



CONFIDENTIAL

OIL & GAS CONSERVATION DIVISION 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: Jack Grow
 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 #: _____

<u>03/01/2012</u>	<u>06/05/2012</u>	<u>08/01/2012</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-077-21816-01-00

Spot Description: _____

SW SE SE SW Sec. 27 Twp. 34 S. R. 7 East West
0 Feet from North / South Line of Section
2000 Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

County: Harper

Lease Name: Davis 3407 Well #: 27-2H

Field Name: Wildcat

Producing Formation: Mississippi

Elevation: Ground: 1405 Kelly Bushing: 1426

Total Depth: 9650 Plug Back Total Depth: 9528

Amount of Surface Pipe Set and Cemented at: 820 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: 03/28/2012
- Confidential Release Date: 03/28/2014
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: NAOMI JAMES Date: 11/30/2012

Shell Exploration & Production Co. Inc.

Harper Co. KS (NAD-27)

Sec 34-T34S-R07W

Davis 3407 #27-2H/ Job# 9341868/ Nab 180

Wellbore #1

Design: Wellbore #1

Sperry Drilling Services

Combo Report With Grid North & True North

06 June, 2012

Well Coordinates: 140,195.98 N, 2,126,384.79 E (37° 03' 03.19" N, 098° 04' 01.07" W)

Ground Level: 1,402.00 ft

Local Coordinate Origin:

Centered on Well Davis 3407 #27-2H/ Job# 9341868/ Nab 180

Viewing Datum:

WELL @ 1425.80ft (Original Well Elev)

TVDs to System:

N

North Reference:

True

Unit System:

API-US-new

Version: 2003.21 Build: 43

HALLIBURTON

HALLIBURTON

Design Report for Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - 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			
0.00	0.00	359.73	0.00	1,425.80	0.00	0.00 N	0.00 E	140,195.98	2,126,384.79	0.00	0.00	
142.00	0.25	58.21	58.48	1,283.80	142.00	0.16 N	0.26 E	140,196.14	2,126,385.05	0.18	0.17	First MWD Survey
173.00	0.28	78.84	79.11	1,252.80	173.00	0.21 N	0.40 E	140,196.19	2,126,385.18	0.32	0.23	
204.00	0.50	131.02	131.29	1,221.80	204.00	0.14 N	0.57 E	140,196.12	2,126,385.36	1.28	0.16	
235.00	1.71	114.85	115.12	1,190.81	234.99	0.15 S	1.09 E	140,195.84	2,126,385.88	3.99	-0.11	
270.00	2.16	120.07	120.34	1,155.83	269.97	0.70 S	2.13 E	140,195.29	2,126,386.92	1.38	-0.62	
301.00	2.75	115.81	116.08	1,124.86	300.94	1.33 S	3.31 E	140,194.67	2,126,388.10	1.99	-1.20	
332.00	3.08	115.99	116.26	1,093.90	331.90	2.02 S	4.72 E	140,193.98	2,126,389.52	1.06	-1.84	
363.00	3.39	114.92	115.19	1,062.95	362.85	2.78 S	6.30 E	140,193.23	2,126,391.10	1.02	-2.54	
394.00	4.00	114.53	114.80	1,032.01	393.79	3.62 S	8.11 E	140,192.39	2,126,392.91	1.97	-3.32	
