

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

API/UWI 42-383-38926-0000		Property Sub 927351-049		Operator PIONEER NATURAL RESRC USA, INC		State TEXAS		County REAGAN	
Field Name SPRABERRY (TREND AREA)				Surface Legal Location					
Spud Date 4/16/2015		TD Date		Drilling Rig Release Date		Frac Date		On Production Date	
Ground Elevation (ft) 2,648.00		Original KB Elevation (ft) 2,674.00		PBDT (All) (ftKB)		Total Depth (All) (ftKB) Original Hole - 5,218.0		Total Depth All (TVD) (ftKB) Original Hole - 5,217.3	
<b>Report #: 1 Daily Operation: 4/15/2015 18:00 - 4/16/2015 06:00</b>									
Job Category ORIG DRILLING				Primary Job Type ODR				AFE Number 032881	
Days From Spud (days) 0		Days on Location (days) 1		End Depth (ftKB) 0.0		End Depth (TVD) (ftKB)		Dens Last Mud (lb/gal) 8.50	
<p>Operations Summary</p> <p>Skid rig in f/ Univ. 2-20 50H. Rig up to spud. Pick up Surface BHA.</p> <p>Remarks</p> <p>Rig (H&amp;P 606) &amp; Well Progress: 0.2 Rig Move Days, 0 Days From Spud, 0.5 Total Days On Well, 7 Total Days On Location</p> <p>Rig NPT: 0 hrs previous 24 hrs. 0 NPT for month of April.</p> <p>Completion percentage: Surface - 0%, Intermediate -0%, Curve - 0%, Lateral - 0%</p> <p>Slide percentage: Surface - 0%, Intermediate - 0%, Curve - 0%, Lateral - 0%</p> <p>Estimated Pad release: 5/20/15</p> <p>**Talked to Sendy @ TRRC about up coming Surface Casing run and Cement job. 22:00 4/15/15.**</p>									
<b>Time Log Summary</b>									
Operation		Com							Dur (hr)
MOVE		PJSM w/ HP and Pioneer rep on skidding rig f/ Univ. 2-20 50H t/ Univ. 2-20 49H. Prep all lines, Scaffolding, Skid rails and Cylinders. Skid rig. Rig is centered over the hole and level. Verified by Pioneer rep, HP Rig Manager and Driller.							4.5
RU		PJSM with rig crew & PNR Representative discussing rigging up after skid. R/U stairs from rig floor to flow line skid. R/U high pressure mud lines & air lines. Install all ground rods & cables Install mouse hole. Install Cellar pumps. Rig up Cellar Discharge hoses to Flowline in order to Circulate cuttings over shakers. Set up to circulate steel pits w/ Fresh water due to Drilling second surface hole on pad.  **Rigging up solids control equipment in Back yard in tandem, in order to strip and process OBM f/ 10.3 down t/ 8.7.**							6.5
PU_BHA		Pick up and torque surface BHA. 1) 17.5" FS65 bit ( 1.55 TFA ), Bit sub w/ float and crows foot, Stabilizer and 4) 8" DC.  **Rig Accepted @ 5:00 am 4/16/15.**  **1 Generator online.**							1
<b>Report #: 2 Daily Operation: 4/16/2015 06:00 - 4/17/2015 06:00</b>									
Job Category ORIG DRILLING				Primary Job Type ODR				AFE Number 032881	
Days From Spud (days) 1		Days on Location (days) 2		End Depth (ftKB) 601.0		End Depth (TVD) (ftKB) 601.0		Dens Last Mud (lb/gal) 8.90	
<p>Operations Summary</p> <p>Spud in well. Drill f/ 146' t/ 601' ( 455' total, TD). Circ. Clean up Cycle. Run Gyro Logs, TOO, L/D BHA, RU Casers, Run 13 3/8" Csg f/ Surface t/ 601'. RD Casers, RU Cementers. Cement 13 3/8" Csg. Perform Top job, R/D Cementers. Cut off Casing and prep to install Well Head.</p> <p>Remarks</p> <p>Rig (H&amp;P 606) &amp; Well Progress: 0.2 Rig Move Days, 0.9 Days From Spud, 1.5 Total Days On Well, 8 Total Days On Location</p> <p>Rig NPT: 0 hrs previous 24 hrs. 0 NPT for month of April.</p> <p>Completion percentage: Surface - 100%, Intermediate -0%, Curve - 0%, Lateral - 0%</p> <p>Slide percentage: Surface - 0%, Intermediate - 0%, Curve - 0%, Lateral - 0%</p> <p>Estimated Pad release: 5/20/15</p> <p>**Spud Well @ 7:00 am 4/16/15.**</p>									
<b>Time Log Summary</b>									
Operation		Com							Dur (hr)
BHA_HAN DLING		Finish Picking up and torqueing surface BHA. 1) 17.5" FS65 bit ( 1.55 TFA ), Bit sub w/ float and crows foot, Stabilizer and 3) 8" DC. Latch stand of HWDP out of Derrick and tag bottom.  **Tagged Bottom @ 126'.							1

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

Time Log Summary		
Operation	Com	Dur (hr)
CUTDL	<p>Rotate Drill 17 1/2" Surface Section 189' @ 47'/hr, 116 spm, 448 gpm, 200-250 psi SPP, 30- 35 top drive rpm, 5-18K wob, 3-9K torque. 2 soap sticks on every other connection, pumping 1 SAPP stick and 1 gal/Stardrill AP on off connections. Full returns to surface.</p> <p><b>**Spud Well @ 7:00 am 4/16/15.**</b></p>	4
SRVY	Run wireline survey @ 315' (Inc. = 0.4°)	0.5
CUTDL	<p>Rotate Drill 17 1/2" Surface Section 286' @ 143'/hr, 193 spm, 742 gpm, 750 psi SPP, 65-70 top drive rpm, 18-20K wob, 9-14K torque. 2 soap sticks on every other connection, pumping 1 SAPP stick and 1 gal/Stardrill AP on off connections. Full returns to surface.</p> <p><b>***Staged drilling parameters after stabilizer exited the conductor casing***</b></p> <p><b>**TD Surface @ 13:30 pm 4/16/15.**</b></p>	2
CIRC	<p>Circulate and condition hole - Pumped 2-45 bbl polymer sweeps surface to surface.</p> <p><b>***Only a slight (&lt;10%) increase in cuttings returned from the sweeps***</b></p> <p><b>***Corporate security administered a random drug, alcohol and firearms search***</b></p>	1
SRVY	<p>PJSM Review Safety Critical JSA. RU VES wireline truck and Gyro tool. RIH and survey every 100'. R/D Gryo.</p> <p>Bottom hole survey: Depth 585' Inc. 0.68° Azm 287.50°</p>	1
CIRC	Circulate BU after running Gyro prior to TOO H to run 13 3/8" Casing, @ 750 gpm, 775 psi, 70 rpms. Shakers clean.	0.5
TOOH_ELE V	TOOH to run 13 3/8" casing f/ 601' t/ 69'. Fill cellar full of fluid and open casing valve in order to keep hole full while TOO H.	1
L/D BHA	Break 8" Stabilizer, Bit sub and 17 1/2" Bit. L/D same. Rack back remaining 8" DC in stand in Derrick.	0.5
SFTY	Clean and clear rig floor of all drilling tools after TOO H & prior to R/U csg. tools.	0.5
CSG_W/O WASH	<p>PJSM with Butch's casing crew, H&amp;P rig crew &amp; PNR rep over running surface casing. Make up 13 3/8" 54.4# J-55 BT&amp;C Single Valve Float Shoe, 1 Jt of 13 3/8" 54.5# J-55 BT&amp;C casing, 13 3/8" 54.5# J-55 Single Valve Float Collar &amp; 1 Jt of 13 3/8" 54.5# J-55 BT&amp;C casing, M/U Torque - 7,400 ft/lbs, made up to the base of diamond. Thread locked all threads in shoe track, including the joint on top of float collar &amp; test- Good. TIH w/13 3/8" 54.5# J-55 BT&amp;C casing to 601'.</p> <p>ID of inside of csg elevators: 13 1/2" OD of 13 3/8" casing collar: 14 3/8"</p> <p>Casing on bottom @ 21:30 pm 4/11/15</p> <p>Float Shoe @ 601' Float Collar @ 562' Bow spring centralizers run middle of shoe joint, 5' above float collar, on collars of Jts. # 7 and 12 for a total of 4 centralizers.</p>	3.5
CIRC	<p>Circulate 1.5 Casing volumes @ 80 spm. 7.3 bpm, 120 psi. Full returns.</p> <p><b>**Rig down Butches casing crew in tandum.**</b></p>	0.5
RU	<p>PJSM w/ HP, Schlumberger and Pioneer Rep on rigging up Cement equipment. Rig up Cement head, steel lines, wash out lines and Chichsans.</p> <p><b>**Load top plug with tattle tail into cementing head, witnessed by PNR CM &amp; SLB supervisor.**</b></p>	1.25

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Well Name: UNIVERSITY 2-20 49H

