

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

API/UWI 42-461-38465-0000		Property Sub 927447-004		Operator PIONEER NATURAL RESRC USA, INC		State TEXAS		County UPTON	
Field Name SPRABERRY (TREND AREA)				Surface Legal Location 900' FNL, 980' FEL, BLK 4, SEC 8, UNIVERSITY LANDS					
Spud Date 12/28/2012		TD Date 1/28/2013		Drilling Rig Release Date 2/3/2013		Frac Date 3/4/2013		On Production Date 3/30/2013	
Initial Potential Date 5/16/2013		Ground Elevation (ft) 2,798.00		Original KB Elevation (ft) 2,824.50		PBDT (All) (ftKB) Original Hole - 0.0		Total Depth (All) (ftKB) Original Hole - 15,460.0	
Total Depth All (TVD) (ftKB) Original Hole - 8,029.6									
<b>Report #: 1 Daily Operation: 12/24/2012 18:00 - 12/25/2012 06:00</b>									
Job Category ORIG DRILLING				Primary Job Type ODR				AFE Number 025594	
Days From Spud (days) -4		Days on Location (days) 1		End Depth (ftKB) 0.0		End Depth (TVD) (ftKB)		Dens Last Mud (lb/gal) Rig	
Operations Summary SKID RIG 30' TO #4 WELL, MODIFY COMPONENTS									
Remarks ATTEMPTED TO SKID, CELLAR AREA GAVE WAY, SHUT OPERATIONS DOWN, LAID MATTS, REMOVED SECTION OF CRANE BOOM, EMPLOYEED A EXTRA TANDEM, SKIDDED RIG									
DFRR=.5									
<b>Time Log Summary</b>									
Operation		Com							Dur (hr)
MIRU		SKID RIG, RIG UP, MODIFY COMPONENTS FOR SKID							12
<b>Report #: 2 Daily Operation: 12/25/2012 06:00 - 12/26/2012 06:00</b>									
Job Category ORIG DRILLING				Primary Job Type ODR				AFE Number 025594	
Days From Spud (days) -3		Days on Location (days) 2		End Depth (ftKB) 0.0		End Depth (TVD) (ftKB)		Dens Last Mud (lb/gal) Rig	
Operations Summary RIGGING UP,WORK ON MODIFICATION FROM SKIDDING RIG, MODIFY FLOWLINE, WORK ON SURFACE LINE, AND ELECTRICAL LINES									
Remarks DFRR=1.5									
<b>Time Log Summary</b>									
Operation		Com							Dur (hr)
RURDRT		RIGGING UP,WORK ON MODIFICATION FROM SKIDDING RIG, MODIFY FLOWLINE, WORK ON SURFACE LINE, AND ELECTRICAL LINES							24
<b>Report #: 3 Daily Operation: 12/26/2012 06:00 - 12/27/2012 06:00</b>									
Job Category ORIG DRILLING				Primary Job Type ODR				AFE Number 025594	
Days From Spud (days) -2		Days on Location (days) 3		End Depth (ftKB) 0.0		End Depth (TVD) (ftKB)		Dens Last Mud (lb/gal) Rig	
Operations Summary FABRICATE FLOW LINE, CHOKE LINES & ELECTRICAL LINES. BUILD SPUD MUD,PREP SHAKERS, THAW OUT PUMPS AND RUN, WINTERIZE PUMPS WITH HEAT WRAP.									
Remarks DFRR=2.5									
<b>Time Log Summary</b>									
Operation		Com							Dur (hr)
MIRU		FABRICATE FLOW LINE WITH WELDERS							6.5
CUTDL		FABRICATE CHOKE & ELECTRICAL LINE EXTENSIONS.							2.5
MIRU		FABRICATE ELECTRICAL LINE EXTENSIONS							15
<b>Report #: 4 Daily Operation: 12/27/2012 06:00 - 12/28/2012 06:00</b>									
Job Category ORIG DRILLING				Primary Job Type ODR				AFE Number 025594	
Days From Spud (days) -1		Days on Location (days) 4		End Depth (ftKB) 0.0		End Depth (TVD) (ftKB)		Dens Last Mud (lb/gal) Rig	
Operations Summary PATTERSON - UTI, 208									
FABRICATE FLOW LINE, CHOKE LINES & ELECTRICAL LINES. SLIP & CUT DRLG LINE. N/U CONDUCTOR RISER & FLOW LINES. FUNCTION TEST TOP-DRIVE. (HYDRAULIC SYSTEM FAILURE.) TROUBLE SHOOT TOP-DRIVE ELECTRONICS & HYDRAULICS.									
Remarks FUNCTION TEST TOP-DRIVE . LOST POWER TO HYDRAULIC SYSTEM. TROUBLE SHOOT ELECTRONICS.									
DFRR=2.5									
<b>Time Log Summary</b>									
Operation		Com							Dur (hr)
MIRU		FABRICATE FLOW LINE WITH WELDERS							2
CUTDL		SLIP & CUT DRLG LINE							2
MIRU		FABRICATE CHOKE & ELECTRICAL LINE EXTENSIONS. N/U CONDUCTOR & FLOW LINES.							3
MIRU		FUNCTION TEST TOP-DRIVE. LOST POWER TO HYDRAULIC SYSTEM.							5
U_RIG		TROUBLE SHOOT TOP-DRIVE HYDRAULIC SYSTEM ELECTRONICS.							12

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

**Report #: 5 Daily Operation: 12/28/2012 06:00 - 12/29/2012 06:00**

Job Category ORIG DRILLING				Primary Job Type ODR			AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig			
1	5	770.0	770.0	8.70	PATTERSON - UTI, 208			

Operations Summary  
TROUBLE SHOOT TOP DRIVE AND REPAIR SAME, INSTALL BAILS AND ELEVATORS, P/U BHA, TIH & TAG @ 105'. DRILL 17-1/2" HOLE SECTION F/105' TO T.D. @ 770'. CIRCULATE & CONDITION WELL BORE, PUMP HI-VIS SWEEP & TOO H F/ 13 3/8" SURFACE CSG. POINT.

Remarks  
SPUD WELL @ 12:30 HRS 12/28/2012  
TRRC NOTIFIED OF INTENT TO SPUD @ 09:00 ,12/27/12 (AMY)

### Time Log Summary

Operation	Com	Dur (hr)
U_RIG	INSTALL NEW HYDRAULIC PINION PUMP WITH FLUID AND FUNCTION TEST	2.5
RURDRT	CHANGE OUT SAVER SUB, INSTALL BAILS AND ELEVATORS	1.5
BHA	PICK UP BHA , TAGGED BOTTOM @ 105'	2
CIRC	FILL HOLE AND CIRC PUMPS	0.5
DRLG	DRILL F/105 T/134' WOB=5, RPM=65,SPM=72,PP=0,GPM=300	1
U_OTR	CLEAN CLOGGED FLOWLINE AND PVC GOING FROM SHAKER SLIDES TO RESERVE	0.5
DRLG	DRILL F/134' T/ 200'. WOB- 5-15 K, RPM- 75, SPM-100, PP- 220, GPM- 300	4
DRLG	ROTATE DRILL F/200' TO SURFACE T.D. @ 770'. RPM- 80, PP- 500, SPM-125, GPM-525	9
CIRC	CIRCULATE & CONDITION WELL BORE. PUMP HI-VIS SWEEP TO SURFACE.	1
TRIP	TOOH TO 17 1/2" BHA. BREAK & LAY OUT SHOCK TOOL & 17 1/2" PDC.	2

**Report #: 6 Daily Operation: 12/29/2012 06:00 - 12/30/2012 06:00**

Job Category ORIG DRILLING				Primary Job Type ODR			AFE Number 025594
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig		
2	6	770.0	770.0	8.70	PATTERSON - UTI, 208		

Operations Summary  
FINISH L/D BHA, SWAP OUT BAILS AND ELEVATORS, HELD SAFETY MTG. W/ CSG & RIG CREWS, RUN 770' (18 JTS) 13-3/8" J-55 48# SURFACE CSG, SET SAME @ 768.3', CIRC CSG WHILE WAITING ON SCHLUMBERGER.  
HELD PRE-JOB SAFETY MTG. W/ CEMENT & RIG CREWS. R/U CEMENT EQUIP. TEST LINES & CEMENT SURFACE CSG. W/ 940 SKS OF CLASS 'C' CEMENT.  
BUMP PLUG, FLOATS HELD. CIRCULATE 134 BBLS (440 SKS) TO SURFACE.  
W.O.C., R/U & RUN W/L GYRO. R/D FLOW LINES, LIFT CONDUCTOR, CUT OFF CSG. & LAY OUT.  
INSTALL SEABOARD WELL HEAD. HELD PRE-JOB SAFETY MTG. W/ N/U & RIG CREWS. N/U BOPE.

Remarks  
ON DISPATCH BOARD WITH SCHLUMBERGER SINCE 12/27/12 @ 09:00, SCHLUMBERGER TO BE ON LOCATION @ 10:30 AM WITH A 6 HR NOTICE, ARRIVED ON LOCATION @ 17:00 12/29/12

### Time Log Summary

Operation	Com	Dur (hr)
BHA	FINISH BREAK OUT BIT AND LAY DOWN BHA	0.5
CSG	SWAP OUT BAILS AND ELEVATORS	0.5
CSG	HOLD PJSW WITH CASING CREW, R/U AND RUN 18 jts 13-3/8" J-55, 48# SURFACE CASING, SET SAME @ 763', R/D CASING CREW	4
U_CMTRS	CIRCULATE SURFACE CASING WHILE WAITING ON SCHLUMBERGER	5
CMT	HOLD PJSM WITH SCHLUMBERGER, R/U CEMENT EQUIPMENT.	1.5
CMT	TEST LINES TO 2000#. CEMENT 770' OF 13 3/8" 54.5# SURFACE CSG. PUMPING 940 SKS OF CLASS 'C' CEMENT@ 6 BPM PUMP RATE. BUMP PLUG & HELD 500 PSI OVER LIFT PRESSURE F/ 5 MIN. RECEIVED 1/2 BBL BACK (FLOATS HELD) CIRCULATED 440 SKS (134 BBLS) TO SURFACE.	1.5
DEVSUR	W.O.C. R/D FLOW LINES & R/U MULTI SHOT W/L GYRO SURVEY EQUIP. RUN DIRECTIONAL SURVEY.	3.5
WLHEAD	P/U CONDUCTOR RISER, MAKE CSG. RUFF CUT, LAY OUT CONDUCTOR RISER & CSG. STUB.	1.5
WLHEAD	MAKE FINAL CUT, WELD ON SEABOARD MANDREL TYPE WELLHEAD 6" BELOW G/L,TEST SAME.	4
BOPS	R/U WINCHES AND LIFT STACK, NIPPLE UP SAME	2

**Report #: 7 Daily Operation: 12/30/2012 06:00 - 12/31/2012 06:00**

Job Category				Primary Job Type		AFE Number	
ORIG DRILLING				ODR		025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig		
3	7	770.0	770.0	8.70	PATTERSON - UTI, 208		

Operations Summary  
FINISH N/U BOPE, TEST SAME. FABRICATE & INSTALL FLOW LINE CONNECTION. P/U BHA# 2 WITH DIRECTIONAL TOOLS, TIH & TAG CEMENT @ 720'. CLOSE PIPE RAMS & ANNULAR. TEST SURFACE CSG. @ 1000# F/ 30 MIN.

Remarks  
RE-INDEX ROTATING HEAD & FLOW NIPPLE FLANGE & FABRICATE TO FIT FLOW LINE.

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Time Log Summary

Operation	Com	Dur (hr)
BOPS	NIPPLE UP BOPE, TORQUE SAME, REMOVE ROTATING HEAD	3
BOPS	RE-INSTALL ROTATING HEAD TO BE IN ALIGNMENT WITH NEW FLOW LINE. R/D BOPE WINCHES	1
BOPS	CUT / MODIFIY FLOW LINE TO FIT ROTATING HEAD	1.5
BOPS	TEST BOPE, CHOKE MANIFOLD, ANNULAR, TOP DRIVE, STAND PIPE, SURFACE LINES BACK TO PUMPS, TESTED 250 LOW 2500 HIGH	5
WLHEAD	INSTALL WELL HEAD WEAR BUSHING.	1
BOPS	HOOK UP FILL UP & FLOW LINES.	1
RURDRT	R/D & INDEX ROTATING HEAD 10* LEFT & FLOW LINE NIPPLE 180* TO FIT FLOW LINE. FABRICATE & WELD ROTATING HEAD FLOW LINE NIPPLE. INSTALL FLOW LINE DRESSER SLEEVES.	5.5
BHA	P/U & M/U 12 1/4" DIRECTIONAL B.H.A. SCRIBE & TEST MWD EQUIP. (CHANGE OUT UBHO SUB) M/U 12 1/4" PDC.	3
TRIP	TIH W/ 12 1/4" INTERMEDIATE DRILL STRING. TAG CEMENT @ 720'.	2.5
LKOFF	P/U OFF BTM, CLOSE PIPE RAMS & ANNULAR. PRESSURE TEST SURFACE CSG. @ 1000# F/ 30 MIN. (GOOD TEST)	0.5

Report #: 8 Daily Operation: 12/31/2012 06:00 - 1/1/2013 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	025594
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
4	8	1,603.0
	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)
	1,598.6	8.70
	Rig	PATTERSON - UTI, 208

#### Operations Summary

DRILL OUT SURFACE CSG. CEMENT & SHOE TRACK.  
 DRILL 12 1/4" DIRECTIONAL INTERMEDIATE F/ 770' TO 1583'.  
 TROUBLE SHOOT MWD FALSE READINGS. TOO H, CHANGE OUT MWD & TEST. TIH W/ 12 1/4" BHA. WASH TO BTM. DRILL FROM 1,583' TO 1,603'.

#### Remarks

MWD TRANSMITTING FALSE READINGS. TROUBLE SHOOT ISSUE. CHANGE OUT TRANS-DUCER, SLOW PUMP RATE. ISSUE CONTINUE. TOO H & CHANGE OUT MWD.

20.5' AHEAD & 1.2' LEFT OF PLAN LINE @ 1583'.

### Time Log Summary

Operation	Com	Dur (hr)
DRLCMT	DRILL SHOE TRACK AND CMT F/ 678' T/740'	2
DRLG	ROTATE DRILL F/770' T/ 909' WOB=10K,RPM=45, PP=600, SPM=120, GPM=500, DIFF=150	2.5
DRLGSLD	SLIDE DRILL F/909' T/ 929', WOB=10K, PP=700, SPM=120, GPM=500, DIFF= 250,	0.5
DRLG	ROTATE DRILL F/929' T/ 1004'. WOB=10K, RPM=45, PP=770, SPM=120, GPM=500, DIFF=150	1
DRLGSLD	SLIDE DRILL F/1004' T/ 1024, WOB=15K, PP=850, SPM=140, GPM=580, DIFF= 150, TF=300M	0.5
DRLG	ROTATE DRILL F/1024' T/1098'. WOB=10K, RPM=45, PP=850, SPM=140, GPM=580, DIFF=250	0.5
DRLGSLD	SLIDE DRILL F/1098' T/ 1123', WOB=10K, PP=850, SPM=120, GPM=580, DIFF= 150, TF=300M	0.5
DRLG	ROTATE DRILL F/1123' T/1193'. WOB=10K, RPM=45, PP=850, SPM=140, GPM=580, DIFF=300	1
DRLGSLD	SLIDE DRILL F/1193' T/ 1208', WOB=10K, PP=850, SPM=140, GPM=580, DIFF= 150, TF=30M	0.5
DRLG	ROTATE DRILL F/1208' T/1381'. WOB=10K, RPM=45, PP=850, SPM=140, GPM=580, DIFF=300	2.5
DRLGSLD	SLIDE DRILL F/1381' T/ 1401', WOB=7K, PP=850, SPM=140, GPM=500, DIFF= 150, TF=330M	0.5
DRLG	ROTATE DRILL F/1401' T/1477'. WOB=13K, RPM=55, PP=1340, SPM=140, GPM=580, DIFF=255	1
DRLGSLD	SLIDE DRILL F/1477' T/ 1502'. WOB=7K, PP=1062, SPM=130, GPM=540, DIFF= 225, TF=30M	0.5
DRLG	ROTATE DRILL F/1502' T/1583'. WOB=13K, RPM=55, PP=1230, SPM=130, GPM=580, DIFF=270	1
U_DIR	MWD EQUIPMENT GIVING FALSE READINGS. CHANGE OUT TRANS-DUCER, SLOWED PUMP RATE, TOO H 1 STD. ISSUE CONTINUED.	1.5
CIRC	PUMP HI-VIS SWEEP TO SURFACE.	1
TRIP	TOOH W/ 12 1/4" BHA TO CHANGE OUT MWD.	2.5
U_DIR	CHANGE OUT MWD, SCRIBE MOTOR, PUMP TEST TOOLS.	1.5
DRLG	TIH, WASH & ROTATE LAST 90' TO BTM.	2

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Time Log Summary

Operation	Com	Dur (hr)
DRLGSLD	SLIDE DRILL F/1583' T/ 1603'. WOB=12K, PP=1002, SPM=116, GPM=585, DIFF= 154, TF=215	1

Report #: 9 Daily Operation: 1/1/2013 06:00 - 1/2/2013 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	025594
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
5	9	1,603.0
		End Depth (TVD) (ftKB)
		1,598.6
	Dens Last Mud (lb/gal)	Rig
	8.70	PATTERSON - UTI, 208

#### Operations Summary

ROTATE AND SLIDE DRILL 12 1/4" INTERMEDIATE F/ 1,603' T/ 2,829'  
(1,226' @ 55.7 FPH AVG.)

WOB=10 =15K, RPM=55, PP= 1650, SPM=140, GPM=585, DIFF= 280

#### Remarks

P/U OFF BTM & CIRCULATED 2 HOUR FOR #2 PUMP REPAIRS @ 1,860'.

24' AHEAD & 8.4' LEFT OF PLAN LINE @ 2,759'.

### Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROTATE DRILL F/1603' T/ 1667' WOB=10K,RPM=45, PP=950, SPM=140, GPM=580, DIFF=150	0.5
DRLGSLD	SLIDE DRILL F/ 1667' T/ 1687', WOB=10K, PP=950, SPM=140, GPM=580, DIFF= 250, TF= 90M	0.5
DRLG	ROTATE DRILL F/ 1687' T/ 1764'. WOB=10K, RPM=55, PP=950, SPM=140, GPM=580, DIFF=250	1
DRLGSLD	SLIDE DRILL F/ 1764' T/ 1779', WOB=15K, PP=950, SPM=140, GPM=580, DIFF= 250, TF=160M	0.5
DRLG	ROTATE DRILL F/ 1779' T/1860'. WOB=15K, RPM=55, PP=950, SPM=140, GPM=580, DIFF=250	1.5
DRLGSLD	CIRCULATE W/ #1 PUMP & REPAIR VALVE SEATS & SPRINGS ON #2 PUMP.	2
DRLG	ROTATE DRILL F/ 1860' T/ 1954'. WOB=10K, RPM=55, PP=1250, SPM=140, GPM=580, DIFF=200	1.5
DRLGSLD	SLIDE DRILL F/ 1954' T/ 1974', WOB=10K, PP=1250, SPM=140, GPM=580, DIFF= 150, TF=160M	0.5
DRLG	ROTATE DRILL F/ 1974' T/ 2143'. WOB=10K, RPM=45, PP=1250, SPM=140, GPM=580, DIFF=250	2.5
DRLGSLD	SLIDE DRILL F/ 2143' T/ 2158', WOB=10K, PP=1250, SPM=140, GPM=580, DIFF= 150, TF=90M	0.5
DRLG	ROTATE DRILL F/ 2158' T/ 2429'. WOB=13K, RPM=55, PP=1600, SPM=140, GPM=580, DIFF=255	5
DRLGSLD	SLIDE DRILL F/ 2429' T/ 2441'. WOB=7K, PP=1546, SPM=140, GPM=585, DIFF= 180, TF=155	0.5
DRLG	ROTATE DRILL F/ 2441' T/ 2619'. WOB=13K, RPM=55, PP=1630, SPM=140, GPM=585, DIFF=270	2.5
DRLG	SLIDE DRILL F/ 2619' T/ 2634'. WOB=11K, PP=1550, SPM=140, GPM=585, DIFF= 170, TF=90	0.5
DRLG	ROTATE DRILL F/ 2634' T/ 2809'. WOB=12K, RPM=55, PP=1640, SPM=140, GPM=585, DIFF=250	3.5
DRLGSLD	SLIDE DRILL F/ 2809' T/ 2829'. WOB=11K, PP=1550, SPM=140, GPM=585, DIFF= 170, TF=140	1

Report #: 10 Daily Operation: 1/2/2013 06:00 - 1/3/2013 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	025594
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
6	10	1,583.0
		End Depth (TVD) (ftKB)
		1,578.8
	Dens Last Mud (lb/gal)	Rig
	8.70	PATTERSON - UTI, 208

#### Operations Summary

ROTATE AND SLIDE DRILL 12 1/4" INTERMEDIATE F/ 2,829' T/ 3,066' (237' @ 39.5 FPH AVG.)

26' AHEAD & 6.2' LEFT OF PLAN @ 2,948'.

TOOH F/ MUD MOTOR FAILURE.

BHA HUNG UP @ 1750'. WORKED DRILL STRING W/ NO SUCCESS.

HELD PRE-JOB SAFETY MTG & REVIEW JSA W/ DIALOG & LOCATION PERSONNEL. R/U RIH W/ W/L FREE POINT TOOLS. DRILL STRING LOOSE ON TOP OF D.C.'S. RIH W/ W/L MWD RETRIEVE TOOL, REMOVE & LAY OUT MWD. RIH W/ W/L BACK OFF TOOL & BACK OFF 1 JT ABOVE D.C.'S. R/D DIALOG W/L EQUIP.

#### Remarks

MUD MOTOR STALLED OUT & PRESSURED UP.

TOOH, PULLED INTO TIGHT SPOT @ 1,758'. WORKED DRILL STRING.

CALLED OUT DIALOG W/L. HELD PRE-JOB SAFETY MTG. R/U & RIH W/ W/L FREE POINT TOOLS. BACK OFF 1 JT. ABOVE DRILL COLLARS.

### Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROTATE DRILL F/ 2829' T/ 2903'. WOB=11K, RPM=60, PP=1650, SPM=140, GPM=585, DIFF=300, TQ= 8K	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Time Log Summary

Operation	Com	Dur (hr)
DRLGSLD	SLIDE DRILL F/ 2903' T/ 2913'. WOB=15K, PP=1650, SPM=140, GPM=585, DIFF= 250, TF=180	0.5
DRLG	ROTATE DRILL F/ 2913' T/ 3066'. WOB=10K, RPM=60, PP=1650, SPM=140, GPM=585, DIFF=300, TQ= 8K	4
U_DIR	MUD MOTOR FAILURE. MOTOR STALLED OUT & PRESSURED UP.	1
U_MTR	TOOH TO 1,758'. WORK TIGHT HOLE. BHA HUNG UP @ 1,758'.	3
U_MTR	CALL OUT DIALOG W/L SERVICE TO RETRIEVE MWD & RUN FREE POINT.	3
U_MTR	HELD PRE-JOB SAFETY MTG. W/ DIALOG W/L & LOCATION PERSONNEL. R/U W/L EQUIPMENT & PREPARE TO RIH W/ MWD RETRIEVAL TOOLS.	3
U_MTR	RIH W/ W/L FREE POINT TOOLS WHILE WAITING ON X-OVER F/ MWD RETRIEVAL TOOLS.	3
U_MTR	R/U & RIH W/ #2 W/L FREE POINT TOOLS. FREE POINT SHOWS TO BE FREE ON TOP OF COLLARS.	2
U_MTR	R/U & RIH W/ W/L MWD RETRIEVAL GRAPPLES. RETRIEVE MWD & LAY OUT.	1.5
U_MTR	R/U & RIH W/ W/L BACK OFF TOOL & BACK OFF 1 JT ABOVE DRILL COLLARS.	1.5

Report #: 11 Daily Operation: 1/3/2013 06:00 - 1/4/2013 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	025594
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
7	11	1,850.0
		End Depth (TVD) (ftKB)
		1,844.2
		Dens Last Mud (lb/gal)
		8.70
		Rig
		PATTERSON - UTI, 208

#### Operations Summary

R/D DIALOG W/L FREE POINT EQUIPMENT. TOOH & LAY OUT SHOT JT. & 2 JTs OF D.P.  
P/U & M/U FISHING TOOLS & 6 - 6" D.C.'s. TIH & SCREW INTO FISH,  
WORK DRILL STRING W/ BUMPER SUB & ENERGIZER. FREED DRILL STRING.  
TOOH, BREAK & LAY OUT FISHING TOOLS.  
REPAIR HYDRAULIC LINES ON ST-80 IRON ROUGH-NECK  
P/U & M/U REAMER BHA.

#### Remarks

DRILL STRING HUNG UP IN KEY-SEAT WHILE TOOH F/ MUD MOTOR FAILURE.  
RAN W/L FREE POINT, BACKED OFF 1 JT ABOVE TIGHT HOLE.  
M/U & TIH W/ FISHING TOOLS. SCREW INTO FISH & JAR DRILL STRING FREE. TOOH, LAY OUT FISHING TOOLS. LOST 8' OF AKO MUD MOTOR HOUSING, MOTOR STABILIZER & 12 1/4" PDC IN HOLE.  
P/U REAMER BHA.

REPAIRED & REPLACED HOSE ON ST-80

### Time Log Summary

Operation	Com	Dur (hr)
U_MTR	R/D DIALOG W/L FREE POINT EQUIPMENT.	1
U_MTR	TOOH, LAY OUT SHOT JT. & 2 JT's OF D.P.	2.5
U_MTR	P/U & M/U FISHING TOOL BHA. 4.5" IF SCREW IN SUB, BUMPER SUB, FISHING JARS, X-OVER, 6 - 6" D.C.'s, X-OVER, ENERGIZER, 3 - 6" D.C.'s	2.5
U_MTR	TIH W/ FISHING TOOL BHA & 9 STDS OF D.P.	1.5
U_MTR	SCREW INTO FISH, WORK DRILL STRING W/ BUMPER SUB & ENERGIZER. DRILL STRING FREE.	2.5
U_MTR	TOOH, BREAK & LAY OUT FISHING TOOL BHA.	4
RIGSER	SERVICE & LUBRICATE RIG EQUIP.	1
U_MTR	CONTINUE TO TOOH W/ FISHING TOOLS. LEFT MUD MOTOR AKO HOUSING, MOTOR STABILIZER & BIT IN HOLE.	1.5
U_MTR	CONTACT DRILLING SUPERINTENDENT (SERGIO MARIN) DISCUSSED OPTIONS & PROCEDURES.. CONTACT BASIC FISHING TOOL SERVICE & DISCUSS FISH DIMENSIONS & ORDERED TOOLS.	1
RIGSER	ATTEMPT TO INSTALL NEW KELLY HOSE. HAMMER UNION CONNECTION WRONG SIZE.	1
U_RIG	REPAIR ST-80 IRON ROUGH-NECK HYDRAULIC HOSES.	4
U_MTR	CLEAN UP HYDRAULIC FLUID & PREPARE RIG FLOOR TO P/U BHA.	0.5
U_MTR	P/U & M/U BHA #4. 12 1/4" PDC, NEAR BIT STABILIZER, 3 - 8" D.C.'s, 11 - 6" D.C.'s.	1

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

Report #: 12 Daily Operation: 1/4/2013 06:00 - 1/5/2013 06:00

Job Category ORIG DRILLING				Primary Job Type ODR				AFE Number 025594		
Days From Spud (days)	8	Days on Location (days)	12	End Depth (ftKB)	1,850.0	End Depth (TVD) (ftKB)	1,844.2	Dens Last Mud (lb/gal)	8.70	PATTERSON - UTI, 208

### Operations Summary

REPAIR GRABBER BOX ON TOP-DRIVE. CONTINUE TO M/U REAMER BHA. TIH & TAG OBSTRUCTION @ 863'. WORK DRILL STRING. TOO H, LAY OUT REAMER BHA. P/U & M/U FISHING TOOL BHA & TIH TO 1,050' W/ NO OBSTRUCTIONS IN WELL BORE. TOO H, LAY OUT FISHING TOOL BHA. P/U REAMER BHA & TIH TO 830'. REAM, BACK REAM & WASH F/ 830' TO 1,950'. CONTINUE TO TIH & TAG FISH @ 2,810'. P/U 30', DISPLACE WELL BORE W/ DRILLING MUD. CIRCULATE, CONDITION HOLE, TOO H, WASH & BACK REAM F/ 1,650' TO 830'.

### Remarks

TIH W/ REAMER BHA. TAGGED, WASHED & REAMED TIGHT SPOTS 863' TO 1,950'.  
CONTINUE TO TIH TO TOP OF FISH @ 2,810'.  
P/U 30', DISPLACED, CIRCULATE & CONDITION WELL BORE W/ DRILLING MUD.

### Time Log Summary

Operation	Com	Dur (hr)
U_RIG	REPAIR GRABBER BOX ON TOP-DRIVE. REPLACE DIES & C PLATE BOLTS.	1.5
U_MTR	CONTINUE TO M/U REAMER BHA. TIH TO 863'. TAGGED OBSTRUCTION IN WELL BORE.	4
U_MTR	TOOH, BEAK & LAY OUT NEAR BIT STABILIZER & 12 1/4" PDC.	1
U_MTR	P/U & M/U FISHING TOOL BHA.	2
U_MTR	TIH W/ FISHING TOOLS TO 1,150'. NO OBSTRUCTION.	1.5
U_MTR	TOOH W/ FISHING TOOLS.	1.5
U_MTR	P/U REAMER BHA & TIH TO 830'.	1.5
U_MTR	REAM, WASH & BACK REAM F/ 830' TO 1,950'.  GPM- 350, RPMS- 75-90, REAMED 30' PER MIN.	5.5
U_MTR	CONTINUE TO TIH F/ 1,950' TO 2,810'. TAGGED TOP OF FISH. P/U OFF FISH 30'.	1.5
U_MTR	WORK DRILL STRING IN TIGHT HOLE.	1
U_MTR	PUMP HI-VIS LCM SWEEP, DISPLACE, CIRCULATE & CONDITION WELL BORE W/ DRILLING MUD.	2
U_MTR	TOOH, WH & BACK REAM F/ 1,650' TO 830'. BREAK & LAY OUT REAMER BHA.	1

Report #: 13 Daily Operation: 1/5/2013 06:00 - 1/6/2013 06:00

Job Category ORIG DRILLING				Primary Job Type ODR				AFE Number 025594			
Days From Spud (days)	9	Days on Location (days)	13	End Depth (ftKB)	1,850.0	End Depth (TVD) (ftKB)	1,844.2	Dens Last Mud (lb/gal)	8.70	Rig	PATTERSON - UTI, 208

### Operations Summary

TOOH & LAY OUT 12 1/4" REAMER BHA. PERFORM RIG SERVICE. PICK UP FISHING TOOL BHA & TIH. TAG & SCREW ON TO FISH @ 2,965'. TOO H, JAR THROUGH TIGHT HOLE @ 1,983', 1,889', 1,571', & 1,444'. BREAK & LAY OUT FISH & FISHING TOOL BHA. P/U & M/U 12 1/4" INTERMEDIATE DIRECTIONAL BHA.

### Remarks

TIH W/ FISHING TOOL BHA. TAG & SCREW ON TO FISH @ 2,965'. TOO H, JAR THROUGH TIGHT HOLE @ 1,983', 1,889', 1,571', & 1,444'.  
  
9 5/8" INTERMEDIATE CSG. ON LOCATION.

### Time Log Summary

Operation	Com	Dur (hr)
U_MTR	TOOH W/ 12 1/4" REAMER BHA TO 2,700'.	1.5
RIGSER	INSPECT, SERVICE & LUBRICATE RIG EQUIPMENT.	1
U_MTR	CONTINUE TO TOO H W/ 12 1/4" REAMER BHA TO 1,775'.	4.5
U_MTR	REMOVE ROTATING HEAD ASSEMBLY.	0.5
U_MTR	CONTINUE TO TOO H W/ 12 1/4" REAMER BHA. BREAK & LAY OUT NEAR BIT STABILIZER & 12 1/4" PDC.	2
U_MTR	P/U & M/U FISHING TOOL BHA.	1
U_MTR	TIH W/ FISHING TOOL BHA.	4.5
U_MTR	TAG, WASH OVER & SCREW ON TO FISH @ 2,965'.	1.5
U_MTR	TOOH W/ FISH, JAR THROUGH TIGHT HOLE @ 1,983', 1,889', 1,571', & 1,444'.	5.5
U_MTR	BREAK & LAY OUT FISH & FISHING TOOL BHA.	1
RIGSER	INSPECT, SERVICE & LUBRICATE RIG EQUIPMENT.	1



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

**Report #: 14 Daily Operation: 1/6/2013 06:00 - 1/7/2013 06:00**

Job Category ORIG DRILLING				Primary Job Type ODR			AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig			
10	14	3,127.0	3,114.1	8.80	PATTERSON - UTI, 208			

**Operations Summary**

P/U & M/U 12 1/4" INTERMEDIATE P/U 12 1/4" DIRECTIONAL BHA. TIH TO 1,300'. INSTALLED ROTATING HEAD. CONTINUE TO TIH, WASH & REAM 90' BTM. DRILL & SLIDE DRILL F/ 3,066 TO 3,127'. SERVICED RIG. TOP-DRIVE DOWN. CALL OUT TECH & TROUBLE SHOOT TOP-DRIVE HYDRAULIC ELECTRONICS.

**Remarks**

TOP-DRIVE HYDRAULIC DRIVE MOTOR THROWING BREAKERS. WORK DRILL STRING PUMPING 400 GPM WHILE TOP-DRIVE TECH TROUBLE SHOOT & MAKES REPAIRS.

19 PIN ON BACK SIDE OF DERRICK TO RUN T-DRIVE MOTOR SHORTING OUT. HAVING PART HOT-SHOTTED TO LOCATION..

**Time Log Summary**

Operation	Com	Dur (hr)
BHA	P/U & M/U 12 1/4" DIRECTIONAL BHA	3.5
TRIP	TIH TO 1,300'.	2
RURDRT	PULL TRIP NIPPLE & INSTALL ROTATING HEAD.	0.5
TRIP	CONTINUE TO TIH, WASH & REAM LAST 90' TO BTM @ 3,066'.	2.5
DRLGSLD	SLIDE DRILL F/ 3066' T/ 3069'. WOB=11K, PP=1600, SPM=140, GPM=550, DIFF= 200, TF=180	0.5
DRLG	ROTATE DRILL F/ 3069' T/ 3127'. WOB=12K, RPM=55, PP=1600, SPM=140, GPM=550, DIFF=300	1
RIGSER	INSPECT, SERVICE & LBRICATE RIG EQUIPMENT.	1
U_RIG	CIRCULATE & WAIT ON TOP-DRIVE TECH TO TROUBLE SHOOT TOP-DRIVE HYDRAULIC PUMP MOTOR ELECTRONICS.	2.5
U_RIG	TOP-DRIVE TECH ARRIVE ON LOCATION . CONTINUE TO TROUBLE SHOOT HYDRAULIC PUMP MOTOR ELECTRONICS.	7.5
U_RIG	TOP-DRIVE TECH FOUNG 19 PIN ON BACK SIDE OF DERRICK SHORTING OUT. CALL IN & HAVE PART HOT-SHOTTED TO LOCATION.	3

**Report #: 15 Daily Operation: 1/7/2013 06:00 - 1/8/2013 06:00**

Job Category ORIG DRILLING				Primary Job Type ODR			AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig			
11	15	3,875.0	3,858.2	9.00	PATTERSON - UTI, 208			

**Operations Summary**

FINISHED REPAIRS ON TOP-DRIVE ELECTRONICS.  
ROTATE & SLIDE DRILL 12 1/4" DIRECTIONAL INTERMEDIATE F/ 3,127' TO 3,875'.  
(748' @ 42.7 FPH AVG.)  
CALL OUT TOP-DRIVE TECH F/ ROTARY & DRILL-OUT FUNCTION ISSUES & REPAIRS.

24' AHEAD & 11' LEFT ON PLAN LINE

**Remarks**

FINISHED REPAIRS ON TOP-DRIVE HYDRAULIC PUMP MOTOR ELECTRONICS.  
REPLACED & REROUTED 19 PIN ELECTRIC LINE ON BACK OF DERRICK TO TOP-DRIVE SERVER.  
DRILLED 748'.  
CALL TOP-DRIVE TECH BACK OUT @ 03:00 F/ ISSUES ON TOP-DRIVE ROTARY & DRILL-OUT FUNCTIONS.

**Time Log Summary**

Operation	Com	Dur (hr)
U_RIG	REPAIR ELECTRICAL TOP DRIVE, TESTED GOOD REROUT 19 PIN THROUGH DERRICK	3.5
DRLG	ROTARY DRILLING F/ 3122' TO 3127'. WOB- 10K, GPM- 580, SPM- 140, DIFF- 150, TQ- 8K PP- 1600, RPM- 60,	1
DRLGSLD	SLIDE DRILLING F/ 3127' TO 3133'. TF- 180, WOB- 15, GPM- 580, PP- 1600, SPM- 140, DIFF- 150	1
DRLG	ROTARY DRILLING F/ 3133' TO 3221'. WOB- 10K, GPM- 580, SPM-140, DIFF- 300, TQ- 8K PP-1600, RPM- 60	1.5
DRLGSLD	SLIDE DRILLING F/ 3221' TO 3251'. TF- 180, WOB- 15K, GPM- 580, PP- 1600, SPM- 140, DIFF-150.	1
DRLG	ROTARY DRILLING F/ 3251' TO 3316'. WOB- 10K, GPM- 580, SPM- 140, DIFF- 150, TQ- 8K PP- 1600, RPM- 60.	1.5
DRLGSLD	SLIDE DRILLING F/ 3316' TO 3336'. TF- 180, WOB- 15K, GPM- 580, PP- 1600, SPM- 140, DIFF- 150.	1.5
DRLG	ROTARY DRILLING F/ 3336' TO 3411'. WOB- 10K, GPM- 580, SPM-140, DIFF- 450, TQ- 8K, PP- 1600, RPM- 60.	1
DRLGSLD	SLIDE DRILLING F/ 3411' TO 3431'. TF- 160, WOB- 15K, GPM- 550, PP- 1650, SPM- 140, DIFF- 150.	1
DRLG	ROTARY DRILLING F/ 3431' TO 3788'. WOB- 10K, GPM- 560, SPM-140, DIFF- 300, TQ- 8K, PP- 1650, RPM- 60.	6.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Time Log Summary

Operation	Com	Dur (hr)
DRLGSLD	SLIDE DRILLING F/ 3788' TO 3809'. TF- 160, WOB- 15K, GPM- 550, PP- 1800, SPM- 140, DIFF- 200.	0.5
DRLG	ROTARY DRILLING F/ 3809' TO 3875'. WOB- 14K, GPM- 560, SPM-140, DIFF- 300, TQ- 8K, PP- 1800, RPM- 60.	1
RIGSER	INSPECT, SERVICE & LUBRICATE RIG EQUIP.	1
U_RIG	TROUBLE SHOOT TOP-DRIVE. CALL TOP-DRIVE TECH OUT @ 03:00 F/ ISSUES ON TOP-DRIVE ROTARY & DRILL-OUT FUNCTIONS.	2

### Report #: 16 Daily Operation: 1/8/2013 06:00 - 1/9/2013 06:00

Job Category ORIG DRILLING	Primary Job Type ODR	AFE Number 025594
Days From Spud (days) 12	Days on Location (days) 16	End Depth (ftKB) 4,550.0
	End Depth (TVD) (ftKB) 4,529.3	Dens Last Mud (lb/gal) 8.90
	Rig PATTERSON - UTI, 208	

#### Operations Summary

DRILL & SLIDE DRILL F/ 3,875' TO 4,550'.  
RIG REPAIR. INSTALL NEW HI-PRESSURE HOSE ON WICHITA CLUTCH. CALL OUT MECHANIC FOR DRAW WORK INSPECTION. LOW DRUM CLUTCH NEEDS REPLACEMENT.  
TOOH TO CGS. SHOE @ 770' F/ DRAWWORK REPAIRS.

DRILLED 675' @ 56.3 FPH AVG.

22.6' AHEAD & 16.8' LEFT OF PLAN LINE

Remarks  
RIG REPAIRS, INSTALLED NEW HI-PRESSURE HOSES ON WICHITA CLUTCH. CALLED OUT MECHANIC. LOWER DRUM CLUTCH NEEDS REPLACEMENT. TOOH TO CSG. SHOE F/ RIG REPAIRS.  
NEW CLUTCH ETA: 10:30

NPT: PATTERSON- 52 HRS.

### Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROTARY DRILLING F/ 3875' TO 3883'. WOB- 14K, GPM- 560, SPM-140, DIFF- 300, TQ- 8K, PP- 1800, RPM- 60.	1
DRLGSLD	SLIDE DRILLING F/ 3883' TO 3908'. TF- 160, WOB- 20K, GPM- 580, PP- 1750, SPM- 140, DIFF- 200.	0.5
DRLG	ROTARY DRILLING F/ 3908' TO 4075'. WOB- 20K, GPM- 580, SPM-140, DIFF- 300, TQ- 14K, PP- 1750, RPM- 60.	2
DRLGSLD	SLIDE DRILLING F/ 4075' TO 4105'. TF- 150, WOB- 20K, GPM- 580, PP- 1750, SPM- 140, DIFF- 200.	1
DRLG	ROTARY DRILLING F/ 4105' TO 4456'. WOB- 18K, GPM- 580, SPM-140, DIFF- 300, TQ- 14K, PP- 1750, RPM- 60.	7.5
DRLGSLD	SLIDE DRILLING F/ 4456' TO 4486'. TF- 140, WOB- 20K, GPM- 580, PP- 1750, SPM- 140, DIFF- 200.	1
DRLG	ROTARY DRILLING F/ 4486' TO 4550'. WOB- 18K, GPM- 580, SPM-140, DIFF- 450, TQ- 15K, PP- 1750, RPM- 60.	1
U_RIG	DRAW WORKS LOWER DRUM CLUTCH WOULDN'T ENGAGE PROPERLY. PULLED INSPECTION PLATES. REPLACED HI-PRESSURE HOSES ON WICHITA CLUTCH. CALLED RIG MECHANIC.	4.5
U_RIG	MECHANIC ON LOCATION. FUNCTION TEST & INSPECT DRAW WORKS. LOWER DRUM CLUTCH NEEDS REPLACEMENT.	1
U_RIG	REPLACE CLUTCH GUARDS & COVERS BACK ON DRAW WORKS.	1.5
U_RIG	TOOH TO CSG. SHOE @ 770' F/ RIG REPAIRS TO DRAW WORKS.	3

### Report #: 17 Daily Operation: 1/9/2013 06:00 - 1/10/2013 06:00

Job Category ORIG DRILLING	Primary Job Type ODR	AFE Number 025594
Days From Spud (days) 13	Days on Location (days) 17	End Depth (ftKB) 4,951.0
	End Depth (TVD) (ftKB) 4,928.6	Dens Last Mud (lb/gal) 8.90
	Rig PATTERSON - UTI, 208	

#### Operations Summary

FINISH TRIP OUT TO SURFACE CASING 750' CHANGE OUT LOW DRUM CLUTCH ON DRAW WORKS TIH F/ BOTTOM OF SURFACE 750' TO 4550' DRILLING INTERMEDIATE

Remarks  
FINISH TRIP OUT TO SURFACE 750' RIG REPAIR CHANGE LOW DRUM CLUTCH ON DRAW WORKS TIH F/ 750' TO 4550' DRILLING INTERMEDIATE

23' AHEAD 12' LEFT

NPT: PATTERSON- 61 HRS.



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Time Log Summary

Operation	Com	Dur (hr)
TRIP	FINISH TRIP OUT OF THE HOLE TO BOTTOM OF SURFACE PIPE ( 750')	1
U_RIG	CHANGE OUT LOW DRUM CLUTCH ON DRAW WORKS ( CHANGED OUT KELLY HOSE WHILE WORKING ON CLUTCH )	9
TRIP	TRIP IN THE HOLE F/ 750' TO 4550'	3.5
DRLGSLD	SLIDE DRILLING F/ 4550' TO 4570' W/ WOB, 16K PP, 1750 SPM 140 GPM, 580 DIFF, 300	1.5
DRLG	ROTARY DRILLING F/ 4570' TO 4645' W/ RPM 60 WOB 15K PP, 1800 SPM 140 GPM 580 DIFF, 250	1.5
DRLGSLD	SLIDE DRILLING F/ 4645' TO 4660' W/ WOB, 25K PP, 1900 SPM 140 GPM 580 DIFF 250	0.5
DRLG	ROTARY DRILLING F/ 4660' TO 4931' W/ WOB, 15 RPM, 60 PP, 1900 SPM, 140 GPM, 580 DIFF, 350	5.5
DRLGSLD	SLIDE DRILLING F/ 4931' TO 4951' W/ WOB, 15K PP, 1700 SPM 140 GPM 580 DIFF, 300	1.5

Report #: 18 Daily Operation: 1/10/2013 06:00 - 1/11/2013 06:00

Job Category ORIG DRILLING		Primary Job Type ODR		AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
14	18	6,071.0	6,042.6	8.90	PATTERSON - UTI, 208

#### Operations Summary

DIRECTIONAL DRILL INTERMEDIATE F/ 4,951' TO 6,071 1,120' @ 48.6 FPH

#### Remarks

DRILLING INTERMEDIATE F/ 4951' TO 6,071'  
27' AHEAD 3.7' TO RIGHT

NPT: PATTERSON- 61 HRS.

### Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROT. DRLG F/ 4,951' TO 5,119' WOB, 15K, SPM 140,GPM 580, PP 2,000, RPM 60, DIFF 450, TQ 15	2.5
DRLGSLD	SLIDE DRILLING F/ 5,119' TO 5,137' TF 170, WOB 15K GPM 580,SPM 140,PP 2,000 , DIFF 200	1
DRLG	ROT. DRLG F/ 5,137' TO 5,404' WOB, 13K, SPM 140,GPM 580, PP 2,000, RPM 65, DIFF 300, TQ 15	5
DRLGSLD	SLIDE DRILLING F/ 5,404' TO 5,429' WOB 20K PP 1,700 SPM 140, GPM 580, DIFF, 200	1.5
DRLG	ROT. DRLG F/ 5,429' TO 5,690' WOB, 15K, SPM 140,GPM 580, PP 2,000, RPM 65, DIFF 300, TQ 15	4.5
DRLGSLD	SLIDE DRILLING F/ 5,690' TO 5,710' WOB 20K PP 1,700 SPM 140, GPM 580, DIFF, 200	2
DRLG	ROT. DRLG F/ 5,710' TO 5,786' WOB, 17K, SPM 140,GPM 580, PP 2,000, RPM 65, DIFF 400, TQ 15	1
DRLGSLD	SLIDE DRILLING F/ 5,786' TO 5,806'TF180M, WOB 16K PP 1,700 SPM 140, GPM 580, DIFF, 300	1.5
DRLG	ROT. DRLG F/ 5,806' TO 6,071' WOB, 19K, SPM 140,GPM 580, PP 1,950 , RPM 65, DIFF 350, TQ 15	5

Report #: 19 Daily Operation: 1/11/2013 06:00 - 1/12/2013 06:00

Job Category ORIG DRILLING		Primary Job Type ODR		AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
15	19	6,705.0	6,673.3	9.00	PATTERSON - UTI, 208

#### Operations Summary

DIRECTIONAL DRILL INTERMEDIATE F/ 6,071' TO 6,705'  
634'@ 30'FPH

#### Remarks

DRILLING INTERMEDIATE F/ 6,071' TO 6,705'  
23.88' AHEAD 33.34 TO LEFT OF 181\* LINE

2 HRS DOWN- CHANGED SWIVEL PACKING ON TOP DRIVE

NPT: PATTERSON- 63 HRS.

### Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROT. DRLG F/ 6,071' TO 6263 WOB, 16K, SPM 140,GPM 580, PP 2000 , RPM 65, DIFF 350, TQ 15	4
DRLGSLD	SLIDE DRILLING F/ 6263' TO 6293'TF310M, WOB 10K PP 2000 SPM 140, GPM 580, DIFF, 200	3
DRLG	ROT. DRLG F/ 6293' TO 6357 WOB, 15K, SPM 140,GPM 580, PP 2000 , RPM 65, DIFF 350, TQ 15	1.5
DRLGSLD	SLIDE DRILLING F/ 6357' TO 6377'TF300M, WOB 20K PP 2000 SPM 140, GPM 580, DIFF, 200	2
DRLG	ROT. DRLG F/ 6377' TO 6451 WOB, 15K, SPM 140,GPM 580, PP 2000, RPM 65, DIFF 350, TQ 15	1.5
DRLGSLD	SLIDE DRILLING F/ 6,451' TO 6,471' TF300M, WOB 20K PP 2000 SPM 140, GPM 580, DIFF, 200	2.5
DRLG	ROT. DRLG F/ 6,471' TO 6,513' WOB, 15K, SPM 140,GPM 580, PP 2000, RPM 65, DIFF 350, TQ 15	1.5
U_OTR	REPLACE SWIVEL PACKING ON TOP DRIVE	2
DRLG	ROT. DRLG F/ 6,513' TO 6,705' WOB, 16K, SPM 110,GPM 580, PP1350, RPM 65, DIFF 350, TQ 15	6

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

Report #: 20 Daily Operation: 1/12/2013 06:00 - 1/13/2013 06:00

Job Category ORIG DRILLING				Primary Job Type ODR			AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig			
16	20	6,959.0	6,926.0	9.00	PATTERSON - UTI, 208			

Operations Summary

DIRECTIONAL DRILL INTERMEDIATE F/ 6,705' TO 6,959'  
254' @ 17.51' FPH

Remarks

DRILLING INTERMEDIATE F/ 6,705' - 6,959'  
TOOH FOR BIT & MTR ,( WORK TIGHT HOLE FROM 1,953' TO 1,267' ) FREE PIPE  
27.51' AHEAD 22.04 TO LEFT OF 181\* LINE

26' RIGHT OF 343\* LINE

NPT: PATTERSON- 63 HRS.

Time Log Summary

Operation	Com					Dur (hr)
DRLG	ROT. DRLG F/ 6,705' TO 6736 WOB, 18K, SPM 140,GPM 580, PP 2000, RPM 65, DIFF 350, TQ 15					1.5
DRLGSLD	SLIDE DRILLING F/ 6,736' TO 6,760' TF190M, WOB 15K PP 2000 SPM 140, GPM 580, DIFF, 200					2
DRLG	ROT. DRLG F/ 6,760' TO 6,831' WOB, 18K, SPM 140,GPM 580, PP 2,000, RPM 65, DIFF 350, TQ 15					2
DRLGSLD	SLIDE DRILLING F/ 6,831' TO 6,861' TF190M, WOB 15K PP 2000 SPM 140, GPM 580, DIFF, 200					3
DRLG	ROT. DRLG F/ 6861' TO 6927', WOB, 18K, SPM 140,GPM 580, PP2000, RPM 65, DIFF 350, TQ 15					1.5
DRLGSLD	SLIDE DRILLING F/ 6927' TO 6942' TF150M, WOB 15K PP 2000 SPM 140, GPM 580, DIFF, 200					2
DRLGSLD	SLIDE DRILLING F/ 6942' TO 6959' TF150M, WOB 13K PP 2000 SPM 140, GPM 580, DIFF, 150					2.5
CIRC	CIRCULATE & BUILD SLUG					0.5
TRIP	T.O.H F / 6,959' TO 1,953' D/M TIED OFF, R/M ON FLOOR, COM CHK OK					3.5
U_SP	WORK TIGHT HOLE F/ 1,953 TO 1,267' PULLED 100K OVER STRING WT					3
TRIP	TOOH WITH D.P. F/1,267' NO ISSUES					2.5

Report #: 21 Daily Operation: 1/13/2013 06:00 - 1/14/2013 06:00

Job Category ORIG DRILLING				Primary Job Type ODR			AFE Number 025594				
Days From Spud (days)	17	Days on Location (days)	21	End Depth (ftKB)	7,056.0	End Depth (TVD) (ftKB)	7,022.8	Dens Last Mud (lb/gal)	9.00	Rig	PATTERSON - UTI, 208

Operations Summary

DIRECTIONAL DRILL INTERMEDIATE SECTION F/ 6,959-7,056

Remarks

CONTINUE POOH 12 ¼ BHA, P/U M.M DIAL F/ 2.12 TO 2.38, TIH,  
W/ 12 ¼ BHA & DRILL PIPE, CONTINUE T/ DRLL LATERAL SECTION  
F/ 6,959' -7,056'

NPT: PATTERSON- 63 HRS.

Time Log Summary

Operation	Com					Dur (hr)
TRIP	TRIP OUT HOLE, 4 STDS 6" DC'S & 1 STD 8" DCS					1
BHA	L/D MUD MTR & BIT P/U NEW MTR & ORIENTATE MUD MTR TO A 2.38, M/P 12 1/4 BIT					4.5
TRIP	TIH W/ 12 1/4 BHA & 5" D.P TO 718'					1
RURDRT	INSTALL ROT. RUBBER					0.5
TRIP	TIH F/ 718'-6849'					4
RMWASH	WASH TO BTM F/ 6849' - 6959'					1
DRLG	DRILLING F/ 6,959'-6,969' RPM/50, WOD/15K, P/P 1750, SPM/120, GPM/510, DIFF/150					1
DRLGSLD	SLIDE F/ 6,969'-6,974', WOB/15K, PP/1750, SPM/120, GPM/150, TF/150					3
DRLG	ROT. DRILLING F/ 6,974.0-6,992', RPM/50, WOB/16K, PP/1700, SPM/120, GPM/510, DIFF/200					1
DRLGSLD	SLIDE F/ 6,992-6,995, WOB/7, PP/1700, SPM/120, GPM/510, DIFF/100, TF/15					1.5
DRLG	ROT. DRILLING 6,995-7,024, WOB/13, RPM/ 60, PP/ 2200 SPM/ 140, GPM/580, DIFF/450					1.5
DRLGSLD	SLIDE F/ 7,024-7,056, WOB/ 15, PP/ 2100, SPM/ 140, GPM/ 580, DIFF/300, TF/ 150					4

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

**Report #: 22 Daily Operation: 1/14/2013 06:00 - 1/15/2013 06:00**

Job Category ORIG DRILLING				Primary Job Type ODR			AFE Number 025594				
Days From Spud (days)	18	Days on Location (days)	22	End Depth (ftKB)	7,494.0	End Depth (TVD) (ftKB)	7,459.9	Dens Last Mud (lb/gal)	9.00	Rig PATTERSON - UTI, 208	

Operations Summary

DIRECTIONAL DRILL INTERMEDIATE SECTION F/ 7,056 - 7,494

Remarks

CONTINUE DRILLING INTERMEDIATE SECTION F/ 7,056'- 7,494,

**Time Log Summary**

Operation	Com	Dur (hr)
DRLGSLD	SLIDE F/ 7,056 - 7,084, TF/ 150, WOB/ 15, GPM/580, SPM/140,PP/ 2150, DIF/200.	2.5
DRLG	ROT. DRLG F/ 7,084' - 7,119' WOB,15, GPM/580, SPM/140, RPM/50, PP/ 2150, DIF/450, TQ/15	1.5
RIGSER	RIG SERVICE, R/M ON FLOOR, M/R WORKING PROPERLY	1
DRLGSLD	SLIDE F/ 7,119 - 7,181, TF/ 150, WOD/10, GPM/580, SPM,140, PP/2000, DIF/200	9.5
DRLG	ROT. DRILLING F/ 7,181- 7,440 WOB/13, RPM/ 50, PP/ 2,350, SPM/ 140, GPM/ 580, DIFF/ 450	7
DRLG	ROT. DRILL F/ 7,440 - 7,494, WOB/ 15, RPM/ 50, PP/ 1600, SPM/ 110 GPM/ 460, DIFF/ 450	2.5

**Report #: 23 Daily Operation: 1/15/2013 06:00 - 1/16/2013 06:00**

Job Category ORIG DRILLING				Primary Job Type ODR			AFE Number 025594				
Days From Spud (days) 19		Days on Location (days) 23		End Depth (ftKB) 7,700.0		End Depth (TVD) (ftKB) 7,665.5		Dens Last Mud (lb/gal) 9.00		Rig PATTERSON - UTI, 208	

Operations Summary

CONTINUE DRILLING INTERMEDIATE SECTION F/ 7,494-7,700. L/DOWN 6" & 8" DC'S AND DIRECTIONAL BHA , PULL WEAR BUSNING, CONDUCT S/MEETING W/ CASING CREW, RIG UP 9 5/8 CASING EQUIPMENT

Remarks

CONTINUE DRILLING INTERMEDIATE SECTION F/ 7,494-7,700. L/DOWN DIRECTIONAL BHA,CONDUCT S/M W/ CASING CREW. RIG UP 9 5/8 CASING EQUIPMENT & P/UP & M/UP & RIH.

47°BEHIND RIGHTOF 181° LINE

NPT: PATTERSON- 63 HRS.

**Time Log Summary**

Operation	Com	Dur (hr)
DRLG	ROT. DRILL F/ 7,494-7,700, WOB/15, GPM/580 , SPM/140, DIF/450, RPM/50, PP/2250, TQ/17	10
CIRC	CIRCULATE, 2 BTMS UP 2800 STKS TOTAL	2
TRIP	POOH F/ 7,700 - 567" W/ 5" D/P, BACK REAMED THREW TIGHT SPOTS @ 1,640' & 1,545'	5.5
BHA	L/DOWN 6" & 8" D/COLLARS & DIRECTIONAL EQUIPMENT	5
U_OTR	PULL WEAR BUSHING, CLEAR FLOOR, CHANGE BAILS T/ A CSG BAIL,	1.5

**Report #: 24 Daily Operation: 1/16/2013 06:00 - 1/17/2013 06:00**

Job Category ORIG DRILLING				Primary Job Type ODR			AFE Number 025594
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig		
20	24	7,700.0	7,665.5	9.00	PATTERSON - UTI, 208		

Operations Summary

CONDUCTED S/M, R/U 9 5/8 CASING EQUIP. P/UP & M/UP 9 5/8 INTERMEDIATE CSG. TO 7,700', CIRCULATED WEL BORE, CONDUCTED S/M W/ CMT PERSONAL, R/UP CMT EQUIP & CEMENTED 9 5/8 CASING. PUMPED 859 bbls OF CEMENT & DISPLACED W/ 559 bbls WATER, R/DOWN CMT EQUIP. INSTALL PACK OFF SEAL IN SECTION A OF WELL HEAD. R/UP TEMP LOG & RIH ( CLEANING MUD TANKS )

Remarks

RAN 9 5/8 INTERM. CSG T/ 7,700', CEMENTED 9 5/8 INTERM. W/ 859 bbl WITH CemNET ( 12.5 ppg) INSTALLED PACK OFF SEAL IN SECTION A OF WELL HEAD. RIH TEMP LOG ( CLEANING MUD TANKS )

RAN 164 JTS 9 5/8 CASING TOTAL

65 JTS W/W  
99 JTS SLICK

BUMPED PLUG @ 01:30 1-17-2013 WITH 500 PSI OVER PUMPING RATE 1750 PSI HELD BLEED BACK 5 BBLS FLOATS HELD

NPT: PATTERSON= 63 Hrs.

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Time Log Summary

Operation	Com	Dur (hr)
U_OTR	R/UP LONGER BAILS & INSTALL BELL NIPPLE	1
CSG	S/M W/ CASING CREW, R/UP CASING CREW & RUN 9 5/8 CSG	11
CSG	CONTINUE TO RUN 9 5/8 CSG IN HOLE F/ 6,400 -7,700 45 JTS.	1.5
CSG	INSTALL 9 5/8 SWEDGE & BREAK CIRCULATION, R/DOWN CASING EQUIPMENT	1.5
CMTPRI	CONDUCT S/M W/ ALL CREWS, PRESSURE TEST LINES T/ 4,000 PSI, PUMP 859 bbls OF CMT, DISPLACED 559 bbl OF WATER & R/DOWN CMT EQUIPMENT.	4
U_OTR	UNTHREAD LANDING JOINT M/UP PACK OFF ON LANDING JOINT, SET IN WELL HEAD SECTION A., TIGHTEN DOWN PACK OFF BOLTS	3
LOG	R/UP & RUN TEMP. LOG	2

### Report #: 25 Daily Operation: 1/17/2013 06:00 - 1/18/2013 06:00

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 025594
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
21	25	7,700.0	7,665.5	11.00	PATTERSON - UTI, 208	

#### Operations Summary

RUNNING TEMP LOG, REPAIRED RIG (HPU) PLUG, SLIP AND CUT DRILLING LINE, PU DIRECTIONAL BHA, TIH, TESTED CASING TO 1000#.

#### Remarks

TEMP LOG, TOC @ 1435', TAG CEMENT @ 7,632'.  
SLIP AND CUT DRILLING LINE, TIH, TEST CSG.,  
NPT: PATTERSON, 208- 63 Hrs.

### Time Log Summary

Operation	Com	Dur (hr)
U_OTR	WAITING ON WIRELINE LOGGING TRUCK. (DIALOG, COMPUTER ISSUES)	3
WIRELN	RUNNING CEMENT TEMP LOG (DIALOG) TOP OF CEMENT AT 1,435' LOGGED F- SURFACE TO FLOAT COLLAR, TAGGED AT 7,632'.	4.5
U_OTR	RIG DOWN DIALOG WIRELINE TRUCK	0.5
CUTDL	SLIP AND CUT DRILLING LINE	1
U_OTR	RD CASING BELLS, INSTALL SHORT BELLS AND ELEVATORS.	1.5
U_OTR	INSTALL WEAR BUSHING	1
BHA	P/U 8 1/2" LEAM DIRECTIONAL BHA. SCRIBE MOTOR & MWD. SURFACE TEST.	2
TRIP	TIH W/ 8 1/2" DIRECTIONAL BHA.	1
RURDRT	INSTALL ROTATING HEAD, RESET STRONGBACK	1
TRIP	T.I.H. P/UP 11 JTS. OF 5" D.P. TAGGED CEMENT AT 7632'	4.5
CSG	TEST CASING TO 1000# Psi.	0.5
U_OTR	CONTINUE TO CLEAN MUD TANKS, TRANSFER OBM TO MUD TANKS	3.5

### Report #: 26 Daily Operation: 1/18/2013 06:00 - 1/19/2013 06:00

Job Category			Primary Job Type			AFE Number		
ORIG DRILLING			ODR			025594		
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig			
22	26	7,800.0	7,764.1	11.00	PATTERSON - UTI, 208			

#### Operations Summary

TRANSFER OBM TO MUD PITS. STRAP DRILL STRING OUT OF HOLE, CORRECT PIPE TALLY & CHANGE OUT FAULTY MWD. TIH, TAG FLOAT COLLAR @ 7,630'. DRILL OUT SHOE TRACK WHILE DISPLACING WELL BORE W/ OIL BASE MUD. DRILL 10' OF NEW FORMATION. PERFORM FIT @ 12.5 PPG EMW. DRILL 8 1/2" PRODUCTION CURVE FROM 7,710 TO 7,800.0

#### Remarks

STRAP OUT OF HOLE, CORRECT DRILL STRING TALLY & CHANGE OUT FAULTY MWD.  
FIT TEST, 601 Psi., PRESSURE DROPPED T/ 581 Psi.=20 Psi.

NPT: PATTERSON #208- 63 Hrs.

58 BEHIND & 6' RIGHT OF PLAN LINE.

### Time Log Summary

Operation	Com	Dur (hr)
CIRC	TRANSFER OBM F/ FRAC TANKS TO MUD PITS.	1
TRIP	STRAP DRILL STRING OUT OF HOLE. CORRECT PIPE TALLY & CHANGE OUT FAULTY MWD.	7
U_DIR	CHANGE OUT MWD & SURFACE TEST SAME.	1
TRIP	TIH, TAGGED CEMENT & FLOAT COLLAR @ 7,630'.	5
U_OTR	REPLACE AND INSTALL ROTATING HEAD, AIR OUT PUMPS AND BRING UP ON LINE #1 & #2	2
DRLCMT	DRILLED OUT SHOE TRACK & 10' OF NEW FORMATION FOR FIT.	3
LKOFF	DRILLED T/ 7,710 & CONDUCTED FIT TEST, PRESSURED FORMATION UP TO 601 Psi, PRESSURE DROPPED T/ 581 Psi = 20 Psi.	0.5
DRLGSLD	SLIDE F/ 7,710' - 7,729' WOB/ 8, PSI/ 2,224, GPM/364, DIFF/210, STK/90	1

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROT. DRILL F/ 7,729' T/ 7,734. WOB- 9K, PSI- 2022, GPM- 364, DIFF- 210, STK- 90, RPM- 30	0.5
DRLGSLD	SLIDE DRILL F' 7,734'-7,760', WOB/ 10, PSI/ 2090, GPM/ 365, DIFF/230, STK/90,	0.5
DRLGSLD	ROT. DRILL F/ 7760'-7766', WOB/9, PSI/2148, GPM/363, DIFF/263, DIFF/263/STK/90, RPM/30	0.5
DRLGSLD	SLIDE F/ 7,766' - 7,793' WOB/ 10, PSI/ 2,084, GPM/365, DIFF/245, STK/90	1
DRLG	ROT. DRILL F/ 7792'-7800', WOB/12, PSI/1739, GPM/379, DIFF/263, STK/90, RPM/30	1

Report #: 27 Daily Operation: 1/19/2013 06:00 - 1/20/2013 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	025594
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
23	27	9,810.0
	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)
	8,121.4	11.00
	Rig	PATTERSON - UTI, 208

#### Operations Summary

ROTATE & SLIDE DRILL 8 1/2" PRODUCTION CURVE @ 8,425'.

#### Remarks

DRILL CURVE TO 8,425'.  
(625' @ 26 FPH)

32' ABOVE NEW TVD & 47' RIGHT OF PLAN.

NPT: PATTERSON, #208 - 63 Hrs.

### Time Log Summary

Operation	Com	Dur (hr)
DRLGSLD	SLIDE DRILL F/ 7800' T/ 7824'. WOB-15K, PP-1750, SPM-110, GPM-400, DIFF- 200, TF-20 L	0.5
DRLG	ROTATE DRILL F/ 7824' T/ 7827'. WOB-15K, RPM-30, PP-1740, SPM-110, GPM- 400, DIFF- 250	0.5
DRLGSLD	SLIDE DRILL F/ 7827' T/ 7855'. WOB-15K, PP-1750, SPM-110, GPM-400, DIFF- 200, TF-20 L	1
DRLG	ROTATE DRILL F/ 7855' T/ 7858'. WOB-15K, RPM-30, PP-1740, SPM-110, GPM- 400, DIFF- 250	0.5
DRLGSLD	SLIDE DRILL F/ 7858' T/ 7887'. WOB-15K, PP-1750, SPM-110, GPM-400, DIFF- 200, TF-20 L	0.5
DRLG	ROTATE DRILL F/ 7887' T/ 7890'. WOB-15K, RPM-30, PP-3100, SPM-110, GPM- 400, DIFF- 250	0.5
DRLGSLD	SLIDE DRILL F/ 7890' T/ 8138'. WOB-15K, PP-2200, SPM-120, GPM-540, DIFF- 300, TF-20 L	9.5
DRLG	ROTATE DRILL F/ 8138' T/ 8146'. WOB-9K, RPM-30, PP-3150, SPM-130, GPM- 540, DIFF- 110	0.5
DRLGSLD	SLIDE DRILL F/ 8146' T/ 8170'. WOB-15K, PP-2200, SPM-120, GPM-540, DIFF- 260, TF-30 L	0.5
DRLG	ROTATE DRILL F/ 8170' T/ 8175'. WOB-9K, RPM-30, PP-3150, SPM-130, GPM- 540, DIFF- 110	0.5
DRLGSLD	SLIDE DRILL F/ 8175' T/ 8202'. WOB-17K, PP-3240, SPM-120, GPM-540, DIFF- 300, TF-30 L	0.5
DRLG	ROTATE DRILL F/ 8202' T/ 8205'. WOB-8K, RPM-30, PP-3118, SPM-160, GPM- 540, DIFF- 110	0.5
DRLGSLD	SLIDE DRILL F/ 8205' T/ 8264'. WOB-17K, PP-32340, SPM-130, GPM-540, DIFF- 300, TF-30 L	2.5
DRLG	ROTATE DRILL F/ 8264' T/ 8295'. WOB-12K, RPM-30, PP-3120, SPM-120, GPM- 540, DIFF- 190	1
DRLGSLD	SLIDE DRILL F/ 8295' T/ 8310'. WOB-17K, PP-2990, SPM-130, GPM-540, DIFF- 175, STK-130, TF-90 L	1
DRLG	ROTATE DRILL F/ 8310' T/ 8327'. WOB-11K, RPM-30, PP-3130, SPM-120, GPM- 540, DIFF- 200	0.5
DRLGSLD	SLIDE DRILL F/ 8327' T/ 8343'. WOB-10K, PP-2969, SPM-130, GPM-540, DIFF- 120, STK-130, TF-90 L	0.5
DRLG	ROTATE DRILL F/ 8343' T/ 8358'. WOB-15K, RPM-30, PP-3220, SPM-130, GPM- 540, DIFF- 345	0.5
DRLGSLD	SLIDE DRILL F/ 8358' T/ 8375'. WOB-10K, PP-2969, SPM-130, GPM-540, DIFF- 120, STK-130, TF-90 L	0.5
DRLG	ROTATE DRILL F/ 8375' T/ 8425'. WOB-13K, RPM-30, PP-3260, SPM-130, GPM- 540, DIFF- 345	1.5
RIGSER	GREASE AND CHECK FLUIDS ON RIG EQUIPMENT	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

Report #: 28 Daily Operation: 1/20/2013 06:00 - 1/21/2013 06:00

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 025594
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
24	28	9,810.0	8,121.4	11.00	PATTERSON - UTI, 208	

Operations Summary  
 DRILL PRODUCTION CURVE F/ 8,425' TO 8,627'.  
 LAND CURVE , ROTATE OUT 30' & DRILL 8 1/2" PRODUCTION LATERAL F/ 8,657' TO 9,810'.