425.00	4.99	107.16	107.43	1,001.11	424.69	4.48 S	10.98 E	140,191.55	2,126,395.18	3.69	-4.09	
519.00	5.77	107.61	107.88	907.52	518.28	7.16 S	18.77 E	140,188.91	2,126,403.59	0.83	-6.45	
612.00	5.66	95.88	96.15	814.98	610.82	9.08 S	27.78 E	140,187.03	2,126,412.61	1.26	-8.04	
705.00	5.69	84.95	85.22	722.43	703.37	9.19 S	36.94 E	140,186.96	2,126,421.77	1.16	-7.81	
755.00	5.54	86.72	86.99	672.67	753.13	8.86 S	41.82 E	140,187.32	2,126,426.65	0.46	-7.30	
889.00	5.35	86.27	86.54	539.28	886.52	8.14 S	54.51 E	140,188.09	2,126,439.34	0.15	-6.11	
984.00	3.64	81.96	82.23	444.57	981.23	7.47 S	61.92 E	140,188.80	2,126,446.74	1.83	-5.16	
1,078.00	2.79	72.66	72.93	350.72	1,075.08	6.39 S	67.07 E	140,189.90	2,126,451.88	1.06	-3.89	
1,173.00	2.31	74.12	74.39	255.82	1,169.98	5.20 S	71.12 E	140,191.11	2,126,455.93	0.51	-2.55	
1,268.00	1.70	92.91	93.18	160.87	1,264.93	4.76 S	74.37 E	140,191.57	2,126,459.18	0.94	-1.99	
1,363.00	1.67	94.32	94.59	65.91	1,359.89	4.95 S	77.16 E	140,191.39	2,126,461.97	0.05	-2.08	
1,458.00	0.90	106.29	106.56	-29.06	1,454.86	5.27 S	79.25 E	140,191.08	2,126,464.06	0.85	-2.32	
1,553.00	0.44	97.77	98.04	-124.05	1,549.85	5.54 S	80.33 E	140,190.82	2,126,465.14	0.49	-2.55	
1,743.00	0.18	64.67	64.94	-314.05	1,739.85	5.51 S	81.32 E	140,190.85	2,126,466.13	0.16	-2.48	
1,933.00	0.34	46.94	47.21	-504.05	1,929.85	5.00 S	82.01 E	140,191.36	2,126,466.81	0.09	-1.95	
2,123.00	0.53	9.45	9.72	-694.04	2,119.84	3.75 S	82.57 E	140,192.61	2,126,467.37	0.17	-0.68	
2,313.00	0.37	18.09	18.36	-884.04	2,309.84	2.30 S	82.91 E	140,194.06	2,126,467.71	0.09	0.78	
2,503.00	0.21	65.49	65.76	-1,074.04	2,499.84	1.58 S	83.42 E	140,194.79	2,126,468.21	0.14	1.52	
2,693.00	0.31	48.77	49.04	-1,264.03	2,689.83	1.10 S	84.13 E	140,195.27	2,126,468.92	0.07	2.03	
2,882.00	0.26	74.56	74.83	-1,453.03	2,878.83	0.65 S	84.93 E	140,195.72	2,126,469.71	0.07	2.51	
3,072.00	0.23	86.88	87.15	-1,643.03	3,068.83	0.52 S	85.72 E	140,195.86	2,126,470.51	0.03	2.67	
3,262.00	0.30	30.38	30.65	-1,833.03	3,258.83	0.07 S	86.36 E	140,196.31	2,126,471.14	0.14	3.14	
3,452.00	0.56	12.69	12.96	-2,023.02	3,448.82	1.26 N	86.82 E	140,197.64	2,126,471.60	0.15	4.49	
3,642.00	0.59	19.39	19.66	-2,213.01	3,638.81	3.09 N	87.36 E	140,199.47	2,126,472.13	0.04	6.33	
3,831.00	0.20	333.43	333.70	-2,402.01	3,827.81	4.30 N	87.54 E	140,200.68	2,126,472.30	0.25	7.55	
4,021.00	0.31	314.45	314.72	-2,592.01	4,017.81	4.96 N	87.03 E	140,201.34	2,126,471.79	0.07	8.19	
4,078.00	1.02	347.41	347.68	-2,649.00	4,074.80	5.56 N	86.81 E	140,201.94	2,126,471.57	1.37	8.78	

