

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

API/UWI 42-461-39446-0000		Property Sub 929062-019		Operator PIONEER NATURAL RESRC USA, INC		State TEXAS		County UPTON	
Field Name SPRABERRY (TREND AREA)				Surface Legal Location 100' FSL/ 317' FEL, SEC: , BLK: 3, AB: A-8U, SVY: UNIVERSITY LANDS					
Spud Date 9/17/2014		TD Date 12/8/2014		Drilling Rig Release Date 12/13/2014		Frac Date 1/6/2015		On Production Date	
Ground Elevation (ft) 2,700.00		Original KB Elevation (ft) 2,726.00		PBDT (All) (ftKB)		Total Depth (All) (ftKB) Original Hole - 19,080.0		Total Depth All (TVD) (ftKB) Original Hole - 8,969.9	
<b>Report #: 1 Daily Operation: 9/13/2014 06:00 - 9/14/2014 06:00</b>									
Job Category ORIG DRILLING				Primary Job Type ODR				AFE Number 033210	
Days From Spud (days) -3		Days on Location (days) 1		End Depth (ftKB) 0.0		End Depth (TVD) (ftKB)		Dens Last Mud (lb/gal) 8.60	
Rig H & P, 606									
Operations Summary Clean and Rig down University 3-14 #17H / Begin move to University 178B #19H. 25% off old location & spotted on new location.									
Remarks Rig (H&P 606) & Well Progress: 1 Rig Move Days, 0 Days From Spud, 0 Total Days On Well, 1 Total Days On Location  Rig NPT: 0 hrs previous 24 hrs. .5 NPT for month of September  Completion percentage: Surface - 0%, Intermediate - 0%, Curve - 0%, Lateral - 0%  Estimated Pad Drilling Completion Date: 12/11/2014									
<b>Time Log Summary</b>									
Operation		Com							Dur (hr)
RDMO		Continue rigging down backyard / pits. Secure hydraulic hoses, Secure BOP. Secure ST-80. Rig down lines, hoses, connections on rig floor & prepare to lay down derrick.  Note: Long Point Oilfield services on location cleaning BOS equipment & washing rig.							7
RDMO		EJSA with ETS tester, H&P Crew & PNR rep over testing abandonment caps. ETS test & chart each abandonment cap (3-14 #15H,16H,17H) to 500 psi for 15 min. (Good). Finsih rigging down BOS equipment. Vac trucks on location transferring OBM from University 3-14 #17H to new location. H&P rig crew still rigging down misc equipment in preparation to lower derrick.  Note: Patterson trucks & cranes on location rigging down. Long Point Oilfield services on location cleaning & washing rig.							5
RDMO		R/D skid tracks. Prepare to lay down derrick. JSA on laying down derrick.  Note: Patterson trucks & cranes on location rigging down, hauling equipment F/ Univ 3-14 17H to Univ 178B 19H. Long Point Oilfield services on location cleaning & washing rig. Vac trucks on location transferring OBM from University 3-14 #17H to Univ 178B #19H.							1.5
RDMO		Lay down derrick top to Patterson truck. Long Point Oilfield services on location cleaning rig floor, sub structure, BOPs, 3rd party equipment. All BOS equipment cleaned, loaded out and off location.  Note: Patterson trucks & cranes on location rigging down, hauling equipment F/ Univ 3-14 #17H to Univ 178B #19H. Vac trucks on location transferring OBM from University 3-14 #17H to Univ 178B #19H.							1.5
RDMO		JSA on lowering derrick from rig floor end to boggies. Lower rig floor end of derrick to boggies. Pin derrick. JSA on dissemble derrick and prep for move. Split derrick. Dress out and prep derrick for move to new location.  Note: Patterson crew off location till 6am. Hauled 10 loads from Univ 3-14 #17H to Univ 178B #19H. "Car" wash every load before leaving location. Vac trucks on location transferring OBM from University 3-14 #17H to Univ 178B #19H. Long Point Oilfield services on location cleaning rig floor, sub structure, doghouse, BOP, spools.							4
RDMO		JSA on prep and lowering doghouse. Lower doghouse and secure for move.  Note: Long Point Oilfield services on location cleaning sub structure and derrick.							2
RDMO		JSA on prep and lowering substructure. Prep to lower sub structure. Lower sub structure.  Note: Long Point Oilfield services on location cleaning derrick.							1
RDMO		Continue rigging down and securing miscellaneous equipment in preparation for move: pumps, pits, 3-generators, VFD house, MCC house, closing unit, BOP wrangler, pipe wrangler, lube/pump house, shakers, fuel tank, derrick, sub, flow line, gas buster, trip tanks,  Note: Long Point Oilfield services on location cleaning derrick.							2

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

**Report #: 2 Daily Operation: 9/14/2014 06:00 - 9/15/2014 06:00**

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 033210	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
-2	2	0.0		8.60	H & P, 606	

**Operations Summary**

Clean and Rig down University 3-14 #17H / Continue move to University 178B #19H. 85% off old location & 50% rigged up on new location.

**Remarks**

Rig (H&P 606) & Well Progress: 2 Rig Move Days, 0 Days From Spud, 0 Total Days On Well, 2 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. .5 NPT for month of September

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

Estimated Pad Drilling Completion Date: 12/11/2014

**Time Log Summary**

Operation	Com	Dur (hr)
RDMO	Clean sub & derrick w/ Long Point Oilfield Services rig cleaners.	1
SAFETY	Pre Job safety meeting discussing moving equipment to new location safely w/ Patterson Crane & Trucks, H&P crew, & PNR Rep. Discussed loading & offloading trucks, heavy lifts with cranes, staying out from suspended loads, keeping good communication & maintaining eye contact with cranes, & rigging up on new location. Discussed that we will have a lot going on & that anyone can stop the job at any time if they feel something is unsafe.	0.5
RDMO	RDMO/ 45 loads from University 3-14 #17H to University 178B #19H; both pumps, all active pits, 3-generators, MCC house, closing unit, both conex boxes, lube/pump house, shakers, fuel tank, derrick, sub, flow line, gas buster, trip tanks, manlift, cable trays drill pipe & DC's, and flow line sections. Setting in place on University 178B #19H.  Patterson Crane & Trucks equipment used to move, 4- cranes, (2 cranes on each end) 16 haul trucks, wash every load before leaving location (safe & fast rig down).  Long Point Oilfield services on location "car wash" pressure washing loads leaving location.	12.5
MIRU	Hooked up electrical cable trays, finish putting pits together, go through both mud pumps.  Patterson Crane & Trucks equipment off location @ 21:00 hrs,  85% rig equipment off old location & spotted on new location. Rig up 50% complete on University 178B #19H.  Estimated spud date for University 178B #19H @ 18:00 hrs 9/16/14.	10

**Report #: 3 Daily Operation: 9/15/2014 06:00 - 9/16/2014 06:00**

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 033210	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
-1	3	0.0		8.60	H & P, 606	

**Operations Summary**

Clean and Rig down University 3-14 #17H / Continue move to University 178B #19H. 100% equipment off old location & 85% rigged up on new location.

**Remarks**

Rig (H&P 606) & Well Progress: 3 Rig Move Days, 0 Days From Spud, 0 Total Days On Well, 3 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. .5 NPT for month of September

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

Estimated Pad Drilling Completion Date: 12/11/2014

**Time Log Summary**

Operation	Com	Dur (hr)
SAFETY	PJSM w/ H & P and Patterson crews discussing plan forward: simops, offloading trucks, heavy lifts, and rigging up.	0.5
MIRU	Rig up rotary tools. Receive 15 loads equipment on new University 178B #19H.  Note: Patterson Crane & Trucks equipment used to move, 4- cranes, (2 cranes on each end) 11 haul trucks, wash every load before leaving location (safe & fast rig down).  Trend moving Solids Control Trailer and Shower House from University 3-14 #17H.	3
MIRU	EJSA on raising sub w/ H&P crew, Patterson & PNR CM. Discussed having good communication during lift, working w/ 3rd party, simops, working under suspended loads, critical lift safety. Discussed right to stop the job if the operation seems unsafe or out of scope acceptable procedures. Raise & secure sub structure.  Note: Austin Chalk on location relocating Frac Tanks & containment.  Trend moving CM office and Mud Logger Trailer from University 3-14 #17H.	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary						
Operation	Com					Dur (hr)
MIRU	<p>EJSA on raising doghouse w/ H&amp;P crew, Patterson &amp; PNR CM. Discussed having good communication during lift, working w/ 3rd party, simops, working under suspended loads, critical lift safety. Raise &amp; secure doghouse.</p> <p>Note: Austin Chalk on location relocating Frac Tanks &amp; containment.</p> <p>Trend moving CM living quarters from University 3-14 #17H.</p>					1
MIRU	<p>EJSA on dress out and raise derrick. Discussed having good communication during lift, working w/ 3rd party, working under suspended loads, critical lift safety. Discussed right to stop the job if the operation seems unsafe or out of scope acceptable procedures. R/Up mast, pin derrick. Raise derrick board and dress out. Raise stabbing board, string out cables, and string block. Spot H&amp;P TP and crew living quarters. R/Up gas buster.</p> <p>Note: H&amp;P Electrician found damaged Top Drive power cable in drag tray. Ordered new one for ASAP delivery.</p> <p>Austin Chalk off location @ 21:00 hrs.</p> <p>Setting Dynamic Solids Control equipment in backyard.</p> <p>Trend moving Mud Engineer and DD living quarters from University 3-14 #17H. Spot living quarters on University 178B #19H: WSL, DD, Mudman, and office. Spot wastewater, potable water tanks, and generators. Power up and plumb water and drain lines. Hook up satellite connections.</p>					9
MIRU	<p>EJSA on latching Blocks to Top drive. Discussed good communication, line of fire, pinch points, working at heights. Latched top drive. H&amp;P Electrician completed rig up of new power cable for Top drive drag tray. Continue rigging up electrical connections and piping, shaker troughs.</p> <p>Note: Trend completed spotting living quarters, wastewater, potable water tanks, and generators. Power up and plumb water and drain lines. Trend communications still working on telephone and internet services.</p> <p>100% rig equipment off old location &amp; spotted on new location. Rig up 85% complete on University 178B #19H.</p> <p>Estimated spud date for University 178B #19H @ 18:00 hrs 9/16/14.</p>					9
<b>Report #: 4 Daily Operation: 9/16/2014 06:00 - 9/17/2014 06:00</b>						
Job Category		Primary Job Type			AFE Number	
ORIG DRILLING		ODR			033210	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
0	4	146.0	146.0	8.60	H & P, 606	
<b>Operations Summary</b> Complete R/Up on University 178B 19H. P/Up 17 1/2" directional BHA. Drill out.						
<b>Remarks</b> Rig (H&P 606) & Well Progress: 4 Rig Move Days, 0 Days From Spud, 0.5 Total Days On Well, 4 Total Days On Location  Rig NPT: 0 hrs previous 24 hrs. .5 NPT for month of September  Completion percentage: Surface - 0%, Intermediate - 0%, Curve - 0%, Lateral - 0%  Estimated Pad Drilling Completion Date: 12/11/2014						
Time Log Summary						
Operation	Com					Dur (hr)
MIRU	<p>Bleed off MRC's (Mast raising cylinders), drops objection inspection &amp; derrick inspection (OK), setting barite tanks &amp; monster pit, organizing front yard.</p> <p>Note: Trend is hooking up communications around rig.</p>					4
MIRU	<p>EJSA on raising derrick with H&amp;P rig crew &amp; PNR rep. Raise derrick.</p> <p>Note: Trend is hooking up communications around rig.</p>					1
MIRU	<p>Dress out derrick, spot pipe wrangle &amp; hang V-door. Finish setting centrifuges in back yard. Set and test Thomas Oilfield floater pumps in reserve pits. Fill rig water tanks, Monster pit. Set barite tanks &amp; set up monster pit. Continue rigging up rotary tools, and rig floor. Power up rig.</p> <p>Note: Trend is hooking up communications around rig.</p> <p>Thomas on site rigging up hydraulic cellar pumps / hydraulics / hoses, and driveway crossover.</p> <p>11:00 - Pre-Spud meeting on University 178B # 19H w/ engineer, drilling superintendent, directional driller, mud engineer, H&amp;P crew &amp; pusher, both PNR consultants</p>					7

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
MIRU	<p>Function test rotary tools.</p> <p>Note: Trend is hooking up communications around rig.</p> <p>Thomas on site rigging up hydraulic cellar pumps / hydraulics / hoses, and driveway crossover.</p>	1
MIRU	EJSA on stringing up drawworks. Discussed having good communications, hand and body placement, and line of fire.	0.5
MIRU	<p>String up drawworks. Electrician function test new top drive power cable.</p> <p>Note: Trend is hooking up communications around rig.</p> <p>Thomas on site rigging up hydraulic cellar pumps / hydraulics / hoses, and driveway crossover.</p>	1
MIRU	<p>Prespud checklist and walk around w/ H&amp;P TP, Driller and PNR CM.</p> <p>Note: Trend completed connecting and testing communications around rig 21:30 hrs.</p> <p>Thomas on site rigging up hydraulic cellar pumps / hydraulics / hoses, and driveway crossover.</p> <p>Vac trucks on location transferring OBM from University 3-14 #17H to Univ 178B #19H.</p>	1
MIRU	<p>Undock top drive, test crown saver, strap DC and HWDP. Clean and clear rig floor to M/U BHA.</p> <p>Note: Thomas completed rig up of cellar pumps @ 23:00 hrs.</p> <p>Vac trucks on location transferring OBM from University 3-14 #17H to Univ 178B #19H.</p>	3
MIRU	EJSA on P/Up and M/Up BHA w/ H&P rig crew, DD, MWD, and PNR CM. Discussed line of fire with heavy drill collars and HWDP. Operation of air hoist, slips, collar clamps. Pinch points, hand, feet, and body placement. Have good communications while handling BHA. Discussed right to stop the job if the operation seems unsafe or out of scope acceptable procedures.	0.5
BHA_HAN DLING	<p>P/Up and M/Up 17 1/2" directional BHA per Integrity DD and MWD.</p> <p>TH Hill job No: T1 19109, Inspection: 221671 date 6/24/2014</p> <p>Note: Vac trucks on location transferring OBM from University 3-14 #17H to Univ 178B #19H.</p>	2
BHA_HAN DLING	<p>Pressure test pumps to top drive to 2500 PSI</p> <p>Note: Vac trucks on location transferring OBM from University 3-14 #17H to Univ 178B #19H.</p>	1
BHA_HAN DLING	<p>Function test MWD tool and mud motor.</p> <p>Note: Vac trucks on location transferring OBM from University 3-14 #17H to Univ 178B #19H.</p>	0.5
BHA_HAN DLING	<p>Repair seal on monstor pit suction line. M/Up 17 1/2" bit. TIH w / 8" collars, tagging TOC @ 147'. Directional driller staging pumps and rotary at report time. Prep to drill out of conductor.</p> <p>Note: By contract accepted rig at spud 9/17/14 @ 06:00 hrs</p> <p>Vac trucks on location transferring OBM from University 3-14 #17H to Univ 178B #19H.</p>	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 5 Daily Operation: 9/17/2014 06:00 - 9/18/2014 06:00

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
1	5	1,120.0	1,120.0	8.60	H & P, 606

### Operations Summary

Drill 17 1/2" Surface Section to 1120' TD. Run 13 3/8" Surface Casing to 80'

### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 1 Days From Spud, 1.5 Total Days On Well, 5 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. .5 NPT for month of September

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

Estimated Pad Drilling Completion Date: 12/11/2014

Note: Notified TRRC 9/17/14 @ 20:00 hrs of upcoming surface cement job. TRRC (job # 5298) Operator / Shakia

### Time Log Summary

Operation	Com	Dur (hr)
BHA_HAN DLING	PJSM with rig crew and Pioneer Rep. Make up bit & directional tools, scribe & test motor, pulsing good. Make up BHA & TIH picking up 8" drill collars and HWDP tagging TOC @ 135'. Fix leak at monster pit & test cellar pumps to make sure all surface equipment is working properly.  Note: By contract accepted rig at spud 9/17/14 @ 06:00 hrs	1.5
DRL_ROT	Rotate Drill 17-1/2" Surface Section 147' @ 40.27'/hr, 50 - 200 spm, 192 - 651 gpm, 50 - 200 diff, 30 - 60 top drive rpm, 12 - 52 motor rpm, 42 - 112 total bit rpm, 5- 25k wob, 3-9k torque. Avg MSE - 2 - 4. 2 soap sticks on every other connection, pumping 1 SAPP stick and 1 gal/Stardrill AP on off connections, pumping hi-vis sweeps as needed.  Note: Lost full returns @ 200', dropped pumps to 200 gpm & pumped 80 bbls 30#/bbl of LCM (mica & walnut). Pumped sweep around & still no returns.	3.5
BHA_HAN DLING	POOH W/3 stands HWDP to X.O Sub, RIH 2 stands 8" Drill Collars & 1 stand HWDP. No fill.	1.5
DRL_ROT	Rotate Drill 17-1/2" Surface Section 292' @ 116.8'/hr, 170 spm, 651 gpm, 1,150 - psi spp, 200 - 350 diff, 70 top drive rpm, 52 motor rpm, 122 total bit rpm, 20 - 25 k wob, 10 - 12 k torque. Avg MSE 8 - 10. Pumping 2 soap sticks on every other connection, pumping 1 SAPP stick and 1 gal/Stardrill AP on off connections, pumping hi-vis sweeps as needed. No returns.  Note: Pumped 80 bbl 30#/bbl LCM (Tiger bullets & walnut). Pumped sweep around, still no returns.	2.5
DRL_ROT	Rotate Drill 17-1/2" Surface Section 420' @ 129.2'/hr, 180 spm, 689 gpm, 1,350 - psi spp, 300 - 450 diff, 70 top drive rpm, 55 motor rpm, 125 total bit rpm, 20 - 25 k wob, 10 - 12 k torque. Avg MSE 8 - 10. Pumping 2 soap sticks on every other connection, pumping 1 SAPP stick and 1 gal/Stardrill AP on off connections, pumping hi-vis sweeps as needed. No returns.  Note: 1,120' Surface TD @ 18:15 hrs on 09/17/2014. (10.75 hrs)	3.25
CIRC	Pump 1 x 50 BBL h-vis (60 vis) sweep w/ 10 ppb nut plug around, no returns.  Line Proximity: PTB @ 1,120', 0.20° Inc., 264.10° Azi., 2' North & 4' West of Plan 1 Line.	0.75
TOOH	Decision made to make check trip. Pulled tight F/ 753' T/ 712'. Short trip to 8" DC's F/1,120' - 310'.	1
TIH	Trip back in hole to 1,053' w/ no issues.  Note: Notified TRRC 9/17/14 @ 20:00 hrs of upcoming surface cement job. TRRC (job # 5298) Operator / Shakia	1
SAFETY	EJSA on change out washpipe.	0.25
RIG_SVC	Change out washpipe. Service Top Drive	1.25
TIH	Trip in from 1,053' to 1,120'. Tag bottom.	0.5
CIRC	Pump 1 x 50 BBL h-vis (60 vis) sweep w/ 10 ppb nut plug & tiger bullets around, no returns.  Attempt to fill cellar w/ fresh water to keep hole full when TOOH, unsuccessful.	0.5
TOOH	EJSA onTOOH with H&P crew & PNR CM: TOOH to run 13 3/8" 54.5 ppf J-55 BTC Surface Casing. POOH 4 stands of DP, 7 stands of HWDP w/ X/O sub. PJSM laying down tools & breaking bit: Lay down stabilizer, and break bit off. Lay down MWD tool, shock sub, down hole motor & monels.	3
SAFETY	PJSM & review JSA w/ Express casing crew & rig crew on rigging up casing running equipment.	0.5
CASE	Rig up casing crew equipment & torque turn	1.5
CASE	Make up 13-3/8" 48 ppf J-55 STC Float Collar w/ Texas Pattern Guide Shoe, 1 Jt of 13-3/8" 48 ppf J-55 STC casing, 13-3/8" 48 ppf J-55 float collar & 1 Jt of 13-3/8" 48 ppf J-55 STC casing, Torque - 3500 ft/lbs. Thread locked all threads in shoe track, including the joint on top of float collar & test- Good. RIH to 80' @ report time.	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 6 Daily Operation: 9/18/2014 06:00 - 9/19/2014 06:00

Job Category ORIG DRILLING				Primary Job Type ODR				AFE Number 033210			
Days From Spud (days)	2	Days on Location (days)	6	End Depth (ftKB)	1,120.0	End Depth (TVD) (ftKB)	1,120.0	Dens Last Mud (lb/gal)	8.60	Rig	H & P, 606

### Operations Summary

Run 13 3/8" Surface Casing to 1,113'. Pump 13 3/8" cement job. PumpTop Cement Job, Cut Off Casing & Weld On Head, Nipple/Up BOPs.

### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 2 Days From Spud, 2.5 Total Days On Well, 6 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. .5 NPT for month of September

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

Estimated Pad Drilling Completion Date: 12/11/2014

### Time Log Summary

Operation	Com	Dur (hr)
SAFETY	Hold Pre Job Safety Meeting & review EJSA with Express Casing, Rig Crews & PNR CM over rigging up casing crew & running 13 3/8" casing. Rig Up Casing Crew to Run 13 3/8 Surface Casing.	0.5
CASE	Make up 13-3/8" 48 ppf J-55 BTC Float Collar w/ Texas Pattern Guide Shoe, 1 Jt of 13-3/8" 54.5 ppf J-55 BTC casing, 13-3/8" 54.5 ppf J-55 float collar & 1 Jt of 13-3/8" 48 ppf J-55 BTC casing, Torque - to base of triangle. Thread locked all threads in shoe track, including the joint on top of float collar & test- Good. RIH w/ 13-3/8" casing to 1113'.	2.5
CASE	EJSA on Install Crest circulating swedge, Circulate 13 3/8" Casing shoe at 1,101', Circulate 1 surface - to- surface volume (388 bbls) with 8 bpm at 150 psi. Full returns to surface. Rig down Express casing crew while circulating casing.	1.5
CMT	PJSM with H&P crew, Crest & Pioneer Representative over cementing 13-3/8" Surface casing. Load top plug with tattle tail into cementing head, witnessed by Pioneer Rep, Crest supervisor & tool pusher.  Note: Casing Centered In Rotary Table.	0.5
CMT	Crest cement 13-3/8" 48 ppf J-55 STC Surface Casing as follows: Pressure test lines to 3500 psi.  40 bbls 8.33 lb/gal of fresh water spacer. Lead Cement 600 sks (203 bbl) of class "C" cement with 6 % BWOC Bentonite Gel, 0.25#/sk Lost circulation (Cellophane Flakes), 3.0% BWOW NaCL (Salt), 3#/sk Kol Seal, mixed @ 12.8 lb/gal, 1.90 ft3/sk yield, 9.71 gal/sk mixing H2O.  Tail Cement 230 Sks (71 BBL ) of Class "C" Cement with 4.0 % BWOC Bentonite Gel, 2.0 % BWOC CaCL, 0.25 #/sk Cellophane Flakes, mixed @ 13.5 ppg, 1.74 ft3/sk yield, 9.17 gal/Sk mixing water.  Drop top plug with tattle tail witnessed by Pioneer Representative & Crest Supervisor. Displace cement with 165 bbls of 8.33 ppg fresh water. Displaced final 10 bbls at 2.2 bpm & bump plug 500 psi over @ 700 psi, final lift pressure of 260 psi. Floats held for 5 min, bled back 0.5 bbls  No circulation back to surface. Lift Pressures: 50 bbls - 6.2 bpm, 270 psi; 80 bbls- 6.1 bpm, 100 bbls - 6.1 bpm, 360 psi; 150 bbls- 3.2 bpm, 250 psi; 160 bbls- 2.3 bpm, 280 psi; 162 bbls- 2.0 bpm, 260 psi, 165 bbl- 1.5 bpm, 700 psi bump plug @ 1:00 pm No returns throughout cement job.	2
SAFETY	EJSA on rig down Crest cementers	0.5
SAFETY	EJSA on rig up of MS wireline log unit for temp log	0.5
LOG	Run temp log from surface to 1030' sent information to Engineer pick top of cement @ 160' Confirm with TRRC to go ahead and top off cement	1.5
SAFETY	EJSA on rig down of MS wireline log unit for temp log	0.5
CMT	PJSM with H&P crew, Crest & Pioneer Company Rep over rig up and cement top job. RIH w/ 200' x 1" pipe. Pump 262 Sks ( 25 BBL ) of Class "H Premium" Cement w/ 2% Calcium Chloride mixed @ 15.6 ppg, 1.18 ft3/sk Yield, 5.2 gal/Sk mixing water. Pumped 3 bbls (32 sks) cement to surface. Added 2 sacks calcium chloride prior to pumping top out cement,	2.5
SAFETY	EJSA on rig down Crest top job cement equipment.	0.5
CMT	Flush 1" pipe and cement lines. Rig down Crest cement equipment. Flush and pump out cellar. Rig down cellar pumps. Prep cellar for welder.	0.5
SAFETY	Safety stand down for severe weather / cloud to ground lightening.	1
WLHEAD	Check for gas contents all good. Cut off conductor, perform rough cut on 13-3/8" casing. Make final cut on 13-3/8" casing 52" below ground level top of well head @ 18" below GL (measurement confirmed by PNR representative, welder, and Seaboard representative). Preheat & Weld wellhead on casing. Let cool for 30 min then test well head to 370 PSI for 10 min - Good test.	3
SAFETY	PJSM on nipple up BOP's w/ rig crew, ETS nipple up crew & Pioneer company rep.	0.5



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
NU_TEST	Set cellar grating in place. N/Up BOPs, R/Up choke lines, hydraulic lines to BOP.  Note: 04:30 - While N/Up BOPs, found damaged ring gasket seat in HCR valve flange. H&P hot shotting an HCR valve from Midland.	6

### Report #: 7 Daily Operation: 9/19/2014 06:00 - 9/20/2014 06:00

Job Category ORIG DRILLING	Primary Job Type ODR	AFE Number 033210
Days From Spud (days) 3	Days on Location (days) 7	End Depth (ftKB) 1,353.0
	End Depth (TVD) (ftKB) 1,353.0	Dens Last Mud (lb/gal) 8.60
	Rig H & P, 606	

#### Operations Summary

Nipple/Up & Test BOPE. Perform Accumulator Test, Install Wear Bushing, P/U Directional. BHA #2, TIH, Tag Cmt, Test Casing to 1000 psi / 30 min. Drlg. Cmt. & Flt Equip., Drill 12 1/4" Intermediate Section to 1,353'

#### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 3 Days From Spud, 3.5 Total Days On Well, 7 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. .5 NPT for month of September

Completion percentage: Surface - 100%, Intermediate - 3%, Curve - 0%, Lateral - 0%

Estimated Pad Drilling Completion Date: 12/11/2014

### Time Log Summary

Operation	Com	Dur (hr)
SAFETY	PJSM w/ETS nipple up crew & H&P crew on working together, be aware of what's going on around you and the hazards	0.5
NU_TEST	N/U BOP, make up bell nipple, set flow line, install "new" HCR valve, make up flex line to choke, rig up gas buster, install dump valve (PVC line) to reserve and trough from shakers to reserve.	6
SAFETY	PJSM w/ETS testing BOP	0.5
NU_TEST	Testing BOPE with H&P crew, ETS testing crew & PNR CM. Test BOP's & choke equipment 250 Low 5 min. / 3,500 High 5 min. Test TDS, stand pipe to pumps 250 Low 5 min / 4,500 High 5 min.	4.5
NU_TEST	Rig down ETS BOP test equipment.	0.5
WEARBUS HING	Install long wear bushing. Tighten two painted lock down screws. Witnessed by Pioneer C/M.	0.5
NU_TEST	H&P driller and TP, with PNR CM perform Accumulator function test @ 18:30 hrs on 9/19/14.	0.5
RIG_SVC	Install rig catch can. Clean and clear rig floor for P/Up BHA.	0.5
SAFETY	PJSM with H&P crew, Integrity directional crew & Pioneer Representatives on picking up directional tools, discuss tool sequence with driller and crew.	0.5
BHA_HAN DLING	P/U 7/8 lobe 4.0 stage Adj. mud motor set @ 1.76° with 12" Stabilizer (.16 rev/gal). P/U 11' Stabilizer, Shock Sub, UBHO (orient UBHO). P/U NMDC and install MWD. Shallow test directional tools 100 spm, 503 gpm, 255 spp (good test). P/U 12 1/4" U716M PDC bit (0.773 TFA). P/U top NMDC & X.O Sub.  Note: T.H. Hill Inspection, Job # XXXXXX Inspection date XXXXX	2
SAFETY	EJSA on P/Up Drill Collars and TIH.	0.5
TIH	TIH w/ 8" DC's, HWDP & DP, Tag Float Collar @ 1055'	2.75
TST_DO_FIT	Close Annular Preventer and Test 13 3/8" Casing to 1000 psi for 30 mins, using rig pumps. Test OK.	0.75
TST_DO_FIT	Drlg Cement & Float Equip. F/1,055' - 1,120', 130 spm, 497 gpm, 30 Top Drive rpm, 79 motor rpm, 109 total bit rpm, 1,150 psi. Full returns to surface.  Float Collar @ 1,068' Shoe @ 1,113'	1.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 233' @ 93°/Hr, 180 spm, 691 gpm, 2050 psi, 350 psi diff, 50 Top Drive rpm, 111 motor rpm, 151 total bit rpm, 25 k wob, 9 k ft/lbs tq, Avg MSE 5.5, Full returns while circulating through reserve pit. MW 8.6 Vis 27  Note: Pumping 1 soap & 2 SAPP sticks every other connection. Pumping 1.5 gal of Stardrill AP down DP on off connections. Pumping hi-vis sweeps w/10 ppb nut plug as needed.  Completion percentage: Surface - 100 %, Intermediate - 3%, Curve - 0%, Lateral- 0%  BHT 83 deg F	2.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 8 Daily Operation: 9/20/2014 06:00 - 9/21/2014 06:00

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
4	8	3,742.0	3,740.8	9.50	H & P, 606

Operations Summary  
Drilling & Sliding 12-1/4" Intermediate Section to 3,742'

Remarks  
Rig (H&P 606) & Well Progress: 4 Rig Move Days, 4 Days From Spud, 4.5 Total Days On Well, 8 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. .5 NPT for month of September

Completion percentage: Surface - 100%, Intermediate - 36%, Curve - 0%, Lateral - 0%

Estimated Pad Drilling Completion Date: 12/11/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 931' @ 155'/Hr, 180 spm, 700 gpm, 2050 psi, 500 psi diff, 75 Top Drive rpm, 112 motor rpm, 187 total bit rpm, 30-35 k wob, 9-12 k ft/lbs tq, Avg MSE 7-8, Full returns while circulating through reserve pit. MW 8.8 Vis 27  Down 5 min on #2 pump tighten up pony rod clamps	6
U_WC	H2S Safety Solutions alarm floor monitors went off in drillers cabin. Stopped pumps pick up 30' check flow (no flow), notified all personnel on location to move to up wind muster station, count crew members and PJSM w/ all personal on location. Change safety flag to red showing H2S on location. Notified Superintendent & Safety Solutions of situation (wait on Safety Solutions to arrive on location). Had gate guard stop all traffic from coming in to location. Wind blowing from South to North.  James Black w/ Safety Solutions arrived on location @ 14:00. EJSA w/ all personnel, Safety Solutions personnel masked up, check for H2S around location & found 0 ppm on rig floor & 3 ppm BOP & shaker area. Safety Solutions personnel waited 20 min. and recheck location. After 30 min. Safety Solution personnel found 0 ppm H2S.	3.5
U_WC	Close BOP annular, line up choke to gas buster. Circulate bottoms up w/ 100 spm, 385 gpm, 825 psi. w/ good flow to reserve. Safety Solutions checking for H2S. Found 0 ppm around rig floor, under sub, shakers & flow coming from gas buster going to reserve.  Note: Safety Solutions found bad censer on rig floor change and check all censers.  After 3300 stk (bottom up) open annular BOP and change valve from choke back to reserve	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 106' @ 71'/Hr, 180 spm, 700 gpm, 2350 psi, 550 psi diff, 75 Top Drive rpm, 112 motor rpm, 187 total bit rpm, 30-35 k wob, 9-12 k ft/lbs tq, Avg MSE 8, Full returns while circulating through reserve pit. MW 9.0 Vis 27	1.5
DRL_SLIDE	Slide Drill 12-1/4" Intermediate Section, 12' @ 24'/Hr, 180 spm, 689 gpm, 2,200 psi, 400 psi diff., 110 motor rpm, 10 k wob, 135 R MTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 554' @ 184'/Hr, 180 spm, 690 gpm, 2550 psi, 550 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 9-12 k ft/lbs tq, Avg MSE 8, Full returns while circulating through reserve pit. MW 9.3 Vis 27	3
DRL_SLIDE	Slide Drill 12-1/4" Intermediate Section, 12' @ 24'/Hr, 180 spm, 690 gpm, 2,200 psi, 400 psi diff., 110 motor rpm, 18 k wob, 135 R MTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 13' @ 26'/Hr, 180 spm, 690 gpm, 2550 psi, 550 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 9-12 k ft/lbs tq, Avg MSE 8, Full returns while circulating through reserve pit. MW 9.4 Vis 27	0.5
U_RIG_OTR	Change out valve and seat on #2 pump, #2 pod. Circulate w/ #1 pump	1.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 69' @ 69'/Hr, 180 spm, 690 gpm, 2650 psi, 550 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 9-12 k ft/lbs tq, Avg MSE 10, Full returns while circulating through reserve pit. MW 9.5 Vis 27	1
DRL_SLIDE	Slide Drill 12-1/4" Intermediate Section, 15' @ 30'/Hr, 180 spm, 690 gpm, 2,200 psi, 400 psi diff., 110 motor rpm, 18 k wob, 135 R MTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 677' @ 150'/Hr, 180 spm, 690 gpm, 2650 psi, 550 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 9-12 k ft/lbs tq, Avg MSE 10, Full returns while circulating through reserve pit. MW 9.5 Vis 27  Line Proximity: PTB @ 3.7 Inc. 131 Azi 3.7' Ahead Of & 4.7' Right Of Plan 2 Line  BH Temp: 101.0	4.5



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 9 Daily Operation: 9/21/2014 06:00 - 9/22/2014 06:00

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
5	9	5,973.0	5,970.8	8.90	H & P, 606

### Operations Summary

Drilling & Sliding 12-1/4" Intermediate Section to 5,973'

### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 5 Days From Spud, 5.5 Total Days On Well, 9 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. .5 NPT for month of September

Completion percentage: Surface - 100%, Intermediate - 67 %, Curve - 0%, Lateral - 0%

Estimated Pad Drilling Completion Date: 12/11/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 251' @ 100'/Hr, 180 spm, 690 gpm, 2650 psi, 550 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 9-12 k ft/lbs tq, Avg MSE 10, Full returns while circulating through reserve pit. MW 9.4 Vis 27	2.5
DRL_SLIDE	Slide Drill 12-1/4" Intermediate Section, 10' @ 20'/Hr, 180 spm, 690 gpm, 2,200 psi, 400 psi diff., 110 motor rpm, 18 k wob, 250 MTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 178' @ 71'/Hr, 180 spm, 690 gpm, 2650 psi, 550 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 10-13 k ft/lbs tq, Avg MSE 10, Full returns while circulating through reserve pit. MW 9.4 Vis 27	2.5
DRL_SLIDE	Slide Drill 12-1/4" Intermediate Section, 16' @ 32'/Hr, 180 spm, 690 gpm, 2,200 psi, 400 psi diff., 110 motor rpm, 18 k wob, 290 MTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 79' @ 79'/Hr, 180 spm, 690 gpm, 2650 psi, 550 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 10-13 k ft/lbs tq, Avg MSE 10, Full returns while circulating through reserve pit. MW 9.4 Vis 27	1
DRL_SLIDE	Slide Drill 12-1/4" Intermediate Section, 16' @ 32'/Hr, 180 spm, 690 gpm, 2,200 psi, 400 psi diff., 110 motor rpm, 18 k wob, 280 MTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 78' @ 78'/Hr, 180 spm, 690 gpm, 2650 psi, 550 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 10-13 k ft/lbs tq, Avg MSE 10, Full returns while circulating through reserve pit. MW 9.4 Vis 27	1
DRL_SLIDE	Slide Drill 12-1/4" Intermediate Section, 18' @ 36'/Hr, 180 spm, 690 gpm, 2,200 psi, 400 psi diff., 110 motor rpm, 18 k wob, 320 MTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 296' @ 98'/Hr, 180 spm, 690 gpm, 2750 psi, 550 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 10-15 k ft/lbs tq, Avg MSE 10, Full returns. MW 8.9 Vis 42  Displace w/ fresh water gel @ 4400' w/ 40 vis 8.7 wt displace with 11900 strokes a 1087 bbl and a 98% wash out and full return throughout displacement	3
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 1289' @ 107'/Hr, 180 spm, 690 gpm, 2750 psi, 550 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 10-15 k ft/lbs tq, Avg MSE 10, Full returns. MW 8.9 Vis 42  Line Proximity: PTB @ 0.2 Inc., 155.3 Azi., A/B 1.7' South & R/L 2.8' West of Plan 2 Line  BH Temp: 115.0  Note: Adding 1 sk of tiger bullets every 20 minutes into active, and bleeding 20 ppb LCM gel pill from monstor pit into active to prevent losses in San Andreas / Clearfork. To control mud weight < 8.9 ppg, running de-silter & centrifuge as needed, bleeding new gel mud from slugging pit to active and dumping sand trap.	12

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 10 Daily Operation: 9/22/2014 06:00 - 9/23/2014 06:00

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 033210	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
6	10	7,110.0	7,103.0	8.90	H & P, 606	

Operations Summary  
Drilling & Sliding 12-1/4" Intermediate Section to 7,199'

Remarks  
Rig (H&P 606) & Well Progress: 4 Rig Move Days, 6 Days From Spud, 6.5 Total Days On Well, 10 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. .5 NPT for month of September

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

Estimated Pad Drilling Completion Date: 12/11/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 15' @ 15'/Hr, 180 spm, 690 gpm, 2,300 psi, 200 psi diff., 110 motor rpm, 18 k wob, 330 MTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 79' @ 79'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 18, Full returns. MW 8.8 Vis 40	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 25' @ 25'/Hr, 180 spm, 690 gpm, 2,300 psi, 200 psi diff., 110 motor rpm, 18 k wob, 330 MTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 69' @ 69'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 18, Full returns. MW 8.9 Vis 40	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 16' @ 32'/Hr, 180 spm, 690 gpm, 2,300 psi, 200 psi diff., 110 motor rpm, 18 k wob, 320 MTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 79' @ 158'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 18, Full returns. MW 8.8 Vis 40	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 16' @ 16'/Hr, 180 spm, 690 gpm, 2,300 psi, 200 psi diff., 110 motor rpm, 18 k wob, 315 MTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 78' @ 156'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 18, Full returns. MW 8.8 Vis 40	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 12' @ 12'/Hr, 180 spm, 690 gpm, 2,300 psi, 200 psi diff., 110 motor rpm, 18 k wob, 315 MTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 82' @ 164'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 18, Full returns. MW 8.8 Vis 40	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 16' @ 16'/Hr, 180 spm, 690 gpm, 2,300 psi, 200 psi diff., 110 motor rpm, 18 k wob, 300 MTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 79' @ 79'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 18, Full returns. MW 8.9 Vis 38	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 22' @ 22'/Hr, 180 spm, 690 gpm, 2,300 psi, 200 psi diff., 110 motor rpm, 18 k wob, 300 MTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 72' @ 72'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 18, Full returns. MW 8.9 Vis 39	1

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
SRVY	Take check shot survey and slow pump rates	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 15' @ 15'/Hr, 180 spm, 690 gpm, 2,300 psi, 200 psi diff., 110 motor rpm, 18 k wob, 300 MTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 15' @ 30'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 18, Full returns. MW 8.9 Vis 40	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 15' @ 30'/Hr, 180 spm, 690 gpm, 2,300 psi, 200 psi diff., 110 motor rpm, 18 k wob, 300 MTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 49' @ 49'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 18, Full returns. MW 8.9 Vis 40	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 20' @ 20'/Hr, 180 spm, 690 gpm, 2,300 psi, 200 psi diff., 110 motor rpm, 18 k wob, 30L GTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 11' @ 22'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 18, Full returns. MW 8.85 Vis 40	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 15' @ 30'/Hr, 180 spm, 690 gpm, 2,300 psi, 200 psi diff., 110 motor rpm, 18 k wob, 30L GTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 67' @ 67'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 18, Full returns. MW 8.85 Vis 40	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 15' @ 30'/Hr, 180 spm, 690 gpm, 2,300 psi, 200 psi diff., 110 motor rpm, 18 k wob, 50L GTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 61' @ 61'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 18, Full returns. MW 8.85 Vis 40	1
RIG_SVC	Service rig & top drive	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 104' @ 104'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 18, Full returns. MW 8.85 Vis 40	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 15' @ 15'/Hr, 180 spm, 690 gpm, 2,300 psi, 200 psi diff., 110 motor rpm, 18 k wob, 30L GTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 164' @ 109'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 18, Full returns. MW 8.85 Vis 40  Line Proximity: PTB @ 7.4 Inc., 321.3 Azi., A/B 2' Above & R/L 9' Right of Plan 2 Line  BH Temp: 127.0  Note: Maintaining mud weight < 8.9 ppg, running de-silter & centrifuge as needed, dumping sand trap, and bleeding new gel mud w/ LCM from slugging pit to active.	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 11 Daily Operation: 9/23/2014 06:00 - 9/24/2014 06:00

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 033210		
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig			
7	11	7,890.0	7,877.2	8.90	H & P, 606			

### Operations Summary

Drilling & Sliding 12-1/4" Intermediate Section to 7,890'

### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 7 Days From Spud, 7.5 Total Days On Well, 11 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. .5 NPT for month of September

Completion percentage: Surface - 100%, Intermediate - 93.7 %, Curve - 0%, Lateral - 0%

Estimated Pad Drilling Completion Date: 12/11/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 14' @ 14'/Hr, 180 spm, 690 gpm, 2,300 psi, 200 psi diff., 110 motor rpm, 18 k wob, 30L GTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 75' @ 75'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 65 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 20, Full returns. MW 8.85 Vis 40	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 20' @ 20'/Hr, HS GTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 74' @ 49'/Hr, Avg MSE 18, Full returns. MW 8.85 Vis 40	1.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 15' @ 30'/Hr, HS GTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 10' @ 20'/Hr, Avg MSE 18, Full returns. MW 8.85 Vis 40	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 12' @ 24'/Hr, 20L GTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 182' @ 52'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 55 Top Drive rpm, 110 motor rpm, 165 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 20, Full returns. MW 8.85 Vis 40 Lost 300 PSI on pump pressure	3.5
U_RIG	Isolate each pump @ 60 spm, check w/ SPR. Found #1 pump not working properly. Circ pump # 2 w/110 spm, 422 gpm, 25 rpm while repairing mud pump #1. Suction valve guide in center module lost in pump. Take off side cap on suction of water melon to receive part.	1.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 32' @ 64'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 55 Top Drive rpm, 110 motor rpm, 165 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 20, Full returns. MW 8.85 Vis 40	0.5
U_RIG_OT R	Repair liner on mud pump #2. Circ mud pump #1 w/110 spm, 422 gpm, 25 rpm while repairing mud pump #2.	2.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 32' @ 64'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 55 Top Drive rpm, 110 motor rpm, 165 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 20, Full returns. MW 8.85 Vis 41	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 16' @ 32'/Hr, 30L GTF, Full returns to surface.	1.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 10' @ 20'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 55 Top Drive rpm, 110 motor rpm, 165 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 20, Full returns. MW 8.85 Vis 41	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 14' @ 28'/Hr, 30L GTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 148' @ 59'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 55 Top Drive rpm, 110 motor rpm, 165 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 20, Full returns. MW 8.85 Vis 41	2.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 10' @ 10'/Hr, 30L GTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 16' @ 32'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 55 Top Drive rpm, 110 motor rpm, 165 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 20, Full returns. MW 8.85 Vis 41	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 5' @ 10'/Hr, 30L GTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 64' @ 128'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 55 Top Drive rpm, 110 motor rpm, 165 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 20, Full returns. MW 8.85 Vis 41	0.5
RIG_SVC	Service rig & top drive	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 20' @ 20'/Hr, 30L GTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 11' @ 22'/Hr, 180 spm, 690 gpm, 2700 psi, 550 psi diff, 55 Top Drive rpm, 110 motor rpm, 165 total bit rpm, 30-38 k wob, 11-17 k ft/lbs tq, Avg MSE 20, Full returns. MW 8.85 Vis 41  Line Proximity: PTB @ 6.3 Inc., 322.4 Azi., A/B 3.7' Above & R/L 9.0' Right of Plan 2 Line  BH Temp: 130  Note: Maintaining mud weight < 8.9 ppg, running de-silter & centrifuge as needed, dumping sand trap, and bleeding new gel mud w/ LCM from slugging pit to active.	0.5

### Report #: 12 Daily Operation: 9/24/2014 06:00 - 9/25/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
8	12	8,351.0
		End Depth (TVD) (ftKB)
		8,335.7
		Dens Last Mud (lb/gal)
		8.90
		Rig
		H & P, 606

#### Operations Summary

Drilling & Sliding 12-1/4" Intermediate Section 7,890' - 8,351', Circulate Sweeps, TOH (SLM), L/D Dir. Tools, Pull Wear Bushing

#### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 8 Days From Spud, 8.5 Total Days On Well, 12 Total Days On Location

