



Confidentiality Requested:

Yes No

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

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
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
-----------------------------------	-----------------	---

API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ 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: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

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

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1234554

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
--	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
 Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
--	---	---

Form	ACO1 - Well Completion
Operator	Unit Petroleum Company
Well Name	Hornbaker 5 #1H
Doc ID	1234554

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	28	16	65	160	Common	144	
Intermediate	12.25	9.625	36	1495	A	405	2% CC + 1/4# celloflake
Intermediate	8.75	7	26	4385	A	160	5% Gyp + 10% salt
Production	6.125	4.50	11.6	8206	50/50 POZ	400	10% salt + 5% Gyp + .3% CFR
Production	6.125	5.50	17	8206	50/50 POZ	400	10% salt + 5% Gyp + .3% CFR

Summary of Changes

Lease Name and Number: Hornbaker 5 #1H

API/Permit #: 15-155-21684-01-00

Doc ID: 1234554

Correction Number: 1

Approved By: NAOMI JAMES

Field Name	Previous Value	New Value
Approved Date	07/22/2014	12/09/2014
Save Link	../../../../kcc/detail/operatorE ditDetail.cfm?docID=12 15008	../../../../kcc/detail/operatorE ditDetail.cfm?docID=12 34554
Well Type	GAS	OIL



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1215008
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed

Form must be Signed

All blanks must be Filled

CONFIDENTIAL WELL COMPLETION FORM

WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

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
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
-----------------------------------	-----------------	---

API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ 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: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

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

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
--	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
---	---	------------------------------------

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
----------------	-------	---------	------------	--

Form	ACO1 - Well Completion
Operator	Unit Petroleum Company
Well Name	Hornbaker 5 #1H
Doc ID	1215008

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	28	16	65	160	Common	144	
Intermediate	12.25	9.625	36	1495	A	405	2% CC + 1/4# celloflake
Intermediate	8.75	7	26	4385	A	160	5% Gyp + 10% salt
Production	6.125	4.50	11.6	8206	50/50 POZ	400	10% salt + 5% Gyp + .3% CFR
Production	6.125	5.50	17	8206	50/50 POZ	400	10% salt + 5% Gyp + .3% CFR


Mid-Continent Conductor, LLC

P.O. Box 1570, Woodward, OK 73802
Ph. 580-254-5400 Fax 580-254-3242

CEMENTING REPORT

Operator: Unit Corporation
Well Name: Hornbaker 5-1H
Legal Description: Reno Cnty, KS

Cement Casing Data	
Cementing Date	3/6/14
Size of Drill Bit (Inches)	28
Size of Casing (Inches O.D.)	16
Setting Depth of Casing (ft.) from ground level	160
Type of Cement	Common Cement
Sacks of Cement Used	144
Was cement circulated?	Yes
Job witnessed by: Spencer Brownlee	



Jeff M. Owen

Mid-Continent Conductor, LLC



Energy services, L.P.

TREATMENT REPORT

Lease No. UNIT	Date 04-07-14
Well # HORNBAKER	Station PRATT KS
Casing 9 5/8	Depth 1495'
County RENO	State KS
Order # 10372	Formation 5-15-10
Type Job GNW Surface	Legal Description 5-15-10

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
9 5/8								
Depth	Depth	From	To	Pre Pad	Max			5 Min.
1495'								
Volume	Volume	From	To	Pad	Min			10 Min.
115 1/2								
Max Press	Max Press	From	To	Frac	Avg			15 Min.
1,000								
Well Connection	Annulus Vol.	From	To		HHP Used			Annulus Pressure
P.C.								
Plug Depth	Packer Depth	From	To	Flush	Gas Volume			Total Load
1494'								

Customer Representative	Station Manager DAVE SCOT	Treater Robert Hill					
Service Units	32900	33708	20920	20959	19918	19826	19860
Driver Names	Sullivan	GRAVES	Phye	HANSON			

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
7:30					on loc soft muddy
					cap on bottom
					1 1/2" circ cip
8:10			3	4	ST SPACER
				5.5	mix 325 wk A-con Blend 3% cc 1 1/4 cf
			141		2.47 yield 14.49 msk @ 12 pp
	300		60		mix 280 Tard com cont 2% cc 1 1/4 cf
					1.20 yield 5.23 msk (P 15.5 pp)
					cont mix shut down
					Release Plug
				5	St Dup
2:30	850		115	4	plug down 56 BBL cont to pit
					Release Ps: Heat held
					SAB complete
					Thank you Robert



Energy services, L.P.

