

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

API/UWI 42-461-39444-0000		Property Sub 929062-017		Operator PIONEER NATURAL RESRC USA, INC		State TEXAS		County UPTON	
Field Name SPRABERRY (TREND AREA)				Surface Legal Location 100' FSL/ 377' FEL, SEC: , BLK: 3, AB: A-17U, SVY: UNIVERSITY LANDS					
Spud Date 10/6/2014		TD Date		Drilling Rig Release Date		Frac Date		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 - 7,770.0		Total Depth All (TVD) (ftKB) Original Hole - 7,747.0	
Report #: 1 Daily Operation: 10/5/2014 18:00 - 10/6/2014 06:00									
Job Category ORIG DRILLING				Primary Job Type ODR				AFE Number 033135	
Days From Spud (days) 0		Days on Location (days) 1		End Depth (ftKB) 286.0		End Depth (TVD) (ftKB) 286.0		Dens Last Mud (lb/gal) 8.70	
Rig H & P, 606									
Operations Summary Skid Rig To University 178B 17H, R/U After Skid, Cut & Slip Drlg Line, R/U Cellar Pumps, P/U BHA #1, Spud In & Drill 17 1/2" Surface Hole F/147' - 286'									
Remarks Rig (H&P 606) & Well Progress: 4 Rig Move Days, 0.1 Days From Spud, 0.5 Total Days On Well, 23 Total Days On Location Rig NPT: 0 hrs previous 24 hrs. 2 NPT for month of October Completion percentage: Surface - 15%, Intermediate - 0%, Curve - 0%, Lateral - 0% Estimated Pad Drilling Completion Date: 11/20/2014									
Time Log Summary									
Operation		Com						Dur (hr)	
SAFETY		EJSA with H&P crew & PNR representative on preparing rig for skid over to University 178B 18H.						0.5	
B_SKID		Skid H&P 606 from University 178B #18H to University 178B #17H. Pioneer Rep & H&P TP verified that rig was level and centered over hole.						1	
B_SKID		EJSA with rig crew & PNR Representative discussing rigging up after skid. R/U stairs from rig floor to flow line skid. R/U high pressure mud lines & air lines. Install all ground rods & cables. Filling mud tanks W/fresh water, Mix LCM sweep in slugging tank, Install mouse hole.						2	
CUTDL		EJSA On Slip & Cut Drilling Line, Slip & Cut Drlg. Line. Perform 2 Point Drawworks Calibration, Perform Crown Saver Test.						2	
B_SKID		Pressure test mud lines from pumps to top drive to 3,000 psi., R/U Thomas Oilfield Cellar Pumps.						1.5	
BHA_HAN DLING		EJSA On P/U BHA, P/U Motor, Bit, 8" Shock Sub, 17 1/4" Stabilizer, 8" UBHO Sub, 8" Monel DC, Scribe & Install MWD, P/U 8" Monel DC, 2 - X.O. Subs & 1 Stand HWDP. Tag @ 147'						3	
DRL_ROT		Rotate Drill 17-1/2" Surface Section 139' @ 69.5'/hr, 104 spm, 400 gpm, 650 psi, 200 diff, 30 - 50 top drive rpm, 32 motor rpm, 62 - 82 total bit rpm, 12 - 15k wob, 7k torque, Avg. MSE 17. At 200' pump 25 bbl of 20 ppb LCM sweep w/30 vis for lost circulation zone. Full returns to surface Check chlorides before spud, 1,700 (ppm) Note: By contract, rig accepted at spud 10/6/2014 @ 04:00 hrs						2	
Report #: 2 Daily Operation: 10/6/2014 06:00 - 10/7/2014 06:00									
Job Category ORIG DRILLING				Primary Job Type ODR				AFE Number 033135	
Days From Spud (days) 1		Days on Location (days) 2		End Depth (ftKB) 1,120.0		End Depth (TVD) (ftKB) 1,119.9		Dens Last Mud (lb/gal) 8.70	
Rig H & P, 606									
Operations Summary Drill 17 1/2" Surface Hole F/286' - 1,120' TD, Circulate Sweeps, TOH, L/D Dir. Tools, R/U Casing Tools, Run 13 3/8" Surface Casing to 1,101', Circulate 1 x Casing Volume, R/U Cementers, Cement 13 3/8" Casing									
Remarks Rig (H&P 606) & Well Progress: 4 Rig Move Days, 1.1 Days From Spud, 1.5 Total Days On Well, 24 Total Days On Location Rig NPT: 0 hrs previous 24 hrs. 2 NPT for month of October Completion percentage: Surface - 100%, Intermediate - 0%, Curve - 0%, Lateral - 0% Estimated Pad Drilling Completion Date: 11/20/2014									
Time Log Summary									
Operation		Com						Dur (hr)	
DRL_ROT		Rotate Drill 17-1/2" Surface Section 120' @ 96'/hr, 104 spm, 400 gpm, 150-200 diff, 30-50 top drive rpm, 32 motor rpm, 62-82 total bit rpm, 10-15k wob, 8-10k torque. 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. Full returns to surface. Note: Chlorides check - 1,500 (ppm)						1.25	

