



CONFIDENTIAL

OIL & GAS CONSERVATION DIVISION

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

Form Must Be Typed
Form must be Signed
All blanks must be Filled

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: Michael Duerr
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 #:
08/19/2012 09/19/2012 11/03/2012
Spud Date or Date Reached TD Completion Date or Recompletion Date

API No. 15 - 15-007-23853-01-00
Spot Description:
NE NE NE NW Sec. 4 Twp. 35 S. R. 10 [] East [x] West
310 Feet from [x] North [] South Line of Section
2333 Feet from [] East [x] West Line of Section
Footages Calculated from Nearest Outside Section Corner:
[] NE [x] NW [] SE [] SW
County: Barber
Lease Name: Schupbach 3510 Well #: 4-1H
Field Name: Wildcat
Producing Formation: Mississippi
Elevation: Ground: 1309 Kelly Bushing: 1332
Total Depth: 9880 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 753 Feet
Multiple Stage Cementing Collar Used? [] Yes [x] 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 [x] West
County: Harper Permit #: KDHE Permit # 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
[x] Letter of Confidentiality Received
Date: 11/07/2012
[] Confidential Release Date:
[x] Wireline Log Received
[] Geologist Report Received
[] UIC Distribution
ALT [x] I [] II [] III Approved by: NAOMI JAMES Date: 11/08/2012

T35S, R10W, 6th P.M.

SGOMI

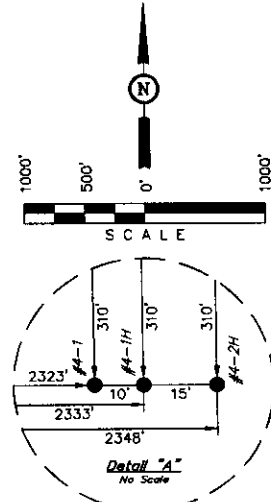
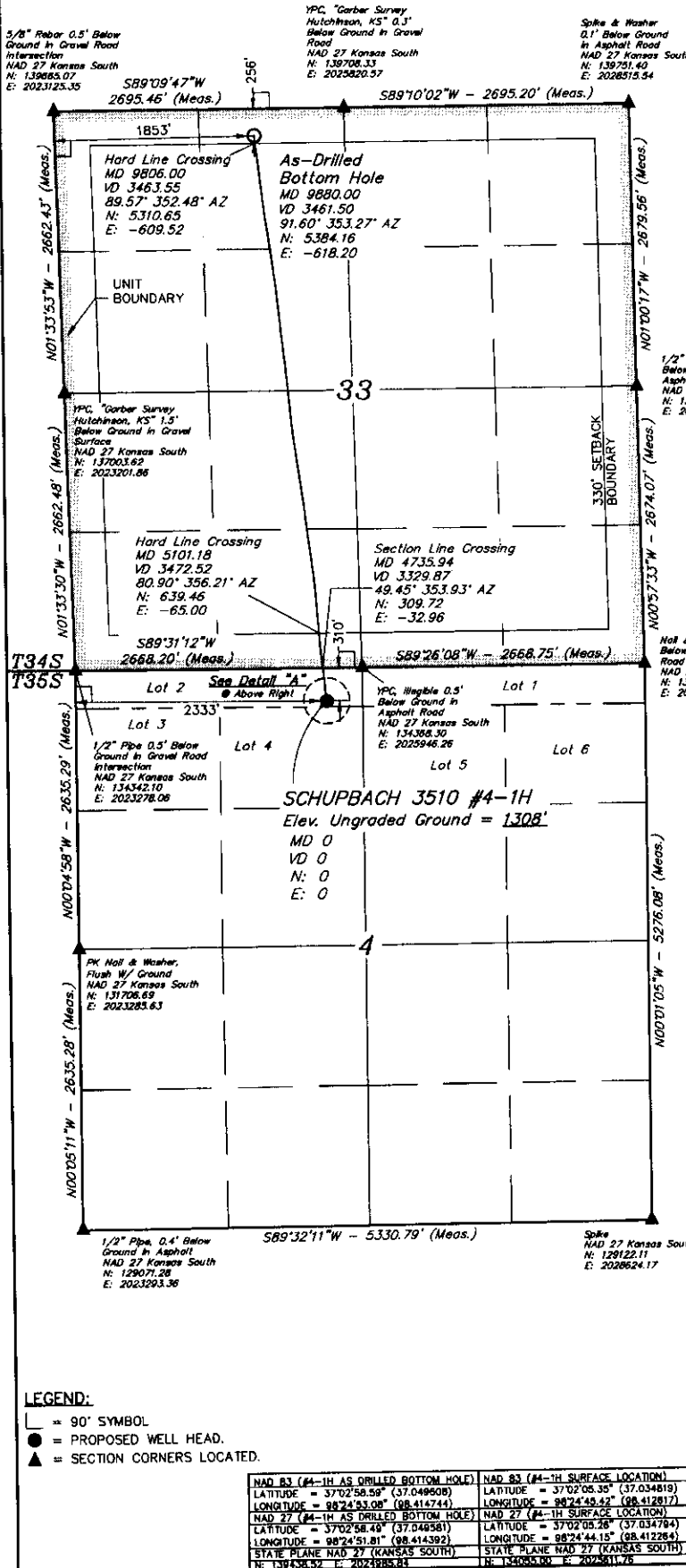
Well location, SCHUPBACH 3510 #4-1H, located as shown in Lot 2 of Section 4, T35S, R10W, 6th P.M., Barber County, Kansas.

