



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1173719
OIL & GAS CONSERVATION DIVISION

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 # _____

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
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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: _____

1173719

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Unit Petroleum Company
Well Name	Rock Chalk Farms 33 #1H
Doc ID	1173719

All Electric Logs Run

Multiple Caliper Log
Single Caliper Log
Compensated Neutron Log
Array Induction Log

Form	ACO1 - Well Completion
Operator	Unit Petroleum Company
Well Name	Rock Chalk Farms 33 #1H
Doc ID	1173719

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	145		120	2% cc
Intermediate	12.25	9.625	36	1502	A	605	2% cc 1/4" celloflake
Production	8.75	7	26	4322	A	160	2% cc 1/4# celloflake
Liner	6.125	4.50	11.6	8393	Prem H	500	2% cc 1/4# celloflake



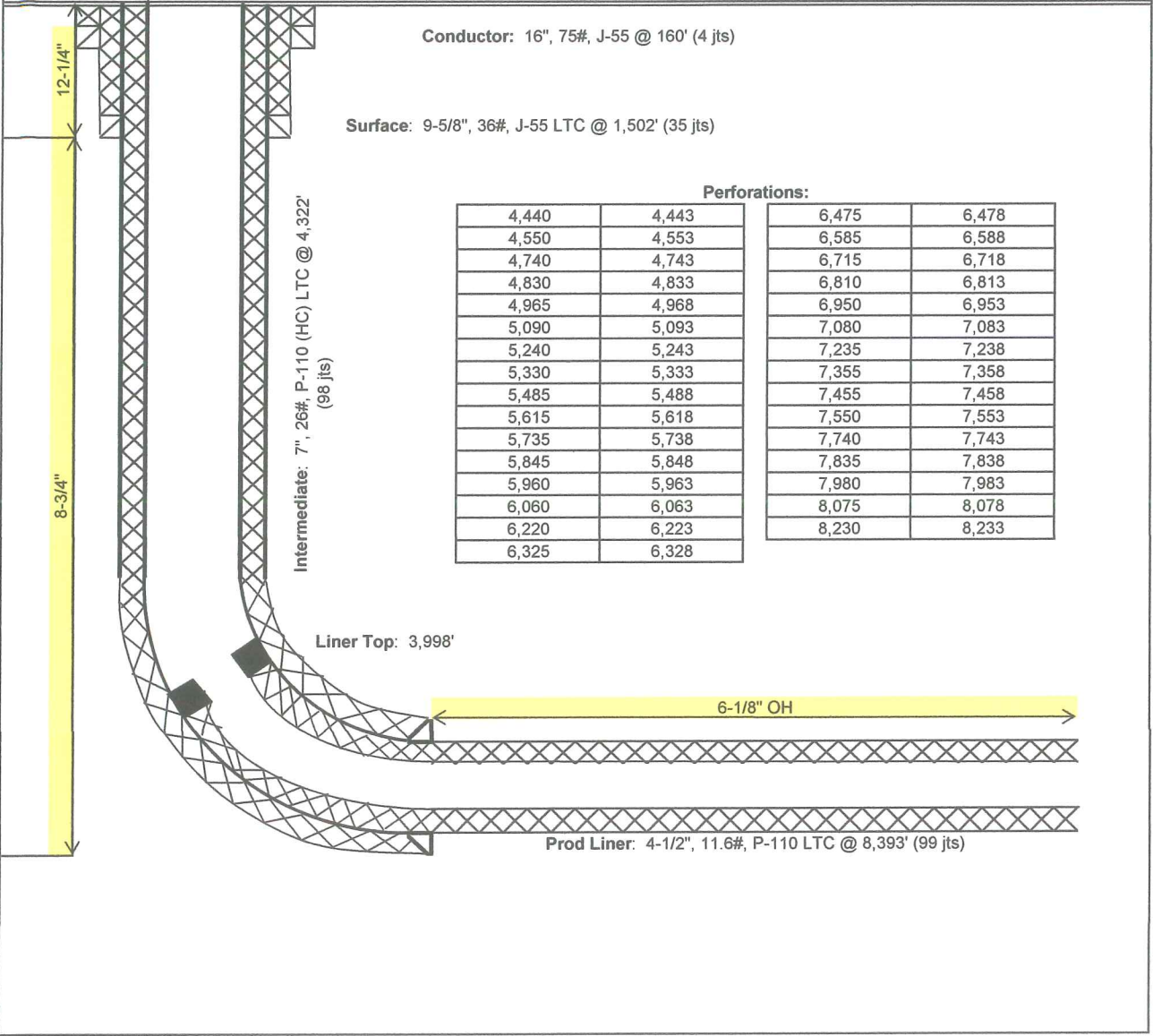
Unit Petroleum Company

Date of Last Revision:
7-Jan-14

Well: Rock Chalk Farms 33 #1H
Location: 33-25S-10W
County, State: Reno County, KS
Surface Location: 175' FNL & 700' FWL

API No.: 1515521669
Rig: Unit Drilling #331
Engineer: Brent Keys (918) 477-4510
Geology: Rob Wilson (928) 477-5728