TREATMENT REPORT

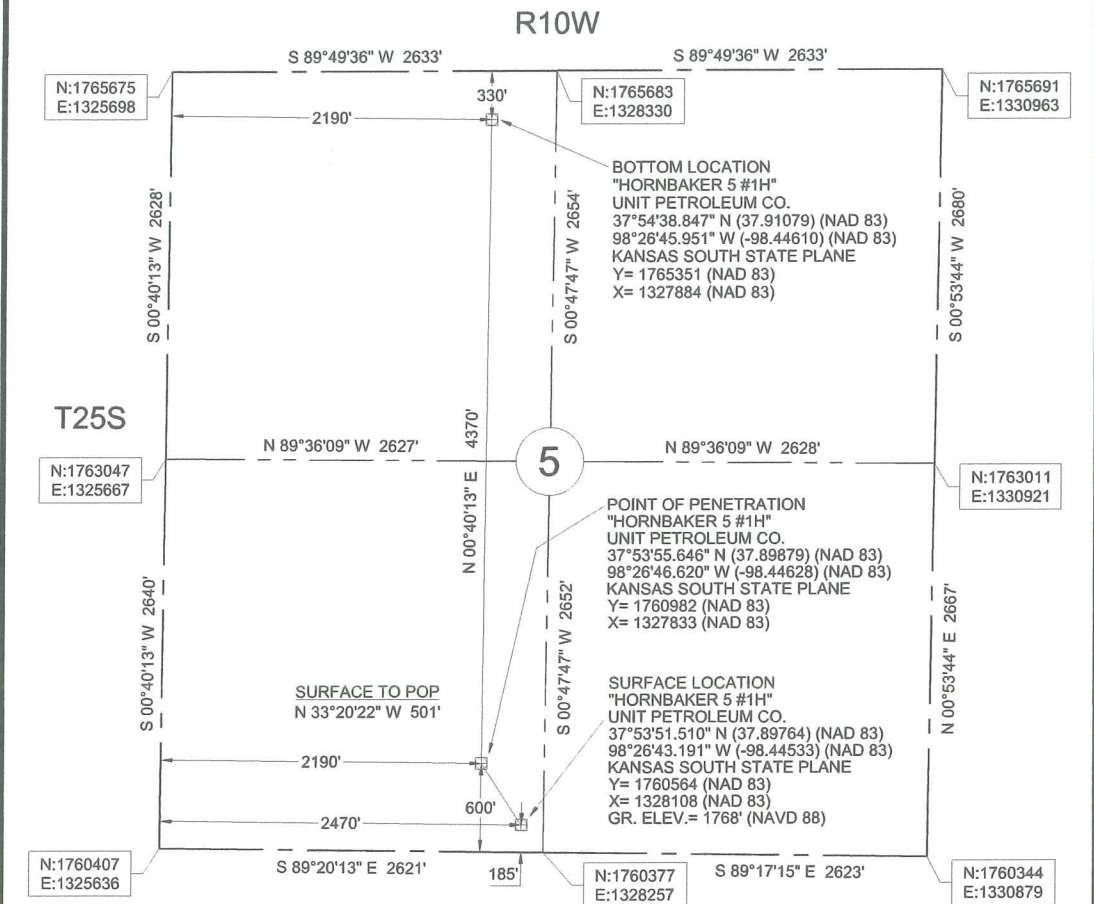
Lease No.
 Date 04-15-14
 Well # 5-1H
 Station P.O.A-H KS
 Casing 7"
 Depth 4385
 County Reno
 State KS
 Formation
 Legal Description 5-25-10
 Order # 379
 Type Job ENW 7" lined

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
7" 1/2	7" 1/2			Pre Pad	Max		5 Min.	
4385	Depth	From	To	Pad	Min		10 Min.	
172 1/2	Volume	From	To	Frac	Avg		15 Min.	
3000	Max Press	From	To		HHP Used		Annulus Pressure	
P.C.	Annulus Vol.	From	To	Flush	Gas Volume		Total Load	
	Plug Depth	From	To					

Customer Representative
 Station Manager Dave Sexton
 Treater Robert Johnson
 Service Units 37900 78982 28983 19959
 Driver Names Sullivan R. Noth Eggie

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
4:20					on loc safety meeting
					Run 7" esp.
5:00					CASING on bottom
5:05					Had 1 1/2' circ esp
5:50	350		12	4.5	1st mud flush
			3		1st spacer
				6.5	mix out 160 sk AA-2 out
			42		cmf mixed shot down
					Release Plug
				6.5	1st Deep
	400				1st PSI
6:30	1150		172 1/2	3	Plug down float held
					SOB complete
					Thank you
					Robert

Section 5, T 25 S, R 10 W., Reno County, Kansas.



