

**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: Earl Manning  
 Purchaser:

## Designate Type of Completion:

- New Well  Re-Entry  Workover
- Oil  WSW  SWD  SLOW  
 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 #: \_\_\_\_\_

10/19/2012	11/09/2012	12/31/2012
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-007-23927-01-00  
 Spot Description: \_\_\_\_\_  
 SW SW SW SE Sec. 16 Twp. 35 S. R. 10  East  West  
 310 Feet from  North /  South Line of Section  
 2832 Feet from  East /  West Line of Section  
 Footages Calculated from Nearest Outside Section Corner:  
 NE  NW  SE  SW  
 County: Barber  
 Lease Name: Schupbach 3510 Well #: 16-1H  
 Field Name: Wildcat  
 Producing Formation: Mississippi  
 Elevation: Ground: 1329 Kelly Bushing: 1353  
 Total Depth: 9956 Plug Back Total Depth: \_\_\_\_\_  
 Amount of Surface Pipe Set and Cemented at: 530 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 #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: 12/03/2012  
 Confidential Release Date: \_\_\_\_\_  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution  
 ALT  I  II  III Approved by: NAOMI JAMES Date: 01/17/2013

# Shell Exploration & Production Co. Inc.

Barber Co. KS (NAD-27)

Sec 16 T35S R10W

Schupbach Ranch 3510 16-1H

API# 15-007-23927/ Job# 9507255/ Nabors 180

Wellbore #1

Plan: Plan #1 101612 RevA0

## Sperry Drilling Services

### Combo Report

18 October, 2012

Surface UWI : API# 15-007-23927/ Job# 9507255/ Nabors 180

Well Coordinates: 121,102.84 N, 2,026,199.53 E (36° 59' 57.19" N, 098° 24' 37.06" W)

Ground Level: 1,330.00 ft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Centered on Well Schupbach Ranch 3510 16-1H

WELL @ 1353.00ft (Original Well Elev+23'KB)

N

Grid

API-US-new

Version: 2003.21 Build: 46

**HALLIBURTON**

**HALLIBURTON****Plan Report for Schupbach Ranch 3510 16-1H - Plan #1 101612 RevA0**

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	-1,353.00	0.00	0.00 N	0.00 E	121,102.84	2,026,199.53	0.00	0.00	
100.00	0.00	0.00	-1,253.00	100.00	0.00 N	0.00 E	121,102.84	2,026,199.53	0.00	0.00	
200.00	0.00	0.00	-1,153.00	200.00	0.00 N	0.00 E	121,102.84	2,026,199.53	0.00	0.00	Start Build 2.50
300.00	2.50	2.16	-1,053.03	299.97	2.18 N	0.08 E	121,105.02	2,026,199.61	2.50	2.18	
400.00	5.00	2.16	-953.25	399.75	8.71 N	0.33 E	121,111.55	2,026,199.86	2.50	8.72	
440.00	6.00	2.16	-913.44	439.56	12.55 N	0.47 E	121,115.39	2,026,200.00	2.50	12.55	Start 300.00 hold at 440.00 MD
500.00	6.00	2.16	-853.77	499.23	18.81 N	0.71 E	121,121.65	2,026,200.24	0.00	18.82	
600.00	6.00	2.16	-754.31	598.69	29.26 N	1.10 E	121,132.10	2,026,200.63	0.00	29.27	
700.00	6.00	2.16	-654.86	698.14	39.70 N	1.50 E	121,142.54	2,026,201.03	0.00	39.72	
740.00	6.00	2.16	-615.08	737.92	43.88 N	1.66 E	121,146.72	2,026,201.19	0.00	43.91	Start Drop -2.50
800.00	4.50	2.16	-555.34	797.66	49.37 N	1.86 E	121,152.21	2,026,201.39	2.50	49.39	
900.00	2.00	2.16	-455.50	897.50	55.03 N	2.08 E	121,157.87	2,026,201.61	2.50	55.06	
980.00	0.00	0.00	-375.52	977.48	56.43 N	2.13 E	121,159.27	2,026,201.66	2.50	56.46	Start 3280.52 hold at 980.00 MD
1,000.00	0.00	0.00	-355.52	997.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
1,100.00	0.00	0.00	-255.52	1,097.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
1,105.52	0.00	0.00	-250.00	1,103.00	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	Hutchinson Salt Top
1,200.00	0.00	0.00	-155.52	1,197.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
1,300.00	0.00	0.00	-55.52	1,297.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
1,400.00	0.00	0.00	44.48	1,397.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
1,486.52	0.00	0.00	131.00	1,484.00	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	Hutchinson Salt Base
1,500.00	0.00	0.00	144.48	1,497.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
1,600.00	0.00	0.00	244.48	1,597.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
1,700.00	0.00	0.00	344.48	1,697.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
1,800.00	0.00	0.00	444.48	1,797.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
1,900.00	0.00	0.00	544.48	1,897.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
2,000.00	0.00	0.00	644.48	1,997.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
2,100.00	0.00	0.00	744.48	2,097.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
2,200.00	0.00	0.00	844.48	2,197.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
2,300.00	0.00	0.00	944.48	2,297.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
2,400.00	0.00	0.00	1,044.48	2,397.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
2,500.00	0.00	0.00	1,144.48	2,497.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
2,564.52	0.00	0.00	1,209.00	2,562.00	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	Onaga Shale
2,600.00	0.00	0.00	1,244.48	2,597.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
2,700.00	0.00	0.00	1,344.48	2,697.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
2,800.00	0.00	0.00	1,444.48	2,797.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
2,900.00	0.00	0.00	1,544.48	2,897.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
3,000.00	0.00	0.00	1,644.48	2,997.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
3,100.00	0.00	0.00	1,744.48	3,097.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
3,200.00	0.00	0.00	1,844.48	3,197.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	