OH Size

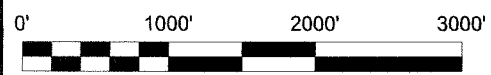
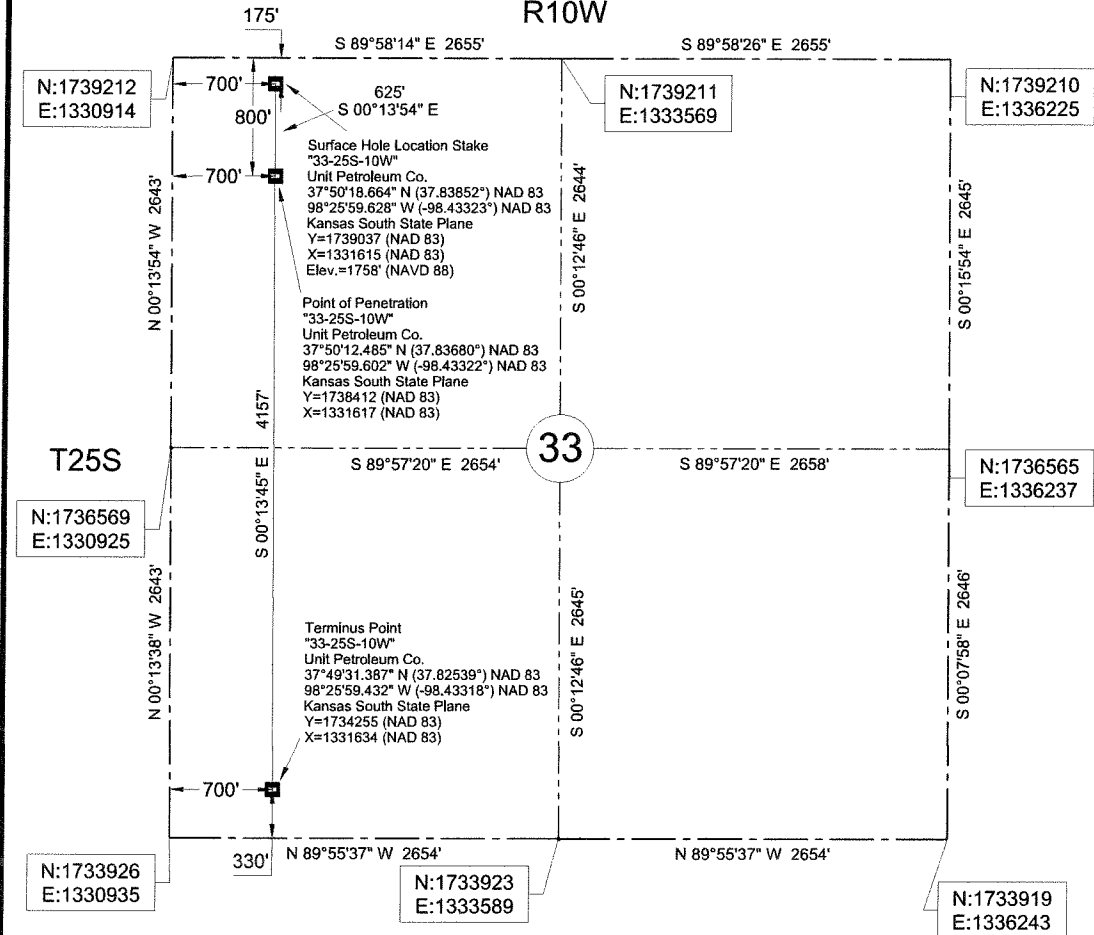


Perforations:

4,440	4,443	6,475	6,478
4,550	4,553	6,585	6,588
4,740	4,743	6,715	6,718
4,830	4,833	6,810	6,813
4,965	4,968	6,950	6,953
5,090	5,093	7,080	7,083
5,240	5,243	7,235	7,238
5,330	5,333	7,355	7,358
5,485	5,488	7,455	7,458
5,615	5,618	7,550	7,553
5,735	5,738	7,740	7,743
5,845	5,848	7,835	7,838
5,960	5,963	7,980	7,983
6,060	6,063	8,075	8,078
6,220	6,223	8,230	8,233
6,325	6,328		

Section 33, T 25 S, R 10 W., Reno County, Kansas.

R10W



Description: Surface Hole Location Stake "33-25S-10W" situated 175 feet from the north section line and 700 feet from the west section line of Section 33, T 25 S, R 10 W., Reno County, Kansas.

Description: Point of Penetration "33-25S-10W" situated 800 feet from the north section line and 700 feet from the west section line of Section 33, T 25 S, R 10 W., Reno County, Kansas.

Description: Terminus Point "33-25S-10W" situated 330 feet from the south section line and 700 feet from the west section line of Section 33, T 25 S, R 10 W., Reno County, Kansas.

48 HOURS BEFORE YOU DIG...
CALL KANSAS ONE-CALL
1-800-344-7233

KANSAS ONE-CALL SYSTEM

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

Contractor is responsible for contacting all utility companies prior to construction.

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

We do hereby certify that this survey was done in accordance to records, maps and other information as provided to us by the client herein named and that great care was taken in the actual staking of this well and the determination of any obstacles thereupon. However, the accuracy of this survey is not guaranteed and if there appears to be any discrepancy, please notify us immediately.



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

	JIVIDEN'S LAND SURVEY CO., INC.	Survey For:	JOB	DATE OF PLAT	SCALE	SHEET
	1210 19TH STREET / P.O. BOX 943 WOODWARD, OKLAHOMA 73802 Phone 580-256-7174 - Fax 580-256-3424 roger@jividenslandsurvey.com milke@jividenslandsurvey.com	Unit Petroleum Co. P.O. Box 2726 Woodward, OK 73802 Attn: Jason Rummery	422-13	08-22-2013	1"=1000'	1 OF 5
			DRAWN BY C.A.N.	OKLA. CA #2064, EXP. 06/30/2015 KANSAS CA #143, EXP. 12/31/2014		

Rock Chalk Farms 33 1H

Customer UNIT-PRATD		Lease No.		Date	
Lease Rock Chalk Farms		Well # 33-14		10-08-13	
Field Order # 9124	Station Pratt KS	Casing	Depth 8395'	County Rawo	State KS
Type Job CNW 4 1/2 Liner			Formation	Legal Description 33-25-10	

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
4 1/2		3 1/2 OP 1876.71					5 Min.
Depth 4394	Depth	From 434	To 649.40	Pre Pad	Max		10 Min.
Volume 68	Volume	From W.P.	To 1478.50	Pad	Min		15 Min.
Max Press	Max Press	From	To	Frac	Avg		HHP Used
Well Connection	Annulus Vol.	From	To				Annulus Pressure
Plug Depth	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative	Station Manager DAVE Scott	Treater Robert Fullin
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Service Units	37900	19889	19843	19903	73768	19960	21010			
Driver Names	Sullivan	Edando	Phye		JACK	SMITH				