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
BHA_HAN DLING	EJSA with H&P rig crew & PNR rep over racking back HWDP & RIH w/ 8' DC's. POOH W/3 stands HWDP to X.O Sub, RIH 2 stands 8" Drill Collars & 1 stand HWDP. No fill. Note: Tailgate safety meeting with W&W Energy Services Forklift operator, Hi- tech casing inspectors, H&P RM & PNR Rep on offloading 13-3/8" casing & cleaning, drifting & talleying casing.	1
DRL_ROT	Rotate Drill 17-1/2" Surface Section 714' @ 150.3'/hr, 160 spm, 613 gpm, 1050 psi, 600 diff, 70 top drive rpm, 50 motor rpm, 120 total bit rpm, 30-32k wob, 14-16k torque. 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. Full returns to surface. Check chlorides 1300 (ppm) Note: While cleaning & drifting casing, casing crew noticed 75% of joints (8 jts good out of 32) delivered had galled threads. W&W Energy Services was notified @ 10:00 hrs, W&W Energy Services called & said they would bring a new batch of casing out to location @ 10:30 hrs. Contacted TRRC @ 08:45 HRS. 10/6/2014 with Notification of cementing 13 3/8" Surface Casing, spoke with Amy - job number # 8469 Note: 1,120' Surface TD @ 13:00 hrs on 10/06/2014. (9 hrs = 8 hrs drilling & 1 hr BHA handling) Line Proximity - PTB @ 1,120' 1.7° Inc., 186° Azi. 2' North of and 6' East of Plan 3 Line.	4.75
CIRC	Pump 2 x 50 BBL h-vis (70 vis) sweep w/ 10 ppb nut plug around to clean hole at TD, in prep to POOH and run 13 3/8" casing, no losses reported Take survey on bottom, fill cellar w/ fresh water to keep hole full. Note: New batch of casing on location @ 13:45 hrs.	1.25
TOOH	EJSA with H&P rig crew, Integrity directional hands & PNR rep on TOOH: TOOH (SLM) to run 13 3/8" surface casing. POOH 3 stands of DP, 6 stands of HWDP w/ X/O subs, 2 stands of 8" DC's, & rack back in derrick. EJSA on laying down tools & breaking bit: Lay down stabilizer and break bit off. Lay down MWD tool, shock sub, down hole motor & monels. No Drag. Note: Both stabilizers and bit balled w/red bed clay. Bit Graded - 1/1/LT/G/X/0/WT/TD	3.75
SAFETY	Clean Rig Floor. PJSM W/Rig Crew, Casing Crew, PNR Co. Man & Safety Rep On R/U Casing Running Tools.	0.5
CASE	R/U Express casing running tools. Casing Elevator ID - 13.3/4", OD of casing collars - 14-5/16"	1
CASE	EJSA with Express casing crew, H&P rig crew & PNR rep over running surface casing. Make up 13 3/8" 54.4# J-55 BT&C Float Collar w/ Texas Pattern Guide Shoe, 1 Jt of 13 3/8" 54.5# J-55 BT&C casing, 13 3/8" 54.5# J-55 float collar & 1 Jt of 13 3/8" 54.5# J-55 BT&C casing, Torque - 13,400 ft/lbs. Thread locked all threads in shoe track, including the joint on top of float collar & test- Good. RIH w/13 3/8" 54.5# J-55 BT&C casing to 1,101'. Shoe @ 1,101' MD Float Collar @ 1,055' Bow Spring Centralizers run middle of shoe joint, 5' above float collar, on collars of Jts. # 6, 10, 14, 18 for a total of 6 centralizers.	6.5
CIRC	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. EJSA W/Crest, Rig Crew & Pioneer Co. Man on Rigging Up Cementers, rig up cementers while circulating. Load top plug with tattle tail into cementing head, witnessed by Pioneer Co. Man & Crest supervisor.	1
SAFETY	PJSM with H&P crew, Crest & Pioneer Representative over cementing 13-3/8" Surface casing. Note: Casing Centered In Rotary Table.	0.5

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
CMT	<p>Crest cement 13-3/8" 48 ppf J-55 STC Surface Casing as follows: Pressure test lines to 3500 psi.</p> <p>20 bbls 8.33 lb/gal of fresh water spacer.</p> <p>Lead Cement 500 sks (203 bbl) of class "C" (35/65 Proz) 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.</p> <p>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.</p> <p>Drop top plug with tattle tail witnessed by Pioneer Representative & Crest Supervisor.</p> <p>Displace cement with 164 bbls of 8.33 ppg fresh water. Displaced final 10 bbls at 2.2 bpm & bump plug @ 1,080 psi, 500 psi over final lift pressure of 3800 psi. Floats held for 5 min, bled back 0.5 bbls.</p> <p>Full returns throughout cement job.</p> <p>Estimated 94 bbl of cement back to surface.</p> <p>Lift pressures: 25 bbls - 5.3 bpm - 100; 50 bbls - 5.3 bpm - 150 psi; 80 bbls - 5.3 bpm - 200 psi; 100 bbls - 5.3 bpm - 240; 120 bbls - 5.3 bpm - 270 psi; 140 bbls - 5.3 bpm - 310; 160 bbls - 2.3 bpm - 360 psi; 164 bbls - 2.3 pm - 380/1080 psi.</p>	2.5