**HALLIBURTON****Plan Report for Schupbach Ranch 3510 16-1H - Plan #1 101612 RevA0**

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)			
3,300.00	0.00	0.00	1,944.48	3,297.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
3,391.52	0.00	0.00	2,036.00	3,389.00	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	Techumseh Shale
3,400.00	0.00	0.00	2,044.48	3,397.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
3,481.52	0.00	0.00	2,126.00	3,479.00	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	Lecompton Limestone
3,500.00	0.00	0.00	2,144.48	3,497.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
3,600.00	0.00	0.00	2,244.48	3,597.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
3,666.52	0.00	0.00	2,311.00	3,664.00	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	Oread Limestone
3,700.00	0.00	0.00	2,344.48	3,697.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
3,718.52	0.00	0.00	2,363.00	3,716.00	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	Toronto Limestone
3,800.00	0.00	0.00	2,444.48	3,797.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
3,900.00	0.00	0.00	2,544.48	3,897.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
4,000.00	0.00	0.00	2,644.48	3,997.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
4,040.52	0.00	0.00	2,685.00	4,038.00	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	Stalnaker Top
4,100.00	0.00	0.00	2,744.48	4,097.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
4,115.52	0.00	0.00	2,760.00	4,113.00	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	Stalnaker Base
4,200.00	0.00	0.00	2,844.48	4,197.48	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	
4,260.52	0.00	0.00	2,905.00	4,258.00	56.43 N	2.13 E	121,159.27	2,026,201.66	0.00	56.46	Start Build 10.00
4,300.00	3.95	3.29	2,944.45	4,297.45	57.79 N	2.21 E	121,160.63	2,026,201.74	10.00	57.82	
4,304.56	4.40	3.29	2,949.00	4,302.00	58.12 N	2.23 E	121,160.96	2,026,201.76	10.00	58.15	Iola Limestone
4,400.00	13.95	3.29	3,043.11	4,396.11	73.29 N	3.10 E	121,176.13	2,026,202.63	10.00	73.35	
4,486.32	22.58	3.29	3,125.00	4,478.00	100.28 N	4.65 E	121,203.12	2,026,204.18	10.00	100.38	Hushpuckney Shale
4,500.00	23.95	3.29	3,137.57	4,490.57	105.67 N	4.96 E	121,208.51	2,026,204.49	10.00	105.78	
4,569.24	30.87	3.29	3,199.00	4,552.00	137.47 N	6.79 E	121,240.31	2,026,206.32	10.00	137.64	Marmaton Group
4,600.00	33.95	3.29	3,224.96	4,577.96	153.93 N	7.74 E	121,256.77	2,026,207.27	10.00	154.12	
4,688.12	42.76	3.29	3,294.00	4,647.00	208.47 N	10.87 E	121,311.31	2,026,210.40	10.00	208.75	Pawnee Limestone
4,700.00	43.95	3.29	3,302.64	4,655.64	216.61 N	11.34 E	121,319.45	2,026,210.87	10.00	216.90	
4,751.41	49.09	3.29	3,338.00	4,691.00	253.84 N	13.48 E	121,356.68	2,026,213.01	10.00	254.19	Cherokee
4,800.00	53.95	3.29	3,368.23	4,721.23	291.80 N	15.67 E	121,394.64	2,026,215.20	10.00	292.22	
4,900.00	63.95	3.29	3,419.74	4,772.74	377.22 N	20.58 E	121,480.06	2,026,220.11	10.00	377.78	
4,974.42	71.39	3.29	3,448.00	4,801.00	445.90 N	24.53 E	121,548.74	2,026,224.06	10.00	446.57	MS Limestone
5,000.00	73.95	3.29	3,455.62	4,808.62	470.27 N	25.94 E	121,573.11	2,026,225.47	10.00	470.99	
5,100.00	83.95	3.29	3,474.77	4,827.77	568.13 N	31.57 E	121,670.97	2,026,231.10	10.00	569.01	
5,160.52	90.00	3.29	3,477.96	4,830.96	628.44 N	35.03 E	121,731.28	2,026,234.56	10.00	629.42	Start 4735.90 hold at 5160.52 MD
5,200.00	90.00	3.29	3,477.96	4,830.96	667.85 N	37.30 E	121,770.69	2,026,236.83	0.00	668.89	
5,300.00	90.00	3.29	3,477.96	4,830.96	767.69 N	43.05 E	121,870.53	2,026,242.58	0.00	768.89	
5,400.00	90.00	3.29	3,477.96	4,830.96	867.52 N	48.79 E	121,970.36	2,026,248.32	0.00	868.89	
5,500.00	90.00	3.29	3,477.96	4,830.96	967.36 N	54.53 E	122,070.20	2,026,254.06	0.00	968.89	
5,600.00	90.00	3.29	3,477.96	4,830.96	1,067.19 N	60.28 E	122,170.03	2,026,259.81	0.00	1,068.89	
5,700.00	90.00	3.29	3,477.96	4,830.96	1,167.03 N	66.02 E	122,269.87	2,026,265.55	0.00	1,168.89	