BASIS OF ELEVATION

SPOT ELEVATION LOCATED AT THE SOUTHWEST CORNER OF SECTION 12, T35S, R10W, 6th P.M. TAKEN FROM THE CORWIN, QUADRANGLE, KANSAS, 7.5 MINUTE QUAD (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 1274 FEET.

BASIS OF BEARINGS

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



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE MAP 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.

[Signature]
 REGISTERED LAND SURVEYOR
 REGISTRATION NO. 17508
 STATE OF KANSAS

LEGEND:

- ⊥ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

UINTAH ENGINEERING & LAND SURVEYING		SCALE	DATE SURVEYED:	DATE DRAWN:
85 SOUTH 200 EAST - VERNAL, UTAH 84078		1" = 1000'	09-21-12	10-25-12
(435) 789-1017		PARTY	REFERENCES	
		D.S. K.S. C.A.G.	G.L.O. PLAT	
		WEATHER	FILE	
		COOL	SGOMI	

NAD 83 (#4-1H AS DRILLED BOTTOM HOLE) LATITUDE = 37°02'58.59" (37.049608) LONGITUDE = 98°24'53.08" (98.414744)	NAD 83 (#4-1H SURFACE LOCATION) LATITUDE = 37°02'08.35" (37.034819) LONGITUDE = 98°24'48.42" (98.412817)
NAD 27 (#4-1H AS DRILLED BOTTOM HOLE) LATITUDE = 37°02'58.40" (37.048981) LONGITUDE = 98°24'51.81" (98.414392)	NAD 27 (#4-1H SURFACE LOCATION) LATITUDE = 37°02'08.28" (37.034784) LONGITUDE = 98°24'44.15" (98.412264)
STATE PLANE NAD 27 (KANSAS SOUTH) N: 134535.52 E: 2024985.81	STATE PLANE NAD 27 (KANSAS SOUTH) N: 134695.00 E: 2025811.76

Shell Exploration & Production Co. Inc.

Barber Co. KS (NAD-27)

Sec 04-T35S-R10W

Schupbach 3510 #4-1H / Job #9504797 / Nabors 180

API 15-007-23853-01-00

Wellbore #1

Survey: MWD Surveys

Sperry Drilling Services Combo Report

21 September, 2012

Surface UWI : API 15-007-23853-01-00

Well Coordinates: 134,055.00 N, 2,025,611.76 E (37° 02' 05.26" N, 098° 24' 44.15" W)
Ground Level: 1,309.00 ft

Local Coordinate Origin:

Centered on Well Schupbach 3510 #4-1H / Job #9504797 / Nabors 180

Viewing Datum:

WELL @ 1332.80ft (Original Well Elev)

TVDs to System:

N

North Reference:

True

Unit System:

API US Survey Feet

Version: 2003.21 Build: 43

HALLIBURTON

HALLIBURTON**Survey Report for Schupbach 3510 #4-1H / Job #9504797 / Nabors 180 - MWD Surveys**