Report #: 3 Daily Operation: 10/7/2014 06:00 - 10/8/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033135
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
2	3	1,120.0
		End Depth (TVD) (ftKB)
		1,119.9
		Dens Last Mud (lb/gal)
		8.60
		Rig
		H & P, 606

Operations Summary
Top Out Cement, Cut Off Casing, Weld On Head, N/U BOP's, Test BOP's, C/O Annular Preventer Element, Re-Test Annular, Install Wear Bushing, P/U Dir. Tools

Remarks
Rig (H&P 606) & Well Progress: 4 Rig Move Days, 2.1 Days From Spud, 2.5 Total Days On Well, 25 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 2 NPT for month of October

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

Estimated Pad Drilling Completion Date: 11/20/2014

Time Log Summary

Operation	Com	Dur (hr)
CMT	Make up 100' 1" pipe and top off conductor with 200 sacks of class H cement mixed @ 15.6 ppg. Pumped 1.5-2 bbl's/min, 200 psi pressure. Full returns.	1.5
SAFETY	EJSA on rig down Crest top job cement equipment & Thomas cellar pumps.	0.5
CMT	Wait on Cement, Rig down Crest cementers & jet out cellar with trash pump. Clean cellar & rig down Thomas Oilfield cellar pumps & move out of way. Rig down Express Spider slips Strip conductor, prepare to cut casing.	1.5
WLHEAD	EJSA with Chris Burns welder, Seaboard Rep, H&P crew, & PNR CM about cutting casing & installing wellhead. 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 560 PSI for 10 min - Good.	4
NU_TEST	<p>EJSA over Nipple up BOP's w/ PNR CM, H&P rig crew & ETS nipple up crew. Inspect spools & tighten the same. N/U BOPs, R/U choke lines, hydraulic lines to BOP, C/O Bails & Elevators.</p> <p>Pits Cleaned & Filled With Pre-mix (Fresh Water/Hydrated Gel)</p> <p>Tested Off-Line While Nippling Up BOPE, 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.</p>	4
NU_TEST	<p>EJSA over testing BOPE with H&P crew, ETS testing crew & PNR CM. Test BOP & Choke Manifold to 250 Low 5 min / 3,500 High 5 min. Good Test.</p> <p>Basin Services Cemented Cellar to Base Plate On Wellhead.</p>	3
U_RIG_OT R	Issues W/Annular Preventer when pulling test plug after BOP Test complete, Element not fully retracting, Function open/close 3 x while flushing w/water. Turned up pressure on annular to 2,000 psi, Element not fully retracting, Able to pull test plug W/2 hoists, Rig Manager contacted H & P Drlg. Supt. to discuss, Pioneer Co. Man Contacted Drlg. Supt., C/O Annular Preventer Element. N/D flow nipple, Remove annular cap, Replace element, Re-Install cap & Flow nipple. Re-test annular preventer to 250 psi low/ 5 mins. 3,500 psi high/5 mins.	7.5

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
WEARBUS HING	R/D Testers & Install long wear bushing. Tighten two painted lock down screws. Witnessed by Pioneer Co. Man. Note: Perform Accumulator Test, Test Good Nipple Up Flowline	1
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, UBHO (orient UBHO).	1

Report #: 4 Daily Operation: 10/8/2014 06:00 - 10/9/2014 06:00

Job Category ORIG DRILLING	Primary Job Type ODR	AFE Number 033135
Days From Spud (days) 3	Days on Location (days) 4	End Depth (ftKB) 3,320.0
	End Depth (TVD) (ftKB) 3,319.8	Dens Last Mud (lb/gal) 8.70
	Rig H & P, 606	

Operations Summary

P/U Dir. Tools, TIH, Test Casing, Drill Out Cement & Float Equipment, Drill 12 1/4" Intermediate Section to 3, 320'

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 2.1 Days From Spud, 2.5 Total Days On Well, 25 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 2 NPT for month of October

Completion percentage: Surface - 100%, Intermediate - 33%, Curve - 0%, Lateral - 0%