HALLIBURTON

Design Report for Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - 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			
4,109.00	1.87	344.23	344.50	-2,679.99	4,105.79	6.32 N	86.61 E	140,202.70	2,126,471.37	2.75	9.53	
4,141.00	3.39	3.05	3.32	-2,711.96	4,137.76	7.77 N	86.53 E	140,204.15	2,126,471.28	5.40	10.98	
4,173.00	5.98	7.59	7.86	-2,743.85	4,169.65	10.36 N	86.81 E	140,206.75	2,126,471.55	8.17	13.58	
4,204.00	7.94	8.73	9.00	-2,774.62	4,200.42	14.08 N	87.37 E	140,210.46	2,126,472.09	6.34	17.31	
4,236.00	9.52	1.34	1.61	-2,806.25	4,232.05	18.91 N	87.79 E	140,215.29	2,126,472.49	6.05	22.16	
4,268.00	11.46	358.41	358.68	-2,837.71	4,263.51	24.73 N	87.79 E	140,221.12	2,126,472.46	6.29	27.98	
4,300.00	14.11	356.18	356.45	-2,868.92	4,294.72	31.80 N	87.47 E	140,228.19	2,126,472.11	8.42	35.03	
4,331.00	16.95	356.99	357.26	-2,898.78	4,324.58	40.09 N	87.02 E	140,236.47	2,126,471.62	9.19	43.30	
4,362.00	18.71	357.92	358.19	-2,928.29	4,354.09	49.57 N	86.65 E	140,245.95	2,126,471.21	5.75	52.76	
4,393.00	21.09	358.15	358.42	-2,957.44	4,383.24	60.12 N	86.34 E	140,256.50	2,126,470.85	7.68	63.29	
4,425.00	24.01	358.64	358.91	-2,986.99	4,412.79	72.39 N	86.06 E	140,268.76	2,126,470.51	9.14	75.53	
4,457.00	26.79	357.14	357.41	-3,015.89	4,441.69	86.10 N	85.61 E	140,282.48	2,126,469.99	8.92	89.22	
4,488.00	28.42	357.04	357.31	-3,043.36	4,469.16	100.45 N	84.95 E	140,296.82	2,126,469.26	5.26	103.54	Start of Tangent
4,520.00	28.83	356.32	356.59	-3,071.45	4,497.25	115.76 N	84.13 E	140,312.13	2,126,468.38	1.67	118.81	
4,552.00	29.46	355.37	355.64	-3,099.40	4,525.20	131.31 N	83.07 E	140,327.67	2,126,467.25	2.44	134.30	
4,583.00	29.32	354.30	354.57	-3,126.41	4,552.21	146.47 N	81.77 E	140,342.82	2,126,465.88	1.75	149.40	
4,615.00	29.48	354.29	354.56	-3,154.29	4,580.09	162.10 N	80.29 E	140,358.45	2,126,464.32	0.50	164.98	
4,646.00	29.17	353.47	353.74	-3,181.32	4,607.12	177.21 N	78.74 E	140,373.55	2,126,462.70	1.64	180.01	
4,678.00	29.99	353.37	353.64	-3,209.15	4,634.95	192.91 N	77.00 E	140,389.24	2,126,460.89	2.57	195.64	End of Tangent
4,710.00	32.81	355.54	355.81	-3,236.46	4,662.26	209.51 N	75.48 E	140,405.83	2,126,459.30	9.49	212.17	
4,741.00	35.03	357.18	357.45	-3,262.18	4,687.98	226.77 N	74.47 E	140,423.10	2,126,458.21	7.75	229.38	
4,773.00	37.02	358.15	358.42	-3,288.06	4,713.86	245.58 N	73.80 E	140,441.90	2,126,457.44	6.47	248.15	
4,804.00	40.61	358.66	358.93	-3,312.21	4,738.01	265.00 N	73.35 E	140,461.32	2,126,456.91	11.63	267.55	
4,836.00	45.08	358.58	358.85	-3,335.67	4,761.47	286.75 N	72.93 E	140,483.07	2,126,456.39	13.97	289.27	
4,868.00	48.54	359.20	359.47	-3,357.57	4,783.37	310.08 N	72.59 E	140,506.39	2,126,455.94	10.90	312.56	
4,893.85	52.30	359.71	359.98	-3,374.03	4,799.83	330.00 N	72.50 E	140,526.31	2,126,455.75	14.63	332.46	Cross 330° FSL @ 4,893.85' MD (330° FSL / 2120 FWL)
4,899.00	53.05	359.80	0.07	-3,377.16	4,802.96	334.09 N	72.50 E	140,530.41	2,126,455.74	14.63	336.56	
4,931.00	58.58	359.29	359.56	-3,395.13	4,820.93	360.55 N	72.41 E	140,556.87	2,126,455.52	17.33	363.00	
4,963.00	62.99	357.70	357.97	-3,410.74	4,836.54	388.47 N	71.80 E	140,584.78	2,126,454.78	14.45	390.87	
5,042.00	76.11	356.83	357.10	-3,438.29	4,864.09	462.26 N	68.60 E	140,658.55	2,126,451.24	16.64	464.49	
5,074.00	81.78	357.12	357.39	-3,444.42	4,870.22	493.61 N	67.09 E	140,689.90	2,126,449.59	17.74	495.77	
5,106.00	86.92	358.00	358.27	-3,447.57	4,873.37	525.43 N	65.89 E	140,721.70	2,126,448.23	16.29	527.51	
5,137.00	90.40	358.98	359.25	-3,448.29	4,874.09	556.40 N	65.22 E	140,752.68	2,126,447.42	11.66	558.44	
5,169.00	92.87	359.46	359.73	-3,447.38	4,873.18	588.39 N	64.93 E	140,784.66	2,126,446.99	7.86	590.39	
5,201.00	92.44	0.20	0.47	-3,445.90	4,871.70	620.35 N	64.99 E	140,816.63	2,126,446.89	2.67	622.34	
5,232.00	92.56	0.06	0.33	-3,444.55	4,870.35	651.32 N	65.21 E	140,847.60	2,126,446.97	0.59	653.30	
5,264.00	92.38	359.95	0.22	-3,443.17	4,868.97	683.29 N	65.36 E	140,879.57	2,126,446.97	0.66	685.25	