Remarks  
 LAND CURVE @ 8,627'. (89°, 179.87 AZM, 8,134' TVD.)  
  
 DRILL 202' IN CURVE.  
 DRILL 1,183' IN LATERAL. TOTAL FOOTAGE: 1,385'.  
  
 NPT: PATTERSON #208 - 64 Hrs.

### Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROTATE DRILL F/ 8425' T/ 8549'. WOB-15K, RPM-30, PP-2900, SPM-125, GPM- 520, DIFF- 345	2.5
DRLGSLD	SLIDE DRILL F/ 8549' T/ 8573'. WOB-15K, PP-2950, SPM-130, GPM-530, DIFF- 250, STK-130, TF-0	0.5
DRLG	ROTATE DRILL F/ 8573' T/ 8582'. WOB-15K, RPM-30, PP 2900, SPM-125, GPM- 520, DIFF- 250	0.5
DRLGSLD	SLIDE DRILL F/ 8582' T/ 8606'. WOB-15K, PP-2950, SPM-125, GPM-520, DIFF- 250, STK-130, TF-20 R	0.5
DRLG	ROTATE DRILL F/ 8606' T/ 8612'. WOB-15K, RPM-30, PP-2900, SPM-125, GPM- 520, DIFF- 300	0.5
DRLGSLD	SLIDE DRILL F/ 8612' T/ 8627'. WOB-15K, PP-2950, SPM-125, GPM-520, DIFF- 250, STK-130, TF-20 R	0.5
DRLG	ROTATE DRILL F/ 8627' T/ 8657'. WOB-20K, RPM-60, PP-2900, SPM-125, GPM- 540, DIFF- 400	2.5
DRLGSLD	SLIDE DRILL F/ 8801' T/ 8816'. WOB-20K, PP-2950, SPM-125, GPM-520, DIFF- 400, STK-130, TF-20 R	0.5
DRLG	ROTATE DRILL F/ 8816' T/ 9083'. WOB-20K, RPM-60, PP-2900, SPM-125, GPM- 540, DIFF- 400	4
DRLGSLD	SLIDE DRILL F/ 9083' T/ 9098'. WOB-30K, PP-3166, SPM-120, GPM-490, DIFF- 320, STK-130, TF-135 R	0.5
DRLG	ROTATE DRILL F/ 9098' T/ 9,272'. WOB-16K, RPM-60, PP-3230, SPM-120, GPM- 490, DIFF- 384	1.5
DRLGSLD	SLIDE DRILL F/ 9272' T/ 9282'. WOB-18K, PP-2910, SPM-120, GPM-490, DIFF- 210, STK-130, TF-150 R	0.5
DRLG	ROTATE DRILL F/ 9282' T/ 9,557'. WOB-13K, RPM-60, PP-3076, SPM-120, GPM- 490, DIFF- 360	3.5
DRLGSLD	SLIDE DRILL F/ 9557' T/ 9572'. WOB-15K, PP-2891, SPM-120, GPM-490, DIFF- 266, STK-120, TF-130 R	0.5
DRLG	ROTATE DRILL F/ 9572' T/ 9652'. WOB-11K, RPM-60, PP-2982, SPM-120, GPM- 490, DIFF- 350	1
DRLGSLD	SLIDE DRILL F/ 9652' T/ 9667'. WOB-15K, PP-3060, SPM-120, GPM-490, DIFF- 250, STK-120, TF-120 R	0.5
RIGSER	INSPECT, SERVICE & LUBRICATE RIG EQUIP.	0.5
U_RIG	CHANGE OUT LINER & SWAB ON # 1 PUMP	1
DRLG	ROTATE DRILL F/ 9657' T/ 9810'. WOB-11K, RPM-60, PP-3060, SPM-120, GPM- 490, DIFF- 370	2.5



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

Report #: 29 Daily Operation: 1/21/2013 06:00 - 1/22/2013 06:00

Job Category ORIG DRILLING				Primary Job Type ODR			AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig			
25	29	11,200.0	8,089.9	11.00	PATTERSON - UTI, 208			

Operations Summary

DRILL 8 1/2" PROD. LATERAL F/ 9,810 TO 11,200'.

Remarks

DRILL 8 1/2" PROD. LATERAL F/ 9,810 TO 11,200'.

(1390' @ 59.0 FPH AVG.)

18.46' LOW, 3.35' RIGHT OF PLAN # 5

NPT: PATTERSON #208- 64 Hrs.

Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROTATE DRILL F/ 9810' T/ 9842'. WOB-15K, RPM-60, PP-2900, SPM-120, GPM- 515, DIFF- 350	0.5
DRLGSLD	SLIDE DRILL F/ 9842' T/ 9857'. WOB-20K, PP-2950, SPM-120, GPM-515, DIFF- 250, STK-130, TF-90 R	0.5
DRLG	ROTATE DRILL F/ 9857' T/ 9936'. WOB-15K, RPM-60, PP 2900, SPM-120, GPM- 515, DIFF- 350	0.5
DRLGSLD	SLIDE DRILL F/ 9936' T/ 9956'. WOB-20K, PP-2950, SPM-120, GPM-515, DIFF- 250, STK-130, TF-135 R	1
DRLG	ROTATE DRILL F/ 9956' T/ 10,031'. WOB-15K, RPM-60, PP-2900, SPM-125, GPM- 515, DIFF- 350	1
DRLGSLD	SLIDE DRILL F/ 10,031' T/ 10,046'. WOB-20K, PP-2950, SPM-120, GPM-515, DIFF- 250, STK-120, TF-100 R	0.5
DRLG	ROTATE DRILL F/ 10,046' T/ 10,222'. WOB-15K, RPM-60, PP-2900, SPM-125, GPM- 515, DIFF- 350	2
DRLGSLD	SLIDE DRILL F/ 10,222' T/ 10,237'. WOB-20K, PP-2950, SPM-125, GPM-515, DIFF- 250, STK-130, TF-120 R	0.5
DRLG	ROTATE DRILL F/ 10,237' T/ 10,412'. WOB-15K, RPM-60, PP-2900, SPM-120, GPM- 515, DIFF- 350	2.5
RIGSER	INSPECT, SERVICE & LUBRICATE RIG EQUIP.	0.5
DRLGSLD	SLIDE DRILL F/ 10,412' T/ 10,427'. WOB-20K, PP-2920, , GPM-515, DIFF- 250, STK-130, TF-180 R	0.5
DRLG	ROTATE DRILL F/ 10,427' T/ 10,698'. WOB-15K, RPM-60, PP-3280, SPM-120, GPM- 490, DIFF- 370	4
DRLGSLD	SLIDE DRILL F/ 10,698' T/ 10,713'. WOB-30K, PP-3200, SPM-120, GPM-490, DIFF- 320, TF-180 R	0.5
DRLG	ROTATE DRILL F/ 10,713' T/ 10,792'. WOB-15K, RPM-60, PP-3250, SPM-120, GPM- 490, DIFF- 320	1.5
DRLGSLD	SLIDE DRILL F/ 10,792' T/ 10,802'. WOB-20K, PP-2910, SPM-120, GPM-490, DIFF- 205, TF-180 R	1.5
DRLG	ROTATE DRILL F/ 10,802' T/ 10,980'. WOB-16K, RPM-60, PP-3260, SPM-120, GPM- 490, DIFF- 370	2
DRLGSLD	SLIDE DRILL F/ 10,980' T/ 10,996'. WOB-15K, PP-3060, SPM-120, GPM-490, DIFF- 250, STK-120, TF-120 R	0.5
DRLG	ROTATE DRILL F/ 10,996' T/ 11,169'. WOB-14K, RPM-60, PP-3345, SPM-120, GPM- 490, DIFF- 370	2.5
DRLGSLD	SLIDE DRILL F/ 11,169' T/ 11,179'. WOB-30K, PP-3095, SPM-120, GPM-490, DIFF- 275, TF-180 R	0.5
DRLG	ROTATE DRILL F/ 11,179' T/ 11,200'. WOB-15K, RPM-60, PP-3190, SPM-120, GPM- 490, DIFF- 365	1

Report #: 30 Daily Operation: 1/22/2013 06:00 - 1/23/2013 06:00

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 025594
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
26	30	12,317.0	8,072.8	11.00	PATTERSON - UTI, 208	

Operations Summary

DRILL 8 1/2" PROD. LATERAL F/ 11,200' TO 12,317'

Remarks

DRILL 8 1/2" PROD. LATERAL F/ 11,200' TO 12,317'.

(1,117' @ 47.5' FPH AVG.)

1.62' LOW, 19.20' RIGHT OF PLAN # 5

NPT: PATTERSON #208- 64 Hrs

Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROTATE DRILL F/ 11,200' T/ 11,359'. WOB-15K, RPM-60, OBPP-2900, SPM-120, GPM- 515, DIFF- 350	2
DRLGSLD	SLIDE DRILL F/ 11,359' T/ 11,369'. WOB-20K, OBPP-2950, SPM-120, GPM-515, DIFF- 150, STK-120, TF-150 R	0.5
DRLG	ROTATE DRILL F/ 11,369' T/ 11,487'. WOB-15K, RPM-60, OBPP 2900, SPM-120, GPM- 515, DIFF- 350	1.5
DRLGSLD	SLIDE DRILL F/ 11,487' T/ 11,497'. WOB-20K, OBPP-2950, SPM-120, GPM-515, DIFF- 250, STK-130, TF-135 R	0.5
DRLG	ROTATE DRILL F/ 11,497' T/ 11,546'. WOB-15K, RPM-60, OBPP-2900, SPM-125, GPM- 515, DIFF- 350	1
DRLGSLD	SLIDE DRILL F/ 11,546' T/ 11,558'. WOB-20K, OBPP-2950, SPM-120, GPM-515, DIFF- 250, STK-120, TF-100 R	0.5
DRLG	ROTATE DRILL F/ 11,558' T/ 11,665'. WOB-15K, RPM-60, OBPP-2900, SPM-125, GPM- 515, DIFF- 350	2.5
DRLGSLD	SLIDE DRILL F/ 11,665' T/ 11,672'. WOB-20K, OBPP-2900, SPM-120, GPM-515, DIFF- 150, , TF-180 R	0.5
DRLG	ROTATE DRILL F/ 11,672' T/ 11,734'. WOB-15K, RPM-60, OBPP-2900, SPM-120, GPM- 515, DIFF- 350	1
DRLGSLD	SLIDE DRILL F/ 11,734' T/ 11,744'. WOB-20K, PP-2900, SPM-120, GPM-515, DIFF- 150, TF-180 R	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROTATE DRILL F/ 11,744.0' T/ 11,925'. WOB-12K, RPM-60, PP-3175, SPM-120, GPM- 500, DIFF- 350	3.5
DRLGSLD	SLIDE DRILL F/ 11,925' T/ 11,937'. WOB-15K, PP-2950, SPM-120, GPM-500, DIFF- 250, TF-160 L	1
DRLG	ROTATE DRILL F/ 11,937' T/ 12,019'. WOB-13K, RPM-60, PP-3300, SPM-120, GPM- 500, DIFF- 290	1
DRLGSLD	SLIDE DRILL F/ 12,019' T/ 12,029'. WOB-8K, PP-2950, SPM-120, GPM-500, DIFF- 145, STK-120, TF-160 L	1
DRLG	ROTATE DRILL F/ 12,029.0' T/ 12,208'. WOB-12K, RPM-60, PP-3225, SPM-120, GPM- 500, DIFF- 325	3
DRLGSLD	SLIDE DRILL F/ 12,208' T/ 12,221'. WOB-28K, PP-2960, SPM-120, GPM-500, DIFF- 185, TF-150 L	1
DRLG	ROTATE DRILL F/ 12,221' T/ 12,302'. WOB-11K, RPM-60, PP-3275, SPM-120, GPM- 500, DIFF- 375	1.5
DRLGSLD	SLIDE DRILL F/ 12,302' T/ 12,317'. WOB-20K, PP-2750, SPM-120, GPM-500, DIFF- 55, TF-150 L	1
RIGSER	SERVICE & INSPECT DRILLING EQUIPMENT	0.5

Report #: 31 Daily Operation: 1/23/2013 06:00 - 1/24/2013 06:00

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
27	31	12,408.0	8,070.0	11.00	PATTERSON - UTI, 208	

#### Operations Summary

DRILL 8 1/2" PROD. LATERAL F/ 12,317' TO 12,408'. PUMP SWEEP & SLUG. TOO H F/ DIRECTIONAL MUD MOTOR FAILURE. CHANGE OUT DIRECTIONAL MOTOR, MWD & 8 1/2" PDC. SCRIBE MWD & DIRECTIONAL EQUIP. SURFACE TEST & TIH.

#### Remarks

DRILL 8 1/2" PROD. LATERAL F/ 12,317' TO 12,408'. TOO H F/ DIRECTIONAL MOTOR FAILURE. WELL BORE TAKING PROPER DISPLACEMENT.

(91' @ 18' FPH AVG.)

1.6' HIGH, 20.3' RIGHT OF PLAN # 5

NPT: PATTERSON #208- 67.5 Hrs

### Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROTATE DRILL F/ 12,317' T/ 12,398'. WOB-15K, RPM-60, OBPP-2900, SPM-120, GPM- 515, DIFF- 350	3
DRLGSLD	SLIDE DRILL F/ 12,398' T/ 12,408'. WOB-20K, OBPP-3400, SPM-136, GPM-560, DIFF- 100, TF-180 R	2
U_DIR	LEAM DIRECTIONAL MUD MOTOR PRESSURING UP & STALLING.	1.5
U_DIR	CIRCULATE SWEEP, BUILD & PUMP SLUG.	1.5
U_DIR	PUMP & BACK REAM 2 STD'S OFF BTM. TOO H F/ MUD MOTOR FAILURE F/ 12,408 TO SURFACE. WELL BORE TOOK PROPER DISPLACEMENT.	6.5
U_DIR	BREAK & LAY OUT MWD, MUD MOTOR & 8 1/2" PDC.	1.5
U_DIR	P/U & M/U 8 1/2" PDC, SCRIBE MWD & DIRECTIONAL EQUIPMENT, SURFACE TEST MWD, RIH & 2 STNDS 5" D.P.	2
RIGSER	SERVICE & INSPECT DRILLING EQUIPMENT	0.5
U_OTR	CHANGE OUT SAVER SUB ON TOP DRIVE	1.5
U_RIG	REPAIR & CHANGE DIES ON GRABBER BOX ON TOP DRIVE	2
U_DIR	CONTINUE TIH W/ 5" DRILL PIPE F/ 266' - 5.000'	2

Report #: 32 Daily Operation: 1/24/2013 06:00 - 1/25/2013 06:00

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
28	32	12,600.0	8,065.3	11.00	PATTERSON - UTI, 208	

#### Operations Summary

TIH TO T.D. @ 12,408' WASH & REAMED LAST 2 STDS TO BTM.  
ROTATE & SLIDE DRILL F/ 12,408' TO 12,502'. ENCOUNTERED PUMP PROBLEMS.  
TOOH TO 9 5/8" CSG. SHOE @ 7,700'. PATTERSON PUMP MECHANICS REPLACE MODULE ON PUMP #2 & REWORKED & REPLACED EXPENDABLES ON PUMP #1. RUN, AIR OUT & TEST PUMPS.  
TIH, WASH & REAM LAST 2 STDS TO BTM.  
ROTATE & SLIDE DRILL F/ 12,502' TO 12,600'.

#### Remarks

TOOH TO 9 5/8" CSG. SHOE @ 7,700'.  
REPLACE MODULE ON PUMP #1 & EXPENDABLES ON PUMP #2.

DRILL F/ 12,408 T/ 12,600' (192' @ 21.3 FPH AVG.)

4.5' HIGH, 19.6' RIGHT OF PLAN # 5

NPT: PATTERSON #208- 78 Hrs

### Time Log Summary

Operation	Com	Dur (hr)
U_DIR	TIH TO T.D. @ 12,408' WASHED & REAMED LAST 2 STDS TO BTM.	4.5
DRLGSLD	SLIDE DRILL F/ 12,408' T/ 12,413'. WOB-20K, OBPP-3400, SPM-136, GPM-560, DIFF- 100, TF-180 R	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROTATE DRILL F/ 12,413' T/ 12,495'. WOB-15K, RPM-60, OBPP-2900, SPM-120, GPM- 515, DIFF- 300	2
RIGSER	INSPECT, SERVICE & LUBRICATE RIG EQUIP.	0.5
DRLGSLD	SLIDE DRILL F/ 12,495' T/ 12,502'. WOB-20K, OBPP-3400, SPM-136, GPM-560, DIFF- 100, TF-180 R	2.5
U_RIG	CIRCULATE SWEEP & PUMP SLUG.	1
U_RIG	PUMP #1 & #2 DOWN FOR REPAIRS. TOOH TO CSG. SHOE @ 7,700'	4
U_RIG	REPAIR & REPLACE MODULE ON #2 PUMP. REPLACE EXPENDABLES ON #1 PUMP. RUN, AIR OUT & TEST PUMPS.	3
U_DIR	TIH TO T.D. @ 12,502'. WASH & REAM LAST 2 STDS TO BTM.	2.5
DRLGSLD	SLIDE DRILL F/ 12,502' T/ 12,515'. WOB-20K, PP-3150, SPM-136, GPM-500, DIFF- 230, TF-180 R	1.5
DRLG	ROTATE DRILL F/ 12,515' T/ 12,589'. WOB-15K, RPM-60, OBPP-2900, SPM-120, GPM- 500, DIFF- 230	1
DRLGSLD	SLIDE DRILL F/ 12,589' T/ 12,600'. WOB-15K, PP-3400, SPM-136, GPM-500, DIFF- 250, TF-180 R	1

Report #: 33 Daily Operation: 1/25/2013 06:00 - 1/26/2013 06:00

Job Category ORIG DRILLING				Primary Job Type ODR			AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig			
29	33	13,470.0	8,044.6	11.00	PATTERSON - UTI, 208			

#### Operations Summary

ROTATE & SLIDE DRILL 8 1/2" PROD. LATERAL F/ 12,600' TO 13,470'.

#### Remarks

ROTATE & SLIDE DRILL 8 1/2" PROD. LATERAL F/ 12,600' TO 13,470'.

(870' @ 36.5 FPH AVG.)

27.55' HIGH, 13.85' RIGHT OF PLAN # 5

NPT: PATTERSON #208- 78 Hrs

### Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROTATE DRILL F/ 12,600' T/ 12,684'. WOB-18K, RPM-60, OBPP-3000, SPM-120, GPM- 515, DIFF- 325	1.5
DRLGSLD	SLIDE DRILL F/ 12,684' T/ 12,696'. WOB-20K, PP-3150, SPM-136, GPM-515, DIFF- 320, TF-105 R	2
DRLG	ROTATE DRILL F/ 12,696' T/ 12,779'. WOB-18K, RPM-60, OBPP-3000, SPM-120, GPM- 515, DIFF- 350	1
DRLGSLD	SLIDE DRILL F/ 12,779' T/ 12,794'. WOB-20K, PP-3200, SPM-128, GPM-515, DIFF- 150, TF-150 R	1.5
DRLG	ROTATE DRILL F/ 12,794' T/ 12,873'. WOB-18K, RPM-60, OBPP-3000, SPM-120, GPM- 515, DIFF- 350	2
DRLGSLD	SLIDE DRILL F/ 12,873' T/ 12,892'. WOB-20K, PP-3200, SPM-128, GPM-515, DIFF- 150, TF-105 R	2
DRLG	ROTATE DRILL F/ 12,794' T/ 12,873'. WOB-18K, RPM-60, OBPP-3000, SPM-120, GPM- 515, DIFF- 350	1
DRLGSLD	SLIDE DRILL F/ 12,965' T/ 12,980'. WOB-20K, PP-3200, SPM-128, GPM-515, DIFF- 150, TF-105 R	1
DRLG	ROTATE DRILL F/ 12,980' T/ 13,060'. WOB-18K, RPM-60, OBPP-3000, SPM-120, GPM- 515, DIFF- 350	2
DRLGSLD	SLIDE DRILL F/ 13,060' T/ 13,075'. WOB-20K, PP-3200, SPM-128, GPM-515, DIFF- 190, TF-105 R	1
DRLG	ROTATE DRILL F/ 13,075' T/ 13,154'. WOB-18K, RPM-60, OBPP-3000, SPM-120, GPM- 515, DIFF- 350	1.5
DRLGSLD	SLIDE DRILL F/ 13,154' T/ 13,164'. WOB-20K, PP-3200, SPM-128, GPM-515, DIFF- 190, TF-105 R	0.5
DRLG	ROTATE DRILL F/ 13,164' T/ 13,249'. WOB-18K, RPM-60, OBPP-3000, SPM-120, GPM- 515, DIFF- 350	1
DRLGSLD	SLIDE DRILL F/ 13,249' T/ 13,261'. WOB-20K, PP-3200, SPM-128, GPM-515, DIFF- 190, TF-105 R	1
DRLG	ROTATE DRILL F/ 13,261' T/ 13,344'. WOB-18K, RPM-60, OBPP-3000, SPM-120, GPM- 515, DIFF- 350	1.5
DRLGSLD	SLIDE DRILL F/ 13,344' T/ 13,354'. WOB-20K, PP-3200, SPM-128, GPM-515, DIFF- 190, TF-105 R	0.5
DRLG	ROTATE DRILL F/ 13,354' T/ 13,439'. WOB-18K, RPM-60, OBPP-3000, SPM-120, GPM- 515, DIFF- 350	1.5
DRLGSLD	SLIDE DRILL F/ 13,439' T/ 13,451'. WOB-20K, PP-3200, SPM-128, GPM-515, DIFF- 190, TF-105 R	1
DRLG	ROTATE DRILL F/ 13,451' T/ 13,470'. WOB-18K, RPM-60, OBPP-3000, SPM-120, GPM- 515, DIFF- 350	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

**Report #: 34 Daily Operation: 1/26/2013 06:00 - 1/27/2013 06:00**

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 025594
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
30	34	14,105.0	8,036.8	11.00	PATTERSON - UTI, 208	

**Operations Summary**

ROTATE & SLIDE DRILL 8 1/2" PROD. LATERAL F/ 13,470' TO 14,105'. .....

**Remarks**

ROTATE & SLIDE DRILL 8 1/2" PROD. LATERAL F/ 13,470' TO 14,105'.

(635' @ 27.0 FPH AVG.)

37.58' HIGH, 19.27' RIGHT OF PLAN # 5

DROPPED DEVIATION TREND F/ 92.24\* @ 13,767' TO 88.99\* @ 14,052' AS PER GEO.

NPT: PATTERSON #208- 78 Hrs.....