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					Northing (ft)	Easting (ft)	Northing (ft)	Easting (ft)			
5,800.00	90.00	3.29	3,477.96	4,830.96	1,266.86 N	71.76 E	122,369.70	2,026,271.29	0.00	1,268.89	
5,900.00	90.00	3.29	3,477.96	4,830.96	1,366.70 N	77.51 E	122,469.54	2,026,277.04	0.00	1,368.89	
6,000.00	90.00	3.29	3,477.96	4,830.96	1,466.53 N	83.25 E	122,569.37	2,026,282.78	0.00	1,468.89	
6,100.00	90.00	3.29	3,477.96	4,830.96	1,566.37 N	88.99 E	122,669.21	2,026,288.52	0.00	1,568.89	
6,200.00	90.00	3.29	3,477.96	4,830.96	1,666.20 N	94.74 E	122,769.04	2,026,294.26	0.00	1,668.89	
6,300.00	90.00	3.29	3,477.96	4,830.96	1,766.04 N	100.48 E	122,868.88	2,026,300.01	0.00	1,768.89	
6,400.00	90.00	3.29	3,477.96	4,830.96	1,865.87 N	106.22 E	122,968.71	2,026,305.75	0.00	1,868.89	
6,500.00	90.00	3.29	3,477.96	4,830.96	1,965.71 N	111.96 E	123,068.54	2,026,311.49	0.00	1,968.89	
6,600.00	90.00	3.29	3,477.96	4,830.96	2,065.54 N	117.71 E	123,168.38	2,026,317.24	0.00	2,068.89	
6,700.00	90.00	3.29	3,477.96	4,830.96	2,165.38 N	123.45 E	123,268.21	2,026,322.98	0.00	2,168.89	
6,800.00	90.00	3.29	3,477.96	4,830.96	2,265.21 N	129.19 E	123,368.05	2,026,328.72	0.00	2,268.89	
6,900.00	90.00	3.29	3,477.96	4,830.96	2,365.05 N	134.94 E	123,467.88	2,026,334.47	0.00	2,368.89	
7,000.00	90.00	3.29	3,477.96	4,830.96	2,464.88 N	140.68 E	123,567.72	2,026,340.21	0.00	2,468.89	
7,100.00	90.00	3.29	3,477.96	4,830.96	2,564.72 N	146.42 E	123,667.55	2,026,345.95	0.00	2,568.89	
7,200.00	90.00	3.29	3,477.96	4,830.96	2,664.55 N	152.17 E	123,767.39	2,026,351.70	0.00	2,668.89	
7,300.00	90.00	3.29	3,477.96	4,830.96	2,764.39 N	157.91 E	123,867.22	2,026,357.44	0.00	2,768.89	
7,400.00	90.00	3.29	3,477.96	4,830.96	2,864.22 N	163.65 E	123,967.06	2,026,363.18	0.00	2,868.89	
7,500.00	90.00	3.29	3,477.96	4,830.96	2,964.06 N	169.40 E	124,066.89	2,026,368.93	0.00	2,968.89	
7,600.00	90.00	3.29	3,477.96	4,830.96	3,063.89 N	175.14 E	124,166.73	2,026,374.67	0.00	3,068.89	
