Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1234343

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 33596
Name: Unit Petroleum Company
Address 1: 7130 S LEWIS AVE
Address 2: STE 1000
City: TULSA State: OK Zip: 74136 + 5492
Contact Person: Adam Scully, District Engineer
Phone: (918) 477-5761
CONTRACTOR: License # 33596
Name: Unit Petroleum Company
Wellsite Geologist: Garrett Russell
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 #:

09/05/2014 Spud Date or Recompletion Date
09/20/2014 Date Reached TD
12/04/2014 Completion Date or Recompletion Date

API No. 15 - 15-155-21709-01-00
Spot Description:
NW NE NE NE Sec. 18 Twp. 24 S. R. 9 ☐ East ☑ West
250 Feet from ☑ North / ☐ South Line of Section
610 Feet from ☑ East / ☐ West Line of Section

Footages Calculated from Nearest Outside Section Corner:
☑ NE ☐ NW ☐ SE ☐ SW

GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Reno
Lease Name: Happy Hollow Well #: 7 #2H
Field Name:
Producing Formation: Mississippian
Elevation: Ground: 1692 Kelly Bushing: 1706
Total Vertical Depth: 3770 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 1518 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: 80000 ppm Fluid volume: 4434 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:

Operator Name: Underground Cavern Stabilization Company
Lease Name: 0 License #: 0
Quarter NE Sec. 14 Twp. 24 S. R. 6 ☐ East ☑ West
County: Reno Permit #: 0

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: 12/15/2014
☑ **Confidential Release Date:** 12/14/2016
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 12/16/2014

[redacted] 1234343

Operator Name: Unit Petroleum Company Lease Name: Happy Hollow Well #: 7 #2H

Sec. 18 Twp. 24 S. R. 9 ☐ East ☑ West County: Reno

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 (Attach Additional Sheets)	☐ Yes	☑ No	☐ Log
Samples Sent to Geological Survey	☑ Yes	☐ No	
Cores Taken	☐ Yes	☑ No	
Electric Log Run	☑ Yes	☐ No	

Formation (Top), Depth and Datum ☐ Sample

Name: Attached Top: Attached Datum: Attached

List All E. Logs Run:

Horizontal Strip
Curve & Lateral Strip

CASING RECORD ☑ New ☐ 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
Attached	Attached	Attached	Attached	Attached	Attached	Attached	Attached

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate				
___ Protect Casing	-			
___ Plug Back TD				
___ 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 *(Amount and Kind of Material Used)*	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:

☐ Vented ☐ Sold ☐ Used on Lease

(If vented, Submit ACO-18.)

METHOD OF COMPLETION:

☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*

☐ Other *(Specify)* _____

PRODUCTION INTERVAL:

Form	ACO1 - Well Completion
Operator	Unit Petroleum Company
Well Name	Happy Hollow 7 #2H
Doc ID	1234343

Tops

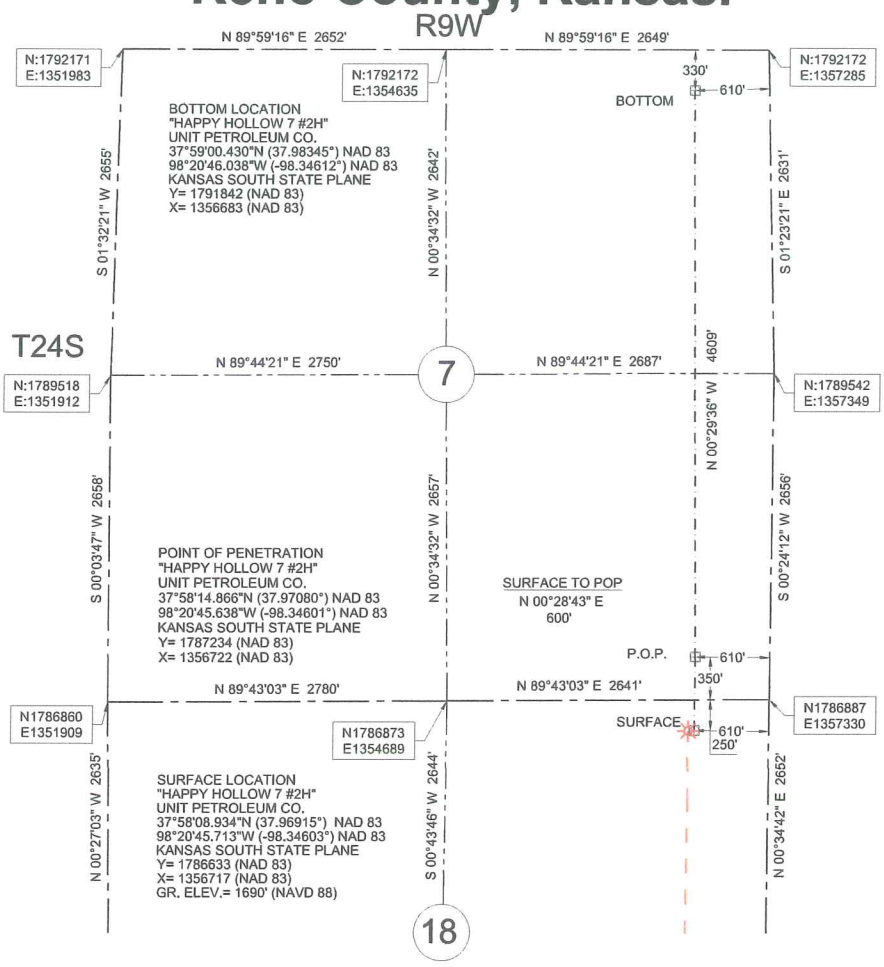
Name	Top	Datum
Heebner Shale	3128	1704
Brown Lime	3295	
Lansing/Kansas City	3318	
Stark Shale	3576	
Hushpuckney Shale	3609	
Pleasanton Shale	3658	
Cherokee Shale	3747	
Mississippi	3760	
Gilmore City Limestone	3810	