Rig NPT: 1 hrs previous 24 hrs. 1.5 NPT for month of September

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

Estimated Pad Drilling Completion Date: 12/11/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 10' @ 10'/Hr, 180 spm, 690 gpm, 2,340 psi, 150 psi diff., 110 motor rpm, 21 k wob, 20L GTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 53' @ 106'/Hr, 180 spm, 690 gpm, 2750 psi, 580 psi diff, 55 Top Drive rpm, 110 motor rpm, 165 total bit rpm, 30-35 k wob, 11-17 k ft/lbs tq, Avg MSE 25, Full returns. MW 8.9 Vis 40	3.75
RIG_SVC	Service rig & top drive	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 3' @ 6'/Hr, 20L GTF, Full returns to surface.	0.25
U_RIG	EJSA w/ crew on #2 mud pump down, leak on inside liner gasket center module. Repair while circ. w/ #1 pump w/90 spm, 345 gpm, 20 rpm. Change gasket, wear plate gasket & wear plate.	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 36' @ 18'/Hr, 20L GTF, Full returns to surface.	2
U_WT	Crop Dusting Airplane dropping SPIKE 20P Herbicide MSDA on rig (getting within 20 yards of derrick.) Suspend Operations & Evacuate Rig Floor.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 171' @ 48.85'/Hr, 180 spm, 690 gpm, 2750 psi, 580 psi diff, 55 Top Drive rpm, 110 motor rpm, 165 total bit rpm, 30-35 k wob, 11-17 k ft/lbs tq, Avg MSE 25, Full returns. MW 8.9 Vis 40.  Line Proximity - PTB @ 8,351' Inc. 5.80 Azi. 319.8 4' Below and 9' Right of Plan 2 Line	3.5
CIRC	Circ. 2 X 40 bbl sweeps 7,500 strokes apart of 85 vis 9.0 wt. w/15 ppb of Tiger Bullets, condition mud w/YP 11, PV 8, WL 11.6, Pumped till Shakers cleaned up, Full returns, Calculation shows roughly 8% Washout. (Surface to surface stks - 12,511, sweep around 13,500 stk). Perform Flow Check, No Flow, Pump Slug	2.5
TOOH	TOOH (SLM) F/8,351' - BHA' on trip tank, no excess drag & hole taking proper displacement. Racking back DP in derrick.  Note: SLM was 3.57' Long To Drillers Tally.  Notified Schlumberger W/Non Confirm For Cement Job @ 23:00 Hrs. 9/24/2014	5
BHA_HAN DLING	TOOH racking back HWDP & 8" DC's, lay down jars.  Note: Removed Corrosion Ring From HWDP	2

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
BHA_HAN DLING	L/D BHA #2 (Stabilizer,XO's, UBHO, monels, shock sub, motor & bit).  Note: Bit Graded 3/5/BT/S/X/0/CT/TD	1.5
WEARBUS HING	EJSA on pulling wear bushing. Verify wear bushing lockdown pins are backed out. Pull long wear bushing. No overpull. P/U wash sub and wash well head. Verify hole was full and close blind rams.  Perform BOP Function Test	0.5

Report #: 13 Daily Operation: 9/25/2014 06:00 - 9/26/2014 06:00

Job Category ORIG DRILLING	Primary Job Type ODR	AFE Number 033210
Days From Spud (days) 9	Days on Location (days) 13	End Depth (ftKB) 8,351.0
	End Depth (TVD) (ftKB) 8,335.7	Dens Last Mud (lb/gal) 9.05
	Rig H & P, 606	

### Operations Summary

Pull Wear Bushing, R/U CRT, Run 9 5/8" Casing, Circulate 1 Casing Volume, Continue Circulating, Rig Up Schlumberger, W/O Cement Lab Report

### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 9 Days From Spud, 9.5 Total Days On Well, 13 Total Days On Location

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

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

Estimated Pad Drilling Completion Date: 12/11/2014

### Time Log Summary

Operation	Com	Dur (hr)
WEARBUS HING	EJSA on pulling wear bushing. Verify wear bushing lockdown pins are backed out. Pull long wear bushing. No overpull. P/u wash sub and wash well head. Verify hole was full and close blind rams.  Perform BOPE weekly function test.	1
CASE	EJSA with H&P rig crew, Tesco Casing Crew & PNR representative over rigging up CRT & Casing tools. P/U & R/U Tesco CRT & Casing equipment.	2
SAFETY	EJSA with H&P crew, Tesco Casing crew & PNR Representative over running casing. Discussed the HSE Alert over operating casing tongs & proper hand/body placement. Discussed that every joint of casing that is ran in hole must be run in with CRT & not with CRT single latch elevators. Anybody on the rig can stop the job at anytime if they feel something doesn't look right or is unsafe & we will address the concern at that time.	0.5
CASE	M/U float shoe onto 2 joint shoe track of 9 5/8" 43.5 lb/ft L80 IC BTC Casing. M/U float collar. M/U 1 joint of casing on top of float collar. Thread lock all threads from top of top of float collar down to shoe. Fill up and test floats (Good). Run casing w/ CRT tool @ 45 ft/min F/Surface - average torque to base of triangle 9,600 ft/lbs. Hole displacing properly and have 20 - 25% flow on each joint ran. Hand caliper the ID of 10 jts of 43.5 lb/ft casing - 8.755". 10 jts of 40 lb/ft casing - 8.835"	1.5
CASE	Run 9 5/8" L-80 BT&C Casing w/ CRT tool @ 45 ft/min F/95' - 2,423' (53 jts. 43.5#), F/2,423' - 3,630' (26 jts. 40#), F/3,630' - 4,953' (29 jts. RYTE Wrap 40#) & F/4,953' - 8,307' (72 jts. 40#) average torque to 9,600 ft/lbs. Hole displacing properly and have 20 - 25% flow on each joint ran. Breaking circulation every 35 jts & CBU every 70 jts. PU & SO every 1000' while inside csg & 500' while in OH.  Contacted TRRC @ 12:06 HRS. 9/25/2014 with Notification of cementing 9-5/8" Intermediate Casing, spoke with Ivy.  @ 18:00 Conducted EJSA W/Rig Crew & Tesco For Running Casing W/3rd Party CRT While Breaking Circ.  Contacted Schlumberger @ 18:20 Hrs 9/25/2014 W/Confirm Time Of 02:00 Hrs 9/26/2014 On Location	15
CASE	P/U & M/U landing joint & hanger, RIH F/8,307' - 8,341'. Hanger landed @ 02:30 hrs., confirmed by Seaboard Rep & Pioneer Representative.  Note: Ran Solid Body Centralizers on stop rings in the middle of each joint on two joint shoe track. Ran Solid body centralizer 5' above float collar on stop ring. Ran Solid Body Centralizers every third joint until reaching 3,000' TVD.  Shoe depth: 8,341' md. Float Collar depth: 8,249.06' md. Shoe track length: 91.94' Solid Body Centralizers: 41	0.5
CIRC	Circulate 1 casing volume (629 bbls) with 6,900 strokes @ 8 bpm, 88 spm, 185 psi, full returns to surface.  Held Safety Meeting/JSA W/Rig Crew, Schlumberger Cement Crew & PNR Co. Man on R/U Cement Equipment, R/U Cementers While Circulating.	1.5
U_WT	Continue Circulating Casing While Waiting On Schlumberger Lab Report, Estimate Lab Report done by 07:00	2



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 14 Daily Operation: 9/26/2014 06:00 - 9/27/2014 00:00

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 033210	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
10	14	8,351.0	8,335.7	9.05	H & P, 606	

### Operations Summary

W.O. Cement Lab report, Cement 9 5/8 Intermediate Casing, Set Packoff, N/D BOPE, Install Abandonment Cap, Prepare Rig To Skid, Start Skid to 178B 18H

### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 9.75 Days From Spud, 10.25 Total Days On Well, 14 Total Days On Location

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

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

Estimated Pad Drilling Completion Date: 12/11/2014

### Time Log Summary

Operation	Com	Dur (hr)
U_WT	Continue Circulating Casing While Waiting On Schlumberger Lab Report, Estimate Lab Report done by 07:00	3.5
SAFETY	EJSA On Cementing 9 5/8" Intermediate Casing W/Schlumberger, Rig Crew, Rig Manager & PNR Co. Men	0.5
CMT	<p>Schlumberger cement 9 5/8" Intermediate casing as follows:</p> <p>Pressure test cement lines to 4500 psi</p> <p>50 bbls 9.4 lb/gal MUDPUSH Express. Mixed with 1.50 lb/bbl BW/V. MUDPUSH Express B389, 1402.9 lb/mgal Weighting Agent D031.</p> <p>Drop bottom plug</p> <p>886 sk, 367.2 bbl Lead, 9.7 lb/gal LiteCrete Slurry, 2.33 yield. Mixed with 8.004 gal/sk H2O, 100 lb/sk Cement (LiteCRETE) 0.3% fluid loss D207, 0.2% Dispersant D065, 0.2% Anti foam D046, 0.2% Retarder D013, and 3.0 % NaCl D044.</p> <p>289 sk, 54.9 bbl, 16.4 lb/gal Tail Slurry, 1.07 yield. Mixed with 4.354 gal/sk H2O, 94 lb/sk Cement (Class H), 0.2% Anti foam D046, 0.3% Retarder D013, 0.4% Dispersant D065.</p> <p>Drop top plug.</p> <p>Displaced cement with 623 bbls of 8.34 ppg Fresh Water w/ 0.084 gal/bbl Green-Cide 25G B244 at 4 - 6 bpm. Displaced final 20 bbls at 3 bpm. Bump plug @ 622 bbls with 1600 psi 500 psi over final lift pressure of 1100 psi. Floats held, bled back 3 bbls after 5 minutes.</p> <p>Full Returns thru out cement job.</p> <p>Pump 5 bbl of mud spacer to reserve</p> <p>Lift pressures: 50 bbl - 8 bpm 394 psi, 100 bbl - 6.5 bpm 315 psi, 200 bbl - 8 bpm 390 psi, 300 bbl - 8 bpm 500 psi, 400 bbl - 6.5 bpm 468 psi, 450 bbl - 6.5 bpm 547 psi, 500 bbl - 6.5 bpm 616 psi, 550 bbl- 6.5 bpm 845 psi, 600 bbl- 4.5 bpm 1075 psi, 610 bbl- 2.3 bpm 1060 psi, 620 bbl- 2.3 bpm 1100 psi.</p> <p>*** - SLB supervisor taking &amp; weighing slurry samples every 100 bbls (3 taken on Lead &amp; 1 taken on Tail)</p> <p>Note: Loading of bottom &amp; top plug verified by both company men, rig manager &amp; Schlumberger supervisor.</p>	3
CMT	EJSA on rigging down cementers & R/D Cementers	1
WLHEAD	Flush and clean cement lines, R/D cementers, wash thru BOP & choke.	0.5
WLHEAD	EJSA W/Seaboard & Pull Landing Joint, Set Packoff, Test Packoff to 5,000 psi for 5 minutes, L/D Landing Joint	1
CASE	EJSA W/Tesco & R/D CRT	1
NU_TEST	EJSA W/ETS & N/D BOPE, Install Abandonment Cap	3
SAFETY	EJSA with H&P crew & PNR representative on preparing rig for skid over to University 178B 18H.	0.5
B_SKID	Prep rig for skid. Disconnect flow line, water lines, choke line, mud line, air hose connections for rig move. Unpin upper and lower pins from drawworks to mud boat. Remove pins from BOP transport skid to boomer skid. Secure hydraulic hoses, BOP to sub, pipe wrangler. Install skid rails, set skid control stand. Remove ground cables and hand rails on flow line stand. Set second flow line stand and flow line extension in place.	3
B_SKID	<p>Start skid to University 178B 18H</p> <p>Contacted TRRC for notification of spud on University 178B 18H @ 24:00 hrs 9/27/2014, Spoke With Kay</p> <p>Tested well head cap to 500 psi for 30 min test good</p> <p>Pump cement to bottom of well heads base plate</p>	1

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 15 Daily Operation: 11/22/2014 06:00 - 11/23/2014 06:00

Job Category ORIG DRILLING			Primary Job Type ODR				AFE Number 033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig		
67	15	8,351.0	8,335.7	9.70	H & P, 606		

### Operations Summary

Skid Rig To University 178B 19H, Rig Up, N/U & Test BOPE, Cut & Slip Drlg. Line, P/U Dir. Tools, TIH

### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 10.75 Days From Spud, 11.25 Total Days On Well, 70 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 252.5 NPT for month of November

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

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
B_SKID	EJSA with H & P Rig Crew, Rig Manager & PNR Co. Man on Skidding Rig. Prep rig for skid. Disconnect flow line, water lines, choke line, mud line, air hose connections for rig move. Un pin upper and lower pins from drawworks to mud boat. Remove pins from BOP transport skid to boomer skid. Secure hydraulic hoses, BOP to sub, pipe wrangler. Install skid rails, set skid control stand. Remove ground cables and hand rails on flow line stand. Remove flow line extension and second flow line stand.	3
B_SKID	Skid rig over to University 178B #19H  Note: Rig accepted @ 06:00 hrs on 178B #19H after Pioneer Rep & H&P TP verified that rig was level and centered over hole.	1
B_SKID	R/U stairs from rig floor to ground & rig floor to flow line skid. R/U high pressure mud lines, water lines & air lines. R/U wrangler, drawworks & HPU, move skid rails, drive ground rods.	2
NU_TEST	Hold EJSA on N/U BOPE. N/U BOP's, R/U flow line stand, bell nipple, kill line, choke line, M/U flow line, fill line, drain line. Install mousehole. Install ground rods.	5
NU_TEST	EJSA On Testing BOPE, Full Test on BOP's & choke equipment, to 250 Low 5 min. / 3,500 High 5 min. Dart valve, TIW valve, TDS, Manual IBOP, Hyd. IBOP, 4" Floor Valve, Standpipe & Mud lines back to pumps, to 250 Low 5 min. / 4,500 High 5 min.  Good Test, Rig Down BOP Tester.  Install Pollution Pan on Bell Nipple. Install Bails, Elevators & Stabbing guide on TDS.	6
WEARBUS HING	Install Short Wear bushing in Wellhead, Witnessed by PNR Co. Man, Perform Accumulator Test (Good Test).	1
RIG_SVC	Service Rig & TDS	0.5
CUTDL	EJSA on Slip & Cut drill line. Slip & Cut drill line, perform crown saver test, and check high and low set points, calibrate blocks.	2
BHA_HAN DLING	EJSA on P/U BHA W/Rig Crew, Directional Driller & PNR Co. Man. P/U Directional Assy. #3, Stabilized Motor, Stabilizer, UBHO, NMDC, Flex NMDC & X.O. Sub, Scribe & Install MWD, Test Motor & MWD 80 spm, 306 gpm, 300 psi W/70 psi pulses. Good Test, M/U Bit & P/U Flex NMDC.  Tested Motor W/Water, taking returns to reserve pit.  Note: TH Hill Job # T1-22259, Inspection # 18528, Inspector Orlando J. Smith	1.5
TIH	TIH F/BHA T/2,957', Filling every 30 stands, taking returns to reserve pit.	2

Report #: 16 Daily Operation: 11/23/2014 06:00 - 11/24/2014 06:00

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
68	16	9,020.0	8,901.1	10.50	H & P, 606	

### Operations Summary

TIH, Test Casing, Drill Out, FIT, Displace W/OBM, Drill 8 1/2" Production Curve Section

### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 11.75 Days From Spud, 12.25 Total Days On Well, 71 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 252.5 NPT for month of November

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 71%, Lateral - 0%

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
TIH	EJSA on TIH, TIH F/2,957' to 8203', Tag @ 8247' , filling pipe every 30 stands, hole displacing properly w/22 - 25% flow on each stand, taking returns to reserve..	2.5
TST_DO_FIT	Fill pipe & perform Casing Test To 2,500 psi for 30 minutes. Test Good.	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Tag cmt. Drill out cement, Float equipment F/8247' - 8,351' & Drill 10' of new hole to 8,361' WOB: 5-8K ; SPM: 105 / 402 GPM; RPM: 30.  Note: Float collar @ 8,249' Float shoe @ 8,341'	2
TST_DO_FIT	Perform FIT/LOT W/ leak off psi of $1887 \div 0.052 \div (8346' \text{ TVD}) + 8.9 \text{ ppg MW Leak-Off Calculated To } 13.2 \text{ ppg EMW}$ . Pressure gradient = 0.226 psi/ft	0.5
CIRC	EJSA with H&P rig crew, NOV mud Eng & PNR representative over displacing hole F/WBM T/OBM. Make sure all lines are rigged up & connections are good. Fill out fluid transfer check-list & prepare to start displacing. Displace hole to OBM.	1.5
DRL_ROT	Rotate Drill 8 1/2" Production Curve 39' @ 78 ft/hr: 20-23 k WOB, 30 TDS rpm, 112 motor rpm, 142 total rpm, 5-6 k TQ., 105 spm, 402 gpm, 300-400 psi Diff, 1750 spp, Avg MSE 77. Full returns to surface.	0.5
DRL_SLIDE	Slide Drill 8-1/2" Production Curve 15' @ 10'/hr, 15 k WOB, 150 spm, 575 gpm, 161 Motor rpm, 350 psi Diff, 2,800 psi SPP, 40 R GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8 1/2" Production Curve 85' @ 42.5 ft/hr: 23 - 25k WOB, 30 TDS rpm, 154 motor rpm, 184 total rpm, 6 - 7k TQ., 144 spm, 551 gpm, 300-400 psi Diff, 3,000 spp, Avg MSE 80. Full returns to surface.	2
DRL_SLIDE	Slide Drill 8 1/2" Production Curve 82' @ 46.85'/hr, 18 - 22k WOB, 144 spm, 551 gpm, 154 Motor rpm, 200 - 300 psi Diff, 2,900 psi SPP, 30 R GTF. Full returns to surface.  Curve KOP - 8,500', 18:00 11/23/2014	1.75
DRL_ROT	Rotate Drill 8 1/2" Production Curve 15' @ 60 ft/hr: 23 - 25k WOB, 30 TDS rpm, 154 motor rpm, 184 total rpm, 6 - 7k TQ., 144 spm, 551 gpm, 300-400 psi Diff, 3,000 spp, Avg MSE 80. Full returns to surface.	0.25
DRL_SLIDE	Slide Drill 8 1/2" Production Curve 32' @ 42.66'/hr, 18 - 22k WOB, 144 spm, 551 gpm, 154 Motor rpm, 200 - 300 psi Diff, 2,900 psi SPP, 30 R GTF. Full returns to surface.	0.75
DRL_ROT	Rotate Drill 8 1/2" Production Curve 24' @ 48 ft/hr: 23 - 25k WOB, 30 TDS rpm, 154 motor rpm, 184 total rpm, 6 - 7k TQ., 144 spm, 551 gpm, 400-500 psi Diff, 3,050 spp, Avg MSE 35. Full returns to surface.	0.5
DRL_SLIDE	Slide Drill 8 1/2" Production Curve 23' @ 30.66'/hr, 18 - 22k WOB, 144 spm, 551 gpm, 154 Motor rpm, 200 - 300 psi Diff, 2,900 psi SPP, 30 L GTF. Full returns to surface.	0.75
DRL_ROT	Rotate Drill 8 1/2" Production Curve 27' @ 54 ft/hr: 23 - 25k WOB, 30 TDS rpm, 154 motor rpm, 184 total rpm, 6 - 7k TQ., 144 spm, 551 gpm, 300-400 psi Diff, 3,100 spp, Avg MSE 37. Full returns to surface.	0.5
DRL_SLIDE	Slide Drill 8 1/2" Production Curve 20' @ 40'/hr, 18 - 22k WOB, 144 spm, 551 gpm, 154 Motor rpm, 200 - 300 psi Diff, 2,950 psi SPP, 30 L GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8 1/2" Production Curve 28' @ 56 ft/hr: 28 - 30k WOB, 30 TDS rpm, 154 motor rpm, 184 total rpm, 7 - 9k TQ., 144 spm, 551 gpm, 350-450 psi Diff, 3,100 spp, Avg MSE 37. Full returns to surface.	0.5
DRL_SLIDE	Slide Drill 8 1/2" Production Curve 19' @ 38'/hr, 18 - 22k WOB, 144 spm, 551 gpm, 154 Motor rpm, 200 - 300 psi Diff, 2,900 psi SPP, 30 L GTF. Full returns to surface.	0.5
RIG_SVC	Service Rig & TDS	0.5
DRL_ROT	Rotate Drill 8 1/2" Production Curve 25' @ 100 ft/hr: 23 - 25k WOB, 30 TDS rpm, 154 motor rpm, 184 total rpm, 7 - 9k TQ., 144 spm, 551 gpm, 400-500 psi Diff, 3,100 spp, Avg MSE 32. Full returns to surface.	0.25
DRL_SLIDE	Slide Drill 8 1/2" Production Curve 22' @ 44'/hr, 18 - 22k WOB, 144 spm, 551 gpm, 154 Motor rpm, 200 - 300 psi Diff, 2,950 psi SPP, 10L GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8 1/2" Production Curve 29' @ 58 ft/hr: 28 - 30k WOB, 30 TDS rpm, 154 motor rpm, 184 total rpm, 7 - 9k TQ., 144 spm, 551 gpm, 400 - 500 psi Diff, 3,150 spp, Avg MSE 38. Full returns to surface.	0.5
DRL_SLIDE	Slide Drill 8 1/2" Production Curve 19' @ 38'/hr, 18 - 22k WOB, 144 spm, 551 gpm, 154 Motor rpm, 200 - 300 psi Diff, 2,950 psi SPP, 10L GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8 1/2" Production Curve 16' @ 64 ft/hr: 28 - 30k WOB, 30 TDS rpm, 154 motor rpm, 184 total rpm, 7 - 9k TQ., 144 spm, 551 gpm, 400 - 500 psi Diff, 3,150 spp, Avg MSE 34. Full returns to surface.	0.25
DRL_SLIDE	Slide Drill 8 1/2" Production Curve 31' @ 62'/hr, 18 - 22k WOB, 144 spm, 551 gpm, 154 Motor rpm, 200 - 300 psi Diff, 2,950 psi SPP, 10L GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8 1/2" Production Curve 22' @ 44 ft/hr: 28 - 30k WOB, 30 TDS rpm, 154 motor rpm, 184 total rpm, 8 - 10k TQ., 144 spm, 551 gpm, 400 - 500 psi Diff, 3,150 spp, Avg MSE 39. Full returns to surface.	0.5
DRL_SLIDE	Slide Drill 8 1/2" Production Curve 24' @ 24'/hr, 18 - 22k WOB, 144 spm, 551 gpm, 154 Motor rpm, 200 - 300 psi Diff, 2,950 psi SPP, 10L GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8 1/2" Production Curve 17' @ 68 ft/hr: 28 - 30k WOB, 30 TDS rpm, 154 motor rpm, 184 total rpm, 8 - 10k TQ., 144 spm, 551 gpm, 400 - 500 psi Diff, 3,150 spp, Avg MSE 39. Full returns to surface.	0.5
DRL_SLIDE	Slide Drill 8 1/2" Production Curve 30' @ 40'/hr, 18 - 22k WOB, 144 spm, 551 gpm, 154 Motor rpm, 200 - 300 psi Diff, 2,950 psi SPP, 10L GTF. Full returns to surface.	0.75

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8 1/2" Production Curve 15' @ 60 ft/hr: 28 - 30k WOB, 30 TDS rpm, 154 motor rpm, 184 total rpm, 8 - 10k TQ., 144 spm, 551 gpm, 400 - 500 psi Diff, 3,150 spp, Avg MSE 39. Full returns to surface.  PTB @ 9,020' Inc. 56.30°, Azi. 357.90°, 56' Above and 39' Right of Plan 2 Line  MWD Tool Temperature – 140.8°F  Motor Yield – 14.0°/100'  Need – 9.1°/100'	0.25

Report #: 17 Daily Operation: 11/24/2014 06:00 - 11/25/2014 06:00

Job Category ORIG DRILLING	Primary Job Type ODR	AFE Number 033210
Days From Spud (days) 69	Days On Location (days) 17	End Depth (ftKB) 10,088.0
	End Depth (TVD) (ftKB) 9,009.7	Dens Last Mud (lb/gal) 11.05
	Rig H & P, 606	

### Operations Summary

Drill 8 1/2" Production Curve & Lateral Section To 10,088'

### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 12.75 Days From Spud, 13.25 Total Days On Well, 72 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 252.5 NPT for month of November

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 100%, Lateral - 7%

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_SLID E	Slide Drill 8 1/2" Production Curve 32' @ 32'/hr, 18 - 22k WOB, 144 spm, 551 gpm, 154 Motor rpm, 200 - 300 psi Diff, 2,950 psi SPP, 10L GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8 1/2" Production Curve 33' @ 132 ft/hr: 28 - 30k WOB, 30 TDS rpm, 154 motor rpm, 184 total rpm, 8 - 10k TQ., 144 spm, 551 gpm, 400 - 500 psi Diff, 3,150 spp, Avg MSE 30. Full returns to surface.	0.25
DRL_SLID E	Slide Drill 8 1/2" Production Curve 14' @ 18'/hr, high side GTF. Full returns to surface.	0.75
DRL_ROT	Rotate Drill 8 1/2" Production Curve 32' @ 64 ft/hr: Avg MSE 38. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8 1/2" Production Curve 15' @ 10'/hr, high side GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8 1/2" Production Curve 29' @ 58 ft/hr: Avg MSE 52. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8 1/2" Production Curve 18' @ 18'/hr, high side GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8 1/2" Production Curve 7' @ 28 ft/hr: Avg MSE 68. Full returns to surface.	0.25
DRL_SLID E	Slide Drill 8 1/2" Production Curve 40' @ 53'/hr, high side GTF. Full returns to surface.	0.75
DRL_ROT	Rotate Drill 8 1/2" Production Curve 25' @ 50 ft/hr: Avg MSE 60. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8 1/2" Production Curve 69' @ 35'/hr, 20 L GTF. Full returns to surface.	2
DRL_ROT	Rotate Drill 8 1/2" Production Curve 47' @ 94 ft/hr: Avg MSE 60. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8 1/2" Production Curve 31' @ 31'/hr, 35 L GTF. Full returns to surface.  Landed Curve @ 9,412' MD, 9,009' TVD @ 16:30 hours 11/24/2014	1
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 61' @ 40.66 ft/hr: Avg MSE 35. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 144' @ 48 ft/hr: 30 - 35k WOB, 30 - 50 TDS rpm, 154 motor rpm, 184 - 204 total rpm, 8 - 11k TQ., 144 spm, 551 gpm, 400 - 500 psi Diff, 3,400 spp, Avg MSE 87. Full returns to surface.	3
RIG_SVC	Service Rig & TDS	0.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 12' @ 12'/hr, 25 - 27k WOB, 144 spm, 551 gpm, 154 Motor rpm, 200 psi Diff, 3,100 psi SPP, 170R GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 176' @ 70.4 ft/hr: 30 - 35k WOB, 50 TDS rpm, 154 motor rpm, 204 total rpm, 8 - 12k TQ., 144 spm, 551 gpm, 400 - 500 psi Diff, 3,400 spp, Avg MSE 60. Full returns to surface.	2.5
DRL_SLID E	Slide Drill 8 1/2" Production Curve 20' @ 13.33'/hr, 90R GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 73' @ 73 ft/hr: Avg MSE 46. Full returns to surface.  Note: Put 3 generators on line, With 2 generators running @ 70%, losing power to pumps.	1

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 12' @ 24/hr, 180 GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 178' @ 89 ft/hr: Avg MSE 46. Full returns to surface.  PTB @ 10,088' Inc. 89.0°, Azi. 1.50°  5' Above and 17' Right of Plan 3 Line  MWD Tool Temperature – 158.9°F	2

Report #: 18 Daily Operation: 11/25/2014 06:00 - 11/26/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033210
Days From Spud (days)	Days On Location (days)	End Depth (ftKB)
70	18	10,481.0
	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)
	9,012.7	11.05
		Rig
		H & P, 606

#### Operations Summary

Drill 8 1/2" Production Lateral Section To 10,181', TOH, C/O BHA, TIH, Drill 8 1/2" Production Lateral To 10,481'

#### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 13.75 Days From Spud, 14.25 Total Days On Well, 73 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 252.5 NPT for month of November

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 100%, Lateral - 11%

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 15' @ 30 ft/hr: 30 - 35k WOB, 50 TDS rpm, 154 motor rpm, 184 total rpm, 8 - 10k TQ., 144 spm, 551 gpm, 400 - 500 psi Diff, 3,500 spp, Avg MSE 80. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 13' @ 26/hr, 25k WOB, 144 spm, 551 gpm, 154 Motor rpm, 200 psi Diff, 3200 psi SPP, 45 R GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 66' @ 66 ft/hr: 30 - 35k WOB, 50 TDS rpm, 154 motor rpm, 184 total rpm, 8 - 10k TQ., 144 spm, 551 gpm, 400 - 500 psi Diff, 3,500 spp, Avg MSE 80. Full returns to surface.  Prepare to POOH to change BHA from curve to lateral assembly	1
CIRC	Circ. 2-B/U reciprocating while circulating, 60 Top Drive rpm, 150 spm, 575 gpm, 3000 psi, full returns to surface. Check flow, negative, pump slug.	1.5
TOOH	EJSA on TOOH For lateral assembly, F/10,182' - BHA on trip tank, no excess drag & hole taking proper displacement.  H&P is conducting an audit of safety equipment	4
BHA_HAN DLING	EJSA On L/D BHA, Drain motor and break bit. Retrieve MWD tool & L/D same, pull & inspect mule shoe sleeve. Break off stabilizer sleeve, L/D motor.	1
WEARBUS HING	EJSA, Pull wear bushing & jet wellhead w/perforated jt., re-install wearbushing (1/4 turn f/previous position), lock down. Witnessed by PNR Co. Rep.  Function Tested BOP (OK)	1
BHA_HAN DLING	EJSA On P/U BHA, P/U & M/U Integrity Mud Motor, Fixed Hsg. 1.5°, 7:8 5.0 stage, 0.28 rpg., Install 8" stabilizer sleeve, scribe motor, orient muleshoe sleeve, install MWD tool, Make up NMDC's, X.O sub and perform surface test - 80 spm, 308 gpm, 630 psi, w/176 psi pulses (good test). M/U 8-1/2" Smith MDiZ516 PDC w/1.202 TFA.  TH Hill Job # T1-22796/88967, Inspection # 18769, Inspector Matt Norris	2.5
RIG_SVC	Service rig & top drive	0.5
TIH	TIH F/BHA to 10,089' on trip tank, filling pipe every 30 stands, hole displacing properly, taking torque & drag readings every 2000' in casing & 500' in open hole w/22 - 25% flow on each stand.	5.5
WASH_RE AM	Wash F/10,089' - 10,182', Re-log Gamma F/10,089' - 10,039' For Correlation, 50' per Geologist, 144 spm, 551 gpm, 3,100 psi, 35 TDS rpm, 154 motor rpm, 214 total rpm, TQ 2 - 4k ft/lb, full returns to surface.	1
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 15' @ 30 ft/hr: 25 - 28k WOB, 80 TDS rpm, 154 motor rpm, 234 total rpm, 7 - 11k TQ., 144 spm, 551 gpm, 400 - 500 psi Diff, 3,450 spp, Avg MSE 85. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 15' @ 30/hr, 38k WOB, 144 spm, 551 gpm, 154 Motor rpm, 300 psi Diff, 3,400 psi SPP, 0 GTF. Full returns to surface.	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 269' @ 67.25 ft/hr: 30 - 32k WOB, 80 TDS rpm, 154 motor rpm, 234 total rpm, 10 - 14k TQ., 144 spm, 551 gpm, 500 - 600 psi Diff, 3,550 spp, Avg MSE 48. Full returns to surface.  PTB @ 10,481' Inc. 90.7°, Azi. 1.00°  On the line and 13' Right of Plan 3 Line  MWD Tool Temperature – 148°F	4

Report #: 19 Daily Operation: 11/26/2014 06:00 - 11/27/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
71	19	11,470.0
	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)
	9,012.1	11.05
		Rig
		H & P, 606

#### Operations Summary

Drill 8 1/2" Production Lateral To 11,470'

#### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 14.75 Days From Spud, 15.25 Total Days On Well, 74 Total Days On Location

Rig NPT: 1 hrs previous 24 hrs. 253.5 NPT for month of November

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 100%, Lateral - 22%

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 15' @ 15 ft/hr, 38k WOB, 144 spm, 551 gpm, 154 Motor rpm, 300 psi Diff, 3,400 psi SPP, 90 R GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 79' @ 158 ft/hr: 30 - 32k WOB, 80 TDS rpm, 154 motor rpm, 234 total rpm, 10 - 14k TQ., 144 spm, 551 gpm, 500 - 600 psi Diff, 3,550 spp, Avg MSE 50. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 17' @ 34 ft/hr, 38k WOB, 144 spm, 551 gpm, 154 Motor rpm, 300 psi Diff, 3,400 psi SPP, 45 R GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 98' @ 49 ft/hr: 30 - 32k WOB, 80 TDS rpm, 118 motor rpm, 198 total rpm, 10 - 14k TQ., 110 spm, 421 gpm, 500 - 600 psi Diff, 2300 spp, Avg MSE 60. Full returns to surface.  Swab out on # 1 pump pod 2	2
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 70' @ 47 ft/hr: 30 - 32k WOB, 80 TDS rpm, 154 motor rpm, 234 total rpm, 10 - 14k TQ., 144 spm, 551 gpm, 500 - 600 psi Diff, 3,650 spp, Avg MSE 50. Full returns to surface.	1.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 30' @ 30 ft/hr, 180 GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 60' @ 41 ft/hr: Avg MSE 50. Full returns to surface.	1.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 25' @ 50 ft/hr, 170 L GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 233' @ 58.3 ft/hr: Avg MSE 50. Full returns to surface.	4
U_RIG_OT R	Repair 2" valve on standpipe.	1
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 296' @ 43.8 ft/hr: Avg MSE 65. Full returns to surface.	6.75
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 20' @ 7.3 ft/hr, 45k WOB, 144 spm, 551 gpm, 154 Motor rpm, 150 - 200 psi Diff, 3,450 psi SPP, 150R GTF. Full returns to surface.	2.75
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 45' @ 45 ft/hr: Avg MSE 35 Full returns to surface.  MW 11.0, Vis 60  PTB @ 11,470' Inc. 91.0°, Azi. 1.4°  3' Above and 18' Right of Plan 3 Line  MWD Tool Temperature – 166°F	1



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 20 Daily Operation: 11/27/2014 06:00 - 11/28/2014 06:00

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
72	20	12,545.0	9,010.7	11.05	H & P, 606	

### Operations Summary

Drill 8 1/2" Production Lateral F/11,470' - 12,545'

### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 15.75 Days From Spud, 16.25 Total Days On Well, 75 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 253.5 NPT for month of November

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 100%, Lateral - 33%

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 29' @ 29 ft/hr: 30 - 35k WOB, 50 - 80 TDS rpm, 154 motor rpm, 204 - 234 total rpm, 10 -14k TQ., 144 spm, 551 gpm, 250 - 500 psi Diff, 3,800 spp, Avg MSE 50. Full returns to surface.  In hard spots, slowing rotary to 50 - 60 rpms & applying more wob until we break through.	1
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 20' @ 13.3 ft/hr, 42k WOB, 144 spm, 551 gpm, 154 Motor rpm, 250 psi Diff, 3,525 psi SPP, 180 GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 540' @ 51.4 ft/hr: 32 - 36k WOB, 50 - 80 TDS rpm, 154 motor rpm, 204 - 234 total rpm, 10 -14k TQ., 144 spm, 551 gpm, 250 - 500 psi Diff, 3,850 spp, Avg MSE 20 - 50. Full returns to surface.	10.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 25' @ 16.7 ft/hr, 160L GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 263' @ 58.4 ft/hr: Avg MSE 25. Full returns to surface.	4.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 20' @ 20 ft/hr, 160R GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 75' @ 75 ft/hr: Avg MSE 18. Full returns to surface.	1
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 20' @ 20 ft/hr, 180 GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 74' @ 49.3 ft/hr: 32 - 35k WOB, 50 - 80 TDS rpm, 145 motor rpm, 195 - 225 total rpm, 10 -14k TQ., 136 spm, 520 gpm, 250 - 500 psi Diff, 3,750 spp, Avg MSE 24. Full returns to surface.  Reduced Flow Rate to 520 gpm to keep spp < 4,000 psi (85% of 4,700 psi max = 3,995 psi)	1.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 10' @ 20 ft/hr, 42k WOB, 136 spm, 520 gpm, 154 Motor rpm, 200 psi Diff, 3,450 psi SPP, 180 GTF. Full returns to surface.  MW 11.0, Vis 64  PTB @ 12,614' Inc. 88.4°, Azi. 1.50°  9' Above and 36' Right of Plan 3 Line  MWD Tool Temperature - 173.7°F	0.5

Report #: 21 Daily Operation: 11/28/2014 06:00 - 11/29/2014 06:00

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
73	21	12,921.0	9,025.4	11.05	H & P, 606	

### Operations Summary

Drill 8 1/2" Production Lateral F/12,545' - 12,921', Circ. Clean Up Cycle, TOOH F/Bit & Motor

### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 16.75 Days From Spud, 17.25 Total Days On Well, 76 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 253.5 NPT for month of November

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 100%, Lateral - 37%

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 12' @ 8 ft/hr, 38k WOB, 136 spm, 520 gpm, 154 Motor rpm, 250 psi Diff, 3,550 psi SPP, 150L GTF. Full returns to surface.  Reduced Flow Rate to 520 gpm to keep spp < 4,000 psi (85% of 4,700 psi max = 3,995 psi)	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 72' @ 72 ft/hr: 35 - 40k WOB, 50 - 80 TDS rpm, 145 motor rpm, 195 - 225 total rpm, 10 -14k TQ., 136 spm, 520 gpm, 250 - 500 psi Diff, 3,750 spp, Avg MSE 22. Full returns to surface.	1
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 34' @ 13.6 ft/hr, 120L GTF. Full returns to surface.	2.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 249' @ 35.6 ft/hr: Avg MSE 30-90. Full returns to surface.  Motor trying to stall in rotation, bit grabbing formation, differential spiking.	7
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 9' @ 9 ft/hr, 135L GTF. Unable to maintain TF. Full returns to surface.  PTB @ 12,921' Inc. 91.3°, Azi. 2.20°,  1' Above and 42' Right of Plan 3 Line  MWD Tool Temperature – 173.3°F	1
CIRC	Set back 1 stand & Perform Clean Up Cycle - Per K & M High Angle Hole Workbook, 4 B/U recommended. B/U = 7,000 strokes. Rotating 80 rpm, 150 spm, 575 gpm, 3,900 psi. After 1st B/U cuttings began to decrease, largest cutting size approx. 1/4" x 1/4". After 2nd B/U, cuttings continue to decrease, largest cuttings BB size, After 3rd B/U, minimal cuttings @ shakers, cuttings like coffee grounds, After 4th B/U, shakers relatively clean.  Build slug while circulating, check flow, no flow, pump slug.	4
TOOH	EJSA with H&P crew & PNR representative over tripping out of the hole due to low penetration rate. TOOH For Motor & Bit F/12,803' - BHA on trip tank. L/D 1 Jt. DP to rotate breaks, No excessive drag and hole taking proper displacement from trip tank. Taking PU & SO every 500' while in OH & every 2,000' in casing. P/U 1Jt. DP on bottom of last stand.  Shut Down 3rd Generator after pulling 5 stands.	6.5
BHA_HAN DLING	EJSA On L/D BHA, Drain motor and break bit. Retrieve MWD tool & L/D same, pull & inspect mule shoe sleeve. L/D motor.	0.5

Report #: 22 Daily Operation: 11/29/2014 06:00 - 11/30/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033210
Days From Spud (days)	Days On Location (days)	End Depth (ftKB)
74	22	13,168.0
	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)
	9,042.8	11.10
		Rig
		H & P, 606

#### Operations Summary

Pull, inspect & install wear bushing, PU & MU BHA #5, TIH, Slip & cut drill line, TIH, Wash To Btm, Drill 8 1/2" Production Lateral

#### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 17.75 Days From Spud, 18.25 Total Days On Well, 77 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 253.5 NPT for month of November

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 100%, Lateral - 39%

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
BHA_HAN DLING	Finish laying down motor & bit.  Bit #4 Graded 1/4/WT/S/X/0/CT/PR	0.5
WEARBUS HING	EJSA, Pull wear bushing & jet wellhead w/perforated jt., re-install wearbushing (1/4 turn f/previous position), lock down. Witnessed by PNR Co. Rep.  Function Tested BOP (OK)	1.5
SAFETY	Clean OBM off rig floor & prepare to pick up BHA #5	0.5
BHA_HAN DLING	EJSA On P/U BHA, P/U & M/U Integrity Mud Motor, Adj Hsg. 1.5°, 7:8 5.0 stage, 0.28 rpg., scribe motor, orient muleshoe sleeve, install MWD tool, Make up NMDC's, X.O sub and perform surface test - 80 spm, 308 gpm, 650 psi, w/176 psi pulses (good test). M/U 8-1/2" Smith MDiZ516 PDC w/1.202 TFA.  TH Hill Job # T1-22259, Inspection # 18073, Inspector Kennard Hughes.	1.5
TIH	EJSA, TIH F/BHA to 8,112' on trip tank, filling pipe every 30 stands, hole displacing properly, taking torque & drag readings every 2000' in casing w/22 - 27% flow on each stand.	3.5
CUTDL	EJSA, Slip & cut 60' of drill line.	2
TIH	TIH F/8,112' - 12,802' on trip tank, filling pipe every 30 stands, hole displacing properly, taking torque & drag readings every 500' in OH w/22 - 27% flow on each stand.	3.5
WASH_RE AM	Wash F/12,802' - 12,921', Re-log Gamma F/12,860' - 12,895' (35') For Correlation, 136 spm, 520 gpm, 3,550 psi, 70 TDS rpm, 145 motor rpm, 215 total rpm, TQ 5 - 9k ft/lb, full returns to surface.	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 20' @ 13.3 ft/hr, 45k WOB, 136 spm, 520 gpm, 154 Motor rpm, 150 psi Diff, 3,700 psi SPP, 135L GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 49' @ 98 ft/hr: 28 - 30k WOB, 80 TDS rpm, 145 motor rpm, 225 total rpm, 10 -12k TQ., 136 spm, 520 gpm, 400 - 500 psi Diff, 3,950 spp, Avg MSE 17. Full returns to surface.	0.5
RIG_SVC	Service Rig & TDS  Note: Survey @ 12,936', Inc. 83.4°, Azi. 359.8° Seeing 9' of erratic slide from previous BHA and 15' of good slide @ 135L GTF from present BHA. 7.75° DLS, (6.9° Change/24' Slide = 28.75°/100' Motor Yield, formation push)	0.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 15' @ 60 ft/hr: 28 - 30k WOB, 80 TDS rpm, 145 motor rpm, 225 total rpm, 10 -12k TQ., 136 spm, 520 gpm, 400 - 500 psi Diff, 3,950 spp, Avg MSE 17. Full returns to surface.  Survey Check Shot @ 12,951' Inc 83.2°, Azi 359.5°	0.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 12' @ 16 ft/hr, 35k WOB, 136 spm, 520 gpm, 154 Motor rpm, 100 psi Diff, 3,600 psi SPP, HS GTF. Full returns to surface.	0.75
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 38' @ 76 ft/hr: 28 - 30k WOB, 80 TDS rpm, 145 motor rpm, 225 total rpm, 10 -12k TQ., 136 spm, 520 gpm, 400 - 500 psi Diff, 3,950 spp, Avg MSE 12. Full returns to surface.  Survey Check Shot @ 12,299' Inc 84.0°, Azi 359.5°	0.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 10' @ 20 ft/hr, 38k WOB, 136 spm, 520 gpm, 154 Motor rpm, 150 psi Diff, 3,600 psi SPP, HS GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 35' @ 46.7 ft/hr: 28 - 30k WOB, 80 TDS rpm, 145 motor rpm, 225 total rpm, 10 -12k TQ., 136 spm, 520 gpm, 400 - 500 psi Diff, 3,950 spp, Avg MSE 18. Full returns to surface.	0.75
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 30' @ 17.14 ft/hr, 42k WOB, 136 spm, 520 gpm, 154 Motor rpm, 150 psi Diff, 3,600 psi SPP, HS GTF. Full returns to surface.  Check Shot @ 13,076', Inc 85.6°, Azi 359.6°	1.75
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 18' @ 72 ft/hr: 28 - 30k WOB, 80 TDS rpm, 145 motor rpm, 225 total rpm, 10 -12k TQ., 136 spm, 520 gpm, 400 - 500 psi Diff, 3,950 spp, Avg MSE 19. Full returns to surface.	0.25
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 20' @ 10 ft/hr, 45k WOB, 136 spm, 520 gpm, 154 Motor rpm, 150 psi Diff, 3,600 psi SPP, HS GTF. Full returns to surface.  PTB @ 13,168' Inc. 91.9°, Azi. 359.6°,  20' Below and 33' Right of Plan 3 Line  MWD Tool Temperature – 162.5°F	2

### Report #: 23 Daily Operation: 11/30/2014 06:00 - 12/1/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
75	23	14,372.0
	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)
	9,025.3	11.05
		Rig
		H & P, 606

### Operations Summary

Drill 8 1/2" Production Lateral F/13,168' - 14,372'

### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 18.75 Days From Spud, 19.25 Total Days On Well, 78 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 253.5 NPT for month of November