Time Log Summary						
Operation		Com				Dur (hr)
CMT	Schlumberger cemented 13-3/8" 54.5 ppf J-55 BTC Surface Casing as follows:  Pressure test lines to 3,000 psi.  20 bbls 8.33 lb/gal of fresh water spacer.  Tail Cement 487 Sks (148 BBL ) of Class "C" Cement with 4.0% BWOB D020 Extender, 2.0% BWOB S001 CaCl2 , mixed @ 13.6 ppg, 1.71 ft3/sk yield, 8.94 gal/Sk mixing water.  Drop top plug with tattle tail witnessed by PNR Co. Man & SLB Supervisor.  Displace cement with 87 bbls of 8.33 ppg fresh water. Displaced final 10 bbls at 3 bpm & bump plug 500 psi over @ 911 psi, final lift pressure of 210 psi. Held pressure for 5 min, bled back 0.5 bbl  Lift Pressures: 10 bbls - 4 bpm, 101 psi; 30 bbls- 4 bpm, 290 psi; 50 bbls - 4.5 bpm, 320 psi; 70 bbls- 3 bpm, 207 psi; 87 bbls- 3 bpm, 210/ 911 psi bump plug @ 00:30 am 4/17/15.  *** Full returns to surface throughout job ***  > Returned 52 bbls of cement to surface  > Took & weighted samples @ 15 bbls (tail) - 13.8 ppg.					1.5
RU	Rig Down Cement head and bowl. Lift cellar hoist cellar pumps to allow f/ More top cement to eqaulize into annulus as cement falls. Rig up and run 150' of 1" Line to Cement 14.8# Class C Top out Cement.  **Confined space permit in place.**					1
CMT	Make up 150' 1" pipe and top off conductor with 126 sacks of class C cement mixed @ 14.8 ppg (30 bbls total). Pumped 1 bbl's/min, 75 - 100 psi pressure. Full returns throughout top out job.					0.75
RD	Wash cement out of cellar. Wash out & rig down Thomas Oilfield cellar pumps. Rig down remaining cementing equipment.  **Confined space permit in place.**					1
WH	PJSM w/ HP Rig Crew, Welder, Weir Rep. & PNR Co. Man on Cutting Off Surface Pipe & Wellhead Installation, Check for gas contents in cellar, all good. Cut off conductor 63 1/2" below GL, perform rough cut on 13-3/8" casing. Make final cut on 13-3/8" casing 51 1/8" below GL, top of well head @ 18" below GL (measurement confirmed by PNR representative, welder, and Weir Rep.). Preparing to set well head.  *** Safe Work Permits, Confined Space Entry, Hot Work Permit***  1 Generator online.					2.5
Report #: 3 Daily Operation: 4/17/2015 06:00 - 4/18/2015 06:00						
Job Category			Primary Job Type			AFE Number
ORIG DRILLING			ODR			032881
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
2	3	1,307.0	1,306.7	9.20		
Operations Summary						
Finish installing well head, Nipple up and Test BOP, Make up Directional tools, TIH f/ 96' t/ 562', Drill Shoe Track, Perform FIT, Drill f/ 610' t/ 1,307'.						
Remarks						
Rig (H&P 606) & Well Progress: 1.7 Rig Move Days, 1.9 Days From Spud, 2.5 Total Days On Well, 9 Total Days On Location						
Rig NPT: 0 hrs previous 24 hrs. 0 NPT for month of April.						
Completion percentage: Surface - 100%, Intermediate - 15%, Curve - 0%, Lateral - 0%						
Slide percentage: Surface - 0%, Intermediate - .01%, Curve - 0%, Lateral - 0%						
Estimated Pad release: 5/20/15						
Time Log Summary						
Operation		Com				Dur (hr)
WLHEAD	Install and level wellhead on 13 3/8" surface casing. Preheat & Weld wellhead on casing. Let cool for 30 min then test well head to 904 PSI for 5 min - Good test.  ***Confined Space and Hot Work Permit in place***					3
NU_TEST	Hold PJSM with rig crew and Battle Torque and Tester. Install spacer spool and DSA on wellhead and N/U BOP. Install flex hose, kill line. Set bell nipple. Attach turn buckles and center BOP. Connect fill hose, 2" bleeder hose and drain hoses. Make up flow line.					4.5

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### Time Log Summary

Operation	Com	Dur (hr)
NU_TEST	PJSM w/Battle Energy Services BOP tester & rig crew on BOP testing, P/U test plug, set plug in wellhead, close blind rams. Test blind rams, wellhead connections, kill line & choke line to 250 psi/low 5 minutes, 5,000 psi/high 5 minutes. Testing mud delivery line from standpipe manifold tree back to the mud pumps to 250 psi/low 5 minutes, 5,000 psi/high 5 minutes. All testing good to this time.  1 generator online	3
WEARBUS HING	Install long wear bushing in well head. Tighten down two opposing lock screws. Perform accumulator draw down test. Test good. All operations witnessed by HP Rig Manager, Driller and Pioneer Company Rep.	0.5
NU_TEST	Finish hooking up flow line. Make up flare line and vent line to drive overs	1
SFTY	Clean and clear rig floor in preparation to make up Intermediate BHA.	0.5
PU_BHA	PJSM On P/U BHA & BHA Handling w/ HP, Leam and PNR Rep. - Pick up and make up BHA # 2. Pick up 1.50 bend 7:8-4.0 stg, 0.17 rpg fixed mud motor with 11 3/4 stabilizer on nose, Scribe tools, install MWD & Test MWD.  Note: Test MWD before making up bit.	2
NU_BOPE	While testing Mud motor and MWD tool. Noticed leak coming from flange in between flow nipple and Annular. Tighten bolts. No leak.	1
PU_BHA	Re-test motor and MWD. Test good. Make up and torque, 12 1/4" Halliburton MM55DM PDC Bit.	0.5
TIH_ELEV	TIH f/106' t/ Top of Cement @ 466' w/ 8-8" DC's, jars (from wrangler), 3-8" DCs.  **While Running in hole w/ Collars, had to replace elevators due to faulty secondary safety latch.**	2.5
TIH_NONE LEV	TIH f/ 466' t/ 562'. Install pipe screen and wash to bottom, ( TOC ),120 spm, 450 gpm, 30 Top Drive rpm, 76 motor rpm, 106 total bit rpm, 720 psi.  Tagged top of cement @ 562'.	0.5
DRL_OUT	Drig Cement & Float Equip. f/562' t/601' plus 10' of new hole t/ 611' for FIT test, 120 spm, 450 gpm, 30 Top Drive rpm, 76 motor rpm, 106 total bit rpm, 780 psi. Full returns to surface.  Float Collar @ 562' Shoe @ 601'	0.5
FIT/LOT	Perform FIT: Circulate BU and Clean hole. MW 9.5 ppg in / out. Test to 11 ppg equivalent. 11 ppg -9.5 ppg = 1.5 ppg x .052 x 601' (Shoe Depth) = 46 psi. Shut upper pipe rams and hold 46 psi casing pressure f/ 5 min. 2 psi drop over 5 min. Test good.	0.5
DRL	Rotate drill 12 1/4" Intermediate - 321' @ 214' fph. MW 9.5 ppg reserve pit water. Full returns, Pumping 1 soap stick, 1 sapp stick every other connection w/ 1 gal of PHPA on off set connections. Pump 40 bbls MF 55 sweeps every third connection.	1.5
DRL	Slide drill 12 1/4" Intermediate - 14' @ 28 fph. MW 9.2 ppg reserve pit water. 90 MTF, Full returns.	0.5
DRL	Rotate drill 12 1/4" Intermediate - 361' @ 180' fph. MW 9.2 ppg reserve pit water. Full returns, Pumping 1 soap stick, 1 sapp stick every other connection w/ 1 gal of PHPA on off set connections. Pump 40 bbls MF 55 sweeps every third connection.  Last Survey MD 1057 feet INC 2.29 ° AZM 85.18 ° TVD 1056.87 feet  Survey Point-HLLR Behind: 2.0 / Right: 5.8 Bit Projection-HLLR Behind: 1.7 / Right: 7.5 AntiCollision: 33 feet from University 2-20 #50H well (Active)  2 Generators online	2

Report #: 4 Daily Operation: 4/18/2015 06:00 - 4/19/2015 06:00

Job Category ORIG DRILLING		Primary Job Type ODR		AFE Number 032881	
Days From Spud (days)	Days On Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
3	4	4,576.0	4,575.4	9.25	
Operations Summary Drill intermediate f/1,307' t/ 4,576'. ( 3,269' Total )					
Remarks Rig (H&P 606) & Well Progress: 1.7 Rig Move Days, 2.9 Days From Spud, 3.5 Total Days On Well, 10 Total Days On Location  Rig NPT: 0 hrs previous 24 hrs. 0 NPT for month of April.  Completion percentage: Surface - 100%, Intermediate - 86%, Curve - 0%, Lateral - 0%  Slide percentage: Surface - 0%, Intermediate - .01%, Curve - 0%, Lateral - 0%  Estimated Pad release: 5/20/15					

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate drill 12 1/4" Intermediate - 566' @ 188' fph. MW 9.2 ppg reserve pit water. Full returns, Pumping 1 soap stick, 1 sapp stick every other connection w/ 1 gal of PHPA on off set connections. Pump 40 bbls MF 55 sweeps every third connection.  2 generators online	3
DRL_SLIDE	Slide drill 12 1/4" Intermediate - 10' @ 40 fph. MW 9.2 ppg reserve pit water. 80 MTF, Full returns.	0.25
DRL_ROT	Rotate drill 12 1/4" Intermediate - 2,161' @ 142' fph. MW 9.2 ppg reserve pit water. Full returns, Pumping 1 soap stick, 1 sapp stick every other connection w/ 1 gal of PHPA on off set connections. Pump 40 bbls MF 55 sweeps every third connection.	15.25
DRL	Slide drill 12 1/4" Intermediate - 12' @ 24 fph. MW 9.2 ppg reserve pit water. 230 MTF, Full returns.	0.5
DRL	Rotate drill 12 1/4" Intermediate - 174' @ 87' fph. MW 9.2 ppg reserve pit water. Full returns, Pumping 1 soap stick, 1 sapp stick every other connection w/ 1 gal of PHPA on off set connections. Pump 40 bbls MF 55 sweeps every third connection.	2
RIG_SVC	Service Rig. Lubricate Drawworks, Blocks and TDS.	0.5
DRL	Rotate drill 12 1/4" Intermediate - 346' @ 138' fph. MW 9.2 ppg reserve pit water. Full returns, Pumping 1 soap stick, 1 sapp stick every other connection w/ 1 gal of PHPA on off set connections. Pump 40 bbls MF 55 sweeps every third connection.  Last Survey MD 4262 feet INC 0.70 ° AZM 174.12 °  Survey Point-HLLR Ahead: 7.7 / Left: 0.4 Bit Projection-HLLR Ahead: 6.9 / Left: 0.5 AntiCollision: 85 feet from University 2-20 #50H well (Active)  **3 Generators online.**	2.5

Report #: 5 Daily Operation: 4/19/2015 06:00 - 4/20/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	032881
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
4	5	5,218.0
		End Depth (TVD) (ftKB)
		5,217.3
		Dens Last Mud (lb/gal)
		9.20
		Rig

Operations Summary  
Drilled intermediate to 5,218' MD (T.D.), circulate bottoms up x2, TOH to D.C.'s, L/D 8" D.C.'s, 8" drilling jars and 8" directional tools, RU CRT and run 9 5/8" csg f/ 93' t/ 2,300'.