Estimated Pad Drilling Completion Date: 11/20/2014

Time Log Summary

Operation	Com	Dur (hr)
SAFETY	EJSA with H&P rig crew, Intergrity directional crew & PNR CM over making up 12-1/4" Intermediate BHA.	0.5
BHA_HAN DLING	P/U NMDC and install MWD. Test Motor & MWD @ 100 spm, 383 gpm, 365 spp (good test). P/U 12 1/4" U716M PDC bit (0.773 TFA). P/U top NMDC & X.O Sub. TH Hill Job # T1-22259, Inspection # 18247	1.5
TIH	TIH W/9 - 8" DC's, P/U Jars, TIH W/3 - 8" DC's, X.O. Sub, 18 HWDP & Drillpipe, Tag @ 1,050'	2
TST_DO_FI T	Close pipe rams and Test 13 3/8" Casing to 1000 psi for 30 mins., using rig pumps, dropped to 978 psi in 30 min. Test Good.	1
DRL_ROT	Drilg Cement & Float Equip. F/1,050' - 1,120', 130 spm, 497 gpm, 30 Top Drive rpm, 79 motor rpm, 109 total bit rpm, 3 - 5k wob 1,050 psi. Full returns to surface. Float Collar @ 1,055' Shoe @ 1,101'	0.75
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 594' @ 148.5/Hr, 180 spm, 690 gpm, 2250 psi, 500-600 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 11-13 k ft/lbs tq, Avg MSE 6, Full returns.	4
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 500' @ 125/Hr, 180 spm, 690 gpm, 2250 psi, 500-600 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 11-13 k ft/lbs tq, Avg MSE 6.2, Full returns.	4
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 645' @ 135/Hr, 180 spm, 690 gpm, 2350 psi, 500-600 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 12-15 k ft/lbs tq, Avg MSE 7.2, Full returns.	4.75
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 10' @ 20'/Hr, 180 spm, 690 gpm, 2,100 psi, 150 psi diff., 110 motor rpm, 15 k wob, 360 MTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 84' @ 84'/Hr, 180 spm, 690 gpm, 2350 psi, 500-600 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 12-15 k ft/lbs tq, Avg MSE 8.5, Full returns.	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 10' @ 20'/Hr, 180 spm, 690 gpm, 2,100 psi, 150 psi diff., 110 motor rpm, 15 k wob, 360 MTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 168' @ 112'/Hr, 180 spm, 690 gpm, 2450 psi, 500-600 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 12-15 k ft/lbs tq, Avg MSE 11.1, Full returns.	1.5
RIG_SVC	Service rig & top drive	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 189' @ 126'/Hr, 180 spm, 690 gpm, 2450 psi, 500-600 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 12-15 k ft/lbs tq, Avg MSE 11.1, Full returns. Line Proximity - PTB @ 3,320 Inc. 0.4° Azi. 287.0°, A/B 18' South & R/L 3' West of Plan 3 Line MWD Tool Temperature 87° F Distance From 178B 18H - 39' Distance From 178B 19H - 59'	1.5

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Report #: 5 Daily Operation: 10/9/2014 06:00 - 10/10/2014 06:00

Job Category ORIG DRILLING			Primary Job Type ODR		AFE Number 033135
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
4	5	5,143.0	5,139.2	8.70	H & P, 606

Operations Summary

Drill 12 1/4" Intermediate Section to 4,357'. Displace active mud system to 8.7 ppg WBM. Drill 12 1/4" Intermediate Section to 5,143'.

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 3.1 Days From Spud, 3.5 Total Days On Well, 26 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 2 NPT for month of October

Completion percentage: Surface - 100%, Intermediate - 61%, Curve - 0%, Lateral - 0%

Estimated Pad Drilling Completion Date: 11/20/2014

Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 283' @ 80.9'/Hr, 180 spm, 690 gpm, 2450 psi, 500-600 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 12-15 k ft/lbs tq, Avg MSE 13, Full returns.	3.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 15' @ 60'/Hr, 180 spm, 690 gpm, 2,100 psi, 150 psi diff., 110 motor rpm, 15 k wob, 300 MTF, Full returns to surface.	0.25
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 267' @ 97.1'/Hr, 180 spm, 690 gpm, 2450 psi, 500-600 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 12-15 k ft/lbs tq, Avg MSE 13, Full returns. BOP drill with H&P rig crew, reaction time - 32 sec.	2.75
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 18' @ 36'/Hr, 180 spm, 690 gpm, 2,150 psi, 150 psi diff., 110 motor rpm, 15 k wob, 300 MTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 77' @ 77'/Hr, 180 spm, 690 gpm, 2550 psi, 500-600 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 13-15 k ft/lbs tq, Avg MSE 15, Full returns.	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 18' @ 9'/Hr, 180 spm, 690 gpm, 2,180 psi, 200 psi diff., 110 motor rpm, 15 k wob, 300 MTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 359' @ 72'/Hr, 180 spm, 690 gpm, 2450 psi, 500-600 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-35 k wob, 12-15 k ft/lbs tq, Avg MSE 13, Full returns.	5
CIRC	Displace active system to WBM (8.7 ppg MW, 40 vis, API filtrate 11.4 cm ³ /30 min. In guage surface to surface calculations = 6,459 strokes, Total displacement took 13,100 strokes, (103% washout.) Full returns throughout displacement. Maintaining active mud system API filtrate < 12. Adding lignite @ 3 ppb. Adding 4 sacks/hr Tiger Bullets to system to maintain 100% returns. Note: To mitigate operational safety / spill risks, performed displacement without drilling ahead due to rig crew assigned to new positions.	1.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 660' @ 101'/Hr, 180 spm, 690 gpm, 2450 psi, 500-600 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 13, Full returns.	6.5
RIG_SVC	Service rig & top drive	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 10' @ 20'/Hr, 180 spm, 690 gpm, 2450 psi, 500-600 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 13, Full returns.	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 20' @ 40'/Hr, 180 spm, 690 gpm, 2,100 psi, 150 psi diff., 110 motor rpm, 15 k wob, 15R GTF, Full returns to surface.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 96' @ 96'/Hr, 180 spm, 690 gpm, 2450 psi, 500-600 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 13, Full returns. Line Proximity - PTB @ 5143' Inc. 4.0° Azi. 295.8°, A/B 23' Above & R/L 10' Leftt of Plan 3 Line MWD Tool Temperature 105° F Distance From 178B 18H - 142' Distance From 178B 19H - 195'	1