HALLIBURTON

Design Report for Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - 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
5,296.00	92.10	0.20	0.47	-3,441.92	4,867.72	715.27 N	65.55 E	140,911.54	2,126,447.02	1.17	717.21	
5,327.00	91.73	1.47	1.74	-3,440.88	4,866.68	746.24 N	66.15 E	140,942.52	2,126,447.47	4.26	748.19	
5,359.00	91.20	2.97	3.24	-3,440.06	4,865.86	778.20 N	67.54 E	140,974.49	2,126,448.71	4.97	780.17	
5,391.00	90.43	3.33	3.60	-3,439.61	4,865.41	810.14 N	69.45 E	141,006.43	2,126,450.47	2.66	812.16	
5,422.00	91.08	3.84	4.11	-3,439.20	4,865.00	841.07 N	71.53 E	141,037.37	2,126,452.41	2.67	843.15	
5,454.00	91.91	3.21	3.48	-3,438.36	4,864.16	872.99 N	73.65 E	141,069.30	2,126,454.38	3.26	875.12	
5,485.00	92.65	3.10	3.37	-3,437.13	4,862.93	903.91 N	75.50 E	141,100.23	2,126,456.09	2.41	906.09	
5,516.00	92.87	3.41	3.68	-3,435.64	4,861.44	934.81 N	77.40 E	141,131.14	2,126,457.85	1.23	937.04	
5,547.00	92.96	3.41	3.68	-3,434.06	4,859.86	965.71 N	79.39 E	141,162.04	2,126,459.69	0.29	967.99	
5,579.00	93.33	2.95	3.22	-3,432.31	4,858.11	997.60 N	81.31 E	141,193.95	2,126,461.47	1.84	999.94	
5,610.00	93.76	2.89	3.16	-3,430.39	4,856.19	1,028.49 N	83.03 E	141,224.85	2,126,463.04	1.40	1,030.87	
5,641.00	94.20	2.75	3.02	-3,428.24	4,854.04	1,059.38 N	84.70 E	141,255.73	2,126,464.57	1.49	1,061.79	
5,672.00	93.55	2.58	2.85	-3,426.14	4,851.94	1,090.26 N	86.28 E	141,286.63	2,126,466.01	2.17	1,092.72	
5,703.00	92.90	2.57	2.84	-3,424.40	4,850.20	1,121.18 N	87.82 E	141,317.55	2,126,467.40	2.10	1,123.67	
5,734.00	92.10	2.64	2.91	-3,423.05	4,848.85	1,152.11 N	89.37 E	141,348.49	2,126,468.81	2.59	1,154.63	
5,765.00	91.29	2.58	2.85	-3,422.13	4,847.93	1,183.05 N	90.93 E	141,379.44	2,126,470.22	2.62	1,185.62	
5,796.00	90.62	2.41	2.68	-3,421.61	4,847.41	1,214.01 N	92.43 E	141,410.41	2,126,471.57	2.23	1,216.61	
5,827.00	90.55	2.34	2.61	-3,421.30	4,847.10	1,244.98 N	93.86 E	141,441.38	2,126,472.86	0.32	1,247.61	
5,858.00	90.71	2.19	2.46	-3,420.96	4,846.76	1,275.95 N	95.23 E	141,472.35	2,126,474.09	0.71	1,278.60	
5,889.00	91.20	2.05	2.32	-3,420.44	4,846.24	1,306.92 N	96.52 E	141,503.33	2,126,475.24	1.64	1,309.60	
5,920.00	91.63	1.87	2.14	-3,419.67	4,845.47	1,337.88 N	97.73 E	141,534.30	2,126,476.30	1.50	1,340.59	
5,951.00	91.63	2.13	2.40	-3,418.79	4,844.59	1,368.85 N	98.95 E	141,565.27	2,126,477.38	0.84	1,371.58	
5,983.00	90.71	3.09	3.36	-3,418.14	4,843.94	1,400.80 N	100.56 E	141,597.23	2,126,478.84	4.15	1,403.57	
6,014.00	89.72	3.14	3.41	-3,418.02	4,843.82	1,431.74 N	102.39 E	141,628.18	2,126,480.53	3.20	1,434.56	
6,045.00	89.97	2.94	3.21	-3,418.11	4,843.91	1,462.69 N	104.18 E	141,659.14	2,126,482.17	1.03	1,465.55	
6,076.00	90.43	2.48	2.75	-3,418.00	4,843.80	1,493.65 N	105.79 E	141,690.10	2,126,483.64	2.10	1,496.55	
6,107.00	90.74	3.22	3.49	-3,417.68	4,843.48	1,524.60 N	107.48 E	141,721.06	2,126,485.19	2.59	1,527.54	
6,139.00	90.31	3.81	4.08	-3,417.39	4,843.19	1,556.53 N	109.59 E	141,753.00	2,126,487.15	2.28	1,559.53	
6,169.00	89.78	3.87	4.14	-3,417.36	4,843.16	1,586.45 N	111.74 E	141,782.93	2,126,489.16	1.78	1,589.51	
6,200.00	90.09	3.38	3.65	-3,417.40	4,843.20	1,617.38 N	113.85 E	141,813.87	2,126,491.12	1.87	1,620.49	
6,231.00	90.56	3.15	3.42	-3,417.22	4,843.02	1,648.32 N	115.76 E	141,844.82	2,126,492.89	1.69	1,651.48	
6,262.00	90.92	2.99	3.26	-3,416.82	4,842.62	1,679.27 N	117.57 E	141,875.77	2,126,494.55	1.27	1,682.48	
6,293.00	90.46	2.47	2.74	-3,416.45	4,842.25	1,710.22 N	119.19 E	141,906.73	2,126,496.03	2.24	1,713.47	
6,325.00	90.49	2.36	2.63	-3,416.18	4,841.98	1,742.18 N	120.69 E	141,938.70	2,126,497.38	0.36	1,745.47	
6,356.00	91.23	2.37	2.64	-3,415.72	4,841.52	1,773.15 N	122.11 E	141,969.67	2,126,498.66	2.39	1,776.46	
6,386.00	91.63	2.16	2.43	-3,414.97	4,840.77	1,803.11 N	123.44 E	141,999.64	2,126,499.85	1.51	1,806.45	
6,417.00	92.35	2.31	2.58	-3,413.89	4,839.69	1,834.06 N	124.79 E	142,030.60	2,126,501.06	2.37	1,837.43	