Measured Depth (ft)	Inclination (°)	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	0.00	-1,332.80	0.00	0.00 N	0.00 E	134,055.00	2,025,611.76	0.00	0.00	
80.00	0.31	239.54	-1,252.80	80.00	0.11 S	0.19 W	134,054.89	2,025,611.57	0.39	-0.09	First Sperry MWD Survey
142.00	0.51	111.31	-1,190.80	142.00	0.30 S	0.07 W	134,054.70	2,025,611.69	1.20	-0.29	
172.00	0.64	87.19	-1,160.80	172.00	0.34 S	0.22 E	134,054.66	2,025,611.98	0.91	-0.36	
202.00	0.86	43.88	-1,130.81	201.99	0.16 S	0.54 E	134,054.84	2,025,612.30	1.97	-0.22	
234.00	1.41	21.30	-1,098.81	233.99	0.38 N	0.85 E	134,055.38	2,025,612.61	2.18	0.28	
269.00	2.25	2.08	-1,063.83	268.97	1.46 N	1.03 E	134,056.46	2,025,612.79	2.94	1.34	
300.00	3.38	358.41	-1,032.87	299.93	2.98 N	1.03 E	134,057.99	2,025,612.79	3.69	2.85	
331.00	4.33	353.54	-1,001.94	330.86	5.06 N	0.87 E	134,060.06	2,025,612.63	3.24	4.94	
362.00	4.92	352.41	-971.04	361.76	7.54 N	0.56 E	134,062.54	2,025,612.32	1.93	7.44	
394.00	5.30	351.83	-939.17	393.63	10.36 N	0.17 E	134,065.36	2,025,611.92	1.20	10.28	
425.00	5.84	348.62	-908.31	424.49	13.33 N	0.34 W	134,068.33	2,025,611.41	2.01	13.29	
456.00	6.31	345.58	-877.49	455.31	16.52 N	1.08 W	134,071.52	2,025,610.67	1.84	16.54	
488.00	6.39	345.19	-845.68	487.12	19.95 N	1.97 W	134,074.95	2,025,609.77	0.28	20.04	
519.00	6.43	344.50	-814.88	517.92	23.29 N	2.87 W	134,078.29	2,025,608.86	0.28	23.46	
613.00	5.78	351.18	-721.41	611.39	33.04 N	5.01 W	134,088.03	2,025,606.72	1.02	33.39	
706.00	5.42	351.34	-628.85	703.95	42.01 N	6.39 W	134,097.00	2,025,605.33	0.39	42.45	
733.00	5.25	351.70	-601.97	730.83	44.49 N	6.76 W	134,099.49	2,025,604.96	0.64	44.96	
804.00	4.59	358.74	-531.23	801.57	50.55 N	7.29 W	134,105.54	2,025,604.42	1.26	51.04	
835.00	4.42	0.33	-500.33	832.47	52.98 N	7.31 W	134,107.97	2,025,604.40	0.68	53.46	
866.00	3.82	0.51	-469.41	863.39	55.21 N	7.29 W	134,110.20	2,025,604.42	1.94	55.67	
897.00	2.68	359.26	-438.46	894.34	56.97 N	7.29 W	134,111.96	2,025,604.41	3.68	57.42	
991.00	0.90	354.84	-344.51	988.29	59.90 N	7.39 W	134,114.89	2,025,604.32	1.90	60.35	
1,084.00	0.79	356.59	-251.52	1,081.28	61.27 N	7.49 W	134,116.26	2,025,604.21	0.12	61.72	
1,178.00	0.61	356.34	-157.52	1,175.28	62.41 N	7.56 W	134,117.40	2,025,604.14	0.19	62.86	
1,272.00	0.43	341.59	-63.53	1,269.27	63.25 N	7.71 W	134,118.24	2,025,604.00	0.24	63.71	
1,367.00	0.52	358.57	31.47	1,364.27	64.02 N	7.83 W	134,119.01	2,025,603.87	0.17	64.49	
1,462.00	0.56	348.54	126.46	1,459.26	64.90 N	7.93 W	134,119.89	2,025,603.77	0.11	65.38	
1,557.00	0.41	356.69	221.46	1,554.26	65.70 N	8.04 W	134,120.69	2,025,603.65	0.17	66.18	
1,746.00	0.53	354.07	410.45	1,743.25	67.24 N	8.17 W	134,122.23	2,025,603.52	0.06	67.73	
1,936.00	0.56	342.18	600.45	1,933.25	69.00 N	8.55 W	134,123.99	2,025,603.15	0.06	69.52	
2,126.00	0.18	22.00	790.44	2,123.24	70.16 N	8.72 W	134,125.15	2,025,602.97	0.23	70.69	
2,315.00	0.65	313.71	979.44	2,312.24	71.17 N	9.38 W	134,126.17	2,025,602.31	0.32	71.77	
2,505.00	0.44	324.80	1,169.43	2,502.23	72.52 N	10.58 W	134,127.51	2,025,601.11	0.12	73.24	
2,694.00	0.34	334.23	1,358.42	2,691.22	73.61 N	11.25 W	134,128.60	2,025,600.45	0.06	74.40	
2,883.00	0.03	108.38	1,547.42	2,880.22	74.10 N	11.44 W	134,129.09	2,025,600.25	0.19	74.91	
3,073.00	0.67	349.08	1,737.42	3,070.22	75.18 N	11.61 W	134,130.17	2,025,600.08	0.36	75.99	
3,263.00	0.83	337.32	1,927.40	3,260.20	77.54 N	12.35 W	134,132.53	2,025,599.34	0.12	78.42	
3,452.00	0.57	13.07	2,116.39	3,449.19	79.72 N	12.66 W	134,134.71	2,025,599.02	0.26	80.62	