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Report #: 6 Daily Operation: 10/10/2014 06:00 - 10/11/2014 06:00

Job Category ORIG DRILLING			Primary Job Type ODR			AFE Number 033135	
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)	End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig		
5	6	6,084.0	6,073.9	8.90	H & P, 606		

Operations Summary

Drill 12 1/4" Intermediate Section to 6,084'.

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 4.1 Days From Spud, 4.5 Total Days On Well, 27 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 2 NPT for month of October

Completion percentage: Surface - 100%, Intermediate - 75%, Curve - 0%, Lateral - 0%

Estimated Pad Drilling Completion Date: 11/20/2014

Time Log Summary

Operation	Com	Dur (hr)
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 23' @ 18.4"/Hr, 180 spm, 690 gpm, 2,170 psi, 200 psi diff., 110 motor rpm, 15-20 k wob, 0 GTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 134' @ 67"/Hr, 180 spm, 690 gpm, 2650 psi, 500-600 psi diff, 75 Top Drive rpm, 110 motor rpm, 185 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 14, Full returns. Tailgate safety meeting with McClatchy Bros Forklift operator, H&P RM & PNR Rep on offloading 13-3/8" casing. Off load 9-5/8" Intermediate casing.	2
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 20' @ 20"/Hr, 180 spm, 690 gpm, 2,210 psi, 150 psi diff., 110 motor rpm, 20 k wob, 0 GTF, Full returns to surface. Tailgate meeting with Hi- Tech Inspectors over cleaning, drifting & talleying 9-5/8" Intermediate casing.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 74' @ 74"/Hr, 180 spm, 690 gpm, 2650 psi, 600 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 15, Full returns. Slowed rotary to help build angle.	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 25' @ 25"/Hr, 180 spm, 690 gpm, 2,220 psi, 250 psi diff., 110 motor rpm, 20 k wob, 0 GTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 38' @ 76"/Hr, 180 spm, 690 gpm, 2500 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 14, Full returns.	0.5
U_RIG_OT R	Change out swab in #2 mud pump middle module, while circulating w/ 90 spm, 345 gpm, 650 psi 10 rpm	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 31' @ 62"/Hr, 180 spm, 690 gpm, 2500 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 14, Full returns.	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 25' @ 25"/Hr, 180 spm, 690 gpm, 2,100 psi, 150 psi diff., 110 motor rpm, 15 k wob, 20L GTF, Full returns to surface. Safety Solutions on location servicing & checking all safety equipment on location.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 164' @ 82"/Hr, 180 spm, 690 gpm, 2550 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 13-15 k ft/lbs tq, Avg MSE 16, Full returns.	2
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 25' @ 16"/Hr, 180 spm, 690 gpm, 2,100 psi, 150 psi diff., 110 motor rpm, 15 k wob, 15R GTF, Full returns to surface.	1.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 79' @ 79"/Hr, 180 spm, 690 gpm, 2500 psi, 550-650 psi diff, 70 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 14, Full returns.	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 15' @ 15"/Hr, 180 spm, 690 gpm, 2,100 psi, 150 psi diff., 110 motor rpm, 15 k wob, High Side GTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 79' @ 52"/Hr, 180 spm, 690 gpm, 2500 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 14, Full returns.	1.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 25' @ 16"/Hr, 180 spm, 690 gpm, 2,100 psi, 150 psi diff., 110 motor rpm, 15 k wob, High Side GTF, Full returns to surface.	1.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 51' @ 118"/Hr, 180 spm, 690 gpm, 2500 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 14, Full returns.	0.5
U_RIG_OT R	Change out swab on #2 mud pump , while circulating w/ 90 spm, 344 gpm, 630 psi 10 rpm	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 8' @ 16"/Hr, 180 spm, 690 gpm, 2500 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 14, Full returns.	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 35' @ 14"/Hr, 180 spm, 690 gpm, 2,100 psi, 150 psi diff., 110 motor rpm, 15 k wob, High Side GTF, Full returns to surface.	2.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 60' @ 120"/Hr, 180 spm, 690 gpm, 2500 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 14, Full returns.	0.5