Form	ACO1 - Well Completion
Operator	Unit Petroleum Company
Well Name	Happy Hollow 7 #2H
Doc ID	1234343

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	40	154	H	160	2% CC
Intermediate	12.25	9.625	36	1518	H	605	2% CC 1/4# celloflake
Production	8.75	7	26	4165	AA-Z	160	2% CC 1/4# celloflake
Liner	6.125	5.5	17	8710	50/50 POZ	400	2% CC 1/4# celloflake
Liner	6.125	4.5	11.6	8710	50/50 POZ	400	2% CC 1/4# celloflake

Sections 7 & 18, T 24 S, R 9 W., Reno County, Kansas.



0' 1200' 2400' 3600'

LEGEND

- SECTION LINE
- 1/4 SECTION LINE
- EXISTING WELL
- EXISTING LATERAL

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

Description: Surface Hole Location
"Happy Hollow 7 #2H" situated 250 feet from the north section line and 610 feet from the east section line of Section 18, T 24 S, R 9 W., Reno County, Kansas.

Description: Point of Penetration
"Happy Hollow 7 #2H" situated 330 feet from the south section line and 610 feet from the east section line of Section 7, T 24 S, R 9 W., Reno County, Kansas.

Description: Bottom Location
"Happy Hollow 7 #2H" situated 330 feet from the north section line and 610 feet from the east section line of Section 7, T 24 S, R 9 W., Reno County, Kansas.

REGISTERED LAND SURVEYOR
MIKE GOSSETT
L.S. 1748
OKLAHOMA

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.

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

JIVIDENS LAND SURVEY CO., INC.
1210 19TH STREET / P.O. BOX 943
WOODWARD, OKLAHOMA 73802
Phone 580-256-7174 - Fax 580-256-3424
roger@jividenslandsurvey.com mike@jividenslandsurvey.com

Survey For:
Unit Petroleum Co.
P.O. Box 2726
Woodward, OK 73802
Attn: Jason Rummery

JOB	DATE OF PLAT	SCALE	SHEET
291-14	05-30-2014	1"=1200'	1 OF 5

DRAWN BY	
C.M.G.	OKLA. CA #2064, EXP. 06/30/2015 KANSAS CA #143, EXP. 12/31/2014

BASIC energy services, L.P.

TREATMENT REPORT

Customer: Dart Petroleum Co	Lease No.			Date: 9-7-14		
Lease: Happy Hollow	Well #: 7#24					
Field Order #: 11316 A	Station	Casing: 9 5/8	Depth: 1518'	County: Reno	State: KS	
Type Job: 9 5/8 Surface Pipe CNW		Formation		Legal Description: 18 24 9		

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size: 9 5/8	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
Depth: 1518	Depth	From	To	Pre Pad	Max		5 Min.
Volume: 117.34	Volume	From	To	Pad	Min		10 Min.
Max Press: 2000	Max Press	From	To	Frac	Avg		15 Min.
Well Connection: 9 5/8	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative: Jerry | Station Manager: Kevin Goodley | Treater: Scott Groves

Service Units	38910	17686 / 19905	20957 / 19918	19831 / 19867						
Driver Names	Scott	Josh	Dale	Aaron						

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
10:45					On location Safety Meeting
					Rig up
3:00					Circulate well
3:35			5	4	Pump H2O spacer
3:38	150			5	Start Mixing 325 sk A-Con
3:55	200		143	5	A-Con Blend complete 12 ppg
3:55	200			5.2	Start mixing 280 sks Common
4:08	200		59.84	5.1	Common Cement Complete 15.6
4:10					Drop plug
4:14	0			3	Pump Cement on top of plug
4:15	150		2	5.5	Start Displacement H2O
4:26	400		70	6.1	Pressure increase
4:30	500		20	6	Circulation to Surface
4:40			30	3.5	Plug landed
					Job Complete

Taylor Printing, Inc. 620-672-3656

BASIC energy services, L.P.

TREATMENT REPORT

Customer: Unit Petroleum Co.	Lease No.		Date: 9-11-14
Lease: HAPPY HOLLOW	Well #: 7 #2 H		
Field Order #: 11192	Station: Pratt	Casing: 7	Depth: 4168.80
County: Reno	State: KS		
Type Job: CNW 7" intermediate	Formation		Legal Description: 18-24-9

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size: 7"	Tubing Size	Shots/Ft		~~Acid~~ 160 SKS	AA-2 RATE	PRESS	ISIP
Depth: 4168.80	Depth	From	To	Pre Pad	Max		5 Min.
Volume: 159.2	Volume	From	To	Pad	Min		10 Min.
Max Press	Max Press	From	To	Frac	Avg		15 Min.
Well Connection: P.C.	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth: 4165	Packer Depth	From	To	Flush 159	Gas Volume		Total Load

Customer Representative: MAY | Station Manager: Kevin Goodlay | Treater: Mike MATTAI

Service Units	37586		33708	20920		19831	19862		19889	19843
Driver Names	MATTAI		ERNST	DENN		BEAKEY			JESSIE	

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
8:45					on location / SAFETY meeting
9:15					Pump Truck Broke Down / wait on Mechanic
12:10					replacement Truck on location
12:20					Hook up to well
12:29	300		5	5.5	Pump 5 BBl water
12:32	300		12	5	Pump 12 BBl mud flush
12:35	300		3	5	Pump 3 BBl water
12:42	300		40	5	Mix 160 SACKS AA-2
12:50	—		—	—	release Plug
12:52	100		2	3	Pump 2 BBl cmt
12:54	100		—	5.5	START Freshwater Displacement
1:20	300		110	4.5	Lift pressure
1:28	700		150	3	slow RATE
1:31	1,000		159	—	Plug down, released & held
					JOB complete
					THANK YOU!
					Mike MATTAI
					Shawn, Deirel
					Jessie

Taylor Printing, Inc. 620-672-3656

BASIC energy services, L.P.