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
3:30 Am					on loc soft, med
					Ran 4 1/2 11.6 csp Liner
12:45					CASING ON BOTTOM) CIRC w/ Lin
1:20		5,000			Hook UP Test Liner 4,500 PSI
1:23		200		3.5	PUMP BALL DOWN
					Set Ball AND SET STAVE
2:00	2200				Pressure up Break Disk
					Shut down check STAVE
2:10			5	4	1st spacer
			12		1st mud flush
			5		SPACER
				5	mix cmt 500sk H cmt @ 15.6 app
					yield 1.24 gal/sk 2.43
			110		cmt mixed shut down. wash Liner, pump
					Release Dart Plug
2:50	400		10		1st Disp w/ Surfact 4²⁰ AND 2% KCL
		600	25		Lift Psi
				3	Slow Rate DART WATCH PLUG
3:20	2000		90		Plug down Short Hold
3:40	1,000			5	check Valve Clean 15 BR cmt Pist
4:00			110		Shut down 50B-Complete THANK YOU

Customer UNIT INTERSTATE CO	Lease No.	Date 9-30-13	
Lease ROCK CHAIN FARMS	Well # 33 1-H		
Field Order # 9705	Station PRATT	Casing 7"	Depth 4326.97
Type Job CMW JMI	Formation	County RENO	State KS
		Legal Description 33-25-10	

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 7"	Tubing Size	Shots/Ft		Acid 160 SKS AH 2	RATE 5.5	PRESS 1100	ISIP	
Depth 4326.97	Depth	From	To	Pre Pad 1.2 GYLAN	Max 10%	Min	5 Min.	
Volume 163.21	Volume	From	To	Pad			10 Min.	
Max Press	Max Press	From	To	Frac	Avg		15 Min.	
Well Connection KC	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth 4326.97	Packer Depth	From	To	Flush 165	Gas Volume		Total Load	

Customer Representative Brian Keys	Station Manager Kevin Grady	Treater MIKE MATTHEW
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Service Units	37416	77686	19905	19831	19862				
Driver Names	MATTHEW	KEVIN		ABE					

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
7:45					ON LOCATION / STARTING
7:45					START 7 casing 4326.97
10:15					CONV ON TUBING RIG DOWN CASE
11:15					UNIT PRESSURE
11:20					FLOW UP HEAD
11:30	300			5.5	PUMP 17 BBL MIN 9154
11:35	300			5	PUMP 5 BBL WATER
11:55	200		48	4	MAX 160 SKS AH 2
11:55					RELEASE PUMP
11:55					START DEGRADATION
12:00	225		30	6	6 BBL P MIN @ 225 CAS
12:10	300		90	6	6 BBL P MIN @ 300 CAS
12:10	400		130	5.5	5.5 MIN P MIN @ 400 CAS
12:20	500		155	3	SLOW RATE
12:25	75		167		PLUG DOWN
12:27	1200				PUMP DOWN / COLLAPSE
					CIRC TRAIL JOB
					JOB COMPLETE
					THANK YOU
					MIKE MATTHEW

Customer UNIT PETROLEUM CO	Lease No.	Date 9-24-13
Lease ROCK CHALK FARMS	Well # 33-1H	
Field Order # 9202	Station PRATT	Casing 4 1/2 O.P.
		Depth 4023
Type Job C.N.W. WHIPSTOCK	Formation	County RENO
		State KS
		Legal Description 33-255-10W

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 4 1/2 O.P.	Tubing Size	Shots/Ft		Acid 620 CMT COMMON 1%	RATE 5.0 GPM	PRESS 25	ISIP 2500 PSI	
Depth 4022	Depth	From	To	Pre Pad	Max		5 Min.	
Volume	Volume	From	To	Pad	Min		10 Min.	
Max Press 500	Max Press	From	To	Frac	Avg		15 Min.	
Well Connection D.P.	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth 4032	Packer Depth	From	To	Flush	Gas Volume		Total Load	

Customer Representative Brent Keyes	Station Manager KEVIN GOLDIEY	Treater MIKE MATRAI
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Service Units	37586	19889	19843	19826	19860	70959	19918
Driver Names	MATRAI	YOUNG		PIE	ISOT	PH	YE

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
2:45 PM					ON LOCATION / SAFETY MEETING
					WHIPSTOCK PLUG @ 4006 4023'
5:05		200		5	PUMP 17 H ₂ O
5:10		150		5	PUMP 620 SWS CMT
5:34					LOST CIRC @ 118 BBLs slurry out
5:37		100	4	5	PUMP 4 BBL H ₂ O
5:39				5	PUMP 28 BBL DRILLING MUD
		150	18	5	PLUG 18 BBL MUD OUT 150 PSI
5:45			28		PLUG DOWN
					JOB COMPLETE
					THANK YOU
					MIKE MATRAI

Customer UNIT PATROL CO	Lease No.	Date 9-24-13
Lease ROCK CHAIR FARM	Well # 33-14	
Field Order # 9203	Station P11TT	Casing 4 1/2 D.P.
	Depth 4023	County
Type Job CNW WHIPSTOCK	Formation	Legal Description 33-25S-10W

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid		RATE	PRESS	ISIP
4 1/2 in.				Pre Pad	Max			5 Min.
Depth 4023	Depth	From	To	Pad	Min			10 Min.
Volume	Volume	From	To	Frac	Avg			15 Min.
Max Press 500	Max Press	From	To		HHP Used			Annulus Pressure
Well Connection D.P.	Annulus Vol.	From	To	Flush	Gas Volume			Total Load
Plug Depth 4023	Packer Depth	From	To					

Customer Representative BETS KEYS	Station Manager Kevin Guldley	Treater Mike MATHAI
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Service Units	37586	19889	19843	19826	19860	70959	19914
Driver Names	MATHAI	YOUNG		BELSON		PHYE	