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 100%, Lateral - 52%

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 309' @ 88.3 ft/hr: 28 - 30k WOB, 50 - 80 TDS rpm, 145 motor rpm, 195 - 225 total rpm, 11 -13k TQ., 136 spm, 520 gpm, 400 - 500 psi Diff, 3,950 spp, Avg MSE 15 - 20. Full returns to surface.	3.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 20' @ 13.3 ft/hr, 45k WOB, 136 spm, 520 gpm, 145 Motor rpm, 150 psi Diff, 3,600 psi SPP, 45R GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 58' @ 116 ft/hr: 28 - 30k WOB, 50 - 80 TDS rpm, 145 motor rpm, 195 - 225 total rpm, 11 -13k TQ., 136 spm, 520 gpm, 400 - 500 psi Diff, 4,000 spp, Avg MSE 15. Full returns to surface.	0.5
RIG_SVC	Service Rig & Top drive	0.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 30' @ 60 ft/hr: 28 - 30k WOB, 50 - 80 TDS rpm, 143 motor rpm, 193 - 223 total rpm, 11 -13k TQ., 134 spm, 513 gpm, 400 - 500 psi Diff, 3,900 spp, Avg MSE 20. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 20' @ 13.3 ft/hr, 45k WOB, 134 spm, 513 gpm, 143 Motor rpm, 150 psi Diff, 3,550 psi SPP, 45R GTF. Full returns to surface.	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 437' @ 87.4 ft/hr: 28 - 30k WOB, 50 - 80 TDS rpm, 143 motor rpm, 193 - 223 total rpm, 9 - 12k TQ., 134 spm, 513 gpm, 300 - 500 psi Diff, 3,950 spp, Avg MSE 20 - 60. Full returns to surface.  BOP drill - reaction time 30 sec.	5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 25' @ 16.7 ft/hr, 45k WOB, 134 spm, 513 gpm, 143 Motor rpm, 100 psi Diff, 3,600 psi SPP, 45R GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 163' @ 54.3 ft/hr: 28 - 30k WOB, 50 - 80 TDS rpm, 141 motor rpm, 191 - 221 total rpm, 12 - 16k TQ., 132 spm, 505 gpm, 350 - 550 psi Diff, 3,950 spp, Avg MSE 10 - 60. Full returns to surface.  Reduced Flow Rate to 505 gpm to keep spp < 4,000 psi (85% of 4,700 psi max = 3,995 psi)  505 gpm = 262 fpm AV Opposite DP	3
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 15' @ 5 ft/hr, 45k WOB, 132 spm, 505 gpm, 141 Motor rpm, 100 psi Diff, 3,600 psi SPP, 150L GTF. Full returns to surface.	3
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 80' @ 80 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 141 motor rpm, 191 - 221 total rpm, 12 - 16k TQ., 132 spm, 505 gpm, 350 - 550 psi Diff, 3,900 spp, Avg MSE 13 - 30. Full returns to surface.	1
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 12' @ 9.6 ft/hr, 42k WOB, 132 spm, 505 gpm, 141 Motor rpm, 100 psi Diff, 3,600 psi SPP, 145L GTF. Full returns to surface.	1.25
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 35' @ 28 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 141 motor rpm, 191 - 221 total rpm, 12 - 16k TQ., 132 spm, 505 gpm, 350 - 550 psi Diff, 3,900 spp, Avg MSE 13 - 55 Full returns to surface.  PTB @ 14,372' Inc. 91.0°, Azi. 2.8°  3' Above and 10' Right of Plan 3 Line  MWD Tool Temperature - 176.9°F	1.25

Report #: 24 Daily Operation: 12/1/2014 06:00 - 12/2/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
76	24	15,315.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
9,014.6	11.05	H & P, 606

#### Operations Summary

Drill 8 1/2" Production Lateral F/14,372' - 15,315'

#### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 19.75 Days From Spud, 20.25 Total Days On Well, 79 Total Days On Location

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

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 100%, Lateral - 61%

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 63' @ 63 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 141 motor rpm, 191 - 221 total rpm, 12 - 14k TQ., 132 spm, 505 gpm, 250 - 450 psi Diff, 3,900 spp, Avg MSE 13 - 40 Full returns to surface	1
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 14' @ 9.3 ft/hr, 42k WOB, 132 spm, 505 gpm, 141 Motor rpm, 100 psi Diff, 3,650 psi SPP, HS GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 23' @ 23/ hr. 28 - 32 k WOB, 50 - 80 TDS rpm, 108 spm, 414 gpm, 116 Motor rpm, 166 - 196 Total rpm, 200 - 350 psi Diff, 2,850 psi SPP, 10 k TQ. Avg MSE: 20-65. Full returns to surface.  LOTO # 1 MP - Change swab in #1 pump, pod #3	1
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 36' @ 24 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 141 motor rpm, 191 - 221 total rpm, 12 - 14k TQ., 132 spm, 505 gpm, 250 - 450 psi Diff, 3,900 spp, Avg MSE 50- 75 Full returns to surface	1.5
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 83' @ 83/ hr. 28 - 32 k WOB, 50 - 80 TDS rpm, 108 spm, 414 gpm, 116 Motor rpm, 166 - 196 Total rpm, 200 - 350 psi Diff, 2,850 psi SPP, 10 k TQ. Avg MSE: 11 - 20. Full returns to surface.  LOTO # 1 MP - Change seat & valve in #1 pump, pod #1.  414 gpm = 214 fpm AV opposite DP	1.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 15' @ 7.5 ft/hr, 42k WOB, 132 spm, 505 gpm, 141 Motor rpm, 100 psi Diff, 3,600 psi SPP, HS GTF. Full returns to surface.	2
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 92' @ 62 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 141 motor rpm, 191 - 221 total rpm, 12 - 14k TQ., 132 spm, 505 gpm, 300 - 500 psi Diff, 3,900 spp, Avg MSE 13 - 52 Full returns to surface.	1.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 15' @ 15 ft/hr, 42k WOB, 132 spm, 505 gpm, 141 Motor rpm, 100 psi Diff, 3,600 psi SPP, 20R GTF. Full returns to surface.	1

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 210' @ 70 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 141 motor rpm, 191 - 221 total rpm, 12 - 15k TQ., 132 spm, 505 gpm, 250 - 450 psi Diff, 3,950 spp, Avg MSE 13 - 51 Full returns to surface.  Steering Update @ 17:04, Window change from 10' Up/10' Down to 20' Up/0' Down, Taking check shot surveys as needed to maintain control.	3
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 36' @ 36'/ hr. 28 - 32 k WOB, 50 - 80 TDS rpm, 108 spm, 414 gpm, 116 Motor rpm, 166 - 196 Total rpm, 200 - 350 psi Diff, 2,850 psi SPP, 10 - 13k TQ. Avg MSE: 13 - 70. Full returns to surface.  LOTO #2 MP - Change Swab #2 pump, pod #2.  414 gpm = 214 fpm AV opposite DP	1
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 196' @ 35.63 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 139 motor rpm, 189 - 219 total rpm, 12 - 16k TQ., 130 spm, 498 gpm, 250 - 500 psi Diff, 3,950 spp, Avg MSE 14 - 108, Full returns to surface.  Reduced Flow Rate to 498 gpm to keep spp < 4,000 psi (85% of 4,700 psi max = 3,995 psi)  498 gpm = 258 fpm AV Opposite DP	5.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 15' @ 12 ft/hr, 48k WOB, 132 spm, 505 gpm, 141 Motor rpm, 100 psi Diff, 3,650 psi SPP, 30R GTF. Full returns to surface.	1.25
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 127' @ 56.4 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 139 motor rpm, 189 - 219 total rpm, 12 - 16k TQ., 130 spm, 498 gpm, 250 - 500 psi Diff, 3,950 spp, Avg MSE 14 - 48, Full returns to surface.  PTB @ 15,314' Inc. 90°, Azi. 359.1°  6' Above and 16' Left of Plan 3 Line  MWD Tool Temperature - 180.5°F	2.25

### Report #: 25 Daily Operation: 12/2/2014 06:00 - 12/3/2014 06:00

Job Category ORIG DRILLING	Primary Job Type ODR	AFE Number 033210
Days From Spud (days) 77	Days on Location (days) 25	End Depth (ftKB) 16,323.0
	End Depth (TVD) (ftKB) 9,011.2	Dens Last Mud (lb/gal) 11.10
	Rig H & P, 606	

#### Operations Summary

Drill 8 1/2" Production Lateral F/15,315' - 16,323'

#### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 20.75 Days From Spud, 21.25 Total Days On Well, 80 Total Days On Location

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

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 100%, Lateral - 71%

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 220' @ 55 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 139 motor rpm, 189 - 219 total rpm, 12 - 16k TQ., 130 spm, 498 gpm, 250 - 500 psi Diff, 3,985 spp, Avg MSE 15 - 35, Full returns to surface.  10% Limestone 90% Shale.  Tailgate meeting with W&W forklift operator, truck drivers, TP & PNR CM over offloading casing.	4
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 304' @ 76 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 139 motor rpm, 189 - 219 total rpm, 12 - 16k TQ., 130 spm, 498 gpm, 250 - 500 psi Diff, 4,000 spp, Avg MSE 15 - 23, Full returns to surface.  0% Limestone 100% Shale.	4
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 112' @ 56 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 139 motor rpm, 189 - 219 total rpm, 12 - 16k TQ., 130 spm, 498 gpm, 250 - 500 psi Diff, 4,050 spp, Avg MSE 15 - 32, Full returns to surface.  0% Limestone 100% Shale.	2
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 20' @ 10 ft/hr, 63k WOB, 130 spm, 498 gpm, 139 Motor rpm, 150 psi Diff, 3,700 psi SPP, 60R GTF. Full returns to surface.	2
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 145' @ 58 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 139 motor rpm, 189 - 219 total rpm, 12 - 16k TQ., 130 spm, 498 gpm, 250 - 500 psi Diff, 3,975 spp, Avg MSE 14 - 27, Full returns to surface.	2.5
RIG_SVC	Service Rig & TDS	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 20' @ 8 ft/hr, 62k WOB, 130 spm, 498 gpm, 139 Motor rpm, 150 psi Diff, 3,700 psi SPP, 35R GTF. Full returns to surface.  0% Limestone 100% shale	2.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 77' @ 38.5 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 139 motor rpm, 189 - 219 total rpm, 12 - 16k TQ., 130 spm, 498 gpm, 250 - 500 psi Diff, 3,975 spp, Avg MSE 15 - 64, Full returns to surface.  0% Limestone 100% shale	2
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 17' @ 13.6 ft/hr, 56k WOB, 130 spm, 498 gpm, 139 Motor rpm, 150 psi Diff, 3,700 psi SPP, 50R GTF. Full returns to surface.	1.25
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 74' @ 59.2 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 139 motor rpm, 189 - 219 total rpm, 12 - 16k TQ., 130 spm, 498 gpm, 250 - 500 psi Diff, 3,975 spp, Avg MSE 19 - 26, Full returns to surface.	1.25
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 20' @ 10 ft/hr, 56k WOB, 130 spm, 498 gpm, 139 Motor rpm, 150 psi Diff, 3,700 psi SPP, 45R GTF. Full returns to surface.  PTB @ 16,323' Inc. 91°, Azi. 1.50°  9' Above and 45' Left of Plan 3 Line  MWD Tool Temperature - 180.5°F	2

Report #: 26 Daily Operation: 12/3/2014 06:00 - 12/4/2014 06:00

Job Category ORIG DRILLING	Primary Job Type ODR	AFE Number 033210
Days From Spud (days) 78	Days on Location (days) 26	End Depth (ftKB) 16,809.0
	End Depth (TVD) (ftKB) 9,008.5	Dens Last Mud (lb/gal) 11.00
	Rig H & P, 606	

#### Operations Summary

Drill 8 1/2" Production Lateral F/16,323' - 16,809'. Circulate Clean Up Cycle. TOOH to 8,959'.

#### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 21.75 Days From Spud, 22.25 Total Days On Well, 81 Total Days On Location

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

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 100%, Lateral - 76%

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 62' @ 41.3' / hr. 28 - 32 k WOB, 50 - 80 TDS rpm, 110 spm, 421 gpm, 118 Motor rpm, 168 - 198 Total rpm, 200 - 350 psi Diff, 3,050 psi SPP, 11 - 13k TQ. Avg MSE: 23 - 60. Full returns to surface.  LOTO #1 MP - Change Swab #2 pump, pod #2.  421 gpm = 218 fpm AV opposite DP	1.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 29' @ 58 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 139 motor rpm, 189 - 219 total rpm, 12 - 16k TQ., 130 spm, 498 gpm, 350 - 550 psi Diff, 4,000 spp, Avg MSE 20 - 25, Full returns to surface.  10% Limestone 90% Shale.	0.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 24' @ 16 ft/hr, 55k WOB, 130 spm, 498 gpm, 139 Motor rpm, 150 psi Diff, 3,750 psi SPP, 60R GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 226' @ 56.5 ft/hr: 20 - 25k WOB, 50 - 65 TDS rpm, 139 motor rpm, 189 - 204 total rpm, 16 - 19k TQ., 130 spm, 498 gpm, 250 - 500 psi Diff, 3,985 spp, Avg MSE 15 - 35, Full returns to surface.  10% Limestone 90% Shale.	4
CIRC	Clean-up cycle due to high torque & dirty hole from drilling with low rpms; reciprocate pipe @ 100 rpms, 140 spm, 536 gpm, 4,150 psi. Bttm up = 8,800 strokes.  1st Bttms up - shakers loaded up w/ cuttings (9400 TQ); 2nd Bttms up - reduce to 1/2 of cuttings; 3rd Bttms up - shakers clean(7600 TQ)	3
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 16' @ 64 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 139 motor rpm, 189 - 219 total rpm, 12 - 16k TQ., 130 spm, 498 gpm, 250 - 500 psi Diff, 3,985 spp, Avg MSE 12 - 17, Full returns to surface.  10% Limestone 90% Shale.	0.25
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 20' @ 16 ft/hr, 53k WOB, 130 spm, 498 gpm, 139 Motor rpm, 150 psi Diff, 3,750 psi SPP, 50R GTF. Full returns to surface.	1.25



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	<p>Rotate Drill 8 1/2" Production Lateral 109' @ 31 ft/hr: 28 - 32k WOB, 50 - 80 TDS rpm, 139 motor rpm, 189 - 219 total rpm, 12 - 16k TQ., 130 spm, 498 gpm, 250 - 500 psi Diff, 3,985 spp, Avg MSE 15 - 35, Full returns to surface.</p> <p>10% Limestone 90% Shale.</p> <p>Note: Motor trying to stall in rotation @ 16,809' , torquing up, and pressure spiking. Called and discussed w/ superintendent. Decision made to POOH to change out motor and bit.</p>	3.5
CIRC	<p>Set back 1 stand &amp; Perform Clean Up Cycle - Per K &amp; M High Angle Hole Workbook, 5 B/U recommended. B/U = 8,850 strokes. Rotating 100 rpm, 130 spm, 500 gpm, 3,750 psi. After 2nd B/U cuttings decreased, largest cutting size approx. 1/4" x 1/4". After 3rd B/U, minimal cuttings @ shakers, cuttings like fine coffee grounds, After 4th B/U, shakers cleaned up. Build slug while circulating, check flow, no flow, pump slug.</p> <p>Before Clean Up Cycle -P/U 252K, S/O 145K,</p> <p>After Clean Up Cycle -P/U 245K, S/O 184K,</p> <p>Note: Previous Clean Up Cycle performed @ 16,664'. (145' rotating and sliding over last 5 hrs)</p>	5
TOOH	<p>EJSA with H&amp;P crew &amp; PNR representative over tripping out of the hole due to motor stalling &amp; high torque while rotating with light wob (20k). TOOH For Motor &amp; Bit F/16,809' - 8,959' on trip tank. L/D 1 Jt. DP to rotate breaks, No excessive drag and hole taking proper displacement from trip tank. Taking PU &amp; SO every 500' while in OH &amp; every 2,000' in casing.</p> <p>Shut Down 3rd Generator after pulling 5 stands.</p>	3.5

### Report #: 27 Daily Operation: 12/4/2014 06:00 - 12/5/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
79	27	16,809.0
		End Depth (TVD) (ftKB)
		9,008.5
	Dens Last Mud (lb/gal)	Rig
	11.00	H & P, 606

#### Operations Summary

TOOH. R & R Wear Bushing. Function test BOPs. C/O 8 1/2" Directional BHA. TIH to 16,350'. Circulate to due Pack Off conditions

#### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 22.75 Days From Spud, 23.25 Total Days On Well, 82 Total Days On Location

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

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 100%, Lateral - 76%

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
SAFETY	Clean OBM off rig floor & prepare to TOOH.	1
TOOH	<p>EJSA with H&amp;P crew &amp; PNR representative over tripping out of the hole. TOOH For Motor &amp; Bit F/ 8,959' - BHA' on trip tank. No excessive drag and hole taking proper displacement from trip tank. Taking PU &amp; SO every 500' while in OH &amp; every 2,000' in casing.</p> <p>Shut Down 3rd Generator (running off 2 gens) after pulling 5 stands.</p> <p>PNR Safety - Chris Purdy arrived @ 09:45 hrs, performed visual walk-thru inspection around rig with CM &amp; TP - (Good).</p>	4.5
BHA_HAN DLING	<p>EJSA On L/D BHA, Drain motor and break bit. Retrieve MWD tool &amp; L/D same, pull &amp; inspect mule shoe sleeve. L/D motor.</p> <p>Bit #5 Graded 1/3/WT/ G/X/0/CT/TQ</p> <p>Note: Run on 1 generator while handling BHA.</p>	1
WEARBUS HING	<p>EJSA, Pull wear bushing &amp; jet wellhead w/perforated jt., re-install wearbushing (1/4 turn f/previous position), lock down. Witnessed by PNR Co. Rep.</p> <p>Function Tested BOP (OK)</p>	1
SAFETY	Clean OBM off rig floor & prepare to PU directional tools.	0.5
BHA_HAN DLING	<p>EJSA On P/U BHA, P/U &amp; M/U Integrity Mud Motor, FBH Hsg. 1.5°, 7:8 5.0 stage, 0.28 rpg., scribe motor, orient muleshoe sleeve, install MWD tool, Make up NMDC's, X.O sub and perform surface test - 84 spm, 331 gpm, 750 psi, w/176 psi pulses (good test). M/U 8-1/2" Smith MDiZ516 PDC w/ (8 x 13's)1.037 TFA.</p> <p>TH Hill Job # T1- 23713, Inspection # 20035, Inspector Henry Young.</p> <p>Note: Bit is jetted with 13's rather than 14's, Smith bit hand is on his way. Spoke with Engineer, wants to go with 13's.</p>	1
RIG_SVC	Service rig & top drive.	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
TIH	EJSA, TIH F/BHA to 16,287' on trip tank, filling pipe every 30 stands, hole displacing properly, taking torque & drag readings every 2000' in casing w/22 - 27% flow on each stand.  Note: Bring another generator online, running off 2 gens while TIH.  Note: @ 16,287', Tight spot. Bring pumps on line. Wash and ream.	9.5
U_TH	Wash and ream F/ 16,287' to 16,350'.  Note: All 3 generators on line.  Note: 16,350', showing signs of packing off. Differential psi spiking to 1,000 psi, SPP spiking to 4,500, Torquing up. Called superintendent to discuss pack off issues. Decision to work pipe and circulate hole clean. Unable to Slack Off. Backream w/ 116 SPM, 444 gpm, 3400 psi, 50-100 RPM.	3
U_TH	Backream w/ 130 SPM, 498 gpm, 3850 psi, 80 RPM, 8,500 TQ. Rack back 2 stands to 16,134' while working to clear pack off issues.	2

Report #: 28 Daily Operation: 12/5/2014 06:00 - 12/6/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
80	28	17,231.0
		End Depth (TVD) (ftKB)
		9,005.2
		Dens Last Mud (lb/gal)
		11.20
		Rig
		H & P, 606

### Operations Summary

Backream T/ 16,134'. Increase MW to 11.3 ppg. Wash and Ream T/ 16,809'. Drill 8 1/2" Production Lateral T/ 17,231'.

### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 23.75 Days From Spud, 24.25 Total Days On Well, 83 Total Days On Location

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

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 100%, Lateral - 81%

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
U_TH	Backream w/ 130 SPM, 498 gpm, 3850 psi, 80 RPM, 8,500 TQ. Rack back 2 stands to 16,134' while working to clear pack off issues. Discussed with superintendent & engineer to bring MW up to 11.3 ppg.  Note: 1st bttms up - shakers loaded up with dime to quarter size cuttings, 2nd bttms up - shakers cleaned up.	2
U_TH	Wash & ream F/16,134' - 16,809', with 80 - 90 TDS rpm, 130 - 139 motor rpm, 210 - 229 total rpm, 8 - 10k TQ., 122 - 130 spm, 467 - 498 gpm, 3,600 - 3850 spp, Full returns to surface.  Relog last stand down.	7.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 59' @ 39 ft/hr: 28 - 32k WOB, 80 TDS rpm, 133 motor rpm, 213 total rpm, 12 - 14k TQ., 124 spm, 475 gpm, 250 - 450 psi Diff, 3,900 spp, Avg MSE 25 - 65 Full returns to surface.	1.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 22' @ 7 ft/hr, 53k WOB, 124 spm, 475 gpm, 133 Motor rpm, 150 psi Diff, 3,750 psi SPP, 45R GTF. Full returns to surface.	3
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 182' @ 60 ft/hr: 28 - 32k WOB, 80 TDS rpm, 133 motor rpm, 213 total rpm, 12 - 14k TQ., 124 spm, 475 gpm, 250 - 450 psi Diff, 3,900 spp, Avg MSE 25 - 65 Full returns to surface.	3
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 22' @ 7 ft/hr, 53k WOB, 124 spm, 475 gpm, 133 Motor rpm, 150 psi Diff, 3,750 psi SPP, High Side GTF. Full returns to surface.	3
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 137' @ 34 ft/hr: 28 - 32k WOB, 80 TDS rpm, 133 motor rpm, 213 total rpm, 12 - 14k TQ., 124 spm, 475 gpm, 250 - 450 psi Diff, 3,900 spp, Avg MSE 25 - 65 Full returns to surface.  PTB @ 17,231' Inc. 90.9°, Azi. 3.70°  8' Above and 29' Left of Plan 3 Line  MWD Tool Temperature = 184°F	4
	PTB @ 17,xxx' Inc. 90.9°, Azi. 3.70°  8' Above and 29' Left of Plan 3 Line  MWD Tool Temperature = 191°F	

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

**Report #: 29 Daily Operation: 12/6/2014 06:00 - 12/7/2014 06:00**

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
81	29	17,924.0	8,992.5	11.30	H & P, 606	

**Operations Summary**

Drill 8 1/2" Production Lateral T/ 17,924'.

**Remarks**

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 24.75 Days From Spud, 25.25 Total Days On Well, 84 Total Days On Location

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

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 100%, Lateral - 87%

Estimated Pad Drilling Completion Date: 12/15/2014

**Time Log Summary**

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 129' @ 43 ft/hr: 20 - 25k WOB, 80 TDS rpm, 131 motor rpm, 211 total rpm, 12 - 14k TQ., 122 spm, 467 gpm, 250 - 450 psi Diff, 4,000 spp, Avg MSE 25 - 65 Full returns to surface.  10% limestone, 90 % shale.	3
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 20' @ 5.7 ft/hr, 57k WOB, 126 spm, 483 gpm, 135 Motor rpm, 150 psi Diff, 3,750 psi SPP, 45R GTF. Full returns to surface.	3.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 244' @ 44 ft/hr: 28 - 32k WOB, 80 TDS rpm, 133 motor rpm, 213 total rpm, 12 - 14k TQ., 124 spm, 475 gpm, 250 - 450 psi Diff, 4,050 spp, Avg MSE 18 - 45 Full returns to surface.  10% limestone, 90 % shale.	5.5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 22' @ 7 ft/hr, 53k WOB, 124 spm, 475 gpm, 133 Motor rpm, 150 psi Diff, 3,750 psi SPP, 45R GTF. Full returns to surface.	3
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 172' @ 34 ft/hr: 28 - 32k WOB, 80 TDS rpm, 133 motor rpm, 213 total rpm, 12 - 14k TQ., 124 spm, 475 gpm, 250 - 450 psi Diff, 3,900 spp, Avg MSE 25 - 65 Full returns to surface.	5
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 14' @ 14 ft/hr, 53k WOB, 124 spm, 475 gpm, 133 Motor rpm, 150 psi Diff, 3,750 psi SPP, 150L GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 60' @ 40 ft/hr: 27 - 32k WOB, 80 TDS rpm, 133 motor rpm, 213 total rpm, 12 - 14k TQ., 124 spm, 475 gpm, 250 - 450 psi Diff, 3,900 spp, Avg MSE 25 - 65 Full returns to surface.	1.5
RIG_SVC	Service rig & top drive.	0.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 60' @ 60 ft/hr: 27 - 32k WOB, 80 TDS rpm, 133 motor rpm, 213 total rpm, 12 - 14k TQ., 124 spm, 475 gpm, 250 - 450 psi Diff, 3,900 spp, Avg MSE 25 - 65 Full returns to surface.  PTB @ 17,924' Inc. 92.5°, Azi. 3.5°  23' Above and 0' L/R of Plan 3 Line  MWD Tool Temperature = 191°F	1

**Report #: 30 Daily Operation: 12/7/2014 06:00 - 12/8/2014 06:00**

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
82	30	18,804.0	8,977.2	11.30	H & P, 606	

**Operations Summary**

Drill 8 1/2" Production Lateral F/ 17,924' T/ 18,804'.

**Remarks**

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 25.75 Days From Spud, 26.25 Total Days On Well, 85 Total Days On Location

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

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 100%, Lateral - 96%

Estimated Pad Drilling Completion Date: 12/15/2014

**Time Log Summary**

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 78' @ 39 ft/hr: 25 - 32k WOB, 80 TDS rpm, 133 motor rpm, 213 total rpm, 12 - 14k TQ., 124 spm, 475 gpm, 250 - 450 psi Diff, 4,200 spp, Avg MSE 15 - 25 Full returns to surface.	2
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 12' @ 4.8 ft/hr, 55k WOB, 127 spm, 486 gpm, 136 Motor rpm, 250 psi Diff, 3,850 psi SPP, 45R GTF. Full returns to surface.	2.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 186' @ 33.82 ft/hr: 20 - 28k WOB, 80 TDS rpm, 133 motor rpm, 213 total rpm, 12 - 14k TQ., 124 spm, 475 gpm, 250 - 450 psi Diff, 4,200 spp, Avg MSE 35 - 85 Full returns to surface. 25 - 80 ROP.	5.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
DRL_SLID E	Slide Drill 8 1/2" Production Lateral 15' @ 10 ft/hr, 55k WOB, 127 spm, 486 gpm, 136 Motor rpm, 275 psi Diff, 3,850 psi SPP, 150 L GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 527' @ 48 ft/hr: 25 - 32k WOB, 80 TDS rpm, 133 motor rpm, 213 total rpm, 12 - 14k TQ., 124 spm, 475 gpm, 250 - 450 psi Diff, 4,050 spp, Avg MSE 15 - 25 Full returns to surface.	11
RIG_SVC	Service rig & top drive.  Note: Replace liner and swab on #1 Mud pump / pod #3 .	0.5
DRL_SLID E	Rotate Drill 8 1/2" Production Lateral 62' @ 62 ft/hr: 25 - 32k WOB, 80 TDS rpm, 133 motor rpm, 213 total rpm, 12 - 14k TQ., 124 spm, 475 gpm, 250 - 450 psi Diff, 4,050 spp, Avg MSE 15 - 25 Full returns to surface.  PTB @ 18,804' Inc. 91.5°, Azi. 3.9°  17' Above and 19' Right of Plan 3 Line  MWD Tool Temperature = 195°F	1

### Report #: 31 Daily Operation: 12/8/2014 06:00 - 12/9/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033210
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
83	31	19,080.0
	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)
	8,969.9	11.50
	Rig	H & P, 606

#### Operations Summary

Drill 8 1/2" Production Lateral F/ 18,804' - 19,080', Perform K&M clean-up cycle, TOO H & L/D DP .

#### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 26.75 Days From Spud, 27.25 Total Days On Well, 86 Total Days On Location

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

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

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8 1/2" Production Lateral 276' @ 50.2 ft/hr: 20 - 25k WOB, 80 TDS rpm, 129 motor rpm, 209 total rpm, 13 - 15k TQ., 120 spm, 460 gpm, 300 - 450 psi Diff, 4,150 spp, Avg MSE 15 - 25 Full returns to surface.  TD'd Lateral @ 19,080' @ 11:30 hrs on 12/8/2014, 25.98 days from spud.  PTB @ 19,080' MD TD, 8,970.01, TVD, 92.5° Inc., 5.10° Azi., 15' Above & 39' Right of plan # 3 line.  MWD Tool Temperature - 198.6°F	5.5
CIRC	Perform clean up cycle @ TD per K&M High Angle Hole Cleanup Procedure, (7 B/U Per Worksheet) circulating @ 128 spm, 440 gpm, 85-90 TDS rpm, 4,150 spp, recipocating full stand @ 1.5 min/ ft back reaming & 1.5 min/stand coming down. (1 x B/U = 9,954 Strokes) Build slug while circulating, check flow, no flow, pump slug.  Increase MW from a 11.3 ppg to 11.5 ppg for hole stability before TOO H.  Note: TD'ed on a double, lay down 1 jt so we can work a full stand while circulating our clean-up cycles & change breaks coming out of the hole.  -1st btm up - shakers loaded up with cuttings; 2nd btm up - shakers 1/2 loaded up with cuttings; 3rd btm up - steady cuttings at shakers; 4th btm up - steady cuttings, at shaker; 5th btm up - cuttings reducing but steady, 6th btm up- steady minimal cuttings, 7 th btms up - shakers clean  Note: Mud Loggers rigged down and released at 24:00 hrs.	11
TOOH	EJSA on TOO H. POOH (SLM) F/19,080' -8,424' w/no excess drag & hole is taking proper displacement from trip tank. Taking PU & SO every 500' while in open hole.  Shut Down 3rd Generator (running off 2 gens) after pulling 5 stands.	5.5
D_PIPE	Lay Down 5" DP from 8,424' to 6,697'.	2

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

**Report #: 32 Daily Operation: 12/9/2014 06:00 - 12/10/2014 06:00**

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 033210	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
84	32	19,080.0	8,969.9	11.50	H & P, 606	

**Operations Summary**

TOOH to BHA, and L/Dn Drill Pipe, Slip & Cut Drill Line.

**Remarks**

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 27.75 Days From Spud, 28.25 Total Days On Well, 87 Total Days On Location

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

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

Estimated Pad Drilling Completion Date: 12/15/2014

**Time Log Summary**

Operation	Com	Dur (hr)
D_PIPE	EJSA with H&P crew & PNR representative over tripping out of the hole & laying down DP. POOH F/6,697' - BHA, w/no excess drag & hole is taking proper displacement from trip tank. Taking PU & SO every 2,000' while in casing.  Note: Running off 2 Generators.	8
BHA_HAN DLING	EJSA On L/D BHA, Drain motor and break bit. Retrieve MWD tool & L/D same, pull & inspect mule shoe sleeve. Break off stabilizer sleeve, L/D motor.  Note: Bit Graded: 1/2/WT/G/X/0/CT/TD	2
TIH	M/U Inside BOP Valve on 1st stand & TIH with 40 stands of 5" DP while monitoring returns on trip tank.	2
D_PIPE	EJSA over laying down DP. TOOH laying down 40 stands of 5" DP. Hole is taking proper displacement from trip tank.	4.5
TIH	TIH with 40 stands of 5" DP while monitoring returns on trip tank.	1.5
D_PIPE	EJSA over laying down DP. TOOH laying down 40 stands of 5" DP. Hole is taking proper displacement from trip tank.	4.5
CUTDL	EJSA, Slip & cut 100' of drill line.	1.5

**Report #: 33 Daily Operation: 12/10/2014 06:00 - 12/11/2014 06:00**

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 033210	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
85	33	19,080.0	8,969.9	11.50	H & P, 606	

**Operations Summary**

L/Dn Drill Pipe, Slip & Cut Drill Line, TIH & L/Dn rest of DP, Pull wear bushing, RU Tesco CRT & Casing Equip, Run 5 1/2" Production Casing

**Remarks**

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 28.75 Days From Spud, 29.25 Total Days On Well, 88 Total Days On Location

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

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

Estimated Pad Drilling Completion Date: 12/15/2014

**Time Log Summary**

Operation	Com	Dur (hr)
CUTDL	EJSA, Finish Slip & cut 100' of drill line.  Note: Running off 2 Generators to reduce diesel usage.	1
TIH	TIH with 28 stands of 5" DP while monitoring returns on trip tank.	1
D_PIPE	EJSA over laying down DP. TOOH laying down 28 stands of 5" DP. Hole is taking proper displacement from trip tank.	2.5
WEARBUS HING	EJSA, Remove & Inspect wear bushing (OK). Wash out well head. Lay down wear bushing.	1
SAFETY	Clean OBM off rig floor & organize floor for running casing, Rig down mud buckets & lay down.	0.5
RIG_SVC	LOTO, Service top drive & rig. R/Dn elevators	0.5
CASE	EJSA with H&P rig crew, Tesco Casing Crew & PNR representative over rigging up CRT. P/U & R/U Tesco CRT & Casing equipment.  OD of casing collars = 6.125" ID of single joint elevators = 5.625"  Calibrate Torque Turn with Top Drive.	1.5
CASE	EJSA with Tesco Casing crew, H&P rig crew & PNR representative over making up 2 jt shoe track & running 5-1/2" Production casing. P/U & M/U 5 1/2" 20# P110 BTC. Weatherford Guide Shoe, 2 joint shoe track, Weatherford latch in double valve float collar, (thread lock all threads in shoe track including top of short jt), 20' short jnt, 8' pup, GeoDynamics time delay toe sleeve, 8' pup. Test floats - (good).  Average ID of 10 Joints 5 1/2" 20# P-110 BTC Casing 4.8125".	1

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
CASE	TIH w/ 5 1/2" 20# P110 BTC casing F/132' - 8,320' with CRT. Taking returns to trip tank, hole giving proper displacement roughly 12.5 bbl's per 10 joints ran. Torque = 5500 ft/lbs to base of triangle. Break cir. every 40 jts. Taking PU & SO every 2000' while inside csg.	11.5
CIRC	Circulate Bottoms Up (4113 strokes) @ 8,320' (9 5/8" Shoe @ 8,341'), 80 spm, 306 gpm, 465 psi, Full Returns To Surface.	1
CASE	TIH w/ 5 1/2" 20# P110 BTC casing F/8,320' - 10,653' with CRT. Taking returns to trip tank, hole giving proper displacement roughly 12.5 bbl's per 10 joints ran. Torque = 5500 ft/lbs to base of triangle. Break cir. every 40 jts. Circulate Btms Up every 80 jts. Taking PU & SO every 500' in open hole.	2.5

Report #: 34 Daily Operation: 12/11/2014 06:00 - 12/12/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033210
Days From Spud (days)	Days On Location (days)	End Depth (ftKB)
86	34	19,080.0
	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)
	8,969.9	11.50
		Rig H & P, 606

#### Operations Summary

TIH w/5 1/2" casing F/10,653' T/11,770', Circulate, TIH w/5 1/2" casing F/11,770' T/14,401', Circulate, TIH w/5 1/2" casing F/14,401' T/16,050', Circulate work casing through tight spot, TIH w/5 1/2" casing F/16,050' T/19,065', Circulate, Cement production casing

#### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 29.75 Days From Spud, 30.25 Total Days On Well, 89 Total Days On Location

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

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

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
CASE	TIH w/ 5 1/2" 20# P110 BTC casing F/10,653' T/11,770' with CRT. Taking returns to trip tank, hole giving proper displacement roughly 12.5 bbl's per 10 joints ran. Torque = 5500 ft/lbs to base of triangle. Break cir. every 40 jts. Circulate Btms Up every 80 jts. Taking PU & SO every 500' in open hole.	1
CIRC	Circulate Bottoms Up (5628 strokes) @ 11,770' 80 spm, 336 gpm, 510 psi, Full Returns To Surface.	0.75
CASE	TIH w/ 5 1/2" 20# P110 BTC casing F/11,770' T/14,401' with CRT. Taking returns to trip tank, hole giving proper displacement roughly 12.5 bbl's per 10 joints ran. Torque = 5500 ft/lbs to base of triangle. Break cir. every 40 jts. Circulate Btms Up every 80 jts. Taking PU & SO every 500' in open hole.	2.25
CIRC	Circulate Bottoms Up (6802 strokes) @ 14,401' 80 spm, 336 gpm, 710 psi, Full Returns To Surface.	1.25
CASE	TIH w/ 5 1/2" 20# P110 BTC casing F/14,401' T/16,050' with CRT. Taking returns to trip tank, hole giving proper displacement roughly 12.5 bbl's per 10 joints ran. Torque = 5500 ft/lbs to base of triangle. Break cir. every 40 jts. Circulate Btms Up every 80 jts. Taking PU & SO every 500' in open hole.  Note: contact TRRC on cementing production casing @ 12:50 pm on 12/11/2014 contact name Ivy.	2.5
U_SP	16,050' casing won't go, circ casing w/336 gpm, 950 psi no excess cutting at surface on bottoms up, casing sticking in hole w/ good circ. 27% flow Spoke with superintendent & engineer to increased gpm to 382 - 400 gpm, 1000-1100 psi w/ 3500 torque. Continue working casing, having issues getting pipe to go in or out. Work pipe 50K over and push 30K & abel to L/D 1 joint to 16,000'. Pump 30 bbl, weighted sweep 1 1/2 ppb over w 336 gpm, 950 psi & started getting movement on casing. Working casing free from over dragging F/16000' T/16041 w 336 gpm 950 psi w/full return. Casing finally broke over at 18:15	4.25
CASE	Continue TIH w/ 5 1/2 20# P110 BTC Casing F/ 16,050' T/ 19,065' with CRT. Break Circ. every 40 jts. Taking PU & SO every 500' while in open hole. Tagged Bottom at 19,080'  Note: Wash 5 joints of casing. Pick up and slack off no excessive drag.	3
CASE	Make up Hanger Jt and Landing Jt. Land Hanger Jt. Seaboard Rep Present	0.5
CIRC	Circulating 1.5x Casing Volume w/ 88 spm, 338 gpm, 800 spp While Rigging Down Casing Crew  Shoe depth: 19,065' md. Float Collar depth: 18,973' md. Shoe track length: 89.85' Toe Sleeve: 18,939' md. Marker's @ 8,401' & 8,219' md. Ran 35 rigid body centralizers. 1 every joint from 8,411' - 9,214'. 1 every other joint from 7,218' - 8,358'.	4
SAFETY	EJSA with Crest Cementing Crew, H&P crew & PNR Representatives over Rigging up Cementing Equipment & Cementing 5-1/2" Production Casing. R/U Crest Cement Crew and Equipment. PJSM with Crest Cement Crew, Rig Crew, Tool Pusher, and PNR representative on Cementing Operations. Pressure Test Lines up to 5,000 psi (ok). Disengage CRT and load bottom plug in 5 1/2" casing (PNR representative supervised this operation).	1.5
CMT	Pumping production cement.	3



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 35 Daily Operation: 12/12/2014 06:00 - 12/13/2014 06:00

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 033210	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
87	35	19,080.0	8,969.9	11.50	H & P, 606	

### Operations Summary

Cement production casing, Set pack off assembly, Rig down floor, Install abandonment cap, L/D derrick, Clean pits,

### Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 30.75 Days From Spud, 31.25 Total Days On Well, 90 Total Days On Location

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

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

Estimated Pad Drilling Completion Date: 12/15/2014

### Time Log Summary

Operation	Com	Dur (hr)
CMT	<p>Crest Pumping Technologies mixed &amp; pumped cement as follows: Test lines to 5,000 psi. OK Weighted Spacer - 50 bbls @ 11.10 lb/gal. Mixed with 3 lb/bbl of GTX Spacer, 152.4 lb/bbl Barite, 2.0 gal/bbl of Plexaid 830 Surfactant and 0.1 gal/bbl of Anti Foam CPT-41L.</p> <p>Drop Bottom Plug: Lead Slurry - 251 bbls mixed @ 11.9 lb/gal, 2.41 ft³ yield, 12.59 gal/sk H2O. Mixed with 92 lb/sk 50/50 Poz H cement, 7% Bentonite Gel, 5% BWOW Sodium Chloride, 0.5% CPT-19, 0.40% CPT-503P Defoamer, 0.30% CPT-45 Suspension Agent, 4 lb/sk KOL Seal, 0.15% Citric Acid and 0.15% CPT-20 Cement Retarder</p> <p>Tail Slurry - 521 bbls mixed @ 13.2 bl/gal, 1.6ft³ yield, 7.97 gal/sk H2O. Mixed with 87 lb/sk Class H Plus cement, 1% Bentonite Gel, 3% BWOW Sodium Chloride, 1% CPT-19, 0.4% CPT-35 Cement Dispersant, 0.25% CPT-503P Defoamer and 0.3% CPT-20 Cement Retarder</p> <p>Drop Top Plug PNR representatives observed both bottom &amp; top plug inserted into casing below CRT.</p> <p>Displaced with 421 bbls @ 8.32 lb/gal H2O, Bumped plug @ 06:25 hrs 12/12/14 with 500 psi over final lift pressure of 2,500 psi (3,000 psi). Held pressure for 5 min., released pressure @ 06:30 hrs, bled back 3 bbls. Floats Held.</p> <p>Circulated out approx. 37 bbls OBM contaminated w/spacer.</p> <p>Note: After bumping top plug monitored well for flow on flow line for 5 min, well was static.</p> <p>Lift Pressures: 50 bbl - 8 bpm - 840 psi, 100 bbls - 8 bpm - 1,600 psi, 150 bbls - 8 bpm - 2,200 psi, 200 bbls - 7 bpm - 2,820 psi, 250 bbls - 7 bpm - 2,920 psi, 300 bbls - 7 bpm - 3,000 psi, 350 bbls - 6 bpm - 2,920 psi, 390 bbls - 6 bpm - 2,970 psi; 400 bbls - 6 bpm - 2940 psi; 410 bbls 3.0 bpm - 2,400 psi. 420 bbls 2500 / 3000 psi</p> <p><b>**Held full returns to surface throughout cement job.**</b></p>	0.5
CMT	<p>Pump line flush &amp; fresh water through BOP stack, Flowline and Choke Manifold to clear OBM &amp; any possible cement.</p> <p>Note: Long Point Oilfield Services cleaning backyard equipment, shakers &amp; pits.</p>	1
CMT	<p>EJSA Rig down Crest Pumping Technologies cement crew &amp; iron.</p> <p>Note: @ 07:30 hrs, Tailgate safety meeting with Long Point Oilfield services, H&amp;P TP &amp; PNR rep over cleaning pits. Long Point Oilfield Services cleaning backyard equipment, shakers &amp; pits.</p>	1
WLHEAD	<p>EJSA Drain Stack. Back off landing joint, pull out and install running tool and pack off. Run in with pack off would not seat properly. Pull out pack off and landing joint.</p> <p>Note: Long Point Oilfield Services cleaning backyard equipment, shakers &amp; pits.</p>	1
CASE	<p>EJSA with Tesco CRT hands, H&amp;P rig crew &amp; PNR Co. Man on laying down Tesco CRT. Rig down Tesco CRT per Tesco, lay down hydraulic stand &amp; hoses, lay down Tesco anti-rotational device.</p> <p>Note: Long Point Oilfield Services cleaning backyard equipment, shakers &amp; pits.</p>	1.5
NU_TEST	<p>EJSA W/ETS, Rig Crew &amp; PNR Co. Man On N/D BOPE. Hang Off Flowline, N/D Bell Nipple, Choke &amp; Kill Lines, Secure BOP Stack W/ BOP Wrangler, Remove Turnbuckles, N/D BOP Stack &amp; Set Back W/BOP Wrangler.</p> <p>Note: Long Point Oilfield Services cleaning backyard equipment, shakers &amp; pits.</p>	3
WLHEAD	<p>Clean out shale &amp; trash above hanger in well head, reset pack off in well head and test pack-off seals (OK)</p> <p>Note: Long Point Oilfield Services cleaning backyard equipment, shakers &amp; pits.</p>	1

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
RDMO	Install Abandonment Cap and Test to 500 psi. R/D Floor, un spool draw works and boom lines. Remove pipe wrangler, and V door, un spool hoist cables, bleed MRC's. Held EJSA w/ H&P, Patterson, PNR CM on lowering mast to truck. Lower mast to truck. Held EJSA on lower mast to bogey. Lower mast to bogey.  Note: Long Point Oilfield Services cleaning backyard equipment, shakers & pits.	5
RDMO	Dress down and secure derrick for move. Continue rigging down backyard / pits. Secure hydraulic hoses, Secure BOP. Secure ST-80. Rig down lines, hoses, connections on rig floor.  Note: Long Point Oilfield Services completed pit cleaning. Note: NOV trucking OBM from 19H to new location Frac Tanks.  Released Rig F/ University 178B 19H T/ University 3-14 49H @ 06:00 12/13/2014  Note: All rig generators off line.	10

### Report #: 1 Daily Operation: 12/18/2014 06:00 - 12/19/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
93	1	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig

#### Operations Summary

Install B section

#### Remarks

Install B section

### Time Log Summary

Operation	Com	Dur (hr)
WSI	Wait on sun light	2
SAFETY	Hold Safety meeting w/ crew	0.5
WSI	WSI- plumb cellar. Fill w/ pea gravel.	4
WSI	Install B section	1
WSI	WSI	16.5

### Report #: 2 Daily Operation: 12/21/2014 06:00 - 12/22/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
96	2	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig

#### Operations Summary

MIRU Pro Oilfield Services and Texas Energy Pump Truck.

RIH w/ 4.625 gauge ring and junk basket to a depth of 9,030 ft.

POOH w/ gauge ring and junk basket.

RIH with GR/CBL.

Made first pass from a depth of 9,000 ft to surface without pressure.

RU Texas Energy pump truck.

Made second pass from a depth of 9,030 ft with 1,500 psi to surface.

Bled down well pressure to 0 psi. POOH w/ GR/CBL tools.

Secured well. Rigged down Pro Oilfield Services

Estimated top of cement @ 960 ft

Surface casing painted red. Intermediate casing painted green.