HALLIBURTON**Survey Report for Schupbach 3510 #4-1H / Job #9504797 / Nabors 180 - MWD Surveys**

Measured Depth (ft)	Inclination (°)	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)			
3,642.00	0.50	347.24	2,306.38	3,639.18	81.45 N	12.63 W	134,136.43	2,025,599.05	0.13	82.34	
3,832.00	0.31	332.57	2,496.38	3,829.18	82.71 N	13.05 W	134,137.70	2,025,598.63	0.11	83.64	
4,022.00	0.22	306.56	2,686.37	4,019.17	83.38 N	13.58 W	134,138.37	2,025,598.10	0.08	84.37	
4,212.00	0.69	9.68	2,876.37	4,209.17	84.73 N	13.68 W	134,139.72	2,025,598.00	0.33	85.72	
4,243.00	3.63	2.18	2,907.34	4,240.14	85.89 N	13.61 W	134,140.88	2,025,598.07	9.51	86.87	
4,273.00	6.89	358.51	2,937.21	4,270.01	88.64 N	13.62 W	134,143.63	2,025,598.05	10.92	89.60	
4,305.00	10.02	357.88	2,968.86	4,301.66	93.35 N	13.78 W	134,148.33	2,025,597.90	9.79	94.29	
4,336.00	13.07	357.81	2,999.23	4,332.03	99.54 N	14.01 W	134,154.53	2,025,597.66	9.84	100.48	
4,368.00	16.20	357.59	3,030.19	4,362.99	107.62 N	14.34 W	134,162.61	2,025,597.32	9.78	108.54	
4,400.00	19.55	357.84	3,060.64	4,393.44	117.43 N	14.73 W	134,172.42	2,025,596.92	10.47	118.34	
4,431.00	22.58	357.74	3,089.56	4,422.36	128.57 N	15.16 W	134,183.55	2,025,596.48	9.77	129.45	
4,463.00	25.68	357.04	3,118.76	4,451.56	141.63 N	15.76 W	134,196.62	2,025,595.87	9.73	142.51	
4,495.00	28.19	356.15	3,147.29	4,480.09	156.10 N	16.62 W	134,211.09	2,025,594.99	7.94	156.98	
4,526.00	30.87	354.91	3,174.26	4,507.06	171.33 N	17.82 W	134,226.31	2,025,593.78	8.87	172.25	
4,558.00	34.30	353.73	3,201.22	4,534.02	188.48 N	19.53 W	134,243.46	2,025,592.05	10.90	189.48	
4,590.00	37.86	353.51	3,227.08	4,559.88	207.20 N	21.63 W	134,262.18	2,025,589.94	11.13	208.33	
4,621.00	41.40	353.48	3,250.95	4,583.75	226.84 N	23.87 W	134,281.82	2,025,587.68	11.42	228.09	
4,653.00	44.69	353.64	3,274.33	4,607.13	248.55 N	26.32 W	134,303.52	2,025,585.21	10.29	249.93	
4,685.00	46.93	353.89	3,296.64	4,629.44	271.35 N	28.81 W	134,326.33	2,025,582.70	7.02	272.88	
4,716.00	49.45	353.93	3,317.30	4,650.10	294.33 N	31.26 W	134,349.30	2,025,580.22	8.13	295.98	
4,748.00	52.34	353.51	3,337.48	4,670.28	319.01 N	33.98 W	134,373.97	2,025,577.48	9.09	320.81	
4,779.00	54.75	353.27	3,355.90	4,688.70	343.77 N	36.85 W	134,398.74	2,025,574.59	7.80	345.74	
4,811.00	57.48	353.82	3,373.74	4,706.54	370.17 N	39.83 W	134,425.13	2,025,571.58	8.65	372.30	
4,843.00	60.63	353.91	3,390.20	4,723.00	397.45 N	42.76 W	134,452.41	2,025,568.62	9.85	399.75	
4,874.00	62.57	354.20	3,404.94	4,737.74	424.57 N	45.59 W	134,479.53	2,025,565.77	6.31	427.01	
4,906.00	65.38	354.56	3,418.98	4,751.78	453.19 N	48.40 W	134,508.14	2,025,562.93	8.84	455.76	
4,938.00	68.50	354.08	3,431.51	4,764.31	482.48 N	51.32 W	134,537.43	2,025,559.99	9.85	485.20	
4,969.00	71.41	353.99	3,442.14	4,774.94	511.44 N	54.34 W	134,566.39	2,025,556.93	9.39	514.32	
5,001.00	74.37	354.59	3,451.55	4,784.35	541.87 N	57.39 W	134,596.82	2,025,553.87	9.42	544.90	
5,033.00	76.67	355.38	3,459.55	4,792.35	572.74 N	60.09 W	134,627.68	2,025,551.13	7.57	575.87	
5,064.00	78.74	355.67	3,466.15	4,798.95	602.93 N	62.46 W	134,657.87	2,025,548.74	6.74	606.15	
5,096.00	80.90	356.21	3,471.81	4,804.61	634.35 N	64.68 W	134,689.28	2,025,546.48	6.95	637.62	
5,128.00	83.33	356.61	3,476.20	4,809.00	665.98 N	66.67 W	134,720.91	2,025,544.46	7.69	669.28	
5,159.00	86.28	355.82	3,479.00	4,811.80	696.78 N	68.71 W	134,751.71	2,025,542.40	9.85	700.12	
5,254.00	90.40	355.94	3,481.75	4,814.55	791.47 N	75.53 W	134,846.40	2,025,535.49	4.34	794.99	
5,347.00	91.11	355.95	3,480.53	4,813.33	884.23 N	82.10 W	134,939.15	2,025,528.82	0.76	887.92	
5,440.00	89.97	355.54	3,479.65	4,812.45	976.97 N	89.00 W	135,031.88	2,025,521.84	1.30	980.85	
5,535.00	91.11	354.32	3,478.76	4,811.56	1,071.59 N	97.40 W	135,126.50	2,025,513.35	1.76	1,075.83	
5,630.00	91.87	354.62	3,476.29	4,809.09	1,166.12 N	106.55 W	135,221.01	2,025,504.11	0.86	1,170.79	

HALLIBURTON**Survey Report for Schupbach 3510 #4-1H / Job #9504797 / Nabors 180 - MWD Surveys**