#### Remarks

Rig (H&P 606) & Well Progress: 1.7 Rig Move Days, 3.9 Days From Spud, 4.5 Total Days On Well, 11 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 0 NPT for month of April.

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 0%, Lateral - 0%

Slide percentage: Surface - 0%, Intermediate - .01%, Curve - 0%, Lateral - 0%

Estimated Pad release: 5/20/15

\*\*Talked to Kay @ TRRC about upcoming intermediate cement job. 22:45 pm 4/19/15.\*\*

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate drill 12 1/4" Intermediate - 600' @ 64' fph. MW 9.2 ppg reserve pit water. Full returns, Pumping 1 soap stick, 1 sapp stick every other connection w/ 1 gal of PHPA on off set connections. Pump 40 bbls MF 55 sweeps every third connection  **TD well @ 5,218'. 16:00 pm 4/19/15.**  **3 Generators online.**	10
CIRC	Circulate and condition hole to run casing - Pumped 2-40 bbls sweeps. No excess cuttings observed @ surface.  **Fluid caliper indicates approx. 59% washout.**  Projected Borehole Position MD 5,218' INC 0.09° AZM 206.29° TVD 5217.44' VS 3.00'  Bit Projection-HLLR North: 1.8 / East: 1.1	2.5

## Drilling & Completion Summary - Ascending

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### Time Log Summary

Operation	Com	Dur (hr)
TOOH_ELE V	PJSM W/Rig Crew & PNR Rep. on TOOH, 15 min flow check. Well static. TOOH (SLM) to Run 9 5/8" Intermediate Casing, f/ 5,218' t/ 473' monitor over trip tank, hole taking proper fill.	2.5
L/D BHA	PJSM on laying down BHA. L/D 11) 8" DC, Jars, X.O. Sub, MWD, Directional mtr and Bit.  **Clean and clear rig floor of all Directional subs and Bit.**	3.5
WH	Remove wear bushing and inspect. Jet well head. Wear bushing had no signs wear.	0.5
RU	PJSM with H&P rig crew, H&P CRT crew & PNR representative over rigging up CRT & Casing tools. P/U & R/U H&P CRT & Casing equipment.	1.25
CSG_TEST	PJSM M/U 9 5/8" BTC L-80 PDC Drillable, Single valve Down jet float shoe, onto 2 joint shoe track of 9 5/8" 40 lb/ft L80 IC BTC Casing. Verified Zero SICP, Open Blind Rams. M/U 9 5/8" BTC L-80 PDC Drillable, Single Valve float collar. M/U 1 joint of casing on top of float collar w/2- solid body centralizers. Thread lock all threads from top of top of float collar down to shoe. Fill up and test floats (Good).  10 jts of 40 lb/ft casing - 8.875". ID of single latch elevators - 9 15/16", OD of casing collars - 10 5/8".	1
CSG_W/O WASH	Run 9 5/8" L-80 BT&C Casing w/H&P CRT tool, torquing each joint to 7,000 ft/lbs (Avg. of 10 jts. made up to base of triangle) f/93' t/2,300', Monitor returns over trip tank hole giving proper displacement, breaking circulation every 40 joints.  2 Generators online.	2.75

Report #: 6 Daily Operation: 4/20/2015 06:00 - 4/21/2015 06:00

Job Category ORIG DRILLING	Primary Job Type ODR	AFE Number 032881
Days From Spud (days) 5	Days on Location (days) 6	End Depth (ftKB) 5,218.0
	End Depth (TVD) (ftKB) 5,217.3	Dens Last Mud (lb/gal) 8.80
	Rig	

#### Operations Summary

Run intermediate csg f/ 2,300' t/ 5,218'. Land out on csg Hanger, RU and cement 9 5/8" csg., Install and test pack off assembly. Modify stack design to allow f/ installation of Rotating head and Orbit valve assembly. Test BOP.

#### Remarks

Rig (H&P 606) & Well Progress: 1.7 Rig Move Days, 4.9 Days From Spud, 5.5 Total Days On Well, 12 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 0 NPT for month of April.

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 0%, Lateral - 0%

Slide percentage: Surface - 0%, Intermediate - .01%, Curve - 0%, Lateral - 0%

Estimated Pad release: 5/20/15

### Time Log Summary

Operation	Com	Dur (hr)
CSG_W/O WASH	Run 9 5/8" L-80 BT&C Casing w/ H&P CRT tool, torquing each joint to 7,000 ft/lbs f/ 2,300' t/ 5,210', Monitor returns over trip tank, hole returning correct fluid for calculated steel displacement, breaking circulation every 40 joints.  2 generators online.	4
WH	M/U & land the casing hanger, measurements confirmed to ensure proper seat in the wellhead by both Seaboard and PNR Co. Reps.  *** The I.D. of the casing hanger and pup joint were checked and confirmed that there is sufficient clearance to run 8.750" bit prior to being made up on the casing string.***	0.5
CIRC	Circulate surface to surface plus 59% calculated wash out volume (20,300 stks.) at 8 BPM with 145 PSI.  ***Schlumberger on location at 11:30 hrs. as requested***  Spotted in and rigged up Schlumberger equipment while circulating STS volume.  Held EJRA with H&P, Schlumberger and PNR Reps. while circulating STS volume.	3.5

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Time Log Summary		
Operation	Com	Dur (hr)
CMT	<p>Cement 9 5/8" Intermediate casing as follows:</p> <p>Pressure test cement lines to 1,500 then up to 4,500 psi. good test.</p> <p>20 bbl water 8.32 lb/gal to pit.</p> <p>40 bbls 9.8 lb/gal MUDPUSH Express. Mixed with 1.20 lb/bbl BW/V. MUDPUSH Express B389, D206 anti foam 0.1 gal/bbl, 1910.0 lb/mgal Weighting Agent D031.</p> <p>Shut down and drop bottom plug, load top plug in the head.</p> <p>362 sk, 146 bbl of Lead Slurry, 11.50 lb/gal D049 cement 75 lb/sk, 2.28 yield. Mixed with 12.975 gal/sk H2O, 0.2% Anti foam D046, 0.5% fluid loss D207, 9.0% extender D020, 5 lb/sk Extender D020, 0.1% viscosifier D208, 0.1 % dispersant D065, and 0.8% Retarder D013.</p> <p>194 sk, 37 bbl, 16.4 lb/gal Tail Slurry, 1.07 yield. Mixed with 4.370 gal/sk H2O, 94 lb/sk Cement (Class H), 0.2% Anti foam D046, 0.2% Dispersant D065, 0.2% Retarder D013.</p> <p>Shut down and drop top plug.</p> <p>Displaced cement with 383 bbls of 8.34 ppg Fresh Water at 4 - 6 bpm. Slowed displacement rate to 4.2 BPM at 40 bbls from final displacement and then slowed to 2.3 bpm the final 20 bbls. Bump the plug with 383 bbls displacement to 1,170 psi. 450 psi over the final lift pressure of 720 psi. at 17:05 hrs 4/20/2015. Held pressure for 5 minutes. Released pressure and bled back 1.75 bbls. Floats held.</p> <p>Lift pressures: 50 bbls @ 6.5 bpm - 145 psi, 100 bbls @ 6.5 bpm - 155 psi, 150 bbls @ 6.5 bpm - 155 psi, 200 bbls @ 6.5 bpm 175 psi, 250 bbls @ 6.5 bpm - 210 psi, 300 bbls @ 6.5 bpm - 425 psi, 350 bbls @ 4.2 bpm - 620 psi, 360 bbls @ 4.2 bpm - 620 psi, 370 bbls @ 2.6 bpm - 665 psi, 380 bbls @ 4.2 bpm - 720 psi, at 383 bbls bumped the plug to 1,170 psi.</p> <p>Full circulation throughout job,</p>	3.5
RD	PJSM on CRT rig down. Rig Down CRT and csg running equipment.	0.5
WH	<p>PJSM W/Seaboard &amp; Pull Landing Joint, Confined Space Entry Permit Req'd, Check Cellar With Sniffer, All OK, Set Packoff, Test Packoff to 5,000 psi for 5 minutes, L/D Landing Joint.</p> <p>***Safe Work Permit - Confined Space Entry***</p>	1.5
ND_BOPE	<p>PJSM w/ HP, Battle, and PNR rep. on Nippling down BOP. Remove Flow nipple, Flow line, Choke hose and spacer spool. Rack back BOP in order to install Rotating head and Orbit valve assembly.</p> <p>**Confined space permit in place.**</p>	2.5
NU_BOPE	<p>PJSM w/ HP, Battle and PNR Rep on Nippling up BOP and Modifying Flow line to fit for Orbit valve assembly. Install new 72" spacer spool on well head. Install Rotating head and Orbit valve assembly to Annular, Reinstall stack to top of spacer spools on well head. Torque all breaks and reinstall Flow Line.</p> <p>**Modifying Flow line in tandem. Shorten by 12" to allow f/ extra length of Orbit valve.**</p> <p>**Hot work permit and Confined space permit in place.**</p>	4.5
TEST_BOP E	<p>PJSM w/Battle Energy Services BOP Tester &amp; Rig Crew on BOP Testing, Test Choke valves and lines, test mud lines back to MP through TDS. 250 low/ 5,000 high, hold f/ 5 min each. Test good.</p> <p>**Started w/ Choke and Mud lines, Rig hands finishing up w/ BOP misc.**</p> <p>**1 Generator online.**</p>	3.5