#### Remarks

Day Shift- Fabian Sotelo

### Time Log Summary

Operation	Com	Dur (hr)
WSI	WSI, No activity	5.5
SAFETY	Held pre job safety meeting with Pro Oilfield Services and Texas Energy Services	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
LOGCBL	MIRU Pro Oilfield Services and Texas Energy Pump Truck. RIH w/ 4.625 gauge ring and junk basket to a depth of 9,030 ft. POOH w/ gauge ring and junk basket. RIH with GR/CBL. Made first pass from a depth of 9,000 ft to surface without pressure. RU Texas Energy pump truck. Made second pass from a depth of 9,030 ft with 1,500 psi to surface. Bled down well pressure to 0 psi. POOH w/ GR/CBL tools. Secured well. Rigged down Pro Oilfield Services  Estimated top of cement @ 960 ft	4
WSI	Well secured, No activity. Await Pre-Stim Ops.	14

### Report #: 3 Daily Operation: 12/30/2014 06:00 - 12/31/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
105	3	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig

#### Operations Summary

NU Frac stack,build containment for frac tanks,set co man trailers

Note: will set frac tanks tomorrow pending road conditions.

#### Remarks

Day Shift- Bob Belcher

### Time Log Summary

Operation	Com	Dur (hr)
WSI	Well secured, No activity. Await Pre-Stim Ops.	10
STACK	NU Frac Stack	4
RURD	Building containments for working tanks,& pumpdown tanks.	4
SDFN	All containments built will put tanks in containment tomorrow,pending road conditions.	6

### Report #: 4 Daily Operation: 12/31/2014 06:00 - 1/1/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
106	4	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig

#### Operations Summary

WSI, Due to icy road conditions.

#### Remarks

Days: Trey Armstrong / Jim Polston

Nights: Bob Belcher / Shawn Everett

### Time Log Summary

Operation	Com	Dur (hr)
U_WOW	WO WEATHER & PPS MIRU	24

### Report #: 5 Daily Operation: 1/1/2015 06:00 - 1/2/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
107	5	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig

#### Operations Summary

Wait on PPS MIRU.

Note: Major Ice storm roads are still not safe for travel.

#### Remarks

Days: Trey Armstrong / Jim Polston

Nights: Bob Belcher / Shawn Everett

### Time Log Summary

Operation	Com	Dur (hr)
U_WOW	WO WEATHER & PPS MIRU	24

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

<b>Report #: 6 Daily Operation: 1/2/2015 06:00 - 1/3/2015 06:00</b>					
Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 108	Days on Location (days) 6	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
Operations Summary Wait on PPS MIRU. Note: Major Ice storm roads are still not safe for travel.					
Remarks Days: Trey Armstrong / Jim Polston Nights: Bob Belcher / Shawn Everett					
<b>Time Log Summary</b>					
Operation	Com				Dur (hr)
U_WOW	WO WEATHER & PPS MIRU				24
<b>Report #: 7 Daily Operation: 1/3/2015 06:00 - 1/4/2015 06:00</b>					
Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 109	Days on Location (days) 7	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
Operations Summary WSI, Wait on roads to clear, Spot working tanks, chemical tanks, flow back, & pump down tanks, finish containment, Acid, & sand delivered. - RU frac support equipment					
Remarks Days: Trey Armstrong / Jim Polston Nights: Bob Belcher / Shawn Everett					
<b>Time Log Summary</b>					
Operation	Com				Dur (hr)
U_WOW	WO WEATHER & PPS MIRU				7
RURD	MIRU frac support equipment - Working/FB tanks - containment - Acid & sand delivered - PD trucks AOL.				17
<b>Report #: 8 Daily Operation: 1/4/2015 06:00 - 1/5/2015 06:00</b>					
Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 110	Days on Location (days) 8	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig PIONEER PUMPING SERVICES, 5
Operations Summary WSI, RU FB support equipment, RU PD trucks and support equipment, load 2 tanks with produced water. MIRU PPS Frac Fleet					
Remarks Days: Trey Armstrong / Jim Polston Nights: Bob Belcher / Shawn Everett					
<b>Time Log Summary</b>					
Operation	Com				Dur (hr)
RURD	RU Express FB support equipment, RU EcoLoop PD trucks and support equipment, load 2 tanks with 9.1#/gal produced water. Freeze point ~18°F. Load 1 tank w/ gel & 1 tank w/ surfactant. Spot ArkLaTex WL equipment. WO PPS Frac Fleet				13.5
WOF	Waiting on PPS Frac crew to arrive from Pembroke X-1 4H.				5.5
RURD	MIRU PPS Frac spread.				5
<b>Report #: 9 Daily Operation: 1/5/2015 06:00 - 1/6/2015 06:00</b>					
Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 111	Days on Location (days) 9	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig PIONEER PUMPING SERVICES, 5
Operations Summary WSI, Complete RU of PD support equipment, MIRU PPS Frac Fleet Priming up & psi testing @ report time.					
Remarks Days: Trey Armstrong / Jim Polston Nights: Bob Belcher / Shawn Everett					
<b>Time Log Summary</b>					
Operation	Com				Dur (hr)
RURD	Continue MIRU in PPS frac & support equipment.				24

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 10 Daily Operation: 1/6/2015 06:00 - 1/7/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 112	Days on Location (days) 10	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig PIONEER PUMPING SERVICES, 5

### Operations Summary

Prime up / Test / Set pop offs / Open sleeve / Perf stg 2-

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
 PPS Frac Crew 5: 0.0 hrs Cumulative: 0.0 hrs  
 Ark-la-tech WL: 0.0 hrs Cumulative: 0.0 hrs  
 Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
 Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
 Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
 API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
 Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
 Double T rentals: 2.5 hrs Cumulative: 2.5 hrs

FTR - 1,243 bbls  
 RT - 0 bbls  
 CR - 0 bbls  
 LTR - 1,243 bbls  
 TSIF - 0 lbs

Days: Trey Armstrong / Jim Polston  
 Nights: Bob Belcher / Shawn Everett

### Time Log Summary

Operation	Com	Dur (hr)
PSI_TEST	PPS continue prime and psi test surface lines. Ecoloop pressure test and hold 1500 psi on backside.  Pressure surface equipment to 10,000 psi.	3.25
U_WOV	1 of the Double T shower trailers was not operational. Pipe going to shower head was cracked (busted from freezing) not allowing the pump to keep prime. Double T transport trailer to Big Lake and bring out another trailer.	2.5
STIM	Pumped 11 bbl at 2.1 bpm until casing pressure to 6,582 psi and hold for 15 minutes. No leaks downhole or on surface. Pumped 5 more bbl at 2.1 bpm until casing pressure to 9,635 psi. and hold. Sleeve shifted in 16 minutes. Let pressure fall to 4367 psi. Started injection test dropping 1500 gal of 7.5% HCL. Raised rate and held at 9150 psi @ 12bpm. Was able to slowly grab rate to 20 bpm at 9250 psi before acid hit. Raised rate to 30. Pumped 200 bbl overflush. Dropped rate to 18 bpm @ stable 7050 psi for PD indication pressures and shut down. SICP: 3880.  FTR: 652	2.25
PERF	RU Ark -La-Tex WL for Stage# 2 of 47. RIH & pump down Weatherford 4.37" OD CFP & (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Set composite frac plug at 18922. Perforated intervals: 18900-18902, 18860-18862, 18820-18822, 18780-18782, 18740-18742. Total of 30 shots fired. POOH while logging gamma/ccl correlation back to vertical section. Confirmed plug gone and all guns fired, witnessed ball was dropped.  Pump down w/16 bpm @ 7700psi. 275 ft/min & 1200# line tension.  Pumped down using : 591 bbl of fluid LTR: 1243 BBL	4
WOF	WO toe opening and injection test on 17H & 18H.	12

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

**Report #: 11 Daily Operation: 1/7/2015 06:00 - 1/8/2015 06:00**

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 113	Days on Location (days) 11	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig PIONEER PUMPING SERVICES, 5

**Operations Summary**

WSI pending TCP operations on the 17H & 18H

**Remarks**

**DOWNTIME:**

Weather: 0.0 hrs Cumulative: 0.0 hrs  
 PPS Frac Crew 5: 0.0 hrs Cumulative: 0.0 hrs  
 Ark-la-tech WL: 0.0 hrs Cumulative: 0.0 hrs  
 Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
 Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
 Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
 API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
 Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
 Double T rentals: 2.5 hrs Cumulative: 2.5 hrs

FTR - 1,243 bbls  
 RT - 0 bbls  
 CR - 0 bbls  
 LTR - 1,243 bbls  
 TSIF - 0 lbs

Days: Will Lemons / Chad Hardin  
 Nights: Trey Armstrong / Jim Polston

**Time Log Summary**

Operation	Com	Dur (hr)
WSI	WSI pending TCP operations on the 18H & 17H	24

**Report #: 12 Daily Operation: 1/8/2015 06:00 - 1/9/2015 06:00**

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 114	Days on Location (days) 12	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig PIONEER PUMPING SERVICES, 5

**Operations Summary**

WSI pending TCP operations on the 17H - Pressure test

**Remarks**

**DOWNTIME:**

Weather: 0.0 hrs Cumulative: 0.0 hrs  
 PPS Frac Crew 5: 0.0 hrs Cumulative: 0.0 hrs  
 Ark-la-tech WL: 0.0 hrs Cumulative: 0.0 hrs  
 Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
 Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
 Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
 API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
 Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
 Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 1,243 bbls  
 RT - 0 bbls  
 CR - 0 bbls  
 LTR - 1,243 bbls  
 TSIF - 0 lbs

Days: Will Lemons / Chad Hardin  
 Nights: Trey Armstrong / Jim Polston

**Time Log Summary**

Operation	Com	Dur (hr)
WSI	WSI pending TCP operations and RD CT on the 17H	21.5
PSI_TEST	Pressure test PPS iron - setting pop offs at end of reporting time	2.5



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 13 Daily Operation: 1/9/2015 06:00 - 1/10/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 115	Days on Location (days) 13	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig Coil Tubing Solutions, 11

### Operations Summary

Start stg 2 frac - CT stage 2 clean out in progress

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
 PPS Frac Crew 5: 0.0 hrs Cumulative: 0.0 hrs  
 Ark-la-tech WL: 0.0 hrs Cumulative: 0.0 hrs  
 Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
 Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
 Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
 API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
 Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
 Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 4381 bbls  
 RT - 80 bbls  
 CR - 80 bbls  
 LTR - 4,301 bbls  
 TSIF - 5957 lbs

Days: Will Lemons / Chad Hardin  
 Nights: Trey Armstrong / Jim Polston

### Time Log Summary

Operation	Com	Dur (hr)
SAFETY	PreJob JSA	0.25
STIM	<p>Frac Stage 2 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls 15% HCL, 5957 lbs 30/50 sand &amp; 2889 bbls of hybrid fluid down 5.5" 20# csg.</p> <p>Formation broke @ 6550 psi @ 20 bpm</p> <p>Step Test 65 bpm @ 7997 psi            40 bpm 6574 psi            20 bpm @ 5283 psi</p> <p>Pad ISIP: 4422 psi. FG: 0.92#. 5 min SIP: 3505 psi.</p> <p>Acid on form @ 40 bpm 7300 psi            Acid clear @ 45 bpm 7150psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 9 cp. @ 50 *F. Gel Ph 10. Pumped 2182 bbl pad. Ran 30/50 sand at 0.25 ppg. Flushed well with 102 bbls. Ending rate 1.5 bpm @ 9210 psi. Placed 2% prop in formation.</p> <p>Avg. rate: 37 bpm Avg. psi: 8950 psi            Max. rate: 65.2 bpm Max. psi: 9599 psi            End of job ISIP n/a FG: n/a</p> <p>FTR: 4132            CR: 0            LTR: 4132            TSIF: 5957</p> <p>Started .25 ppg sand per engineer at 40 BPM @ 9100 psi, Screened out on .25 ppg 30/50. Flushed 102 Bbls.</p> <p>After shut down PPS flushed all fresh water out of equip and iron with brine back to working tanks causing working tanks to over run approximately 50 to 60 bbls in containment. Vac trucks was ordered and spill was reported to HSE Johna Novack PPS is filling out report.</p>	0.75
FLW_SCR N	<p>Flowed back for 1.5 hrs, got 80 bbls back. Tried to pump into it reached 5 bpm at 9000 psi pumped 250 bbls, PSI kept increasing. Shut down to get coil tubing to do clean out run.</p> <p>FTR: 4381            CR: 80            LTR: 4301</p>	3
WSI	Waiting for coil tubing to do clean out.	4.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
RURD	Priority ND WL flange / CTS on location spotting equipment / VZ environmental on location putting duck ponds under CT Equipment - NU of BHA consisting of from top down / Coil Connector 3.12" od - 1.5" id- 1.34 ' length / Dual Backpressure Valve 2.88" od - 1.00" id - 1.94 ' length / Jars 2.88" od - .81" id - 6.45 ' length / FAU HT Disconnect 2.88" od - .66" id - 2.02 ' length / Dual Circ Sub 2.88" od -.58" id - 1.38 ' length / Tempress Screen Sub 2.88" od - 2.44 ' length / Tempress Hydro-Pull 2.88" od - 2.69 ' length / Extreme Motor 2.88" od - 10.62 ' length / Crossover Sub (2 3/8 PAC Pin-BY-2 7/8 REG BOX) 3.5" od - 1.5" id - .95 ' length / JZ Rock Bit 4.63" od/ .48 ' length / for overall length of 30.31 ' - SICP 2500 psi. Close UMW and Open LMV to FB manifold. Bled off in less than one minute. Pressure test BOP and lubricator to 3,500 psi. Test good. Open well head to RIH - SICP built back up to 2500 psi in 20 minutes. Bleed off through choke in less than 1 minute. Start RIH	8
CLNOUT_S CRN	RIH w/ CTS 2-3/8 CT and Baker clean out BHA. 1 bbl in / 1 bbl out at 500 psi. Start POP to 1qt/10 so will be out of coil by time entering the KOP. Rate to 2 bbl in / 2 bbl out to get agitator working. Circ pressure 4400. Open choke to 2 1/2 bbl back at 3200 psi. Continue RIH at 100 fpm. CTset down at 15,863'. No stalls on motor. Pull up 1,000' while raising POP conc. up to 2qt/10. Start back down as new POP conc. exiting pipe. RIH at ~16000' at report time. Losing differential pipe heavy fast.	7.5

Report #: 14 Daily Operation: 1/10/2015 06:00 - 1/11/2015 06:00

Job Category ORIG COMPLETION	Primary Job Type OCM	AFE Number 033228
Days From Spud (days) 116	Days on Location (days) 14	End Depth (ftKB) 0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig Coil Tubing Solutions, 11

### Operations Summary

CT stage 2 clean out - Injection test

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 0.0 hrs Cumulative: 0.0 hrs  
Ark-la-tech WL: 0.0 hrs Cumulative: 0.0 hrs  
Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 4381 bbls  
RT - 80 bbls  
CR - 80 bbls  
LTR - 4,301 bbls  
TSIF - 5957 lbs

Days: Will Lemons / Chad Hardin  
Nights: Trey Armstrong / Jim Polston

### Time Log Summary

Operation	Com	Dur (hr)
SAFETY	PreJob JSA	0.5
CLNOUT_S CRN	Continue RIH w/ CTS 2-3/8 CT and Baker clean out BHA. 1 bbl in / 1 bbl out at 0 psi. on well head circulating psi 1450. Reached depth of 18,922. Send POP/FR sweep. Sweep out of coil at 18:10.	11.75
POOH	Begin POOH. Off bottom at 53K# at 40 fpm. Circulating 2 bpm in at 1550 psi returning 2.5 bpm at 500 psi chasing POP slug/sweep OOH. CT bump up - SWI at lower valve- Bleed off - SWI at upper valve and open lower valve to choke manifold - SICP=0.	5.75
FIT	Begin injection test with PD trucks: 4bpm-6320 psi held for 75 bbls pressure steady / 5bpm - 6500 psi held for 30 bbls pressure steady / 6 bpm - 7100 psi held for 30 bbls pressure steady / 7.5 bpm - held for 30 bbls pressure steady / 8.5 bpm - 7600 psi held for 30 bbls pressure steady / 11 bpm - 8400 psi held for 30 bbls held for 30 bbls pressure steady. 12 bpm - 8600 psi held for 30 bbls pressure steady / 13 bpm - 8800 psi held for 30 bbls pressure steady. Drop to 3 bpm and pump 10 bbl of brine and shut down. Injection volume pumped 285 bbls. SWI at lower valve, bleed off and hand over to CT to blow dry and begin RD.  FTR: 4666 CR: 80 LTR: 4586	1.5
RURD	ND clean out BHA and lubricator - Blow dry CTS 2-3/8 CT. RD CTU and support equipment. NU WL flange.	4
RURD	PU WL lub and prep for stg 3 perfs. Will not run plug.	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 15 Daily Operation: 1/11/2015 06:00 - 1/12/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 117	Days on Location (days) 15	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig PIONEER PUMPING SERVICES, 5

### Operations Summary

Frack--3,4

Perf--3,4,5

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
 PPS Frac Crew 5: 1.75 hrs Cumulative: 1.75 hrs  
 Ark-la-tech WL: 0.0 hrs Cumulative: 0.0 hrs  
 Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
 Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
 Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
 API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
 Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
 Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 15,432 bbls

RT - 80 bbls

CR - 80 bbls

LTR - 15,352 bbls

TSIF - 229,267 lbs

Days: Will Lemons / Chad Hardin

Nights: Trey Armstrong / Jim Polston

### Time Log Summary

Operation	Com	Dur (hr)
SAFETY	PreJob JSA	0.5
RURD	PU WL lub and prep for stg 3 perfs. Will not run plug.	1
PERF	RU Arklatex WL for Stage# 3 of 47 . RIH & pump down (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Did not set composite frac plug. Perforate at intervals: 18700-18702, 18660-18662, 18620-18622, 18580-18582, 18540-18542, Total of 30 shots. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 15 bpm /8900psi, 125 ft/min, 800 Line Ten.  TBP: 1712 BBL FTR: 6378 BBL CR: 80 BBL LTR: 6298 BBL  During pump down of the Guns WL had issues getting down due to guns with gauge ring getting hung up on collars, RU PPS to do pump down with FR. Pumped casing volume with FR then pumped guns down with no other problems.	5.5
WOZF	WSI - WO frac ops on 17H	4
RURD	PPS RU frac risers to wel.	1
U_OTHR	Blender repairs - Oil in air lines for valve actuators.	1.75

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>Frac Stage 3 of 47. Test stack to 9650 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls of 15% HCL &amp; 0 lbs 30/50 sand &amp; 2322 bbls of hybrid fluid down 5.5" 20# csg.</p> <p>Formation broke @ 7295 psi @ 30 bpm</p> <p>Step Test 65 bpm @ 7699 psi  49 bpm @ 6875 psi  33 bpm @ 5800 psi  16 bpm @ 4860 psi</p> <p>Pad ISIP: 4158 psi Pad FG: 0.89 5 min SIP: 3564 psi</p> <p>Acid on form @ 30 bpm 7295 psi  Acid clear @ 30 bpm 6143 psi</p> <p>Increased rate to 65 bpm. Started stage w/ 16# gel equivalent loading, 9 cp. @ 55°F. Pumped 1827 bbl pad. Flushed well with 459 bbls. Ending rate 55 bpm @ 8347 psi. Placed 0% prop in formation.</p> <p>Avg. rate: 60 bpm Avg. psi: 8495 psi  Max. rate: 67 bpm Max. psi: 9244 psi  Final ISIP: 5118 psi Final FG: 1.0</p> <p>FTR: 8700 bbl  LTR: 8700 bbl  TSIF: 0 lbs</p> <p>Note* Never was able to pump sand due to pressure limits. Called stage good as per Engineer. Ready to perforate stage 4.</p>	1.75
PERF	<p>RU Ark -La-Tex WL for Stage# 4 of 47. RIH &amp; pump down Weatherford 4.37" OD CFP &amp; (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Set composite frac plug at 18521. Perforated intervals: 18500-18502, 18460-18462, 18420-18422, 18380-18382, 18340-18342. Total of 30 shots fired. POOH, confirmed plug gone and all guns fired, witnessed ball was dropped.</p> <p>Pump down w/16 bpm @ 8700psi. 295 ft/min &amp; 1085# line tension.</p> <p>Pumped down using : 513 bbl of fluid  FTR: 9,213 BBL  LTR: 9,133 BBL</p>	2.5
STIM	<p>Frac Stage 4 of 47. Test stack to 9650 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls of 15% HCL &amp; 223,310 lbs 30/50 sand &amp; 5778 bbls of hybrid fluid down 5.5" 20# csg.</p> <p>Formation broke @ 5850 psi @ 20 bpm</p> <p>Step Test 65 bpm @ 7249 psi  49 bpm @ 6314 psi  33 bpm @ 5324 psi  16 bpm @ 4352 psi</p> <p>Pad ISIP: 3773 psi Pad FG: 0.85 5 min SIP: 3530 psi</p> <p>Acid on form @ 30 bpm 6515 psi  Acid clear @ 65 bpm 7300 psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 9 cp. @ 50°F. Pumped 1761 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3.0 ppg. Flushed well with 506 bbls. Ending rate 65 bpm @ 6483 psi. Placed 100% prop in formation.</p> <p>Avg. rate: 64.5 bpm Avg. psi: 8086 psi  Max. rate: 66.8 bpm Max. psi: 9299 psi  Final ISIP: 3481 psi Final FG: 0.81</p> <p>FTR: 14,991 bbl  LTR: 14,991 bbl  TSIF: 229,267 lbs</p>	2.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
PERF	<p>RU Ark -La-Tex WL for Stage# 5 of 47. RIH &amp; pump down Weatherford 4.37" OD CFP &amp; (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Set composite frac plug at 18321. Perforated intervals: 18300-18302, 18260-18262, 18220-18222, 18180-18182, 18140-18142. Total of 30 shots fired. POOH, confirmed plug gone and all guns fired, witnessed ball was dropped.</p> <p>Pump down w/16 bpm @ 5100psi. 320 ft/min &amp; 1100# line tension.</p> <p>Pumped down using : 441 bbl of fluid LTR: 15,432 BBL</p> <p>NOTE* WL rehead before picking up gun string.</p>	3.5

### Report #: 16 Daily Operation: 1/12/2015 06:00 - 1/13/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig	
118	16	0.0			PIONEER PUMPING SERVICES, 5	

#### Operations Summary

Frac stg 5,6

Perf stg 6,7

#### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
 PPS Frac Crew 5: 0.75 hrs Cumulative: 2.5 hrs  
 Ark-la-tech WL: 0.0 hrs Cumulative: 0.0 hrs  
 Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
 Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
 Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
 API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
 Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
 Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 29,055 bbls

RT - 80 bbls

CR - 80 bbls

LTR - 28,975 bbls

TSIF - 673,686 lbs

Days: Will Lemons / Chad Hardin

Nights: Trey Armstrong / Jim Polston

### Time Log Summary

Operation	Com	Dur (hr)
WOZF	WSI - WO Frac ops on 19H & 17H	5.75
STIM	Started Frac stage 5, As we staged to 1.0 ppg 30/50 the Blender 12009 tub lube pump went out. Shut down to repair.	0.75
U_PEPXD	Blender 12009 tub lube pump went out. Repaired on location.	0.75

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>Frac Stage 5 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls 15% HCL, 219,608 lbs 30/50 sand &amp; 7762 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 4922 psi @ 20 bpm</p> <p>Step Test 65 bpm @ 6635 psi 45 bpm @ 5530 psi 25 bpm @ 4522 psi</p> <p>Pad ISIP: 3697 psi. FG: 0.84#. 5 min SIP: 3515 psi.</p> <p>Acid on form @ 35 bpm 5885 psi Acid clear @ 38 bpm 5790psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 9 cp. @ 54 °F. Gel Ph 10. Pumped 3626 bbl pad. Ramped 30/50 sand from 0.25 ppg to 3 ppg. Flushed well with 922 bbls. Ending rate 65 bpm @ 6580 psi. Placed 98% prop in formation.</p> <p>Avg. rate: 59 bpm Avg. psi: 7216 psi Max. rate: 67 bpm Max. psi: 9011 psi End of job ISIP 3793 FG: 0.85</p> <p>FTR: 23,194 CR: 80 LTR: 23,114 TSIF: 448,875</p> <p>Note: At the end of 3.0 ppg stg PPS ran the X-linker tote empty,</p>	1.5
PERF	<p>RU Arklatex WL for Stage# 6 of 47 . RIH &amp; pump down Weatherford CFP &amp; (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 18121. Perforate at intervals: 18100-18102, 18060-18062, 18020-18022, 17980-17982, 17940-17942, Total of 30 shots. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm /5600psi, 300 ft/min, 1200 Line Ten.</p> <p>TBP: 473 BBL FTR: 23,667 BBL CR: 80 BBL LTR: 23,587 BBL</p>	2
WOZF	WSI - WO Frac ops on 18H & 17H	6
STIM	<p>Frac Stage 6 of 47 Test stack to 9600 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls of 15% HCL &amp; 224,811 lbs 30/50 sand &amp; 4939 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 4834 psi @ 20 bpm</p> <p>Step Test 65 bpm @ 6459 psi 49 bpm @ 5656 psi 33 bpm @ 4773 psi 16 bpm @ 4248 psi</p> <p>Pad ISIP: 3803 psi Pad FG: 0.85 5 min SIP: 3525 psi</p> <p>Acid on form @ 30 bpm 5437 psi Acid clear @ 30 bpm 4924 psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 10 cp. @ 50°F. Pumped 1524 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3.0 ppg. Flushed well with 498 bbls. Ending rate 65 bpm @ 6322 psi. Placed 100% prop in formation.</p> <p>Avg. rate: 64 bpm Avg. psi: 7496 psi Max. rate: 65 bpm Max. psi: 8110 psi Final ISIP: 3579 psi Final FG: 0.83</p> <p>FTR: 28,606 bbl LTR: 28,526 bbl TSIF: 673,686 lbs</p>	1.75



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
PERF	RU Ark -La-Tex WL for Stage# 7 of 47. RIH & pump down Weatherford 4.37" OD CFP & (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Set composite frac plug at 17921. Perforated intervals: 17900-17902, 17860-17862, 17820-17822, 17780-17782, 17740-17742. Total of 30 shots fired. POOH, confirmed plug gone and all guns fired, witnessed ball was dropped.  Pump down w/16 bpm @ 4700psi. 320 ft/min & 1150# line tension.  Pumped down using : 449 bbl of fluid FTR: 29,055 BBL LTR: 28,975 BBL	2.5
WOZF	WSI - WO Frac ops on 18H & 17H	3

Report #: 17 Daily Operation: 1/13/2015 06:00 - 1/14/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
119	17	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
		PIONEER PUMPING SERVICES, 5

#### Operations Summary

Frac stg 7,8,9  
Perf stg 8,9,10

#### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 0.75 hrs Cumulative: 2.5 hrs  
Ark-la-tech WL: 0.0 hrs Cumulative: 0.0 hrs  
Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 42993 bbls  
RT - 80 bbls  
CR - 80 bbls  
LTR - 422913 bbls  
TSIF - 1120848 lbs

Days: Will Lemons / Chad Hardin  
Nights: Trey Armstrong / Jim Polston

### Time Log Summary

Operation	Com	Dur (hr)
WOZF	WSI - WO Frac ops on 18H & 17H	1.5
STIM	Frac Stage 7 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls 15% HCL, 223160 lbs 30/50 sand & 4895 bbls of hybrid fluid down 5.5" 20# csg.  Formation broke @ 4798 psi @ 20 bpm  Step Test 65 bpm @ 6226 psi 45 bpm @ 5218 psi 25 bpm @ 4416 psi  Pad ISIP: 3739 psi. FG: 0.84#. 5 min SIP: 3542 psi.  Acid on form @ 30 bpm 5200 psi Acid clear @ 35 bpm 5460psi  Increased rate to 80 bpm. Started stage w/ 15# gel equivalent loading, 9 cp. @ 49 °F. Gel Ph 10. Pumped 1471 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 495 bbls. Ending rate 65 bpm @ 5670 psi. Placed 100% prop iin formation.  Avg. rate: 64 bpm Avg. psi: 6636 psi Max. rate: 67 bpm Max. psi: 7960 psi End of job ISIP 3528 FG: 0.82  FTR: 33950 CR: 80 LTR: 33870 TSIF: 896846	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
PERF	<p>RU Arklatex WL for Stage# 8 of 47 . RIH &amp; pump down Weatherford CFP &amp; (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 17725. Perforate at intervals: 17700-17702, 17660-17662, 17620-17622, 17580-17582, 17540-17542, Total of 30 shots. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm /5100psi, 340 ft/min, 1200 Line Ten.</p> <p>TBP: 445 BBL FTR: 34395 BBL CR: 80 BBL LTR: 34315 BBL</p>	2
WOZF	WSI - WO Frac ops on 18H & 17H	6.5
STIM	<p>Frac Stage 8 of 47 Test stack to 9600 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls of 15% HCL &amp; 224,002 lbs 30/50 sand &amp; 4934 bbls of hybrid fluid down 5.5" 20# csg.</p> <p>Formation broke @ 4844 psi @ 20 bpm</p> <p>Step Test 65 bpm @ 6453 psi 49 bpm @ 5490 psi 33 bpm @ 4612 psi 16 bpm @ 4165 psi</p> <p>Pad ISIP: 3683 psi Pad FG: 0.84 5 min SIP: 3168 psi</p> <p>Acid on form @ 5833 bpm 30 psi Acid clear @ 6453 bpm 65 psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 10 cp. @ 50°F. Pumped 1524 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3.0 ppg. Flushed well with 490 bbls. Ending rate 65 bpm @ 6129 psi. Placed 100% prop in formation.</p> <p>Avg. rate: 64 bpm Avg. psi: 7317 psi Max. rate: 65 bpm Max. psi: 7806 psi Final ISIP: 3610 psi Final FG: 0.83</p> <p>FTR: 39,329 bbl LTR: 39,249 bbl TSIF: 1,120,848 lbs</p>	1.75
PERF	<p>RU Ark -La-Tex WL for Stage# 9 of 47. RIH &amp; pump down Weatherford 4.37" OD CFP &amp; (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Set composite frac plug at 17521. Perforated intervals: 17500-17502, 17460-17462, 17420-17422, 17380-17382, 17340-17342. Total of 30 shots fired. POOH, confirmed plug gone and all guns fired, witnessed ball was dropped.</p> <p>Pump down w/16 bpm @ 4600psi. 310 ft/min &amp; 1160# line tension.</p> <p>Pumped down using : 426 bbl of fluid FTR: 39,755 BBL LTR: 39,675 BBL</p>	2.25
WOZF	WSI - WO Frac ops on 18H & 17H	5.25

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
STIM	<p>Frac Stage 9 of 47. Test stack to 9600 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 53 total bbls of 15% HCL &amp; 0 lbs 30/50 sand &amp; 2722 bbls of linear fluid down 5.5" 20# csg.</p> <p>Formation broke @ 5070 psi @ 20 bpm</p> <p>Step Test 65 bpm @ 7250 psi  49 bpm @ 5842 psi  33 bpm @ 4706 psi  16 bpm @ 3432 psi</p> <p>Pad ISIP: 3871 psi Pad FG: 0.86 5 min SIP: 3871 psi</p> <p>Acid on form @ 35 bpm 5925 psi  Acid clear @ 35 bpm 5483 psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 9 cp. @ 50°F. Pumped 2215 bbl pad. Flushed well with 471 bbls. Ending rate 60 bpm @ 9022 psi. Placed 0% prop in formation. See note below.</p> <p>Avg. rate: 50 bpm Avg. psi: 7455 psi  Max. rate: 66 bpm Max. psi: 9178 psi  Final ISIP: 4017 psi Final FG: 0.87</p> <p>FTR: 42477 bbl  LTR: 42397 bbl  TSIF: 1120848 lbs</p> <p>NOTE: Step down test was done with pressure gradual climb in pressure. Would not ever level out. Each step down, pressure would climb. No water hammer noted on last step. Dropped another 750 gal of 15% HCL in front of gel pad. Got relief of 400# on second acid slug. Raised rate to 65 bpm at 7000 psi and continued climbing to 9100. Derated to 60 bpm and started gel stage. Gel on perfs at 60 bpm leveled off at 8850 psi. Did not think had room for XLink friction pressure without having to derate more. Made call to Engineer Conner Wood. Decision made to abandon this frac stage and shoot stg 10 perfs without plug and frac 9/10 together.</p>	1.25
PERF	<p>RU Ark -La-Tex WL for Stage# 10 of 47. RIH &amp; pump down (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Did not run plug for this stage. Perforated intervals: 17300-17302, 17260-17262, 17220-17222, 17180-17182, 17140-17142. Total of 30 shots fired. POOH at report time.</p> <p>Pump down w/16 bpm @ 7300psi. 265 ft/min &amp; 1150# line tension.</p> <p>Pumped down using : 516 bbl of fluid</p> <p>FTR: 42993 BBL  LTR: 42913 BBL</p>	2

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 18 Daily Operation: 1/14/2015 06:00 - 1/15/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 120	Days on Location (days) 18	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig PIONEER PUMPING SERVICES, 5

Operations Summary  
Frac: Stg #10-11  
Perf: Stg #11

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 0.75 hrs Cumulative: 2.5 hrs  
Ark-la-tech WL: 0.0 hrs Cumulative: 0.0 hrs  
Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 54729 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 54649 bbls  
TSIF - 1569504 lbs

Days: Jerry Fletcher / Randy Armstrong  
Nights: Will Lemons / Chad Hardin  
Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
WOZF	WSI, waiting on #17 & #18 Zipper ops.	8
STIM	<p>Frac Stage # 10 of 47. Test stack to 9,500 PSI , Frac perms as proposed W/36 bbls 15% HCL 223,741 LBS.30/50 &amp; 2,889 BBLS Hybrid fluid, down 5.5' CSG</p> <p>Formation broke @ 20 BPM/4,725 PSI</p> <p>Step Down: 65 bpm @ 5,334 50 bpm @ 4,754 20 bpm @ 4,270</p> <p>Pad ISIP: 3,768 PSI Pad F.G.:0.85 5 min- 3,664 PSI</p> <p>Increase rate to 80 bpm. Started stage w/ 15# gel equivalent loading, 10 cp. @52 *F. Pumped 2,872 bbl pad. Ramped 30/50 sand from 0.25 ppg to 3 ppg. Flushed well with 482 bbls. Ending rate 65.7 bpm @ 5,747 psi. Placed 100% prop in formation.</p> <p>Avg rate: 61 BPM Avg PSI: 6,744 Max rate:67 BPM Max PSI: 7,896 ISIP:3,691 PSI FG .84</p> <p>LTR Total:6,279 BBLS Total SIF:1,344,589 LBS. FTR Total: 49,192 BBLS</p>	2
PERF	<p>RU Ark -La-Tex WL for Stage# 11 of 47. RIH &amp; pump down Weatherford 4.37" OD CFP &amp; (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Set composite frac plug at 17,121'. Perforated intervals: 17,100 -17,102, 17,060-17,062, 17,020-17,022, 16,980-16,982, 16,940-16,942. Total of 30 shots fired. POOH, confirmed plug gone and all guns fired, witnessed ball was dropped.</p> <p>Pump down w/16 bpm @ 4800 psi. 350 ft/min &amp; 1200# line tension.</p> <p>Pumped down using : 463 bbl of fluid FTR: 49,735 BBL LTR: 49,655 BBL</p>	2.5
WOZF	WSI, waiting on #17 & #18 Zipper ops.	8.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>Frac Stage 11 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls 15% HCL, 224915 lbs 30/50 sand &amp; 4994 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 5027 psi @ 20 bpm</p> <p>Step Test 80 bpm @ 6544 psi 60 bpm 5541 psi 40 bpm @ 4786 psi 20 bpm @ 4234 psi</p> <p>Pad ISIP: 3827 psi. FG: 0.85#. 5 min SIP: 3188 psi.</p> <p>Acid on form @ 20 bpm 5000 psi Acid clear @ 20 bpm 4762psi</p> <p>Increased rate to 80 bpm. Started stage w/ 15# gel equivalent loading, 10 cp. @ 50 °F. Gel Ph 10. Pumped 1524 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 476 bbls. Ending rate 67 bpm @ 6271 psi. Placed 100% prop iin formation.</p> <p>Avg. rate: 64 bpm Avg. psi: 7178 psi Max. rate: 67 bpm Max. psi: 7490 psi End of job ISIP 3744 FG: 0.84</p> <p>FTR: 54729 CR: 80 LTR: 54649 TSIF: 1569504</p>	2
PERF	Perf stg 12 @ time of report	1

Report #: 19 Daily Operation: 1/15/2015 06:00 - 1/16/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
121	19	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
		PIONEER PUMPING SERVICES, 5

#### Operations Summary

Perf stg 12,13

Frac stg12

#### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 0.0 hrs Cumulative: 2.5 hrs  
Ark-la-tech WL: 0.0 hrs Cumulative: 0.0 hrs  
Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 60475 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 60395 bbls  
TSIF - 1795676 lbs

Days: Jerry Fletcher / Randy Armstrong  
Nights: Will Lemons / Chad Hardin  
Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
PERF	<p>Ark-La-Tex WL for Stage# 12 of 47. RIH &amp; pump down Schlumberger CFP &amp; (5) 3-1/8 perforating guns W/ 21.5 gram, 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 16,921'. Perforate at intervals: 16,900 - 16,902, 16,860 - 16,862, 16,820 - 16,822, 16,780 - 16,782, 16,740 - 16,742, Total of 40 holes. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm /4,400 psi, 300 ft/min, 1,250 Line Ten.</p> <p>FTR: 410 CR: 80 LTR: 55,059</p>	1.5
WSI	WSI, waiting on 17h & 18h Zipper ops.	12.25

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>Frac Stage 12 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls 15% HCL, 226172 lbs 30/50 sand &amp; 4953 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 5084 psi @ 20 bpm</p> <p>Step Test 65 bpm @ 6632 psi 49 bpm @ 5641 psi 33 bpm @ 4912 psi 16 bpm @ 4314 psi</p> <p>Pad ISIP: 3832 psi. FG: 0.85#. 5 min SIP: 3258 psi.</p> <p>Acid on form @ 30 bpm 5200 psi Acid clear @ 35 bpm 5375psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 11 cp. @ 50 °F. Gel Ph 10. Pumped 1524 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 472 bbls. Ending rate 65 bpm @ 6192 psi. Placed 100% prop iin formation.</p> <p>Avg. rate: 64 bpm Avg. psi: 7511 psi Max. rate: 65 bpm Max. psi: 8230 psi End of job ISIP 3710 FG: 0.84</p> <p>FTR: 60,092 CR: 80 LTR: 60,012 TSIF: 1795676</p>	1.5
PERF	<p>RU Arklatex WL for Stage# 13 of 47 . RIH &amp; pump down Weatherford CFP &amp; (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 16721. Perforate at intervals: 16700-16702, 16660-16662, 16620-16622, 16580-16582, 16540-16542, Total of 30 shots. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm /4700psi, 375 ft/min, 1100 Line Ten.</p> <p>TBP: 383 BBL FTR: 60475 BBL CR: 80 BBL LTR: 60395 BBL TSIF: 1795676 LBS</p>	2
WOZF	WSI, waiting on 17h & 18h Zipper ops.	4.5
PSI_TEST	PPS prime up presure test pumps and iron	1
STIM	Frac stg 13 at report time.	1.25

### Report #: 20 Daily Operation: 1/16/2015 06:00 - 1/17/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
122	20	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
		PIONEER PUMPING SERVICES, 5

#### Operations Summary

Finish Frac Stg #13, 14, 15  
Perf Stg# 14, 15, 16

#### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 0.0 hrs Cumulative: 2.5 hrs  
Ark-la-tech WL: 3.5 hrs Cumulative: 3.5 hrs  
Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 76,705 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 76,625 bbls  
TSIF - 2,476,003 lbs

Days: Jerry Fletcher / Randy Armstrong  
Nights: Will Lemons / Chad Hardin  
Phone # 432-400-2263



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>Finish Frac Stage #13 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/36 bbls 15% HCL, 223,532 lbs 30/50 sand &amp; 2,890 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 5,222 psi @ 20 bpm</p> <p>Step Test 65 bpm @ 7,085 49 bpm @ 5,979 33 bpm @ 5,124 16 bpm @ 4,407 Pad ISIP:3,941 FG: 0.87 5 min SIP:3,506</p> <p>Acid on form @ 20 bpm 5,107 psi Acid clear @ 20 bpm 4,864 psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 10 cp. @ 52 °F. Gel Ph 10. Pumped 1,523 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 467 bbls. Ending rate 65.6 bpm @ 6,177 psi. Placed 100 % prop iin formation.</p> <p>Avg. rate: 61 bpm Avg. psi:6,667 psi Max. rate: 66 bpm Max. psi:9,084 psi End of job ISIP : 3,673 FG: 0.84</p> <p>FTR: 65,393 BBLS CR: 80 BBLS LTR: 65,313 BBLS TSIF: 2,019,208 LBS</p>	0.75
PERF	<p>Ark-La-Tex WL for Stage#14 of 47. RIH &amp; pump down Schlumberger CFP &amp; (5) 3-1/8 perforating guns W/ 21.5 gram, 60 degree phasing, 0.42 EHD. Position and set composite frac plug at16,524'. Perforate at intervals:16,500'- 15,502',16,460'- 16,462', 16,420'- 16,422',16,380'-16,382',16,340'- 16,342', Total of 30 holes. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm /4,700 psi, 308 ft/min, 1,760 Line Ten.</p> <p>TBP: 384 BBL FTR: 65,777 BBL CR: 80 BBL LTR: 65,697 BBL TSIF: 2,019,208 LBS</p>	2
WSI	WSI waiting on 17h & 18h Zipper ops.	5.25
STIM	<p>Frac Stage#14 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/36 bbls 15% HCL,228,352 lbs 30/50 sand &amp; 4,883 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 4,933 psi @ 20 bpm</p> <p>Step Test 65 bpm @ 6,748 psi 49 bpm @ 5,883 psi 33 bpm @ 5,086 psi 20 bpm @ 4,498 psi Pad ISIP:3,846 psi. FG: 0.86. 5 min SIP: 3,371 psi.</p> <p>Acid on form @ 20 bpm 4,893 psi Acid clear @ 20 bpm 4,706 psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 9 cp. @ 61 °F. Gel Ph 10.4 Pumped 1,425 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 462 bbls. Ending rate 65 bpm @ 6,143 psi. Placed 100 % prop iin formation.</p> <p>Avg. rate:60 bpm Avg. psi: 7053 psi Max. rate: 66 bpm Max. psi:8143 psi End of job ISIP : 3896 FG: 0.86</p> <p>FTR:70,660 BBL CR: 80 BBL LTR: 70,580 BBL TSIF: 2,247,560 LBS</p>	1.75

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
U_WL	Got on depth w/plug, plug did not show fire, POOH to diagnose. Bad oring let water in causing a direct short resulting in no communication. RU new set of guns w/ plug and tested good.  TBP: 358 BBL FTR: 71,018 BBL CR: 80 BBL LTR: 70,938 BBL	3.5
PERF	RU Arklatex WL for Stage# 15 of 47 . RIH & pump down Weatherford CFP & (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 16321. Perforate at intervals: 16300-16302, 16260-16262, 16224-16226, 16180-16182, 16144-16146, Total of 30 shots. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm /4800psi, 375 ft/min, 1200 Line Ten.  TBP: 362 BBL FTR: 71,380 BBL CR: 80 BBL LTR: 71,300 BBL	2
WOZF	WSI waiting on 17h & 18h Zipper ops.	1
PSI_TEST	PPS prime up pressure test pumps and iron	1
STIM	Frac Stage 15 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls 15% HCL, 228443 lbs 30/50 sand & 5001 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 5123 psi @ 20 bpm  Step Test 65 bpm @ 6806 psi 49 bpm 5826 psi 33 bpm @ 5019 psi 16 bpm @ 4406 psi Pad ISIP: 3933 psi. FG: 0.86#. 5 min SIP: 3521 psi.  Acid on form @ 20 bpm 5138 psi Acid clear @ 20 bpm 4898psi  Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 10 cp. @ 45 *F. Gel Ph 10. Pumped 1524 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 458 bbls. Ending rate 68 bpm @ 6496 psi. Placed 100% prop iin formation. Avg. rate: 65 bpm Avg. psi: 7710 psi Max. rate: 66 bpm Max. psi: 8269 psi End of job ISIP 3772 FG: 0.85  FTR: 76381 CR: 80 LTR: 76301 TSIF: 2476003	2
WOZF	Waiting on perf ops of the 17H	2.75
PERF	RU Arklatex WL for Stage# 16 of 47 . RIH & pump down Weatherford CFP & (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 16121. Perforate at intervals: 16100-16102, 16060-16062, 16020-16022, 15980-15982, 15940-15942, Total of 30 shots. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm /4900psi, 350 ft/min, 1150 Line Ten.  TBP: 324 BBL FTR: 76705 BBL CR: 80 BBL LTR: 76625 BBL TSIF: 2476003 LBS	1.5
WOZF	WSI waiting on 17h & 18h Zipper ops.	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 21 Daily Operation: 1/17/2015 06:00 - 1/18/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 123	Days on Location (days) 21	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig PIONEER PUMPING SERVICES, 5

Operations Summary  
Frac Stg #16-17  
Perf Stg #17

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 7.25 hrs Cumulative: 9.75 hrs  
Ark-la-tech WL: 0.0 hrs Cumulative: 3.5 hrs  
Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 86,863 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 86,783 bbls  
TSIF - 2,930,622 lbs