Measured Depth (ft)	Inclination (°)	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)			
5,725.00	91.67	352.83	3,473.35	4,806.15	1,260.50 N	116.93 W	135,315.39	2,025,493.65	1.90	1,265.74	
5,820.00	90.22	352.98	3,471.79	4,804.59	1,354.76 N	128.66 W	135,409.63	2,025,481.83	1.53	1,360.71	
5,915.00	90.43	352.89	3,471.25	4,804.05	1,449.03 N	140.34 W	135,503.90	2,025,470.05	0.24	1,455.70	
6,010.00	89.60	352.40	3,471.22	4,804.02	1,543.25 N	152.51 W	135,598.10	2,025,457.80	1.01	1,550.68	
6,105.00	89.97	353.24	3,471.58	4,804.38	1,637.50 N	164.38 W	135,692.34	2,025,445.84	0.97	1,645.67	
6,201.00	90.40	353.93	3,471.27	4,804.07	1,732.90 N	175.11 W	135,787.73	2,025,435.02	0.85	1,741.66	
6,295.00	90.62	353.60	3,470.43	4,803.23	1,826.34 N	185.31 W	135,881.16	2,025,424.73	0.42	1,835.66	
6,390.00	90.12	352.08	3,469.82	4,802.62	1,920.59 N	197.15 W	135,975.40	2,025,412.80	1.68	1,930.64	
6,485.00	89.38	351.51	3,470.23	4,803.03	2,014.62 N	210.71 W	136,069.42	2,025,399.15	0.98	2,025.59	
6,579.00	90.06	352.26	3,470.69	4,803.49	2,107.68 N	223.98 W	136,162.46	2,025,385.80	1.08	2,119.53	
6,674.00	90.06	351.84	3,470.59	4,803.39	2,201.76 N	237.12 W	136,256.54	2,025,372.57	0.44	2,214.49	
6,769.00	90.55	351.68	3,470.09	4,802.89	2,295.78 N	250.74 W	136,350.54	2,025,358.87	0.54	2,309.43	
6,864.00	91.08	351.75	3,468.74	4,801.54	2,389.78 N	264.42 W	136,444.53	2,025,345.09	0.56	2,404.36	
6,959.00	90.83	352.13	3,467.15	4,799.95	2,483.83 N	277.74 W	136,538.56	2,025,331.68	0.48	2,499.30	
7,054.00	90.18	353.88	3,466.31	4,799.11	2,578.11 N	289.31 W	136,632.83	2,025,320.03	1.96	2,594.29	
7,149.00	90.00	354.35	3,466.17	4,798.97	2,672.61 N	299.05 W	136,727.32	2,025,310.20	0.53	2,689.28	
7,244.00	91.48	354.82	3,464.94	4,797.74	2,767.18 N	308.01 W	136,821.88	2,025,301.14	1.63	2,784.26	
7,339.00	90.71	355.07	3,463.12	4,795.92	2,861.79 N	316.38 W	136,916.49	2,025,292.69	0.85	2,879.22	
7,434.00	89.66	354.37	3,462.82	4,795.62	2,956.38 N	325.12 W	137,011.07	2,025,283.85	1.33	2,974.21	