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
RIG_SVC	Service rig & top drive	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 10' @ 40'/Hr, 180 spm, 690 gpm, 2500 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 14, Full returns.	0.25
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 20' @ 16'/Hr, 180 spm, 690 gpm, 2,100 psi, 150 psi diff., 110 motor rpm, 15 k wob, High Side GTF, Full returns to surface. Line Proximity - PTB @ 6084' Inc. 7.6° Azi. 300.1°, A/B 7' Above & R/L 6' Leftt of Plan 3 Line MWD Tool Temperature 108° F Distance From 178B 18H - 252' Distance From 178B 19H - 309'	1.25

Report #: 7 Daily Operation: 10/11/2014 06:00 - 10/12/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033135
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
6	7	6,818.0
		End Depth (TVD) (ftKB)
		6,801.7
		Dens Last Mud (lb/gal)
		8.90
		Rig
		H & P, 606

Operations Summary

Drill 12 1/4" Intermediate Section to 6,818'.

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 5.1 Days From Spud, 5.5 Total Days On Well, 28 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 2 NPT for month of October

Completion percentage: Surface - 100%, Intermediate - 86%, Curve - 0%, Lateral - 0%

Estimated Pad Drilling Completion Date: 11/20/2014

Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 74' @ 49.3'/Hr, 180 spm, 690 gpm, 2450 psi, 500-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 35-38 k wob, 13-15 k ft/lbs tq, Avg MSE 15, Full returns. Adding 2 Soap sticks and 1 Sapp stick every other connection. Pumping 2 gallons of Stardril AP on every connection. Pumping 10 ppb LCM Hi-Vis sweeps as needed.	1.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 25' @ 12.5'/Hr, 180 spm, 690 gpm, 2,000 psi, 150 psi diff., 110 motor rpm, 15-20 k wob, High Side GTF, Full returns to surface.	2
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 59' @ 59'/Hr, 180 spm, 690 gpm, 2450 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 16, Full returns.	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 32' @ 21.3'/Hr, 180 spm, 690 gpm, 2,000 psi, 150 psi diff., 110 motor rpm, 15 k wob, 10R GTF, Full returns to surface.	1.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 63' @ 63'/Hr, 180 spm, 690 gpm, 2450 psi, 500-600 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 13-15 k ft/lbs tq, Avg MSE 15, Full returns.	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 31' @ 15.5'/Hr, 180 spm, 690 gpm, 2,000 psi, 150 psi diff., 110 motor rpm, 15 k wob, 10R GTF, Full returns to surface.	2
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 63' @ 126'/Hr, 180 spm, 690 gpm, 2450 psi, 500-625 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 15, Full returns.	0.5
RIG_SVC	Service rig & top drive	0.5
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 31' @ 20'/Hr, 180 spm, 690 gpm, 1900 psi, 100 psi diff., 110 motor rpm, 15 k wob, High Side GTF, Full returns to surface.	1.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 63' @ 63'/Hr, 180 spm, 690 gpm, 2500 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 15, Full returns.	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 30' @ 10'/Hr, 180 spm, 690 gpm, 2,100 psi, 150 psi diff., 110 motor rpm, 15 k wob, High Side GTF. Note: Seepage losses from 18:30 hrs - 19:30 hrs. 25 bbls per hr. Adding 3 sks Tiger Bullets to active sytem / 30 mins. Pumped 35 bbl 10 ppb LCM hi vis sweep. Healed losses. Full returns to surface.	3
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 65' @ 65'/Hr, 180 spm, 690 gpm, 2500 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 18. Note: Seepage losses from 21:30 hrs - 23:30 hrs. 25 bbls per hr. Increase to 4 sks Tiger Bullets to active sytem / 30 mins. Pumped 35 bbl 15 ppb LCM hi vis sweep. Healed losses. Full returns to surface.	1
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 31' @ 9'/Hr, 180 spm, 690 gpm, 2,100 psi, 150 psi diff., 110 motor rpm, 15 k wob, High Side GTF, Full returns to surface. Adding 4 sks Tiger Bullets to active sytem / 30 mins.	3.5