LEGEND

- SECTION LINE
- - - 1/4 SECTION LINE



Datum: NAD 83
 Units: US Survey Feet
 North: Grid
 Coordinates: State Plane
 Zone: 1502
 State: Kansas
 Region: South

Description: Surface Hole Location Stake "Hornbaker 5 #1H" situated 185 feet from the south section line and 2470 feet from the west section line of Section 5, T 25 S, R 10 W., Reno County, Kansas.

Description: Point of Penetration "Hornbaker 5 #1H" situated 600 feet from the south section line and 2190 feet from the west section line of Section 5, T 25 S, R 10 W., Reno County, Kansas.

Description: Bottom Location "Hornbaker 5 #1H" situated 330 feet from the north section line and 2190 feet from the west section line of Section 5, T 25 S, R 10 W., Reno County, Kansas.



Survey is valid only if print has original seal and signature of surveyor present

ONE CALL KANSAS
811

**Know what's below.
Call before you dig.**

Buried utilities are not necessarily shown. It is the contractor's responsibility to locate and preserve all utility services.

	JIVIDENS LAND SURVEY Co., INC. 1210 19TH STREET / P.O. BOX 943 WOODWARD, OKLAHOMA 73802 Phone 580-256-7174 - Fax 580-256-3424 roger@jvidenslandsurvey.com mike@jvidenslandsurvey.com	Survey For: Unit Petroleum Co. P.O. Box 2726 Woodward, Oklahoma 73802 Attn: Jason Rummery	JOB 020-14	DATE OF PLAT 01-14-2014	SCALE 1"=1000'	SHEET 1 OF 5
		DRAWN BY C.M.G.	OKLA. CA #2064, EXP. 06/30/2015 KANSAS CA #143, EXP. 12/31/2014			

Unit Petroleum

Reno County, Kansas [NAD 83]

Section 5 T25S-R10W

Hornbaker 5 #1H

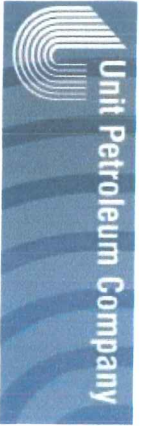
OH

Design: OH

Standard Survey Report

21 April, 2014





Unit Petroleum
 Project: Reno County, Kansas [NAD 83]
 Site: Section 5 T25S-R10W
 Well: Hornbaker 5 #1H
 Wellbore: OH
 Design: Design #3
 Lat: 37° 53' 51.515 N
 Long: 98° 26' 43.189 W
 Pad GL: 1768.00
 KB: 14' KB @ 1782.00usft (UDI 331)