7,529.00	90.03	354.66	3,463.07	4,795.87	3,050.95 N	334.21 W	137,105.63	2,025,274.68	0.49	3,069.20	
7,624.00	90.77	354.35	3,462.41	4,795.21	3,145.51 N	343.30 W	137,200.18	2,025,265.50	0.84	3,164.19	
7,719.00	90.06	353.63	3,461.72	4,794.52	3,239.98 N	353.25 W	137,294.64	2,025,255.46	1.06	3,259.18	
7,814.00	89.29	353.29	3,462.26	4,795.06	3,334.36 N	364.07 W	137,389.01	2,025,244.55	0.89	3,354.18	
7,909.00	89.91	353.65	3,462.92	4,795.72	3,428.74 N	374.87 W	137,483.38	2,025,233.66	0.75	3,449.18	
8,004.00	89.35	353.01	3,463.54	4,796.34	3,523.10 N	385.91 W	137,577.73	2,025,222.54	0.90	3,544.17	
8,099.00	88.37	354.33	3,465.43	4,798.23	3,617.50 N	396.38 W	137,672.11	2,025,211.98	1.73	3,639.15	
8,193.00	90.43	353.91	3,466.41	4,799.21	3,710.99 N	406.01 W	137,765.60	2,025,202.26	2.24	3,733.14	
8,288.00	91.97	354.78	3,464.42	4,797.22	3,805.50 N	415.37 W	137,860.10	2,025,192.81	1.86	3,828.11	
8,383.00	91.39	354.13	3,461.64	4,794.44	3,900.02 N	424.54 W	137,954.61	2,025,183.55	0.92	3,923.06	
8,478.00	89.91	352.30	3,460.56	4,793.36	3,994.34 N	435.76 W	138,048.92	2,025,172.24	2.48	4,018.04	
8,573.00	90.09	352.10	3,460.56	4,793.36	4,088.46 N	448.66 W	138,143.03	2,025,159.26	0.28	4,113.01	
8,667.00	90.37	351.88	3,460.18	4,792.98	4,181.54 N	461.75 W	138,236.10	2,025,146.07	0.38	4,206.96	
8,762.00	90.40	351.60	3,459.54	4,792.34	4,275.56 N	475.40 W	138,330.10	2,025,132.34	0.30	4,301.90	
8,857.00	90.12	351.74	3,459.11	4,791.91	4,369.55 N	489.17 W	138,424.08	2,025,118.48	0.33	4,396.84	
8,952.00	89.10	351.17	3,459.76	4,792.56	4,463.49 N	503.28 W	138,518.01	2,025,104.28	1.23	4,491.76	
9,047.00	89.97	352.05	3,460.53	4,793.33	4,557.47 N	517.14 W	138,611.97	2,025,090.33	1.30	4,586.68	
9,142.00	90.74	352.25	3,459.94	4,792.74	4,651.58 N	530.12 W	138,706.07	2,025,077.27	0.84	4,681.64	
9,237.00	91.29	354.06	3,458.26	4,791.06	4,745.88 N	541.44 W	138,800.36	2,025,065.86	1.99	4,776.62	
9,332.00	87.96	352.72	3,458.88	4,791.68	4,840.23 N	552.37 W	138,894.70	2,025,054.84	3.78	4,871.60	