Days: Jerry Fletcher / Randy Armstrong  
Nights: Will Lemons / Chad Hardin  
Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
WSI	WSI waiting on 17h & 18h Zipper ops.	1.25
STIM	<p>Frac Stage# 16 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/36 bbls 15% HCL, 230.804 lbs 30/50 sand &amp; 4,882 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 5,325 psi @ 20 bpm</p> <p>Step Test 65 bpm @ 6,697 psi 49 bpm @ 5,899 psi 33 bpm @ 5,124 psi 20 bpm @ 4,591 psi Pad ISIP: 3907 psi. FG: 0.86. 5 min SIP: 3554 psi.</p> <p>Acid on form @ 20 bpm 5339 psi Acid clear @ 20 bpm 4962 psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 9 cp. @ 52 °F. Gel Ph 10.9. Pumped 1455 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 454 bbls. Ending rate 65 bpm @ 6069 psi. Placed 100 % prop iin formation.</p> <p>Avg. rate: 61 bpm Avg. psi: 6959 psi Max. rate: 66 bpm Max. psi: 8036 psi End of job ISIP : 3807 FG: 0.85</p> <p>FTR: 81,587 CR: 80 LTR: 81,507 TSIF: 2,706,807</p>	2
WSI	WSI waiting on Wireline ops. on 17h & 18h.	7
PERF	<p>Grease frac stack before RIH w/ plug &amp; guns</p> <p>Ark-La-Tex WL for Stage# 17 of 47. RIH &amp; pump down Schlumberger CFP &amp; 5 - 3-1/8 perforating guns W/ 21.5 gram, 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 15918'. Perforate at intervals: 15,900 - 15,902, 15,860 - 15,862, 15,820 - 15,822, 15,780 - 15,782, 15,740 - 15,742, Total of 30 holes. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm / 5300 psi, 308 ft/min, 1258 Line Ten.</p> <p>TBP: 349 BBL FTR: 81,936 BBL CR: 80 BBL LTR: 81,856 BBL</p>	2
WSI	WSI waiting on Wireline ops. on 17h & 18h.	1.25

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
U_PEPXD	Hydration unit 13018 deck engine blew a turbo. A turbo was Hot shot from yard and replaced on location.	7.25
STIM	<p>Frac Stage 17 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls 15% HCL, 223,815 lbs 30/50 sand &amp; 4927 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 5460 psi @ 20 bpm</p> <p>Step Test     65 bpm @ 6893 psi                            49 bpm @ 5864 psi                            33 bpm @ 5132 psi                            16 bpm @ 4470 psi</p> <p>Pad ISIP: 3979 psi.    FG: 0.87#.    5 min SIP: 3478 psi.</p> <p>Acid on form @ 20 bpm 5480 psi          Acid clear @ 25 bpm 6100psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 10 cp. @ 46 °F. Gel Ph 10. Pumped 1524 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 449 bbls. Ending rate 65 bpm @ 6255 psi. Placed 100% prop iin formation.</p> <p>Avg. rate: 65 bpm            Avg. psi: 7568 psi          Max. rate: 66 bpm            Max. psi: 8297 psi          End of job ISIP 3859            FG: 0.86</p> <p>FTR: 86863          CR: 80          LTR: 86783          TSIF: 2930622</p>	1.5
PERF	Perf stg 18 at report time.	1.75

**Report #: 22    Daily Operation: 1/18/2015 06:00 - 1/19/2015 06:00**

Job Category ORIG COMPLETION		Primary Job Type OCM		AFE Number 033228	
Days From Spud (days) 124	Days on Location (days) 22	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig PIONEER PUMPING SERVICES, 5

#### Operations Summary

Perf 18,19,20

Frac 18,19

#### Remarks

#### DOWNTIME:

Weather:            0.0 hrs    Cumulative: 0.0 hrs  
 PPS Frac Crew 5:    3.0 hrs    Cumulative: 12.75 hrs  
 Ark-la-tech WL:    0.0 hrs    Cumulative: 3.5 hrs  
 Select H2O Transfer: 0.0 hrs    Cumulative: 0.0 hrs  
 Circle 8 crane:    0.0 hrs    Cumulative: 0.0 hrs  
 Weatherford plugs: 0.0 hrs    Cumulative: 0.0 hrs  
 API Lube/Grease:    0.0 hrs    Cumulative: 0.0 hrs  
 Priority WH:        0.0 hrs    Cumulative: 0.0 hrs  
 Double T rentals:    0.0 hrs    Cumulative: 2.5 hrs

FTR - 97,738 bbls  
 RT - 0.0 bbls  
 CR - 80 bbls  
 LTR - 97,658 bbls  
 TSIF - 3,376,913 lbs

Days: Jerry Fletcher / Randy Armstrong  
 Nights: Will Lemons / Chad Hardin  
 Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
WL	<p>Ark-La-Tex WL for Stage#18 of 47. RIH &amp; pump down Schlumberger CFP &amp; (5) 3-1/8 perforating guns W/ 21.5 gram, 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 15,721'. Perforate at intervals:15,544'-15,546',15,580'-15,582', 15,620'-15,622',15,560'-15,562', 15,500'- 15,502', Total of 30 holes. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm /4,600 psi,320 ft/min,1,200 Line Ten.</p> <p>TBP: 305 BBL          FTR: 87,168 BBL          CR: 80 BBL          LTR: 87,088 BBL          TSIF: 2,930,622 LBS</p>	0.75
WSI	WSI waiting on 17h & 18h Zipper ops.	3.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
U_PEPXD	WSI waiting on pump repairs	3
STIM	<p>Frac Stage# 18 of 42 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls 15% HCL,222,302 lbs 30/50 sand &amp; 4989 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 5286 psi @ 20 bpm</p> <p>Step Test 65 bpm @ 6707 psi  49 bpm @ 5922 psi  33 bpm @ 5210 psi  20 bpm @ 4663 psi  Pad ISIP: 4007 psi. FG: 0.87 . 5 min SIP: 3417 psi.</p> <p>Acid on form @ 20 bpm 5279 psi  Acid clear @ 20 bpm 4930 psi</p> <p>Increased rate to 65 bpm. Started stage w/15# gel equivalent loading, 10 cp. @ 60 *F. Gel Ph 7. Pumped 1583 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 445 bbls. Ending rate 65 bpm @ 6103 psi. Placed 100 % prop iin formation.</p> <p>Avg. rate: 59bpm Avg. psi:7125 psi  Max. rate: 69bpm Max. psi: 8066 psi  End of job ISIP : 3899 FG: 0..86</p> <p>FTR: 92,157  CR: 80  LTR: 92,077  TSIF: 3,152,924</p>	2
WL	<p>Ark-La-Tex WL for Stage#19 of 47. RIH &amp; pump down Schlumberger CFP &amp; (5) 3-1/8 perforating guns W/ 21.5 gram, 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 15,521'. Perforate at intervals:15,500' -15,502', 15,460' -15,462', 15,420' -15,422', 15,380'-15,382', 15,340'-15,342' Total of 30 holes. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm /4,900 psi,305 ft/min,1,230 Line Ten.</p> <p>NOTE: Lost ECO Loop pump @ 15,105',P/U 300' catch collors &amp; pump down w/1 pump, due to being unable to start 2nd. pump. Was able to start 2nd. pump after guns were shot.</p> <p>TBP:354 BBL  FTR:92,511 BBL  CR: 80 BBL  LTR:92,431 BBL  TSIF: 3,152,924 LBS</p>	2.5
WSI	WSI waiting on 17h & 19h Zipper ops.	3.75
PSI_TEST	PPS prime up pressure test pumps and iron	1
STIM	<p>Frac Stage 19 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls 15% HCL, 223989 lbs 30/50 sand &amp; 4940 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 5436 psi @ 20 bpm</p> <p>Step Test 65 bpm @ 6787 psi  49 bpm 5866 psi  33 bpm @ 5184 psi  16 bpm @ 4548 psi  Pad ISIP: 4089 psi. FG: 0.88#. 5 min SIP: 3777 psi.</p> <p>Acid on form @ 20 bpm 5424 psi  Acid clear @ 20 bpm 5145psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 10 cp. @ 50 *F. Gel Ph 10. Pumped 1525 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 442 bbls. Ending rate 66 bpm @ 6021 psi. Placed 100% prop iin formation.</p> <p>Avg. rate: 65 bpm Avg. psi: 7452 psi  Max. rate: 65 bpm Max. psi: 7850 psi  End of job ISIP 3845 FG: 0.86</p> <p>FTR: 97451  CR: 80  LTR: 97371  TSIF: 3376913</p>	2

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
PERF	RU Arklatex WL for Stage# 20 of 47 . RIH & pump down Weatherford CFP & (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 15321. Perforate at intervals: 15300-15302, 15260-15262, 15220-15222, 15180-15182, 15140-15142, Total of 30 shots. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm /4800psi, 345 ft/min, 1125 Line Ten.  TBP: 287 BBL FTR: 97738 BBL CR: 80 BBL LTR: 97658 BBL TSIF: 3376913 LBS	2
WOZF	WSI waiting on 17h & 19h Zipper ops.	3.5

Report #: 23 Daily Operation: 1/19/2015 06:00 - 1/20/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
125	23	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
		PIONEER PUMPING SERVICES, 5

#### Operations Summary

Wait on zipper frac ops on 17H & 18H  
Frac Stg #20  
Perf Stg #21

#### Remarks

##### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 0.0 hrs Cumulative: 12.75 hrs  
Ark-la-tech WL: 0.0 hrs Cumulative: 3.5 hrs  
Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 103132 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 103052 bbls  
TSIF - 3600850 lbs

Days: Jerry Fletcher / Randy Armstrong  
Nights: Will Lemons / Chad Hardin  
Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
WOZF	Wait on zipper frac ops on 17H & 18H	5
STIM	Frac Stage# 20 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls 15% HCL, 223,937 lbs 30/50 sand & 5082 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 5294 psi @ 20 bpm  Step Test 65 bpm @ 6447 psi 49 bpm @ 5733 psi 33 bpm @ 5069 psi 20 bpm @ 4602 psi Pad ISIP: 3941 psi. FG: 0.87 . 5 min SIP: 3501 psi.  Acid on form @ 20 bpm 5260 psi Acid clear @ 20 bpm 4912 psi  Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 9 cp. @ 60 *F. Gel Ph 10. Pumped 1675 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 436 bbls. Ending rate 65 bpm @ 6099 psi. Placed 100 % prop iin formation. Avg. rate: 60 bpm Avg. psi: 6995 psi Max. rate: 66 bpm Max. psi: 8088 psi End of job ISIP : 3768 FG: 0.85  FTR: 102,820 CR: 80 LTR: 102,740 TSIF: 3,600, 850	2



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
PERF	RU Arklatex WL for Stage# 21 of 47 . RIH & pump down Weatherford CFP & (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Position and set composite frac plug at . Perforate at intervals: 15.100 - 15.102, 15.060 - 15.062, 15.020 - 15.022, 14.984 - 14.986, 14.940 - 14.942 , Total of 30 shots. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm /4,700 psi, 304 ft/min, 1,250 Line Ten.  TBP: 312 BBL FTR: 103,132 BBL CR: 80 BBL LTR: 103,052 BBL TSIF: 3,600,850 LBS	2.5
WOZF	Wait on zipper frac ops on 17H & 18H	14.5

Report #: 24 Daily Operation: 1/20/2015 06:00 - 1/21/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
126	24	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
		PIONEER PUMPING SERVICES, 5

#### Operations Summary

Frac Stg # 21,22,23 of 47  
Perf Stg # 22,23,24 of 47

#### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 0.0 hrs Cumulative: 12.75 hrs  
Ark-la-tech WL: 0.0 hrs Cumulative: 3.5 hrs  
Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 119,028 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 118,948 bbls  
TSIF - 4,048,400 lbs

Days: Jerry Fletcher / Randy Armstrong  
Nights: Will Lemons / Chad Hardin  
Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
WOZF	WSI waiting on 17h & 18h Zipper frac ops.	3.25

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
STIM	<p>Set pop off to 9500 psi Frac Stage#21 of 47 Test stack to 9500 psi. Set Pop-offs, Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls 15% HCL, 224,101 lbs 30/50 sand &amp; 5244 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 4958 psi @ 20 bpm</p> <p>Step Test 65 bpm @ 6774psi 45 bpm @ 5640 psi 33 bpm @ 5187 psi 20 bpm @ 4527 psi Pad ISIP: 3975 psi. FG: 0.87. 5 min SIP: 3449 psi.</p> <p>Acid on form @ 20 bpm 4964 psi Acid clear @ 20 bpm 4921 psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 10 cp. @ 60 °F. Gel Ph 10. Pumped 1839 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 432 bbls. Ending rate 66 bpm @ 6064 psi. Placed 100 % prop iin formation. Avg. rate: 58.4 bpm Avg. psi: 6441 psi Max. rate: 68.1 bpm Max. psi: 8404 psi End of job ISIP : 3941 FG: 0.87</p> <p>NOTE: Chems ran long due to insufficient visc. samples</p> <p>FTR: 108376 CR: 80 LTR: 108296 TSIF: 3,824,951</p>	2
PERF	<p>Ark-La-Tex WL for Stage #22 of 47. RIH &amp; pump down Schlumberger CFP &amp; ( 5 ) 3-1/8 perforating guns W/ 21.5 gram, 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 14,921'. Perforate at intervals:14,900 - 14,902, 14,860 - 14,862, 14,820 - 14,822, 14,780 - 14,782, 14,740 - 14,742', Total of 30 holes. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm @5,000 psi,304 ft/min, 1,250Line Ten.</p> <p>TBP:309 BBL FTR: 108,685 BBL CR: 80 BBL LTR: 108,605 BBL TSIF: 3,824,951 LBS</p>	2
WOZF	WSI waiting on 17h & 18h Zipper frac ops.	4
STIM	<p>Frac Stage 22 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls 15% HCL, 223449 lbs 30/50 sand &amp; 4858 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 5006 psi @ 20 bpm</p> <p>Step Test 65 bpm @ 6943 psi 49 bpm 6096 psi 33 bpm @ 5256 psi 20 bpm @ 4708 psi Pad ISIP: 4016 psi. FG: 0.87#. 5 min SIP: 3431 psi.</p> <p>Acid on form @ 20 bpm 5028 psi Acid clear @ 20 bpm 4951psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 10 cp. @ 50 °F. Gel Ph 10. Pumped 1493 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 427 bbls. Ending rate 65 bpm @ 8144 psi. Placed 100% prop iin formation. Avg. rate: 62 bpm Avg. psi: 7344 psi Max. rate: 67 bpm Max. psi: 8047 psi End of job ISIP 4028 FG: 0.88</p> <p>FTR: 113543 CR: 80 LTR: 113463 TSIF: 4048400</p>	2

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
PERF	<p>RU Arklatex WL for Stage# 23 of 47 . RIH &amp; pump down Weatherford CFP &amp; (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 14721. Perforate at intervals: 14540-14542, 14580-14582, 14620-14622, 14660-14662, 14700-14702, Total of 30 shots. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm /5000psi, 320 ft/min, 1250 Line Ten.</p> <p>TBP: 296 BBL FTR: 113839 BBL CR: 80 BBL LTR: 113759 BBL TSIF: 4048400 LBS</p>	2
WOZF	WSI waiting on 17h & 18h Zipper frac ops.	4
STIM	<p>Frac Stage 23 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 36 bbls 15% HCL, 225530 lbs 30/50 sand &amp; 4905 bbls of hybrid fluid down 5.5" 20# csg. Formation broke @ 4960 psi @ 20 bpm</p> <p>Step Test      65 bpm @ 6815 psi                     49 bpm @ 5794 psi                     33 bpm @ 5071 psi                     16 bpm @ 4450 psi</p> <p>Pad ISIP: 3926 psi.    FG: 0.86#.    5 min SIP: 3590 psi.</p> <p>Acid on form @    20 bpm 4935 psi Acid clear @    25 bpm 5495psi</p> <p>Increased rate to 65 bpm. Started stage w/ 15# gel equivalent loading, 9 cp. @ 53 °F. Gel Ph 10. Pumped 1524 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 423 bbls. Ending rate 65 bpm @ 6520 psi. Placed 100% prop iin formation.</p> <p>Avg. rate: 64 bpm      Avg. psi: 7291 psi Max. rate: 65 bpm      Max. psi: 7867 psi End of job ISIP 3861      FG: 0.86</p> <p>FTR: 118744 CR: 80 LTR: 118664 TSIF: 4273930</p>	1.5
PERF	<p>RU Arklatex WL for Stage# 24 of 47 . RIH &amp; pump down Weatherford CFP &amp; (5) 3-1/8 perforating guns W/ 21.5 gram, 3 SPF. 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 14521. Perforate at intervals: 14500-14502, 14460-14462, 14420-14422, 14380-14382, 14340-14342, Total of 30 shots. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 16 bpm /4700psi, 350 ft/min, 1150 Line Ten.</p> <p>TBP: 284 BBL FTR: 119028 BBL CR: 80 BBL LTR: 118948 BBL TSIF: 4273930 LBS</p>	2
WOZF	WSI waiting on 17h & 18h Zipper frac ops.	1.25

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 25 Daily Operation: 1/21/2015 06:00 - 1/22/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 127	Days on Location (days) 25	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig PIONEER PUMPING SERVICES, 5

### Operations Summary

Perf stg 25  
Start frac stg 25

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 0.0 hrs Cumulative: 12.75 hrs  
Ark-la-tech WL: 0.0 hrs Cumulative: 3.5 hrs  
Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 123,852 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 123,772 bbls  
TSIF - 4,271,545 lbs

Days: Bob Belcher / Shawn Everett  
Nights: Jerry Fletcher / Randy Armstrong  
Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
WOZF	WSI waiting on 17h & 18h Zipper frac ops.	8.5
STIM	<p>FRAC STG #24 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 36 bbls 15% HCL, 223,145 lbs.30/50 Brown sand &amp; 4,566 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 4,667 psi. Acid on 40 BPM @ 5,853 psi Acid clear 40 BPM @ 5,640 psi</p> <p>Stepdown: 65 bpm : 6,699 psi 50 bpm: 5,838 psi 35 bpm: 5,078 psi 20 bpm: 4,466 psi Pad ISIP: 4,015 psi FG: 0.87 psi/ft 5 min: 3,511 psi Started stage with 15 # equivalent gel loading (10 cp @ 56*) XL Ph 10</p> <p>Increased rate to 65 bpm. Pumped 1,194 bbl pad Ramped 30/50 brown sand from 0.25 ppg to 3.0 ppg. Flushed well with 418 bbls. Ending rate 65 bpm 5,880 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 64 bpm Avg psi: 6,799 psi Max rate: 66 bpm Max psi: 7,380 psi ISIP: 88 psi FG: .0.88 psi/ft</p> <p>FTR=123,594 bbls LTR= 123,514 bbls TSIF= 4,271,545 lbs.</p>	1.5
PERF	<p>RU Ark La Tex WL for Stage # 25. RIH &amp; pump down Weatherford CFP &amp; 5 each 3.125" guns. Set CFP @ 14,321'. Perforate intervals : 14,300'-03', 14,260'-62', 14,220'-22 , 14,180'-82', &amp; 14,140'-42' w/ 30 shots, 3 SPF, 60*, 21.5 GR, 0.42" EHD perf guns. 30 holes total. POOH. All shots fired. RD WL .</p> <p>Pump down @ 16 bpm/4,500 psi. Line speed 300 fpm.</p> <p>258 bbls used for pump down. FTR: 123,852 bbls. LTR: 123,772 bbls</p>	1.5
WOZF	WSI waiting on 17h & 18h Zipper frac ops.	11.5
STIM	Start frac for stg 25 at report time	1

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 26 Daily Operation: 1/22/2015 06:00 - 1/23/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 128	Days on Location (days) 26	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig PIONEER PUMPING SERVICES, 5

### Operations Summary

Frac Stg #25,26 of 47

Perf Stg #26,27

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 4.5 hrs Cumulative: 17.25 hrs  
Ark-la-tech WL: 0.0 hrs Cumulative: 3.5 hrs  
Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 134,022 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 133,942 bbls  
TSIF - 4,719,143 lbs

Days: Bob Belcher / Shawn Everett  
Nights: Jerry Fletcher / Randy Armstrong  
Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>FRAC STG #25 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 36 bbls 15% HCL, 223,461 lbs. 30/50 Brown sand &amp; 4,859 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 4,835 psi.  Acid on 55 BPM @ 6,920 psi  Acid clear 65 BPM @ 7,150 psi</p> <p>Stepdown:  65 bpm : 6,529 psi  50 bpm: 5,674 psi  35 bpm: 4,998 psi  20 bpm: 4,454 psi  Pad ISIP: 3,920 psi FG: 0.86 psi/ft 5 min: 3,428 psi  Started stage with 15 # equivalent gel loading (10 cp @ 55")  XL Ph 10</p> <p>Increased rate to 65 bpm. Pumped 1,457 bbl pad Ramped 30/50 brown sand from 0.25 ppg to 3.0 ppg. Flushed well with 418 bbls. Ending rate 40 bpm 5,242 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 65 bpm Avg psi: 6,804 psi  Max rate: 66 bpm Max psi: 7,465 psi  ISIP: 4,009 psi FG: .0.87 psi/ft</p> <p>FTR=128,711 bbls  CR: 80  LTR= 128,631 bbls  TSIF= 4,495,006 lbs.</p>	1
PERF	<p>RU Ark La Tex WL for Stage # 26. RIH &amp; pump down Weatherford CFP &amp; 5 each 3.125" guns. Set CFP @ 14,121'. Perforate intervals : 14,100'-02', 14,060'-62', 14,020'-22 , 13,980'-82', &amp; 13,940'-42' w/ 30 shots, 3 SPF, 60", 21.5 GR, 0.42" EHD perf guns. 30 holes total. POOH. All shots fired. RD WL .  Pump down @ 16 bpm/4,600 psi. Line speed 300 fpm.</p> <p>TBP: 257  FTR: 128,968 bbls.  CR: 80 bbls.  LTR: 128,888 bbls</p>	2
WOZF	Well shut in waiting on 17/18H Stim ops	9.5
U_PEPXD	Pump Brine water through equipment to winterize. Change out Centrifugal pump on blender #12009 due to severe leak.	4.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>FRAC STG #26 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/36 bbls 15% HCL, 224,137 lbs. 30/50 Brown sand &amp; 4,797 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 5,422 psi.            Acid on 20 BPM @ 5,459 psi            Acid clear 20 BPM @ 4,981 psi</p> <p>Stepdown:            65 bpm : 6,604 psi            50 bpm: 5,798 psi            35 bpm: 5,073 psi            20 bpm: 4,630 psi            Pad ISIP: 4,040 psi FG: 0.88 psi/ft 5 min: 3,370 psi            Started stage with 15 # equivalent gel loading (9 cp @ 52*)            XL Ph 9.5</p> <p>Increased rate to 65 bpm. Pumped 1,402 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 409 bbls. Ending rate 65 bpm 6,088 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 64 bpm Avg psi: 7,110 psi            Max rate: 65 bpm Max psi: 7,727 psi            ISIP: 3,914 psi FG: .086 psi/ft</p> <p>FTR= 133,765 bbls            CR= 80 bbls.            LTR= 133,685 bbls            TSIF= 4,719,143 lbs.</p>	1.75
PERF	<p>RU Ark La Tex WL for Stage # 27. RIH &amp; pump down Weatherford CFP &amp; 5 each 3.125" guns. Set CFP @ 13,921'. Perforate intervals : 13,904'-13,906', 13,860'-13,862', 13,820'-13,822', 13,780'-13,782', 13,740'-13,742' w/ 30 shots, 3 SPF, 60*, 21.5 GR, 0.42" EHD perf guns. 30 holes total. POOH. All shots fired. RD WL.</p> <p>Pump down @ 16 bpm/ 4,500 psi. Line speed 320 fpm.</p> <p>TBP: 257            FTR: 134,022 bbls.            CR: 80 bbls.            LTR: 133,942 bbls</p>	2
WOZF	Well shut in waiting on 17/18H Stim ops	3.25

### Report #: 27 Daily Operation: 1/23/2015 06:00 - 1/24/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
129	27	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
		PIONEER PUMPING SERVICES, 5

#### Operations Summary

Frac Stg #27,28,29 of 47  
 Perf Stg # 28,29,30

#### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
 PPS Frac Crew 5: 4.5 hrs Cumulative: 17.25 hrs  
 Ark-la-tech WL: 0.0 hrs Cumulative: 3.5 hrs  
 Select H2O Transfer: 0.0 hrs Cumulative: 0.0 hrs  
 Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
 Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
 API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
 Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
 Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 148,984 bbls  
 RT - 0.0 bbls  
 CR - 80 bbls  
 LTR - 148,868 bbls  
 TSIF - 6,389,837 lbs

Days: Bob Belcher / Shawn Everett  
 Nights: Jerry Fletcher / Randy Armstrong  
 Phone # 432-400-2263

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
WOZF	Well shut in waiting on 17/18H Stim ops	2
STIM	<p>FRAC STG #27 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/36 bbls 15% HCL, 222,805 lbs. 30/50 Brown sand &amp; 4,891 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 5517 psi.            Acid on 50 BPM @ 6,572 psi            Acid clear 65 BPM @ 6,649 psi</p> <p>Stepdown:            65 bpm : 6,499 psi            50 bpm: 5,896 psi            35 bpm: 5,150 psi            20 bpm: 4,666 psi            Pad ISIP: 4,063 psi FG: 0.88 psi/ft 5 min: 3,536 psi            Started stage with 15 # equivalent gel loading (10 cp @ 54")            XL Ph 9.5</p> <p>Increased rate to 65 bpm. Pumped 1,524 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 409 bbls. Ending rate 40 bpm 5,000 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 63 bpm Avg psi: 6,845 psi            Max rate: 68 bpm Max psi: 7,748 psi            ISIP: 3,755 psi FG: .085 psi/ft</p> <p>FTR=138,913 bbls            CR= 80 bbls.            LTR=138,833 bbls            TSIF= 4,941,948 lbs.</p>	1.5
PERF	<p>RU Ark La Tex WL for Stage # 28. RIH &amp; pump down Weatherford CFP &amp; 5 each 3.125" guns. Attempted to set CFP @ 13,921'. Plug did not set. Never saw the tool stroke. Pulled up and pumped 3 bpm and it was the same pressure the initial pump down. Pumped down and tried to tag plug never saw a weight loss. Pulled out of the hole and to see what the issue is. Redress tools.</p> <p>TBP: 230 bbls            FTR: 139,144 bbls.            CR: 80 bbls.            LTR: 139,064 bbls</p>	2
PERF	<p>RU Ark La Tex WL for Stage # 28. RIH &amp; pump down Weatherford CFP &amp; 5 each 3.125" guns. Set CFP @ 13,921'. Perforate intervals : 13,700'-13,702', 13,660'-13,662', 13,620'-13,622', 13,580'-13,582', 13,540'-13,542' w/ 30 shots, 3 SPF, 60*, 21.5 GR, 0.42" EHD perf guns. 30 holes total. POOH. All shots fired. RD WL .</p> <p>Pump down @ 16 bpm/ 4,500 psi. Line speed 320 fpm.</p> <p>TBP: 209            FTR: 139,353 bbls.            CR: 80 bbls.            LTR: 139,273 bbls</p>	4
WOZF	Well shut in waiting on 17/18H Stim ops	0.5



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>FRAC STG # 28 of 47:Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perms per schedule w/ 36 bbls 15% HCL, 223,491 lbs.30/50 Brown sand &amp; 4,503 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 5,564 psi. Acid on 40 BPM @ 6,860 psi Acid clear 40 BPM @ 6,234 psi</p> <p>Stepdown: 65 bpm : 6,937 psi 50 bpm: 6,165 psi 35 bpm: 5,299 psi 20 bpm: 4,732 psi Pad ISIP: 4,052 psi FG: 0.88 psi/ft 5 min: 3,427 psi Started stage with 15 # equivalent gel loading (10 cp @ 57 *) XL Ph 9</p> <p>Increased rate to 65 bpm. Pumped 1,150 bbl pad Ramped 30/50 brown sand from 0.25 ppg to 3.0 ppg. Flushed well with 401 bbls. Ending rate 65 bpm 5,687 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 64 bpm Avg psi: 6,911 psi Max rate: 66 bpm Max psi: 8,334 psi ISIP: 3,921 psi FG: .086 psi/ft</p> <p>FTR= 143,856 bbls CR= 80 LTR= 143,776 bbls TSIF= 6,165,439</p>	1.5
WSI	Well shut in waiting on 17h perf ops.	1.75
PERF	<p>RU Ark La Tex WL for Stage # 29 of 46. RIH &amp; pump down Weatherford CFP &amp; 5 each 3.125" guns. Set CFP @ 13521'. Perforate intervals: 13,500'-13,502', 13,460'-13,462', 13,420'-13,422', 13,378'-13,380', 13,344', 13,346'. w/ 30 shots, 3.5 SPF, 60*, 21.5 GR, 0.42" EHD perf guns.. POOH. All shots fired. RD WL .</p> <p>Pump down @ 16 bpm@ 4,700 psi. Line speed @ 300 fpm.</p> <p>TBP: 232 Bbls FTR: 144,088 Bbls CR:80 LTR: 144,008 Bbls.</p>	2
WOZF	Waiting on Zipper ops. 17h /19h	4.75
STIM	<p>FRAC STG # 29 of 47:Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perms per schedule w/ 36 bbls 15% HCL,224,398 lbs.30/50 Brown sand &amp; 4,642 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 4,958 psi. Acid on 20 BPM @ 4,978 psi Acid clear 20 BPM @ 4,718 psi</p> <p>Stepdown: 65 bpm : 6,118 psi 49 bpm: 5,412 psi 33 bpm: 4,854- psi 16 bpm: 4,385 psi Pad ISIP:4,017 psi FG: 0.87 psi/ft 5 min: 3,365 psi Started stage with 15 # equivalent gel loading ( 9 cp @ 46*) XL Ph 9.5</p> <p>Increased rate to 65 bpm. Pumped 1,301 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 396 bbls. Ending rate 65 bpm 5,713 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 65 bpm Avg psi: 6,683 psi Max rate: 65 bpm Max psi: 7,075 psi ISIP: 4.096 psi FG: .088 psi/ft</p> <p>FTR= 148,730 bbls CR= 80 LTR= 148,650 bbls TSIF=6,389,837 lbs.</p>	2

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
PERF	RU Ark La Tex WL for Stage #30 of 46. RIH & pump down Weatherford CFP & 5 each 3.125" guns. Set CFP @ 13,321'. Perforate intervals: 13,300'-13,302', 13,260'-13,262', 13,220'-13,222', 13,180'-13,182', 13,140', 13,142'. w/ 30 shots, 3.5 SPF, 60", 21.5 GR, 0.42" EHD perf guns. POOH @ Report time. Pump down @ 16 bpm @ 4,600 psi. Line speed @ 310 fpm.  TBP:218 Bbls FTR:148,984 Bbls CR:80 LTR: 148,868 Bbls.	2

Report #: 28 Daily Operation: 1/24/2015 06:00 - 1/25/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
130	28	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
		PIONEER PUMPING SERVICES, 5

#### Operations Summary

Frac Stg #30,31,32 of 47

Perf Stg # 31,32,33

#### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 1.75 hrs Cumulative: 19.00 hrs.  
Ark-la-tech WL: 0.0 hrs Cumulative: 3.5 hrs  
Select H2O Transfer : 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 165,019 bbls

RT - 0.0 bbls

CR - 80 bbls

LTR - 164,939 bbls

TSIF - 7,149,330 lbs

Days: Bob Belcher / Shawn Everett

Nights: Jerry Fletcher / Randy Armstrong

Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
WOZF	Well shut in waiting on 17/18H Stim ops	4.25
STIM	FRAC STG # 30 of 47:Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perms per schedule w/ 36 bbls 15% HCL,223,373 lbs.30/50 Brown sand & 4,871 bbls Hybrid Fluid down 5.5" csg.  Formation broke @ 20 bpm @ 5,125 psi. Acid on 50 BPM @ 6,391 psi Acid clear 65 BPM @ 6,553 psi  Stepdown: 65 bpm : 6,459 psi 50 bpm: 5,727 psi 35 bpm: 5,049 psi 20 bpm: 4,521 psi Pad ISIP:4,017 psi FG: 0.87 psi/ft 5 min: 3,341 psi Started stage with 15 # equivalent gel loading ( 10 cp @ 46*) XL Ph 10  Increased rate to 65 bpm. Pumped 1,524 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 396 bbls. Ending rate 40 bpm 5,713 psi. Placed 100% proppant in formation.  Avg rate: 64 bpm Avg psi: 6,901 psi Max rate: 66 bpm Max psi: 7,647 psi ISIP: 3,772 psi FG: .0.85 psi/ft  FTR= 153,879 bbls CR= 80 LTR= 153,739 bbls TSIF= 6,613,210 lbs.	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
PERF	<p>RU Ark La Tex WL for Stage #31 of 46. RIH &amp; pump down Weatherford CFP &amp; 6 each 3.125" guns. Set CFP @ 13,121'. Perforate intervals: 13,100'-13,102', 13,060'-13,062', 13,020'-13,022', 12,980'-12,982', 12,940'- 12,942', 12,900-12,902. w/ 42 shots, 3.5 SPF, 60*, 21.5 GR, 0.42" EHD perf guns. POOH</p> <p>Pump down @ 16 bpm @ 4,400 psi. Line speed @ 310 fpm.</p> <p>TBP: 184 Bbls FTR: 154,003 Bbls CR:80 LTR: 153,923 Bbls.</p>	1.5
WOZF	Well shut in waiting on 17/18H Stim ops	1.5
STIM	<p>FRAC STG # 31 of 47:Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perms per schedule w/ 36 bbls 15% HCL,268,242 lbs.30/50 Brown sand &amp; 5,568 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 5,169 psi. Acid on 56 BPM @ 6,636 psi Acid clear 80 BPM @ 7,052 psi</p> <p>Stepdown: 80 bpm : 6,875 psi 60 bpm: 6,009 psi 40 bpm: 5,241 psi 20 bpm: 4,594 psi Pad ISIP: 4,093 psi FG: 0.88 psi/ft 5 min: 3,554 psi Started stage with 15 # equivalent gel loading ( 10 cp @ 62*) XL Ph 10</p> <p>Increased rate to 80 bpm. Pumped 1,650 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 391 bbls. Ending rate 40 bpm 5,713 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 80 bpm Avg psi: 7,375 psi Max rate: 81 bpm Max psi: 8,253 psi ISIP: 3,995 psi FG: .0.87 psi/ft</p> <p>FTR= 159,571 bbls CR= 80 bbls LTR= 159,491 bbls TSIF= 6,881,452 lbs.</p>	1.5
PERF	<p>RU Ark La Tex WL for Stage #32 of 46. RIH &amp; pump down Weatherford CFP &amp; 6 each 3.125" guns. Set CFP @ 12,881'. Perforate intervals: 12,860'-12,862', 12,820'-12,822', 12,780'-12,782', 12,740'-12,742', 12,700'- 12,702', 12,660-12,662. w/ 42 shots, 3.5 SPF, 60*, 21.5 GR, 0.42" EHD perf guns. POOH</p> <p>Pump down @ 16 bpm @ 4,400 psi. Line speed @ 310 fpm.</p> <p>TBP: 179 Bbls FTR: 159,750 Bbls CR:80 LTR: 159,670 Bbls.</p>	1.5
WOZF	Well shut in waiting on 17/18H Stim ops	5
U_PEPXD	Repair engine oil leak on Blender.	1.75

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>FRAC STG # 32 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perms per schedule w/ 36 bbls 15% HCL, 267,878 lbs. 30/50 Brown sand &amp; 5,088 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 4,988 psi.            Acid on 20 BPM @ 4,988 psi            Acid clear 20 BPM @ 4,802 psi</p> <p>Stepdown:            80 bpm: 6,787 psi            60 bpm: 5,830 psi            40 bpm: 5,048 psi            20 bpm: 4,536 psi            Pad ISIP: 4,055 psi FG: 0.88 psi/ft 5 min: 3,313 psi            Started stage with 15 # equivalent gel loading ( 10 cp @ 48*)            XL Ph 9.5</p> <p>Increased rate to 80 bpm. Pumped 1,255 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 382 bbls. Ending rate 80 bpm 6,560 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 80 bpm Avg psi: 7,445 psi            Max rate: 80 bpm Max psi: 7,847 psi            ISIP: 3,987 psi FG: .0.87 psi/ft</p> <p>FTR=164,838 bbls            CR= 80 bbls            LTR= 164,758 bbls            TSIF= 7,149,330 lbs.</p>	1.75
PERF	<p>RU Ark La Tex WL for Stage #33 of 46. RIH &amp; pump down Weatherford CFP &amp; 6 each 3.125" guns. Set CFP @ 12,641'. Perforate intervals: 12,620'-12,622', 12,580'-12,582', 12,540'-12,542', 12,500'-12,502', 12,460'-12,462', 12,420'-12,422. w/ 42 shots, 3.5 SPF, 60", 21.5 GR, 0.42" EHD perf guns. POOH</p> <p>Pump down @ 16 bpm @ 4300 psi. Line speed @ 344 fpm.</p> <p>TBP: 181 Bbls            FTR: 165,019 Bbls            CR: 80            LTR: 164,939 Bbls.</p>	1.5
WOZF	Well shut in waiting on 17h ops.	1.75
STIM	Start prime up & pressure test	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 29 Daily Operation: 1/25/2015 06:00 - 1/26/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 131	Days on Location (days) 29	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig PIONEER PUMPING SERVICES, 5

### Operations Summary

Frac Stg #33,34,35 of 47

Perf Stg #34,35,36

Prime up & pressure test for stg #36 @ report time.

Blender developed hydraulic leak, mechanic accessing problem @ report time.

NOTE: S/D on Stg #34 due to blender, temporarily repair & Finish stage.

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
 PPS Frac Crew 5: 3.5 hrs Cumulative: 24.25 hrs  
 Ark-la-tech WL: 0.0 hrs Cumulative: 3.5 hrs  
 Select H2O Transfer : 0.0 hrs Cumulative: 0.0 hrs  
 Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
 Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
 API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
 Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
 Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 182,733 bbls  
 RT - 0.0 bbls  
 CR - 80 bbls  
 LTR - 182,653 bbls  
 TSIF - 7,953,923 lbs

Days: Bob Belcher / Shawn Everett  
 Nights: Jerry Fletcher / Randy Armstrong  
 Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>FRAC STG #33 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 36 bbls 15% HCL, 268,161 lbs. 30/50 Brown sand &amp; 5,209 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 5,205 psi.            Acid on 40 BPM @ 6,351 psi            Acid clear 40 BPM @ 5,765 psi</p> <p>Stepdown:            80 bpm : 7,172 psi            60 bpm: 6,189 psi            40 bpm: 5,188 psi            20 bpm: 4,505 psi            Pad ISIP: 3,852 psi FG: 0.86 psi/ft 5 min: 3,333 psi            Started stage with 15 # equivalent gel loading (10 cp @ 55*)            XL Ph 10</p> <p>Increased rate to 80 bpm. Pumped 1,341 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 376 bbls. Ending rate 80 bpm 6,067 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 79 bpm Avg psi: 7,215 psi            Max rate: 81 bpm Max psi: 8,056 psi            ISIP: 3,902 psi FG: .0..86 psi/ft</p> <p>FTR=170,228 bbls            LTR=170,148 bbls            TSIF= 7,417,491 lbs.</p>	1.25
PERF	<p>RU Ark La Tex WL for Stage # 34. RIH &amp; pump down Weatherford CFP &amp; 5 each 3.125" guns. Set CFP @ 12,401'. Perforate intervals : 12,380'-82', 12,340'-42', 12,300'-02', 12,260'-62', 12,220'- 22', &amp; 12,180'-82' w/ 42 shots, 3.5 SPF, 60*, 21.5 GR, 0.42" EHD perf guns. 42 holes total. POOH. All shots fired. RD WL .</p> <p>Pump down @ 16 bpm/4200 psi. Line speed 300 fpm.</p> <p>155 bbls used for pump down.            FTR:170,383 bbls.            LTR: 170,303 bbls.</p>	2
WOZF	Well shut in waiting on 17h ops.	3.25

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
U_PEPXD	Repair engine oil leak on Blender.	1
STIM	<p>FRAC STG #34 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 36 bbls 15% HCL, 20,000 lbs. 30/50 Brown sand &amp; 2,874 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 5,140 psi.            Acid on 68 BPM @ 7,362 psi            Acid clear 72 BPM @ 7,347 psi</p> <p>Stepdown:            80 bpm : 6,945 psi            60 bpm: 5,959 psi            40 bpm: 5,171 psi            20 bpm: 4,551 psi            Pad ISIP: 4,006 psi FG: 0.87 psi/ft 5 min: 3,537 psi            Started stage with 15 # equivalent gel loading (10 cp @ 63*)            XL Ph 10</p> <p>Increased rate to 80 bpm. Pumped 1,650 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 375 bbls. Ending rate 40 bpm 5288 psi. Placed 7% proppant in formation.</p> <p>FTR= 173,257 bbls            LTR= 173,177 bbls            TSIF= 7,437,491 lbs.</p> <p>Note: During the 1# sand stage the blender discharge manifold developed a hole. The hole was big enough and frac fluid was pouring out of it. Went to flush and over flushed the well by 100 bbls. PPS is calling a welder to weld the hole so we can continue.</p>	0.75
U_PEPXD	Blender developed hole in Discharge manifold. They fixed the hole with a screw to get us through this stage. Welder will come out to make more permanent fix.	0.75
STIM	<p>(Re frac) FRAC STG #34 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 36 bbls 15% HCL, 248,296 lbs. 30/50 Brown sand &amp; 4,045 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 5,140 psi.            Acid on 68 BPM @ 7,362 psi            Acid clear 72 BPM @ 7,347 psi</p> <p>Stepdown:            80 bpm : 6,945 psi            60 bpm: 5,959 psi            40 bpm: 5,171 psi            20 bpm: 4,551 psi            Pad ISIP: 4,006 psi FG: 0.87 psi/ft 5 min: 3,537 psi            Started stage with 15 # equivalent gel loading (10 cp @ 63*)            XL Ph 10</p> <p>Increased rate to 80 bpm. Pumped 2,495 bbl total pad for both attempts. Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 375 bbls. Ending rate 40 bpm 5,000 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 77 bpm Avg psi: 6,322 psi            Max rate: 82 bpm Max psi: 8,340 psi            ISIP: 3,949 psi FG: .0..87 psi/ft</p> <p>FTR= 177,302 bbls            LTR= 177,222 bbls            TSIF= 7,685,787 lbs.</p>	1
PERF	<p>RU Ark La Tex WL for Stage # 35. RIH &amp; pump down Weatherford CFP &amp; 6 each 3.125" guns. Set CFP @ 12,161'. Perforate intervals : 12,140'-42', 12,100'-02', 12,060'-62', 12,020'-22', 11,980'- 82', &amp; 11,940'-42' w/ 42 shots, 3.5 SPF, 60*, 21.5 GR, 0.42" EHD perf guns. 42 holes total. POOH. All shots fired. RD WL .</p> <p>Pump down @ 16 bpm/4200 psi. Line speed 300 fpm.</p> <p>122 bbls used for pump down.            FTR: 177,424 bbls.            LTR: 177,344 bbls.</p>	1.5
WOZF	Well shut in waiting on 17h ops.	3

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
STIM	<p>FRAC STG #35 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 36 bbls 15% HCL, 268,136 lbs. 30/50 Brown sand &amp; 5,163 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 5,280 psi.            Acid on 20 BPM @ 5,327 psi            Acid clear 20 BPM @ 4,962 psi</p> <p>Stepdown:            80 bpm : 6,816 psi            60 bpm: 5,817 psi            40 bpm: 5,070 psi            20 bpm: 4,494 psi            Pad ISIP: 3,829 psi FG: 0.85 psi/ft 5 min: 3,404 psi            Started stage with 15 # equivalent gel loading (10 cp @ 51*)            XL Ph 10</p> <p>Increased rate to 80 bpm. Pumped 1,318 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 365 bbls. Ending rate 82 bpm 6,241 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 80 bpm      Avg psi: 7,398 psi            Max rate: 81 bpm      Max psi: 8,589 psi            ISIP: 4,510 psi      FG: .0..93 psi/ft</p> <p>FTR= 182,587 bbls            CR = 80 bbls.            LTR= 182,507 bbls            TSIF= 7,953,923 lbs.</p>	2
PERF	<p>RU Ark La Tex WL for Stage # 36. RIH &amp; pump down Weatherford CFP &amp; 6 each 3.125" guns. Set CFP @ 12,921'. Perforate intervals : 12,140 - 12,142 12,100 - 12,102, 12,060 - 12,062, 12,020 - 12,022, 11,980 - 11,982, 11,940 - 11,942' w/ 42 shots, 3.5 SPF, 60", 21.5 GR, 0.42" EHD perf guns. 42 holes total. POOH. All shots fired. RD WL .</p> <p>Pump down @ 16 bpm/4200 psi. Line speed 354 fpm.</p> <p>TBP: 146            FTR: 182,733 bbls            CR -80 bbls            LTR: 182,653 bbls.</p>	1.5
WOZF	Well shut in waiting on 17h & 18h Zipper ops.	3
U_PEPXD	Replace alternator on Blender.	1.75
STIM	Prime up & pressure test w/9,500 psi, Blender was shut down due to severe hydraulic leak, PPS mechanic accessing problem @ report time.	1.25



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 30 Daily Operation: 1/26/2015 06:00 - 1/27/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 132	Days on Location (days) 30	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig PIONEER PUMPING SERVICES, 5

Operations Summary  
Frac Stg #36,37,38 of 47  
Perf Stg # 37,38, 39

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 2.00 hrs Cumulative: 26.25 hrs  
Ark-la-tech WL: 0.0 hrs Cumulative: 3.5 hrs  
Select H2O Transfer : 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 198,738 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 198,658 bbls  
TSIF - 8,761,395 lbs