HALLIBURTON

Design Report for Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - 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)			
6,448.00	92.55	1.93	2.20	-3,412.57	4,838.37	1,865.01 N	126.08 E		142,061.55	2,126,502.21	1.38	1,868.40	
6,479.00	91.88	1.44	1.71	-3,411.37	4,837.17	1,895.96 N	127.14 E		142,092.51	2,126,503.12	2.68	1,899.38	
6,511.00	90.59	1.17	1.44	-3,410.68	4,836.48	1,927.94 N	128.02 E		142,124.49	2,126,503.85	4.12	1,931.37	
6,543.00	89.14	1.56	1.83	-3,410.76	4,836.56	1,959.93 N	128.93 E		142,156.48	2,126,504.62	4.69	1,963.37	
6,574.00	89.45	1.44	1.71	-3,411.14	4,836.94	1,990.91 N	129.89 E		142,187.47	2,126,505.43	1.07	1,994.36	
6,606.00	89.75	1.36	1.63	-3,411.36	4,837.16	2,022.90 N	130.82 E		142,219.46	2,126,506.21	0.97	2,026.36	
6,637.00	90.15	0.71	0.98	-3,411.39	4,837.19	2,053.89 N	131.53 E		142,250.45	2,126,506.78	2.46	2,057.36	
6,669.00	90.89	1.08	1.35	-3,411.10	4,836.90	2,085.88 N	132.18 E		142,282.45	2,126,507.28	2.59	2,089.35	
6,701.00	91.33	0.94	1.21	-3,410.48	4,836.28	2,117.87 N	132.89 E		142,314.44	2,126,507.84	1.44	2,121.34	
6,732.00	90.92	1.39	1.66	-3,409.87	4,835.67	2,148.85 N	133.67 E		142,345.43	2,126,508.48	1.96	2,152.34	
6,764.00	91.26	1.11	1.38	-3,409.26	4,835.06	2,180.83 N	134.52 E		142,377.41	2,126,509.18	1.38	2,184.33	
6,795.00	92.50	0.74	1.01	-3,408.24	4,834.04	2,211.81 N	135.17 E		142,408.39	2,126,509.68	4.17	2,215.31	
6,827.00	92.40	0.87	1.14	-3,406.88	4,832.68	2,243.78 N	135.77 E		142,440.36	2,126,510.13	0.51	2,247.27	
6,858.00	91.82	1.02	1.29	-3,405.73	4,831.53	2,274.75 N	136.42 E		142,471.33	2,126,510.64	1.93	2,278.25	
6,890.00	91.79	1.12	1.39	-3,404.73	4,830.53	2,306.72 N	137.17 E		142,503.31	2,126,511.24	0.33	2,310.23	
6,922.00	91.76	0.99	1.26	-3,403.74	4,829.54	2,338.70 N	137.91 E		142,535.29	2,126,511.83	0.42	2,342.21	
6,953.00	92.07	1.25	1.52	-3,402.70	4,828.50	2,369.67 N	138.66 E		142,566.27	2,126,512.44	1.30	2,373.19	
6,985.00	91.57	1.49	1.76	-3,401.68	4,827.48	2,401.64 N	139.58 E		142,598.24	2,126,513.21	1.73	2,405.17	
7,016.00	90.37	1.50	1.77	-3,401.16	4,826.96	2,432.62 N	140.53 E		142,629.23	2,126,514.02	3.87	2,436.17	
7,048.00	90.25	1.30	1.57	-3,400.99	4,826.79	2,464.61 N	141.46 E		142,661.21	2,126,514.80	0.73	2,468.16	
7,080.00	90.62	1.37	1.64	-3,400.74	4,826.54	2,496.60 N	142.36 E		142,693.21	2,126,515.55	1.18	2,500.16	
7,111.00	91.11	0.93	1.20	-3,400.27	4,826.07	2,527.58 N	143.13 E		142,724.20	2,126,516.17	2.12	2,531.16	
7,143.00	90.89	0.82	1.09	-3,399.72	4,825.52	2,559.57 N	143.77 E		142,756.19	2,126,516.67	0.77	2,563.15	
7,175.00	90.31	0.58	0.85	-3,399.38	4,825.18	2,591.56 N	144.31 E		142,788.18	2,126,517.06	1.96	2,595.14	
7,206.00	90.74	0.49	0.76	-3,399.10	4,824.90	2,622.56 N	144.74 E		142,819.18	2,126,517.35	1.42	2,626.13	
7,238.00	91.70	0.42	0.69	-3,398.42	4,824.22	2,654.55 N	145.15 E		142,851.17	2,126,517.61	3.01	2,658.11	
7,270.00	91.33	0.71	0.98	-3,397.57	4,823.37	2,686.54 N	145.62 E		142,883.16	2,126,517.92	1.47	2,690.09	
7,301.00	89.66	0.96	1.23	-3,397.30	4,823.10	2,717.53 N	146.21 E		142,914.15	2,126,518.38	5.45	2,721.08	
7,333.00	88.74	1.22	1.49	-3,397.75	4,823.55	2,749.52 N	146.97 E		142,946.14	2,126,518.99	2.99	2,753.08	
7,365.00	89.29	0.69	0.96	-3,398.30	4,824.10	2,781.50 N	147.66 E		142,978.13	2,126,519.52	2.39	2,785.07	
7,396.00	90.31	0.05	0.32	-3,398.41	4,824.21	2,812.50 N	148.00 E		143,009.13	2,126,519.73	3.88	2,816.06	
7,428.00	89.75	0.15	0.42	-3,398.39	4,824.19	2,844.50 N	148.21 E		143,041.13	2,126,519.78	1.78	2,848.04	
7,459.00	90.18	359.93	0.20	-3,398.41	4,824.21	2,875.50 N	148.38 E		143,072.13	2,126,519.81	1.56	2,879.03	
7,491.00	90.83	359.59	359.86	-3,398.13	4,823.93	2,907.50 N	148.39 E		143,104.13	2,126,519.68	2.29	2,911.00	
7,523.00	91.48	359.74	0.01	-3,397.48	4,823.28	2,939.49 N	148.36 E		143,136.12	2,126,519.49	2.08	2,942.97	
7,555.00	91.70	359.62	359.89	-3,396.59	4,822.39	2,971.48 N	148.33 E		143,168.11	2,126,519.31	0.78	2,974.94	
7,586.00	91.88	359.05	359.32	-3,395.63	4,821.43	3,002.46 N	148.12 E		143,199.09	2,126,518.96	1.93	3,005.89	