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

Report #: 7 Daily Operation: 4/21/2015 06:00 - 4/22/2015 06:00

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 032881
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
6	7	6,025.0	6,024.3	8.80	

### Operations Summary

Finish testing BOP, Test Csg. PU 8 3/4" BHA, TIH f/ 96' t/ 5,117', Drill out shoe track t/ 5,210. Drill 10' of new hole t/ 5,228', Clrc. and displace to OBM, FIT t/ 10.5 EMW. Drill 8 3/4" hole f/ 5,228 t/ 6,025'.

### Remarks

Rig (H&P 606) & Well Progress: 1.7 Rig Move Days, 5.9 Days From Spud, 6.5 Total Days On Well, 13 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 0 NPT for month of April.

Completion percentage: Surface - 100%, Intermediate - 100%, Vertical Production Hole - 65%, Curve - 0%, Lateral - 0%

Slide percentage: Production Vertical To KOP - 0%

Estimated Pad release: 5/20/15

### Time Log Summary

Operation	Com	Dur (hr)
TEST_BOP E	Review JSA on pressure testing. Finish testing BOPE. Tested annular to 250 low / 3500 high Tested floor safety valve and inside BOP valve to 250 low/ 5,000 high, held each test for 5 min.  1 generator online	2.5
CSG_TEST	Removed test plug and tested casing to 2,500 psi for 30 minutes. All tests were good.	1
WH	Install and anchor wear bushing in the wellhead with two opposing locking screws. Verify wellhead valves were closed.  **Operation witnessed by PNR Co. Rep.**  Performed standard accumulator draw down test.	0.5
RIG_SVC	Install trip nipple in RCH. Take measurements on RCH trip nipple and rotary table opening to fabricate OBM drip pans.	1.5
PU_BHA	PJSM on P/U BHA & BHA handling w/ HP, Leam and PNR Rep. Pick up and make up BHA # 3. Pick up 6 3/4" XD, 7/8, 5.0, 1.83° 0.29 rpg, fixed bend mud motor with 8 1/4" stabilizer, Scribe tools, install & test MWD and motor, made up 8 3/4" Halliburton MMD55DM bit #3.  Note: Tested MWD and mud motor before making up the bit.	1.5
TIH_ELEV	Tripping in the hole at 4,893'. P/U, M/U and TIH with 5" D.P. to make up BHA difference. Tagged cement at 5,088'.	3
DRL_OUT	Establish circulation. Drill cement to float collar at 5,118'. drill F.C. and shoe track. Drill float shoe collar at 5,210' with 350 gpm and 15 top-drive rpm's	0.75
DRL	Drill 10' of new formation to 5,228'	0.25
CIRC	Pumped a 20 bbl high vis. polymer sweep with 6 bags of cedar fiber for a marker ahead of 35 bbl diesel spacer. Diesel spacer to surface at calculated strokes. Diverted diesel to the trip tank. Circulate and condition mud weight to 8.8 ppg in/out prior to FIT.  Removed trough and over board line to reserve pit.  Shut down and flow check- well static.  Check SPR.	3
FIT/LOT	Perform FIT with 8.8 ppg MW, ( 5,210' TVD) = 460 psi ~ 10.5 EMW. Pressure drop to 447 psi in 5 min Leak-Off Calculated To 10.45 ppg EMW.	0.5



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

### Time Log Summary

Operation	Com	Dur (hr)
DRL	<p>Rotate drill 8 3/4" Vertical Production hole - 797' @ 84' fph. MW 8.8 ppg OBM. Full returns, Pumping 20 bbls of high vis sweep every third connection.</p> <p><b>**Hold ROP t/ 130 fph while drilling through Clearfork ( top @ 5,639' ) to prevent f/ loading back side annulus w/ cuttings and inadvertently raising ECD causing lost returns.**</b></p> <p>Lithology:  5,300: 40% sl, 40% ls, 20% sh  5,390: 70% sh, 30% ls  5,630: 80% sh, 10% ls</p> <p>Last Survey  MD 5781 feet  INC 0.26 °  AZM 103.46 °  Bit Projection-HLLR Ahead: 1.4 / Left: 4.5</p> <p>3 Generators online</p>	9.5

Report #: 8 Daily Operation: 4/22/2015 06:00 - 4/23/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	032881
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
7	8	7,650.0
		End Depth (TVD) (ftKB)
		7,647.7
	Dens Last Mud (lb/gal)	Rig
	8.75	

### Operations Summary

Drill 8 3/4" Vertical Production Hole Section to KOP at 7500'. Drill Curve Section from 7,500' to 7,650'.

### Remarks

Rig (H&P 606) & Well Progress: 1.7 Rig Move Days, 6.9 Days From Spud, 7.5 Total Days On Well, 14 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 0 NPT for month of April.

Completion percentage: Surface - 100%, Intermediate - 100%, Vertical Production Hole - 100%, Curve - 15%, Lateral - 0%

Estimated Pad release: 5/20/15

### Time Log Summary

Operation	Com	Dur (hr)
DRL	<p>Rotate drill 8 3/4" vertical production section - 284' @ 114' fph. MW 8.8 ppg OBM. Pumping 20 bbl. high vis. sweeps every third connection. Full returns.</p> <p>Staged drilling ROP parameter up while monitoring for any signs of losses. Parameters increased from 130fph limit to 150 fph with no indication of losses while drilling through the Clearfork formation.</p>	2.5
RIG_SVC	Service rig equipment	1
CIRC	Removed solid master bushing and replaced with split master bushings. Circulate hole while installing H&P OBM drip pans on the Black Gold RCH system.	0.5
DRL	<p>Rotate drill 8 3/4" vertical production section - 1,109' @ 99.25' fph. MW 8.8 ppg OBM. Pumping 20 bbl. high vis. sweeps every third connection. Full returns.</p> <p>Note: At 7350' the Flow Out Percent dropped from 35% to 25% while pumping 470 GPM. Lowered the Flow Rate to 370 GPM and continued drilling with Max ROP set at 80 while pumping a 25 bbl LCM Sweep at 18 ppb (8 ppb Tiger Bullets Medium, 5 ppb Mica, and 5 ppb Calcium Carbonate 250). Observed a 3%-4% increase in flow out. Pumped 2 additional LCM Sweeps with the same LCM. Regained full returns prior to reaching KOP and staged pumps back to 470 GPM.</p>	12

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

### Time Log Summary

Operation	Com	Dur (hr)
DRL	Slide Drill 8 3/4" Curve Section 150' at 18.8 fph. MW 8.8 ppg OBM. Pumping 20 bbl Hi-Vis sweeps with 18 ppb LCM on each connection to clean wellbore and maintain full returns.  Lithology: 7,060' 50% SH, 40% SD, 10% SLST 7,240' 70% SH, 30% SD 7,360' 40% SH, 60% SD 7,570' 90% SH, 10% LS  Last Survey MD 7,573' INC 7.12 ° AZM 353.42 °  Bit Projection-HLLR Ahead: 13.0 High / 17.3 Right  Last Motor Yield 9.3, BRN 8.9  2 Generators online past 24 hours.	8

### Report #: 9 Daily Operation: 4/23/2015 06:00 - 4/24/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	032881
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
8	9	8,319.0
		End Depth (TVD) (ftKB)
		8,112.4
		Dens Last Mud (lb/gal)
		8.75
		Rig

### Operations Summary

Drilled Curve Hole Section from 7,650' to 8,319'.

### Remarks

Rig (H&P 606) & Well Progress: 1.7 Rig Move Days, 7.9 Days From Spud, 8.5 Total Days On Well, 15 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 0 NPT for month of April.

Completion percentage: Surface - 100%, Intermediate - 100%, Vertical Production Hole - 100%, Curve - 84%, Lateral - 0%

Estimated Pad release: 5/20/15

### Time Log Summary

Operation	Com	Dur (hr)
DRL	Slide Drill 8 3/4" Curve Section 669' at 27.9 fph. HS TFO. MW 8.8 ppg OBM. Pumping 20 bbl High-Vis. sweeps as needed to assist in cleaning the wellbore. Full returns.  Note: Adjusted Drilling Parameters by Lowering the GPM to affectively achieve desired Build Rates.  Lithology: 7,660' 90% SH, 10% LS 7,670' 90% SH, 10% LS 7,720' 80% SH, 20% LS 7,780' 90% SH, 10% LS 7,880' 60% LS, 40% SH 7,980 70% SH, 30%LS 8,020 80% SH, 20% LS 8,190 90% SH, 10% LS  Last Survey: MD Inc Azm MY BRN 8,185' 62.61° 2.74° 10.8 8.6  Line Proximity: PTB -- 8,241', Inc. 68.37°, Azi. 2.53°  Line Prox 12.9' High and 9.1' Right of Plan 2.  Ran 2 Generators 24 hours.	24

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

Report #: 10 Daily Operation: 4/24/2015 06:00 - 4/25/2015 06:00

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 032881
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
9	10	8,477.0	8,130.9	8.80	

### Operations Summary

Rotate and Slide Drilled from 8,319' to the EOC at 8,477'. Performed Clean-Up Cycle and TOO H for new BHA. LD Bit and BHA. PU New BHA and MU 8 1/2" Bit. TIH to the Casing Shoe. Cut and Slip 49' (5 wraps) of Drill Line. Test MWD in Open hole. TIH to KOP at 7,500'. Orient the Drilling Motor to the HS and TIH to 8,477', making up 5 Stands of Drill Pipe to tag.