Days: Bob Belcher / Shawn Everett  
Nights: Jerry Fletcher / Randy Armstrong  
Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>FRAC STG #36 of 47:Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 36 bbls 15% HCL, 264,911 lbs.30/50 Brown sand &amp; 5,266 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 4,922 psi. Acid on 40 BPM @ 5,420 psi Acid clear 40 BPM @ 5,151 psi</p> <p>Stepdown: 80 bpm : 6,590 psi 60 bpm: 5,765 psi 40 bpm: 5,038 psi 20 bpm: 4,469 psi Pad ISIP: 3,934 psi FG: 0.87 psi/ft 5 min: 3,272 psi Started stage with 15 # equivalent gel loading (10 cp @ 47*) XL Ph 9.5</p> <p>Increased rate to 80 bpm. Pumped 1,380 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 360 bbls. Ending rate 80 bpm 5,112 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 80 bpm Avg psi: 7,236 psi Max rate: 80 bpm Max psi: 7,640 psi ISIP: 4,127 psi FG: .0.89 psi/ft</p> <p>FTR=187,999 bbls LTR= 187,919 bbls TSIF= 8,218,834 lbs.</p>	1.5
PERF	<p>RU Ark La Tex WL for Stage # 37. RIH &amp; pump down Weatherford CFP &amp; 6 each 3.125" guns. Set CFP @ 11,681'. Perforate intervals : 11,460'-62', 11,620'-22', 11,580'-82' , 11,540'-42' , 11,500'- 02' ,&amp; 11,460'-62' w/ 42 shots, 3.5 SPF, 60*, 21.5 GR, 0.42" EHD perf guns. 42 holes total. POOH. All shots fired. RD WL . Pump down @ 16 bpm/4100 psi. Line speed 300 fpm.</p> <p>118 bbls used for pump down. FTR: 188,117 bbls. LTR: 188,037 bbls.</p>	1.5
WOZF	Well shut in waiting on 17h & 18h Zipper ops.	2
U_PEPXD	Had to solder cable for Bulkhead for RPM monitor on blender # 12009	2

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>FRAC STG #37 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 36 bbls 15% HCL, 268,141 lbs. 20/40 Brown sand &amp; 5,113 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 5,223 psi.            Acid on 40 BPM @ 6,104 psi            Acid clear 40 BPM @ 5,374 psi</p> <p>Stepdown:            80 bpm : 6,697 psi            60 bpm: 5,970 psi            40 bpm: 5,111 psi            20 bpm: 4,504 psi            Pad ISIP: 3,988 psi FG: 0.87 psi/ft 5 min: 3,378 psi            Started stage with 15 # equivalent gel loading (10 cp @ 64*)            XL Ph 10</p> <p>Increased rate to 80 bpm. Pumped 1,223 bbl pad Ramped 20/40 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 355 bbls. Ending rate 80 bpm 6,366 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 79 bpm Avg psi: 7,106 psi            Max rate: 81 bpm Max psi: 7,741 psi            ISIP: 4,072 psi FG: .088 psi/ft</p> <p>FTR=193,230 bbls LTR=193,150 bbls            TSIF= 8,486,975 lbs.</p>	1.5
PERF	<p>RU Ark La Tex WL for Stage # 38. RIH &amp; pump down Weatherford CFP &amp; 6 each 3.125" guns. Set CFP @ 11,441'. Perforate intervals : 11,420'-22', 11,380'-82', 11,340'-42', 11,300'-02', 11,260'-62', &amp; 11,220'-22' w/ 42 shots, 3.5 SPF, 60*, 21.5 GR, 0.42" EHD perf guns. 42 holes total. POOH. All shots fired. RD WL .</p> <p>Pump down @ 16 bpm/4100 psi. Line speed 300 fpm.</p> <p>108 bbls used for pump down.            FTR: 193,338 bbls.            LTR: 193,258 bbls.</p>	1.5
WOZF	Well shut in waiting on 17h & 18h Zipper ops.	4.75
STIM	<p>FRAC STG #38 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 36 bbls 15% HCL, 274,420 lbs. 20/40 Brown sand &amp; 5,291 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 5,303 psi.            Acid on 20 BPM @ 5,385 psi            Acid clear 20 BPM @ 5,027 psi</p> <p>Stepdown:            80 bpm : 7,491 psi            60 bpm: 6,271 psi            40 bpm: 5,209 psi            20 bpm: 4,676 psi            Pad ISIP: 4,133 psi FG: 0.89 psi/ft 5 min: 3,486 psi            Started stage with 15 # equivalent gel loading (10 cp @ 60*)            XL Ph 10</p> <p>Increased rate to 80 bpm. Pumped 1,393 bbl pad Ramped 20/40 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 350 bbls. Ending rate 80 bpm 6,240 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 80 bpm Avg psi: 7,281 psi            Max rate: 81 bpm Max psi: 7,783 psi            ISIP: 4,111 psi FG: .088 psi/ft</p> <p>FTR= 198,629 bbls LTR= 198,549 bbls            TSIF= 8,761,395 lbs.</p>	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
PERF	RU Ark La Tex WL for Stage # 39. RIH & pump down Weatherford CFP & 6 each 3.125" guns. Set CFP @ 11,201'. Perforate intervals : 11,180'-11,182', 11,140'-11,142', 11,100'-11,102' , 11,060'-11,062', 11,020'- 11,022',& 10,980-10,982' w/ 42 shots, 3.5 SPF, 60*, 21.5 GR, 0.42" EHD perf guns. 42 holes total. POOH. All shots fired. RD WL . Pump down @ 16 bpm/-4000 psi. Line speed 340- fpm, Ten 1270  TBP: 109 FTR: 198,738 bbls. LTR:198,658 bbls.	1.25
WOZF	Well shut in waiting on 17h & 18h Zipper ops.	6.5

Report #: 31 Daily Operation: 1/27/2015 06:00 - 1/28/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
133	31	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
		PIONEER PUMPING SERVICES, 5
Operations Summary Frac Stgs #39,40, Perf Stgs #40,41		

Remarks
DOWNTIME:
Weather: 0.0 hrs Cumulative: 0.0 hrs
PPS Frac Crew 5: 3.25 hrs Cumulative: 29.50 hrs
Ark-la-tech WL: 0.0 hrs Cumulative: 3.5 hrs
Select H2O Transfer : 0.0 hrs Cumulative: 0.0 hrs
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs
Priority WH: 0.0 hrs Cumulative: 0.0 hrs
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs
 FTR - 209,966 bbls RT - 0.0 bbls CR - 80 bbls LTR - 209,886 bbls TSIF -9,120,581 lbs
 Days: Bob Belcher / Shawn Everett Nights: Jerry Fletcher / Randy Armstrong Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
WOZF	Well shut in waiting on 17h & 18h Zipper ops.	1.5
U_PEPXD	Working on LA pumps	1.5
STIM	FRAC STG #39 of 47:Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 30 bbls 15% HCL, While coming up to rate before stepdown,Blender #1209 developed oil leak on timing belt cover on engine 2.Completed step down,& 5 minute leak off test.620 bbls total pumped.  Formation broke @ 20 bpm @ 5,017 psi. Acid on 40 BPM @ 5,590 psi Acid clear 40 BPM @ 5,216 psi  Stepdown: 80 bpm : 6,700 psi 60 bpm: 5,695 psi 40 bpm: 4,985 psi 20 bpm: 4,442 psi Pad ISIP: 3,958 psi FG: 0.87 psi/ft 5 min: 3,496 psi  FTR=199,358 bbls LTR= 199,278 bbls TSIF= 8,761,395  .	0.5
U_PEPXD	Repair oil leak on timing belt cover on engine 2 of blender #1209	1
STIM	FRAC STG #39 of 47, Resume stage 47, & Xlink LA pump 2 would not work shut down to repair.	0.5
U_PEPXD	Repair Xlink pump on chem van	0.75

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
STIM	<p>FRAC STG #39 of 47:Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 30 bbls 15% HCL, 91,125 lbs.30/50 Brown sand &amp; 5,751 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 5,017 psi. Acid on 40 BPM @ 5,590 psi Acid clear 40 BPM @ 5,216 psi</p> <p>Stepdown: 80 bpm : 6,700 psi 60 bpm: 5,695 psi 40 bpm: 4,985 psi 20 bpm: 4,442 psi Pad ISIP: 3,958 psi FG: 0.87 psi/ft 5 min: 3,496 psi</p> <p>Increased rate to 80 bpm. Pumped 1,518 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 2.00 ppg. Flushed well with 344 bbls. Ending rate 80 bpm 6,215 psi. Placed 34% proppant in formation.</p> <p>Note: Lost Xlink LA #2 again on chem van 316 bbls into 2.00 ppg cut screws &amp; flushed well, called stage good per Engineer Connor Wood.</p> <p>Avg rate: 77 bpm      Avg psi: 5,503 psi Max rate: 81 bpm      Max psi: 7,759 psi ISIP: 4,421 psi      FG: .092 psi/ft</p> <p>FTR=204,489 bbls LTR= 204,409 bbls TSIF= 8,852,520 lbs.</p>	0.75
PERF	<p>RU Ark La Tex WL for Stage # 40. RIH &amp; pump down Weatherford CFP &amp; 6 each 3.125" guns. Set CFP @ 10,961'. Perforate intervals : 10,940'-42', 10,900'-02', 10,860'-62', 10,820'-22', 10,780'- 82', &amp; 10,740'-42' w/ 42 shots, 3.5 SPF, 60", 21.5 GR, 0.42" EHD perf guns. 42 holes total. POOH. All shots fired. RD WL .</p> <p>Pump down @ 16 bpm/4100 psi. Line speed 300 fpm.</p> <p>95 bbls used for pump down. FTR: 204,584 bbls. CR- 80 bbls LTR: 204,504 bbls.</p>	1.5
WOZF	WSI, waiting on 17h & 18h Zipper ops.	9
STIM	<p>FRAC STG #40 of 47:Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/39 bbls 15% HCL, 268,061 lbs.30/50 Brown sand &amp; 5,296 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 5,240 psi. Acid on 20 BPM @ 5,240 psi Acid clear 20 BPM @ 4,606 psi</p> <p>Stepdown: 80 bpm : 6,165 psi 60 bpm: 5,461 psi 40 bpm: 4,547 psi 20 bpm: 4,345 psi</p> <p>Pad ISIP:3,946 psi FG: 0.87 psi/ft 5 min: 3,556 psi Started stage with 15# equivalent gel loading ( 10 cp @ 50* ) XL PH 10</p> <p>Increased rate to 80 bpm. Pumped bbl pad Ramped 30/50 brown sand from 0.50 ppg to 2.00 ppg. Flushed well with 342 bbls. Ending rate 80 bpm 5,980 psi. Placed 100% proppant in formation.</p> <p>Avg rate:79.6 bpm      Avg psi: 6,763 psi Max rate: 81 bpm      Max psi: 7,231 psi ISIP: 3,867 psi      FG: .086 psi/ft</p> <p>FTR= 209,880 bbls LTR= 209,800 bbls TSIF= 9,120,581 lbs.</p>	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
PERF	RU Ark La Tex WL for Stage # 41. RIH & pump down Weatherford CFP & 6 each 3.125" guns. Set CFP @ 10,721'. Perforate intervals :10,700'-10,702, 10,660'-10,662, 10,620'-10,622', 10,580'-10,582', 10,538'-10,540', 10,503'-10,505" w/ 42 shots, 3.5 SPF, 60*, 21.5 GR, 0.42" EHD perf guns. 42 holes total. POOH. All shots fired. RD WL . Pump down @ 16 bpm/4,100 psi. Line speed 345 fpm.  TBP: 86 FTR: 209,966 bbls. CR- 80 bbls LTR: 209,886 bbls. TSIF=9,120,581	1.25
WOZF	WSI, waiting on 17h & 18h Zipper ops.	4.25

Report #: 32 Daily Operation: 1/28/2015 06:00 - 1/29/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
134	32	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
		PIONEER PUMPING SERVICES, 5

#### Operations Summary

Frac Stgs # 41,42,&43

Perf Stgs # 42,43,&44

#### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 3.00 hrs Cumulative: 29.50 hrs  
Ark-la-tech WL: 0.0 hrs Cumulative: 3.5 hrs  
Select H2O Transfer : 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 227,104 bbls

RT - 0.0 bbls

CR - 80 bbls

LTR - 227,024 bbls

TSIF -9,926,019 lbs

Days: Mike Drennan/ Jimmy Lake

Nights: Bob Belcher / Shawn Everett

Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
WOZF	WSI- Waiting on zipper frac operations on 17H	2
U_PEPXD	Had a new stainless steel pump on location. They had replaced valves and seats in this pump last night without talking to mantiance in Midland. Had to wait on a phone from the office to see if they could use the pump. They were told not to use the pump and had to then do valves and seats in two other pumps to have enough pumps to go down hole. Had to replace N2 pop-off.	3

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>Frac Stage 41 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 20 bbls 15% HCL, 268567 lbs 30/50 sand &amp; 5883 bbls of hybrid fluid down 5.5" #20# csg. Formation broke @ 4779 psi @ 20 bpm</p> <p>Step Test 80 bpm @ 6159 psi 60 bpm 5526 psi 40 bpm @ 4896 psi 20 bpm @ 4398 psi Pad ISIP: 3910 psi. FG: 0.87#. 5 min SIP: 3569 psi.</p> <p>Acid on form @ 20 bpm 4811 psi Acid clear @ 20 bpm 4637psi</p> <p>Increased rate to 80 bpm. Started stage w/ 15# gel equivalent loading, 10 cp. @ 58 °F. Pumped 2066 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 337 bbls. Ending rate 80 bpm @ 5814 psi. Placed 100% prop in formation. Avg. rate: 79.7 bpm Avg. psi: 6705 psi Max. rate: 80.7 bpm Max. psi: 7450 psi End of job ISIP 4082 FG: 0.88</p> <p>FTR: 215,849 LTR: 215,769 TSIF: 9,389,148</p>	2
PERF	<p>RU Ark-La-Tex WL for Stage# Stage 42 of 47 . RIH &amp; pump down Weatherford CFP &amp; (6) 3-1/8 perforating guns W/ 21.5 gram, 4 SPF. 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 10481. Perforate at intervals: 10260-10262, 10300-10302, 10340-10342,10380-10382, 10420-10422,10460-10462, Total of 42 shots. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 14 bpm /3500psi, 338 ft/min, 1122 Line Ten.</p> <p>TBP: 72 BBL FTR: 215921 BBL CR: 80 LTR: 215841 BBL</p>	1.5
WOZF	WSI- Waiting on zipper frac operations on 18 and 17H	4
STIM	<p>FRAC STG #42 of 47:Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 30 bbls 15% HCL, 269,244 lbs.30/50 Brown sand &amp; 5,656 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 4,830 psi. Acid on 50 BPM @ 6,500 psi Acid clear 80 BPM @ 7,652 psi</p> <p>Stepdown: 80 bpm : 6,042 psi 60 bpm: 5,403 psi 40 bpm: 4,776 psi 20 bpm: 4,306 psi Pad ISIP: 3,934 psi FG: 0.87 psi/ft 5 min:3,590 psi Started job with 15# equivilant gel system. ( 10 cP @) Base Gel Water PH 7 XL PH 10</p> <p>Increased rate to 80 bpm. Pumped 1,798 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 2.00 ppg. Flushed well with 333 bbls. Ending rate 40 bpm 5,039 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 80 bpm Avg psi: 6,713 psi Max rate: 81 bpm Max psi: 7,898 psi ISIP: 4,122 psi FG: .0.9 psi/ft</p> <p>FTR=221,577 bbls LTR=221,497 bbls TSIF= 9,658,392 lbs.</p>	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
PERF	<p>RU Ark-La-Tex WL for Stage# 43 of 47 . RIH &amp; pump down Weatherford CFP &amp; (6) 3-1/8 perforating guns W/ 21.5 gram, 4 SPF. 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 10,241. Perforate at intervals: 10220-10222, 10180-10182, 10140-10142, 10100-10102, 10060-10062, 10020-10022, Total of 42 shots. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 14 bpm /3500psi, 338 ft/min, 1122 Line Ten.</p> <p>TBP: 61 BBL FTR: 221,638 BBL CR: 80 LTR: 221,558 BBL</p>	1.5
WOZF	WSI- Waiting on zipper frac operations on 18 and 17H	4
STIM	<p>FRAC STG #43 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 41 bbls 15% HCL, 267,627 lbs. 30/50 Brown sand &amp; 5,409 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 4,815 psi. Acid on 40 BPM @ 5,534 psi Acid clear 40 BPM @ 5,290 psi</p> <p>Stepdown: 80 bpm : 6,754 psi 60 bpm: 5,294 psi 40 bpm: 4,735 psi 20 bpm: 4,347 psi Pad ISIP: 3,993 psi FG: 0.88 psi/ft 5 min: 3,580 psi Started stage with 15 # equivalent gel loading (10 cp @ 65") XL Ph 10</p> <p>Increased rate to 80 bpm. Pumped 1,498 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 327 bbls. Ending rate 80 bpm 5,691 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 79 bpm Avg psi: 6,417 psi Max rate: 81 bpm Max psi: 7,025 psi ISIP: 3,914 psi FG: .0.87 psi/ft</p> <p>FTR=227,047 bbls LTR=226,967 bbls TSIF= 9,926,019 lbs.</p>	1.5
PERF	<p>RU Ark La Tex WL for Stage # 44. RIH &amp; pump down Weatherford CFP &amp; 5 each 3.125" guns. Set CFP @ 10,001'. Perforate intervals : 9,980'-82', 9,940'-42', 9,900'-02', 9,860'-62', 9,820'- 22', &amp; 9,780'-82' w/ 42 shots, 3.5 SPF, 60", 21.5 GR, 0.42" EHD perf guns. 42 holes total. POOH. All shots fired. RD WL . Pump down @ 14 bpm/3,600 psi. Line speed 300 fpm.</p> <p>57 bbls used for pump down. FTR: 227,104 bbls. LTR=227,024 bbls</p>	1.5
WOZF	WSI- Waiting on zipper frac operations on 18 and 17H	1.5



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 33 Daily Operation: 1/29/2015 06:00 - 1/30/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 135	Days on Location (days) 33	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig PIONEER PUMPING SERVICES, 5

### Operations Summary

Frac Stgs # 44,45,& 46  
Perf Stgs # 45,46,&47

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 1.5 hrs Cumulative: 31 hrs  
Ark-la-tech WL: 0.0 hrs Cumulative: 3.5 hrs  
Select H2O Transfer : 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 244,008 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 243,928 bbls  
TSIF -10,713,057 lbs

Days: Mike Drennan/ Jimmy Lake  
Nights: Bob Belcher / Shawn Everett  
Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
WOZF	WSI- Waiting on zipper frac operations on 17H	2.25
STIM	<p>Frac Stage 44 of 47 Test stack to 9500 psi. Hold 1500 psi on backside. PPS frac'd per schedule w/ 20 bbls 15% HCL, 267962 lbs 30/50 sand &amp; 5563 bbls of hybrid fluid down 5.5" #20# csg. Formation broke @ 4791 psi @ 20 bpm</p> <p>Step Test 80 bpm @ 5921 psi 60 bpm 5250 psi 40 bpm @ 4656 psi 20 bpm @ 4210 psi</p> <p>Pad ISIP: 3875 psi. FG: 0.86#. 5 min SIP: 3569 psi.</p> <p>Acid on form @ 20 bpm 4847 psi Acid clear @ 20 bpm 4383psi</p> <p>Increased rate to 80 bpm. Started stage w/ 15# gel equivalent loading, 9 cp. @ 62 *F. Pumped 1679 bbl pad. Ramped 30/50 sand from 0.5 ppg to 3 ppg. Flushed well with 323 bbls. Ending rate 80 bpm @ 5823 psi. Placed 100% prop in formation. Avg. rate: 79.8 bpm Avg. psi: 6409 psi Max. rate: 81.2 bpm Max. psi: 7113 psi End of job ISIP 4242 FG: 0.89</p> <p>FTR: 232667 LTR: 232587 TSIF: 10193981</p>	2
PERF	<p>RU Ark-La-Tex WL for Stage# Stage 45 of 47 . RIH &amp; pump down Weatherford CFP &amp; (6) 3-1/8 perforating guns W/ 21.5 gram, 4 SPF. 60 degree phasing, 0.42 EHD. Position and set composite frac plug at 9761. Perforate at intervals: 9698-9700, 9662-9664, 9620-9622, 9580-9582, 9540-9542, 9549-9542 Total of 42 shots. POOH. Stand wireline back. Confirmed all guns fired. Pump down @ 14 bpm /3600psi, 340 ft/min, 1049 Line Ten.</p> <p>TBP: 44 BBL FTR: 232711 BBL CR- 80 LTR: 232631 BBL</p>	1.25
WOZF	WSI- Waiting on zipper frac operations on 18 and 17 H	5.75

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>FRAC STG #45 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 17 bbls 15% HCL, 267,837 lbs. 30/50 Brown sand &amp; 5,675 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 5,157 psi.            Acid on 40 BPM @ 5,528 psi            Acid clear 40 BPM @ 4,929 psi</p> <p>Stepdown:            80 bpm : 5,883 psi            60 bpm: 5,253 psi            40 bpm: 4,681 psi            20 bpm: 4,236 psi            Pad ISIP: 3,955 psi FG: 0.87 psi/ft 5 min: 3,570 psi            Started stage with 15 # equivalent gel loading (9 cp @ 65*)            XL Ph 10</p> <p>Increased rate to 80 bpm. Pumped 1213 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 316 bbls. Ending rate 80 bpm 5,943 psi. Placed 100% proppant in formation.</p> <p>Note: pressure spiked 315 bbls into .50 ppg, cut screws flushed well, pressure came back down restarted sand &amp; completed job with no further issues.</p> <p>Avg rate: 78 bpm Avg psi: 7,021 psi            Max rate: 81 bpm Max psi: 8,945 psi            ISIP: 3,993 psi FG: .088 psi/ft</p> <p>FTR=238,386 bbls            LTR=238,306 bbls            TSIF= 10,461,818 lbs.</p>	1.5
PERF	<p>RU Ark La Tex WL for Stage # 46. RIH &amp; pump down Weatherford CFP &amp; 5 each 3.125" guns. Set CFP @ 9,521'. Perforate intervals : 9,500'-02', 9,460'-62', 9,420'-22', 9,380'-82', 9,340'-42', &amp; 9,300'-02' w/ 42 shots, 3.5 SPF, 60*, 21.5 GR, 0.42" EHD perf guns. 42 holes total. POOH. All shots fired. RD WL .</p> <p>Pump down @ 16 bpm/3200 psi. Line speed 300 fpm.</p> <p>40 bbls used for pump down.            FTR: 238,426 bbls.            LTR=238,346 bbls</p>	1.5
WOZF	WSI- Waiting on zipper frac operations on 18 and 17 H	5.25
U_PEPXD	PPS Ran out of acid.	1.5
STIM	<p>FRAC STG #46 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 34 bbls 15% HCL, 269,239 lbs. 30/50 Brown sand &amp; 5,552 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 4,908 psi.            Acid on 60 BPM @ 6,491 psi            Acid clear 80 BPM @ 6,765 psi</p> <p>Stepdown:            80 bpm : 6,582 psi            60 bpm: 5,627 psi            40 bpm: 4,667 psi            20 bpm: 4,250 psi            Pad ISIP: 4,060 psi FG: 0.88 psi/ft 5 min: 3,640 psi            Started stage with 15 # equivalent gel loading (9 cp @ 65*)            XL Ph 10</p> <p>Increased rate to 80 bpm. Pumped 1,650 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 311 bbls. Ending rate 20 bpm 4,307 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 80 bpm Avg psi: 6,290 psi            Max rate: 81 bpm Max psi: 7,063 psi            ISIP: 4,085 psi FG: .089 psi/ft</p> <p>FTR= 243,978 bbls            LTR=243,898 bbls            TSIF= 10,713,057 lbs.</p>	1.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
PERF	RU Ark La Tex WL for Stage # 47. RIH & pump down Weatherford CFP & 6 each 3.125" guns. Set CFP @ 9,281'. Perforate intervals : 9,260'-62', 9,200'-22', 9,180'-82' , 9,140'-42', 9,097'- 99',& 9,058'-60' w/ 42 shots, 3.5 SPF, 60", 21.5 GR, 0.42" EHD perf guns. 42 holes total. POOH. All shots fired. RD WL . Pump down @ 12 bpm/3400 psi. Line speed 300 fpm.  30 bbls used for pump down. FTR: 244,008 bbls. LTR= 243,928 bbls	1.5

Report #: 34 Daily Operation: 1/30/2015 06:00 - 1/31/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
136	34	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
		PIONEER PUMPING SERVICES, 5

#### Operations Summary

Frac Stg 47.  
Set kill plug @ 8950'.  
Rdmol frac equipment, wireline & pumpdown equipment.

Continue RDMOL.

#### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
PPS Frac Crew 5: 0.0 hrs Cumulative: 31 hrs  
Ark-la-tech WL: 0.0 hrs Cumulative: 3.5 hrs  
Select H2O Transfer : 0.0 hrs Cumulative: 0.0 hrs  
Circle 8 crane: 0.0 hrs Cumulative: 0.0 hrs  
Weatherford plugs: 0.0 hrs Cumulative: 0.0 hrs  
API Lube/Grease: 0.0 hrs Cumulative: 0.0 hrs  
Priority WH: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 249,497 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 249,417 bbls  
TSIF - 10,998,870 lbs

Days: Mike Drennan/ Jimmy Lake  
Nights: Bob Belcher / Shawn Everett  
Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
WOZF	WSI- Waiting on zipper frac operations on 18 and 17 H	3.75

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
STIM	<p>FRAC STG #47 of 47: Test stack to 9,500 psi. Hold 1500 psi on backside. PPS frac'd perfs per schedule w/ 44 bbls 15% HCL, 267,813 lbs. 30/50 Brown sand &amp; 5,489 bbls Hybrid Fluid down 5.5" csg.</p> <p>Formation broke @ 20 bpm @ 4748 psi.            Acid on 20 BPM @ 4615 psi            Acid clear 20 BPM @ 4286 psi</p> <p>Stepdown:            80 bpm : 6000 psi            60 bpm: 5305 psi            40 bpm: 4655 psi            20 bpm: 4200 psi            Pad ISIP: 3901 psi FG: 0.86 psi/ft 5 min: 3568 psi            Started stage with 15 # equivalent gel loading (9 cp @ 60")            XL Ph 10</p> <p>Increased rate to 80 bpm. Pumped 1,590 bbl pad Ramped 30/50 brown sand from 0.50 ppg to 3.0 ppg. Flushed well with 303 bbls. Ending rate 80 bpm 5595 psi. Placed 100% proppant in formation.</p> <p>Avg rate: 80 bpm Avg psi: 6194 psi            Max rate: 81 bpm Max psi: 7332 psi            ISIP: 4053 psi FG: .0.88 psi/ft</p> <p>FTR= 249,497 bbls            LTR= 249,417 bbls            TSIF= 10,998,870 lbs.</p>	1.5
PERF	RU Ark La Tex WL. Rih & set kill plug @ 8,950'. Pooh. Bled pressure down to 0 psi.	1.5
RURD	Rdmol frac equipment, wireline & pumpdown equipment.	17.25

### Report #: 35 Daily Operation: 1/31/2015 06:00 - 2/1/2015 06:00

Job Category	Primary Job Type	AFE Number
ORIG COMPLETION	OCM	033228
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
137	35	0.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig

#### Operations Summary

Rdmol frac equipment & all support equipment.

Wsi & Secured. Waiting on drill out ops.

#### Remarks

##### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
 Express Transfer: 0.0 hrs Cumulative: 0.0 hrs  
 Express Flowback: 0.0 hrs Cumulative: 0.0 hrs  
 Esco: 0.0 hrs Cumulative: 0.0 hrs  
 Vision: 0.0 hrs Cumulative: 0.0 hrs  
 Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 249,497 bbls  
 RT - 0.0 bbls  
 CR - 80 bbls  
 LTR - 249,417 bbls  
 TSIF - 10,998,870 lbs

Days: Mike Drennan  
 Nights: Bob Belcher  
 Phone # 432-400-2263

### Time Log Summary

Operation	Com	Dur (hr)
RURD	<p>Continue rigging down and moving off location frac equipment. Transferred frac tanks &amp; water around for drill out ops.</p> <p>Released all unnecessary equipment.</p> <p>Wsi. Waiting on drill out ops.</p>	24

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

**Report #: 36 Daily Operation: 2/1/2015 06:00 - 2/2/2015 06:00**

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 138	Days on Location (days) 36	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig

**Operations Summary**

Wsi. Waiting on drill out ops.

**Remarks**

**DOWNTIME:**

Weather: 0.0 hrs Cumulative: 0.0 hrs

Express Transfer: 0.0 hrs Cumulative: 0.0 hrs

Express Flowback: 0.0 hrs Cumulative: 0.0 hrs

Esco: 0.0 hrs Cumulative: 0.0 hrs

Vision: 0.0 hrs Cumulative: 0.0 hrs

Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 249,497 bbls

RT - 0.0 bbls

CR - 80 bbls

LTR - 249,417 bbls

TSIF - 10,998,870 lbs

Days: Mike Drennan

Nights: Bob Belcher

Phone # 432-400-2263

**Time Log Summary**

Operation	Com	Dur (hr)
WSI	Wsi. Waiting on drill out ops on 18H.	24

**Report #: 37 Daily Operation: 2/2/2015 06:00 - 2/3/2015 06:00**

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 139	Days on Location (days) 37	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig

**Operations Summary**

Wsi. Waiting on drill out ops.

**Remarks**

**DOWNTIME:**

Weather: 0.0 hrs Cumulative: 0.0 hrs

Express Transfer: 0.0 hrs Cumulative: 0.0 hrs

Express Flowback: 0.0 hrs Cumulative: 0.0 hrs

Esco: 0.0 hrs Cumulative: 0.0 hrs

Vision: 0.0 hrs Cumulative: 0.0 hrs

Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 249,497 bbls

RT - 0.0 bbls

CR - 80 bbls

LTR - 249,417 bbls

TSIF - 10,998,870 lbs

Days: Mike Drennan

Nights: Bob Belcher

Phone # 432-400-2263

**Time Log Summary**

Operation	Com	Dur (hr)
WSI	Wsi. Waiting on drill out ops on 18H.	24

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

**Report #: 38 Daily Operation: 2/3/2015 06:00 - 2/4/2015 06:00**

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 140	Days on Location (days) 38	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig

**Operations Summary**

Wsi. Waiting on drill out ops.

**Remarks**

**DOWNTIME:**

Weather: 0.0 hrs Cumulative: 0.0 hrs

Express Transfer: 0.0 hrs Cumulative: 0.0 hrs

Express Flowback: 0.0 hrs Cumulative: 0.0 hrs

Esco: 0.0 hrs Cumulative: 0.0 hrs

Vision: 0.0 hrs Cumulative: 0.0 hrs

Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 249,497 bbls

RT - 0.0 bbls

CR - 80 bbls

LTR - 249,417 bbls

TSIF - 10,998,870 lbs

Days: Mike Drennan

Nights: Bob Belcher

Phone # 432-400-2263

**Time Log Summary**

Operation	Com	Dur (hr)
WSI	Wsi. Waiting on drill out ops on 18H.	24

**Report #: 39 Daily Operation: 2/4/2015 06:00 - 2/5/2015 06:00**

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 141	Days on Location (days) 39	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig

**Operations Summary**

Wsi. Waiting on drill out ops.

**Remarks**

**DOWNTIME:**

Weather: 0.0 hrs Cumulative: 0.0 hrs

Express Transfer: 0.0 hrs Cumulative: 0.0 hrs

Express Flowback: 0.0 hrs Cumulative: 0.0 hrs

Esco: 0.0 hrs Cumulative: 0.0 hrs

Vision: 0.0 hrs Cumulative: 0.0 hrs

Double T rentals: 0.0 hrs Cumulative: 2.5 hrs

FTR - 249,497 bbls

RT - 0.0 bbls

CR - 80 bbls

LTR - 249,417 bbls

TSIF - 10,998,870 lbs

Days: Wendell Wiggins

Luke Armstrong

Nights: Mike Drennan

TD Jones

**Time Log Summary**

Operation	Com	Dur (hr)
WSI	Wsi. Waiting on drill out ops on 18H.	24

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

**Report #: 40 Daily Operation: 2/5/2015 06:00 - 2/6/2015 06:00**

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 142	Days on Location (days) 40	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig

Operations Summary  
Wsi. Waiting on drill out ops.

Remarks  
DOWNTIME:  
Weather: 0.0 hrs Cumulative: 0.0 hrs  
Express Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Express Flowback: 0.0 hrs Cumulative: 0.0 hrs  
Esco: 0.0 hrs Cumulative: 0.0 hrs  
Vision: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs  
  
FTR - 249,497 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 249,417 bbls  
TSIF - 10,998,870 lbs  
  
Days: Wendell Wiggins  
Luke Armstrong  
  
Nights: Mike Drennan  
TD Jones

### Time Log Summary

Operation	Com	Dur (hr)
WSI	Wsi. Waiting on drill out ops on 18H.	24

**Report #: 41 Daily Operation: 2/6/2015 06:00 - 2/7/2015 06:00**

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 143	Days on Location (days) 41	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig

Operations Summary  
Wsi. Waiting on drill out ops.

Remarks  
DOWNTIME:  
Weather: 0.0 hrs Cumulative: 0.0 hrs  
Express Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Express Flowback: 0.0 hrs Cumulative: 0.0 hrs  
Esco: 0.0 hrs Cumulative: 0.0 hrs  
Vision: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs  
  
FTR - 249,497 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 249,417 bbls  
TSIF - 10,998,870 lbs  
  
Days: Wendell Wiggins  
Luke Armstrong  
  
Nights: Mike Drennan  
TD Jones

### Time Log Summary

Operation	Com	Dur (hr)
WSI	Wsi. Waiting on drill out ops on 18H.	24



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

**Report #: 42 Daily Operation: 2/7/2015 06:00 - 2/8/2015 06:00**

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 144	Days on Location (days) 42	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig

Operations Summary  
Wsi. Waiting on drill out ops.

Remarks  
DOWNTIME:  
Weather: 0.0 hrs Cumulative: 0.0 hrs  
Express Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Express Flowback: 0.0 hrs Cumulative: 0.0 hrs  
Esco: 0.0 hrs Cumulative: 0.0 hrs  
Vision: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs  
  
FTR - 249,497 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 249,417 bbls  
TSIF - 10,998,870 lbs  
  
Days: Wendell Wiggins  
Luke Armstrong  
  
Nights: Mike Drennan  
TD Jones

**Time Log Summary**

Operation	Com	Dur (hr)
WSI	Wsi. Waiting on drill out ops on 18H.	24

**Report #: 43 Daily Operation: 2/8/2015 06:00 - 2/9/2015 06:00**

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 145	Days on Location (days) 43	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig

Operations Summary  
Wsi. Waiting on drill out ops.

Remarks  
DOWNTIME:  
Weather: 0.0 hrs Cumulative: 0.0 hrs  
Express Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Express Flowback: 0.0 hrs Cumulative: 0.0 hrs  
Esco: 0.0 hrs Cumulative: 0.0 hrs  
Vision: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs  
  
FTR - 249,497 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 249,417 bbls  
TSIF - 10,998,870 lbs  
  
Days: Wendell Wiggins  
Luke Armstrong  
  
Nights: Mike Drennan  
TD Jones

**Time Log Summary**

Operation	Com	Dur (hr)
WSI	Wsi. Waiting on drill out ops on 18H.	24

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 44 Daily Operation: 2/9/2015 06:00 - 2/10/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 146	Days on Location (days) 44	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig Coil Tubing Solutions, 11

### Operations Summary

Rig up Coil Tubing Solutions/ Crane / Emerald Surf/  
Make up BHA / Test coil

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
Express Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Express Flowback: 0.0 hrs Cumulative: 0.0 hrs  
Coil Tubing Solutions: 0.0 hrs Cumulative: 0.0 hrs  
Oil States: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs  
Voyager : 0.0 hrs Cumulative

FTR - 249,497 bbls  
RT - 0.0 bbls  
CR - 80 bbls  
LTR - 249,417 bbls  
TSIF - 10,998,870 lbs

Days: Wendell Wiggins  
Luke Armstrong

Nights: Mike Drennan  
TD Jones

Dilling BHA;  
Coil Conn. .87"  
Dual BPV 1.21'  
Jars 4.30'  
Hyd Dis 2.13'  
Tempress Screen 2.69'  
Tempress Hydropull 2.69'  
Xover .60  
Motor 11.33'  
Xover 1.17'  
4 5/8" JZ Rock Bit .51" SN # 1424605  
BHA Length 27.5 Ft.

### Time Log Summary

Operation	Com	Dur (hr)
WSI	Wsi. Waiting on drill out ops on 18H.	16
SAFETY	JSA/Safety Meeting	0.5
RURD	Lay containment for equipment. Start bringing in CTU Solutins equipment, crane and start rigging up. Bring in chemical plant and rig up Make up coil connector and pull test to 30,000 lb., make up BHA, at report time.  Dilling BHA; C Conn .87" Dual BPV 1.21' Jars 4.30' Hyd Dis 2.13' Tempress Screen 2.69' Tempress Hydropull 2.69' Xover .60 Motor 11.33' Xover 1.17' 4 5/8" JZ Rock Bit .51" SN # 1424605 BHA Length 27.5 Ft.	7.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 45 Daily Operation: 2/10/2015 06:00 - 2/11/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 147	Days on Location (days) 45	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig Coil Tubing Solutions, 11

### Operations Summary

Test motor  
RIH w/ BHA  
Drillout Kill Plug  
and Plugs #46 thru 37

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
Express Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Express Flowback: 0.0 hrs Cumulative: 0.0 hrs  
Coil Tubing Solutions: 0.0 hrs Cumulative: 0.0 hrs  
Oil States: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs  
Voyager : 0.0 hrs Cumulative

FTR - 249,497 bbls  
RT - 529 bbls  
CR - 609 bbls  
LTR - 248,888 bbls  
TSIF - 10,998,870 lbs  
Sand recoverd - 8,000 lbs

Days: Wendell Wiggins  
Luke Armstrong

Nights: Mike Drennan  
TD Jones

Dilling BHA;  
Coil Conn. .87"  
Dual BPV 1.21'  
Jars 4.30'  
Hyd Dis 2.13'  
Tempress Screen 2.69'  
Tempress Hydropull 2.69'  
Xover .60  
Motor 11.33'  
Xover .52  
4 5/8" JZ Rock Bit .51" SN # 1422161  
BHA Length 26.85 Ft.

Roll off Box # OT2544 in use

### Time Log Summary

Operation	Com	Dur (hr)
MILL_CT	Test motor and BHA	1
MILL_CT	RIH w/ Coil	3
MILL_CT	Tag/Drill Weatherford CFP #Kill Plug. Depth 8958'. Drilled CFP in 12 minutes. Pumping 2.5 BPM @ 2700 PSI Returning 2.5 BPM @ 1600 PSI. On choke 36/64. Sand none. Plug debris are small Sent 10 bbl sweep.	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
MILL_CT	Tag/Drill Weatherford CFP #46. Depth 9281'. Drilled CFP in 21 minutes. Pumping 3.5 BPM @ 4500 PSI Returning 3.5 BPM @ 1700 PSI. On choke 36/64. Sand light. Plug debris are small Sent 5 bbl sweep.	1.25
MILL_CT	Tag/Drill Weatherford CFP #45. Depth 9521'. Drilled CFP in 20 minutes. Pumping 3.5 BPM @ 4200 PSI Returning 3.5 BPM @ 1500 PSI. On choke 36/64. Sand med. Plug debris are small Sent 5 bbl sweep.	0.75
MILL_CT	Tag/Drill Weatherford CFP #44. Depth 9770'. Drilled CFP in 11 minutes. Pumping 3.5 BPM @ 4700 PSI Returning 3.5 BPM @ 1500 PSI. On choke 36/64. Sand heavy. Plug debris are small Sent 10 bbl sweep.	0.5
MILL_CT	Short trip to 8500'. Pump 10 bbl sweep. Clean up hole & run back in.	1.75
MILL_CT	Tag/Drill Weatherford CFP #43. Depth 10003'. Drilled CFP in 18 minutes. Pumping 3.5 BPM @ 4400 PSI Returning 3.5 BPM @ 1500 PSI. On choke 36/64. Sand heavy. Plug debris are small Sent 5 bbl sweep.	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
MILL_CT	Tag/Drill Weatherford CFP #42. Depth 10226'. Drilled CFP in 30 minutes. Pumping 3.5 BPM @ 4200 PSI Returning 3.6 BPM @ 1400 PSI. On choke 36/64. Sand med. Plug debris are small Sent 5 bbl sweep.	1
MILL_CT	Tag/Drill Weatherford CFP #41. Depth 10487'. Drilled CFP in 30 minutes. Pumping 3.5 BPM @ 4400 PSI Returning 3.6 BPM @ 1500 PSI. On choke 36/64. Sand med. Plug debris are small Sent 5 bbl sweep.	1.25
MILL_CT	RIH tag plug #40. Short trip to 8550'. Pump 10 bbl sweep. Clean up hole & run back in. Had stopped and let Flowback get blow down line unplugged.	3
MILL_CT	Tag/Drill Weatherford CFP #40. Depth 10,719'. Drilled CFP in 20 minutes. Pumping 3.5 BPM @ 4000 PSI Returning 3.6 BPM @ 1500 PSI. On choke 36/64. Sand med. Plug debris are small Sent 5 bbl sweep. RIH to plug # 39	1
MILL_CT	Tag/Drill Weatherford CFP #39. Depth 10,961'. plug not drilled, motor is locking up.POOH	0.5
U_MTR	Trip out of hole with coil BHA @ surface 00:15 - Motor locked up Change out Tempress Hydra Pull which stopped working after Kill plug/ Motor/ Bit/ Test Motor / pressure test coil and lines to 5,000 psi 01:00 Trip back in hole	6

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
MILL_CT	Tag/Drill Weatherford CFP #39. Depth 10,971'. Drilled CFP in 5 minutes. Looks like plug had been drilled from previous tag. Pumping 3.5 BPM @ 4000 PSI Returning 3.6 BPM @ 1500 PSI. On choke 36/64. Sand med. Plug debris are small Sent 5 bbl sweep. RIH to plug # 38	0.5
MILL_CT	Tag/Drill Weatherford CFP #38. Depth 11,209'. Drilled CFP in 15 minutes. Pumping 3.5 BPM @ 3,900 PSI Returning 3.6 BPM @ 1400 PSI. On choke 36/64. Sand med. Plug debris are small Sent 5 bbl sweep. RIH to plug # 37	0.75
MILL_CT	.Drilling on Plug No. 37 at report time	0.75

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 46 Daily Operation: 2/11/2015 06:00 - 2/12/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 148	Days on Location (days) 46	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig Coil Tubing Solutions, 11

### Operations Summary

Held JSA  
Drill plug # 37 thru 30  
Washing to top of plug 29 when coil parted  
Clamp of tbg to reel  
Wait on welder to weld coil  
Weld Coil together, Pump sweep &  
POOH w/ Coil Tubing @ 5,800' @ TOR

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
Express Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Express Flowback: 0.0 hrs Cumulative: 0.0 hrs  
Coil Tubing Solutions: 13.0 hrs Cumulative: 13.0 hrs  
Oil States: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs  
Voyager : 0.0 hrs Cumulative

FTR - 249,497 bbls ( Meter zeroed this a.m. 1702 bbls on location @ 06:00 on 2-11-15 / 2171 bbls on location @ 06:00 on 2-12-15)

RT - 1781 bbls

CR - 2390 bbls

LTR - 247,107 bbls

TSIF - 10,998,870 lbs

Sand recoverd - for day shift 28,000 lbs or 280 cu ft

Days: Jerry Fletcher

Donnie Reza

Nights: Luke Armstrong

Wendel Wiggins

### Dilling BHA;

Coil Conn. .87'

Dual BPV 1.21'

Jars 4.30'

Hyd Dis 2.13'

Tempress Screen 2.69'

Tempress Hydropull 2.69'

Xover .60

Motor 11.33'

Xover .52

4 5/8" JZ Rock Bit .51" SN # 1422161

BHA Length 26.85 Ft.

Roll off Box # OT2544 full

Roll off box Smart move # Rt-25117 in use

### Time Log Summary

Operation	Com	Dur (hr)
SAFETY	Held Safety meeting w/ crew	0.5
MILL_CT	Tag/Drill Weatherford CFP #36. Depth 11,683' . Drilled CFP in 51 minutes. Pumping 3.4 BPM @ 3900 PSI Returning 3.6 BPM @ 1450 PSI. On choke 36/64. Sand medium. Plug debris are small Sent 10 bbl sweep.	2
MILL_CT	Short trip to 8425'. Pump 10 bbl sweep. Clean up hole & run back in. Returned heavy sand on short trip.	1



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Time Log Summary		
Operation	Com	Dur (hr)
MILL_CT	Tag/Drill Weatherford CFP #35 /34/ 33. Depth 11,912/12,163' / 12,402. Drilled CFP in avg of 12 minutes each. Pumping 3.4 BPM @ 3900 PSI Returning 3.6 BPM @ 1350 PSI. On choke 36/64. Sand medium. Plug debris are small Sent 10 bbl sweep. Ran down and tagged plug # 32. Start short trip.	1.5
MILL_CT	Short trip to 8525' to clean up wellbore. Pumped 10 bbl sweep. Heavy sand in returns.	1.75
MILL_CT	RIH to top of plug # 32 of 46. Tag/Drill Weatherford CFP #32/31 . Depth 12,636'/12,863. Drilled CFP in avg of 9 minutes each. Pumping 3.4 BPM @ 4000 PSI Returning 3.8 BPM @ 1300 PSI. On choke 40/64. Sand Heavy. Plug debris are small Sent 10 bbl sweep. Wash to top of plug # 30.  Note: changed out sand boxes. Install Smart move # RT-25117.	2.25
MILL_CT	Washed to top of plug # 31. Drilled up plug in 21 min. Pumping 3,5 BPM @ 4,500 psi in & returning 4.0 BPM @ 1450 psi. Returning lite sand. Washing to top of plug # 29 & coil tbg parted w/ 13,129' of coil in hole. Shut FB manifold. Installed pipe clamp on tbg & chained coil tbg to reel. Opend FB manifold back up flowing 3 BPM to sand-X until coil can be welded up. Currently waiting on welder to come from Biglake.	2
U_CT	Down waiting on welder to weld up 2-3/8" coil.	5.5
U_CT	Weld coi together. Pump 10 bbl sweep, pump 30 bbls FR water spacer, pump 10 bbl sweep and cir hole. POOH w/ coil.  ***Water transfer (Experss) let the frac tanks over flow and the containment failed. Approx 1.5 bbls leaked onto the ground behind the sandx.***	7.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Report #: 47 Daily Operation: 2/12/2015 06:00 - 2/13/2015 06:00

Job Category ORIG COMPLETION			Primary Job Type OCM		AFE Number 033228
Days From Spud (days) 149	Days on Location (days) 47	End Depth (ftKB) 0.0	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig Coil Tubing Solutions, 11

### Operations Summary

Held JSA  
Finish POH w/ coil tbg  
Blow reel dry & RD coil unit  
Waiting on new replacement CTS coil unit  
MIRU CTS replacement unit  
RIH w/ BHA  
Drill out plug #29  
Coil set down @ 13,327'  
POOH w/ BHA

### Remarks

#### DOWNTIME:

Weather: 0.0 hrs Cumulative: 0.0 hrs  
Express Transfer: 0.0 hrs Cumulative: 0.0 hrs  
Express Flowback: 0.0 hrs Cumulative: 0.0 hrs  
Coil Tubing Solutions: 2.0 hrs Cumulative: 26.0 hrs  
Oil States: 0.0 hrs Cumulative: 0.0 hrs  
Double T rentals: 0.0 hrs Cumulative: 2.5 hrs  
Voyager : 0.0 hrs Cumulative

FTR - 249,497 bbls ( Meter zeroed this a.m. 2171 bbls on location @ 06:00 on 2-12-15 / 1936 bbls on location @ 06:00 on 2-13-15)

RT - 235 bbls

CR - 2625 bbls

LTR - 246,872 bbls

TSIF - 10,998,870 lbs

Sand recoverd - for day shift 000 lbs or 00 cu ft

Days: Jerry Fletcher  
Donnie Reza

Nights: Luke Armstrong  
Wendel Wiggins

### Dilling BHA;

Coil Conn. .87 '  
Dual BPV 1.21'  
Jars 4.30'  
Hyd Dis 2.13'  
Tempress Screen 2.69'  
Tempress Hydropull 2.69'  
Xover .60  
Motor 11.33'  
Xover .52  
4 5/8" JZ Rock Bit .51" SN # 1422161  
BHA Length 26.85 Ft.