**Time Log Summary**

Operation	Com	Dur (hr)
DRLG	ROTATE DRILL F/ 13471' T/ 13534'. WOB-15K, RPM-60, OBPP-3000, SPM-120, GPM- 515, DIFF- 350	1
DRLGSLD	SLIDE DRILL F/ 13534' T/ 13546'. WOB-20K, PP-3150, SPM-120, GPM-515, DIFF- 100, TF-105 R	1
DRLG	ROTATE DRILL F/ 13546' T/ 13628'. WOB-15K, RPM-60, OBPP-3000, SPM-120, GPM- 520, DIFF- 350	1.5
DRLGSLD	SLIDE DRILL F/ 13628' T/ 13640'. WOB-20K, PP-3000, SPM-128, GPM-515, DIFF- 100, TF-150 R	1.5
DRLG	ROTATE DRILL F/13724' T/ 13724'. WOB-15K, RPM-60, OBPP-3000, SPM-120, GPM- 520, DIFF- 350	1.5
DRLGSLD	SLIDE DRILL F/ 13724' T/ 13736'. WOB-20K, PP-3200, SPM-120, GPM-515, DIFF- 100, TF-105 R	2
DRLG	ROTATE DRILL F/ 13736' T/ 13818'. WOB-15K, RPM-60, OBPP-3000, SPM-120, GPM- 520, DIFF- 350	1.5
DRLGSLD	SLIDE DRILL F/ 13818' T/ 13828'. WOB-20K, PP-3200, SPM-128, GPM-515, DIFF- 150, TF-105 R	2
DRLGSLD	SLIDE DRILL F/ 13828' T/ 13862'. WOB-4K, RPM-60, OBPP-2880, SPM-120, GPM- 515, DIFF- 95	3.5
DRLG	DRILL F/ 13,862' T/ 13,914'. WOB-12K, PP-3175, RPM-60, GPM-500, DIFF- 315, TF-105 R	1.5
DRLGSLD	SLIDE DRILL F/ 13,914' T/ 13,939'. WOB-14K, , OBPP-3000, SPM-120, GPM- 500, DIFF- 120	2
DRLG	DRILL F/ 13,939' T/ 14,009'. WOB-10K, PP-3300, SPM-128, GPM-500, DIFF- 310, TF-105 R	2
DRLGSLD	SLIDE DRILL F/ 14,009' T/ 14,019'. WOB-4K, , OBPP-2870, SPM-120, GPM- 500, DIFF- 50	1
DRLG	DRILL F/ 14,019' T/ 14,104'. WOB-13K, PP-3175, SPM-120, GPM-500, DIFF- 350, TF-105 R	1.5
RIGSER	LUBRICATE AND SERVICE RIG..	0.5

**Report #: 35 Daily Operation: 1/27/2013 06:00 - 1/28/2013 06:00**

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 025594
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
31	35	14,860.0	8,039.8	11.00	PATTERSON - UTI, 208	

**Operations Summary**

ROTATE & SLIDE DRILL 8 1/2" PROD. LATERAL F/ 14,105' TO 14,860'.....

**Remarks**

ROTATE & SLIDE DRILL 8 1/2" PROD. LATERAL F/ 14,105' TO 14,860'.

(755' @ 33.1 FPH AVG.)

35.24' HIGH, 27.30' RIGHT OF PLAN # 5

NPT: PATTERSON #208- 78 Hrs.....

**Time Log Summary**

Operation	Com	Dur (hr)
DRLG	ROTATE DRILL F/ 14,105' T/ 14,210'. WOB-15K, RPM-60, OBPP-3000, SPM-118, GPM- 515, DIFF- 350	2.5
DRLGSLD	SLIDE DRILL F/ 14,210' T/ 14,220'. WOB-20K, PP-3150, SPM-118, GPM-510, DIFF- 100, TF-180 R	1
DRLG	ROTATE DRILL F/ 14,220' T/ 14,305'. WOB-15K, RPM-60, OBPP-3000, SPM-120, GPM- 520, DIFF- 350	2.5
DRLGSLD	SLIDE DRILL F/ 14,305' T/ 14,315'. WOB-20K, PP-3000, SPM-118, GPM-510, DIFF- 100, TF-180 R	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROTATE DRILL F/14,315' T/ 14,400'. WOB-15K, RPM-60, OBPP-3000, SPM-118, GPM- 510, DIFF- 350	1.5
DRLGSLD	SLIDE DRILL F/ 14,400' T/ 14,409'. WOB-20K, PP-3200, SPM-120, GPM-510, DIFF- 100, TF-180 R	1.5
DRLG	ROTATE DRILL F/ 13736' T/ 13818'. WOB-15K, RPM-60, OBPP-3000, SPM-120, GPM- 520, DIFF- 350	1.5
RIGSER	LUBRICATE AND SERVICE RIG	0.5
DRLGSLD	SLIDE DRILL F/ 14,484.' T/ 14,494.'. WOB-7K, OBPP-2770, SPM-120, GPM- 515, DIFF- 54	1.5
DRLG	DRILL F/ 14,494.' T/ 14,578'. WOB-8K, PP-3110, RPM-60, GPM-500, DIFF- 235, TF-105 R	1.5
DRLGSLD	SLIDE DRILL F/ 14,578.' T/ 14,590'. WOB-7K, , OBPP-2960, SPM-118, GPM- 490, DIFF- 115	2
DRLG	DRILL F/ 14,590.' T/ 14,673'. WOB-12K, PP-3120, SPM-128, GPM-490, DIFF- 310, TF-105 R	1.5
DRLGSLD	SLIDE DRILL F/ 14,673' T/ 14,683'. WOB-10K, , PSI-2725, SPM-118, GPM- 490, DIFF- 30	1
DRLG	DRILL F/ 14,683..' T/ 14,767'. WOB-13K, PP-3180, SPM-120, GPM-490, DIFF- 245, TF-105 R	1.5
DRLGSLD	SLIDE DRILL F/ 14,767.' T/ 14,777.'. WOB-9K, , PSI-2875, SPM-118, GPM- 490, DIFF- 71	1.5
DRLG	DRILL F/ 14,777..' T/ 14,860'. WOB-13K, PP-3200, SPM-120, GPM-490, DIFF- 285,	1

Report #: 36 Daily Operation: 1/28/2013 06:00 - 1/29/2013 06:00

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig		
32	36	15,460.0	8,029.6	11.00	PATTERSON - UTI, 208		

#### Operations Summary

ROTATE & SLIDE DRILL 8 1/2" PROD. LATERAL F/ 14,860' TO T.D. @ 15,460'.  
CIRCULATE, CONDITION WELL BORE & PUMP TWO HI-VIS LCM SWEEPS TO SURFACE .  
TOOH (SLM) TO 9 5/8" CSG. SHOE MONITORING HOLE DRAG. WELL BORE IN GOOD CONDITION.  
CONTINUE TO TOOH TO SURFACE.

#### Remarks

ROTATE & SLIDE DRILL 8 1/2" PROD. LATERAL F/ 14,860' TO T.D. @ 15,460'.

(600' @ 44.4 FPH AVG.)

41' HIGH, 21.6' RIGHT OF PLAN # 5

NPT: PATTERSON #208- 78 Hrs

### Time Log Summary

Operation	Com	Dur (hr)
DRLG	ROTATE DRILL F/ 14,860.' T/ 14,966'. WOB-12K, RPM-60, PSI/3000, SPM-116, GPM- 510, DIFF- 300	2.5
DRLGSLD	SLIDE DRILL F/ 14,966' T/ 14,976.'. WOB-20K, PP-3000, SPM-116, GPM-510, DIFF- 300, TF-180 R	0.5
DRLG	ROTATE DRILL F/ 14,976' T/ 15,061'. WOB-12K, RPM-60, OBPP-3000, SPM-116, GPM- 515, DIFF- 300	2
DRLGSLD	SLIDE DRILL F/ 15,061' T/ 15,071'. WOB-20K, PP-3000, SPM-116, GPM-510, DIFF- 100, TF-180 R	1.5
DRLG	ROTATE DRILL F/15,071' T/ 15,460'. WOB-15K, RPM-60, OBPP-3000, SPM-118, GPM- 510, DIFF- 350	7
RIGSER	LUBRICATE AND SERVICE RIG	0.5
CIRC	CIRCULATE, CONDITION WELL BORE & PUMP TWO HI-VIS LCM SWEEPS TO SURFACE .	2
TRIP	PUMP SLUG & STRAP DRILL STRING OUT OF HOLE. (ENCOUNTERED NO TIGHT SPOTS IN LATERAL)	8

Report #: 37 Daily Operation: 1/29/2013 06:00 - 1/30/2013 06:00

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig		
33	37	15,460.0	8,029.6	11.00	PATTERSON - UTI, 208		

#### Operations Summary

FINISH TRIP OUT/ LD BHA.PICKUP & TEST LOGGING EQUIP.TIH W/ MICRO IMAGER,SURVEY TOOL & DRILLING GAMA RAY TOOLS

#### Remarks

TIH W/ OBMI, GPIT & GR LOGGING TOOLS

### Time Log Summary

Operation	Com	Dur (hr)
TRIP	TOOH TO SURFACE F/ OPEN HOLE LOGS.	1.5
BHA	BREAK & LAY OUT 8 1/2" PDC, MWD & MUD MOTOR.	1.5
CUTDL	SLIP & CUT 108' OF DRILLING LINE.	2
RIGSER	LUBRICATE AND SERVICE RIG EQUIPMENT.	0.5
SFTY	HELD PRE-JOB SAFETY MTG. W/ SCHLUMBERGER LOGGING & LOCATION PERSONNEL.	2
LOG	R/U & SURFACE TEST LOGGING EQUIPMENT.	6.5
TRIP	TIH/ MICRO IMAGER,SURVEY TOOL & GAMMA RAY. FILL UP DRILL PIPE/ OPEN LOGGING TOOL SIDE DOOR	10

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

<b>Report #: 38 Daily Operation: 1/30/2013 06:00 - 1/31/2013 06:00</b>						
Job Category ORIG DRILLING				Primary Job Type ODR		AFE Number 025594
Days From Spud (days) 34	Days on Location (days) 38	End Depth (ftKB) 15,460.0	End Depth (TVD) (ftKB) 8,029.6	Dens Last Mud (lb/gal) 11.00	Rig PATTERSON - UTI, 208	
<b>Operations Summary</b> TIH TO 15320' W / DRILL STRING AND LOGGING TOOLS LOG WELL POOH / LAY DOWN LOGGING TOOL ASSEMBLE						
<b>Remarks</b> BREAK DOWN LOGGING TOOLS / RIG DOWN SCHLUMBERGER						
<b>Time Log Summary</b>						
Operation	Com					Dur (hr)
LOG	RIG UP WIRE LINE TOOL / TRIP IN HOLE TO 15320'					7
LOG	TRIP OUT OF HOLE / WITH WIRE LINE LOGGING TOOL					8
LOG	PULL OUT WIRE LINE / UNSCREW WINDOW / LOWER SHIEVE					2.5
TRIP	TRIP OUT OF HOLE W/LOGGING TOOLS					5
TRIP	BREAK DOWN LOGGING TOOLS AND RIG DOWN SCHLUMBERGER					1.5
<b>Report #: 39 Daily Operation: 1/31/2013 06:00 - 2/1/2013 06:00</b>						
Job Category ORIG DRILLING				Primary Job Type ODR		AFE Number 025594
Days From Spud (days) 35	Days on Location (days) 39	End Depth (ftKB) 15,460.0	End Depth (TVD) (ftKB) 8,029.6	Dens Last Mud (lb/gal) 11.00	Rig PATTERSON - UTI, 208	
<b>Operations Summary</b> TIH 81 STDS DP AND LAY DOWN / WORK ON CAT WALK / CONTINUE LAY DOWN DP / TIH W / LAST 81 STDS DP / RIG UP LAY DOWN MACHINE / FINISH LAYING DOWN DP						
<b>Remarks</b> LAYING DOWN DRILL STRING WITH L/D MACHINE						
<b>Time Log Summary</b>						
Operation	Com					Dur (hr)
TRIP	TIH 81 STDS/7664'					4.5
TRIP	LAY DOWN DRILL PIPE					8.5
RIGSER	LUBRICATE AND SERVICE RIG					1
U_RIG	ELECTRICAL FAILURE ON HYRAULIC CAT WALK					1
TRIP	CONTINUE LAYING DOWN DRILL PIPE					1
TRIP	TRIP IN THE HOLE THE LAST 81 STDS OF DRILL PIPE					3.5
U_RIG	RIG DOWN CAT WALK WINCH AND SAFETY TRIP WIRE / RIG UP LAY DOWN MACHINE					2.5
TRIP	CONTINUE LAYING DOWN DRILL PIPE WITH LAY DOWN MACHINE					2
<b>Report #: 40 Daily Operation: 2/1/2013 06:00 - 2/2/2013 06:00</b>						
Job Category ORIG DRILLING				Primary Job Type ODR		AFE Number 025594
Days From Spud (days) 36	Days on Location (days) 40	End Depth (ftKB) 15,460.0	End Depth (TVD) (ftKB) 8,029.6	Dens Last Mud (lb/gal) 11.00	Rig PATTERSON - UTI, 208	
<b>Operations Summary</b> FINISH L/D DRILL PIPE / R/U CSG CREW / SAFETY MEETING / RUN 5 1/2 CSG TO BOTTOM / CIR & COND HOLE WHILE RIGGING DN CSG CREW / RIG UP SCHLUMBERGER / SAFETY MEETING / TEST LINES / START CEMENT PROCEEDURES						
<b>Remarks</b> LAYED DN DP / RAN 5 1/2 PROD CSG / CEMENT THE SAME						
<b>Time Log Summary</b>						
Operation	Com					Dur (hr)
DPIPE	FINISH LAYING DOWN DP WITH L/D MACHINE PULL WARE BUSHING					5.5
RURDRT	PULL WEAR BUSHING OUT					0.5
CSG	CLEAN FLOOR / REMOVE RIG BAILS AND ELEVATORS / INSTALL CSG BAILS / RIG UP CSG CREW					1.5
RIGSER	LUBRICATE AND SERVICE RIG					0.5
CSG	MAKE UP AND RUN 5 1/2 CSG TO BOTTOM					13
CIRC	TAG BOTTOM /RIG UP CIR SWEDGE / CIR AND COND HOLE / SAFETY MEETING					2
CMT	RIG UP CEMENT HEAD / TEST LINES @5000 PSI / START CEMENT JOB					1



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Report #: 41 Daily Operation: 2/2/2013 06:00 - 2/3/2013 06:00

Job Category ORIG DRILLING				Primary Job Type ODR			AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig			
37	41	15,460.0	8,029.6	11.00	PATTERSON - UTI, 208			

Operations Summary  
CEMENT 5.5 CSG / 45 bbl MUD PUSH / 189.3 bbl-669 sk LEAD / 457.9 bbl-1810 sk TAIL / 340 bbl 2% KCL DISPL / BUMP PLUG W/500 OVER / PLUG HELD / 3 bbl RETURN

Remarks  
CEMENT 5.5 CSG / INSTALL TUBING HEAD / RIGGING DN / CLEANING TANKS & RIG

#### Time Log Summary

Operation	Com	Dur (hr)
CMT	CEMENT 5.5 PROD CSG / BUMP PLUG 500 PSI OVER / PLUG HELD / 3BBL RETURN	5.5
CMPRI	RIG DOWN CEMENTERS EQUIPMENT	0.5
BOPS	RIG UP NIPPLE DOWN CREW /REMOVE LINES / HOSES / TURNBUCKLES FROM BOP STACK	2
BOPS	SAFETY MEETING WITH CREW / RIG UP WINCHES	1
WLHEAD	NIPPLE DOWN BOPs	1
WLHEAD	CUT AND PREPARE CSG / INSTALL WELL HEAD	2
RDMO	RIG DN "V" DOOR,RIG FLOOR,FLOW LINE,CHOKE & LINES,CHANGE OIL IN TOP DR./ FLUSH THRU PUMPS / CLEAN PITS	12

### Report #: 42 Daily Operation: 2/3/2013 06:00 - 2/3/2013 18:00

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig		
37	41	15,460.0	8,029.6	11.00	PATTERSON - UTI, 208		

Operations Summary  
RIGGING DOWN / PRESSURE WASHING RIG AND TANKS /RELEASE RIG

Remarks  
RIG DOWN / CLEAN TANKS / RELEASE RIG 2-3-13 @1800 HRS

#### Time Log Summary

Operation	Com	Dur (hr)
U_OTR	CLEANING MUD TANKS AND WASHING RIG RELEASED RIG AT 18:00 HOURS 2-3-2013	12

### Report #: 43 Daily Operation: 2/3/2013 18:00 - 2/4/2013 18:00

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 025594	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig		
38	41	15,460.0	8,029.6	11.00			

Operations Summary

Remarks

#### Time Log Summary

Operation	Com	Dur (hr)

### Report #: 44 Daily Operation: 3/8/2013 18:00 - 3/9/2013 18:00

Job Category			Primary Job Type			AFE Number		
ORIG DRILLING			ODR			025594		
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig			
71	41	15,460.0	8,029.6	11.00				

Operations Summary

Remarks

#### Time Log Summary

Operation	Com	Dur (hr)

### Report #: 1 Daily Operation: 2/14/2013 00:00 - 2/14/2013 00:00

Job Category Well Service			Primary Job Type Workover			AFE Number
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
47		0.0				

Operations Summary

Remarks

#### Time Log Summary

Operation	Com	Dur (hr)

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

<b>Report #: 2 Daily Operation: 2/15/2013 00:00 - 2/15/2013 00:00</b>						
Job Category Well Service				Primary Job Type Workover		AFE Number
Days From Spud (days) 48	Days on Location (days)	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
Operations Summary						
Remarks						
<b>Time Log Summary</b>						
Operation	Com					Dur (hr)
<b>Report #: 3 Daily Operation: 2/16/2013 00:00 - 2/16/2013 00:00</b>						
Job Category Well Service				Primary Job Type Workover		AFE Number
Days From Spud (days) 49	Days on Location (days)	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
Operations Summary						
Remarks						
<b>Time Log Summary</b>						
Operation	Com					Dur (hr)
<b>Report #: 4 Daily Operation: 2/18/2013 00:00 - 2/18/2013 00:00</b>						
Job Category Well Service				Primary Job Type Workover		AFE Number
Days From Spud (days) 51	Days on Location (days)	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
Operations Summary						
Remarks						
<b>Time Log Summary</b>						
Operation	Com					Dur (hr)
<b>Report #: 5 Daily Operation: 2/19/2013 00:00 - 2/19/2013 00:00</b>						
Job Category Well Service				Primary Job Type Workover		AFE Number
Days From Spud (days) 52	Days on Location (days)	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
Operations Summary						
Remarks						
<b>Time Log Summary</b>						
Operation	Com					Dur (hr)
<b>Report #: 6 Daily Operation: 2/20/2013 00:00 - 2/20/2013 00:00</b>						
Job Category Well Service				Primary Job Type Workover		AFE Number
Days From Spud (days) 53	Days on Location (days)	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
Operations Summary						
Remarks						
<b>Time Log Summary</b>						
Operation	Com					Dur (hr)
<b>Report #: 1 Daily Operation: 2/14/2013 06:00 - 2/14/2013 18:00</b>						
Job Category ORIG COMPLETION				Primary Job Type OCM		AFE Number 025595
Days From Spud (days) 48	Days on Location (days) 1	End Depth (ftKB) 15,460.0	End Depth (TVD) (ftKB) 0.0	Dens Last Mud (lb/gal)	Rig PIONEER WELL SERVICE, 21	
Operations Summary MIRU						
Remarks						

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Time Log Summary

Operation	Com	Dur (hr)
CLNOUT	MIRU. installed pipe racks and racked TBG. tally pipe ND. flange NU. spool & B.O.P. PU. 4 5/8 " BIT & 5 1/2" SCRAPER RIH W/ 70 JTS. 2 3/8" PH-6 TBG. SHUT IN FOR THE NIGHT.	12

### Report #: 2 Daily Operation: 2/15/2013 06:00 - 2/15/2013 18:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	025595
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
49	1	15,460.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
0.0		PIONEER WELL SERVICE, 21
Operations Summary		
PU TBG TO 13986'.		
Remarks		

### Time Log Summary

Operation	Com	Dur (hr)
CLNOUT	CREW TO LOCATION, OPENED WELL. PU TBG TO 13986'. SWION.	12

### Report #: 3 Daily Operation: 2/16/2013 06:00 - 2/16/2013 18:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	025595
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
50	2	15,460.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
0.0		PIONEER WELL SERVICE, 21
Operations Summary		
CIRC BOTTOMS UP, GOT OUT SOME CEMENT.		
Remarks		

### Time Log Summary

Operation	Com	Dur (hr)
CLNOUT	CREW TO LOCATION. OPENED WELL, PU SWIVEL, RIH TO 15378'. CIRC BOTTOMS UP, GOT OUT SOME CEMENT. LD SWIVEL & 1 JT TBG. SWION.	12

### Report #: 4 Daily Operation: 2/18/2013 06:00 - 2/18/2013 18:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	025595
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
52	2	15,460.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
0.0		PIONEER WELL SERVICE, 21
Operations Summary		
Pump #1 sweep @ 15378'of 1500 gals D-limomene,10 bbls. water, 3500 gals hcl. W/ inhibitors & 5 bbls. gel.		
Remarks		

### Time Log Summary

Operation	Com	Dur (hr)
CLNOUT	Drove crew to location Ru. up pioneer pumping ser. Hose broke on pump. Had to wait 3 hours for new hose to be installed. Pump #1 sweep @ 15378'of 1500 gals D-limomene,10 bbls. water, 3500 gals hcl. W/ inhibitors & 5 bbls. gel. cir till clean. P.O.O.H. TO 9750'. RU. PUMP trucks pump 1000 gals d-limomene cir till clean. Shut in for the night.	12

### Report #: 6 Daily Operation: 2/19/2013 06:00 - 2/19/2013 18:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	025595
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
53	3	15,460.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
0.0		PIONEER WELL SERVICE, 21
Operations Summary		
ND TEST FLANGE NU B.O.P.		
Remarks		

### Time Log Summary

Operation	Com	Dur (hr)
CLNOUT	Drove crew to location opened well RD. swivel P.O.O.H. W/ TBG. ND. B.O.P. NU. TEST FLANGE. RU. PUMP TRUCK. TEST CASING TO 7500# HELD FOR 5 MIN. ND. TEST FLANGE NU. B.O.P. RD. TRK. RIH W/ 230 JTS. TBG. P.O.O.H. W 230 JTS. LD. SHUT IN FOR THE NIGHT.	12

### Report #: 5 Daily Operation: 2/19/2013 06:00 - 2/19/2013 18:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	025595
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
53	3	15,460.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
0.0		PIONEER WELL SERVICE, 21
Operations Summary		
CASING TEST		
Remarks		

### Time Log Summary

Operation	Com	Dur (hr)
CASING	CASING TEST	12

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

<b>Report #: 7 Daily Operation: 2/20/2013 06:00 - 2/20/2013 18:00</b>						
Job Category ORIG COMPLETION				Primary Job Type OCM		AFE Number 025595
Days From Spud (days) 54	Days on Location (days) 4	End Depth (ftKB) 15,460.0	End Depth (TVD) (ftKB) 0.0	Dens Last Mud (lb/gal)	Rig PIONEER WELL SERVICE, 21	
Operations Summary ND. B.O.P. installed blank flange. RD. cleaned location moved to next location						
Remarks						
<b>Time Log Summary</b>						
Operation	Com					Dur (hr)
CLNOUT	Drove crew to location opened well RIH. w/rest TBG. P.O.O.H. LD. 262JTS. OF 2 7/8" TBG. ND. B.O.P. installed blank flange. RD. cleaned location moved to next location					12
<b>Report #: 8 Daily Operation: 3/4/2013 06:00 - 3/4/2013 18:00</b>						
Job Category ORIG COMPLETION				Primary Job Type OCM		AFE Number 025595
Days From Spud (days) 66	Days on Location (days) 4	End Depth (ftKB) 15,460.0	End Depth (TVD) (ftKB) 0.0	Dens Last Mud (lb/gal)	Rig E&P/SCHL, N/A	
Operations Summary FRAC'D STAGES 1-5						
Remarks						
<b>Time Log Summary</b>						
Operation	Com					Dur (hr)
<b>Report #: 9 Daily Operation: 3/5/2013 06:00 - 3/5/2013 18:00</b>						
Job Category ORIG COMPLETION				Primary Job Type OCM		AFE Number 025595
Days From Spud (days) 67	Days on Location (days) 4	End Depth (ftKB) 15,460.0	End Depth (TVD) (ftKB) 0.0	Dens Last Mud (lb/gal)	Rig E&P/SCHL, N/A	
Operations Summary FRAC'D STAGES 6-11						
Remarks						
<b>Time Log Summary</b>						
Operation	Com					Dur (hr)
<b>Report #: 10 Daily Operation: 3/6/2013 06:00 - 3/6/2013 18:00</b>						
Job Category ORIG COMPLETION				Primary Job Type OCM		AFE Number 025595
Days From Spud (days) 68	Days on Location (days) 4	End Depth (ftKB) 15,460.0	End Depth (TVD) (ftKB) 0.0	Dens Last Mud (lb/gal)	Rig E&P/SCHL, N/A	
Operations Summary FRAC'D STAGES 12-18						
Remarks						
<b>Time Log Summary</b>						
Operation	Com					Dur (hr)
<b>Report #: 11 Daily Operation: 3/7/2013 06:00 - 3/7/2013 18:00</b>						
Job Category ORIG COMPLETION				Primary Job Type OCM		AFE Number 025595
Days From Spud (days) 69	Days on Location (days) 4	End Depth (ftKB) 15,460.0	End Depth (TVD) (ftKB) 0.0	Dens Last Mud (lb/gal)	Rig E&P/SCHL, N/A	
Operations Summary FRAC'D STAGES 19-22						
Remarks						
<b>Time Log Summary</b>						
Operation	Com					Dur (hr)

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

Report #: 12 Daily Operation: 3/22/2013 06:00 - 3/23/2013 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM			AFE Number 025595
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
85	5	15,460.0	0.0		Coil Tubing Services, 2 3/8 UNIT	

### Operations Summary

WSI, pending ops. on 4-8 #3h.  
Swing over RU CTU.  
MU drillout BHA, weld on coil connector leaking, LD BHA.  
Move over & RU FB iron while waiting for welder to AOL.  
Weld on new coil connector, allow to cool.  
Pull test 25K, pressure test coil connector 3,100 psi.  
MU drillout BHA.  
Function test drillout BHA 2.5 bpm/2,100 psi.  
NU stac.