TREATMENT REPORT

Customer: Unit Petroleum Co.	Lease No.			Date: 9-20-14	
Lease: Happy Hollow	Well #: 7 2H				
Field Order #: 11144	Station: Pratt	Casing: 4½	Depth	County: Reno	State: KS
Type Job: CNW Liner	Formation			Legal Description: 18-24-9	

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size: 4½	Tubing Size: ~~5½~~ 5½	Shots/Ft		Acid	RATE	PRESS	ISIP
Depth	Depth	From	To	Pre Pad	Max		5 Min.
Volume	Volume	From	To	Pad	Min		10 Min.
Max Press	Max Press	From	To	Frac	Avg		15 Min.
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative	Station Manager	Treater

Service Units	77686	19905	19903	19860		28443					
Driver Names	Mike Mcdraw		Aaron	Beachy		Joe					

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
0700					on Loc / safety meeting
					Run 4795.~~52~~ 51' of 4½ Csg 11.6#
					Run 3915.22' ~~of~~ of 5½ Csg 17#
950	1100		5	5	H20 spacer
			12	5	Mix mud flush
			5	5	H20 spacer
			108	5	mix 400 sk 50/50 POZ @ 13.8#
	500		5	5	~~Shut Down~~ Run 5 BBls Sugar H20
			~~0~~	~~0~~	Shut Down Release Plug
	500		~~0~~	6	Star H20 Disp
	1250		40	6	Lift PSI
	1600		155	5	Slow Rate
1050	2650		165	~~0~~	Plug Down
					JOB Complete
					Thank you
					Joe

Taylor Printing, Inc. 620-672-3656

Field: **Mississippi**

Happy Hollow 7-2H

	Location:
Footage:	Sfc: 250' FNL & 610' FEL
Section:	18
Township:	24S
Range:	9W
County:	Reno, KS
Lat:	37° 58' 08.934" N
Long:	98° 20' 45.713" W
	Elevations:
GL:	1690'
KB:	14'
KB Calc:	1704'
ck w/log?	

Date	History
9/6/14	Spud Well
9/17/14	TD well at 8,734'

Joints	Tubing Detail (top to bottom) Description	Footage	Depth

Rods	Rod Detail (top to bottom) Description	Footage	Depth

Updated: 12/8/2014

Wellbore Diagram

Well ID Info:	
API No:	155 21709
Spud Date:	9/6/14 Rig 331

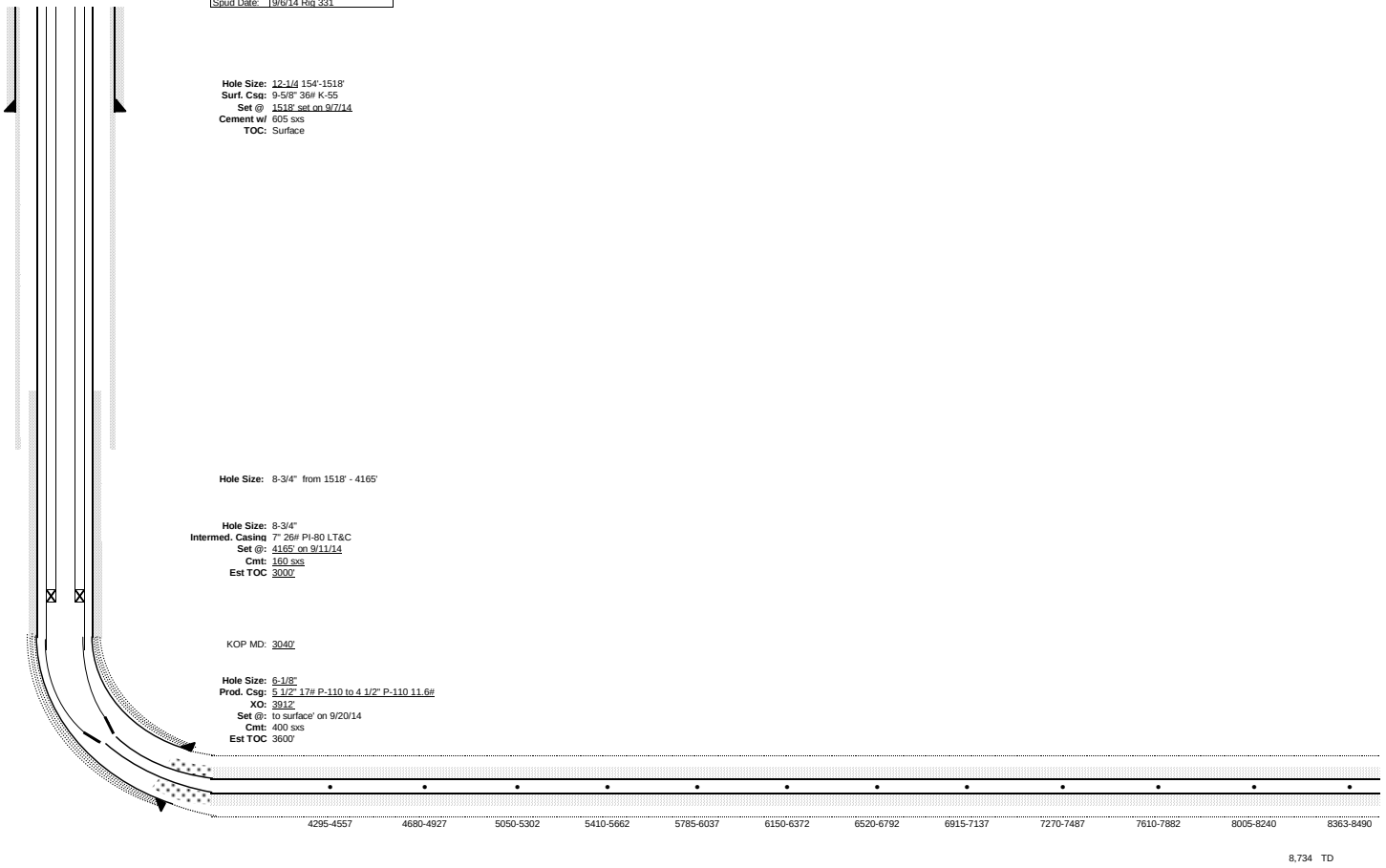
Hole Size: 12-1/4 154'-1518'
Surf. Csg: 9-5/8" 36# K-55
Set @ 1518' set on 9/7/14
Cement w/ 605 sxs
TOC: Surface

