	
7,474.00	90.65	358.62	358.89	3,170.06	4,564.76	3,383.73 N	671.82 E	191,275.92	2,128,602.08	1.44	3,445.30	
7,569.00	89.05	358.71	358.98	3,170.31	4,565.01	3,478.71 N	670.06 E	191,370.89	2,128,599.86	1.69	3,539.03	
7,663.00	87.94	358.67	358.94	3,172.78	4,567.48	3,572.66 N	668.35 E	191,464.83	2,128,597.72	1.18	3,631.75	
7,758.00	88.77	0.31	0.58	3,175.50	4,570.20	3,667.62 N	667.96 E	191,559.79	2,128,596.87	1.93	3,725.65	
7,852.00	88.24	0.85	1.12	3,177.96	4,572.66	3,761.58 N	669.35 E	191,653.75	2,128,597.82	0.80	3,818.82	
7,947.00	88.42	0.19	0.46	3,180.72	4,575.42	3,856.53 N	670.66 E	191,748.70	2,128,598.69	0.72	3,912.96	
8,041.00	89.20	359.12	359.39	3,182.68	4,577.38	3,950.50 N	670.54 E	191,842.68	2,128,598.12	1.41	4,005.94	
8,136.00	90.74	359.35	359.62	3,182.73	4,577.43	4,045.50 N	669.72 E	191,937.67	2,128,596.85	1.64	4,099.82	
8,230.00	92.44	359.96	0.23	3,180.12	4,574.82	4,139.46 N	669.59 E	192,031.63	2,128,596.29	1.92	4,192.77	
8,325.00	92.43	359.56	359.83	3,176.08	4,570.78	4,234.37 N	669.64 E	192,126.54	2,128,595.89	0.42	4,286.70	
8,419.00	92.10	359.81	0.08	3,172.37	4,567.07	4,328.30 N	669.57 E	192,220.46	2,128,595.37	0.44	4,379.62	
8,513.00	92.93	0.54	0.81	3,168.24	4,562.94	4,422.20 N	670.30 E	192,314.37	2,128,595.66	1.18	4,472.65	
8,608.00	91.11	0.86	1.13	3,164.89	4,559.59	4,517.13 N	671.90 E	192,409.30	2,128,596.82	1.95	4,566.81	
8,693.00	90.86	0.34	0.61	3,163.43	4,558.13	4,602.10 N	673.19 E	192,494.28	2,128,597.71	0.68	4,651.08	Last MWD
8,719.14	90.86	0.34	0.61	3,163.04	4,557.74	4,628.24 N	673.47 E	192,520.42	2,128,597.86	0.00	4,676.98	Hudgens 3307 #10-1H PBHL

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Design Report for Hudgens 3307 #10-1H - Wellbore #1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	True Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates Northing (ft)	Local Coordinates Easting (ft)	Map Coordinates Northing (ft)	Map Coordinates Easting (ft)	Dogleg Rate (°/100ft)	Vertical Section (ft)	Comments
8,740.00	90.86	0.34	0.61	3,162.73	4,557.43	4,649.10 N	673.70 E	192,541.28	2,128,597.99	0.00	4,697.65	Projection to TD 8740.00 MD, 4557.43 TVD 4649.10 N, 673.70 E 309 FNL, 452 FEL

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
157.00	156.98	1.90	0.43	Start MWD
8,693.00	4,558.13	4,602.10	673.19	Last MWD
8,740.00	4,557.43	4,649.10	673.70	Projection to TD 8740.00 MD, 4557.43 TVD 4649.10 N, 673.70 E 309 FNL, 452 FEL

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (ft)	Origin +E/-W (ft)	Start TVD (ft)
User	No Target (Freehand)	8.31	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
157.00	8,740.00	Sperry MWD Surveys	MWD+SC

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
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Design Report for Hudgens 3307 #10-1H - Wellbore #1

Directional Difficulty Index

Average Dogleg over Survey:	2.18 °/100ft	Maximum Dogleg over Survey:	15.72 °/100ft at 4,910.00 ft
Net Tortosity applicable to Plans:	0.52 °/100ft	Directional Difficulty Index:	6.268

Audit Info

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North Reference Sheet for Sec 10-T33S-R07W - Hudgens 3307 #10-1H - Wellbore #1

All data is in Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.

Vertical Depths are relative to WELL @ 1394.70ft (Nabors 102 (31.7')). Northing and Easting are relative to Hudgens 3307 #10-1H

Coordinate System is US State Plane 1927 (Exact solution), Kansas South 1502 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Lambert Conformal Conic (2 parallel)

Central Meridian is 98° 30' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:37° 16' 0.000 N°

False Easting: 2,000,000.00ft, False Northing: 0.00ft, Scale Reduction: 1.00001775

Grid Coordinates of Well: 187,889.07 ft N, 2,127,946.20 ft E

Geographical Coordinates of Well: 37° 10' 54.66" N, 098° 03' 39.04" W

Grid Convergence at Surface is: 0.27°

Based upon Minimum Curvature type calculations, at a Measured Depth of 8,740.00ft the Bottom Hole Displacement is 4,697.65ft in the Direction of 8.25° (True).

Magnetic Convergence at surface is: -4.37° (10 September 2012, BGGM2012)