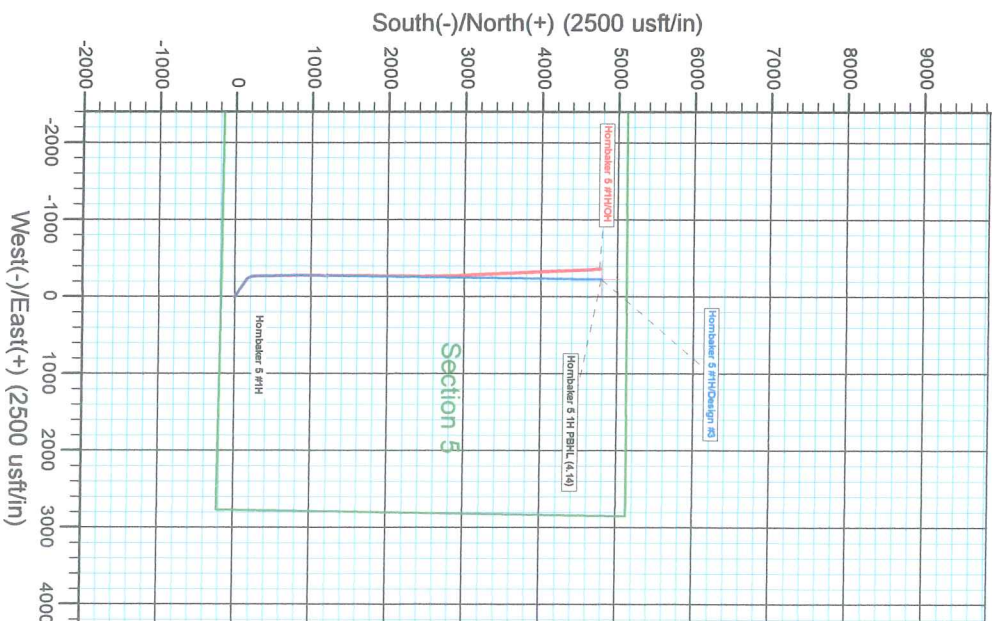
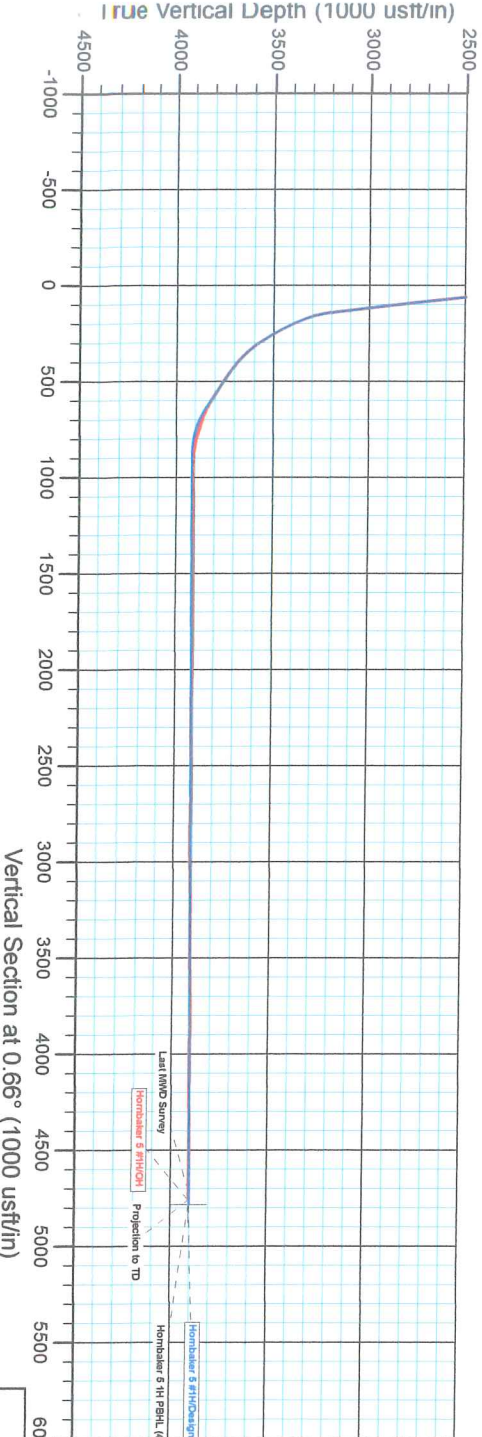


SECTION DETAILS									
MD	3894.00	Inc	56.90	Azi	358.90	TVD	3746.05	+N/S	488.45
	4067.32		56.90		358.90		3840.96	-E/W	-268.75
	4346.43		90.25		0.71		3919.00	Dip	571.57
	8236.76						4787.31	Dieg	-212.10
								TFace	-224.01
								Vsect	0.00
									0.00
									630.32
									894.12
									4784.41

WELL DETAILS: Hornbaker 5 #1H					
+N/S	+E/W	Northing	Ground Level	1768.00	Slot
0.00	0.00	1780564.00	Easting	1328108.00	
			Latitude	37° 53' 51.515 N	
			Longitude	98° 26' 43.189 W	

PROJECT DETAILS: Reno County, Kansas [NAD 83]					
Geodetic System:	US State Plane 1983				
Datum:	North American Datum 1983				
Ellipsoid:	GRS 1980				
Zone:	Kansas Southern Zone				
System Datum:	Mean Sea Level				

NOTE: All Lease lines and Hard lines are estimates only and are subject to the customers' approval.



Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Hornbaker 5 #1H
Project:	Reno County, Kansas [NAD 83]	TVD Reference:	14' KB @ 1782.00usft (UDI 331)
Site:	Section 5 T25S-R10W	MD Reference:	14' KB @ 1782.00usft (UDI 331)
Well:	Hornbaker 5 #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Project	Reno County, Kansas [NAD 83]		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Kansas Southern Zone		Using geodetic scale factor

Site	Section 5 T25S-R10W				
Site Position:		Northing:	1,760,564.00 usft	Latitude:	37° 53' 51.515 N
From:	Map	Easting:	1,328,108.00 usft	Longitude:	98° 26' 43.189 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.03 °

Well	Hornbaker 5 #1H					
Well Position	+N/-S	0.00 usft	Northing:	1,760,564.00 usft	Latitude:	37° 53' 51.515 N
	+E/-W	0.00 usft	Easting:	1,328,108.00 usft	Longitude:	98° 26' 43.189 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	1,768.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/1/2014	4.63	65.78	52,060