Hole Size: 8-3/4" from 1518' - 4165'

Hole Size: 8-3/4"
Intermed. Casing 7" 26# PI-80 LT&C
Set @: 4165' on 9/11/14
Cmt: 160 sxs
Est TOC 3000'

KOP MD: 3040'

Hole Size: 6-1/8"
Prod. Csg: 5 1/2" 17# P-110 to 4 1/2" P-110 11.6#
XO: 3912'
Set @: to surface' on 9/20/14
Cmt: 400 sxs
Est TOC 3600'



Unit Petroleum

Reno County, Kansas [NAD 83]
Section 18 T24S-R9W
Happy Hollow 7 #2H

OH

Design: OH

Standard Survey Report

17 September, 2014

INWELL INC.

Unit Petroleum Company

Unit Petroleum
Project: Reno County, Kansas [NAD 83]
Site: Section 18 T24S-R9W
Well: Happy Hollow 7 #2H
Wellbore: OH
Design: Design #2
Lat: 37° 58' 8.929 N
Long: 98° 20' 45.716 W
Pad GL: 1690.00
KB: 14' KB @ 1704.00usft (UDI 331)

INWELL INC.

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3044.20	0.00	0.00	3044.20	0.00	0.00	0.00	0.00	0.00
3744.20	56.00	359.63	3637.95	315.70	-2.04	8.00	359.63	315.70
3894.20	56.00	359.63	3721.83	440.05	-2.84	0.00	0.00	440.06
4198.59	92.53	359.62	3803.00	728.09	-4.73	12.00	-0.02	728.10
4470.75	92.53	359.62	3791.00	999.98	-6.53	0.00	0.00	1000.00
4544.31	90.32	359.63	3789.17	1073.51	-7.01	3.00	179.86	1073.53
5468.08	90.32	359.63	3784.02	1997.25	-13.04	0.00	0.00	1997.29
5470.79	90.40	359.63	3784.00	1999.96	-13.05	3.00	-0.14	2000.00
6470.82	90.40	359.63	3777.00	2999.94	-19.58	0.00	0.00	3000.00
6476.61	90.57	359.63	3776.95	3005.73	-19.62	3.00	0.00	3005.79
7461.18	90.57	359.63	3767.07	3990.23	-26.04	0.00	0.00	3990.31
7470.87	90.28	359.63	3767.00	3999.91	-26.11	3.00	180.00	4000.00
8680.32	90.28	359.63	3761.00	5209.33	-34.00	0.00	0.00	5209.44

WELL DETAILS: Happy Hollow 7 #2H

Ground Level: 1690.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1786633.00	1356717.00	37° 58' 8.929 N	98° 20' 45.716 W	

PROJECT DETAILS: Reno County, Kansas [NAD 83]

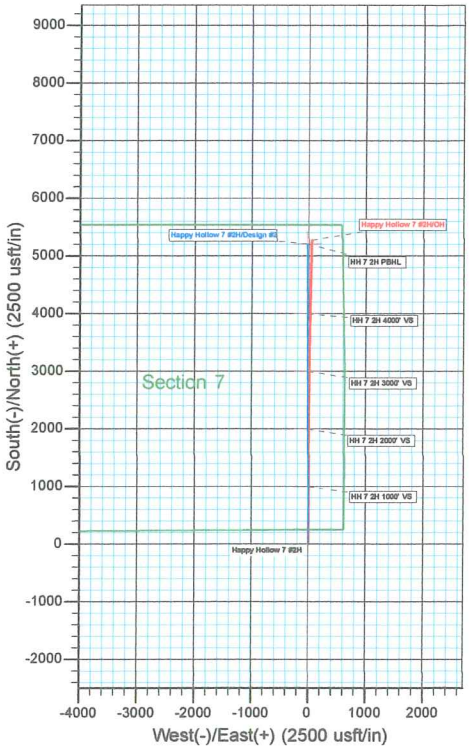
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Kansas Southern Zone