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
					CONTINUATION OF PREVIOUS REPORT
6:45					PLUG DOWN, DISCONNECTED DISCONNECTED FROM D.P.
					D.P. WAS STUCK
6:15					RIG BACK UP TO PILL PIPE
6:39		400	3	2	PUMP 3. BBL'S MIN, LOADED
6:40		1000	3.5		HOLDING 1000 PSI
6:40					RIG DOWN
					THANK YOU
					MIKE MATHAI

Customer <u>UNIT Petroleum CO.</u>	Lease No.	Date <u>9-21-13</u>
Lease <u>ROCK CHALK FAIMS</u>	Well # <u>33-1H</u>	
Field Order # <u>9201</u>	Station <u>PRATT</u>	Casing <u>9 5/8</u>
		Depth <u>1506</u>
Type Job <u>CNW S.P.</u>	Formation	County <u>RENO</u>
		State <u>KS</u>
		Legal Description <u>33-255-10W</u>

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME	
Casing Size <u>9 5/8</u>	Tubing Size	Shots/Ft		Acid <u>325 A-con</u>	RATE <u>32 CC</u>	PRESS <u>1/4 CC</u>	ISIP
Depth <u>1506</u>	Depth	From	To	Pre-Pad <u>280 COM</u>	Max <u>275 CC</u>	<u>1/4 CC</u>	5 Min.
Volume <u>116.41</u>	Volume	From	To	Pad	Min		10 Min.
Max Press <u>1000</u>	Max Press	From	To	Frac	Avg		15 Min.
Well Connection <u>P.C.</u>	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth <u>1506</u>	Packer Depth	From	To	Flush <u>116.41</u>	Gas Volume		Total Load

Customer Representative <u>Brent Keys</u>	Station Manager <u>Kevin Gordley</u>	Treater <u>MIKE MATTAI</u>
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Service Units <u>37586</u>	<u>19889</u>	<u>19843</u>	<u>19903</u>	<u>73768</u>	<u>19826</u>	<u>19860</u>
Driver Names <u>MATTAI</u>	<u>MARQUEZ</u>		<u>GRAVES</u>		<u>HAMBLY</u>	

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
7:30 AM					ON LOCATION / SAFETY Meeting
9:45					RUN CSNG
12:10 PM					CSNG ON BOTTOM
12:15					HOOK UP TO CSNG / BREAK CIRC W RIG
12:50			5	5	PUMP 5 BBLS H2O
12:55	400		110	5.5	MIX 325 SWS A-con CMF
1:10	300		65	5.5	MIX 280 SWS COMBION CMF
1:25	400		-	5.5	Release Plug / START DISPLACEMENT
1:50	800		117		Plug DOWN
					60 BBLS CMF TO PIT
					Circ Then JOB
					JOB COMPLETE
					THANK YOU
					MIKE MATTAI



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

CEMENTING REPORT

Operator: Unit Corporation
Well Name: Rock Chalk Farms 33-1H
Legal Description: Reno Cnty, KS

Cement Casing Data	
Cementing Date	9-13-13
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: Sonny Lauer	

A handwritten signature in black ink, appearing to read "Jeff M. Owen". The signature is stylized and somewhat cursive.

Jeff M. Owen
Mid-Continent Conductor, LLC

Unit Petroleum

**Reno County, Kansas
Section 33 T25S-R10W
Rock Chalk Farms 33 #1H**

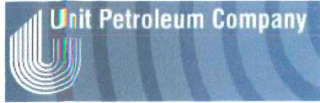
STK

Design: STK

Standard Survey Report

07 October, 2013





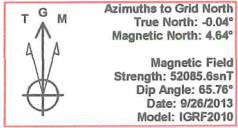
Unit Petroleum
 Project: Reno County, Kansas
 Site: Section 33 T25S-R10W
 Well: Rock Chalk Farms 33 #1H
 Wellbore: STK
 Design: STK Design #1
 Lat: 37° 50' 18.664 N
 Long: 98° 25' 59.627 W
 Pad GL: 1758.00
 KB: RKB 14' @ 1772.00usft (UDI 331)



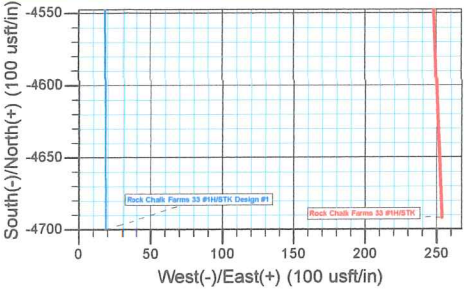
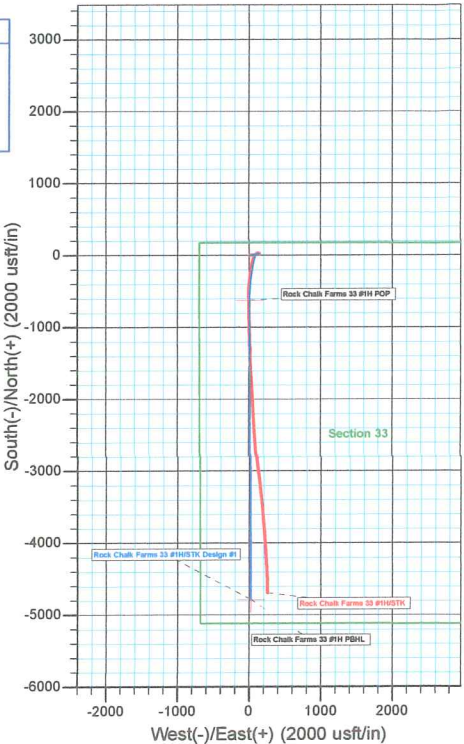
SECTION DETAILS									
MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	
2890.10	1.17	70.16	2683.35	25.89	141.55	0.00	0.00	-26.33	
2775.00	1.15	74.94	2768.23	27.40	143.29	0.12	104.06	-26.84	
2887.36	5.00	270.00	2890.46	27.72	139.44	5.00	-167.73	-27.17	
3361.51	5.00	270.00	3352.84	27.72	98.69	0.00	0.00	-27.33	
3915.49	56.00	188.80	3820.70	-218.84	35.18	10.00	-84.79	218.98	
4035.49	56.00	188.80	3887.80	-317.21	20.30	0.00	0.00	317.29	
4324.52	89.66	179.77	3972.00	-588.33	2.42	12.00	-15.65	588.33	
8516.41	89.66	179.77	3997.00	-4782.30	19.00	0.00	0.00	4782.34	