### Remarks

Rig (H&P 606) & Well Progress: 1.7 Rig Move Days, 8.9 Days From Spud, 9.5 Total Days On Well, 16 Total Days On Location

Rig NPT: 1.5 hrs previous 24 hrs. 1.5 NPT for month of April.

Completion percentage: Surface - 100%, Intermediate - 100%, Vertical Production Hole - 100%, Curve - 100%, Lateral - 0%

Estimated Pad release: 5/15/15

### Time Log Summary

Operation	Com	Dur (hr)
DRL	Slide & rotate curve section f/ 8,319' to 8,477' 158' @ 39.5 fph. HS TFO. MW 8.8 ppg OBM, Pumping 20 bbl High-Vis. sweeps as needed to assist in cleaning the wellbore with full returns to surface.  Landed the curve at 8,477' @ 10:00 hrs.  Last Survey: MD 8,421' INC 85.56° AZM 2.03° TVD 8,127.76' NS 554.97' EW 87.64' VS 557.19' DLS 8.08°/100' MY: 10.8 BRN: Landed  Projected Borehole Position: MD 8,475' INC 88.99° AZM 1.85° TVD 8,130.24' NS 609.33' EW 89.51' VS 611.58'  Line Prox 5.8' High and 1.6' Left of Plan 2.	4
CIRC	Circulate and perform clean up cycle. BU x2 @ 529 GPM with 2350 psi SPP. 55 top-drive RPM's while reciprocating the pipe. Full returns to surface	1
FLOW_CHK	Shut down and flow check well. (wellbore static)	0.25
TOOH_ELEV	EJSA with H&P and PNR on tripping out of the hole. Trip out 5 stands wet. Hole took correct fluid for calculated steel displacement.	0.25
FLOW_CHK	Flow check well (wellbore static) Pump dry pipe trip slug	0.5
TOOH_ELEV	Trip out of the hole for lateral BHA assembly. Hole taking correct fill for caculated steel displacement.  ***Fuction Tested BOP.	4
SFTY	Pipe came wet. Shut down to clean OBM off of the rig floor for safety prior to handling BHA	0.5
PU_BHA	EJSA with H&P, Leam and PNR on handling BHA. Lay down MWD sensor, PU drain motor and remove bit and stabilizer. PU new 6 3/4" XD, 7/8, 5.0, 1.5° fixed mud motor with slick sleeve. Scribe and orient. Install MWD and surface test same. Made up Halliburton 8 1/2" MMD55D bit.	2
TIH_ELEV	TIH to 2,400' monitoring Well on Trip Tanks, correct Displacement.	1.25
TIH_ELEV	TOOH from 2,400' to retrieve Pipe Screen.	0.75
TIH_ELEV	TIH to 2,400', filling Pipe every 25 stands.monioting Well on Trip Tanks, correct Displacement.	0.75
TIH_ELEV	TIH from 2,400' to 5,184' filling pipe every 25 stands, monitoring Well on Trip Tanks, correct Displacement.	1.25
SLIP_CUT	Hold PJSM on Docking the Top Drive. Dock Top Drive. Hold PJSM on Cutting Drill Line, Cut and Slip 49' (5 wraps) of Drill Line. Hold PJSM on Undocking Top Drive, Undock Top Drive. Monitoring Well on Trip tanks, Well Static. Perform 2 point calibration.	3
RIG_SVC	Lubricate Top Drive, Change out Elevators, and Check Suction Screens on Mud Pumps, Screens Clean.	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

### Time Log Summary

Operation	Com	Dur (hr)
TIH_ELEV	TIH from 5,184' to 5,373', Fill Pipe and Pump up Survey to confirm Depth and Gamma (good). TIH from 5,373' to 7,500'. Orient Drilling Motor to HS and TIH from 7,500' to 8,477', Re-Logging last 50' for Gamma (MU 5 Stands of Drill Pipe to replace HWDP) filling pipe every 25 stands, monitoring Well on Trip Tanks, correct Displacement.  Ran 2 Generators 24 Hours.	4

Report #: 11 Daily Operation: 4/25/2015 06:00 - 4/26/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	032881
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
10	11	11,061.0
	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)
	8,152.1	8.85
		Rig

#### Operations Summary

Slide and Rotate Drill 8 1/2" Lateral Hole Section from 8,477' to 11,061'.

#### Remarks

Rig (H&P 606) & Well Progress: 1.7 Rig Move Days, 9.9 Days From Spud, 10.5 Total Days On Well, 17 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 1.5 NPT for month of April.

Completion percentage: Surface - 100%, Intermediate - 100%, Vertical Production Hole - 100%, Curve - 100%, Lateral - 25%

Estimated Pad release: 5/15/15

### Time Log Summary

Operation	Com	Dur (hr)
DRL	Slide and rotate drill 8 1/2" lateral section 2,081' at 104 fph. MW 8.8 ppg OBM. Full returns.	20
RIG_SVC	Lubricate Rig and Top Drive, Check Suction Screens on Mud Pumps, Screens Clean.	0.5
DRL	Slide and rotate drill 8 1/2" lateral section 503' at 143 fph. MW 8.8 ppg OBM. Full returns.  Lithology: 8,510' - 8,690' 90% SH, 10% LS 8,690' - 8,910' 80% SH, 20% LS 8,910' - 9,910' 90% SH, 10% LS 9,910' - 10,060' 90% SH, 10% LS 10,060' - 10,390' 90% SH, 10% LS 10,390' - 10,450' 80% SH, 20% LS 10,450' - 10,480' 90% SH, 10% LS 10,480' - 10,590' 80% SH, 20% LS 10,590' - 11,061' 90% SH, 10% LS  Last Survey MD 10884 feet INC 88.29 ° AZM 1.15 ° TVD 8149.97 feet NS 3016.18 feet EW 138.88 feet VS 3018.87 feet DLS 0.35 °/100' CL 94.00 feet  Projected Borehole Position MD 10936 feet INC 88.45 ° AZM 1.03 ° TVD 8151.36 feet NS 3067.92 feet EW 139.97 feet VS 3070.62 feet  Line Prox 3.4' High and 2.7' Left of Plan 2.  Ran 2 Generators 7 Hours. Ran 3 Generators 17 Hours.	3.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

<b>Report #: 12 Daily Operation: 4/26/2015 06:00 - 4/27/2015 06:00</b>					
Job Category ORIG DRILLING				Primary Job Type ODR	
				AFE Number 032881	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
11	12	13,480.0	8,175.2	9.20	
Operations Summary					
Slide and Rotate Drill 8 1/2" Lateral Hole Section from 11,061' to 13,480'.					
Remarks					
Rig (H&P 606) & Well Progress: 1.7 Rig Move Days, 10.9 Days From Spud, 11.5 Total Days On Well, 18 Total Days On Location					
Rig NPT: 0 hrs previous 24 hrs. 1.5 NPT for month of April.					
Completion percentage: Surface - 100%, Intermediate - 100%, Vertical Production Hole - 100%, Curve - 100%, Lateral - 49%					
<b>Time Log Summary</b>					
Operation	Com				Dur (hr)
DRL	Slide and rotate drill 8 1/2" lateral section 1,948' at 102.9 fph. MW 8.9 - 9.2 ppg OBM. Full returns.				19
RIG_SVC	Lubricate Rig and Top Drive, Check Suction Screens on Mud Pumps, Screens Clean.				0.5
DRL	Slide and rotate drill 8 1/2" lateral section 471' at 104.7 fph. MW 9.2 ppg OBM. Full returns.				4.5
Lithology:					
11,020' - 11,200' 80% SH, 20% LS					
11,200' - 11,260' 90% SH, 10% LS					
11,260' - 11,320' 80% SH, 20% LS					
11,320' - 11,490' 90% SH, 10% LS Trace of Pyrite at 11,380'					
11,640' - 11,850' 80% SH, 20% LS					
11,850' - 11,910' 90% SH, 10% LS					
11,910' - 11,970' 80% SH, 20% LS					
11,970' - 12,020' 90% SH, 10% LS					
12,020' - 12,160' 80% SH, 20% LS					
12,160' - 12,370' 90% SH, 10% LS					
12,430' 100% SH					
12,460' - 12,640' 90% SH, 10% LS					
12,700' 100% SH					
12,760' - 13,120' 90% SH, 10% LS					
Last Survey					
MD 13335 feet					
INC 89.69 °					
AZM 2.21 °					
TVD 8174.47 feet					
NS 5465.37 feet					
EW 200.04 feet					
VS 5468.82 feet					
DLS 2.24 °/100'					
CL 95.00 feet					
Projected Borehole Position					
MD 13386 feet					
INC 90.56 °					
AZM 2.98 °					
TVD 8174.26 feet					
NS 5516.31 feet					
EW 202.47 feet					
VS 5519.80 feet					
Line Prox 7.8' High and 9.7' Left of Plan 2.					
Ran 3 Generators 24 Hours.					