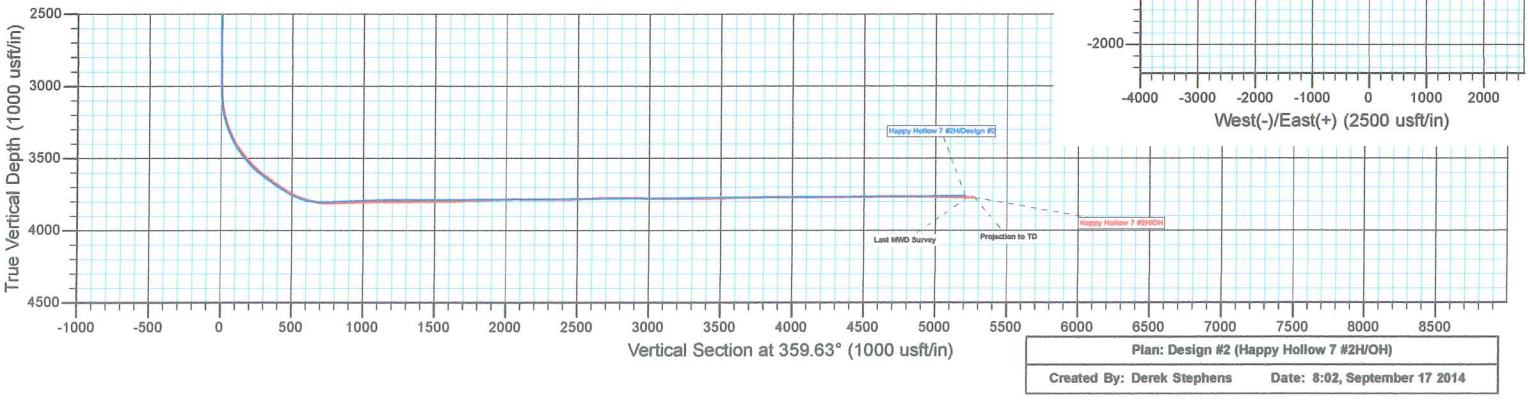
System Datum: Mean Sea Level

Azimuths to Grid North
True North: -0.09°
Magnetic North: 4.41°

Magnetic Field
Strength: 52060.0snT
Dip Angle: 65.83°
Date: 8/26/2014
Model: IGRF2010

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





Plan: Design #2 (Happy Hollow 7 #2H/OH)

Created By: Derek Stephens Date: 8:02, September 17 2014

Company:	Unit Petroleum	**Local Co-ordinate Reference:**	Well Happy Hollow 7 #2H
Project:	Reno County, Kansas [NAD 83]	**TVD Reference:**	14' KB @ 1704.00usft (UDI 331)
Site:	Section 18 T24S-R9W	**MD Reference:**	14' KB @ 1704.00usft (UDI 331)
Well:	Happy Hollow 7 #2H	**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 18 T24S-R9W

Site Position:		**Northing:**	1,786,633.00 usft	**Latitude:**	37° 58' 8.929 N
From:	Map	**Easting:**	1,356,717.00 usft	**Longitude:**	98° 20' 45.716 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.09 °

Well Happy Hollow 7 #2H

Well Position	**+N/-S**	0.00 usft	**Northing:**	1,786,633.00 usft	**Latitude:**	37° 58' 8.929 N
	+E/-W	0.00 usft	**Easting:**	1,356,717.00 usft	**Longitude:**	98° 20' 45.716 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	1,690.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/26/2014	4.51	65.83	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	359.63

Survey Program **Date** 9/17/2014

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
72.67	2,922.87	Gyro (OH)	CB-GYRO-MS	Camera based gyro multishot
2,977.00	8,734.00	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
72.67	0.58	341.53	72.67	0.35	-0.12	0.35	0.80	0.80	0.00
166.62	0.62	359.70	166.61	1.31	-0.27	1.31	0.21	0.04	19.34
260.57	0.72	352.27	260.56	2.40	-0.35	2.40	0.14	0.11	-7.91
354.52	0.48	333.67	354.50	3.34	-0.61	3.34	0.33	-0.26	-19.80
448.47	0.24	302.77	448.45	3.80	-0.95	3.80	0.32	-0.26	-32.89
542.42	0.43	290.38	542.40	4.03	-1.44	4.04	0.22	0.20	-13.19
636.37	0.29	268.89	636.35	4.15	-2.01	4.16	0.20	-0.15	-22.87
730.32	0.18	246.68	730.30	4.08	-2.38	4.10	0.15	-0.12	-23.64
824.27	0.19	227.44	824.25	3.92	-2.63	3.94	0.07	0.01	-20.48