### Remarks

No incidents or accidents to report.

### BIT DATA:

SIZE: 4 5/8"  
TYPE: HA-2G  
S/N: K34017  
PIN SIZE: 2 7/8"  
IADC: 126

Downtime - NAC Sandex - 0 hrs, Cumm. hrs.

Downtime- CTS 0 hrs.

BBS RT: 0 bbls.

CR: 0 bbls.

### Time Log Summary

Operation	Com	Dur (hr)
WSI	WSI, pending ops on University 4-8 #3h.	20
RURD	Swing over from 4-8 #3h, RU CTU. MU drillout BHA weld on coil connector leaking severly. Call for welder. LD BHA, cut off coil connector, NU BOP.	0.75
RURD	Move over, start RU FB iron & set new manifold while waiting on welder.	0.75
OTHR	Weld on new coil connector, wait for cool down & pull test to 25K, pressure test 3,100 psi.	1.5
RURD	MU drillout BHA as follows: coil connector 2 3/8" OD Dual BPV Jars Disconnect Circ Sub Agitator X-Over 3 1/8" Motor X-Over 4 5/8" JZ Bit Total BHA 30.03' Function test BHA @ 2.5 bpm/2,100 psi.	0.5
NU/TEST	NU & prepare to test stac & FB iron	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

Report #: 13 Daily Operation: 3/23/2013 06:00 - 3/24/2013 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 025595
Days From Spud (days) 86	Days on Location (days) 6	End Depth (ftKB) 15,460.0	End Depth (TVD) (ftKB) 0.0	Dens Last Mud (lb/gal)	Rig Coil Tubing Services, 2 3/8 UNIT

Operations Summary  
 Pressure test stac & iron to 5 K.  
 Drill 2 CBP's.  
 Drill CFP's #21 tag #20 @ 9,172' CTM  
 Short trip to verticle.  
 Drill CFP's #20 thru #18 tag #17 @ 10,117' CTM  
 Short trip to 7,730'  
 Drill CFP's #17 thru #13 tag #12 @ 11,653' CTM  
 Short trip to 7,700'  
 Drill CFP's #12 thru #8, Tag CFP #7 @ 13,188' CTM  
 Short trip to 7,600'  
 RIH w/BHA @ 10,690' at time of report.

Remarks  
 No incidents or accidents to report.

BIT DATA:  
 SIZE: 4 5/8"  
 TYPE: HA-2G  
 S/N: K34017  
 PIN SIZE: 2 7/8"  
 IADC: 126

Downtime - NAC Sandex - 0 hrs, Cummm. hrs.  
 Downtime- CTS 0 hrs.

BBLS RT: 612 bbls.  
 CR: 612 bbls.  
 Oil RT: 100 bbls.

### Time Log Summary

Operation	Com	Dur (hr)
TEST CSG/DRILL OUT/FIT	Pressure test stack & FB iron to 5K.	1
MILL	RIH w/BHA on 2-3/8" CTS CTU. Tag top kill plug @ 7,046' CTM. Drill plug 4 bpm in @ 4000# / 4 bpm out at 2000# - Drill time 5 minutes. Continue in hole to second kill plug @ 7,174' CTM. Drill plug 4 bpm in @ 4000# / 4 bpm out at 2000# - Drill time 16 minutes. Pressure below plug 1200# surface psi. Continue to CFP #21. Tag @ 8,874'. Drill plug 4 bpm @ 4300# in / 4 bpm @ 2100# out - Drill time 9 minutes. Continue to CFP #20. Tag @ 9172'. Well flowing 90% oil - losing water. Prep to short trip back into vertical, and wait on additional drlg water.	3
CLNOUT	Short trip into vertical section. Well flowing oil - losing water. WO additional water for drilling. Continue circ'ing well at 4 bpm wtr in / 4 bpm oil/water out. Pioneer transports deliver/off-load 1000 bbls Kcl wtr for continued drilling. Trip back into lateral and tag plug #20 @ 9172'.	3
MILL	Continue drilling on CFP #20. 4 bpm in @ 3900# / 4 bpm out @ 600#. Drilling time 15 minutes. Wash to CFP #19 @ 9514' CTM. Drill @ 4 bpm @ 4000# in / 4 bpm @ 600# out. Drilling time 17 minutes. Pump 10 bbl sweep. Wash to CFP #18 @ 9787' CTM. Drill @ 4 bpm @ 4000# in / 4 bpm @ 600# out. Drilling time 17 minutes. Pump 10 bbl sweep. Wash to CFP #17 @ 10,117' CTM. Tag plug. Pump 10 bbl sweep to prepare for short trip.	2.25
CLNOUT	Short trip from CFP #17 to 7730'. RIH and tag CFP #17 @ 10,117' CTM.	1.5
MILL	Drill CFP #17. 4 bpm in @ 3500# / 4 bpm out @ 700# Drilling time 5 minutes - plug turned loose. Wash to CFP #16 @ 10,414' CTM. Drill @ 4 bpm @ 3500# in / 4 bpm 700# out. Drilling time 8 minutes. Wash to CFP #15 @ 10,738' WL measurement - did not tag plug. Continue in hole to CFP #14 @ 11,049. Drill plug 4 bpm/3,500 psi, returning 4.1 bpm/550 psi. Drill time 6 min. Wash to CFP #13 @ 11,322' CTM pumping 4 bpm/ 3200 psi, returning 4 bpm/ 600 psi. w/very little sand, plug debris small. Drill time 15 min. Wash to CFP #12 @ 11,653' CTM. Start short trip	3
CLNOUT	Short trip from CFP #12 to 7,700'. RIH and re- tag CFP #12 @ 11,653' CTM.	1.75
MILL	Drill CFP #12 @ 11,653' CTM pumping 4 bpm/ 4,019 psi, returning 4 bpm/600 psi. Drill time 12 min. Wash to CFP #11 @ 11,943' CTM pumping 4 bpm/3,648 psi, returning 4 bpm/600 psi. Drill time 24 min. Washing down to CFP #10 fighting friction, start pipe on pipe @ 12,011' CFP #10 & #9 were not tagged, tag & drill CFP #8 pumping 4 bpm/3,708 psi, returning 4 bpm/600 psi. Drill time 22 min. Wash down & tag CFP #7 @ 13,188' CTM, start short trip.	4.5
CLNOUT	Short trip from CFP #7 @ 13,188' to 7,600' pumping 4 bpm/4,100 psi, returning 4.2 bpm/600 psi, with medeium sand. RIH & re-tag CFP #7 @ 13,188'. BHA @ 10,690' at time of report.	4



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

Report #: 14 Daily Operation: 3/24/2013 06:00 - 3/25/2013 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 025595
Days From Spud (days) 87	Days on Location (days) 7	End Depth (ftKB) 15,460.0	End Depth (TVD) (ftKB) 0.0	Dens Last Mud (lb/gal)	Rig Coil Tubing Services, 2 3/8 UNIT

### Operations Summary

Continue RIH to CFP #7 @ 13,188'  
 Drill CFP's #7 thru #4 tag #3 @ 14,425' CTM  
 Short trip from 14,425' to 7,740'  
 RIH to CFP #3 @ 14,425'  
 Drill CFP's #3  
 Safety Meeting  
 Short trip from 14,591' to 11,000'  
 RIH to 14,589' w/ no success making hole.  
 PUH from 14,589' to 7,600'  
 RIH to 14,588' conditioning hole w/Beka Lube.  
 Wash down & drill CFP #2  
 Washing down @ 14,613'

### Remarks

No incidents or accidents to report.

### BIT DATA:

SIZE: 4 5/8"  
 TYPE: HA-2G  
 S/N: K34017  
 PIN SIZE: 2 7/8"  
 IADC: 126

Downtime - NAC Sandex - 0 hrs, Cumulative hrs.  
 Downtime- CTS 0 hrs.

BBLS RT: 149 bbls.  
 CR:761 bbls.  
 Oil on location: 100 bbls.

### Time Log Summary

Operation	Com	Dur (hr)
MILL	Continue RIH after short tripping to CFP #7 @ 13,188' CTM. Drill plug @ 4 bpm @ 3500# in / 4 bpm @ 600# out. Drill time 11 minutes. Wash down to CFP #6 @ 13,482' CTM. Drill plug @ 4 bpm @ 3500# in / 4 bpm @ 700# out. Drill time 18 minutes. Wash to CFP #5 @ 13,802' CTM. Drill plug @ 4 bpm @ 3600# in / 4 bpm @ 700#. Drill time 15 minutes. Wash to CFP #4 @ 14,109' CTM. Drill plug @ 4 bpm @ 3600# in / 4 bpm @ 700# out. Drill time 8 minutes. Wash to CFP #3 @ 14,425' CTM. Tag plug. Pump sweep, and prep to short trip.	5
CLNOUT	Short trip BHA from CFP #3 @ 14,425' to 7,740' circulating clean. Trip BHA back into hole and tag CFP #3.	4
MILL	Tag CFP #3 @ 14,245' CTM. Drill plug @ 4 bpm @ 3600# in / 4 bpm @ 600# out. Drilling time 34 minutes. Pump sweep.  PJSM with crew change @ 18:45  Wash to 14,591' CTM. Adding 5 gal pipe on pipe every 60 bbls.	5.5
TRIP	Unable to make hole from 14,591' PUH to 11,000' & RIH to get down thru friction bite. Pumping 4 bpm/3,800 psi, adding 5 gal. pipe on pipe every 60 bbls. returning 4 bpm/600 psi. RIH @ 160 FPM to 14,589' w/no success, instructed to PUH to verticle section.	2.5
TRIP	14,589' PUH to verticle section @ 7,600' Conditioning hole w/Beka Lube. RIH to 14,588' @ 105 fpm.	5.25
MILL	Wash down to CFP #2 @ 14,680' CTM, pumping 4 bpm/3,625 psi, returning 4 bpm/600 psi. Time to drill 35 min. Washing down to CFP #1 @ time of report @ 14,613'	1.75

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

Report #: 15 Daily Operation: 3/25/2013 06:00 - 3/26/2013 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM			AFE Number 025595
Days From Spud (days) 88	Days on Location (days) 8	End Depth (ftKB) 15,460.0	End Depth (TVD) (ftKB) 0.0	Dens Last Mud (lb/gal)	Rig Coil Tubing Services, 2 3/8 UNIT	

Operations Summary  
Continue wash to 14,719'  
Short trip from 14,719' to 7,700'  
RIH to 14,708'  
POOH to inspect BHA.  
PJSM w/crew change.  
L/D bad motor & replace, inspect tool string & test.  
P/U New motor & tested BHA.  
RIH to CFP#1 @ 15,058' & drill final CFP.  
Wash to PBTD @ 15,378' CTM. pump 20 bbl sweep.  
TOOH w/drillout BHA. Current depth @ report time 4,000'

Remarks  
No incidents or accidents to report.

BIT DATA:  
SIZE: 4 5/8"  
TYPE: HA-2G  
S/N: K34017  
PIN SIZE: 2 7/8"  
IADC: 126

Downtime - NAC Sandex - 0 hrs, Cumm. hrs.  
Downtime- CTS 0 hrs.

BBLS RT: - 454 bbls.  
CR: 1,215 bbls.  
Oil on location: 100 bbls.

### Time Log Summary

Operation	Com	Dur (hr)
MILL	Continue washing down to 14,719'. Friction-locked. PU 1000' to 13,179' until attaining pipe weight. RIH @ 130 FPM, losing coil speed as locked-spot approached. Set down @ 14,719'. Left weight on bit for approx 45 minutes with no progress.	3
CLNOUT	Short trip BHA from 14,719' to 7,700' spotting Beka-lube to recondition pipe ID. RIH w/BHA pumping Beka-lube @ 165 FPM to 14,708' CTM with fluid rates @ 4.5 bpm @ 4300# in / 4.5 bpm @ 600# out. Stacked out.	4
MILL	Continue drilling @ 14,708' CTM @ 4.5 bpm in @ 3700# / 4.5 bpm out @ 600#. Drilled one hour - no progress.	1.25
BHA	POH to inspect BHA. Upon reaching surface w/BHA 2' of outer shell of motor was missing.  PJSM with crew change @ 18:30.	4.5
RURD	L/D BHA to change out motor, inspect tool string & test. Function test BHA @ 3 bpm/2,500 psi. Test stac & FB iron 5K.	1.5
MILL	Open well @ 500 psi,RIH & tag CFP #1 @ 15,058' CTM, pumping 4 bpm/4,715 psi, returning 4 bpm/600 psi. Drill time 35 min. Wash to PBTD, tagged @ 15,378' CTM. PUH to 15,363' Pump 20 bbls sweep w/marker & 122 bbls.	4.5
TRIP BHA	TOOH to surface, pumping 4 bpm/4,800 psi, returning 4 bpm/600 psi. w/moderate sand.  Current depth @ report time 4,000'	5.25

Report #: 16 Daily Operation: 3/26/2013 06:00 - 3/27/2013 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM			AFE Number 025595
Days From Spud (days) 89	Days on Location (days) 9	End Depth (ftKB) 15,460.0	End Depth (TVD) (ftKB) 0.0	Dens Last Mud (lb/gal)	Rig PIONEER WELL SERVICE, <rigno>	

Operations Summary  
Continue POH w/drilling BHA.  
MU & RIH w/ProTechnics logging BHA - log well from 500' above KOP to PBTD, and from PBTD to 500' above KOP. POH.  
Secure well, L/D Logging tool, N/U lube & blow reel dry.  
R/D CTU & related equipment.  
Clean Sand X.

Remarks  
No incidents or accidents to report

Downtime - NAC Sandex - 0 hrs, Cumm. hrs.  
Downtime- CTS 0 hrs.

BBLS RT: - 932 bbls.  
CR: - 2,147 bbls.  
Oil on location: 100 bbls.

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Time Log Summary

Operation	Com	Dur (hr)
TRIP BHA	Continue POH w/milling BHA. ND lube. LD BHA.	1
LOGRA	MU & RIH w/ProTechnics memory tool on 2-3/8" CTS coil tubing. RIH to 7200'. Begin logging in hole @ 35 FPM avg, logging to 15,378' CTM. Log from 15,378' CTM to 7,200' CTM @ 35 FPM avg. Continue POH with memory tool. Close well in. LD tools.	11
RURD	LD memory tool, download logs, NU lube and blow reel dry to FB tanks w/N2	3
RURD	R/D CTU & related equipment.  WSI & secure.	1
U_WT	Wait on Master Vac to AOL.	3.5
OTHR	Super Vac sand from Sand X.	4.5

### Report #: 17 Daily Operation: 3/27/2013 06:00 - 3/28/2013 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM			AFE Number 025595
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
90	10	15,460.0	0.0		PIONEER WELL SERVICE, <rigno>	

#### Operations Summary

WSI Pending Ops on 3H.  
SICP 1325 Psi.  
ND Frac Stack.  
MIRU API WL.  
RIH w/ GR, Junk Basket & CCL.  
RIH to 8,050' WLM.  
PU Odessa's Arrowset 2 7/8 Packer.  
RIH, Set packer @ 7,975' WLM.  
RDMOL API WL.  
Secured well.  
SDFN.  
WSI.

#### Remarks

No incidents or accidents to report

### Time Log Summary

Operation	Com	Dur (hr)
WSI	WSI Pending ops on 3H.	2
RURD	Hold JSA Safety Meeting, ND 7 1/16" and 5 1/8" Frac Stack.	1
WSI	WSI Pending ops on 3H.	5.5
RURD	MURU API WL, RIH w/ 4.625" OD Gauge Ring, Junk Basket and CCL. RIH to 8,050' WLM. POOH w/ GR. POOH.	0.5
WLPAK	RD 4.625" OD Gauge Ring, PU Odessa Packers Services Arrowset-1X w/ 2 7/8" T-2 On-Off Packer, w/ 2.250 "F" Seal Nipple 5 1/2" X 2 7/8"..	1.5
WLPAK	RIH w/ Packer and set packer @ 8,050' WLM.	1.5
WLPAK	POOH w/ WL and Setting tool. Negative tested packer by bleeding casing pressure from 600 Psi to 0 Psi, good test. RD API WL.	2
SDFN	Well secure. SDFN.	10

### Report #: 19 Daily Operation: 3/28/2013 06:00 - 3/29/2013 06:00

Job Category				Primary Job Type		AFE Number	
ORIG COMPLETION				OCM		025595	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig		
91	11	15,460.0	0.0		PIONEER WELL SERVICE. <rigno>		

#### Operations Summary

WSI Pending ops on 3H.  
RDMO PWS WO RigFrom 3H.  
RU WO Rig & support equipment.  
WSI, SICP 0 Psi.  
Secure Location.  
SDFN.

#### Remarks

No accidents or incidents to report.

### Time Log Summary

Operation	Com	Dur (hr)
WSI	WSI Pending ops on 3H.	9
RURD	RDMO PWS WO Rig from 3H Well. RU Rig and support equipment. ND J&W Frac valve, NU rig BOP. Set catwalk and load pipe racks w/ 2 7/8" L-80 production tubing. Secure location, SDFN.	4
WSI	WSI, SICP 0 Psi.	11

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Report #: 18 Daily Operation: 3/28/2013 06:00 - 3/29/2013 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM			AFE Number 025595
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
91	10	15,460.0	0.0		PIONEER WELL SERVICE, <rigno>	

Operations Summary

Remarks

### Time Log Summary

Operation	Com	Dur (hr)

### Report #: 20 Daily Operation: 3/29/2013 06:00 - 3/30/2013 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM			AFE Number 025595
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
92	12	15,460.0	0.0		PIONEER WELL SERVICE, <rigno>	

Operations Summary

WSI No activity.  
SICP 0 Psi.  
Hold JSA Safety Meeting.  
RIH w/ 2 7/8" L-80 Production Tubing.  
RDMOPU.  
Turn well over to production.

Remarks

No accidents or incidents to report.

5 jts 2-7/8" L80 tbg (NEW) left on sills on location.