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	0.66	

Survey Program	Date 4/21/2014				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	1,426.00	Gyro (OH)	CB-GYRO-MS	Camera based gyro multishot	
1,574.00	8,210.00	MWD (OH)	MWD	MWD - Standard	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.56	131.00	100.00	-0.32	0.37	-0.32	0.56	0.56	0.00	
200.00	1.18	143.83	199.99	-1.47	1.35	-1.46	0.65	0.62	12.83	
300.00	1.21	158.68	299.96	-3.29	2.34	-3.26	0.31	0.03	14.85	
400.00	0.95	132.35	399.95	-4.83	3.33	-4.79	0.55	-0.26	-26.33	
500.00	0.15	117.69	499.94	-5.45	4.06	-5.40	0.81	-0.80	-14.66	
600.00	0.09	98.43	599.94	-5.52	4.26	-5.47	0.07	-0.06	-19.26	
700.00	0.36	93.57	699.94	-5.55	4.65	-5.50	0.27	0.27	-4.86	
800.00	0.14	124.74	799.94	-5.64	5.06	-5.58	0.25	-0.22	31.17	
900.00	0.25	139.57	899.94	-5.88	5.30	-5.82	0.12	0.11	14.83	

Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Hornbaker 5 #1H
Project:	Reno County, Kansas [NAD 83]	TVD Reference:	14' KB @ 1782.00usft (UDI 331)
Site:	Section 5 T25S-R10W	MD Reference:	14' KB @ 1782.00usft (UDI 331)
Well:	Hornbaker 5 #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.28	145.71	999.94	-6.24	5.58	-6.18	0.04	0.03	6.14
1,100.00	0.35	152.01	1,099.94	-6.72	5.86	-6.65	0.08	0.07	6.30
1,200.00	0.44	163.62	1,199.93	-7.35	6.11	-7.28	0.12	0.09	11.61
1,300.00	0.54	153.59	1,299.93	-8.14	6.43	-8.07	0.13	0.10	-10.03
1,400.00	0.53	133.76	1,399.93	-8.89	6.98	-8.81	0.18	-0.01	-19.83
1,426.00	0.62	128.18	1,425.93	-9.06	7.17	-8.97	0.41	0.35	-21.46
1,574.00	0.20	110.30	1,573.92	-9.64	8.05	-9.55	0.29	-0.28	-12.08
1,637.00	1.60	312.50	1,636.91	-9.09	7.50	-9.00	2.84	2.22	-250.48
1,700.00	2.80	313.80	1,699.87	-7.43	5.74	-7.36	1.91	1.90	2.06
1,764.00	4.50	314.10	1,763.73	-4.60	2.81	-4.56	2.66	2.66	0.47
1,827.00	6.20	315.40	1,826.46	-0.45	-1.35	-0.47	2.71	2.70	2.06
1,890.00	6.90	314.90	1,889.05	4.64	-6.42	4.57	1.11	1.11	-0.79
1,954.00	8.10	310.40	1,952.50	10.28	-12.58	10.13	2.09	1.88	-7.03
2,017.00	9.00	306.30	2,014.80	16.07	-19.93	15.84	1.72	1.43	-6.51
2,080.00	9.40	304.50	2,076.99	21.90	-28.14	21.58	0.78	0.63	-2.86
2,143.00	10.30	302.50	2,139.06	27.84	-37.13	27.41	1.53	1.43	-3.17
2,206.00	11.60	299.40	2,200.91	33.98	-47.40	33.43	2.26	2.06	-4.92
2,269.00	11.60	298.90	2,262.62	40.15	-58.47	39.47	0.16	0.00	-0.79
2,333.00	11.60	299.50	2,325.32	46.43	-69.70	45.62	0.19	0.00	0.94
2,395.00	11.60	300.40	2,386.05	52.65	-80.50	51.72	0.29	0.00	1.45
2,458.00	11.40	300.40	2,447.79	59.01	-91.34	57.95	0.32	-0.32	0.00
2,521.00	11.30	300.70	2,509.55	65.31	-102.01	64.13	0.18	-0.16	0.48
2,583.00	11.40	302.40	2,570.34	71.69	-112.41	70.39	0.56	0.16	2.74
2,646.00	11.40	303.40	2,632.10	78.46	-122.86	77.03	0.31	0.00	1.59
2,710.00	11.40	303.90	2,694.84	85.46	-133.39	83.92	0.15	0.00	0.78
2,774.00	11.30	304.90	2,757.58	92.58	-143.79	90.92	0.34	-0.16	1.56
2,837.00	11.40	305.80	2,819.35	99.75	-153.90	97.97	0.32	0.16	1.43
2,901.00	12.10	304.70	2,882.01	107.27	-164.54	105.37	1.15	1.09	-1.72
2,964.00	12.00	305.10	2,943.62	114.80	-175.33	112.77	0.21	-0.16	0.63
3,028.00	11.80	304.80	3,006.25	122.36	-186.15	120.21	0.33	-0.31	-0.47
3,092.00	11.90	304.90	3,068.88	129.87	-196.93	127.59	0.16	0.16	0.16
3,155.00	11.90	305.40	3,130.53	137.35	-207.55	134.95	0.16	0.00	0.79
3,196.00	11.40	304.70	3,170.68	142.10	-214.33	139.62	1.27	-1.22	-1.71
3,228.00	11.90	305.80	3,202.02	145.83	-219.61	143.29	1.71	1.56	3.44
3,260.00	13.80	313.00	3,233.22	150.37	-225.08	147.76	7.75	5.94	22.50
3,292.00	16.30	321.50	3,264.13	156.48	-230.66	153.82	10.40	7.81	26.56
3,324.00	18.90	326.90	3,294.63	164.34	-236.29	161.61	9.59	8.13	16.88
3,355.00	21.10	332.00	3,323.76	173.48	-241.65	170.68	9.05	7.10	16.45
3,387.00	23.10	336.50	3,353.41	184.32	-246.86	181.47	8.18	6.25	14.06
3,419.00	24.80	340.70	3,382.66	196.41	-251.58	193.50	7.52	5.31	13.13
3,450.00	25.90	344.50	3,410.67	209.08	-255.54	206.12	6.33	3.55	12.26
3,482.00	27.20	348.00	3,439.30	222.97	-258.93	219.97	6.35	4.06	10.94
3,513.00	28.90	351.40	3,466.66	237.30	-261.52	234.28	7.53	5.48	10.97

Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Hornbaker 5 #1H
Project:	Reno County, Kansas [NAD 83]	TVD Reference:	14' KB @ 1782.00usft (UDI 331)
Site:	Section 5 T25S-R10W	MD Reference:	14' KB @ 1782.00usft (UDI 331)
Well:	Hornbaker 5 #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,545.00	29.60	355.00	3,494.58	252.82	-263.37	249.77	5.92	2.19	11.25
3,577.00	30.60	357.40	3,522.27	268.83	-264.43	265.77	4.89	3.13	7.50
3,607.00	32.80	358.40	3,547.79	284.59	-265.00	281.52	7.54	7.33	3.33
3,639.00	34.70	359.10	3,574.39	302.36	-265.39	299.28	6.06	5.94	2.19
3,671.00	37.70	359.60	3,600.21	321.26	-265.60	318.18	9.42	9.38	1.56
3,702.00	41.50	359.10	3,624.10	341.01	-265.83	337.93	12.30	12.26	-1.61
3,734.00	45.60	358.60	3,647.28	363.05	-266.27	359.96	12.86	12.81	-1.56
3,766.00	47.60	358.90	3,669.27	386.29	-266.78	383.19	6.29	6.25	0.94
3,798.00	50.10	358.90	3,690.32	410.38	-267.24	407.28	7.81	7.81	0.00
3,830.00	53.50	358.90	3,710.11	435.52	-267.72	432.41	10.63	10.63	0.00
3,860.00	56.40	358.80	3,727.34	460.07	-268.22	456.95	9.67	9.67	-0.33
3,894.00	56.80	358.90	3,746.05	488.45	-268.79	485.32	1.20	1.18	0.29
3,925.00	57.00	358.70	3,762.98	514.42	-269.33	511.28	0.84	0.65	-0.65
3,957.00	57.30	358.80	3,780.34	541.29	-269.92	538.15	0.97	0.94	0.31
3,988.00	57.70	358.60	3,797.00	567.43	-270.51	564.28	1.40	1.29	-0.65
4,019.00	58.10	358.70	3,813.47	593.68	-271.13	590.52	1.32	1.29	0.32
4,035.00	58.30	358.80	3,821.90	607.28	-271.42	604.11	1.36	1.25	0.63
4,083.00	65.30	358.50	3,844.57	649.54	-272.42	646.36	14.59	14.58	-0.63
4,114.00	69.40	358.40	3,856.51	678.14	-273.20	674.94	13.23	13.23	-0.32
4,146.00	70.90	358.70	3,867.37	708.22	-273.96	705.02	4.77	4.69	0.94
4,178.00	72.30	359.30	3,877.47	738.58	-274.49	735.37	4.72	4.38	1.88
4,209.00	74.90	359.70	3,886.22	768.32	-274.75	765.10	8.48	8.39	1.29
4,241.00	77.20	359.40	3,893.94	799.37	-274.99	796.15	7.24	7.19	-0.94
4,272.00	79.30	359.90	3,900.25	829.72	-275.18	826.49	6.96	6.77	1.61
4,304.00	81.40	0.50	3,905.61	861.26	-275.07	858.04	6.82	6.56	1.88
4,333.00	84.80	0.80	3,909.10	890.05	-274.74	886.82	11.77	11.72	1.03
4,416.00	90.60	0.70	3,912.43	972.94	-273.65	969.72	6.99	6.99	-0.12
4,478.00	91.00	0.10	3,911.56	1,034.93	-273.22	1,031.71	1.16	0.65	-0.97
4,541.00	90.30	0.50	3,910.85	1,097.93	-272.89	1,094.71	1.28	-1.11	0.63
4,602.00	90.60	0.40	3,910.37	1,158.92	-272.41	1,155.71	0.52	0.49	-0.16
4,665.00	91.00	0.60	3,909.49	1,221.91	-271.86	1,218.70	0.71	0.63	0.32
4,726.00	89.60	0.70	3,909.17	1,282.91	-271.17	1,279.70	2.30	-2.30	0.16
4,789.00	90.20	0.40	3,909.28	1,345.90	-270.57	1,342.70	1.06	0.95	-0.48
4,851.00	90.90	0.10	3,908.68	1,407.90	-270.30	1,404.69	1.23	1.13	-0.48
4,914.00	89.40	0.20	3,908.52	1,470.90	-270.13	1,467.69	2.39	-2.38	0.16
4,975.00	89.30	0.30	3,909.21	1,531.89	-269.86	1,528.68	0.23	-0.16	0.16
5,037.00	89.80	359.80	3,909.70	1,593.89	-269.81	1,590.68	1.14	0.81	-0.81
5,099.00	89.80	0.30	3,909.91	1,655.89	-269.76	1,652.67	0.81	0.00	0.81
5,160.00	89.80	0.20	3,910.13	1,716.89	-269.49	1,713.67	0.16	0.00	-0.16
5,222.00	90.00	0.50	3,910.24	1,778.89	-269.11	1,775.67	0.58	0.32	0.48
5,283.00	90.10	359.80	3,910.18	1,839.89	-268.95	1,836.67	1.16	0.16	-1.15
5,345.00	90.10	0.30	3,910.07	1,901.89	-268.90	1,898.66	0.81	0.00	0.81
5,406.00	89.80	0.70	3,910.13	1,962.88	-268.37	1,959.66	0.82	-0.49	0.66

Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Hornbaker 5 #1H
Project:	Reno County, Kansas [NAD 83]	TVD Reference:	14' KB @ 1782.00usft (UDI 331)
Site:	Section 5 T25S-R10W	MD Reference:	14' KB @ 1782.00usft (UDI 331)
Well:	Hornbaker 5 #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,468.00	89.40	0.40	3,910.56	2,024.88	-267.77	2,021.66	0.81	-0.65	-0.48	
5,529.00	89.60	0.50	3,911.09	2,085.87	-267.29	2,082.66	0.37	0.33	0.16	
5,591.00	89.70	1.00	3,911.47	2,147.87	-266.48	2,144.66	0.82	0.16	0.81	
5,652.00	89.30	1.00	3,912.00	2,208.86	-265.42	2,205.65	0.66	-0.66	0.00	
5,714.00	90.20	0.80	3,912.27	2,270.85	-264.44	2,267.65	1.49	1.45	-0.32	
5,776.00	90.20	0.20	3,912.06	2,332.84	-263.90	2,329.65	0.97	0.00	-0.97	
5,837.00	90.40	0.50	3,911.74	2,393.84	-263.53	2,390.65	0.59	0.33	0.49	
5,899.00	90.60	0.10	3,911.20	2,455.84	-263.20	2,452.64	0.72	0.32	-0.65	
5,961.00	90.30	359.10	3,910.71	2,517.83	-263.64	2,514.63	1.68	-0.48	-1.61	
6,023.00	90.10	359.60	3,910.49	2,579.83	-264.34	2,576.61	0.87	-0.32	0.81	
6,084.00	90.10	358.90	3,910.39	2,640.82	-265.14	2,637.60	1.15	0.00	-1.15	
6,146.00	89.30	359.00	3,910.71	2,702.81	-266.27	2,699.57	1.30	-1.29	0.16	
6,207.00	88.40	358.40	3,911.94	2,763.78	-267.66	2,760.52	1.77	-1.48	-0.98	
6,269.00	89.70	358.20	3,912.96	2,825.75	-269.50	2,822.45	2.12	2.10	-0.32	
6,330.00	90.40	357.80	3,912.91	2,886.71	-271.63	2,883.39	1.32	1.15	-0.66	
6,392.00	90.80	357.70	3,912.26	2,948.66	-274.06	2,945.31	0.67	0.65	-0.16	
6,454.00	91.20	357.60	3,911.18	3,010.60	-276.60	3,007.21	0.67	0.65	-0.16	
6,516.00	91.10	357.40	3,909.94	3,072.52	-279.31	3,069.10	0.36	-0.16	-0.32	
6,578.00	90.60	357.60	3,909.02	3,134.46	-282.01	3,131.00	0.87	-0.81	0.32	
6,640.00	91.30	357.10	3,907.99	3,196.38	-284.88	3,192.89	1.39	1.13	-0.81	
6,702.00	89.40	357.50	3,907.61	3,258.31	-287.80	3,254.78	3.13	-3.06	0.65	
6,764.00	89.80	357.70	3,908.04	3,320.25	-290.39	3,316.69	0.72	0.65	0.32	
6,825.00	89.70	357.50	3,908.31	3,381.20	-292.95	3,377.60	0.37	-0.16	-0.33	
6,887.00	90.00	356.90	3,908.47	3,443.13	-295.97	3,439.49	1.08	0.48	-0.97	
6,949.00	90.60	356.50	3,908.15	3,505.02	-299.54	3,501.34	1.16	0.97	-0.65	
7,011.00	90.50	356.60	3,907.55	3,566.91	-303.27	3,563.18	0.23	-0.16	0.16	