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

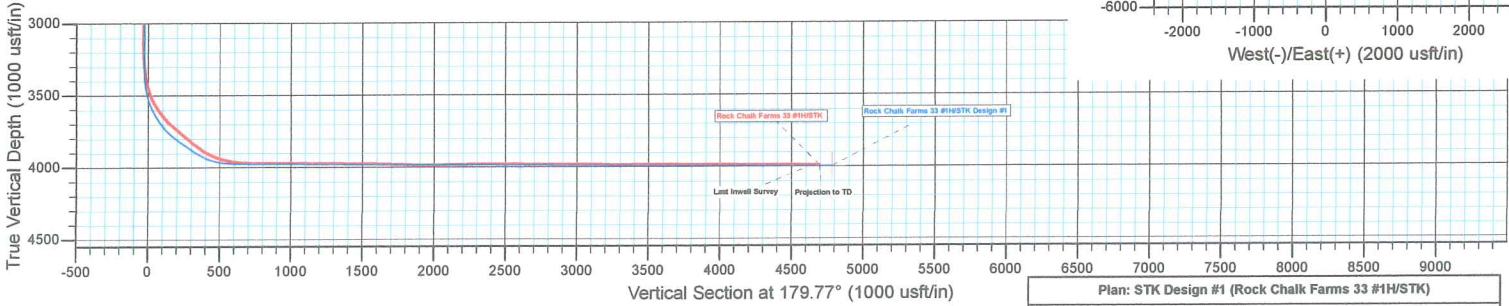
WELL DETAILS: Rock Chalk Farms 33 #1H							
+N-S	+E-W	Northing	Ground Level	Easting	Latitude	Longitude	Slot
0.00	0.00	1739037.00	1758.00	1331615.00	37° 50' 18.664 N	98° 25' 59.627 W	



WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N-S	+E-W	Latitude	Longitude	Shape
Rock Chalk Farms 33 #1H POP	0.00	-525.04	2.00	37° 50' 12.485 N	98° 25' 59.808 W	Point
Rock Chalk Farms 33 #1H PBHL	3997.00	-4782.30	19.00	37° 49' 31.386 N	98° 25' 59.433 W	Point



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



Plan: STK Design #1 (Rock Chalk Farms 33 #1H/STK)
 Created By: Derek Stephens Date: 9:51, October 07 2013



Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Rock Chalk Farms 33 #1H
Project:	Reno County, Kansas	TVD Reference:	RKB 14' @ 1772.00usft (UDI 331)
Site:	Section 33 T25S-R10W	MD Reference:	RKB 14' @ 1772.00usft (UDI 331)
Well:	Rock Chalk Farms 33 #1H	North Reference:	Grid
Wellbore:	STK	Survey Calculation Method:	Minimum Curvature
Design:	STK	Database:	EDM 5000.1 Single User Db

Project	Reno County, Kansas		
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 33 T25S-R10W				
Site Position:		Northing:	1,739,037.00 usft	Latitude:	37° 50' 18.664 N
From:	Map	Easting:	1,331,615.00 usft	Longitude:	98° 25' 59.627 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.04 °

Well	Rock Chalk Farms 33 #1H					
Well Position	+N/-S	0.00 usft	Northing:	1,739,037.00 usft	Latitude:	37° 50' 18.664 N
	+E/-W	0.00 usft	Easting:	1,331,615.00 usft	Longitude:	98° 25' 59.627 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	1,758.00 usft

Wellbore	STK				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/26/2013	4.69	65.76	52,086

Design	STK				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	2,597.31
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	179.77	

Survey Program	Date	10/7/2013			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
91.98	2,597.31	Gyro (OH)	CB-GYRO-MS	Camera based gyro multishot	
2,653.00	8,395.00	MWD (STK)	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	
Rock Chalk Farms 33 #1H POP										
91.98	0.29	19.39	91.98	0.22	0.08	-0.22	0.32	0.32	0.00	
184.77	0.11	42.35	184.77	0.51	0.22	-0.51	0.21	-0.19	24.74	
277.56	0.45	78.16	277.56	0.65	0.63	-0.64	0.39	0.37	38.59	
370.35	0.61	154.21	370.34	0.28	1.20	-0.27	0.72	0.17	81.96	
463.14	0.60	56.74	463.13	0.10	1.82	-0.09	0.98	-0.01	-105.04	
555.93	1.31	79.45	555.91	0.56	3.27	-0.55	0.85	0.77	24.47	
648.72	1.52	71.08	648.67	1.15	5.48	-1.13	0.32	0.23	-9.02	
741.51	1.21	80.81	741.43	1.71	7.61	-1.68	0.42	-0.33	10.49	

Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Rock Chalk Farms 33 #1H
Project:	Reno County, Kansas	TVD Reference:	RKB 14' @ 1772.00usft (UDI 331)
Site:	Section 33 T25S-R10W	MD Reference:	RKB 14' @ 1772.00usft (UDI 331)
Well:	Rock Chalk Farms 33 #1H	North Reference:	Grid
Wellbore:	STK	Survey Calculation Method:	Minimum Curvature
Design:	STK	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)
834.30	1.70	88.63	834.19	1.90	9.95	-1.86	0.57	0.53	8.43
927.09	1.66	85.52	926.94	2.04	12.67	-1.99	0.11	-0.04	-3.35
1,019.88	2.01	89.60	1,019.69	2.15	15.64	-2.09	0.40	0.38	4.40
1,112.67	2.68	89.90	1,112.40	2.17	19.43	-2.09	0.72	0.72	0.32
1,205.46	3.62	84.30	1,205.05	2.46	24.52	-2.36	1.06	1.01	-6.04
1,298.25	4.94	80.77	1,297.58	3.39	31.38	-3.27	1.45	1.42	-3.80
1,391.04	5.67	80.45	1,389.97	4.80	39.84	-4.64	0.79	0.79	-0.34
1,483.83	6.89	79.37	1,482.20	6.58	49.83	-6.38	1.32	1.31	-1.16
1,576.62	7.71	82.76	1,574.24	8.39	61.48	-8.15	1.00	0.88	3.65
1,669.41	8.06	84.75	1,666.15	9.77	74.13	-9.48	0.48	0.38	2.14
1,762.20	9.69	80.41	1,757.83	11.67	88.31	-11.32	1.90	1.76	-4.68
1,854.99	6.37	79.99	1,849.69	13.87	101.08	-13.46	3.58	-3.58	-0.45
1,947.78	5.72	76.12	1,941.97	15.87	110.64	-15.43	0.83	-0.70	-4.17
2,040.57	5.00	75.32	2,034.35	18.00	119.04	-17.53	0.78	-0.78	-0.86
2,133.36	3.04	72.55	2,126.91	19.77	125.30	-19.26	2.12	-2.11	-2.99
2,226.15	2.01	70.48	2,219.61	21.05	129.18	-20.53	1.11	-1.11	-2.23
2,318.94	1.96	61.82	2,312.34	22.34	132.11	-21.81	0.33	-0.05	-9.33
2,411.73	1.97	62.89	2,405.08	23.82	134.93	-23.28	0.04	0.01	1.15
2,504.52	1.51	62.38	2,497.82	25.11	137.43	-24.56	0.50	-0.50	-0.55
2,597.31	1.49	68.36	2,590.58	26.12	139.64	-25.56	0.17	-0.02	6.44
2,653.00	1.00	89.80	2,646.26	26.39	140.80	-25.83	1.20	-0.88	38.50
2,684.00	0.10	133.20	2,677.26	26.37	141.09	-25.81	3.00	-2.90	140.00
2,715.00	0.60	276.30	2,708.26	26.37	140.95	-25.81	2.20	1.61	461.61
2,746.00	1.10	281.40	2,739.25	26.45	140.49	-25.89	1.63	1.61	16.45
2,778.00	2.90	293.60	2,771.23	26.83	139.45	-26.27	5.75	5.63	38.13
2,810.00	3.70	294.40	2,803.18	27.59	137.77	-27.03	2.50	2.50	2.50
2,842.00	4.00	295.70	2,835.11	28.50	135.82	-27.95	0.98	0.94	4.06
2,874.00	4.20	298.20	2,867.03	29.53	133.78	-29.00	0.84	0.63	7.81
2,906.00	4.00	296.20	2,898.94	30.58	131.75	-30.05	0.77	-0.63	-6.25
2,937.00	4.20	287.40	2,929.87	31.40	129.70	-30.88	2.13	0.65	-28.39
2,969.00	4.50	281.60	2,961.77	32.00	127.35	-31.49	1.66	0.94	-18.13
3,000.00	4.60	274.80	2,992.68	32.35	124.92	-31.85	1.77	0.32	-21.94
3,096.00	4.20	278.60	3,088.39	33.20	117.61	-32.72	0.52	-0.42	3.96
3,128.00	4.00	282.40	3,120.31	33.61	115.36	-33.15	1.05	-0.63	11.88
3,159.00	3.80	281.90	3,151.24	34.06	113.30	-33.60	0.65	-0.65	-1.61
3,190.00	4.60	265.30	3,182.16	34.17	111.05	-33.72	4.67	2.58	-53.55
3,221.00	6.00	251.00	3,213.02	33.54	108.28	-33.10	6.18	4.52	-46.13
3,253.00	7.10	242.00	3,244.82	32.06	104.95	-31.64	4.69	3.44	-28.13
3,285.00	7.90	234.80	3,276.54	29.87	101.41	-29.46	3.85	2.50	-22.50
3,317.00	8.20	232.20	3,308.23	27.20	97.81	-26.81	1.47	0.94	-8.13
3,348.00	9.90	229.00	3,338.84	24.10	94.05	-23.72	5.72	5.48	-10.32
3,379.00	12.90	225.60	3,369.23	19.93	89.57	-19.57	9.91	9.68	-10.97
3,411.00	16.10	221.40	3,400.20	14.10	84.08	-13.76	10.52	10.00	-13.13

Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Rock Chalk Farms 33 #1H
Project:	Reno County, Kansas	TVD Reference:	RKB 14' @ 1772.00usft (UDI 331)
Site:	Section 33 T25S-R10W	MD Reference:	RKB 14' @ 1772.00usft (UDI 331)
Well:	Rock Chalk Farms 33 #1H	North Reference:	Grid
Wellbore:	STK	Survey Calculation Method:	Minimum Curvature
Design:	STK	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)	
3,443.00	18.90	217.70	3,430.72	6.67	77.97	-6.35	9.41	8.75	-11.56	
3,475.00	21.40	214.80	3,460.76	-2.23	71.47	2.52	8.41	7.81	-9.06	
3,506.00	24.00	211.20	3,489.36	-12.27	64.98	12.53	9.51	8.39	-11.61	
3,537.00	26.50	205.90	3,517.40	-23.89	58.69	24.12	10.87	8.06	-17.10	
3,569.00	29.00	200.40	3,545.72	-37.58	52.86	37.79	11.18	7.81	-17.19	
3,601.00	31.60	194.90	3,573.35	-52.96	48.00	53.15	11.88	8.13	-17.19	
3,633.00	34.80	192.60	3,600.13	-69.98	43.85	70.15	10.75	10.00	-7.19	
3,665.00	38.50	193.60	3,625.79	-88.58	39.52	88.74	11.71	11.56	3.13	
3,696.00	41.80	194.20	3,649.49	-107.98	34.71	108.12	10.72	10.65	1.94	
3,728.00	45.10	194.40	3,672.71	-129.30	29.28	129.42	10.32	10.31	0.63	
3,760.00	46.70	191.40	3,694.99	-151.70	24.16	151.79	8.39	5.00	-9.38	
3,792.00	48.80	187.60	3,716.50	-175.05	20.26	175.13	10.97	6.56	-11.88	
3,824.00	50.40	186.10	3,737.24	-199.24	17.36	199.31	6.14	5.00	-4.69	
3,856.00	50.70	186.00	3,757.58	-223.82	14.75	223.87	0.97	0.94	-0.31	
3,887.00	50.80	186.00	3,777.19	-247.69	12.25	247.74	0.32	0.32	0.00	
3,919.00	50.70	185.40	3,797.44	-272.35	9.78	272.39	1.49	-0.31	-1.88	
3,951.00	50.60	185.40	3,817.73	-296.98	7.46	297.01	0.31	-0.31	0.00	
3,983.00	50.70	185.40	3,838.02	-321.62	5.13	321.64	0.31	0.31	0.00	
4,015.00	53.30	185.20	3,857.72	-346.73	2.80	346.73	8.14	8.13	-0.63	
4,046.00	56.70	185.40	3,875.50	-372.01	0.45	372.01	10.98	10.97	0.65	
4,078.00	60.10	185.30	3,892.26	-399.14	-2.09	399.13	10.63	10.63	-0.31	
4,110.00	63.30	184.80	3,907.43	-427.20	-4.57	427.18	10.09	10.00	-1.56	
4,142.00	66.90	183.90	3,920.90	-456.14	-6.76	456.11	11.54	11.25	-2.81	
4,173.00	70.60	182.70	3,932.13	-484.98	-8.42	484.94	12.47	11.94	-3.87	
4,205.00	74.20	182.20	3,941.81	-515.45	-9.73	515.40	11.35	11.25	-1.56	
4,237.00	76.60	180.40	3,949.87	-546.40	-10.43	546.36	9.27	7.50	-5.63	
4,269.00	79.30	178.90	3,956.56	-577.69	-10.23	577.65	9.60	8.44	-4.69	
4,341.00	84.80	178.60	3,966.51	-648.96	-8.68	648.92	7.65	7.64	-0.42	
4,372.00	86.60	178.40	3,968.83	-679.86	-7.87	679.82	5.84	5.81	-0.65	
4,403.00	88.70	178.30	3,970.10	-710.82	-6.97	710.78	6.78	6.77	-0.32	
4,434.00	89.50	178.90	3,970.59	-741.80	-6.22	741.77	3.23	2.58	1.94	
4,495.00	90.90	178.70	3,970.38	-802.79	-4.94	802.76	2.32	2.30	-0.33	
4,557.00	90.50	178.50	3,969.62	-864.76	-3.43	864.74	0.72	-0.65	-0.32	
4,619.00	90.70	178.40	3,968.97	-926.74	-1.75	926.72	0.36	0.32	-0.16	
4,680.00	89.50	178.70	3,968.87	-987.72	-0.20	987.71	2.03	-1.97	0.49	
4,742.00	88.80	178.70	3,969.79	-1,049.69	1.20	1,049.69	1.13	-1.13	0.00	
4,804.00	88.60	178.60	3,971.19	-1,111.66	2.66	1,111.66	0.36	-0.32	-0.16	
4,866.00	89.50	179.30	3,972.22	-1,173.64	3.80	1,173.65	1.84	1.45	1.13	
4,928.00	89.10	178.40	3,972.98	-1,235.62	5.04	1,235.63	1.59	-0.65	-1.45	
4,989.00	89.70	178.90	3,973.62	-1,296.60	6.48	1,296.62	1.28	0.98	0.82	
5,051.00	90.50	178.10	3,973.51	-1,358.58	8.10	1,358.60	1.82	1.29	-1.29	
5,113.00	89.30	178.60	3,973.62	-1,420.55	9.89	1,420.58	2.10	-1.94	0.81	
5,174.00	89.90	177.50	3,974.04	-1,481.52	11.96	1,481.55	2.05	0.98	-1.80	

Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Rock Chalk Farms 33 #1H
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Site:	Section 33 T25S-R10W	MD Reference:	RKB 14' @ 1772.00usft (UDI 331)
Well:	Rock Chalk Farms 33 #1H	North Reference:	Grid
Wellbore:	STK	Survey Calculation Method:	Minimum Curvature
Design:	STK	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)	
5,236.00	89.20	176.70	3,974.53	-1,543.43	15.10	1,543.48	1.71	-1.13	-1.29	
5,296.00	89.20	176.80	3,975.37	-1,603.33	18.50	1,603.39	0.17	0.00	0.17	
5,359.00	88.60	176.50	3,976.58	-1,666.21	22.18	1,666.29	1.06	-0.95	-0.48	
5,420.00	88.60	176.50	3,978.07	-1,727.08	25.90	1,727.17	0.00	0.00	0.00	
5,481.00	87.90	175.60	3,979.93	-1,787.90	30.10	1,788.01	1.87	-1.15	-1.48	
5,543.00	87.60	176.30	3,982.36	-1,849.70	34.48	1,849.83	1.23	-0.48	1.13	
5,604.00	89.10	176.70	3,984.12	-1,910.56	38.20	1,910.70	2.54	2.46	0.66	
5,665.00	90.50	176.90	3,984.33	-1,971.46	41.61	1,971.62	2.32	2.30	0.33	
5,726.00	91.70	176.10	3,983.16	-2,032.34	45.33	2,032.50	2.36	1.97	-1.31	
5,788.00	91.80	176.60	3,981.27	-2,094.18	49.28	2,094.36	0.82	0.16	0.81	
5,850.00	90.80	177.00	3,979.86	-2,156.07	52.74	2,156.26	1.74	-1.61	0.65	
5,912.00	90.20	176.60	3,979.32	-2,217.97	56.20	2,218.18	1.16	-0.97	-0.65	
5,973.00	88.90	176.40	3,979.80	-2,278.85	59.92	2,279.07	2.16	-2.13	-0.33	
6,035.00	90.20	176.20	3,980.29	-2,340.72	63.92	2,340.96	2.12	2.10	-0.32	
6,096.00	89.50	176.80	3,980.45	-2,401.61	67.64	2,401.86	1.51	-1.15	0.98	
6,158.00	90.40	176.60	3,980.50	-2,463.50	71.21	2,463.77	1.49	1.45	-0.32	
6,220.00	89.60	176.80	3,980.50	-2,525.40	74.78	2,525.68	1.33	-1.29	0.32	
6,281.00	90.60	176.00	3,980.39	-2,586.28	78.61	2,586.57	2.10	1.64	-1.31	
6,343.00	90.10	175.90	3,980.02	-2,648.12	82.99	2,648.43	0.82	-0.81	-0.16	
6,404.00	88.80	174.70	3,980.60	-2,708.91	87.99	2,709.24	2.90	-2.13	-1.97	
6,466.00	89.30	174.20	3,981.63	-2,770.61	93.98	2,770.97	1.14	0.81	-0.81	
6,527.00	90.00	173.30	3,982.00	-2,831.25	100.63	2,831.63	1.87	1.15	-1.48	
6,589.00	90.60	172.40	3,981.68	-2,892.76	108.34	2,893.17	1.74	0.97	-1.45	
6,651.00	89.60	173.10	3,981.57	-2,954.27	116.17	2,954.71	1.97	-1.61	1.13	
6,712.00	90.40	172.40	3,981.57	-3,014.78	123.86	3,015.25	1.74	1.31	-1.15	
6,774.00	90.80	172.90	3,980.92	-3,076.26	131.80	3,076.77	1.03	0.65	0.81	
6,835.00	88.50	173.90	3,981.29	-3,136.85	138.81	3,137.39	4.11	-3.77	1.64	
6,897.00	87.70	173.90	3,983.35	-3,198.47	145.39	3,199.03	1.29	-1.29	0.00	
6,958.00	88.80	173.70	3,985.21	-3,259.08	151.98	3,259.67	1.83	1.80	-0.33	
7,020.00	89.80	173.90	3,985.97	-3,320.71	158.67	3,321.32	1.64	1.61	0.32	
7,082.00	90.20	174.30	3,985.97	-3,382.39	165.04	3,383.02	0.91	0.65	0.65	
7,144.00	91.10	173.50	3,985.26	-3,444.03	171.63	3,444.69	1.94	1.45	-1.29	
7,205.00	89.70	174.30	3,984.84	-3,504.68	178.11	3,505.37	2.64	-2.30	1.31	
7,267.00	89.80	173.80	3,985.11	-3,566.35	184.54	3,567.06	0.82	0.16	-0.81	
7,329.00	90.40	174.00	3,985.00	-3,627.99	191.13	3,628.73	1.02	0.97	0.32	
7,390.00	89.50	174.70	3,985.05	-3,688.70	197.13	3,689.46	1.87	-1.48	1.15	
7,452.00	90.30	174.50	3,985.16	-3,750.42	202.97	3,751.21	1.33	1.29	-0.32	
7,520.00	89.80	176.60	3,985.10	-3,818.21	208.24	3,819.02	3.17	-0.74	3.09	
7,581.00	89.40	176.30	3,985.53	-3,879.09	212.02	3,879.91	0.82	-0.66	-0.49	
7,643.00	90.10	176.00	3,985.80	-3,940.95	216.18	3,941.79	1.23	1.13	-0.48	
7,705.00	89.90	177.00	3,985.80	-4,002.84	219.97	4,003.69	1.64	-0.32	1.61	
7,766.00	88.90	176.80	3,986.44	-4,063.74	223.27	4,064.61	1.67	-1.64	-0.33	
7,828.00	89.60	176.70	3,987.25	-4,125.64	226.78	4,126.51	1.14	1.13	-0.16	
7,890.00	90.10	176.60	3,987.41	-4,187.53	230.41	4,188.42	0.82	0.81	-0.16	

Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Rock Chalk Farms 33 #1H
Project:	Reno County, Kansas	TVD Reference:	RKB 14' @ 1772.00usft (UDI 331)
Site:	Section 33 T25S-R10W	MD Reference:	RKB 14' @ 1772.00usft (UDI 331)
Well:	Rock Chalk Farms 33 #1H	North Reference:	Grid
Wellbore:	STK	Survey Calculation Method:	Minimum Curvature
Design:	STK	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)	
7,951.00	89.50	177.10	3,987.63	-4,248.44	233.76	4,249.34	1.28	-0.98	0.82	
8,013.00	89.80	177.40	3,988.00	-4,310.36	236.73	4,311.28	0.68	0.48	0.48	
8,075.00	90.20	176.90	3,988.00	-4,372.29	239.81	4,373.22	1.03	0.65	-0.81	
8,137.00	89.00	177.10	3,988.44	-4,434.20	243.06	4,435.14	1.96	-1.94	0.32	
8,198.00	90.10	177.60	3,988.92	-4,495.13	245.88	4,496.08	1.98	1.80	0.82	
8,260.00	88.70	178.00	3,989.56	-4,557.08	248.26	4,558.04	2.35	-2.26	0.65	
8,322.00	89.40	177.70	3,990.59	-4,619.03	250.58	4,620.00	1.23	1.13	-0.48	
8,351.00	89.20	177.70	3,990.95	-4,648.00	251.75	4,648.98	0.69	-0.69	0.00	
Last Inwell Survey										
8,395.00	89.20	177.70	3,991.56	-4,691.96	253.51	4,692.94	0.00	0.00	0.00	
Projection to TD - Rock Chalk Farms 33 #1H PBHL										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
8,351.00	3,990.95	-4,648.00	251.75	Last Inwell Survey	
8,395.00	3,991.56	-4,691.96	253.51	Projection to TD	

Checked By: _____ Approved By: _____ Date: _____