### Time Log Summary

Operation	Com	Dur (hr)
WSI	WSI No activity.	1.5
SFTY	Hold JSA Safety Meeting.	0.5
TRIP	RIH w/ 2 7/8" 6.5# L-80 Production tubing & PCS GLV's. Space well out. Latch onto pkr. NDBOP. Place tbg/pkr in 20k compression. NUWH. Pioneer pump load tubing to shear pressure disc pins. Pump additional 3 bbls past burst point to ensure no restriction.	4
RIGSER	RDMOPU. Release all light towers, porta-potties, frac tanks, and BTI tubing installation rentals. Remove all equipment from around wellhead for flowline hook-ups. Turn well over to production dept.	4
	Completions has turned well over to production dept.	14

### Report #: 21 Daily Operation: 3/30/2013 00:00 - 5/16/2013 00:00

Job Category ORIG COMPLETION			Primary Job Type OCM			AFE Number 025595
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
138	12	15,460.0	0.0			

Operations Summary

Daily Well Test  
After Completion

Remarks

Final Report

### Time Log Summary

Operation	Com	Dur (hr)

### WELL DETAILS

Well Name UNIVERSITY 4-8 4H	API/UWI 42-461-38465-0000	Operator PIONEER NATURAL RESRC USA, INC
--------------------------------	------------------------------	--------------------------------------------

### Wellbore Hole Size

Section Des	Size (in)	Act Top (ftKB)	Act Btm (ftKB)	Start Date	End Date
Surface	17 1/2	0.0	775.0	12/28/2012	12/29/2012
Intermediate	12 1/4	770.0	7,680.0	1/16/2013	1/16/2013
Lateral	8 1/2	7,680.0	15,460.0	1/18/2013	1/28/2013

### Surface Casing

Set Depth (ftKB)	Run Date	Centralizers						
762.5	12/29/2012	6						
Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Casing Joints	13 3/8	12.715	54.50	J-55	717.10	17	0.0	717.1
FLOAT COLLAR	13 3/8	12.715	48.00	J-55	0.82	1	717.1	717.9

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

Item Des		OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Casing Joints		13 3/8	12.715	54.50	J-55	42.89	1	717.9	760.8
FLOAT SHOE		13 3/8	12.715	48.00	J-55	1.73	1	760.8	762.5
Surface Casing Cement									
Type Casing	String Surface, 762.5ftKB	Cementing Start Date 12/29/2012		Cementing End Date 12/29/2012		Cementing Company x		Top (ftKB) 0.0	Btm (ftKB) 768.3
Class Class C		Amount (sacks) 940			Yield (ft³/sack) 1.71		Density (lb/gal) 13.60		
Intermediate Casing									
Set Depth (ftKB) 7,680.0	Run Date 1/16/2013		Centralizers 20						
Item Des		OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
CASING		9 5/8	8.755	47.00	L-80	0.00	0	-12.6	-12.6
LANDING JT		9 5/8	8.755	47.00	L-80	34.45	1	-12.6	21.9
CASING		9 5/8	8.755	47.00	L-80	3,495.60	75	21.9	3,517.5
CASING RITE WRAP		9 5/8	8.755	47.00	L-80	3,043.96	65	3,517.5	6,561.4
CASING		9 5/8	8.755	47.00	L-80	1,069.42	23	6,561.4	7,630.9
Float Collar		9 5/8	8.755	47.00	L-80	1.44	1	7,630.9	7,632.3
Casing		9 5/8	8.755	47.00	L-80	46.46	1	7,632.3	7,678.8
Float Shoe		9 5/8	8.755	47.00	L-80	1.24	1	7,678.8	7,680.0
Intermediate Casing Cement									
Type Casing	String Intermediate, 7,680.0ftKB	Cementing Start Date 1/16/2013		Cementing End Date 1/17/2013		Cementing Company SCHLUMBERGER		Top (ftKB) 0.0	Btm (ftKB) 7,680.0
Class		Amount (sacks)			Yield (ft³/sack)		Density (lb/gal)		
Production Casing									
Set Depth (ftKB) 15,460.0	Run Date 2/2/2013		Centralizers 15						
Item Des		OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Casing Joints		5 1/2	4.778	20.00	P-110	6,886.79	164	29.6	6,916.4
Marker Joint		5 1/2	4.000	20.00	p-110	19.78	1	6,916.4	6,936.2
Casing Joints		5 1/2	4.778	20.00	P-110	152.34	4	6,936.2	7,088.5
Marker Joint		5 1/2	4.000	20.00	p-110	19.31	1	7,088.5	7,107.8
Casing Joints		5 1/2	4.778	20.00	P-110	8,265.98	198	7,107.8	15,373.8
Float Collar		5 1/2	4.778	20.00	P-110	1.31	1	15,373.8	15,375.1
Casing Joints		5 1/2	4.778	20.00	P-110	83.32	2	15,375.1	15,458.4
Float Shoe		5 1/2	4.778	20.00	p-110	1.56	1	15,458.4	15,460.0
Production Casing Cement									
Type Casing	String Production, 15,460.0ftKB	Cementing Start Date 2/2/2013		Cementing End Date 2/2/2013		Cementing Company SCHLUMBERGER		Top (ftKB) 0.0	Btm (ftKB) 15,438.0
Class		Amount (sacks)			Yield (ft³/sack)		Density (lb/gal)		
Cement Squeeze									
Description		Type		String		Cementing Start Date	Cementing End Date	Top (ftKB)	Btm (ftKB)
Amount (sacks)		Yield (ft³/sack)				Dens (lb/gal)			
Perforations									
Top (ftKB)	Btm (ftKB)	Zone		Shot Dens (shots/ft)	Entered Shot Total	Com			
8,598.0	8,848.0	WOLFCAMP A2, Original Hole		4.0	40	8598-8600, 8660-8662, 8722-8724, 8784-8786, 8846-8848			
8,908.0	9,158.0	WOLFCAMP A2, Original Hole		4.0	40	8908-8910, 8970-8972, 9032-9034, 9094-9096, 9156-9158			
9,218.0	9,468.0	WOLFCAMP A2, Original Hole		4.0	40	9218-9220, 9280-9282, 9342-9344, 9404-9406, 9466-9468			
9,528.0	9,778.0	WOLFCAMP A2, Original Hole		4.0	40	9528-9530, 9590-9592, 9652-9654, 9714-9716, 9776-9778			
9,838.0	10,088.0	WOLFCAMP A2, Original Hole		4.0	40	9838-9840, 9900-9902, 9962-9964, 10024-10026, 10086-10088			
10,148.0	10,398.0	WOLFCAMP A2, Original Hole		4.0	40	10148-10150, 10210-10212, 10272-10274, 10334-10336, 10396-10398			
10,458.0	10,708.0	WOLFCAMP A2, Original Hole		4.0	40	10458-10460, 10520-10522, 10582-10584, 10644-10646, 10706-10708			
10,768.0	11,018.0	WOLFCAMP A2, Original Hole		4.0	40	10768-10770, 10830-10832, 10892-10894, 10954-10956, 11016-11018			
11,078.0	11,328.0	WOLFCAMP A2, Original Hole		4.0	40	11078-11080, 11140-11142, 11202-11204, 11264-11266, 11326-11328			

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Perforations

Top (ftKB)	Btm (ftKB)	Zone	Shot Dens (shots/ft)	Entered Shot Total	Com
11,388.0	11,638.0	WOLFCAMP A2, Original Hole	4.0	40	11388-11390, 11450-11452, 11512-11514, 11574-11576, 11636-11638
11,698.0	11,948.0	WOLFCAMP A2, Original Hole	4.0	40	11698-11700, 11760-11762, 11822-11824, 11884-11886, 11946-11948
12,008.0	12,258.0	WOLFCAMP A2, Original Hole	4.0	40	12008-12010, 12070-12072, 12132-12134, 12194-12196, 12256-12258
12,318.0	12,568.0	WOLFCAMP A2, Original Hole	4.0	40	12318-12320, 12380-12382, 12442-12444, 12504-12506, 12566-12568
12,628.0	12,878.0	WOLFCAMP A2, Original Hole	4.0	40	12628-12630, 12690-12692, 12752-12754, 12814-12816, 12876-12878
12,938.0	13,188.0	WOLFCAMP A2, Original Hole	4.0	40	12938-12940, 13000-13002, 13062-13064, 13124-13126, 13186-13188
13,248.0	13,498.0	WOLFCAMP A2, Original Hole	4.0	40	13248-13250, 13310-13312, 13372-13374, 13434-13436, 13496-13498
13,558.0	13,808.0	WOLFCAMP A2, Original Hole	4.0	40	13558-13560, 13620-13622, 13682-13684, 13744-13746, 13806-13808
13,868.0	14,118.0	WOLFCAMP A2, Original Hole	4.0	40	13868-13870, 13930-13932, 13992-13994, 14054-14056, 14116-14118
14,178.0	14,428.0	WOLFCAMP A2, Original Hole	4.0	40	14178-14180, 14240-14242, 14302-14304, 14364-14366, 14426-14428
14,488.0	14,738.0	WOLFCAMP A2, Original Hole	4.0	40	14488-14490, 14550-14552, 14612-14614, 14674-14676, 14736-14738
14,798.0	15,048.0	WOLFCAMP A2, Original Hole	4.0	40	14798-14800, 14860-14862, 14922-14924, 14984-14986, 15046-15048
15,108.0	15,358.0	WOLFCAMP A2, Original Hole	4.0	40	15108-15110, 15170-15172, 15232-15234, 15294-15296, 15356-15358

### Completion (FRAC) Details

#### Stage 1 on 3/4/2013 06:00

Date 3/4/2013	Type Stage 1	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 15,108.0	Max Btm Depth (ftKB) 15,358.0
------------------	-----------------	------------------------------------	------------------------------------------------	----------------------------------	----------------------------------

#### GEL

Fluid Name Slickwater	Total Water/Clean Volume (bbl) 9,827.81
--------------------------	--------------------------------------------

#### SAND & ACID

Additive HCL 15%	Type Acid	Amount 3,000.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH	Type Bulk Sand	Amount 350,281.0	Units lb	Sand Size 40/70-100	Concentration... 2.25

#### Stage 2 on 3/4/2013 06:00

Date 3/4/2013	Type Stage 2	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 14,798.0	Max Btm Depth (ftKB) 15,048.0
------------------	-----------------	------------------------------------	------------------------------------------------	----------------------------------	----------------------------------

#### GEL

Fluid Name Slickwater	Total Water/Clean Volume (bbl) 9,781.90
--------------------------	--------------------------------------------

#### SAND & ACID

Additive HCL 15%	Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH	Type Bulk Sand	Amount 350,811.0	Units lb	Sand Size 40/70-100	Concentration... 2.25

#### Stage 3 on 3/4/2013 06:00

Date 3/4/2013	Type Stage 3	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 14,488.0	Max Btm Depth (ftKB) 14,738.0
------------------	-----------------	------------------------------------	------------------------------------------------	----------------------------------	----------------------------------

#### GEL

Fluid Name Slickwater	Total Water/Clean Volume (bbl) 9,880.90
--------------------------	--------------------------------------------

#### SAND & ACID

Additive HCL 15%	Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH	Type Bulk Sand	Amount 350,248.0	Units lb	Sand Size 40/70-100	Concentration... 2.25

#### Stage 4 on 3/4/2013 06:00

Date 3/4/2013	Type Stage 4	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 14,178.0	Max Btm Depth (ftKB) 14,428.0
------------------	-----------------	------------------------------------	------------------------------------------------	----------------------------------	----------------------------------



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

GEL						
Fluid Name Slickwater			Total Water/Clean Volume (bbl) 9,746.38			
SAND & ACID						
Additive HCL 15%		Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH		Type Bulk Sand	Amount 350,802.0	Units lb	Sand Size 40/70-100	Concentration... 2.25
Stage 5 on 3/4/2013 06:00						
Date 3/4/2013	Type Stage 5	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services		Min Top Depth (ftKB) 13,868.0	Max Btm Depth (ftKB) 14,118.0
GEL						
Fluid Name Slickwater			Total Water/Clean Volume (bbl) 9,707.38			
SAND & ACID						
Additive HCL 15%		Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH		Type Bulk Sand	Amount 350,618.0	Units lb	Sand Size 40/70-100	Concentration... 2.25
Stage 6 on 3/5/2013 06:00						
Date 3/5/2013	Type Stage 6	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services		Min Top Depth (ftKB) 13,558.0	Max Btm Depth (ftKB) 13,808.0
GEL						
Fluid Name Slickwater			Total Water/Clean Volume (bbl) 9,756.38			
SAND & ACID						
Additive HCL 15%		Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH		Type Bulk Sand	Amount 350,122.0	Units lb	Sand Size 40/70-100	Concentration... 2.25
Stage 7 on 3/5/2013 06:00						
Date 3/5/2013	Type Stage 7	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services		Min Top Depth (ftKB) 13,248.0	Max Btm Depth (ftKB) 13,498.0
GEL						
Fluid Name Slickwater			Total Water/Clean Volume (bbl) 10,101.38			
SAND & ACID						
Additive HCL 15%		Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH		Type Bulk Sand	Amount 350,310.0	Units lb	Sand Size 40/70-100	Concentration... 2.25
Stage 8 on 3/5/2013 06:00						
Date 3/5/2013	Type Stage 8	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services		Min Top Depth (ftKB) 12,938.0	Max Btm Depth (ftKB) 13,188.0
GEL						
Fluid Name Slickwater			Total Water/Clean Volume (bbl) 9,807.38			
SAND & ACID						
Additive HCL 15%		Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH		Type Bulk Sand	Amount 350,581.0	Units lb	Sand Size 40/70-100	Concentration... 2.25
Stage 9 on 3/5/2013 06:00						
Date 3/5/2013	Type Stage 9	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services		Min Top Depth (ftKB) 12,628.0	Max Btm Depth (ftKB) 12,878.0
GEL						
Fluid Name Slickwater			Total Water/Clean Volume (bbl) 9,773.38			
SAND & ACID						
Additive HCL 15%		Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH		Type Bulk Sand	Amount 350,042.0	Units lb	Sand Size 40/70-100	Concentration... 2.25
Stage 10 on 3/5/2013 06:00						
Date 3/5/2013	Type Stage 10	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services		Min Top Depth (ftKB) 12,318.0	Max Btm Depth (ftKB) 12,568.0
GEL						
Fluid Name Slickwater			Total Water/Clean Volume (bbl) 9,634.38			

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### SAND & ACID

Additive HCL 15%	Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH	Type Bulk Sand	Amount 350,294.0	Units lb	Sand Size 40/70-100	Concentration... 2.25

### Stage 11 on 3/5/2013 06:00

Date 3/5/2013	Type Stage 11	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 12,008.0	Max Btm Depth (ftKB) 12,258.0
------------------	------------------	------------------------------------	------------------------------------------------	----------------------------------	----------------------------------

### GEL

Fluid Name Slickwater	Total Water/Clean Volume (bbl) 9,593.38
--------------------------	--------------------------------------------

### SAND & ACID

Additive HCL 15%	Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH	Type Bulk Sand	Amount 350,563.0	Units lb	Sand Size 40/70-100	Concentration... 2.25

### Stage 12 on 3/6/2013 06:00

Date 3/6/2013	Type Stage 12	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 11,698.0	Max Btm Depth (ftKB) 11,948.0
------------------	------------------	------------------------------------	------------------------------------------------	----------------------------------	----------------------------------

### GEL

Fluid Name Slickwater	Total Water/Clean Volume (bbl) 9,658.38
--------------------------	--------------------------------------------

### SAND & ACID

Additive HCL 15%	Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH	Type Bulk Sand	Amount 350,394.0	Units lb	Sand Size 40/70-100	Concentration... 2.25

### Stage 13 on 3/6/2013 06:00

Date 3/6/2013	Type Stage 13	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 11,388.0	Max Btm Depth (ftKB) 11,638.0
------------------	------------------	------------------------------------	------------------------------------------------	----------------------------------	----------------------------------

### GEL

Fluid Name Slickwater	Total Water/Clean Volume (bbl) 9,536.38
--------------------------	--------------------------------------------

### SAND & ACID

Additive HCL 15%	Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH	Type Bulk Sand	Amount 351,531.0	Units lb	Sand Size 40/70-100	Concentration... 2.25

### Stage 14 on 3/6/2013 06:00

Date 3/6/2013	Type Stage 14	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 11,078.0	Max Btm Depth (ftKB) 11,328.0
------------------	------------------	------------------------------------	------------------------------------------------	----------------------------------	----------------------------------

### GEL

Fluid Name Slickwater	Total Water/Clean Volume (bbl) 9,548.38
--------------------------	--------------------------------------------

### SAND & ACID

Additive HCL 15%	Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH	Type Bulk Sand	Amount 351,420.0	Units lb	Sand Size 40/70-100	Concentration... 2.25

### Stage 15 on 3/6/2013 06:00

Date 3/6/2013	Type Stage 15	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 10,768.0	Max Btm Depth (ftKB) 11,018.0
------------------	------------------	------------------------------------	------------------------------------------------	----------------------------------	----------------------------------

### GEL

Fluid Name Slickwater	Total Water/Clean Volume (bbl) 9,628.38
--------------------------	--------------------------------------------

### SAND & ACID

Additive HCL 15%	Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH	Type Bulk Sand	Amount 350,139.0	Units lb	Sand Size 40/70-100	Concentration... 2.25

### Stage 16 on 3/6/2013 06:00

Date 3/6/2013	Type Stage 16	Zone WOLFCAMP A2, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 10,458.0	Max Btm Depth (ftKB) 10,708.0
------------------	------------------	------------------------------------	------------------------------------------------	----------------------------------	----------------------------------

### GEL

Fluid Name Slickwater	Total Water/Clean Volume (bbl) 9,597.38
--------------------------	--------------------------------------------

### SAND & ACID

Additive HCL 15%	Type Acid	Amount 2,500.0	Units gal	Sand Size	Concentration...
Additive 40/70-100 BRADY-MESH	Type Bulk Sand	Amount 350,946.0	Units lb	Sand Size 40/70-100	Concentration... 2.25

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

### Completion (FRAC) Details

#### Stage 17 on 3/6/2013 06:00

Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)
3/6/2013	Stage 17	WOLFCAMP A2, Original Hole	Pioneer Pumping Services	10,148.0	10,398.0

#### GEL

Fluid Name	Total Water/Clean Volume (bbl)
Slickwater	9,488.38

#### SAND & ACID

Additive	Type	Amount	Units	Sand Size	Concentration...
HCL 15%	Acid	2,500.0	gal		
Additive	Type	Amount	Units	Sand Size	Concentration...
40/70-100 BRADY-MESH	Bulk Sand	350,499.0	lb	40/70-100	2.25

#### Stage 18 on 3/6/2013 06:00

Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)
3/6/2013	Stage 18	WOLFCAMP A2, Original Hole	Pioneer Pumping Services	9,838.0	10,088.0

#### GEL

Fluid Name	Total Water/Clean Volume (bbl)
Slickwater	10,390.57

#### SAND & ACID

Additive	Type	Amount	Units	Sand Size	Concentration...
HCL 15%	Acid	2,500.0	gal		
Additive	Type	Amount	Units	Sand Size	Concentration...
40/70-100 BRADY-MESH	Bulk Sand	351,019.0	lb	40/70-100	2.25

#### Stage 19 on 3/7/2013 06:00

Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)
3/7/2013	Stage 19	WOLFCAMP A2, Original Hole	Pioneer Pumping Services	9,528.0	9,778.0

#### GEL

Fluid Name	Total Water/Clean Volume (bbl)
Slickwater	6,226.33

#### SAND & ACID

Additive	Type	Amount	Units	Sand Size	Concentration...
HCL 15%	Acid	2,500.0	gal		
Additive	Type	Amount	Units	Sand Size	Concentration...
40/70-100 BRADY-MESH	Bulk Sand	168,091.0	lb	40/70-100	2.25

#### Stage 20 on 3/7/2013 06:00

Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)
3/7/2013	Stage 20	WOLFCAMP A2, Original Hole	Pioneer Pumping Services	9,218.0	9,468.0

#### GEL

Fluid Name	Total Water/Clean Volume (bbl)
Slickwater	9,572.38

#### SAND & ACID

Additive	Type	Amount	Units	Sand Size	Concentration...
HCL 15%	Acid	2,500.0	gal		
Additive	Type	Amount	Units	Sand Size	Concentration...
40/70-100 BRADY-MESH	Bulk Sand	349,966.0	lb	40/70-100	2.25

#### Stage 21 on 3/7/2013 06:00

Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)
3/7/2013	Stage 21	WOLFCAMP A2, Original Hole	Pioneer Pumping Services	8,908.0	9,158.0

#### GEL

Fluid Name	Total Water/Clean Volume (bbl)
Slickwater	9,545.90

#### SAND & ACID

Additive	Type	Amount	Units	Sand Size	Concentration...
HCL 15%	Acid	2,500.0	gal		
Additive	Type	Amount	Units	Sand Size	Concentration...
40/70-100 BRADY-MESH	Bulk Sand	350,579.0	lb	40/70-100	2.25

#### Stage 22 on 3/7/2013 06:00

Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)
3/7/2013	Stage 22	WOLFCAMP A2, Original Hole	Pioneer Pumping Services	8,598.0	8,848.0

#### GEL

Fluid Name	Total Water/Clean Volume (bbl)
Slickwater	9,490.90

#### SAND & ACID

Additive	Type	Amount	Units	Sand Size	Concentration...
40/70-100 BRADY-MESH	Bulk Sand	350,975.0	lb	40/70-100	2.25

#### Zones

Zone Name	Top (ftKB)
Upper Wolfcamp	
Middle Wolfcamp	

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

Zones										
Zone Name							Top (ftKB)			
Middle Spraberry										
Dean										
Lower Wolfcamp										
San Andres										
Lower Spraberry										
WOLFCAMP A2										
Tubing Details										
Tubing Description					Set Depth (ftKB)		Run Date			
Tubing - Production					7,974.7		3/29/2013			
Tubing Components										
Item Des	OD (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)			
Tubing	2 7/8	6.50	L-80	31.42	1	26.0	57.4			
Tubing	2 7/8	6.50	L-80	10.00	1	57.4	67.4			
Tubing	2 7/8	6.50	L-80	2,202.62	71	67.4	2,270.0			
Gas Lift Mandrel	2 7/8	6.50	L-80	4.10		2,270.0	2,274.1			
Tubing	2 7/8	6.50	L-80	991.33	32	2,274.1	3,265.5			
Gas Lift Mandrel	2 7/8	6.50	L-80	4.10		3,265.5	3,269.6			
Tubing	2 7/8	6.50	L-80	499.38	16	3,269.6	3,769.0			
Gas Lift Mandrel	2 7/8	6.50	L-80	4.10		3,769.0	3,773.1			
Tubing	2 7/8	6.50	L-80	496.33	16	3,773.1	4,269.4			
Gas Lift Mandrel	2 7/8	6.50	L-80	4.10		4,269.4	4,273.5			
Tubing	2 7/8	6.50	L-80	492.22	16	4,273.5	4,765.7			
Gas Lift Mandrel	2 7/8	6.50	L-80	4.10		4,765.7	4,769.8			
Tubing	2 7/8	6.50	L-80	493.71	16	4,769.8	5,263.5			
Gas Lift Mandrel	2 7/8	6.50	L-80	4.10		5,263.5	5,267.6			
Tubing	2 7/8	6.50	L-80	434.48	14	5,267.6	5,702.1			
Gas Lift Mandrel	2 7/8	6.50	L-80	4.10		5,702.1	5,706.2			
Tubing	2 7/8	6.50	L-80	468.74	15	5,706.2	6,174.9			
Gas Lift Mandrel	2 7/8	6.50	L-80	4.10		6,174.9	6,179.0			
Tubing	2 7/8	6.50	L-80	437.04	14	6,179.0	6,616.1			
Gas Lift Mandrel	2 7/8	6.50	L-80	4.10		6,616.1	6,620.2			
Tubing	2 7/8	6.50	L-80	432.64	14	6,620.2	7,052.8			
Gas Lift Mandrel	2 7/8	6.50	L-80	4.10		7,052.8	7,056.9			
Tubing	2 7/8	6.50	L-80	463.57	15	7,056.9	7,520.5			
Gas Lift Mandrel	2 7/8	6.50	L-80	4.10		7,520.5	7,524.6			
Tubing	2 7/8	6.50	L-80	404.27	13	7,524.6	7,928.9			
Gas Lift Mandrel	2 7/8	6.50	L-80	4.10		7,928.9	7,933.0			
Tubing	2 7/8	6.50	L-80	31.17	1	7,933.0	7,964.1			
On & Off Tool	2 7/8	6.50	L-80	1.45		7,964.1	7,965.6			
Stinger	2 7/8	6.50	L-80	1.30		7,965.6	7,966.9			
Packer	2 7/8			7.41		7,966.9	7,974.3			
Pump-Out-Plug	2 7/8	6.50	L-80	0.40		7,974.3	7,974.7			
Rod Strings										
Rod Description					Set Depth (ftKB)		Run Date			
Rod Components										
Item Des	OD (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)	Make	Model	SN
Well Tests										
Description				Volume Oil Total (bbl)		Volume Gas Total (MCF)		Volume Water Total (bbl)		
Before IP				6085.0		2,355.000		29168.0		
Start Date	End Date	Sz Dia Choke (in)	P Tub End (psi)	P Cas End (psi)	Com		Vol Oil Tot (bbl)	Vol Gas Tot (MCF)	Vol Water Tot (bbl)	
4/2/2013			420.0	0.0			40.0	12.000	846.0	
4/3/2013			160.0	0.0			121.0	56.000	854.0	
4/4/2013		0.625	150.0	0.0	Went to 40/64 choke at 9 a.m.		92.0	63.000	541.0	
4/5/2013			200.0	950.0	Started well on gas lift at 12:00 p.m.		120.0	25.000	1189.0	
4/6/2013			220.0	900.0			193.0	126.000	1998.0	