HALLIBURTON

Survey Report for Schupbach 3510 #4-1H / Job #9504797 / Nabors 180 - MWD Surveys

Measured Depth (ft)	Inclination (°)	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			
9,427.00	88.70	353.01	3,461.65	4,794.45	4,934.46 N	564.16 W	138,988.92	2,025,042.95	0.84	4,966.55	
9,522.00	89.51	353.51	3,463.13	4,795.93	5,028.79 N	575.31 W	139,083.24	2,025,031.72	1.00	5,061.53	
9,617.00	89.63	353.37	3,463.85	4,796.65	5,123.16 N	586.17 W	139,177.60	2,025,020.78	0.19	5,156.53	
9,712.00	89.57	352.48	3,464.51	4,797.31	5,217.44 N	597.87 W	139,271.86	2,025,008.99	0.94	5,251.51	
9,807.00	91.60	353.27	3,463.54	4,796.34	5,311.69 N	609.65 W	139,366.11	2,024,997.12	2.29	5,346.49	Final Sperry MWD Survey
9,880.00	91.60	353.27	3,461.50	4,794.30	5,384.16 N	618.20 W	139,438.57	2,024,988.50	0.00	5,419.46	Projection To TD

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates (ft)		Comment
		+N/-S	+E/-W	
80.00	80.00	-0.11	-0.19	First Sperry MWD Survey
9,807.00	4,796.34	5,311.69	-609.65	Final Sperry MWD Survey
9,880.00	4,794.30	5,384.16	-618.20	Projection To TD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin (ft)		Start TVD (ft)
				+N/_S	+E/-W	
User	No Target (Freehand)	353.75	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
80.00	9,880.00	MWD Surveys	MWD+SC

Design Targets

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

HALLIBURTON**Survey Report for Schupbach 3510 #4-1H / Job #9504797 / Nabors 180 - MWD Surveys**

Directional Difficulty Index

Average Dogleg over Survey:	1.63 °/100ft	Maximum Dogleg over Survey:	11.42 °/100ft at 4,621.00 ft
Net Tortosity applicable to Plans:	0.09 °/100ft	Directional Difficulty Index:	6.254

Audit Info

HALLIBURTON**North Reference Sheet for Sec 04-T35S-R10W - Schupbach 3510 #4-1H / Job #9504797 / Nabors 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 @ 1332.80ft (Original Well Elev). Northing and Easting are relative to Schupbach 3510 #4-1H / Job #9504797 / Nabors 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: 1.00005366

Grid Coordinates of Well: 134,055.00 ft N, 2,025,611.76 ft E

Geographical Coordinates of Well: 37° 02' 05.26" N, 098° 24' 44.15" W

Grid Convergence at Surface is: 0.05°

Based upon Minimum Curvature type calculations, at a Measured Depth of 9,880.00ft the Bottom Hole Displacement is 5,419.54ft in the Direction of 353.45° (True).

Magnetic Convergence at surface is: -4.83° (2 August 2012, , BGGM2012)