HALLIBURTON

Design Report for Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - 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
7,618.00	90.89	359.13	359.40	-3,394.85	4,820.65	3,034.45 N	147.76 E	143,231.08	2,126,518.45	3.10	3,037.85	
7,650.00	89.44	359.16	359.43	-3,394.76	4,820.56	3,066.45 N	147.43 E	143,263.07	2,126,517.98	4.53	3,069.81	
7,681.00	89.38	359.61	359.88	-3,395.08	4,820.88	3,097.45 N	147.25 E	143,294.07	2,126,517.65	1.46	3,100.78	
7,713.00	88.80	359.17	359.44	-3,395.59	4,821.39	3,129.44 N	147.06 E	143,326.06	2,126,517.31	2.27	3,132.74	
7,745.00	88.24	359.01	359.28	-3,396.41	4,822.21	3,161.43 N	146.70 E	143,358.05	2,126,516.80	1.82	3,164.70	
7,808.00	89.01	0.26	0.53	-3,397.93	4,823.73	3,224.41 N	146.59 E	143,421.03	2,126,516.40	2.33	3,227.63	
7,903.00	91.04	0.40	0.67	-3,397.88	4,823.68	3,319.40 N	147.59 E	143,516.02	2,126,516.96	2.14	3,322.59	
7,998.00	91.70	0.54	0.81	-3,395.61	4,821.41	3,414.36 N	148.82 E	143,610.99	2,126,517.74	0.71	3,417.53	
8,093.00	89.11	0.45	0.72	-3,394.94	4,820.74	3,509.34 N	150.08 E	143,705.98	2,126,518.57	2.73	3,512.50	
8,188.00	89.32	0.72	0.99	-3,396.24	4,822.04	3,604.32 N	151.50 E	143,800.96	2,126,519.55	0.36	3,607.46	
8,282.00	90.68	0.45	0.72	-3,396.24	4,822.04	3,698.31 N	152.90 E	143,894.95	2,126,520.51	1.48	3,701.44	
8,377.00	90.52	1.01	1.28	-3,395.25	4,821.05	3,793.29 N	154.56 E	143,989.94	2,126,521.73	0.61	3,796.41	
8,472.00	90.28	359.89	0.16	-3,394.59	4,820.39	3,888.28 N	155.76 E	144,084.93	2,126,522.48	1.21	3,891.38	
8,567.00	90.74	0.00	0.27	-3,393.74	4,819.54	3,983.27 N	156.11 E	144,179.93	2,126,522.40	0.50	3,986.32	
8,662.00	89.54	0.48	0.75	-3,393.51	4,819.31	4,078.27 N	156.96 E	144,274.93	2,126,522.80	1.36	4,081.28	
8,757.00	92.03	0.24	0.51	-3,392.21	4,818.01	4,173.25 N	158.00 E	144,369.91	2,126,523.40	2.63	4,176.24	
8,852.00	92.24	0.77	1.04	-3,388.67	4,814.47	4,268.17 N	159.29 E	144,464.84	2,126,524.25	0.60	4,271.14	
8,947.00	90.49	0.26	0.53	-3,386.40	4,812.20	4,363.13 N	160.59 E	144,559.80	2,126,525.11	1.92	4,366.09	
9,042.00	88.95	359.88	0.15	-3,386.87	4,812.67	4,458.13 N	161.15 E	144,654.80	2,126,525.23	1.67	4,461.03	
9,137.00	89.41	0.24	0.51	-3,388.23	4,814.03	4,553.11 N	161.70 E	144,749.79	2,126,525.34	0.61	4,555.98	
9,231.00	89.72	359.50	359.77	-3,388.94	4,814.74	4,647.11 N	161.93 E	144,843.78	2,126,525.13	0.85	4,649.92	
9,326.00	91.30	359.93	0.20	-3,388.10	4,813.90	4,742.10 N	161.90 E	144,938.77	2,126,524.66	1.72	4,744.84	
9,421.00	90.92	359.90	0.17	-3,386.26	4,812.06	4,837.08 N	162.21 E	145,033.76	2,126,524.53	0.40	4,839.77	
9,516.00	90.03	359.96	0.23	-3,385.47	4,811.27	4,932.08 N	162.54 E	145,128.75	2,126,524.42	0.94	4,934.71	
9,527.92	90.14	359.88	0.14	-3,385.45	4,811.25	4,944.00 N	162.58 E	145,140.67	2,126,524.40	1.20	4,946.63	Cross 330' FNL @9,527.92' MD (330' FNL / 2289 FWL)
9,594.00	90.77	359.39	359.66	-3,384.92	4,810.72	5,010.08 N	162.47 E	145,206.75	2,126,523.98	1.20	5,012.65	Last MWD Survey
9,650.00	90.77	359.39	359.66	-3,384.17	4,809.97	5,066.07 N	162.13 E	145,262.74	2,126,523.39	0.00	5,068.60	Projected to TD