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

Start Date	End Date	Sz Dia Choke (in)	P Tub End (psi)	P Cas End (psi)	Com	Vol Oil Tot (bbl)	Vol Gas Tot (MCF)	Vol Water Tot (bbl)
4/7/2013			220.0	925.0		195.0	118.000	1713.0
4/8/2013			210.0	925.0		191.0	119.000	1482.0
4/9/2013			230.0	940.0		180.0	114.000	1281.0
4/10/2013			180.0	860.0		163.0	154.000	1041.0
4/11/2013			210.0	900.0		187.0	99.000	1222.0
4/12/2013			211.0	1,077.0		219.0	119.000	1316.0
4/13/2013			214.0	1,063.0		196.0	105.000	1084.0
4/14/2013			200.0	1,051.0		191.0	100.000	1031.0
4/15/2013			203.0	1,046.0		212.0	100.000	1021.0
4/16/2013			208.0	1,046.0	Both compressors down 4 hrs for pm	196.0	93.000	908.0
4/17/2013			211.0	1,050.0		200.0	108.000	909.0
4/18/2013			127.0	1,030.0	Compressor #1 was odwn fom 3:51am to 9:21am.	180.0	79.000	769.0
4/19/2013			173.0	1,050.0		208.0	73.000	796.0
4/20/2013			208.0	1,010.0		224.0	85.000	801.0
4/21/2013			187.0	1,018.0		221.0	87.000	765.0
4/22/2013			123.0	947.0		215.0	53.000	726.0
4/23/2013			185.0	1,024.0	6 hrs of compressor downtime.	205.0	49.000	686.0
4/24/2013			222.0	1,017.0		215.0	64.000	680.0
4/25/2013			157.0	1,022.0	Lact is down, waiting on repairs.	193.0	13.000	639.0
4/26/2013			219.0	1,018.0	Compressor 1 down for 15 min for fuel issues. Compressor 2 down for 1.5 hrs total with electrical, fuel and high discharge issues.	190.0	0.000	576.0
4/27/2013			190.0	990.0		234.0	137.000	646.0
4/28/2013			168.0	989.0	Compressor #2 down for 2.25 hrs on cat fail.	236.0	0.000	644.0
4/29/2013			150.0	977.0	Investigating gas measurement.	255.0	0.000	662.0
4/30/2013			281.0	975.0	Gas test meter is reading inaccurately, should be resolved today.	245.0	0.000	664.0
5/1/2013			293.0	970.0	Gas test meter was repaired yesterday, should teflect in tomorrows report.	249.0	0.000	630.0
5/2/2013			257.0	964.0	Shut well in for 3 hrs to install crown valve.	158.0	35.000	378.0
5/3/2013			2,555.0	1,654.0	Shut in for off set frac.	0.0	18.000	0.0
5/4/2013			2,668.0	1,729.0	Well shut in for offset frac.	0.0	0.000	0.0
5/5/2013			2,744.0	1,791.0	Well shut in for offset frac.	0.0	0.000	0.0
5/6/2013			2,836.0	1,865.0	Well shut in for offset frac.	0.0	0.000	0.0
5/7/2013			2,979.0	1,972.0	Well shut in for offset frac.	0.0	0.000	0.0
5/8/2013			2,100.0	798.0	Well shut in for offset frac.	0.0	0.000	0.0
5/9/2013			2,160.0	1,720.0	Well shut in for offset frac.	0.0	0.000	0.0
5/10/2013			2,200.0	1,725.0	Well shut in for offset frac.	0.0	0.000	0.0
5/11/2013			2,225.0	1,725.0	Well shut in for offset frac.	0.0	0.000	0.0
5/12/2013			2,260.0	1,725.0	Well shut in for offset frac.	0.0	0.000	0.0
5/13/2013			2,260.0	1,725.0	Well shut in for offset frac.	0.0	0.000	0.0
5/14/2013			2,350.0	1,750.0	Well shut in for offset frac.	0.0	0.000	0.0
5/15/2013			150.0	950.0	Opened well back up at 10am.	161.0	151.000	670.0
Description Completion IP						Volume Oil Total (bbl) 381.0	Volume Gas Total (MCF) 207.000	Volume Water Total (bbl) 1093.0
Start Date	End Date	Sz Dia Choke (in)	P Tub End (psi)	P Cas End (psi)	Com	Vol Oil Tot (bbl)	Vol Gas Tot (MCF)	Vol Water Tot (bbl)
5/16/2013			160.0	950.0	IP Gravity @ 41.2	381.0	207.000	1093.0
Description After IP						Volume Oil Total (bbl) 4003.0	Volume Gas Total (MCF) 2,331.000	Volume Water Total (bbl) 9894.0
Start Date	End Date	Sz Dia Choke (in)	P Tub End (psi)	P Cas End (psi)	Com	Vol Oil Tot (bbl)	Vol Gas Tot (MCF)	Vol Water Tot (bbl)
5/17/2013			140.0	900.0		295.0	151.000	862.0
5/18/2013			140.0	870.0		261.0	806.000	146.0
5/19/2013			140.0	870.0		224.0	136.000	749.0
5/20/2013			150.0	850.0		226.0	138.000	701.0
5/21/2013			130.0	850.0	Compressor #1 was down for 5.7 hrs on oil pressure an anti freeze issues.	198.0	107.000	641.0

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

Start Date	End Date	Sz Dia Choke (in)	P Tub End (psi)	P Cas End (psi)	Com	Vol Oil Tot (bbl)	Vol Gas Tot (MCF)	Vol Water Tot (bbl)
5/22/2013			140.0	850.0		201.0	110.000	572.0
5/23/2013			145.0	850.0		226.0	123.000	640.0
5/24/2013			70.0	800.0	Compressor down 2 hrs, scheduled shut down.	175.0	15.000	497.0
5/25/2013			140.0	850.0	Compressor down 10.5 hrs, scheduled shut down.	70.0	40.000	295.0
5/26/2013			100.0	850.0		212.0	122.000	536.0
5/27/2013			85.0	830.0	Investigating gas produnction.	240.0	0.000	548.0
5/28/2013			170.0	830.0	Gas measurement will be on location today.	224.0	0.000	513.0
5/29/2013			120.0	820.0		217.0	94.000	492.0
5/30/2013			80.0	810.0		226.0	58.000	504.0
5/31/2013			130.0	800.0		203.0	108.000	471.0
6/1/2013			110.0	800.0		229.0	122.000	457.0
6/2/2013			95.0	800.0	25.5 hr test.	222.0	14.000	475.0
6/3/2013			100.0	800.0		177.0	59.000	406.0
6/4/2013			90.0	800.0		177.0	128.000	389.0

### Directional Survey

Date	Description					
12/26/2012	ACTUAL					
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company
1/21/2013				0.00	0.00	Leam Drilling Systems, Inc.
1/25/2013				0.00	0.00	Leam Drilling Systems, Inc.
12/30/2012	300.00	0.23	275.00	300.00	0.60	M.S.
12/30/2012	700.00	0.43	10.61	699.99	2.23	M.S.
12/31/2012	860.00	0.62	60.69	859.99	3.57	Leam Drilling Systems, Inc.
12/31/2012	1,048.00	2.90	350.73	1,047.90	8.76	Leam Drilling Systems, Inc.
12/31/2012	1,238.00	6.77	337.19	1,237.19	24.68	Leam Drilling Systems, Inc.
12/31/2012	1,427.00	9.06	338.95	1,424.38	50.70	Leam Drilling Systems, Inc.
1/1/2013	1,618.00	6.86	334.38	1,613.53	77.13	Leam Drilling Systems, Inc.
1/1/2013	1,809.00	5.54	339.65	1,803.41	97.73	Leam Drilling Systems, Inc.
1/1/2013	1,999.00	5.63	335.79	1,992.51	116.21	Leam Drilling Systems, Inc.
1/1/2013	2,189.00	5.36	344.40	2,181.64	134.36	Leam Drilling Systems, Inc.
1/1/2013	2,380.00	6.33	343.17	2,371.64	153.81	Leam Drilling Systems, Inc.
1/2/2013	2,570.00	5.98	342.29	2,560.55	174.18	Leam Drilling Systems, Inc.
1/2/2013	2,759.00	6.68	347.39	2,748.40	195.00	Leam Drilling Systems, Inc.
1/2/2013	2,948.00	6.07	351.25	2,936.23	215.97	Leam Drilling Systems, Inc.
1/7/2013	3,073.00	6.68	349.85	3,060.45	229.85	Leam Drilling Systems, Inc.
1/7/2013	3,263.00	6.60	338.42	3,249.19	251.71	Leam Drilling Systems, Inc.
1/7/2013	3,452.00	4.66	325.94	3,437.27	270.14	Leam Drilling Systems, Inc.
1/7/2013	3,639.00	5.80	331.74	3,623.49	287.17	Leam Drilling Systems, Inc.
1/8/2013	3,829.00	6.16	342.11	3,812.46	306.88	Leam Drilling Systems, Inc.
1/8/2013	4,021.00	6.16	337.72	4,003.36	327.47	Leam Drilling Systems, Inc.
1/8/2013	4,213.00	5.36	341.06	4,194.39	346.73	Leam Drilling Systems, Inc.
1/8/2013	4,402.00	7.03	340.00	4,382.28	367.13	Leam Drilling Systems, Inc.
1/8/2013	4,592.00	5.80	351.96	4,571.09	388.24	Leam Drilling Systems, Inc.
1/8/2013	4,782.00	4.84	359.16	4,760.27	405.82	Leam Drilling Systems, Inc.
1/8/2013	4,971.00	5.72	354.07	4,948.47	423.20	Leam Drilling Systems, Inc.
1/8/2013	5,161.00	5.80	351.08	5,137.51	442.26	Leam Drilling Systems, Inc.
1/8/2013	5,351.00	6.95	353.01	5,326.33	463.35	Leam Drilling Systems, Inc.
1/8/2013	5,541.00	5.98	346.16	5,515.13	484.71	Leam Drilling Systems, Inc.
1/8/2013	5,732.00	6.42	346.68	5,705.01	505.34	Leam Drilling Systems, Inc.
1/8/2013	5,922.00	4.66	352.13	5,894.11	523.66	Leam Drilling Systems, Inc.
1/8/2013	6,113.00	5.45	13.05	6,084.39	540.21	Leam Drilling Systems, Inc.
1/8/2013	6,303.00	5.17	10.94	6,273.57	557.79	Leam Drilling Systems, Inc.
1/8/2013	6,492.00	5.98	352.66	6,461.69	575.92	Leam Drilling Systems, Inc.
1/8/2013	6,683.00	6.95	348.44	6,651.47	597.41	Leam Drilling Systems, Inc.
1/8/2013	6,873.00	5.85	333.85	6,840.30	618.42	Leam Drilling Systems, Inc.
1/8/2013	7,066.00	2.81	293.07	7,032.77	632.20	Leam Drilling Systems, Inc.



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company
1/8/2013	7,251.00	4.13	215.73	7,217.51	641.04	Leam Drilling Systems, Inc.
1/8/2013	7,439.00	3.87	202.19	7,405.05	654.07	Leam Drilling Systems, Inc.
1/8/2013	7,628.00	3.61	191.29	7,593.65	666.34	Leam Drilling Systems, Inc.
1/8/2013	7,647.00	3.52	188.83	7,612.62	667.52	Leam Drilling Systems, Inc.
1/19/2013	7,711.00	4.22	191.82	7,676.47	671.84	Leam Drilling Systems, Inc.
1/19/2013	7,743.00	8.35	195.51	7,708.27	675.34	Leam Drilling Systems, Inc.
1/19/2013	7,774.00	11.96	195.69	7,738.78	680.81	Leam Drilling Systems, Inc.
1/19/2013	7,806.00	15.92	192.88	7,769.83	688.51	Leam Drilling Systems, Inc.
1/19/2013	7,837.00	20.22	191.82	7,799.30	698.12	Leam Drilling Systems, Inc.
1/19/2013	7,870.00	24.45	191.47	7,829.81	710.66	Leam Drilling Systems, Inc.
1/19/2013	7,900.00	28.67	190.41	7,856.64	724.07	Leam Drilling Systems, Inc.
1/19/2013	7,933.00	33.33	189.36	7,884.92	741.06	Leam Drilling Systems, Inc.
1/19/2013	7,964.00	37.46	188.48	7,910.19	759.01	Leam Drilling Systems, Inc.
1/19/2013	7,995.00	41.42	188.83	7,934.12	778.70	Leam Drilling Systems, Inc.
1/19/2013	8,027.00	46.43	189.18	7,957.16	800.90	Leam Drilling Systems, Inc.
1/19/2013	8,057.00	51.09	189.18	7,976.93	823.45	Leam Drilling Systems, Inc.
1/19/2013	8,088.00	55.66	188.83	7,995.42	848.32	Leam Drilling Systems, Inc.
1/19/2013	8,120.00	59.79	187.78	8,012.51	875.37	Leam Drilling Systems, Inc.
1/19/2013	8,152.00	62.87	185.49	8,027.86	903.44	Leam Drilling Systems, Inc.
1/19/2013	8,183.00	65.77	184.26	8,041.29	931.37	Leam Drilling Systems, Inc.
1/19/2013	8,214.00	70.43	183.56	8,052.85	960.13	Leam Drilling Systems, Inc.
1/19/2013	8,246.00	74.57	185.14	8,062.47	990.64	Leam Drilling Systems, Inc.
1/19/2013	8,277.00	76.94	185.49	8,070.10	1,020.69	Leam Drilling Systems, Inc.
1/19/2013	8,309.00	77.12	183.91	8,077.28	1,051.87	Leam Drilling Systems, Inc.
1/19/2013	8,341.00	77.29	180.92	8,084.37	1,083.07	Leam Drilling Systems, Inc.
1/20/2013	8,373.00	77.82	178.29	8,091.27	1,114.31	Leam Drilling Systems, Inc.
1/20/2013	8,405.00	78.26	177.41	8,097.90	1,145.62	Leam Drilling Systems, Inc.
1/20/2013	8,436.00	78.35	177.41	8,104.18	1,175.98	Leam Drilling Systems, Inc.
1/20/2013	8,467.00	78.35	177.58	8,110.44	1,206.34	Leam Drilling Systems, Inc.
1/20/2013	8,499.00	78.61	177.23	8,116.83	1,237.69	Leam Drilling Systems, Inc.
1/20/2013	8,532.00	78.88	176.88	8,123.27	1,270.06	Leam Drilling Systems, Inc.
1/20/2013	8,562.00	81.25	177.41	8,128.45	1,299.61	Leam Drilling Systems, Inc.
1/20/2013	8,657.00	89.34	179.87	8,136.24	1,394.20	Leam Drilling Systems, Inc.
1/20/2013	8,751.00	90.48	179.34	8,136.38	1,488.20	Leam Drilling Systems, Inc.
1/20/2013	8,846.00	88.72	178.46	8,137.05	1,583.19	Leam Drilling Systems, Inc.
1/20/2013	8,941.00	90.04	177.93	8,138.08	1,678.18	Leam Drilling Systems, Inc.
1/20/2013	9,033.00	91.80	178.29	8,136.60	1,770.17	Leam Drilling Systems, Inc.
1/20/2013	9,128.00	91.01	179.16	8,134.27	1,865.14	Leam Drilling Systems, Inc.
1/20/2013	9,222.00	91.63	178.64	8,132.10	1,959.11	Leam Drilling Systems, Inc.
1/20/2013	9,317.00	89.87	177.93	8,130.86	2,054.10	Leam Drilling Systems, Inc.
1/20/2013	9,412.00	91.45	177.76	8,129.77	2,149.09	Leam Drilling Systems, Inc.
1/20/2013	9,507.00	93.03	177.41	8,126.05	2,244.01	Leam Drilling Systems, Inc.
1/20/2013	9,603.00	90.48	175.65	8,123.11	2,339.96	Leam Drilling Systems, Inc.
1/21/2013	9,638.00	89.78	178.99	8,123.03	2,374.95	Leam Drilling Systems, Inc.
1/21/2013	9,886.00	91.98	178.81	8,119.23	2,622.91	Leam Drilling Systems, Inc.
1/21/2013	9,981.00	90.75	180.57	8,116.96	2,717.87	Leam Drilling Systems, Inc.
1/21/2013	10,127.00	90.48	186.86	8,115.39	2,863.79	Leam Drilling Systems, Inc.
1/21/2013	10,172.00	91.10	181.80	8,114.77	2,908.77	Leam Drilling Systems, Inc.
1/21/2013	10,266.00	90.22	184.61	8,113.69	3,002.76	Leam Drilling Systems, Inc.
1/21/2013	10,362.00	91.80	184.61	8,112.00	3,098.74	Leam Drilling Systems, Inc.
1/21/2013	10,458.00	89.96	184.44	8,110.52	3,194.72	Leam Drilling Systems, Inc.
1/21/2013	10,553.00	91.36	183.91	8,109.43	3,289.71	Leam Drilling Systems, Inc.
1/21/2013	10,648.00	92.59	183.73	8,106.15	3,384.66	Leam Drilling Systems, Inc.
1/21/2013	10,742.00	91.80	184.09	8,102.55	3,478.59	Leam Drilling Systems, Inc.
1/21/2013	10,836.00	91.10	182.15	8,100.18	3,572.55	Leam Drilling Systems, Inc.
1/21/2013	10,931.00	92.59	181.80	8,097.12	3,667.50	Leam Drilling Systems, Inc.



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 4-8 4H

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company
1/21/2013	11,025.00	90.92	181.27	8,094.24	3,761.45	Leam Drilling Systems, Inc.
1/21/2013	11,119.00	91.98	181.45	8,091.86	3,855.42	Leam Drilling Systems, Inc.
1/22/2013	11,213.00	90.57	181.63	8,089.77	3,949.39	Leam Drilling Systems, Inc.
1/22/2013	11,308.00	91.63	180.93	8,087.94	4,044.37	Leam Drilling Systems, Inc.
1/22/2013	11,402.00	90.66	180.75	8,086.07	4,138.35	Leam Drilling Systems, Inc.
1/22/2013	11,496.00	91.28	181.63	8,084.47	4,232.34	Leam Drilling Systems, Inc.
1/22/2013	11,590.00	90.04	181.80	8,083.39	4,326.33	Leam Drilling Systems, Inc.
1/22/2013	11,685.00	90.31	181.45	8,083.10	4,421.33	Leam Drilling Systems, Inc.
1/22/2013	11,780.00	89.25	182.15	8,083.47	4,516.33	Leam Drilling Systems, Inc.
1/22/2013	11,875.00	91.01	183.56	8,083.25	4,611.32	Leam Drilling Systems, Inc.
1/22/2013	11,969.00	90.48	182.33	8,082.03	4,705.31	Leam Drilling Systems, Inc.
1/22/2013	12,065.00	90.48	182.50	8,081.22	4,801.31	Leam Drilling Systems, Inc.
1/22/2013	12,154.00	92.42	182.86	8,078.97	4,890.28	Leam Drilling Systems, Inc.
1/22/2013	12,255.00	92.15	182.15	8,074.95	4,991.19	Leam Drilling Systems, Inc.
1/22/2013	12,349.00	91.71	181.45	8,071.78	5,085.14	Leam Drilling Systems, Inc.
1/24/2013	12,445.00	91.80	180.04	8,068.84	5,181.09	Leam Drilling Systems, Inc.
1/25/2013	12,538.00	91.19	179.87	8,066.41	5,274.06	Leam Drilling Systems, Inc.
1/25/2013	12,633.00	90.75	178.81	8,064.80	5,369.05	Leam Drilling Systems, Inc.
1/25/2013	12,727.00	91.63	180.04	8,062.85	5,463.02	Leam Drilling Systems, Inc.
1/25/2013	12,821.00	91.98	180.57	8,059.89	5,556.98	Leam Drilling Systems, Inc.
1/25/2013	12,913.00	91.63	181.10	8,056.99	5,648.93	Leam Drilling Systems, Inc.
1/26/2013	13,102.00	91.45	181.80	8,051.91	5,837.86	Leam Drilling Systems, Inc.
1/26/2013	13,197.00	91.45	181.63	8,049.51	5,932.83	Leam Drilling Systems, Inc.
1/26/2013	13,292.00	90.84	181.98	8,047.61	6,027.81	Leam Drilling Systems, Inc.
1/26/2013	13,388.00	91.01	181.63	8,046.06	6,123.80	Leam Drilling Systems, Inc.
1/26/2013	13,482.00	91.01	181.63	8,044.41	6,217.78	Leam Drilling Systems, Inc.
1/26/2013	13,577.00	90.92	181.98	8,042.81	6,312.77	Leam Drilling Systems, Inc.
1/26/2013	13,672.00	91.45	181.63	8,040.84	6,407.75	Leam Drilling Systems, Inc.
1/26/2013	13,767.00	92.24	180.92	8,037.78	6,502.70	Leam Drilling Systems, Inc.
1/26/2013	13,862.00	90.92	181.10	8,035.16	6,597.66	Leam Drilling Systems, Inc.
1/27/2013	13,957.00	89.52	182.50	8,034.80	6,692.65	Leam Drilling Systems, Inc.
1/27/2013	14,052.00	88.99	182.33	8,036.03	6,787.65	Leam Drilling Systems, Inc.
1/27/2013	14,147.00	89.69	182.15	8,037.13	6,882.64	Leam Drilling Systems, Inc.
1/27/2013	14,243.00	89.60	181.98	8,037.72	6,978.64	Leam Drilling Systems, Inc.
1/27/2013	14,338.00	89.52	181.80	8,038.45	7,073.63	Leam Drilling Systems, Inc.
1/27/2013	14,433.00	89.87	181.98	8,038.96	7,168.63	Leam Drilling Systems, Inc.
1/27/2013	14,527.00	90.48	181.45	8,038.67	7,262.63	Leam Drilling Systems, Inc.
1/27/2013	14,622.00	89.96	181.80	8,038.31	7,357.63	Leam Drilling Systems, Inc.
1/27/2013	14,716.00	89.96	181.27	8,038.37	7,451.63	Leam Drilling Systems, Inc.
1/27/2013	14,810.00	89.08	180.75	8,039.16	7,545.62	Leam Drilling Systems, Inc.
1/27/2013	14,904.00	89.78	181.10	8,040.09	7,639.62	Leam Drilling Systems, Inc.
1/27/2013	14,999.00	89.87	180.22	8,040.38	7,734.62	Leam Drilling Systems, Inc.
1/27/2013	15,094.00	89.60	179.69	8,040.82	7,829.62	Leam Drilling Systems, Inc.
1/27/2013	15,189.00	90.92	180.75	8,040.39	7,924.61	Leam Drilling Systems, Inc.
1/27/2013	15,285.00	91.80	180.92	8,038.11	8,020.58	Leam Drilling Systems, Inc.
1/27/2013	15,408.00	93.30	181.27	8,032.64	8,143.46	Leam Drilling Systems, Inc.
1/27/2013	15,460.00	93.30	181.27	8,029.65	8,195.37	Leam Drilling Systems, Inc.