Company:	Unit Petroleum	**Local Co-ordinate Reference:**	Well Happy Hollow 7 #2H
Project:	Reno County, Kansas [NAD 83]	**TVD Reference:**	14' KB @ 1704.00usft (UDI 331)
Site:	Section 18 T24S-R9W	**MD Reference:**	14' KB @ 1704.00usft (UDI 331)
Well:	Happy Hollow 7 #2H	**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)
918.22	0.31	172.04	918.19	3.56	-2.71	3.58	0.27	0.13	-58.97
1,012.17	0.23	187.67	1,012.14	3.12	-2.70	3.14	0.11	-0.09	16.64
1,106.12	0.23	245.18	1,106.09	2.86	-2.90	2.88	0.24	0.00	61.21
1,200.07	0.12	244.98	1,200.04	2.74	-3.16	2.76	0.12	-0.12	-0.21
1,294.02	0.65	227.79	1,293.99	2.34	-3.64	2.36	0.57	0.56	-18.30
1,387.97	0.51	209.74	1,387.94	1.62	-4.25	1.64	0.24	-0.15	-19.21
1,481.92	0.12	138.65	1,481.88	1.18	-4.39	1.21	0.52	-0.42	-75.67
1,575.87	0.14	115.77	1,575.83	1.06	-4.22	1.08	0.06	0.02	-24.35
1,669.82	0.47	74.67	1,669.78	1.11	-3.74	1.13	0.40	0.35	-43.75
1,763.77	0.54	37.16	1,763.73	1.56	-3.11	1.58	0.35	0.07	-39.93
1,857.72	0.15	10.88	1,857.68	2.04	-2.81	2.05	0.44	-0.42	-27.97
1,951.67	0.51	354.24	1,951.63	2.57	-2.83	2.59	0.39	0.38	-17.71
2,045.62	0.02	341.22	2,045.57	3.00	-2.88	3.02	0.52	-0.52	-13.86
2,139.57	0.15	257.49	2,139.52	2.99	-3.01	3.01	0.16	0.14	-89.12
2,233.52	0.21	217.45	2,233.47	2.83	-3.23	2.85	0.14	0.06	-42.62
2,327.47	0.23	220.61	2,327.42	2.55	-3.46	2.57	0.02	0.02	3.36
2,421.42	0.18	193.98	2,421.37	2.26	-3.62	2.29	0.11	-0.05	-28.34
2,515.37	0.16	229.30	2,515.32	2.03	-3.75	2.06	0.11	-0.02	37.59
2,609.32	0.28	193.35	2,609.27	1.73	-3.90	1.75	0.19	0.13	-38.27
2,703.27	0.24	184.56	2,703.22	1.31	-3.97	1.33	0.06	-0.04	-9.36
2,797.22	0.31	168.92	2,797.17	0.86	-3.94	0.89	0.11	0.07	-16.65
2,891.17	0.28	209.34	2,891.12	0.41	-4.00	0.44	0.22	-0.03	43.02
2,922.87	0.27	199.82	2,922.82	0.27	-4.07	0.30	0.15	-0.03	-30.03
2,977.00	0.10	300.80	2,976.95	0.18	-4.15	0.20	0.56	-0.31	186.55
3,009.00	0.30	355.70	3,008.95	0.27	-4.18	0.30	0.80	0.63	171.56
3,040.00	1.60	0.90	3,039.94	0.79	-4.18	0.82	4.20	4.19	16.77
3,072.00	3.80	357.60	3,071.91	2.30	-4.22	2.32	6.89	6.88	-10.31
3,104.00	6.50	0.30	3,103.77	5.17	-4.25	5.19	8.47	8.44	8.44
3,136.00	9.00	3.30	3,135.48	9.48	-4.10	9.50	7.91	7.81	9.38
3,167.00	11.10	1.30	3,166.00	14.88	-3.89	14.91	6.87	6.77	-6.45
3,199.00	13.10	359.30	3,197.29	21.59	-3.87	21.61	6.38	6.25	-6.25
3,230.00	15.30	358.80	3,227.34	29.19	-3.99	29.22	7.11	7.10	-1.61
3,262.00	17.70	358.80	3,258.02	38.28	-4.18	38.30	7.50	7.50	0.00
3,294.00	20.10	359.40	3,288.29	48.64	-4.34	48.67	7.52	7.50	1.88
3,326.00	22.90	0.00	3,318.06	60.37	-4.40	60.39	8.78	8.75	1.88
3,357.00	26.00	0.40	3,346.28	73.20	-4.35	73.22	10.01	10.00	1.29
3,389.00	29.00	0.80	3,374.66	87.97	-4.20	87.99	9.39	9.38	1.25
3,421.00	31.70	1.00	3,402.27	104.13	-3.94	104.16	8.44	8.44	0.63
3,453.00	34.30	0.80	3,429.11	121.56	-3.67	121.58	8.13	8.13	-0.63
3,484.00	36.60	0.60	3,454.36	139.54	-3.45	139.56	7.43	7.42	-0.65
3,516.00	38.90	0.20	3,479.66	159.13	-3.32	159.14	7.23	7.19	-1.25
3,547.00	41.30	0.60	3,503.37	179.09	-3.17	179.11	7.79	7.74	1.29
3,579.00	43.50	0.60	3,527.00	200.67	-2.95	200.68	6.88	6.88	0.00