Roll off Box # OT2544 full

Roll off box Smart move # Rt-25117 in use

### Time Log Summary

Operation	Com	Dur (hr)
SAFETY	Held JSA meeting	0.5
U_CT	Con't POH w/ coil tbg. Blow reel dry w/ N2. RD move off coil tbg unit. MIRU new CTU unit from New Mexico.	12.5
MILL_CT	RIH w/BHA to drillout plugs. Pumping 1 BPM @ XXXX PSI, returning 1 BPM @ XXXX PSI.	3
MILL_CT	Tag/Drill Weatherford CFP #29. Depth 13320'. Drilled CFP in 30 minutes. Pumping 3.5 BPM @ 4200 PSI Returning 3.6 BPM @ 1500 PSI. On choke 36/64. Sand Light. Plug debris are small Sent 5 bbl sweep.	0.5

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Time Log Summary

Operation	Com	Dur (hr)
MILL_CT	Cont' in hole Coil set down @ 13,327' Pushed 25k on string and drilled for 45 min. Didn't make footage no motor stall. Pumped pipe on pipe and nano beads still no footage. Pull up RIH @ 100 FPM coil set down in same place. Motor doesn't stall. Drill 45 min and push 30k No footage made. POOH w/ BHA.	1.5
MILL_CT	POOH w/ BHA.	5
RURD	RD Coil tubing to move in workover rig to finish drilling plugs.	1

### WELL DETAILS

Well Name UNIVERSITY 178B 19H	API/UWI 42-461-39446-0000	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	9/1/2014	9/2/2014
Surface	17 1/2	146.0	1,120.0	9/17/2014	9/17/2014
Intermediate	12 1/4	1,120.0	8,351.0	9/20/2014	9/24/2014
Production	8 1/2	8,351.0	19,080.0	12/11/2014	12/12/2014

### 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)
Conductor	20	19.625	78.60	H-40	120.00	1	0.0	120.0
Run Date 9/3/2014	Set Depth (ftKB) 146.0				Centralizers None			
Item Des	OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Conductor	20	19.625	78.60	H-40	120.00	3	26.0	146.0

### Surface Casing

Set Depth (ftKB)	1,113.0	Run Date	9/18/2014	Centralizers	7				
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	54.50	J-55	0.00	0	26.0	26.0
Cut off		13 3/8	12.715			12.49	1	26.0	38.4
Casing Joints		13 3/8	12.715	54.50	J-55	1,029.82	25	38.4	1,068.3
Float Collar		13 3/8	12.715		J-55	1.30	1	1,068.3	1,069.6
Casing Joints		13 3/8	12.715	54.50	J-55	41.27	1	1,069.6	1,110.8
Float Collar		13 3/8	12.715		J-55	1.30	1	1,110.8	1,112.1
Texas Pattern Shoe		13 3/8	12.715			0.87	1	1,112.1	1,113.0
Set Depth (ftKB)	1,225.0	Run Date		Centralizers					
Item Des		OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Casing Joints		13 3/8		48.00	J-55	1,199.00	30	26.0	1,225.0

### Surface Casing Cement

Type Casing	String Surface, 1,113.0ftKB	Cementing Start Date 9/18/2014	Cementing End Date 9/18/2014	Cementing Company Crest	Top (ftKB) 26.0	Btm (ftKB) 1,113.0
Class FW	Amount (sacks) 0	Yield (ft³/sack) 0	Density (lb/gal) 8.60			
Class Class C Poz	Amount (sacks) 600	Yield (ft³/sack) 1.90	Density (lb/gal) 12.80			
Class Class C	Amount (sacks) 262	Yield (ft³/sack) 1.18	Density (lb/gal) 13.50			
Class FW	Amount (sacks) 0	Yield (ft³/sack) 0	Density (lb/gal) 8.60			

### Intermediate Casing

Set Depth (ftKB)	Run Date	Centralizers						
7,750.0								
Item Des	OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Casing Joints	9 5/8		40.00	L-80 IC	7,724.00	193	26.0	7,750.0
Set Depth (ftKB)	Run Date	Centralizers						
8,341.0	9/26/2014	41 Solid Body						

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Item Des	OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Landing Joint	9 5/8	8.835			0.00	0	29.2	29.2
Casing Hanger	9 5/8	8.835			4.00	1	29.2	33.2
Casing Joints	9 5/8	8.835	40.00	L-80	3,354.06	72	33.2	3,387.3
Casing Joints - RytWrap	9 5/8	8.835	40.00	L-80 IC	1,323.70	29	3,387.3	4,711.0
Casing Joints	9 5/8	8.835	40.00	L-80	1,207.03	26	4,711.0	5,918.0
Casing Joints	9 5/8	8.755	43.50	L-80	2,331.08	51	5,918.0	8,249.1
Float Collar	9 5/8	8.755			1.50	1	8,249.1	8,250.6
Casing Joints	9 5/8	8.755	43.50	L-80	88.69	2	8,250.6	8,339.3
Float Shoe	9 5/8	8.755			1.75	1	8,339.3	8,341.0

### Intermediate Casing Cement

Type Casing	String Intermediate, 8,341.0ftKB	Cementing Start Date 9/26/2014	Cementing End Date 9/26/2014	Cementing Company SCHLUMBERGER	Top (ftKB) 3,250.0	Btm (ftKB) 8,351.0
Class	Amount (sacks)	Yield (ft³/sack)	Density (lb/gal)	9.40		
Class LITECRETE	Amount (sacks)	Yield (ft³/sack)	Density (lb/gal)	9.70		
Class Class H	Amount (sacks)	Yield (ft³/sack)	Density (lb/gal)	16.40		

### Production Casing

Set Depth (ftKB) 19,065.0		Run Date 12/12/2014		Centralizers 35 Solid Body					
Item Des		OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Landing Joint		5 1/2	4.778			0.00	0	26.0	26.0
Casing Hanger		5 1/2	4.778			5.10	1	26.0	31.1
Casing Joints		5 1/2	4.778	20.00	P-110	8,199.30	201	31.1	8,230.4
Pup Joint		5 1/2	4.778			9.65	1	8,230.4	8,240.0
Casing Joints		5 1/2	4.778	20.00	P-110	172.04	4	8,240.0	8,412.0
Pup Joint		5 1/2	4.778			10.05	1	8,412.0	8,422.1
Casing Joints		5 1/2	4.778	20.00	P-110	10,511.36	256	8,422.1	18,933.5
Pup Joint		5 1/2	4.778			8.00	1	18,933.5	18,941.5
Toe Sleeve		5 1/2	4.778			5.43	1	18,941.5	18,946.9
Pup Joint		5 1/2	4.778			28.25	2	18,946.9	18,975.1
Float Collar		5 1/2	4.778			3.00	1	18,975.1	18,978.1
Casing Joints		5 1/2	4.778	20.00	P-110	85.12	2	18,978.1	19,063.3
Float Shoe		5 1/2	4.778			1.74	1	19,063.3	19,065.0

Set Depth (ftKB)	Run Date	Centralizers						
19,825.0								
Item Des	OD (in)	ID (in)	Wt/Lgth (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Casing Joints	5 1/2		20.00	P-110 IC	19,799.00	495	26.0	19,825.0

### Production Casing Cement

Type Casing	String Production, 19,065.0ftKB	Cementing Start Date 12/12/2014	Cementing End Date 12/13/2014	Cementing Company Crest	Top (ftKB) 26.0	Btm (ftKB) 19,065.0
Class GTX Spacer	Amount (sacks)	Yield (ft³/sack)	Density (lb/gal)	0		
Class 50/50 Poz H	Amount (sacks)	Yield (ft³/sack)	Density (lb/gal)	2.42		
Class Class H Plus	Amount (sacks)	Yield (ft³/sack)	Density (lb/gal)	1.63		
Class Water	Amount (sacks)	Yield (ft³/sack)	Density (lb/gal)	0		

### 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
9,058.0	9,060.0	Wolfcamp B3, Original Hole	3.0		STAGE 47
9,097.0	9,099.0	Wolfcamp B3, Original Hole	3.0		STAGE 47
9,140.0	9,142.0	Wolfcamp B3, Original Hole	3.0		STAGE 47
9,180.0	9,182.0	Wolfcamp B3, Original Hole	3.0		STAGE 47

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Perforations

Top (ftKB)	Btm (ftKB)	Zone	Shot Dens (shots/ft)	Entered Shot Total	Com
9,220.0	9,222.0	Wolfcamp B3, Original Hole	3.0		STAGE 47
9,260.0	9,262.0	Wolfcamp B3, Original Hole	3.0		STAGE 47
9,300.0	9,302.0	Wolfcamp B3, Original Hole	3.0		STAGE 46
9,340.0	9,342.0	Wolfcamp B3, Original Hole	3.0		STAGE 46
9,380.0	9,382.0	Wolfcamp B3, Original Hole	3.0		STAGE 46
9,420.0	9,422.0	Wolfcamp B3, Original Hole	3.0		STAGE 46
9,460.0	9,462.0	Wolfcamp B3, Original Hole	3.0		STAGE 46
9,500.0	9,502.0	Wolfcamp B3, Original Hole	3.0		STAGE 46
9,540.0	9,542.0	Wolfcamp B3, Original Hole	3.0		STAGE 45
9,580.0	9,582.0	Wolfcamp B3, Original Hole	3.0		STAGE 45
9,620.0	9,622.0	Wolfcamp B3, Original Hole	3.0		STAGE 45
9,662.0	9,664.0	Wolfcamp B3, Original Hole	3.0		STAGE 45
9,698.0	9,700.0	Wolfcamp B3, Original Hole	3.0		STAGE 45
9,740.0	9,742.0	Wolfcamp B3, Original Hole	3.0		STAGE 45
9,780.0	9,782.0	Wolfcamp B3, Original Hole	3.0		STAGE 44
9,820.0	9,822.0	Wolfcamp B3, Original Hole	3.0		STAGE 44
9,860.0	9,862.0	Wolfcamp B3, Original Hole	3.0		STAGE 44
9,900.0	9,902.0	Wolfcamp B3, Original Hole	3.0		STAGE 44
9,940.0	9,942.0	Wolfcamp B3, Original Hole	3.0		STAGE 44
9,980.0	9,982.0	Wolfcamp B3, Original Hole	3.0		STAGE 44
10,020.0	10,022.0	Wolfcamp B3, Original Hole	3.0		STAGE 43
10,060.0	10,062.0	Wolfcamp B3, Original Hole	3.0		STAGE 43
10,100.0	10,102.0	Wolfcamp B3, Original Hole	3.0		STAGE 43
10,140.0	10,142.0	Wolfcamp B3, Original Hole	3.0		STAGE 43
10,180.0	10,182.0	Wolfcamp B3, Original Hole	3.0		STAGE 43
10,220.0	10,222.0	Wolfcamp B3, Original Hole	3.0		STAGE 43
10,260.0	10,262.0	Wolfcamp B3, Original Hole	3.0		STAGE 42
10,300.0	10,302.0	Wolfcamp B3, Original Hole	3.0		STAGE 42
10,340.0	10,342.0	Wolfcamp B3, Original Hole	3.0		STAGE 42
10,380.0	10,382.0	Wolfcamp B3, Original Hole	3.0		STAGE 42
10,420.0	10,422.0	Wolfcamp B3, Original Hole	3.0		STAGE 42
10,460.0	10,462.0	Wolfcamp B3, Original Hole	3.0		STAGE 42
10,500.0	10,502.0	Wolfcamp B3, Original Hole	3.0		STAGE 41
10,540.0	10,542.0	Wolfcamp B3, Original Hole	3.0		STAGE 41
10,580.0	10,582.0	Wolfcamp B3, Original Hole	3.0		STAGE 41
10,620.0	10,622.0	Wolfcamp B3, Original Hole	3.0		STAGE 41
10,660.0	10,662.0	Wolfcamp B3, Original Hole	3.0		STAGE 41
10,700.0	10,702.0	Wolfcamp B3, Original Hole	3.0		STAGE 41
10,740.0	10,742.0	Wolfcamp B3, Original Hole	3.0		STAGE 40
10,780.0	10,782.0	Wolfcamp B3, Original Hole	3.0		STAGE 40
10,820.0	10,822.0	Wolfcamp B3, Original Hole	3.0		STAGE 40
10,860.0	10,862.0	Wolfcamp B3, Original Hole	3.0		STAGE 40
10,900.0	10,902.0	Wolfcamp B3, Original Hole	3.0		STAGE 40
10,940.0	10,942.0	Wolfcamp B3, Original Hole	3.0		STAGE 40
10,980.0	10,982.0	Wolfcamp B3, Original Hole	3.0		STAGE 39
11,020.0	11,022.0	Wolfcamp B3, Original Hole	3.0		STAGE 39
11,060.0	11,062.0	Wolfcamp B3, Original Hole	3.0		STAGE 39
11,100.0	11,102.0	Wolfcamp B3, Original Hole	3.0		STAGE 39
11,140.0	11,142.0	Wolfcamp B3, Original Hole	3.0		STAGE 39
11,180.0	11,182.0	Wolfcamp B3, Original Hole	3.0		STAGE 39
11,220.0	11,222.0	Wolfcamp B3, Original Hole	3.0		STAGE 38
11,260.0	11,262.0	Wolfcamp B3, Original Hole	3.0		STAGE 38
11,300.0	11,302.0	Wolfcamp B3, Original Hole	3.0		STAGE 38
11,340.0	11,342.0	Wolfcamp B3, Original Hole	3.0		STAGE 38

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Perforations

Top (ftKB)	Btm (ftKB)	Zone	Shot Dens (shots/ft)	Entered Shot Total	Com
11,380.0	11,382.0	Wolfcamp B3, Original Hole	3.0		STAGE 38
11,420.0	11,422.0	Wolfcamp B3, Original Hole	3.0		STAGE 38
11,460.0	11,462.0	Wolfcamp B3, Original Hole	3.0		STAGE 37
11,500.0	11,502.0	Wolfcamp B3, Original Hole	3.0		STAGE 37
11,540.0	11,542.0	Wolfcamp B3, Original Hole	3.0		STAGE 37
11,580.0	11,582.0	Wolfcamp B3, Original Hole	3.0		STAGE 37
11,620.0	11,622.0	Wolfcamp B3, Original Hole	3.0		STAGE 37
11,660.0	11,662.0	Wolfcamp B3, Original Hole	3.0		STAGE 37
11,700.0	11,702.0	Wolfcamp B3, Original Hole	3.0		STAGE 36
11,740.0	11,742.0	Wolfcamp B3, Original Hole	3.0		STAGE 36
11,780.0	11,782.0	Wolfcamp B3, Original Hole	3.0		STAGE 36
11,820.0	11,822.0	Wolfcamp B3, Original Hole	3.0		STAGE 36
11,860.0	11,862.0	Wolfcamp B3, Original Hole	3.0		STAGE 36
11,900.0	11,902.0	Wolfcamp B3, Original Hole	3.0		STAGE 36
11,940.0	11,942.0	Wolfcamp B3, Original Hole	3.0		STAGE 35
11,980.0	11,982.0	Wolfcamp B3, Original Hole	3.0		STAGE 35
12,020.0	12,022.0	Wolfcamp B3, Original Hole	3.0		STAGE 35
12,060.0	12,062.0	Wolfcamp B3, Original Hole	3.0		STAGE 35
12,100.0	12,102.0	Wolfcamp B3, Original Hole	3.0		STAGE 35
12,140.0	12,142.0	Wolfcamp B3, Original Hole	3.0		STAGE 35
12,180.0	12,182.0	Wolfcamp B3, Original Hole	3.0		STAGE 34
12,220.0	12,222.0	Wolfcamp B3, Original Hole	3.0		STAGE 34
12,260.0	12,262.0	Wolfcamp B3, Original Hole	3.0		STAGE 34
12,300.0	12,302.0	Wolfcamp B3, Original Hole	3.0		STAGE 34
12,340.0	12,342.0	Wolfcamp B3, Original Hole	3.0		STAGE 34
12,380.0	12,382.0	Wolfcamp B3, Original Hole	3.0		STAGE 34
12,420.0	12,422.0	Wolfcamp B3, Original Hole	3.0		STAGE 33
12,460.0	12,462.0	Wolfcamp B3, Original Hole	3.0		STAGE 33
12,500.0	12,502.0	Wolfcamp B3, Original Hole	3.0		STAGE 33
12,540.0	12,542.0	Wolfcamp B3, Original Hole	3.0		STAGE 33
12,580.0	12,582.0	Wolfcamp B3, Original Hole	3.0		STAGE 33
12,620.0	12,622.0	Wolfcamp B3, Original Hole	3.0		STAGE 33
12,660.0	12,662.0	Wolfcamp B3, Original Hole	3.0		STAGE 32
12,700.0	12,702.0	Wolfcamp B3, Original Hole	3.0		STAGE 32
12,740.0	12,742.0	Wolfcamp B3, Original Hole	3.0		STAGE 32
12,780.0	12,782.0	Wolfcamp B3, Original Hole	3.0		STAGE 32
12,820.0	12,822.0	Wolfcamp B3, Original Hole	3.0		STAGE 32
12,860.0	12,862.0	Wolfcamp B3, Original Hole	3.0		STAGE 32
12,900.0	12,902.0	Wolfcamp B3, Original Hole	3.0		STAGE 31
12,940.0	12,942.0	Wolfcamp B3, Original Hole	3.0		STAGE 31
12,980.0	12,982.0	Wolfcamp B3, Original Hole	3.0		STAGE 31
13,020.0	13,022.0	Wolfcamp B3, Original Hole	3.0		STAGE 31
13,060.0	13,062.0	Wolfcamp B3, Original Hole	3.0		STAGE 31
13,100.0	13,102.0	Wolfcamp B3, Original Hole	3.0		STAGE 31
13,140.0	13,142.0	Wolfcamp B3, Original Hole	3.0		STAGE 30
13,180.0	13,182.0	Wolfcamp B3, Original Hole	3.0		STAGE 30
13,220.0	13,222.0	Wolfcamp B3, Original Hole	3.0		STAGE 30
13,260.0	13,262.0	Wolfcamp B3, Original Hole	3.0		STAGE 30
13,300.0	13,302.0	Wolfcamp B3, Original Hole	3.0		STAGE 30
13,340.0	13,342.0	Wolfcamp B3, Original Hole	3.0		STAGE 29
13,380.0	13,382.0	Wolfcamp B3, Original Hole	3.0		STAGE 29
13,420.0	13,422.0	Wolfcamp B3, Original Hole	3.0		STAGE 29
13,460.0	13,462.0	Wolfcamp B3, Original Hole	3.0		STAGE 29
13,500.0	13,502.0	Wolfcamp B3, Original Hole	3.0		STAGE 29

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Perforations

Top (ftKB)	Btm (ftKB)	Zone	Shot Dens (shots/ft)	Entered Shot Total	Com
13,540.0	13,542.0	Wolfcamp B3, Original Hole	3.0		STAGE 28
13,580.0	13,582.0	Wolfcamp B3, Original Hole	3.0		STAGE 28
13,620.0	13,622.0	Wolfcamp B3, Original Hole	3.0		STAGE 28
13,660.0	13,662.0	Wolfcamp B3, Original Hole	3.0		STAGE 28
13,700.0	13,702.0	Wolfcamp B3, Original Hole	3.0		STAGE 28
13,740.0	13,742.0	Wolfcamp B3, Original Hole	3.0		STAGE 27
13,780.0	13,782.0	Wolfcamp B3, Original Hole	3.0		STAGE 27
13,820.0	13,822.0	Wolfcamp B3, Original Hole	3.0		STAGE 27
13,860.0	13,862.0	Wolfcamp B3, Original Hole	3.0		STAGE 27
13,904.0	13,906.0	Wolfcamp B3, Original Hole	3.0		STAGE 27
13,940.0	13,942.0	Wolfcamp B3, Original Hole	3.0		STAGE 26
13,980.0	13,982.0	Wolfcamp B3, Original Hole	3.0		STAGE 26
14,020.0	14,022.0	Wolfcamp B3, Original Hole	3.0		STAGE 26
14,060.0	14,062.0	Wolfcamp B3, Original Hole	3.0		STAGE 26
14,100.0	14,102.0	Wolfcamp B3, Original Hole	3.0		STAGE 26
14,140.0	14,142.0	Wolfcamp B3, Original Hole	3.0		STAGE 25
14,180.0	14,182.0	Wolfcamp B3, Original Hole	3.0		STAGE 25
14,220.0	14,222.0	Wolfcamp B3, Original Hole	3.0		STAGE 25
14,260.0	14,262.0	Wolfcamp B3, Original Hole	3.0		STAGE 25
14,300.0	14,302.0	Wolfcamp B3, Original Hole	3.0		STAGE 25
14,340.0	14,342.0	Wolfcamp B3, Original Hole	3.0		STAGE 24
14,380.0	14,382.0	Wolfcamp B3, Original Hole	3.0		STAGE 24
14,420.0	14,422.0	Wolfcamp B3, Original Hole	3.0		STAGE 24
14,460.0	14,462.0	Wolfcamp B3, Original Hole	3.0		STAGE 24
14,500.0	14,502.0	Wolfcamp B3, Original Hole	3.0		STAGE 24
14,540.0	14,542.0	Wolfcamp B3, Original Hole	3.0		STAGE 23
14,580.0	14,582.0	Wolfcamp B3, Original Hole	3.0		STAGE 23
14,620.0	14,622.0	Wolfcamp B3, Original Hole	3.0		STAGE 23
14,660.0	14,662.0	Wolfcamp B3, Original Hole	3.0		STAGE 23
14,700.0	14,702.0	Wolfcamp B3, Original Hole	3.0		STAGE 23
14,740.0	14,742.0	Wolfcamp B3, Original Hole	3.0		STAGE 22
14,780.0	14,782.0	Wolfcamp B3, Original Hole	3.0		STAGE 22
14,820.0	14,822.0	Wolfcamp B3, Original Hole	3.0		STAGE 22
14,860.0	14,862.0	Wolfcamp B3, Original Hole	3.0		STAGE 22
14,900.0	14,902.0	Wolfcamp B3, Original Hole	3.0		STAGE 22
14,940.0	14,942.0	Wolfcamp B3, Original Hole	3.0		STAGE 21
14,984.0	14,986.0	Wolfcamp B3, Original Hole	3.0		STAGE 21
15,020.0	15,022.0	Wolfcamp B3, Original Hole	3.0		STAGE 21
15,060.0	15,062.0	Wolfcamp B3, Original Hole	3.0		STAGE 21
15,100.0	15,102.0	Wolfcamp B3, Original Hole	3.0		STAGE 21
15,140.0	15,142.0	Wolfcamp B3, Original Hole	3.0		STAGE 20
15,180.0	15,182.0	Wolfcamp B3, Original Hole	3.0		STAGE 20
15,220.0	15,222.0	Wolfcamp B3, Original Hole	3.0		STAGE 20
15,260.0	15,262.0	Wolfcamp B3, Original Hole	3.0		STAGE 20
15,300.0	15,302.0	Wolfcamp B3, Original Hole	3.0		STAGE 20
15,340.0	15,342.0	Wolfcamp B3, Original Hole	3.0		STAGE 19
15,380.0	15,382.0	Wolfcamp B3, Original Hole	3.0		STAGE 19
15,420.0	15,422.0	Wolfcamp B3, Original Hole	3.0		STAGE 19
15,460.0	15,462.0	Wolfcamp B3, Original Hole	3.0		STAGE 19
15,500.0	15,502.0	Wolfcamp B3, Original Hole	3.0		STAGE 19
15,544.0	15,546.0	Wolfcamp B3, Original Hole	3.0		STAGE 18
15,580.0	15,582.0	Wolfcamp B3, Original Hole	3.0		STAGE 18
15,620.0	15,622.0	Wolfcamp B3, Original Hole	3.0		STAGE 18
15,660.0	15,662.0	Wolfcamp B3, Original Hole	3.0		STAGE 18



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Perforations

Top (ftKB)	Btm (ftKB)	Zone	Shot Dens (shots/ft)	Entered Shot Total	Com
15,700.0	15,702.0	Wolfcamp B3, Original Hole	3.0		STAGE 18
15,740.0	15,742.0	Wolfcamp B3, Original Hole	3.0		STAGE 17
15,780.0	15,782.0	Wolfcamp B3, Original Hole	3.0		STAGE 17
15,820.0	15,822.0	Wolfcamp B3, Original Hole	3.0		STAGE 17
15,860.0	15,862.0	Wolfcamp B3, Original Hole	3.0		STAGE 17
15,900.0	15,902.0	Wolfcamp B3, Original Hole	3.0		STAGE 17
15,940.0	15,942.0	Wolfcamp B3, Original Hole	3.0		STAGE 16
15,980.0	15,982.0	Wolfcamp B3, Original Hole	3.0		STAGE 16
16,020.0	16,022.0	Wolfcamp B3, Original Hole	3.0		STAGE 16
16,060.0	16,062.0	Wolfcamp B3, Original Hole	3.0		STAGE 16
16,100.0	16,102.0	Wolfcamp B3, Original Hole	3.0		STAGE 16
16,144.0	16,146.0	Wolfcamp B3, Original Hole	3.0		STAGE 15
16,180.0	16,182.0	Wolfcamp B3, Original Hole	3.0		STAGE 15
16,224.0	16,226.0	Wolfcamp B3, Original Hole	3.0		STAGE 15
16,260.0	16,262.0	Wolfcamp B3, Original Hole	3.0		STAGE 15
16,300.0	16,302.0	Wolfcamp B3, Original Hole	3.0		STAGE 15
16,340.0	16,342.0	Wolfcamp B3, Original Hole	3.0		STAGE 14
16,380.0	16,382.0	Wolfcamp B3, Original Hole	3.0		STAGE 14
16,420.0	16,422.0	Wolfcamp B3, Original Hole	3.0		STAGE 14
16,460.0	16,462.0	Wolfcamp B3, Original Hole	3.0		STAGE 14
16,500.0	16,502.0	Wolfcamp B3, Original Hole	3.0		STAGE 14
16,540.0	16,542.0	Wolfcamp B3, Original Hole	3.0		STAGE 13
16,580.0	16,582.0	Wolfcamp B3, Original Hole	3.0		STAGE 13
16,620.0	16,622.0	Wolfcamp B3, Original Hole	3.0		STAGE 13
16,660.0	16,662.0	Wolfcamp B3, Original Hole	3.0		STAGE 13
16,700.0	16,702.0	Wolfcamp B3, Original Hole	3.0		STAGE 13
16,740.0	16,742.0	Wolfcamp B3, Original Hole	3.0		STAGE 12
16,780.0	16,782.0	Wolfcamp B3, Original Hole	3.0		STAGE 12
16,820.0	16,822.0	Wolfcamp B3, Original Hole	3.0		STAGE 12
16,860.0	16,862.0	Wolfcamp B3, Original Hole	3.0		STAGE 12
16,900.0	16,902.0	Wolfcamp B3, Original Hole	3.0		STAGE 12
16,940.0	16,942.0	Wolfcamp B3, Original Hole	3.0		STAGE 11
16,980.0	16,982.0	Wolfcamp B3, Original Hole	3.0		STAGE 11
17,020.0	17,022.0	Wolfcamp B3, Original Hole	3.0		STAGE 11
17,060.0	17,062.0	Wolfcamp B3, Original Hole	3.0		STAGE 11
17,100.0	17,102.0	Wolfcamp B3, Original Hole	3.0		STAGE 11
17,140.0	17,142.0	Wolfcamp B3, Original Hole	3.0		STAGE 10
17,180.0	17,182.0	Wolfcamp B3, Original Hole	3.0		STAGE 10
17,220.0	17,222.0	Wolfcamp B3, Original Hole	3.0		STAGE 10
17,260.0	17,262.0	Wolfcamp B3, Original Hole	3.0		STAGE 10
17,300.0	17,302.0	Wolfcamp B3, Original Hole	3.0		STAGE 10
17,340.0	17,342.0	Wolfcamp B3, Original Hole	3.0		STAGE 9
17,380.0	17,382.0	Wolfcamp B3, Original Hole	3.0		STAGE 9
17,420.0	17,422.0	Wolfcamp B3, Original Hole	3.0		STAGE 9
17,460.0	17,462.0	Wolfcamp B3, Original Hole	3.0		STAGE 9
17,500.0	17,502.0	Wolfcamp B3, Original Hole	3.0		STAGE 9
17,540.0	17,542.0	Wolfcamp B3, Original Hole	3.0		STAGE 8
17,580.0	17,582.0	Wolfcamp B3, Original Hole	3.0		STAGE 8
17,620.0	17,622.0	Wolfcamp B3, Original Hole	3.0		STAGE 8
17,660.0	17,662.0	Wolfcamp B3, Original Hole	3.0		STAGE 8
17,700.0	17,702.0	Wolfcamp B3, Original Hole	3.0		STAGE 8
17,740.0	17,742.0	Wolfcamp B3, Original Hole	3.0		STAGE 7
17,780.0	17,782.0	Wolfcamp B3, Original Hole	3.0		STAGE 7
17,820.0	17,822.0	Wolfcamp B3, Original Hole	3.0		STAGE 7

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Perforations

Top (ftKB)	Btm (ftKB)	Zone	Shot Dens (shots/ft)	Entered Shot Total	Com
17,860.0	17,862.0	Wolfcamp B3, Original Hole	3.0		STAGE 7
17,900.0	17,902.0	Wolfcamp B3, Original Hole	3.0		STAGE 7
17,940.0	17,942.0	Wolfcamp B3, Original Hole	3.0		STAGE 6
17,980.0	17,982.0	Wolfcamp B3, Original Hole	3.0		STAGE 6
18,020.0	18,022.0	Wolfcamp B3, Original Hole	3.0		STAGE 6
18,060.0	18,062.0	Wolfcamp B3, Original Hole	3.0		STAGE 6
18,100.0	18,102.0	Wolfcamp B3, Original Hole	3.0		STAGE 6
18,140.0	18,142.0	Wolfcamp B3, Original Hole	3.0		STAGE 5
18,180.0	18,182.0	Wolfcamp B3, Original Hole	3.0		STAGE 5
18,220.0	18,222.0	Wolfcamp B3, Original Hole	3.0		STAGE 5
18,260.0	18,262.0	Wolfcamp B3, Original Hole	3.0		STAGE 5
18,300.0	18,302.0	Wolfcamp B3, Original Hole	3.0		STAGE 5
18,340.0	18,342.0	Wolfcamp B3, Original Hole	3.0		STAGE 4
18,380.0	18,382.0	Wolfcamp B3, Original Hole	3.0		STAGE 4
18,420.0	18,422.0	Wolfcamp B3, Original Hole	3.0		STAGE 4
18,460.0	18,462.0	Wolfcamp B3, Original Hole	3.0		STAGE 4
18,500.0	18,502.0	Wolfcamp B3, Original Hole	3.0		STAGE 4
18,540.0	18,542.0	Wolfcamp B3, Original Hole	3.0		STAGE 3
18,580.0	18,582.0	Wolfcamp B3, Original Hole	3.0		STAGE 3
18,620.0	18,622.0	Wolfcamp B3, Original Hole	3.0		STAGE 3
18,660.0	18,662.0	Wolfcamp B3, Original Hole	3.0		STAGE 3
18,700.0	18,702.0	Wolfcamp B3, Original Hole	3.0		STAGE 3
18,740.0	18,742.0	Wolfcamp B3, Original Hole	3.0		STAGE 2
18,780.0	18,782.0	Wolfcamp B3, Original Hole	3.0		STAGE 2
18,820.0	18,822.0	Wolfcamp B3, Original Hole	3.0		STAGE 2
18,860.0	18,862.0	Wolfcamp B3, Original Hole	3.0		STAGE 2
18,900.0	18,902.0	Wolfcamp B3, Original Hole	3.0		STAGE 2
18,942.0	18,944.0	Wolfcamp B3, Original Hole	2.0		STAGE 1

### Completion (FRAC) Details

#### Stage 1 on 1/6/2015 14:00

Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)
1/6/2015	Stage 1	Wolfcamp B3, Original Hole	Pioneer Pumping Services	18,942.0	18,944.0

#### GEL

Fluid Name	Total Clean Volume (bbl)
7.5% HCl	1,243.00
Fluid Name	Total Clean Volume (bbl)
Fresh Water	1,243.00

#### Stage 2 on 1/9/2015 05:28

Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)
1/9/2015	Stage 2	Wolfcamp B3, Original Hole	Pioneer Pumping Services	18,740.0	18,902.0

#### GEL

Fluid Name	Total Clean Volume (bbl)
15% HCl	4,850.00
Fluid Name	Total Clean Volume (bbl)
Slickwater	4,850.00
Fluid Name	Total Clean Volume (bbl)
15# XLink	4,850.00

#### SAND & ACID

Additive	Type	Amount	Units	Sand Size	Concentration...
Brown Sand 0.25	Bulk Sand	5,957.0	lb	30/50	0.25

#### Stage 3 on 1/11/2015 18:21

Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)
1/11/2015	Stage 3	Wolfcamp B3, Original Hole	Pioneer Pumping Services	18,540.0	18,702.0

#### GEL

Fluid Name	Total Clean Volume (bbl)
15% HCl	2,832.00
Fluid Name	Total Clean Volume (bbl)
Slickwater	2,832.00
Fluid Name	Total Clean Volume (bbl)
15# XLink	2,832.00

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Completion (FRAC) Details						
Stage 4 on 1/12/2015 00:40						
Date	Type	Zone	Stim/Treat Company		Min Top Depth (ftKB)	Max Btm Depth (ftKB)
1/12/2015	Stage 4	Wolfcamp B3, Original Hole	Pioneer Pumping Services		18,340.0	18,502.0
GEL						
Fluid Name			Total Clean Volume (bbl)			
15% HCl			5,778.00			
Fluid Name			Total Clean Volume (bbl)			
Slickwater			5,778.00			
Fluid Name			Total Clean Volume (bbl)			
15# XLink			5,778.00			
SAND & ACID						
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 0.5	Bulk Sand	15,338.0	lb	30/50	0.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 1.0	Bulk Sand	17,008.0	lb	30/50	1.00	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 1.5	Bulk Sand	26,223.0	lb	30/50	1.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 2.0	Bulk Sand	36,285.0	lb	30/50	2.00	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 2.5	Bulk Sand	59,268.0	lb	30/50	2.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 3.0	Bulk Sand	69,188.0	lb	30/50	3.00	
Stage 5 on 1/12/2015 11:47						
Date	Type	Zone	Stim/Treat Company		Min Top Depth (ftKB)	Max Btm Depth (ftKB)
1/12/2015	Stage 5	Wolfcamp B3, Original Hole	Pioneer Pumping Services		18,140.0	18,302.0
GEL						
Fluid Name			Total Clean Volume (bbl)			
15% HCl			8,235.00			
Fluid Name			Total Clean Volume (bbl)			
Slickwater			8,235.00			
Fluid Name			Total Clean Volume (bbl)			
15# XLink			8,235.00			
SAND & ACID						
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 1.0	Bulk Sand		lb	30/50	1.00	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 1	Bulk Sand	2,000.0	lb	30/50	0.25	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 2	Bulk Sand	16,850.0	lb	30/50	0.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 3	Bulk Sand	27,700.0	lb	30/50	1.00	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 4	Bulk Sand	16,500.0	lb	30/50	1.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 5	Bulk Sand	40,000.0	lb	30/50	2.00	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 6	Bulk Sand	58,333.0	lb	30/50	2.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 7	Bulk Sand	58,225.0	lb	30/50	3.00	
Stage 6 on 1/12/2015 22:56						
Date	Type	Zone	Stim/Treat Company		Min Top Depth (ftKB)	Max Btm Depth (ftKB)
1/12/2015	Stage 6	Wolfcamp B3, Original Hole	Pioneer Pumping Services		17,940.0	18,102.0
GEL						
Fluid Name			Total Clean Volume (bbl)			
15% HCl			5,388.00			
Fluid Name			Total Clean Volume (bbl)			
Slickwater			5,388.00			
Fluid Name			Total Clean Volume (bbl)			
15# XLink			5,388.00			
SAND & ACID						
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 0.5	Bulk Sand	8,252.0	lb	30/50	0.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 1.0	Bulk Sand	16,872.0	lb	30/50	1.00	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 1.5	Bulk Sand	29,399.0	lb	30/50	1.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 2.0	Bulk Sand	39,892.0	lb	30/50	2.00	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 2.5	Bulk Sand	58,211.0	lb	30/50	2.50	

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### SAND & ACID

Additive Brown Sand 3.0	Type Bulk Sand	Amount 72,185.0	Units lb	Sand Size 30/50	Concentration...
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### Stage 7 on 1/13/2015 07:25

Date 1/13/2015	Type Stage 7	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 17,740.0	Max Btm Depth (ftKB) 17,902.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,340.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,340.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,340.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,334.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,667.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 40,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 58,333.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 69,827.0	Units lb	Sand Size 30/50	Concentration...

### Stage 8 on 1/13/2015 17:38

Date 1/13/2015	Type Stage 8	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 17,540.0	Max Btm Depth (ftKB) 17,702.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 4,934.00
Fluid Name Slickwater	Total Clean Volume (bbl) 4,934.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 4,934.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 7,249.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,412.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,510.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 39,674.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 57,834.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 72,651.0	Units lb	Sand Size 30/50	Concentration...

### Stage 9 on 1/14/2015 02:46

Date 1/14/2015	Type Stage 9	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 17,340.0	Max Btm Depth (ftKB) 17,502.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 3,238.00
Fluid Name Slickwater	Total Clean Volume (bbl) 3,238.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 3,238.00

### Stage 10 on 1/14/2015 14:00

Date 1/14/2015	Type Stage 10	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 17,140.0	Max Btm Depth (ftKB) 17,502.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 6,742.00
Fluid Name Slickwater	Total Clean Volume (bbl) 6,742.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 6,742.00

### SAND & ACID

Additive Brown Sand .25	Type Bulk Sand	Amount 2,078.0	Units lb	Sand Size 30/50	Concentration...
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## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 3,491.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 3,993.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 19,184.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 66,210.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 58,424.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 69,470.0	Units lb	Sand Size 30/50	Concentration...

### Stage 11 on 1/15/2015 03:00

Date 1/15/2015	Type Stage 11	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 16,490.0	Max Btm Depth (ftKB) 17,102.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 4,994.00
Fluid Name Slickwater	Total Clean Volume (bbl) 4,994.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 4,994.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 9,225.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,641.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,130.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 39,656.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 57,429.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 71,834.0	Units lb	Sand Size 30/50	Concentration...

### Stage 12 on 1/15/2015 19:45

Date 1/15/2015	Type Stage 12	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 16,740.0	Max Btm Depth (ftKB) 16,902.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,336.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,336.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,336.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,334.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,667.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 40,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 58,333.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 72,839.0	Units lb	Sand Size 30/50	Concentration...

### Stage 13 on 1/16/2015 06:00

Date 1/16/2015	Type Stage 13	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 16,540.0	Max Btm Depth (ftKB) 16,702.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,300.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,300.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,300.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,297.0	Units lb	Sand Size 30/50	Concentration...
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## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### SAND & ACID

Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,193.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,780.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 39,088.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 58,319.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 71,977.0	Units lb	Sand Size 30/50	Concentration...

### Stage 14 on 1/16/2015 14:00

Date 1/16/2015	Type Stage 14	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 16,340.0	Max Btm Depth (ftKB) 16,502.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,601.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,601.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,601.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,042.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,419.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,298.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 39,778.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 57,962.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 75,853.0	Units lb	Sand Size 30/50	Concentration...

### Stage 15 on 1/16/2015 23:23

Date 1/16/2015	Type Stage 15	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 16,140.0	Max Btm Depth (ftKB) 16,302.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,325.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,325.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,325.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount	Units lb	Sand Size 30/50	Concentration...

### Stage 16 on 1/17/2015 07:30

Date 1/17/2015	Type Stage 16	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 15,940.0	Max Btm Depth (ftKB) 16,102.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 4,882.00
Fluid Name Slickwater	Total Clean Volume (bbl) 4,882.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 4,882.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,261.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,435.0	Units lb	Sand Size 30/50	Concentration...



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### SAND & ACID

Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,257.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 39,781.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 58,365.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 77,704.0	Units lb	Sand Size 30/50	Concentration...

### Stage 17 on 1/18/2015 02:43

Date 1/18/2015	Type Stage 17	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 15,740.0	Max Btm Depth (ftKB) 15,902.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,232.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,232.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,232.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,334.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,667.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 40,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 58,333.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 70,482.0	Units lb	Sand Size 30/50	Concentration...

### Stage 18 on 1/18/2015 13:25

Date 1/18/2015	Type Stage 18	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 15,544.0	Max Btm Depth (ftKB) 15,702.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,343.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,343.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,343.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,384.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,346.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,263.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 39,450.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 58,567.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 69,292.0	Units lb	Sand Size 30/50	Concentration...

### Stage 19 on 1/18/2015 23:55

Date 1/18/2015	Type Stage 19	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 15,340.0	Max Btm Depth (ftKB) 15,502.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,226.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,226.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,226.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,452.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,235.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,118.0	Units lb	Sand Size 30/50	Concentration...



## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### SAND & ACID

Additive Brown Sand 2.0	Type Bulk Sand	Amount 39,321.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 59,371.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 70,492.0	Units lb	Sand Size 30/50	Concentration...

### Stage 20 on 1/19/2015 11:07

Date 1/19/2015	Type Stage 20	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 15,140.0	Max Btm Depth (ftKB) 15,302.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,394.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,394.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,394.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,216.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,449.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,401.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 39,644.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 58,364.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 77,813.0	Units lb	Sand Size 30/50	Concentration...

### Stage 21 on 1/20/2015 09:20

Date 1/20/2015	Type Stage 21	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 14,940.0	Max Btm Depth (ftKB) 15,102.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,244.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,244.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,244.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 7,756.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,525.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,029.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 40,386.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 58,246.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 76,905.0	Units lb	Sand Size 30/50	Concentration...

### Stage 22 on 1/20/2015 17:04

Date 1/20/2015	Type Stage 22	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 14,740.0	Max Btm Depth (ftKB) 14,902.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 4,858.00
Fluid Name Slickwater	Total Clean Volume (bbl) 4,858.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 4,858.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,379.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,492.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 29,976.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 39,535.0	Units lb	Sand Size 30/50	Concentration...

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### SAND & ACID

Additive Brown Sand 2.5	Type Bulk Sand	Amount 58,895.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 74,877.0	Units lb	Sand Size 30/50	Concentration...

### Stage 23 on 1/21/2015 01:22

Date 1/21/2015	Type Stage 23	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 14,540.0	Max Btm Depth (ftKB) 14,702.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,189.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,189.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,189.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,334.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,667.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 40,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 58,333.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 72,197.0	Units lb	Sand Size 30/50	Concentration...

### Stage 24 on 1/21/2015 14:30

Date 1/21/2015	Type Stage 24	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 14,340.0	Max Btm Depth (ftKB) 14,502.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 4,824.00
Fluid Name Slickwater	Total Clean Volume (bbl) 4,824.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 4,824.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,469.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,234.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 28,996.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 40,254.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 58,222.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 70,970.0	Units lb	Sand Size 30/50	Concentration...

### Stage 25 on 1/22/2015 05:45

Date 1/22/2015	Type Stage 25	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 14,140.0	Max Btm Depth (ftKB) 14,302.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,116.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,116.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,116.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,334.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,667.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 40,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 58,333.0	Units lb	Sand Size 30/50	Concentration...

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### SAND & ACID

Additive Brown Sand 3.0	Type Bulk Sand	Amount 70,128.0	Units lb	Sand Size 30/50	Concentration...
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### Stage 26 on 1/22/2015 23:12

Date 1/22/2015	Type Stage 26	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 13,940.0	Max Btm Depth (ftKB) 14,102.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,034.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,034.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,034.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,342.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,487.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,281.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 39,096.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 59,347.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 75,158.0	Units lb	Sand Size 30/50	Concentration...