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

**Report #: 13 Daily Operation: 4/27/2015 06:00 - 4/28/2015 06:00**

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 032881
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
12	13	15,680.0	8,175.6	9.20		

**Operations Summary**

Slide and Rotate Drill 8 1/2" Lateral Hole Section from 13,480' to 15,680'.

**Remarks**

Rig (H&P 606) & Well Progress: 1.7 Rig Move Days, 11.9 Days From Spud, 12.5 Total Days On Well, 19 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 1.5 NPT for month of April.

Completion percentage: Surface - 100%, Intermediate - 100%, Vertical Production Hole - 100%, Curve - 100%, Lateral - 70%

**Time Log Summary**

Operation	Com	Dur (hr)
DRL	Slide and rotate drill 8 1/2" lateral section 1885' at 91.9 fph. MW 9.1 - 9.2 ppg OBM. Full returns.	20.5
RIG_SVC	Lubricate Rig and Top Drive, Checked Suction Screens on Mud Pumps, Screens Clean. Checked Shaker Screens.	0.5
DRL	Slide and rotate drill 8 1/2" lateral section 315' at 105 fph. MW 9.2 ppg OBM. Full returns.  Lithology: 13,500' - 13,670' 90% SH, 10% LS, Tr. PYR at 13,610' 13,670' - 13,730' 80% SH, 20% LS 13,730' - 15,680' 90% SH, 20% LS Tr. PYR at 14,430'  Last Survey MD 15502 feet INC 91.36 ° AZM 0.27 ° TVD 8176.33 feet NS 7631.40 feet EW 236.91 feet VS 7635.04 feet DLS 1.69 °/100' CL 94.00 feet  Projected Borehole Position MD 15553 feet INC 92.23 ° AZM 0.15 ° TVD 8174.63 feet NS 7682.47 feet EW 237.20 feet VS 7686.10 feet  Recent Gamma: 130  Line Prox 3.0' High and 0.2' Right of Plan 2.  Ran 3 Generators 24 Hours.	3

**Report #: 14 Daily Operation: 4/28/2015 06:00 - 4/29/2015 06:00**

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 032881
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
13	14	18,067.0	8,197.5	9.20		

**Operations Summary**

Slide and Rotate Drill 8 1/2" Lateral Hole Section from 15,680' to 18,067'.

**Remarks**

Rig (H&P 606) & Well Progress: 1.7 Rig Move Days, 12.9 Days From Spud, 13.5 Total Days On Well, 20 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 1.5 NPT for month of April.

Completion percentage: Surface - 100%, Intermediate - 100%, Vertical Production Hole - 100%, Curve - 100%, Lateral - 93%

**Time Log Summary**

Operation	Com	Dur (hr)
DRL	Slide and rotate drill 8 1/2" lateral section 2041' at 97.2 fph. MW 9.2+ ppg OBM. Full returns.  Window tolerances changed to 5' High and 25' Low at the request of the Geology Dept. as per Drilling Engineer.	21
RIG_SVC	Lubricate Rig and Top Drive, Checked Suction Screens on Mud Pumps, Screens Clean. Checked Shaker Screens.	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

### Time Log Summary

Operation	Com	Dur (hr)
Slide and rotate drill 8 1/2" lateral section 346' at 138.4 fph. MW 9.2+ ppg OBM. Full returns.		2.5
Lithology: 15,750' - 15,870' 90% SH, 10% LS 15,870' - 15,930' 80% SH, 20% LS 15,930' - 16,080' 90% SH, 10% LS 16,080' - 16,290' 80% SH, 20% LS 16,290' - 16,410' 90% SH, 10% LS 16,410' - 16,440' 80% SH, 20% LS 16,440' - 16,560' 90% SH, 10% LS Tr. Pyrite at 16,440' 16,560' - 16,650' 80% SH, 20% LS 16,650' - 18,067' 90% SH, 20% LS  Last Survey MD 17953 feet INC 90.75 ° AZM 2.38 ° TVD 8196.45 feet NS 10081.23 feet EW 290.56 feet VS 10085.41 feet DLS 1.14 °/100' CL 94.00 feet  Projected Borehole Position MD 17911 feet INC 89.56 ° AZM 2.56 ° TVD 8197.05 feet NS 10039.47 feet EW 288.93 feet VS 10043.63 feet  Recent Gamma: 110  Line Prox 13.1' Low and 4.7' Right of Plan 2.  Window tolerances changed to 5' High and 25' Low at the request of the Geology Dept. as per Drilling Engineer.  Ran 3 Generators 24 Hours.		

### WELL DETAILS

Well Name UNIVERSITY 2-20 49H	API/UWI 42-383-38926-0000	Operator PIONEER NATURAL RESRC USA, INC
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### Wellbore Hole Size

Section Des	Size (in)	Act Top (ftKB)	Act Btm (ftKB)	Start Date	End Date
Conductor	30	26.0	146.0	4/1/2015	4/1/2015
Surface	17 1/2	146.0	601.0	4/16/2015	4/16/2015
Intermediate	12 1/4	601.0	5,218.0	4/20/2015	4/19/2015
Production	8 1/2	5,218.0		4/21/2015	

### Conductor Casing

Run Date	Set Depth (ftKB) 120.0				Centralizers			
Item Des	OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Casing Joints	20	19.124	94.00	J-55	120.00	1	0.0	120.0
Run Date 4/1/2015	Set Depth (ftKB) 146.0				Centralizers 0			
Item Des	OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Conductor	20	19.124	94.00	J-55	120.00	3	26.0	146.0

### Surface Casing

Set Depth (ftKB) 601.0	Run Date 4/16/2015	Centralizers 4
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## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

Item Des		OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Casing Joints		13 3/8	12.615	54.50	J-55	0.00	0	26.5	26.5
Cut off		13 3/8	12.615			0.00	1	26.5	26.5
Casing Joints		13 3/8	12.615	54.50	J-55	535.51	14	26.5	562.0
Float Collar		13 3/8	12.615			1.60	1	562.0	563.6
Casing Joints		13 3/8	12.615	54.50	J-55	35.78	1	563.6	599.4
Float Shoe		13 3/8	12.615			1.65	1	599.4	601.0
Set Depth (ftKB)	Run Date		Centralizers						
1,175.0									
Item Des		OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Casing Joints		13 3/8	12.715	48.00	J-55	1,175.00	29	0.0	1,175.0
Surface Casing Cement									
Type	String	Cementing Start Date	Cementing End Date	Cementing Company				Top (ftKB)	Btm (ftKB)
Casing	Surface, 601.0ftKB	4/16/2015	4/17/2015					26.0	601.0
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
Class C		487		1.71	13.60				
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
Class C		126		1.35	14.80				
Intermediate Casing									
Set Depth (ftKB)	Run Date		Centralizers						
5,210.4	4/20/2015		15						
Item Des		OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Marker Joint		9 5/8	8.835		L-80	0.00	0	-3.4	-3.4
Casing Joints		9 5/8	8.835	40.00	L-80	0.00	0	-3.4	-3.4
Landing Joint		9 5/8	8.835		L-80	33.40	1	-3.4	30.0
Casing Hanger		9 5/8	8.835		L-80	4.00	1	30.0	34.0
Casing Joints		9 5/8	8.835	40.00	L-80	45.40	1	34.0	79.4
Marker Joint		9 5/8	8.835		L-80	8.87	1	79.4	88.3
Casing Joints		9 5/8	8.835	40.00	L-80	5,027.51	111	88.3	5,115.8
Float Collar		9 5/8	8.835			1.50	1	5,115.8	5,117.3
Casing Joints		9 5/8	8.835	40.00	L-80	91.14	2	5,117.3	5,208.4
Float Shoe		9 5/8	8.835			2.00	1	5,208.4	5,210.4
Set Depth (ftKB)	Run Date		Centralizers						
7,575.0									
Item Des		OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Casing Joints		9 5/8	8.835	40.00	L-80	7,575.00	189	0.0	7,575.0
Intermediate Casing Cement									
Type	String	Cementing Start Date	Cementing End Date	Cementing Company				Top (ftKB)	Btm (ftKB)
Casing	Intermediate, 5,210.4ftKB	4/20/2015	4/20/2015					2,950.0	5,210.4
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
Mud Push		0		9.80					
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
TXI LITEWEIGHT		362		2.28	11.50				
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
Class H		194		1.07	16.40				
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
Fresh water		0		8.30					
Production Casing									
Set Depth (ftKB)	Run Date		Centralizers						
18,742.0	5/2/2015								
Item Des		OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Landing Joint						32.17	1	-424.2	-392.1
Casing Hanger						4.00	1	-392.1	-388.1
Casing Joints		5 1/2	4.778	20.00	P-110 IC	18,693.36	469	-388.1	18,305.3
Casing Joints		5 1/2	4.778	20.00	P-110 IC	316.20	8	18,305.3	18,621.5
Pup Joint		5 1/2	4.778			0.00	1	18,621.5	18,621.5
Toe Sleeve		5 1/2	4.778			0.00	1	18,621.5	18,621.5
Pup Joint		5 1/2	4.778			0.00	1	18,621.5	18,621.5
Casing Joints		5 1/2	4.778	20.00	P-110 IC	41.65	1	18,621.5	18,663.1
Float Collar		5 1/2	4.778			0.00	1	18,663.1	18,663.1
Casing Joints		5 1/2	4.778	20.00	P-110 IC	78.86	2	18,663.1	18,742.0