Company:	Unit Petroleum	**Local Co-ordinate Reference:**	Well Happy Hollow 7 #2H
Project:	Reno County, Kansas [NAD 83]	**TVD Reference:**	14' KB @ 1704.00usft (UDI 331)
Site:	Section 18 T24S-R9W	**MD Reference:**	14' KB @ 1704.00usft (UDI 331)
Well:	Happy Hollow 7 #2H	**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)
3,611.00	45.80	0.40	3,549.76	223.15	-2.75	223.17	7.20	7.19	-0.63
3,643.00	48.30	0.40	3,571.56	246.57	-2.59	246.58	7.81	7.81	0.00
3,675.00	50.50	0.40	3,592.39	270.87	-2.42	270.88	6.88	6.88	0.00
3,706.00	52.80	0.70	3,611.62	295.18	-2.19	295.18	7.46	7.42	0.97
3,744.00	54.90	1.50	3,634.04	325.85	-1.59	325.86	5.78	5.53	2.11
3,770.00	55.10	1.10	3,648.95	347.14	-1.11	347.14	1.48	0.77	-1.54
3,802.00	55.40	1.30	3,667.19	373.43	-0.56	373.43	1.07	0.94	0.63
3,833.00	55.70	0.60	3,684.73	398.99	-0.14	398.98	2.10	0.97	-2.26
3,865.00	56.10	0.60	3,702.67	425.49	0.14	425.48	1.25	1.25	0.00
3,895.00	57.40	0.30	3,719.11	450.57	0.34	450.56	4.41	4.33	-1.00
3,930.00	60.40	359.80	3,737.19	480.54	0.36	480.53	8.66	8.57	-1.43
3,961.00	63.60	359.80	3,751.74	507.91	0.27	507.90	10.32	10.32	0.00
3,993.00	67.00	0.30	3,765.11	536.98	0.29	536.96	10.72	10.63	1.56
4,024.00	70.50	0.70	3,776.35	565.86	0.55	565.85	11.35	11.29	1.29
4,056.00	73.30	1.00	3,786.29	596.27	1.00	596.25	8.80	8.75	0.94
4,087.00	76.70	1.10	3,794.31	626.21	1.55	626.18	10.97	10.97	0.32
4,125.00	80.50	0.90	3,801.82	663.44	2.20	663.42	10.01	10.00	-0.53
4,206.00	87.50	0.40	3,810.28	743.95	3.11	743.91	8.66	8.64	-0.62
4,238.00	91.40	359.90	3,810.59	775.94	3.19	775.90	12.29	12.19	-1.56
4,269.00	93.30	359.90	3,809.32	806.91	3.14	806.87	6.13	6.13	0.00
4,332.00	93.50	0.80	3,805.58	869.80	3.52	869.76	1.46	0.32	1.43
4,392.00	91.90	0.70	3,802.75	929.72	4.31	929.68	2.67	-2.67	-0.17
4,454.00	90.70	0.40	3,801.35	991.70	4.90	991.65	2.00	-1.94	-0.48
4,462.34	90.63	0.32	3,801.25	1,000.04	4.95	999.99	1.26	-0.81	-0.97
HH 7 2H 1000' VS									
4,516.00	90.20	359.80	3,800.86	1,053.70	5.01	1,053.65	1.26	-0.81	-0.97
4,578.00	90.60	359.90	3,800.43	1,115.70	4.85	1,115.64	0.67	0.65	0.16
4,640.00	90.40	359.80	3,799.89	1,177.70	4.68	1,177.64	0.36	-0.32	-0.16
4,702.00	90.40	359.80	3,799.45	1,239.69	4.47	1,239.64	0.00	0.00	0.00
4,765.00	90.10	359.90	3,799.18	1,302.69	4.30	1,302.64	0.50	-0.48	0.16
4,827.00	89.80	359.70	3,799.23	1,364.69	4.09	1,364.64	0.58	-0.48	-0.32
4,889.00	89.90	359.00	3,799.40	1,426.69	3.38	1,426.64	1.14	0.16	-1.13
4,952.00	90.90	359.80	3,798.96	1,489.68	2.72	1,489.63	2.03	1.59	1.27
5,013.00	90.80	359.40	3,798.05	1,550.67	2.30	1,550.63	0.68	-0.16	-0.66
5,075.00	90.80	359.90	3,797.19	1,612.67	1.92	1,612.62	0.81	0.00	0.81
5,137.00	92.10	0.70	3,795.62	1,674.64	2.24	1,674.59	2.46	2.10	1.29
5,198.00	92.30	0.80	3,793.27	1,735.59	3.04	1,735.54	0.37	0.33	0.16
5,260.00	92.50	0.50	3,790.68	1,797.54	3.74	1,797.47	0.58	0.32	-0.48
5,322.00	92.30	0.60	3,788.08	1,859.48	4.34	1,859.41	0.36	-0.32	0.16
5,383.00	91.40	0.70	3,786.11	1,920.44	5.03	1,920.37	1.48	-1.48	0.16
5,443.00	92.00	0.70	3,784.33	1,980.41	5.76	1,980.33	1.00	1.00	0.00
5,462.39	91.31	0.57	3,783.77	1,999.79	5.98	1,999.71	3.61	-3.55	-0.65
HH 7 2H 2000' VS									
5,505.00	89.80	0.30	3,783.36	2,042.40	6.30	2,042.31	3.61	-3.55	-0.65