7,700.00	90.00	3.29	3,477.96	4,830.96	3,163.73 N	180.88 E	124,266.56	2,026,380.41	0.00	3,168.89	
7,800.00	90.00	3.29	3,477.96	4,830.96	3,263.56 N	186.63 E	124,366.40	2,026,386.16	0.00	3,268.89	
7,900.00	90.00	3.29	3,477.96	4,830.96	3,363.40 N	192.37 E	124,466.23	2,026,391.90	0.00	3,368.89	
8,000.00	90.00	3.29	3,477.96	4,830.96	3,463.23 N	198.11 E	124,566.07	2,026,397.64	0.00	3,468.89	
8,100.00	90.00	3.29	3,477.96	4,830.96	3,563.07 N	203.86 E	124,665.90	2,026,403.39	0.00	3,568.89	
8,200.00	90.00	3.29	3,477.96	4,830.96	3,662.90 N	209.60 E	124,765.74	2,026,409.13	0.00	3,668.89	
8,300.00	90.00	3.29	3,477.96	4,830.96	3,762.74 N	215.34 E	124,865.57	2,026,414.87	0.00	3,768.89	
8,400.00	90.00	3.29	3,477.96	4,830.96	3,862.57 N	221.09 E	124,965.40	2,026,420.62	0.00	3,868.89	
8,500.00	90.00	3.29	3,477.96	4,830.96	3,962.41 N	226.83 E	125,065.24	2,026,426.36	0.00	3,968.89	
8,600.00	90.00	3.29	3,477.96	4,830.96	4,062.24 N	232.57 E	125,165.07	2,026,432.10	0.00	4,068.89	
8,700.00	90.00	3.29	3,477.96	4,830.96	4,162.08 N	238.32 E	125,264.91	2,026,437.85	0.00	4,168.89	
8,800.00	90.00	3.29	3,477.96	4,830.96	4,261.91 N	244.06 E	125,364.74	2,026,443.59	0.00	4,268.89	
8,900.00	90.00	3.29	3,477.96	4,830.96	4,361.75 N	249.80 E	125,464.58	2,026,449.33	0.00	4,368.89	
9,000.00	90.00	3.29	3,477.96	4,830.96	4,461.58 N	255.55 E	125,564.41	2,026,455.08	0.00	4,468.89	
9,100.00	90.00	3.29	3,477.96	4,830.96	4,561.42 N	261.29 E	125,664.25	2,026,460.82	0.00	4,568.89	
9,200.00	90.00	3.29	3,477.96	4,830.96	4,661.25 N	267.03 E	125,764.08	2,026,466.56	0.00	4,668.89	
9,300.00	90.00	3.29	3,477.96	4,830.96	4,761.09 N	272.78 E	125,863.92	2,026,472.31	0.00	4,768.89	
9,400.00	90.00	3.29	3,477.96	4,830.96	4,860.92 N	278.52 E	125,963.75	2,026,478.05	0.00	4,868.89	
9,500.00	90.00	3.29	3,477.96	4,830.96	4,960.76 N	284.26 E	126,063.59	2,026,483.79	0.00	4,968.89	
9,600.00	90.00	3.29	3,477.96	4,830.96	5,060.59 N	290.01 E	126,163.42	2,026,489.54	0.00	5,068.89	