7,072.00	91.30	356.70	3,906.59	3,627.79	-306.84	3,624.02	1.32	1.31	0.16	
7,134.00	90.70	357.00	3,905.51	3,689.69	-310.25	3,685.87	1.08	-0.97	0.48	
7,196.00	90.30	357.30	3,904.97	3,751.61	-313.33	3,747.75	0.81	-0.65	0.48	
7,258.00	89.40	357.30	3,905.13	3,813.54	-316.25	3,809.65	1.45	-1.45	0.00	
7,319.00	89.20	357.60	3,905.88	3,874.48	-318.96	3,870.55	0.59	-0.33	0.49	
7,381.00	89.90	358.20	3,906.36	3,936.43	-321.23	3,932.47	1.49	1.13	0.97	
7,443.00	89.00	358.30	3,906.96	3,998.40	-323.13	3,994.41	1.46	-1.45	0.16	
7,505.00	89.80	358.50	3,907.61	4,060.37	-324.86	4,056.36	1.33	1.29	0.32	
7,567.00	90.60	357.80	3,907.39	4,122.34	-326.86	4,118.30	1.71	1.29	-1.13	
7,629.00	91.00	357.80	3,906.53	4,184.29	-329.24	4,180.22	0.65	0.65	0.00	
7,691.00	91.70	357.40	3,905.07	4,246.21	-331.83	4,242.11	1.30	1.13	-0.65	
7,753.00	90.10	357.40	3,904.09	4,308.14	-334.65	4,304.00	2.58	-2.58	0.00	
7,814.00	89.80	357.00	3,904.14	4,369.07	-337.63	4,364.89	0.82	-0.49	-0.66	
7,907.00	89.80	357.00	3,904.47	4,461.94	-342.49	4,457.70	0.00	0.00	0.00	
7,999.00	89.80	357.00	3,904.79	4,553.81	-347.31	4,549.51	0.00	0.00	0.00	
8,092.00	89.80	357.00	3,905.12	4,646.68	-352.18	4,642.32	0.00	0.00	0.00	
8,166.00	89.80	357.00	3,905.37	4,720.58	-356.05	4,716.17	0.00	0.00	0.00	

Last MWD Survey



Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Hornbaker 5 #1H
Project:	Reno County, Kansas [NAD 83]	TVD Reference:	14' KB @ 1782.00usft (UDI 331)
Site:	Section 5 T25S-R10W	MD Reference:	14' KB @ 1782.00usft (UDI 331)
Well:	Hornbaker 5 #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,210.00	89.80	357.00	3,905.53	4,764.52	-358.35	4,760.08	0.00	0.00	0.00
Projection to TD - Hornbaker 5 1H PBHL (4.14)									

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,166.00	3,905.37	4,720.58	-356.05	Last MWD Survey
8,210.00	3,905.53	4,764.52	-358.35	Projection to TD

Checked By: _____ Approved By: _____ Date: _____



Unit Petroleum Company

Date of Last Revision:
22-Jul-14

Well: Hornbaker 5 #1H
Location: 05-25S-10W
County, State: Reno County, KS
Surface Location: 185' FSL and 2470' FWL

API No.: 1515521684
Rig: Unit Drilling #331
Engineer: Tom Carrington (918) 477-4535
Geology: Rob Wilson (918) 477-5728

OH Size