Company:	Unit Petroleum	**Local Co-ordinate Reference:**	Well Happy Hollow 7 #2H
Project:	Reno County, Kansas [NAD 83]	**TVD Reference:**	14' KB @ 1704.00usft (UDI 331)
Site:	Section 18 T24S-R9W	**MD Reference:**	14' KB @ 1704.00usft (UDI 331)
Well:	Happy Hollow 7 #2H	**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)
5,566.00	88.80	359.80	3,784.10	2,103.39	6.36	2,103.30	1.83	-1.64	-0.82
5,628.00	88.30	359.80	3,785.67	2,165.37	6.14	2,165.28	0.81	-0.81	0.00
5,689.00	89.80	0.20	3,786.68	2,226.36	6.14	2,226.27	2.54	2.46	0.66
5,751.00	90.30	0.00	3,786.63	2,288.36	6.25	2,288.27	0.87	0.81	-0.32
5,812.00	90.30	0.20	3,786.31	2,349.36	6.36	2,349.27	0.33	0.00	0.33
5,874.00	91.50	0.00	3,785.34	2,411.35	6.46	2,411.26	1.96	1.94	-0.32
5,935.00	91.50	359.90	3,783.74	2,472.33	6.41	2,472.23	0.16	0.00	-0.16
5,997.00	91.90	0.30	3,781.90	2,534.30	6.52	2,534.21	0.91	0.65	0.65
6,058.00	92.20	359.80	3,779.72	2,595.26	6.57	2,595.16	0.96	0.49	-0.82
6,120.00	91.90	0.00	3,777.50	2,657.22	6.46	2,657.12	0.58	-0.48	0.32
6,180.00	91.10	0.20	3,775.93	2,717.20	6.57	2,717.10	1.37	-1.33	0.33
6,242.00	89.40	0.10	3,775.66	2,779.20	6.73	2,779.10	2.75	-2.74	-0.16
6,303.00	89.00	0.10	3,776.51	2,840.19	6.84	2,840.09	0.66	-0.66	0.00
6,365.00	89.30	0.40	3,777.43	2,902.18	7.11	2,902.08	0.68	0.48	0.48
6,427.00	89.70	0.40	3,777.97	2,964.18	7.54	2,964.07	0.65	0.65	0.00
6,462.61	89.70	0.29	3,778.16	2,999.79	7.75	2,999.67	0.32	0.00	-0.32
HH 7 2H 3000' VS									
6,489.00	89.70	0.20	3,778.30	3,026.18	7.87	3,026.06	0.32	0.00	-0.32
6,553.00	89.90	0.80	3,778.52	3,090.18	8.42	3,090.05	0.99	0.31	0.94
6,617.00	90.00	0.50	3,778.58	3,154.17	9.15	3,154.04	0.49	0.16	-0.47
6,680.00	90.20	0.40	3,778.47	3,217.17	9.64	3,217.04	0.35	0.32	-0.16
6,744.00	89.70	0.60	3,778.52	3,281.17	10.20	3,281.03	0.84	-0.78	0.31
6,808.00	90.20	0.90	3,778.58	3,345.16	11.04	3,345.02	0.91	0.78	0.47
6,872.00	90.70	1.00	3,778.08	3,409.15	12.10	3,409.00	0.80	0.78	0.16
6,936.00	91.50	1.10	3,776.85	3,473.13	13.27	3,472.97	1.26	1.25	0.16
6,999.00	91.60	0.60	3,775.14	3,536.10	14.21	3,535.93	0.81	0.16	-0.79
7,062.00	91.30	0.40	3,773.55	3,599.07	14.76	3,598.90	0.57	-0.48	-0.32
7,125.00	91.20	0.60	3,772.17	3,662.06	15.31	3,661.88	0.35	-0.16	0.32
7,189.00	90.70	0.40	3,771.11	3,726.05	15.87	3,725.86	0.84	-0.78	-0.31
7,252.00	90.20	0.50	3,770.62	3,789.04	16.36	3,788.85	0.81	-0.79	0.16
7,315.00	89.80	0.60	3,770.62	3,852.04	16.97	3,851.85	0.65	-0.63	0.16
7,379.00	89.60	1.30	3,770.95	3,916.03	18.03	3,915.83	1.14	-0.31	1.09
7,442.00	90.40	1.30	3,770.95	3,979.01	19.46	3,978.80	1.27	1.27	0.00
7,462.02	90.46	1.21	3,770.80	3,999.02	19.89	3,998.81	0.56	0.31	-0.47
HH 7 2H 4000' VS									
7,506.00	90.60	1.00	3,770.40	4,043.00	20.74	4,042.77	0.56	0.31	-0.47
7,570.00	89.80	0.70	3,770.17	4,106.99	21.69	4,106.76	1.33	-1.25	-0.47
7,633.00	89.40	1.10	3,770.61	4,169.98	22.68	4,169.74	0.90	-0.63	0.63
7,697.00	89.90	1.20	3,771.00	4,233.96	23.96	4,233.72	0.80	0.78	0.16
7,761.00	90.60	0.90	3,770.72	4,297.95	25.14	4,297.70	1.19	1.09	-0.47
7,824.00	91.00	0.80	3,769.84	4,360.94	26.07	4,360.68	0.65	0.63	-0.16
7,886.00	91.10	0.30	3,768.71	4,422.93	26.67	4,422.66	0.82	0.16	-0.81
7,950.00	90.80	0.10	3,767.65	4,486.92	26.89	4,486.64	0.56	-0.47	-0.31

Company:	Unit Petroleum	**Local Co-ordinate Reference:**	Well Happy Hollow 7 #2H
Project:	Reno County, Kansas [NAD 83]	**TVD Reference:**	14' KB @ 1704.00usft (UDI 331)
Site:	Section 18 T24S-R9W	**MD Reference:**	14' KB @ 1704.00usft (UDI 331)
Well:	Happy Hollow 7 #2H	**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)
8,013.00	90.90	0.40	3,766.71	4,549.91	27.16	4,549.63	0.50	0.16	0.48
8,078.00	91.20	0.20	3,765.52	4,614.90	27.50	4,614.62	0.55	0.46	-0.31
8,141.00	90.60	0.20	3,764.53	4,677.89	27.72	4,677.61	0.95	-0.95	0.00
8,203.00	90.50	0.90	3,763.94	4,739.88	28.32	4,739.60	1.14	-0.16	1.13
8,266.00	89.80	1.10	3,763.77	4,802.87	29.42	4,802.58	1.16	-1.11	0.32
8,329.00	89.50	1.30	3,764.16	4,865.86	30.74	4,865.55	0.57	-0.48	0.32
8,393.00	89.30	1.40	3,764.83	4,929.84	32.25	4,929.52	0.35	-0.31	0.16
8,457.00	88.80	1.80	3,765.89	4,993.80	34.03	4,993.47	1.00	-0.78	0.63
8,521.00	88.20	2.00	3,767.56	5,057.74	36.15	5,057.40	0.99	-0.94	0.31
8,584.00	88.60	1.90	3,769.32	5,120.68	38.30	5,120.32	0.65	0.63	-0.16
8,647.00	89.10	1.30	3,770.59	5,183.64	40.06	5,183.27	1.24	0.79	-0.95
8,670.33	89.16	1.74	3,770.94	5,206.97	40.68	5,206.59	1.92	0.24	1.90
HH 7 2H PBHL									
8,689.00	89.20	2.10	3,771.21	5,225.62	41.30	5,225.24	1.92	0.24	1.90
Last MWD Survey									
8,734.00	89.20	2.10	3,771.84	5,270.59	42.95	5,270.19	0.00	0.00	0.00
Projection to TD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
8,689.00	3,771.21	5,225.62	41.30	Last MWD Survey
8,734.00	3,771.84	5,270.59	42.95	Projection to TD

Checked By: _____ Approved By: _____ Date: _____