**HALLIBURTON**

**Plan Report for Schupbach Ranch 3510 16-1H - Plan #1 101612 RevA0**

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)			
9,700.00	90.00	3.29	3,477.96	4,830.96	5,160.43 N	295.75 E	126,263.26	2,026,495.28	0.00	5,168.89	
9,800.00	90.00	3.29	3,477.96	4,830.96	5,260.26 N	301.49 E	126,363.09	2,026,501.02	0.00	5,268.89	
9,896.42	90.00	3.29	3,477.96	4,830.96	5,356.52 N	307.03 E	126,459.35	2,026,508.56	0.00	5,365.31	TD at 9896.42

**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.00	200.00	0.00	0.00	Start Build 2.50
440.00	439.56	12.55	0.47	Start 300.00 hold at 440.00 MD
740.00	737.92	43.88	1.66	Start Drop -2.50
980.00	977.48	56.43	2.13	Start 3280.52 hold at 980.00 MD
4,260.52	4,258.00	56.43	2.13	Start Build 10.00
5,160.52	4,830.98	628.44	35.03	Start 4735.90 hold at 5160.52 MD
9,896.42	4,830.96	5,356.52	307.03	TD at 9896.42

**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
TD	No Target (Freehand)	3.28	Slot	0.00	0.00	0.00

**Survey tool program**

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	9,896.42	Plan #1 101612 RevA0	MWD+SC

**HALLIBURTON****Plan Report for Schupbach Ranch 3510 16-1H - Plan #1 101612 RevA0****Formation Details**

Measured Depth (ft)	Vertical Depth (ft)	TVDSS (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,105.52	1,103.00	-250.00	Hutchinson Salt Top		0.00	
1,486.52	1,484.00	131.00	Hutchinson Salt Base		0.00	
2,564.52	2,562.00	1,209.00	Onaga Shale		0.00	
3,391.52	3,389.00	2,036.00	Techumseh Shale		0.00	
3,481.52	3,479.00	2,126.00	Lecompton Limestone		0.00	
3,666.52	3,664.00	2,311.00	Oread Limestone		0.00	
3,718.52	3,716.00	2,363.00	Toronto Limestone		0.00	
4,040.52	4,038.00	2,685.00	Stalnaker Top		0.00	
4,115.52	4,113.00	2,760.00	Stalnaker Base		0.00	
4,304.56	4,302.00	2,949.00	Iola Limestone		0.00	
4,486.32	4,478.00	3,125.00	Hushpuckney Shale		0.00	
4,569.24	4,552.00	3,199.00	Marmaton Group		0.00	
4,688.12	4,647.00	3,294.00	Pawnee Limestone		0.00	
4,751.41	4,691.00	3,338.00	Cherokee		0.00	
4,974.42	4,801.00	3,448.00	MS Limestone		0.00	

**Design Targets**

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Schupbach Ranch 3510	0.00	0.00	4,831.00	5,356.52	307.03	126,459.35	2,026,506.56	37° 0' 50.151 N	98° 24' 33.211 W
- hit/miss target									
- Shape									
- plan misses target center by 0.04ft at 9896.42ft MD (4830.96 TVD, 5356.52 N, 307.03 E)									
- Point									

**Directional Difficulty Index**

Average Dogleg over Survey:	1.03 °/100ft	Maximum Dogleg over Survey:	10.00 °/100ft at 5,160.52 ft
Net Tortousity applicable to Plans:	1.03 °/100ft	Directional Difficulty Index:	6.201