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

Item Des	OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)		
Float Shoe	5 1/2	4.778			0.00	1	18,742.0	18,742.0		
Set Depth (ftKB)	19,425.0	Run Date	Centralizers							
Item Des	OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)		
Casing Joints	5 1/2	4.892	17.00	P-110	19,425.00	485	0.0	19,425.0		
<b>Production Casing Cement</b>										
Type	String	Cementing Start Date	Cementing End Date	Cementing Company	Top (ftKB)	Btm (ftKB)				
Class	Amount (sacks)	Yield (ft³/sack)	Density (lb/gal)							
<b>Cement Squeeze</b>										
Description	Type	String	Cementing Start Date	Cementing End Date	Top (ftKB)	Btm (ftKB)				
Amount (sacks)	Yield (ft³/sack)	Dens (lb/gal)								
<b>Perforations</b>										
Top (ftKB)	Btm (ftKB)	Zone	Shot Dens (shots/ft)	Entered Shot Total	Com					
<b>Completion (FRAC) Details</b>										
<typ> on <dtm>										
Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)					
<b>GEL</b>										
Fluid Name	Total Clean Volume (bbl)									
<b>SAND &amp; ACID</b>										
Additive	Type	Amount	Units	Sand Size	Concentration...					
<b>Zones</b>										
Zone Name	Top (ftKB)									
<b>Tubing Details</b>										
Tubing Description	Set Depth (ftKB)	Run Date								
<b>Tubing Components</b>										
Item Des	OD (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)			
<b>Rod Strings</b>										
Rod Description	Set Depth (ftKB)	Run Date								
<b>Rod Components</b>										
Item Des	OD (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)	Make	Model	SN
<b>Well Tests</b>										
Description	Volume Oil Total (bbl)	Volume Gas Total (MCF)	Volume Water Total (bbl)							
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)		
<b>Directional Survey</b>										
Date	Description	MAIN HOLE SURVEY								
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company				
4/16/2015	0.00	0.00	0.00	0.00	0.00					
4/16/2015	100.00	0.60	144.14	100.00	0.52	VES				
4/16/2015	200.00	0.75	129.82	199.99	1.69	VES				
4/16/2015	300.00	0.50	124.74	299.99	2.78	VES				
4/16/2015	400.00	0.36	56.68	399.98	3.41	VES				
4/16/2015	500.00	0.62	242.36	499.98	3.64	VES				
4/16/2015	585.00	0.68	287.50	584.98	4.53	VES				
4/18/2015	685.00	0.88	260.61	684.97	5.85	Leam				
4/18/2015	778.00	0.44	94.67	777.96	6.23	Leam				

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company
4/18/2015	870.00	0.88	89.75	869.96	7.29	Leam
4/18/2015	963.00	1.76	86.93	962.93	9.43	Leam
4/18/2015	1,057.00	2.29	85.18	1,056.87	12.75	Leam
4/18/2015	1,151.00	2.11	87.11	1,150.80	16.36	Leam
4/18/2015	1,245.00	2.11	87.46	1,244.74	19.82	Leam
4/18/2015	1,340.00	1.85	81.49	1,339.68	23.10	Leam
4/18/2015	1,434.00	1.76	88.69	1,433.64	26.06	Leam
4/18/2015	1,528.00	1.58	86.23	1,527.60	28.79	Leam
4/18/2015	1,622.00	1.32	87.29	1,621.57	31.17	Leam
4/18/2015	1,717.00	1.06	91.86	1,716.55	33.14	Leam
4/18/2015	1,811.00	0.70	102.40	1,810.54	34.58	Leam
4/18/2015	1,905.00	1.23	68.65	1,904.52	36.10	Leam
4/18/2015	1,999.00	1.58	63.56	1,998.49	38.40	Leam
4/18/2015	2,093.00	1.41	60.74	2,092.46	40.86	Leam
4/18/2015	2,187.00	1.14	60.22	2,186.44	42.95	Leam
4/18/2015	2,282.00	0.88	69.88	2,281.42	44.62	Leam
4/18/2015	2,376.00	0.62	77.79	2,375.42	45.84	Leam
4/18/2015	2,470.00	0.35	85.53	2,469.41	46.64	Leam
4/18/2015	2,565.00	0.35	85.00	2,564.41	47.22	Leam
4/18/2015	2,659.00	0.44	47.38	2,658.41	47.83	Leam
4/18/2015	2,754.00	0.44	58.81	2,753.41	48.56	Leam
4/18/2015	2,848.00	0.26	32.27	2,847.40	49.12	Leam
4/18/2015	2,942.00	0.18	188.71	2,941.40	49.22	Leam
4/18/2015	3,037.00	0.18	193.11	3,036.40	49.51	Leam
4/18/2015	3,131.00	0.26	326.52	3,130.40	49.67	Leam
4/18/2015	3,225.00	0.35	9.06	3,224.40	50.14	Leam
4/18/2015	3,319.00	0.18	121.92	3,318.40	50.40	Leam
4/18/2015	3,413.00	0.44	10.82	3,412.40	50.74	Leam
4/18/2015	3,508.00	0.44	24.88	3,507.40	51.46	Leam
4/18/2015	3,602.00	0.44	42.64	3,601.39	52.18	Leam
4/18/2015	3,696.00	0.44	329.69	3,695.39	52.76	Leam
4/18/2015	3,791.00	0.35	17.50	3,790.39	53.36	Leam
4/19/2015	3,885.00	0.62	46.15	3,884.39	54.13	Leam
4/19/2015	3,979.00	0.70	54.59	3,978.38	55.21	Leam
4/19/2015	4,074.00	0.35	183.26	4,073.38	55.67	Leam
4/19/2015	4,168.00	0.53	164.63	4,167.38	56.38	Leam
4/19/2015	4,262.00	0.70	174.12	4,261.37	57.39	Leam
4/19/2015	4,357.00	0.70	212.97	4,356.36	58.48	Leam
4/19/2015	4,451.00	0.53	167.27	4,450.36	59.41	Leam
4/19/2015	4,545.00	0.53	170.96	4,544.36	60.28	Leam
4/19/2015	4,639.00	0.53	202.77	4,638.35	61.12	Leam
4/19/2015	4,734.00	0.44	218.42	4,733.35	61.92	Leam
4/19/2015	4,828.00	0.26	110.67	4,827.35	62.27	Leam
4/19/2015	4,922.00	0.44	122.79	4,921.35	62.85	Leam
4/19/2015	5,017.00	0.53	116.99	5,016.34	63.65	Leam
4/19/2015	5,111.00	0.18	191.70	5,110.34	64.14	Leam
4/19/2015	5,156.00	0.09	206.29	5,155.34	64.25	Leam
4/21/2015	5,310.00	0.62	113.65	5,309.34	65.08	Leam
4/21/2015	5,404.00	0.26	66.54	5,403.33	65.76	Leam
4/22/2015	5,498.00	0.26	78.67	5,497.33	66.18	Leam
4/22/2015	5,593.00	0.35	75.68	5,592.33	66.69	Leam
4/22/2015	5,687.00	0.18	98.89	5,686.33	67.11	Leam
4/22/2015	5,781.00	0.26	103.46	5,780.33	67.47	Leam
4/22/2015	5,876.00	0.26	122.97	5,875.33	67.90	Leam
4/22/2015	5,970.00	0.26	83.59	5,969.33	68.30	Leam
4/22/2015	6,065.00	0.79	81.49	6,064.32	69.17	Leam

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company
4/22/2015	6,159.00	1.14	69.53	6,158.31	70.75	Leam
4/22/2015	6,254.00	0.79	73.75	6,253.30	72.34	Leam
4/22/2015	6,348.00	0.70	79.90	6,347.29	73.57	Leam
4/22/2015	6,442.00	0.53	92.21	6,441.28	74.57	Leam
4/22/2015	6,536.00	0.44	86.06	6,535.28	75.36	Leam
4/22/2015	6,630.00	0.35	95.37	6,629.28	76.01	Leam
4/22/2015	6,725.00	0.35	61.80	6,724.28	76.56	Leam
4/22/2015	6,819.00	0.35	69.71	6,818.27	77.14	Leam
4/22/2015	6,913.00	0.35	81.84	6,912.27	77.71	Leam
4/22/2015	7,007.00	0.44	84.83	7,006.27	78.36	Leam
4/22/2015	7,101.00	0.44	79.73	7,100.27	79.08	Leam
4/22/2015	7,196.00	0.44	81.13	7,195.27	79.81	Leam
4/22/2015	7,290.00	0.44	96.78	7,289.26	80.52	Leam
4/22/2015	7,384.00	0.44	95.55	7,383.26	81.24	Leam
4/23/2015	7,479.00	0.26	74.28	7,478.26	81.81	Leam
4/23/2015	7,526.00	2.73	355.00	7,525.24	82.96	Leam
4/23/2015	7,573.00	7.12	353.42	7,572.05	86.99	Leam
4/23/2015	7,620.00	11.43	357.46	7,618.43	94.56	Leam
4/23/2015	7,667.00	14.42	2.91	7,664.24	105.06	Leam
4/23/2015	7,714.00	18.29	3.09	7,709.33	118.29	Leam
4/23/2015	7,761.00	22.16	5.37	7,753.42	134.54	Leam
4/23/2015	7,808.00	25.85	6.95	7,796.35	153.65	Leam
4/23/2015	7,855.00	29.90	6.60	7,837.89	175.62	Leam
4/23/2015	7,902.00	34.21	5.02	7,877.71	200.56	Leam
4/23/2015	7,950.00	38.34	3.26	7,916.40	228.95	Leam
4/23/2015	7,997.00	43.00	2.03	7,952.04	259.57	Leam
4/23/2015	8,044.00	47.84	2.03	7,985.02	293.04	Leam
4/24/2015	8,091.00	52.41	2.91	8,015.14	329.10	Leam
4/24/2015	8,138.00	57.51	2.91	8,042.12	367.56	Leam
4/24/2015	8,185.00	62.61	2.74	8,065.57	408.28	Leam
4/24/2015	8,232.00	67.53	2.38	8,085.37	450.89	Leam
4/24/2015	8,279.00	72.02	1.51	8,101.62	494.98	Leam
4/24/2015	8,326.00	77.65	1.68	8,113.91	540.32	Leam
4/24/2015	8,374.00	81.78	1.68	8,122.48	587.54	Leam
4/24/2015	8,421.00	85.56	2.03	8,127.66	634.25	Leam
4/25/2015	8,527.00	89.78	1.51	8,131.97	740.13	Leam
4/25/2015	8,621.00	91.19	1.33	8,131.17	834.13	Leam
4/25/2015	8,716.00	90.04	1.68	8,130.15	929.12	Leam
4/25/2015	8,810.00	89.16	2.21	8,130.81	1,023.12	Leam
4/25/2015	8,904.00	90.31	2.38	8,131.24	1,117.11	Leam
4/25/2015	8,998.00	88.46	2.21	8,132.25	1,211.10	Leam
4/25/2015	9,092.00	89.34	2.03	8,134.06	1,305.09	Leam
4/25/2015	9,187.00	88.11	3.09	8,136.17	1,400.06	Leam
4/25/2015	9,281.00	89.16	3.97	8,138.41	1,494.03	Leam
4/25/2015	9,375.00	89.96	2.56	8,139.13	1,588.02	Leam
4/25/2015	9,470.00	89.96	1.68	8,139.20	1,683.02	Leam
4/25/2015	9,564.00	88.11	0.27	8,140.78	1,777.00	Leam
4/25/2015	9,658.00	89.16	0.27	8,143.02	1,870.98	Leam
4/25/2015	9,752.00	88.02	358.87	8,145.33	1,964.94	Leam
4/25/2015	9,846.00	88.37	358.69	8,148.29	2,058.90	Leam
4/25/2015	9,941.00	89.87	359.22	8,149.75	2,153.88	Leam
4/25/2015	10,035.00	91.10	359.40	8,148.96	2,247.88	Leam
4/25/2015	10,129.00	86.97	357.99	8,150.54	2,341.84	Leam
4/25/2015	10,224.00	89.96	0.98	8,153.09	2,436.79	Leam
4/26/2015	10,318.00	91.54	1.68	8,151.85	2,530.77	Leam
4/26/2015	10,412.00	92.07	0.80	8,148.89	2,624.73	Leam