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 63' @ 63'/Hr, 180 spm, 690 gpm, 2500 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 18, Full returns. Adding 4 sks Tiger Bullets to active sytem / 30 mins.	1
DRL_SLIDE	Slide Drill 12-1/4" Intermediate Section, 31' @ 21'/Hr, 180 spm, 690 gpm, 2,100 psi, 150 psi diff., 110 motor rpm, 15 k wob, 20L GTF, Full returns. Adding 4 sks Tiger Bullets to active sytem / 30 mins.	1.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 63' @ 63'/Hr, 180 spm, 690 gpm, 2500 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 18, Full returns. Adding 4 sks Tiger Bullets to active sytem / 30 mins.	1
DRL_SLIDE	Slide Drill 12-1/4" Intermediate Section, 10' @ 20'/Hr, 180 spm, 690 gpm, 2,100 psi, 150 psi diff., 110 motor rpm, 15 k wob, 20L GTF, Full returns. Line Proximity - PTB @ 6818' Inc. 7.7° Azi. 308.8°, A/B 11' Above & R/L 6' Left of Plan 3 Line MWD Tool Temperature 122° F Distance From 178B 18H - 314' Distance From 178B 19H - 371'	0.5

Report #: 8 Daily Operation: 10/12/2014 06:00 - 10/13/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033135
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
7	8	7,111.0
		End Depth (TVD) (ftKB)
		7,092.0
		Dens Last Mud (lb/gal)
		8.90
		Rig
		H & P, 606

Operations Summary

Drill 12 1/4" Intermediate Section F/6,818'- 7,111' TOOH to change out bit.

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 6.1 Days From Spud, 6.5 Total Days On Well, 29 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 2 NPT for month of October

Completion percentage: Surface - 100%, Intermediate - 90%, Curve - 0%, Lateral - 0%

Estimated Pad Drilling Completion Date: 11/20/2014

Time Log Summary

Operation	Com	Dur (hr)
DRL_SLIDE	Slide Drill 12-1/4" Intermediate Section, 22' @ 14.7'/Hr, 180 spm, 690 gpm, 2,150 psi, 150 psi diff., 110 motor rpm, 20-25 k wob, 10L GTF, Full returns. Adding 4 sks Tiger Bullets to active sytem / 30 mins. Adding 2 Soap sticks and 1 Sapp stick every other connection. Pumping 2 gallons of Stardril AP on every connection. Pumping 10 ppb LCM Hi-Vis sweeps w/ nut plug as needed.	1.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 73' @ 36.5'/Hr, 180 spm, 690 gpm, 2420 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 22 Full returns.	2
DRL_SLIDE	Slide Drill 12-1/4" Intermediate Section, 20' @ 20'/Hr, 180 spm, 690 gpm, 2,100 psi, 125 psi diff., 110 motor rpm, 15 k wob, 10L GTF, Full returns to surface.	1
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 65' @ 37.1'/Hr, 180 spm, 690 gpm, 2450 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 16, Full returns. Tailgate safety meeting with Dynamic Oilfield Services hands on rigging up solids control equipment. Rig up hoses, wire in all equipment & ground, connect PVC pipe, & test equipment.	1.75
U_RIG_OTR	Change out seat & valve in #1 mud pump #1 module, while circulating w/ 90 spm, 345 gpm, 665 psi 10 rpm. PNR Safety man Chris Purdy out on location. Walk & perfrom safety check around rig with PNR safety man & CM.	0.75
DRL_SLIDE	Slide Drill 12-1/4" Intermediate Section, 24' @ 12'/Hr, 180 spm, 690 gpm, 2,150 psi, 175 psi diff., 110 motor rpm, 15 k wob, High Side GTF, Full returns to surface.	2
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 89' @ 20'/Hr, 180 spm, 690 gpm, 2450 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 16, Full returns.	4.5

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
CIRC	Circ 2 x 45 bbl 10 ppb LCM sweeps surface to surface. Pumped till Shakers cleaned up, Full returns, Perform Flow Check, No Flow, Pump Slug. Note: Contacted superintendent and engineer to discuss low penetration rate. Decision made to POOH to change out 12 1/4" bit and mud motor. Due to 30 hr delivery for motor w/ 12" stabilizer, decision made to use motor w/ 11 3/4" stabilizer to TD intermediate section.	2.5
TOOH	EJSA on TOOH, TOOH F/7,111- 6, 910' -, no excess drag, hole taking proper displacement. Racking back DP in derrick. At 6,910', pulled over 40 k. Worked thru. Pulled multiple tight spots from 6,910' to 4,629'. Pulled 40 k over. Not able to pull through.	3.5
CIRC	Screwed into string & brought pumps on hole. Brought rotary up & starting getting signs of packing off. Circulate bottoms up while working pipe through tight spot. No significant cuttings to surface. Prepare to TOOH	3
TOOH	TOH 2 stands to 4496' Pulled 60k over. Screw back into string, stage pumps up to 600 gpm & 60 rpm, backreaming through tight spot.	1.5

Report #: 9 Daily Operation: 10/13/2014 06:00 - 10/14/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033135
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
8	9	7,374.0
		End Depth (TVD) (ftKB)
		7,353.0
	Dens Last Mud (lb/gal)	Rig
	8.90	H & P, 606

Operations Summary

TOOH. Change out 12 1/4" BHA. TIH. Drill 12 1/4" Intermediate Section F/ 7,111' - 7,374'.