**Audit Info**

**HALLIBURTON****North Reference Sheet for Sec 16 T35S R10W - Schupbach Ranch 3510 16-1H - Wellbore #1**

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

Vertical Depths are relative to WELL @ 1353.00ft (Original Well Elev+23'KB). Northing and Easting are relative to Schupbach Ranch 3510 16-1H

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: 1.00006332

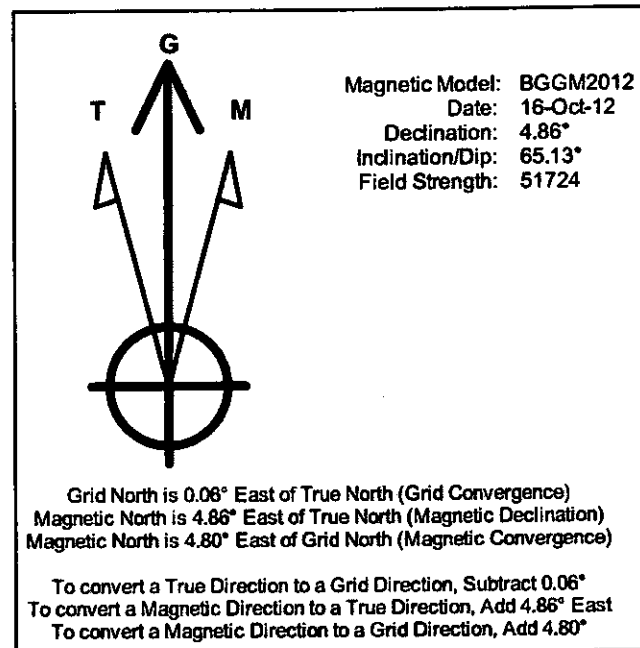
Grid Coordinates of Well: 121,102.84 ft N, 2,026,199.53 ft E

Geographical Coordinates of Well: 36° 59' 57.19" N, 098° 24' 37.06" W

Grid Convergence at Surface is: 0.06°

Based upon Minimum Curvature type calculations, at a Measured Depth of 9,896.42ft  
the Bottom Hole Displacement is 5,365.31ft in the Direction of 3.28° (Grid).

Magnetic Convergence at surface is: -4.80° (16 October 2012, , BGGM2012)





T35S, R10W, 6th P.M.

SGOMI

Well location, SCHUBBACH 3510 #16-1H, located as shown in Lot 1 of Section 16, T35S, R10W, 6th P.M., Barber County, Kansas.