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company
4/26/2015	10,507.00	90.92	1.51	8,146.42	2,719.69	Leam
4/26/2015	10,601.00	89.87	2.03	8,145.77	2,813.69	Leam
4/26/2015	10,695.00	90.40	1.68	8,145.55	2,907.69	Leam
4/26/2015	10,790.00	88.02	1.33	8,146.86	3,002.67	Leam
4/26/2015	10,884.00	88.29	1.15	8,149.88	3,096.62	Leam
4/26/2015	10,978.00	89.08	0.63	8,152.04	3,190.60	Leam
4/26/2015	11,072.00	91.01	0.98	8,151.97	3,284.59	Leam
4/26/2015	11,167.00	88.20	0.10	8,152.62	3,379.58	Leam
4/26/2015	11,261.00	89.25	0.27	8,154.71	3,473.55	Leam
4/26/2015	11,355.00	90.84	0.63	8,154.64	3,567.55	Leam
4/26/2015	11,449.00	88.02	1.51	8,155.57	3,661.54	Leam
4/26/2015	11,544.00	89.52	2.74	8,157.61	3,756.51	Leam
4/26/2015	11,638.00	91.63	3.79	8,156.67	3,850.50	Leam
4/26/2015	11,732.00	89.52	1.51	8,155.73	3,944.48	Leam
4/26/2015	11,826.00	88.37	0.80	8,157.46	4,038.46	Leam
4/26/2015	11,921.00	88.99	0.80	8,159.65	4,133.44	Leam
4/26/2015	12,015.00	88.46	2.03	8,161.74	4,227.41	Leam
4/26/2015	12,109.00	88.64	0.63	8,164.12	4,321.38	Leam
4/26/2015	12,204.00	89.25	0.45	8,165.86	4,416.36	Leam
4/26/2015	12,298.00	90.31	358.17	8,166.23	4,510.36	Leam
4/26/2015	12,392.00	88.81	358.69	8,166.95	4,604.35	Leam
4/26/2015	12,487.00	89.25	1.86	8,168.56	4,699.32	Leam
4/26/2015	12,581.00	90.75	2.38	8,168.56	4,793.32	Leam
4/26/2015	12,675.00	88.55	3.09	8,169.13	4,887.31	Leam
4/26/2015	12,769.00	90.48	3.79	8,169.93	4,981.30	Leam
4/26/2015	12,864.00	89.25	3.61	8,170.15	5,076.30	Leam
4/27/2015	12,958.00	88.46	1.86	8,172.03	5,170.28	Leam
4/27/2015	13,052.00	91.98	3.61	8,171.67	5,264.26	Leam
4/27/2015	13,146.00	89.43	0.80	8,170.51	5,358.24	Leam
4/27/2015	13,240.00	88.11	0.80	8,172.53	5,452.21	Leam
4/27/2015	13,335.00	89.69	2.21	8,174.35	5,547.19	Leam
4/27/2015	13,429.00	89.52	1.51	8,175.00	5,641.19	Leam
4/27/2015	13,523.00	90.40	2.21	8,175.07	5,735.18	Leam
4/27/2015	13,618.00	89.34	0.80	8,175.28	5,830.18	Leam
4/27/2015	13,712.00	90.75	1.15	8,175.21	5,924.18	Leam
4/27/2015	13,806.00	88.72	0.45	8,175.64	6,018.17	Leam
4/27/2015	13,900.00	89.52	0.45	8,177.09	6,112.16	Leam
4/27/2015	13,995.00	89.78	0.98	8,177.67	6,207.16	Leam
4/27/2015	14,089.00	89.69	1.86	8,178.10	6,301.16	Leam
4/27/2015	14,183.00	89.87	2.56	8,178.46	6,395.15	Leam
4/27/2015	14,278.00	90.04	2.91	8,178.54	6,490.15	Leam
4/27/2015	14,372.00	89.34	2.21	8,179.05	6,584.15	Leam
4/27/2015	14,466.00	89.43	0.98	8,180.05	6,678.14	Leam
4/27/2015	14,560.00	90.13	358.52	8,180.42	6,772.14	Leam
4/27/2015	14,655.00	91.36	358.52	8,179.18	6,867.13	Leam
4/27/2015	14,749.00	90.57	357.81	8,177.60	6,961.11	Leam
4/27/2015	14,843.00	90.75	0.27	8,176.51	7,055.10	Leam
4/27/2015	14,937.00	91.10	359.57	8,175.00	7,149.08	Leam
4/27/2015	15,031.00	90.40	2.21	8,173.77	7,243.07	Leam
4/28/2015	15,126.00	88.90	1.68	8,174.35	7,338.06	Leam
4/28/2015	15,220.00	90.31	2.56	8,174.99	7,432.06	Leam
4/28/2015	15,314.00	88.64	1.51	8,175.86	7,526.05	Leam
4/28/2015	15,408.00	89.78	0.45	8,177.15	7,620.04	Leam
4/28/2015	15,502.00	91.36	0.27	8,176.22	7,714.03	Leam
4/28/2015	15,596.00	89.87	0.98	8,175.21	7,808.02	Leam
4/28/2015	15,691.00	89.52	1.15	8,175.71	7,903.02	Leam

### Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 2-20 49H

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company
4/28/2015	15,785.00	89.69	0.98	8,176.36	7,997.02	Leam
4/28/2015	15,879.00	89.60	1.33	8,176.94	8,091.01	Leam
4/28/2015	15,974.00	89.78	1.68	8,177.46	8,186.01	Leam
4/28/2015	16,068.00	89.34	1.51	8,178.18	8,280.01	Leam
4/28/2015	16,162.00	89.25	0.98	8,179.34	8,374.00	Leam
4/28/2015	16,256.00	89.52	359.92	8,180.35	8,468.00	Leam
4/28/2015	16,351.00	89.96	359.04	8,180.78	8,562.99	Leam
4/28/2015	16,445.00	87.76	359.75	8,182.65	8,656.97	Leam
4/28/2015	16,539.00	88.64	359.75	8,185.60	8,750.92	Leam
4/28/2015	16,634.00	90.40	0.45	8,186.39	8,845.91	Leam
4/28/2015	16,728.00	88.99	0.45	8,186.90	8,939.91	Leam
4/28/2015	16,822.00	90.31	2.38	8,187.47	9,033.90	Leam
4/28/2015	16,916.00	88.37	0.98	8,188.55	9,127.89	Leam
4/28/2015	17,011.00	88.99	0.80	8,190.74	9,222.86	Leam
4/28/2015	17,105.00	90.48	0.80	8,191.18	9,316.86	Leam
4/28/2015	17,199.00	89.69	1.86	8,191.04	9,410.86	Leam
4/28/2015	17,294.00	90.84	2.21	8,190.60	9,505.85	Leam
4/28/2015	17,388.00	88.37	2.21	8,191.24	9,599.85	Leam
4/29/2015	17,482.00	88.90	2.38	8,193.48	9,693.82	Leam
4/29/2015	17,576.00	90.75	3.09	8,193.77	9,787.81	Leam
4/29/2015	17,670.00	88.11	2.03	8,194.71	9,881.80	Leam
4/29/2015	17,765.00	88.90	2.03	8,197.18	9,976.77	Leam
4/29/2015	17,859.00	89.69	2.56	8,198.34	10,070.76	Leam
4/29/2015	17,953.00	90.75	2.38	8,197.98	10,164.76	Leam
4/29/2015	18,067.00	89.69	2.56	8,197.54	10,278.75	Leam