HALLIBURTON

Design Report for Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - Wellbore #1

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
142.00	142.00	0.16	0.26	First MWD Survey
4,488.00	4,469.16	100.45	84.95	Start of Tangent
4,678.00	4,634.95	192.91	77.00	End of Tangent
4,893.85	4,799.83	330.00	72.50	Cross 330' FSL @ 4,893.85' MD (330' FSL / 2120 FWL)
9,527.92	4,811.25	4,944.00	162.58	Cross 330' FNL @9,527.92' MD (330' FNL / 2289 FWL)
9,594.00	4,810.72	5,010.08	162.47	Last MWD Survey
9,650.00	4,809.97	5,066.07	162.13	Projected to TD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/_S (ft)	+E/-W (ft)	
User	No Target (Freehand)	2.13	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
142.00	9,650.00	MWD	MWD+SC

Design Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target									
- Shape	()	()	()	()	()	()	()		

Directional Difficulty Index

Average Dogleg over Survey:	1.97 °/100ft	Maximum Dogleg over Survey:	17.74 °/100ft at 5,074.00 ft
Net Tortousity applicable to Plans:	0.87 °/100ft	Directional Difficulty Index:	6.289

HALLIBURTON

Design Report for Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - Wellbore #1

Audit Info

HALLIBURTON

North Reference Sheet for Sec 34-T34S-R07W - Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - 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 @ 1425.80ft (Original Well Elev). Northing and Easting are relative to Davis 3407 #27-2H/ Job# 9341868/ Nab 180 .

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: 1.00004941

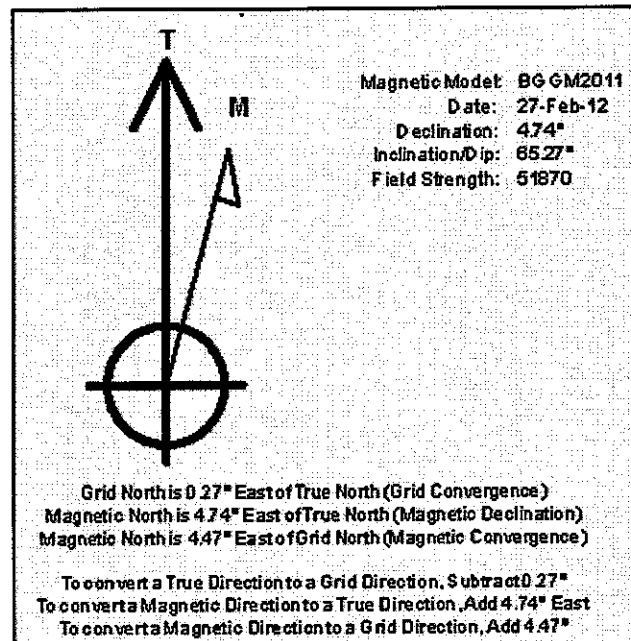
Grid Coordinates of Well: 140,195.98 ft N, 2,126,384.79 ft E

Geographical Coordinates of Well: 37° 03' 03.19" N, 098° 04' 01.07" W

Grid Convergence at Surface is: 0.27°

Based upon Minimum Curvature type calculations, at a Measured Depth of 9,650.00ft
the Bottom Hole Displacement is 5,068.66ft in the Direction of 1.83° (True).

Magnetic Convergence at surface is: -4.47° (27 February 2012, , BGGM2011)



T34S, R7W, 6th P.M.

SGOMI

Well location, DAVIS 3407 #27-2H, located as shown on the Line Between the SE 1/4 SW 1/4 of Section 27 and the NE 1/4 NW 1/4 of section 34, T34S, R7W, 6th P.M., Harper County, Kansas.