### Stage 27 on 1/23/2015 08:00

Date 1/23/2015	Type Stage 27	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 13,740.0	Max Btm Depth (ftKB) 13,902.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,330.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,330.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,330.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,334.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,667.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 40,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 58,333.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 69,472.0	Units lb	Sand Size 30/50	Concentration...

### Stage 28 on 1/23/2015 16:00

Date 1/23/2015	Type Stage 28	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 13,540.0	Max Btm Depth (ftKB) 13,702.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 4,735.00
Fluid Name Slickwater	Total Clean Volume (bbl) 4,735.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 4,735.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,400.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 16,137.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 30,254.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 40,091.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 57,860.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 70,749.0	Units lb	Sand Size 30/50	Concentration...

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### Completion (FRAC) Details

#### Stage 29 on 1/24/2015 02:32

Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)
1/24/2015	Stage 29	Wolfcamp B3, Original Hole	Pioneer Pumping Services	13,344.0	13,502.0

#### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl)
Fluid Name Slickwater	4,860.00
Fluid Name 15# XLink	4,860.00

#### SAND & ACID

Additive	Type	Amount	Units	Sand Size	Concentration...
Brown Sand 0.5	Bulk Sand	8,532.0	lb	30/50	0.50
Brown Sand 1.0	Bulk Sand	16,542.0	lb	30/50	1.00
Brown Sand 1.5	Bulk Sand	29,731.0	lb	30/50	1.50
Brown Sand 2.0	Bulk Sand	39,976.0	lb	30/50	2.00
Brown Sand 2.5	Bulk Sand	58,380.0	lb	30/50	2.50
Brown Sand 3.0	Bulk Sand	71,237.0	lb	30/50	3.00

#### Stage 30 on 1/24/2015 10:15

Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)
1/24/2015	Stage 30	Wolfcamp B3, Original Hole	Pioneer Pumping Services	13,140.0	13,302.0

#### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl)
Fluid Name Slickwater	5,055.00
Fluid Name 15# XLink	5,055.00

#### SAND & ACID

Additive	Type	Amount	Units	Sand Size	Concentration...
Brown Sand 0.5	Bulk Sand	8,334.0	lb	30/50	0.50
Brown Sand 1.0	Bulk Sand	16,667.0	lb	30/50	1.00
Brown Sand 1.5	Bulk Sand	30,000.0	lb	30/50	1.50
Brown Sand 2.0	Bulk Sand	40,000.0	lb	30/50	2.00
Brown Sand 2.5	Bulk Sand	58,333.0	lb	30/50	2.50
Brown Sand 3.0	Bulk Sand	70,040.0	lb	30/50	3.00

#### Stage 31 on 1/24/2015 15:00

Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)
1/24/2015	Stage 31	Wolfcamp B3, Original Hole	Pioneer Pumping Services	12,900.0	13,102.0

#### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl)
Fluid Name Slickwater	5,747.00
Fluid Name 15# XLink	5,747.00

#### SAND & ACID

Additive	Type	Amount	Units	Sand Size	Concentration...
Brown Sand 0.5	Bulk Sand	10,000.0	lb	30/50	0.50
Brown Sand 1.0	Bulk Sand	20,000.0	lb	30/50	1.00
Brown Sand 1.5	Bulk Sand	36,000.0	lb	30/50	1.50
Brown Sand 2.0	Bulk Sand	48,000.0	lb	30/50	2.00
Brown Sand 2.5	Bulk Sand	70,000.0	lb	30/50	2.50
Brown Sand 3.0	Bulk Sand	84,242.0	lb	30/50	3.00

#### Stage 32 on 1/25/2015 00:44

Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)
1/25/2015	Stage 32	Wolfcamp B3, Original Hole	Pioneer Pumping Services	12,660.0	12,862.0

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

GEL						
Fluid Name 15% HCl			Total Clean Volume (bbl) 5,262.00			
Fluid Name Slickwater			Total Clean Volume (bbl) 5,262.00			
Fluid Name 15# XLink			Total Clean Volume (bbl) 5,262.00			
SAND & ACID						
Additive Brown Sand 0.5	Type Bulk Sand	Amount 10,315.0	Units lb	Sand Size 30/50	Concentration... 0.50	
Additive Brown Sand 1.0	Type Bulk Sand	Amount 18,824.0	Units lb	Sand Size 30/50	Concentration... 1.00	
Additive Brown Sand 1.5	Type Bulk Sand	Amount 40,778.0	Units lb	Sand Size 30/50	Concentration... 1.50	
Additive Brown Sand 2.0	Type Bulk Sand	Amount 48,774.0	Units lb	Sand Size 30/50	Concentration... 2.00	
Additive Brown Sand 2.5	Type Bulk Sand	Amount 72,994.0	Units lb	Sand Size 30/50	Concentration... 2.50	
Additive Brown Sand 3.0	Type Bulk Sand	Amount 76,183.0	Units lb	Sand Size 30/50	Concentration... 3.00	
Stage 33 on 1/25/2015 06:00						
Date 1/25/2015	Type Stage 33	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services		Min Top Depth (ftKB) 12,420.0	Max Btm Depth (ftKB) 12,622.0
GEL						
Fluid Name 15% HCl			Total Clean Volume (bbl) 5,364.00			
Fluid Name Slickwater			Total Clean Volume (bbl) 5,364.00			
Fluid Name 15# XLink			Total Clean Volume (bbl) 5,364.00			
SAND & ACID						
Additive Brown Sand 0.5	Type Bulk Sand	Amount 10,004.0	Units lb	Sand Size 30/50	Concentration... 0.50	
Additive Brown Sand 1.0	Type Bulk Sand	Amount 20,775.0	Units lb	Sand Size 30/50	Concentration... 1.00	
Additive Brown Sand 1.5	Type Bulk Sand	Amount 37,087.0	Units lb	Sand Size 30/50	Concentration... 1.50	
Additive Brown Sand 2.0	Type Bulk Sand	Amount 49,660.0	Units lb	Sand Size 30/50	Concentration... 2.00	
Additive Brown Sand 2.5	Type Bulk Sand	Amount 69,741.0	Units lb	Sand Size 30/50	Concentration... 2.50	
Additive Brown Sand 3.0	Type Bulk Sand	Amount 80,894.0	Units lb	Sand Size 30/50	Concentration... 3.00	
Stage 34 on 1/25/2015 13:15						
Date 1/25/2015	Type Stage 34	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services		Min Top Depth (ftKB) 12,180.0	Max Btm Depth (ftKB) 12,382.0
GEL						
Fluid Name 15% HCl			Total Clean Volume (bbl) 7,041.00			
Fluid Name Slickwater			Total Clean Volume (bbl) 7,041.00			
Fluid Name 15# XLink			Total Clean Volume (bbl) 7,041.00			
SAND & ACID						
Additive Brown Sand 0.5	Type Bulk Sand	Amount 10,000.0	Units lb	Sand Size 30/50	Concentration... 0.50	
Additive Brown Sand 1.0	Type Bulk Sand	Amount 10,000.0	Units lb	Sand Size 30/50	Concentration... 1.00	
Additive Brown Sand 1.5	Type Bulk Sand	Amount 36,000.0	Units lb	Sand Size 30/50	Concentration... 1.50	
Additive Brown Sand 2.0	Type Bulk Sand	Amount 48,000.0	Units lb	Sand Size 30/50	Concentration... 2.00	
Additive Brown Sand 2.5	Type Bulk Sand	Amount 70,000.0	Units lb	Sand Size 30/50	Concentration... 2.50	
Additive Brown Sand 3.0	Type Bulk Sand	Amount	Units lb	Sand Size 30/50	Concentration... 3.00	
Additive Brown Sand 0.5	Type Bulk Sand	Amount 5,000.0	Units lb	Sand Size 30/50	Concentration... 0.50	
Additive Brown Sand 1.0	Type Bulk Sand	Amount 5,000.0	Units lb	Sand Size 30/50	Concentration... 1.00	
Additive Brown Sand 1.5	Type Bulk Sand	Amount 36,000.0	Units lb	Sand Size 30/50	Concentration... 1.50	
Additive Brown Sand 2.0	Type Bulk Sand	Amount 48,000.0	Units lb	Sand Size 30/50	Concentration... 2.00	

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### SAND & ACID

Additive Brown Sand 2.5	Type Bulk Sand	Amount 70,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 84,296.0	Units lb	Sand Size 30/50	Concentration...

### Stage 35 on 1/25/2015 20:50

Date 1/25/2015	Type Stage 35	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 11,940.0	Max Btm Depth (ftKB) 12,142.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,309.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,309.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,309.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 10,891.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 20,267.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 76,682.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 48,873.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 73,112.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 78,401.0	Units lb	Sand Size 30/50	Concentration...

### Stage 36 on 1/26/2015 06:00

Date 1/26/2015	Type Stage 36	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 11,700.0	Max Btm Depth (ftKB) 11,902.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,384.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,384.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,384.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 10,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 20,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 36,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 48,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 70,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 80,911.0	Units lb	Sand Size 30/50	Concentration...

### Stage 37 on 1/26/2015 13:00

Date 1/26/2015	Type Stage 37	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 11,460.0	Max Btm Depth (ftKB) 11,662.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,221.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,221.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,221.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 10,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 20,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 36,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 48,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 70,000.0	Units lb	Sand Size 30/50	Concentration...

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

### SAND & ACID

Additive Brown Sand 3.0	Type Bulk Sand	Amount 84,141.0	Units lb	Sand Size 30/50	Concentration...
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### Stage 38 on 1/26/2015 20:56

Date 1/26/2015	Type Stage 38	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 11,201.0	Max Btm Depth (ftKB) 11,422.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 4,732.00
Fluid Name Slickwater	Total Clean Volume (bbl) 4,732.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 4,732.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 8,665.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 19,985.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 36,357.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 48,018.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 69,053.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 92,369.0	Units lb	Sand Size 30/50	Concentration...

### Stage 39 on 1/27/2015 09:13

Date 1/27/2015	Type Stage 39	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 10,980.0	Max Btm Depth (ftKB) 11,182.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,846.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,846.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,846.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 10,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 20,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 36,000.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 25,125.0	Units lb	Sand Size 30/50	Concentration...

### Stage 40 on 1/27/2015 23:00

Date 1/27/2015	Type Stage 40	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 10,740.0	Max Btm Depth (ftKB) 10,942.0
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### GEL

Fluid Name 15% HCl	Total Clean Volume (bbl) 5,382.00
Fluid Name Slickwater	Total Clean Volume (bbl) 5,382.00
Fluid Name 15# XLink	Total Clean Volume (bbl) 5,382.00

### SAND & ACID

Additive Brown Sand 0.5	Type Bulk Sand	Amount 9,202.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.0	Type Bulk Sand	Amount 19,501.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 1.5	Type Bulk Sand	Amount 35,555.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.0	Type Bulk Sand	Amount 48,161.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 2.5	Type Bulk Sand	Amount 69,109.0	Units lb	Sand Size 30/50	Concentration...
Additive Brown Sand 3.0	Type Bulk Sand	Amount 91,920.0	Units lb	Sand Size 30/50	Concentration...

### Stage 41 on 1/28/2015 11:10

Date 1/28/2015	Type Stage 41	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services	Min Top Depth (ftKB) 10,500.0	Max Btm Depth (ftKB) 10,702.0
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## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

GEL						
Fluid Name 15% HCl			Total Clean Volume (bbl) 5,955.00			
Fluid Name Slickwater			Total Clean Volume (bbl) 5,955.00			
Fluid Name 15# XLink			Total Clean Volume (bbl) 5,955.00			
SAND & ACID						
Additive Brown Sand 0.5	Type Bulk Sand	Amount 10,000.0	Units lb	Sand Size 30/50	Concentration... 0.50	
Additive Brown Sand 1.0	Type Bulk Sand	Amount 20,000.0	Units lb	Sand Size 30/50	Concentration... 1.00	
Additive Brown Sand 1.5	Type Bulk Sand	Amount 36,000.0	Units lb	Sand Size 30/50	Concentration... 1.50	
Additive Brown Sand 2.0	Type Bulk Sand	Amount 48,000.0	Units lb	Sand Size 30/50	Concentration... 2.00	
Additive Brown Sand 2.5	Type Bulk Sand	Amount 70,000.0	Units lb	Sand Size 30/50	Concentration... 2.50	
Additive Brown Sand 3.0	Type Bulk Sand	Amount 84,567.0	Units lb	Sand Size 30/50	Concentration... 3.00	
Stage 42 on 1/28/2015 18:30						
Date 1/28/2015	Type Stage 42	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services		Min Top Depth (ftKB) 10,260.0	Max Btm Depth (ftKB) 10,462.0
GEL						
Fluid Name 15% HCl			Total Clean Volume (bbl) 5,717.00			
Fluid Name Slickwater			Total Clean Volume (bbl) 5,717.00			
Fluid Name 15# XLink			Total Clean Volume (bbl) 5,717.00			
SAND & ACID						
Additive Brown Sand 0.5	Type Bulk Sand	Amount 10,000.0	Units lb	Sand Size 30/50	Concentration... 0.50	
Additive Brown Sand 1.0	Type Bulk Sand	Amount 20,000.0	Units lb	Sand Size 30/50	Concentration... 1.00	
Additive Brown Sand 1.5	Type Bulk Sand	Amount 36,000.0	Units lb	Sand Size 30/50	Concentration... 1.50	
Additive Brown Sand 2.0	Type Bulk Sand	Amount 48,000.0	Units lb	Sand Size 30/50	Concentration... 2.00	
Additive Brown Sand 2.5	Type Bulk Sand	Amount 70,000.0	Units lb	Sand Size 30/50	Concentration... 2.50	
Additive Brown Sand 3.0	Type Bulk Sand	Amount 85,244.0	Units lb	Sand Size 30/50	Concentration... 3.00	
Stage 43 on 1/29/2015 01:25						
Date 1/29/2015	Type Stage 43	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services		Min Top Depth (ftKB) 10,020.0	Max Btm Depth (ftKB) 10,222.0
GEL						
Fluid Name 15% HCl			Total Clean Volume (bbl) 5,466.00			
Fluid Name Slickwater			Total Clean Volume (bbl) 5,466.00			
Fluid Name 15# XLink			Total Clean Volume (bbl) 5,466.00			
SAND & ACID						
Additive Brown Sand 0.5	Type Bulk Sand	Amount 10,000.0	Units lb	Sand Size 30/50	Concentration... 0.50	
Additive Brown Sand 1.0	Type Bulk Sand	Amount 20,000.0	Units lb	Sand Size 30/50	Concentration... 1.00	
Additive Brown Sand 1.5	Type Bulk Sand	Amount 36,000.0	Units lb	Sand Size 30/50	Concentration... 1.50	
Additive Brown Sand 2.0	Type Bulk Sand	Amount 48,000.0	Units lb	Sand Size 30/50	Concentration... 2.00	
Additive Brown Sand 2.5	Type Bulk Sand	Amount 70,000.0	Units lb	Sand Size 30/50	Concentration... 2.50	
Additive Brown Sand 3.0	Type Bulk Sand	Amount 83,627.0	Units lb	Sand Size 30/50	Concentration... 3.00	
Stage 44 on 1/29/2015 08:28						
Date 1/29/2015	Type Stage 44	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services		Min Top Depth (ftKB) 9,780.0	Max Btm Depth (ftKB) 9,982.0
GEL						
Fluid Name 15% HCl			Total Clean Volume (bbl) 5,563.00			

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

GEL						
Fluid Name Slickwater			Total Clean Volume (bbl) 5,563.00			
Fluid Name 15# XLink			Total Clean Volume (bbl) 5,563.00			
SAND & ACID						
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 0.5	Bulk Sand	10,000.0	lb	30/50	0.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 1.0	Bulk Sand	20,000.0	lb	30/50	1.00	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 1.5	Bulk Sand	36,000.0	lb	30/50	1.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 2.0	Bulk Sand	48,000.0	lb	30/50	2.00	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 2.5	Bulk Sand	70,000.0	lb	30/50	2.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 3.0	Bulk Sand	83,962.0	lb	30/50	3.00	
Stage 45 on 1/29/2015 17:12						
Date 1/29/2015	Type Stage 45	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services		Min Top Depth (ftKB) 9,540.0	Max Btm Depth (ftKB) 9,742.0
GEL						
Fluid Name 15% HCl			Total Clean Volume (bbl) 5,715.00			
Fluid Name Slickwater			Total Clean Volume (bbl) 5,715.00			
Fluid Name 15# XLink			Total Clean Volume (bbl) 5,715.00			
SAND & ACID						
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 0.5	Bulk Sand	10,000.0	lb	30/50	0.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 1.0	Bulk Sand	20,000.0	lb	30/50	1.00	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 1.5	Bulk Sand	36,000.0	lb	30/50	1.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 2.0	Bulk Sand	48,000.0	lb	30/50	2.00	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 2.5	Bulk Sand	70,000.0	lb	30/50	2.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 3.0	Bulk Sand	83,837.0	lb	30/50	3.00	
Stage 46 on 1/30/2015 03:00						
Date 1/30/2015	Type Stage 46	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services		Min Top Depth (ftKB) 9,300.0	Max Btm Depth (ftKB) 9,502.0
GEL						
Fluid Name 15% HCl			Total Clean Volume (bbl) 5,582.00			
Fluid Name Slickwater			Total Clean Volume (bbl) 5,582.00			
Fluid Name 15# XLink			Total Clean Volume (bbl) 5,582.00			
SAND & ACID						
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 0.5	Bulk Sand	10,000.0	lb	30/50	0.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 1.0	Bulk Sand	20,000.0	lb	30/50	1.00	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 1.5	Bulk Sand	36,000.0	lb	30/50	1.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 2.0	Bulk Sand	48,000.0	lb	30/50	2.00	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 2.5	Bulk Sand	70,000.0	lb	30/50	2.50	
Additive	Type	Amount	Units	Sand Size	Concentration...	
Brown Sand 3.0	Bulk Sand	85,239.0	lb	30/50	3.00	
Stage 47 on 1/30/2015 09:48						
Date 1/30/2015	Type Stage 47	Zone Wolfcamp B3, Original Hole	Stim/Treat Company Pioneer Pumping Services		Min Top Depth (ftKB) 9,060.0	Max Btm Depth (ftKB) 9,262.0
GEL						
Fluid Name 15% HCl			Total Clean Volume (bbl) 5,489.00			
Fluid Name Slickwater			Total Clean Volume (bbl) 5,489.00			

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

GEL										
Fluid Name 15# XLink					Total Clean Volume (bbl) 5,489.00					
SAND & ACID										
Additive Brown Sand 0.5	Type Bulk Sand		Amount 10,000.0		Units lb	Sand Size 30/50		Concentration...		
Additive Brown Sand 1.0	Type Bulk Sand		Amount 20,000.0		Units lb	Sand Size 30/50		Concentration...		
Additive Brown Sand 1.5	Type Bulk Sand		Amount 36,000.0		Units lb	Sand Size 30/50		Concentration...		
Additive Brown Sand 2.0	Type Bulk Sand		Amount 48,000.0		Units lb	Sand Size 30/50		Concentration...		
Additive Brown Sand 2.5	Type Bulk Sand		Amount 70,000.0		Units lb	Sand Size 30/50		Concentration...		
Additive Brown Sand 3.0	Type Bulk Sand		Amount 83,813.0		Units lb	Sand Size 30/50		Concentration...		
Zones										
Zone Name					Top (ftKB)					
Wolfcamp B3										
Tubing Details										
Tubing Description			Set Depth (ftKB)			Run Date				
Tubing Components										
Item Des		OD (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)		
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
Other In Hole										
Des	Top (ftKB)	Btm (ftKB)	OD (in)	Run Date	Com		String		Wellbore	
Composite Plug 1	18,922.0	18,924.0	4.37	1/6/2015			Production, 19,065.0ftKB		Original Hole	
Composite Plug 2	18,721.0	18,723.0	4.37	1/11/2015	Did not run		Production, 19,065.0ftKB		Original Hole	
Composite Plug 3	18,521.0	18,523.0	4.37	1/11/2015			Production, 19,065.0ftKB		Original Hole	
Composite Plug 4	18,321.0	18,323.0	4.37	1/12/2015			Production, 19,065.0ftKB		Original Hole	
Composite Plug 5	18,121.0	18,123.0	4.37	1/12/2015			Production, 19,065.0ftKB		Original Hole	
Composite Plug 6	17,921.0	17,923.0	4.37	1/13/2015			Production, 19,065.0ftKB		Original Hole	
Composite Plug 7	17,725.0	17,727.0	4.37	1/13/2015			Production, 19,065.0ftKB		Original Hole	
Composite Plug 8	17,521.0	17,523.0	4.37	1/13/2015			Production, 19,065.0ftKB		Original Hole	
Composite Plug 9	17,321.0	17,323.0	4.37	1/14/2015	Did not run		Production, 19,065.0ftKB		Original Hole	
Composite Plug 10	17,121.0	17,123.0	4.37	1/14/2015			Production, 19,065.0ftKB		Original Hole	
Composite Plug 11	16,921.0	16,923.0	4.37	1/15/2015			Production, 19,065.0ftKB		Original Hole	
Composite Plug 12	16,721.0	16,723.0	4.37	1/15/2015			Production, 19,065.0ftKB		Original Hole	
Composite Plug 13	16,524.0	16,526.0	4.37	1/16/2015			Production, 19,065.0ftKB		Original Hole	
Composite Plug 14	16,321.0	16,323.0	4.37	1/16/2015			Production, 19,065.0ftKB		Original Hole	
Composite Plug 15	16,121.0	16,123.0	4.37	1/17/2015			Production, 19,065.0ftKB		Original Hole	
Composite Plug 16	15,918.0	15,920.0	4.37	1/17/2015			Production, 19,065.0ftKB		Original Hole	

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Other In Hole							
Des	Top (ftKB)	Btm (ftKB)	OD (in)	Run Date	Com	String	Wellbore
Composite Plug 17	15,721.0	15,723.0	4.37	1/18/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 18	15,521.0	15,523.0	4.37	1/18/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 19	15,321.0	15,323.0	4.37	1/19/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 20	15,121.0	15,123.0	4.37	1/19/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 21	14,921.0	14,923.0	4.37	1/20/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 22	14,721.0	14,723.0	4.37	1/20/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 23	14,521.0	14,523.0	4.37	1/21/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 24	14,321.0	14,323.0	4.37	1/21/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 25	14,121.0	14,123.0	4.37	1/22/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 26	13,921.0	13,923.0	4.37	1/23/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 27	13,721.0	13,723.0	4.37	1/23/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 28	13,521.0	13,523.0	4.37	1/23/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 29	13,321.0	13,323.0	4.37	1/24/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 30	13,121.0	13,123.0	4.37	1/24/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 31	12,881.0	12,883.0	4.37	1/24/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 32	12,641.0	12,643.0	4.37	1/25/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 33	12,401.0	12,403.0	4.37	1/25/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 34	12,161.0	12,163.0	4.37	1/25/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 35	11,921.0	11,923.0	4.37	1/25/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 36	11,681.0	11,683.0	4.37	1/26/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 37	11,441.0	11,443.0	4.37	1/26/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 38	11,201.0	11,203.0	4.37	1/26/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 39	10,961.0	10,963.0	4.37	1/27/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 40	10,721.0	10,723.0	4.37	1/28/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 41	10,481.0	10,483.0	4.37	1/28/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 42	10,241.0	10,243.0	4.37	1/28/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 43	10,001.0	10,003.0	4.37	1/29/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 44	9,761.0	9,763.0	4.37	1/29/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 45	9,521.0	9,523.0	4.37	1/29/2015		Production, 19,065.0ftKB	Original Hole
Composite Plug 46	9,281.0	9,283.0	4.37	1/30/2015		Production, 19,065.0ftKB	Original Hole

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Other In Hole									
Des		Top (ftKB)	Btm (ftKB)	OD (in)	Run Date	Com	String	Wellbore	
Composite Plug 47		8,950.0	8,952.0	4.37	1/30/2015		Production, 19,065.0ftKB	Original Hole	
Well Tests									
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)
Directional Survey									
Date 9/17/2014			Description MAIN HOLE SURVEY						
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company			
9/17/2014	0.00	0.00	0.00	0.00	0.00	Integrity Directional Services			
9/17/2014	180.00	0.20	302.20	180.00	0.31	Integrity Directional Services			
9/17/2014	241.00	0.40	324.70	241.00	0.63	Integrity Directional Services			
9/17/2014	330.00	0.40	323.30	330.00	1.25	Integrity Directional Services			
9/17/2014	422.00	0.30	326.60	421.99	1.81	Integrity Directional Services			
9/17/2014	514.00	0.50	300.40	513.99	2.44	Integrity Directional Services			
9/17/2014	604.00	0.50	291.50	603.99	3.22	Integrity Directional Services			
9/17/2014	695.00	0.30	301.20	694.99	3.85	Integrity Directional Services			
9/17/2014	787.00	0.20	275.90	786.99	4.25	Integrity Directional Services			
9/17/2014	878.00	0.20	243.10	877.99	4.55	Integrity Directional Services			
9/17/2014	972.00	0.40	259.70	971.98	5.04	Integrity Directional Services			
9/17/2014	1,044.00	0.20	264.10	1,043.98	5.42	Integrity Directional Services			
9/17/2014	1,191.00	0.20	223.50	1,190.98	5.90	Integrity Directional Services			
9/17/2014	1,285.00	0.30	235.10	1,284.98	6.30	Integrity Directional Services			
9/17/2014	1,379.00	0.10	243.50	1,378.98	6.63	Integrity Directional Services			
9/17/2014	1,474.00	0.10	325.10	1,473.98	6.76	Integrity Directional Services			
9/17/2014	1,568.00	0.00	174.30	1,567.98	6.84	Integrity Directional Services			
9/18/2014	1,662.00	0.10	294.30	1,661.98	6.92	Integrity Directional Services			
9/17/2014	1,757.00	0.00	204.30	1,756.98	7.00	Integrity Directional Services			
9/17/2014	1,851.00	0.20	287.80	1,850.98	7.17	Integrity Directional Services			
9/17/2014	1,945.00	0.30	314.50	1,944.98	7.57	Integrity Directional Services			
9/17/2014	2,039.00	0.30	321.30	2,038.98	8.06	Integrity Directional Services			
9/17/2014	2,139.00	0.40	308.70	2,138.98	8.67	Integrity Directional Services			
9/17/2014	2,228.00	0.40	287.20	2,227.97	9.28	Integrity Directional Services			
9/17/2014	2,322.00	0.50	306.70	2,321.97	10.00	Integrity Directional Services			
9/17/2014	2,416.00	0.40	181.20	2,415.97	10.35	Integrity Directional Services			
9/17/2014	2,511.00	0.50	168.50	2,510.97	11.09	Integrity Directional Services			
9/17/2014	2,605.00	0.60	167.00	2,604.96	11.99	Integrity Directional Services			
9/17/2014	2,699.00	0.50	150.50	2,698.96	12.89	Integrity Directional Services			
9/17/2014	2,794.00	0.50	168.00	2,793.95	13.71	Integrity Directional Services			
9/17/2014	2,888.00	0.40	152.20	2,887.95	14.44	Integrity Directional Services			
9/17/2014	2,982.00	0.80	140.00	2,981.95	15.42	Integrity Directional Services			
9/17/2014	3,077.00	2.20	129.00	3,076.91	17.90	Integrity Directional Services			
9/17/2014	3,171.00	3.30	133.40	3,170.80	22.40	Integrity Directional Services			
9/17/2014	3,265.00	3.20	130.60	3,264.65	27.73	Integrity Directional Services			
9/17/2014	3,359.00	3.30	132.90	3,358.50	33.06	Integrity Directional Services			
9/17/2014	3,454.00	3.40	131.70	3,453.34	38.61	Integrity Directional Services			
9/17/2014	3,548.00	3.50	131.00	3,547.17	44.27	Integrity Directional Services			
9/17/2014	3,642.00	3.60	124.00	3,640.99	50.07	Integrity Directional Services			
9/17/2014	3,736.00	3.60	120.90	3,734.80	55.98	Integrity Directional Services			
9/17/2014	3,830.00	3.80	121.50	3,828.61	62.04	Integrity Directional Services			
9/17/2014	3,925.00	3.80	118.50	3,923.40	68.33	Integrity Directional Services			
9/17/2014	4,019.00	3.30	122.40	4,017.22	74.15	Integrity Directional Services			
9/17/2014	4,113.00	3.60	129.00	4,111.05	79.80	Integrity Directional Services			
9/17/2014	4,208.00	2.50	129.60	4,205.91	84.85	Integrity Directional Services			

## Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 19H

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company
9/17/2014	4,302.00	1.60	139.00	4,299.85	88.21	Integrity Directional Services
9/17/2014	4,396.00	1.40	297.90	4,393.84	88.68	Integrity Directional Services
9/17/2014	4,490.00	0.40	252.50	4,487.83	90.08	Integrity Directional Services
9/17/2014	4,585.00	0.50	245.60	4,582.82	90.83	Integrity Directional Services
9/17/2014	4,679.00	0.50	253.30	4,676.82	91.65	Integrity Directional Services
9/17/2014	4,773.00	0.50	254.30	4,770.82	92.47	Integrity Directional Services
9/17/2014	4,868.00	0.30	229.70	4,865.81	93.12	Integrity Directional Services
9/17/2014	4,962.00	0.20	258.60	4,959.81	93.51	Integrity Directional Services
9/17/2014	5,057.00	0.10	230.20	5,054.81	93.75	Integrity Directional Services
9/17/2014	5,151.00	0.30	234.60	5,148.81	94.08	Integrity Directional Services
9/17/2014	5,245.00	0.30	190.40	5,242.81	94.54	Integrity Directional Services
9/17/2014	5,339.00	0.10	221.40	5,336.81	94.86	Integrity Directional Services
9/17/2014	5,434.00	0.30	165.40	5,431.81	95.16	Integrity Directional Services
9/17/2014	5,528.00	0.20	182.60	5,525.81	95.57	Integrity Directional Services
9/17/2014	5,622.00	0.20	155.60	5,619.81	95.89	Integrity Directional Services
9/17/2014	5,716.00	0.30	139.50	5,713.81	96.29	Integrity Directional Services
9/17/2014	5,811.00	0.20	155.30	5,808.81	96.70	Integrity Directional Services
9/17/2014	5,905.00	0.30	138.30	5,902.81	97.11	Integrity Directional Services
9/17/2014	5,999.00	0.20	10.00	5,996.81	97.30	Integrity Directional Services
9/17/2014	6,093.00	1.10	357.80	6,090.80	98.37	Integrity Directional Services
9/17/2014	6,188.00	2.20	358.90	6,185.76	101.10	Integrity Directional Services
9/17/2014	6,282.00	3.10	349.70	6,279.66	105.43	Integrity Directional Services
9/17/2014	6,376.00	3.60	345.10	6,373.50	110.92	Integrity Directional Services
9/17/2014	6,471.00	3.80	338.80	6,468.30	117.04	Integrity Directional Services
9/17/2014	6,565.00	4.30	335.60	6,562.06	123.68	Integrity Directional Services
9/17/2014	6,659.00	5.50	327.90	6,655.72	131.69	Integrity Directional Services
9/17/2014	6,753.00	7.00	323.30	6,749.16	141.92	Integrity Directional Services
9/17/2014	6,848.00	8.10	320.60	6,843.33	154.39	Integrity Directional Services
9/17/2014	6,942.00	7.70	321.10	6,936.44	167.31	Integrity Directional Services
9/17/2014	7,036.00	7.40	321.30	7,029.63	179.66	Integrity Directional Services
9/17/2014	7,131.00	6.90	320.10	7,123.89	191.49	Integrity Directional Services
9/17/2014	7,225.00	6.90	321.50	7,217.21	202.78	Integrity Directional Services
9/17/2014	7,319.00	7.40	322.70	7,310.47	214.48	Integrity Directional Services
9/24/2014	7,413.00	7.60	323.00	7,403.67	226.75	Integrity Directional Services
9/24/2014	7,508.00	7.00	322.80	7,497.90	238.82	Integrity Directional Services
9/24/2014	7,602.00	7.30	321.90	7,591.17	250.52	Integrity Directional Services
9/24/2014	7,696.00	7.00	322.40	7,684.44	262.22	Integrity Directional Services
9/24/2014	7,791.00	6.30	322.40	7,778.80	273.22	Integrity Directional Services
9/24/2014	7,885.00	6.50	322.60	7,872.21	283.70	Integrity Directional Services
9/24/2014	7,979.00	6.00	321.90	7,965.65	293.93	Integrity Directional Services
9/24/2014	8,073.00	5.70	323.10	8,059.16	303.51	Integrity Directional Services
9/24/2014	8,168.00	6.20	322.80	8,153.65	313.36	Integrity Directional Services
9/24/2014	8,262.00	6.10	319.00	8,247.11	323.42	Integrity Directional Services
9/24/2014	8,283.00	5.80	319.80	8,268.00	325.60	Integrity Directional Services
11/23/2014	8,344.00	5.30	319.20	8,328.71	331.50	Integrity Directional Services
11/23/2014	8,438.00	7.70	331.50	8,422.11	342.08	Integrity Directional Services
11/23/2014	8,532.00	12.00	352.40	8,514.73	357.91	Integrity Directional Services
11/23/2014	8,579.00	19.10	4.00	8,559.99	370.44	Integrity Directional Services
11/23/2014	8,626.00	24.80	6.30	8,603.56	388.00	Integrity Directional Services
11/23/2014	8,673.00	29.10	3.20	8,645.45	409.29	Integrity Directional Services
11/24/2014	8,720.00	32.30	0.70	8,685.86	433.28	Integrity Directional Services
11/24/2014	8,767.00	36.00	358.70	8,724.75	459.65	Integrity Directional Services
11/24/2014	8,815.00	39.00	358.00	8,762.83	488.87	Integrity Directional Services
11/24/2014	8,862.00	42.00	358.00	8,798.56	519.39	Integrity Directional Services
11/24/2014	8,908.00	46.20	357.90	8,831.59	551.40	Integrity Directional Services
11/24/2014	8,955.00	49.90	358.00	8,863.00	586.35	Integrity Directional Services



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Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company
11/24/2014	9,002.00	55.90	357.40	8,891.34	623.82	Integrity Directional Services
11/24/2014	9,049.00	61.70	357.00	8,915.68	664.00	Integrity Directional Services
11/24/2014	9,096.00	64.40	357.10	8,936.98	705.89	Integrity Directional Services
11/24/2014	9,143.00	66.10	357.10	8,956.65	748.57	Integrity Directional Services
11/24/2014	9,190.00	68.80	357.60	8,974.68	791.98	Integrity Directional Services
11/24/2014	9,237.00	74.40	359.80	8,989.51	836.55	Integrity Directional Services
11/24/2014	9,284.00	80.00	1.40	8,999.92	882.36	Integrity Directional Services
11/24/2014	9,331.00	85.80	1.50	9,005.72	928.98	Integrity Directional Services
11/24/2014	9,378.00	87.70	0.70	9,008.39	975.91	Integrity Directional Services
11/24/2014	9,425.00	91.30	0.50	9,008.80	1,022.90	Integrity Directional Services
11/24/2014	9,472.00	91.60	0.30	9,007.61	1,069.88	Integrity Directional Services
11/24/2014	9,567.00	91.40	359.60	9,005.12	1,164.85	Integrity Directional Services
11/25/2014	9,661.00	89.90	358.90	9,004.05	1,258.84	Integrity Directional Services
11/25/2014	9,755.00	89.50	357.40	9,004.55	1,352.83	Integrity Directional Services
11/25/2014	9,849.00	91.30	2.70	9,003.89	1,446.79	Integrity Directional Services
11/25/2014	9,943.00	89.00	1.50	9,003.64	1,540.79	Integrity Directional Services
11/25/2014	10,038.00	86.80	359.10	9,007.13	1,635.71	Integrity Directional Services
11/25/2014	10,132.00	87.70	1.30	9,011.64	1,729.59	Integrity Directional Services
11/26/2014	10,223.00	90.00	0.90	9,013.46	1,820.57	Integrity Directional Services
11/26/2014	10,318.00	90.70	1.00	9,012.88	1,915.57	Integrity Directional Services
11/26/2014	10,412.00	90.40	0.20	9,011.98	2,009.56	Integrity Directional Services
11/26/2014	10,506.00	87.70	359.90	9,013.54	2,103.54	Integrity Directional Services
11/26/2014	10,600.00	90.20	1.00	9,015.26	2,197.52	Integrity Directional Services
11/26/2014	10,691.00	94.50	1.90	9,011.53	2,288.42	Integrity Directional Services
11/26/2014	10,782.00	93.50	2.90	9,005.18	2,379.19	Integrity Directional Services
11/26/2014	10,873.00	88.50	3.00	9,003.59	2,470.15	Integrity Directional Services
11/26/2014	10,964.00	87.30	2.30	9,006.93	2,561.09	Integrity Directional Services
11/26/2014	11,056.00	87.60	1.90	9,011.02	2,653.00	Integrity Directional Services
11/26/2014	11,148.00	88.20	1.70	9,014.39	2,744.93	Integrity Directional Services
11/26/2014	11,242.00	88.40	0.70	9,017.18	2,838.89	Integrity Directional Services
11/27/2014	11,336.00	91.80	1.40	9,017.02	2,932.88	Integrity Directional Services
11/27/2014	11,430.00	92.80	3.20	9,013.25	3,026.80	Integrity Directional Services
11/27/2014	11,524.00	87.60	2.50	9,012.92	3,120.76	Integrity Directional Services
11/27/2014	11,618.00	90.30	3.10	9,014.64	3,214.74	Integrity Directional Services
11/27/2014	11,712.00	88.60	2.60	9,015.54	3,308.73	Integrity Directional Services
11/27/2014	11,807.00	90.70	2.90	9,016.12	3,403.72	Integrity Directional Services
11/27/2014	11,901.00	91.20	2.10	9,014.56	3,497.71	Integrity Directional Services
11/27/2014	11,995.00	92.50	2.50	9,011.53	3,591.66	Integrity Directional Services
11/27/2014	12,089.00	89.10	2.20	9,010.22	3,685.63	Integrity Directional Services
11/27/2014	12,183.00	89.30	1.00	9,011.53	3,779.62	Integrity Directional Services
11/28/2014	12,278.00	91.50	0.40	9,010.87	3,874.61	Integrity Directional Services
11/28/2014	12,372.00	90.60	1.30	9,009.14	3,968.60	Integrity Directional Services
11/28/2014	12,466.00	89.40	1.50	9,009.14	4,062.59	Integrity Directional Services
11/28/2014	12,560.00	88.20	3.30	9,011.11	4,156.57	Integrity Directional Services
11/28/2014	12,655.00	86.50	1.60	9,015.50	4,251.46	Integrity Directional Services
11/28/2014	12,749.00	87.70	1.30	9,020.26	4,345.34	Integrity Directional Services
11/28/2014	12,843.00	90.30	1.90	9,021.90	4,439.31	Integrity Directional Services
11/29/2014	12,936.00	83.40	359.80	9,027.01	4,532.11	Integrity Directional Services
11/30/2014	13,031.00	84.50	359.50	9,037.02	4,626.58	Integrity Directional Services
11/30/2014	13,125.00	88.90	359.30	9,042.43	4,720.40	Integrity Directional Services
11/30/2014	13,219.00	91.60	359.10	9,042.02	4,814.39	Integrity Directional Services
11/30/2014	13,313.00	91.70	358.90	9,039.31	4,908.35	Integrity Directional Services
11/30/2014	13,408.00	89.10	356.10	9,038.65	5,003.33	Integrity Directional Services
11/30/2014	13,502.00	90.30	358.10	9,039.14	5,097.33	Integrity Directional Services
11/30/2014	13,596.00	91.00	358.90	9,038.08	5,191.32	Integrity Directional Services
11/30/2014	13,690.00	91.40	359.70	9,036.11	5,285.30	Integrity Directional Services

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Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company
11/30/2014	13,785.00	90.60	359.40	9,034.45	5,380.28	Integrity Directional Services
11/30/2014	13,879.00	90.90	0.50	9,033.22	5,474.27	Integrity Directional Services
11/30/2014	13,973.00	88.60	0.10	9,033.63	5,568.27	Integrity Directional Services
11/30/2014	14,067.00	92.40	2.70	9,032.81	5,662.24	Integrity Directional Services
11/30/2014	14,161.00	93.50	3.10	9,027.97	5,756.11	Integrity Directional Services
12/1/2014	14,256.00	92.40	3.20	9,023.08	5,850.98	Integrity Directional Services
12/1/2014	14,350.00	86.50	0.70	9,023.98	5,944.93	Integrity Directional Services
12/1/2014	14,444.00	87.60	0.40	9,028.82	6,038.80	Integrity Directional Services
12/1/2014	14,538.00	87.80	0.40	9,032.59	6,132.73	Integrity Directional Services
12/1/2014	14,632.00	89.70	0.40	9,034.65	6,226.70	Integrity Directional Services
12/1/2014	14,726.00	89.80	359.00	9,035.06	6,320.70	Integrity Directional Services
12/1/2014	14,821.00	92.90	0.40	9,032.82	6,415.66	Integrity Directional Services
12/1/2014	14,915.00	93.20	0.10	9,027.82	6,509.52	Integrity Directional Services
12/1/2014	15,009.00	93.60	359.60	9,022.24	6,603.36	Integrity Directional Services
12/2/2014	15,103.00	89.50	357.80	9,019.70	6,697.30	Integrity Directional Services
12/2/2014	15,198.00	91.60	359.10	9,018.79	6,792.29	Integrity Directional Services
12/2/2014	15,292.00	92.40	359.80	9,015.51	6,886.23	Integrity Directional Services
12/2/2014	15,386.00	90.70	359.30	9,012.96	6,980.19	Integrity Directional Services
12/2/2014	15,480.00	89.90	359.10	9,012.47	7,074.19	Integrity Directional Services
12/2/2014	15,575.00	90.20	360.00	9,012.39	7,169.19	Integrity Directional Services
12/2/2014	15,669.00	89.80	359.20	9,012.39	7,263.19	Integrity Directional Services
12/2/2014	15,763.00	91.40	359.30	9,011.40	7,357.18	Integrity Directional Services
12/2/2014	15,857.00	88.10	358.50	9,011.81	7,451.16	Integrity Directional Services
12/2/2014	15,952.00	90.50	359.60	9,012.98	7,546.15	Integrity Directional Services
12/2/2014	16,046.00	88.50	358.70	9,013.80	7,640.14	Integrity Directional Services
12/3/2014	16,140.00	92.00	359.80	9,013.39	7,734.12	Integrity Directional Services
12/3/2014	16,234.00	89.60	0.40	9,012.07	7,828.11	Integrity Directional Services
12/3/2014	16,329.00	91.70	1.80	9,011.00	7,923.09	Integrity Directional Services
12/3/2014	16,423.00	89.40	1.60	9,010.09	8,017.08	Integrity Directional Services
12/3/2014	16,517.00	90.70	2.30	9,010.01	8,111.08	Integrity Directional Services
12/3/2014	16,611.00	89.10	1.70	9,010.18	8,205.08	Integrity Directional Services
12/3/2014	16,706.00	92.70	3.20	9,008.68	8,300.05	Integrity Directional Services
12/5/2014	16,801.00	87.90	1.10	9,008.19	8,395.01	Integrity Directional Services
12/5/2014	16,896.00	89.10	2.20	9,010.67	8,489.98	Integrity Directional Services
12/5/2014	16,990.00	90.50	4.00	9,011.00	8,583.97	Integrity Directional Services
12/6/2014	17,084.00	90.90	3.70	9,009.85	8,677.96	Integrity Directional Services
12/6/2014	17,179.00	92.50	4.70	9,007.03	8,772.92	Integrity Directional Services
12/6/2014	17,273.00	90.80	3.30	9,004.33	8,866.87	Integrity Directional Services
12/6/2014	17,367.00	90.50	3.30	9,003.26	8,960.86	Integrity Directional Services
12/6/2014	17,461.00	90.70	2.50	9,002.28	9,054.86	Integrity Directional Services
12/6/2014	17,557.00	88.40	2.00	9,003.03	9,150.85	Integrity Directional Services
12/6/2014	17,651.00	92.40	4.00	9,002.37	9,244.82	Integrity Directional Services
12/7/2014	17,746.00	93.10	4.40	8,997.82	9,339.71	Integrity Directional Services
12/7/2014	17,840.00	92.50	3.50	8,993.22	9,433.60	Integrity Directional Services
12/7/2014	17,935.00	88.00	1.70	8,992.81	9,528.57	Integrity Directional Services
12/7/2014	18,029.00	88.70	1.80	8,995.52	9,622.53	Integrity Directional Services
12/7/2014	18,123.00	93.40	3.30	8,993.79	9,716.49	Integrity Directional Services
12/7/2014	18,218.00	93.60	2.50	8,987.99	9,811.31	Integrity Directional Services
12/7/2014	18,312.00	89.70	1.40	8,985.29	9,905.25	Integrity Directional Services
12/7/2014	18,406.00	89.50	1.80	8,985.94	9,999.25	Integrity Directional Services
12/8/2014	18,501.00	91.30	3.30	8,985.28	10,094.24	Integrity Directional Services
12/8/2014	18,595.00	91.30	3.00	8,983.15	10,188.21	Integrity Directional Services
12/8/2014	18,690.00	91.50	3.90	8,980.83	10,283.18	Integrity Directional Services
12/8/2014	18,784.00	92.10	4.20	8,977.88	10,377.14	Integrity Directional Services
12/8/2014	18,878.00	90.20	4.30	8,975.99	10,471.11	Integrity Directional Services
12/8/2014	18,973.00	91.90	4.70	8,974.25	10,566.09	Integrity Directional Services



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12/8/2014	19,028.00	92.50	5.10	8,972.14	10,621.05	Integrity Directional Services
12/8/2014	19,080.00	92.50	5.10	8,969.87	10,673.00	Integrity Directional Services