**BASIS OF ELEVATION**

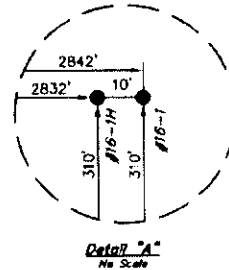
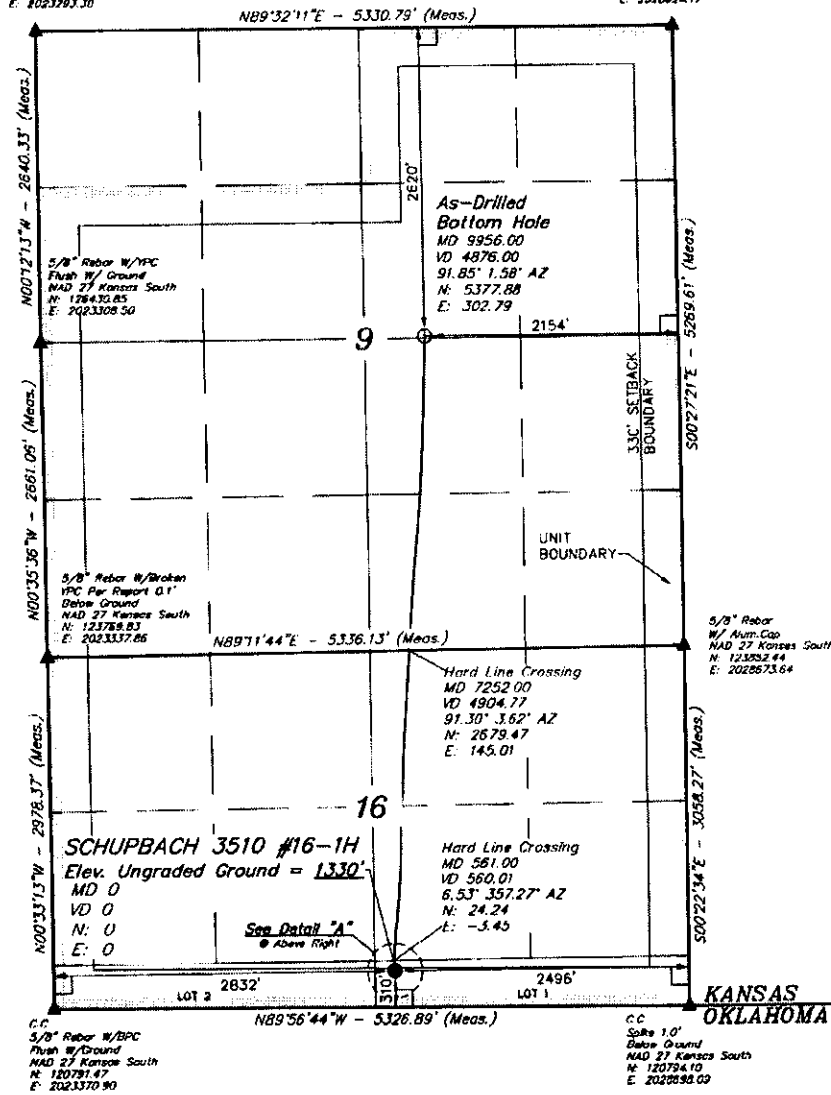
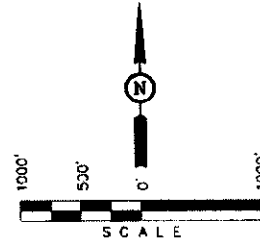
SPOT ELEVATION LOCATED AT THE SOUTHWEST CORNER OF SECTION 12, T35S, R10W, 6th P.M. TAKEN FROM THE CORWIN, QUADRANGLE, KANSAS, 7.5 MINUTE QUAD (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 1274 FEET

**BASIS OF BEARINGS**

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

1/2" Pipe, 0.6' Below  
Ground in Asphalt  
NAD 27 Kansas South  
N: 125071.28  
E: 2023293.30

Spike 0.1' Below Ground  
NAD 27 Kansas South  
N: 128122.10  
E: 2022824.17



KANSAS  
OKLAHOMA

**CERTIFICATE**

THIS IS TO CERTIFY THAT THE ABOVE...  
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  
REGISTRATION NO. 194 N.S.S.  
STATE OF KANSAS  
J. P. B. I., J. d.

**LEGEND:**

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

<p><b>UINTAH ENGINEERING &amp; LAND SURVEYING</b> 85 SOUTH 200 EAST - VERNAL, UTAH 84078 (435) 789-1017</p>		
SCALE	DATE SURVEYED:	DATE DRAWN:
1" = 1000'	C2-18-12	01-15-13
PARTY	REFERENCES	
J.P. B.I., J.d.	G.L.O. PLAT	
WEATHER	FILE	
HOT	SGOMI	

NAD 83 (#16-1H AS-DRILLED BOTTOM HOLE)	NAD 83 (#16-1H SURFACE LOCATION)
LATITUDE = 37°00'50.47" (37.014019)	LATITUDE = 38°59'57.14" (38.999247)
LONGITUDE = 88°24'34.94" (88.409817)	LONGITUDE = 88°24'38.32" (88.410644)
NAD 27 (#16-1H AS-DRILLED BOTTOM HOLE)	NAD 27 (#16-1H SURFACE LOCATION)
LATITUDE = 37°00'50.37" (37.013892)	LATITUDE = 38°59'57.18" (38.999210)
LONGITUDE = 88°24'33.38" (88.409267)	LONGITUDE = 88°24'37.00" (88.410284)
STATE PLANE NAD 27 (KANSAS SOUTH)	STATE PLANE NAD 27 (KANSAS SOUTH)
N: 128481.35 E: 2028424.85	N: 128102.84 E: 2028199.53