BASIS OF ELEVATION

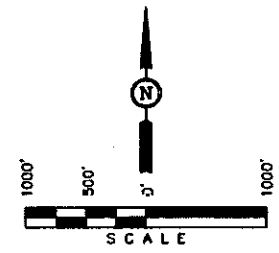
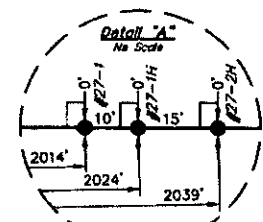
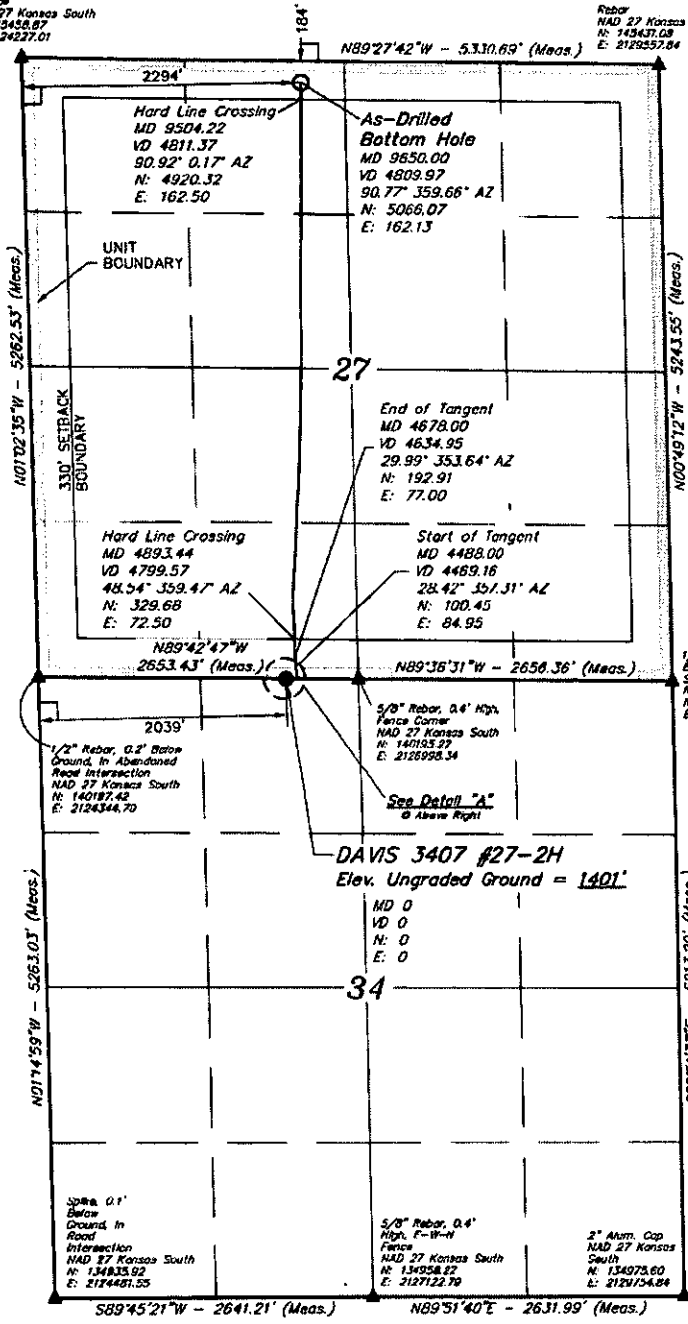
SPOT ELEVATION LOCATED AT THE NORTHEAST CORNER OF SECTION 22, T33S, R7W, 6th P.M. TAKEN FROM THE ANTHONY, QUADRANGLE, KANSAS, HARPER COUNTY, 7.5 MINUTE QUAD (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 1348 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

Pr. Peg
NAD 27 Kansas South
N: 143458.87
E: 2124227.01

Rebar
NAD 27 Kansas South
N: 143437.08
E: 2125557.04



CERTIFICATE
THIS IS TO CERTIFY THAT THE ABOVE PLAN WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
STATE OF KANSAS
12

LEGEND:
 L = 90° SYMBOL
 ● = PROPOSED WELL HEAD.
 ▲ = SECTION CORNERS LOCATED.

NAD 83 (#27-2H AS DRILLED BOTTOM HOLE) LATITUDE = 37°03'53.37" (37.064825) LONGITUDE = 090°40'02.27" (90.667742)	NAD 83 (#27-2H SURFACE LOCATION) LATITUDE = 37°03'03.28" (37.050811) LONGITUDE = 090°40'02.50" (90.667506)
NAD 27 (#27-2H AS DRILLED BOTTOM HOLE) LATITUDE = 37°03'53.28" (37.064800) LONGITUDE = 090°39'04" (90.648000)	NAD 27 (#27-2H SURFACE LOCATION) LATITUDE = 37°03'03.19" (37.050660) LONGITUDE = 090°40'01.07" (90.666854)
STATE PLANE NAD 27 N: 143228.42 E: 2124225.06	STATE PLANE NAD 27 N: 140180.45 E: 2126549.52

UNTAH ENGINEERING & LAND SURVEYING 65 SOUTH 200 EAST - VERNAL, UTAH 84078 (435) 789-1017		
SCALE 1" = 1000'	DATE SURVEYED: 08-08-12	DATE DRAWN: 09-24-12
PARTY L.S. K.H. C.A.G.	REFERENCES G.L.O. PLAT	
WEATHER COOL	FILE SGOMI	