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 7.1 Days From Spud, 7.5 Total Days On Well, 30 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 2 NPT for month of October

Completion percentage: Surface - 100%, Intermediate - 94%, Curve - 0%, Lateral - 0%

Estimated Pad Drilling Completion Date: 11/20/2014

Time Log Summary

Operation	Com	Dur (hr)
TOOH	Back ream out of hole w/ 60 rpm, 600 gpm F/4,357' - 4,074'.	1
TOOH	TOOH F/4,074' - BHA' on trip tank, no excess drag & hole taking proper displacement. Racking back DP in derrick.	2.5
BHA_HAN DLING	TOOH racking back HWDP & 8" DC's, lay down jars.	1.5
BHA_HAN DLING	L/D Dir. Tools, X.O. Sub, Monel DC, MWD, Monel DC, UBHO, 11" Stabilizer, Motor & Bit Note: Bit Graded 5/2/CR/N/X/0/CT/PR	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. Rototate wear bushing 1/4 turn & reset. Verify hole is full & close blind rams. Perform BOP Function Test	1
BHA_HAN DLING	P/U 7/8 lobe 4.0 stage Adj. mud motor set @ 1.76° with 11.75" Stabilizer (.16 rev/gal). P/U 11" Stabilizer, UBHO (orient UBHO), P/U NMDC and install MWD & test Motor & MWD @ 100 spm, 383 gpm, 350 spp (good test). P/U 12 1/4" U716M PDC bit (0.773 TFA). P/U top NMDC & X.O Sub. TH Hill Job # T1-19109, Inspection # 18241	2.5
TIH	TIH W/9 - 8" DC's, P/U Jars, TIH W/3 - 8" DC's, X.O. Sub, 18 HWDP & DP T/6,997'	5.5
WASH_RE AM	Wash last stand down F/6,997' - 7,081'	0.5
U_RIG_OT R	Change out swab & liner on #1 mud pump / pod #3, while circulating w/ 105 spm, 400 gpm, 954 psi 30 rpm.	2
WASH_RE AM	Wash last stand down F/7,081' - 7,111' & re-log last 30' of gamma.	0.5
DRL_ROT	Rotate Drill 12-1/4" Intermediate Section 178' @ 59' /Hr, 180 spm, 690 gpm, 2780 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 22 Full returns.	3
DRL_SLID E	Slide Drill 12-1/4" Intermediate Section, 20' @ 13'/Hr, 180 spm, 690 gpm, 2,450 psi, 175 psi diff., 110 motor rpm, 15 k wob, High Side GTF, Full returns to surface.	1.5

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	<p>Rotate Drill 12-1/4" Intermediate Section 65' @ 65' /Hr, 180 spm, 690 gpm, 2780 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-38 k wob, 12-15 k ft/lbs tq, Avg MSE 22 Full returns.</p> <p>Line Proximity - PTB @ 7,374' Inc. 6.7° Azi. 297.6°, A/B 18' Above & R/L 3' Left of Plan 3 Line</p> <p>MWD Tool Temperature 116° F</p> <p>Distance From 178B 18H - 332'</p> <p>Distance From 178B 19H - 381'</p>	1

Report #: 10 Daily Operation: 10/14/2014 06:00 - 10/15/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033135
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
9	10	7,770.0
		End Depth (TVD) (ftKB)
		7,747.0
		Dens Last Mud (lb/gal)
		8.90
		Rig
		H & P, 606

Operations Summary

Drill 12 1/4" Intermediate Section F/ 7,111' - 7,770' TD. Cir, TOOH T/7,770' - BHA, LD DC's, Jars & directional BHA, Pull wearbushing, RU Tesco CRT & casing equipment, RIH w/ 9-5/8" Intermediate Casing

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 8.1 Days From Spud, 8.5 Total Days On Well, 31 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 2 NPT for month of October

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

Estimated Pad Drilling Completion Date: 11/20/2014

Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	<p>Rotate Drill 12-1/4" Intermediate Section 105' @ 60' /Hr, 180 spm, 690 gpm, 2900 psi, 550-650 psi diff, 65 Top Drive rpm, 110 motor rpm, 175 total bit rpm, 30-35 k wob, 11-13 k ft/lbs tq, Avg MSE 19 Full returns.</p>	1.75
U_RIG_OT R	Secure liner on #1 mud pump / pod #3, while circulating w/ 90 spm, 345 gpm, 795 psi 10 rpm.	0.75
DRL_ROT	<p>Rotate Drill 12-1/4" Intermediate Section 291' @ 61.3' /Hr, 130-180 spm, 500-690 gpm, 2000-2900 psi, 550-650 psi diff, 65 Top Drive rpm, 80-110 motor rpm, 145-175 total bit rpm, 30-35 k wob, 11-13 k ft/lbs tq, Avg MSE 18 Full returns.</p> <p>@ 7,505', dropped gpm's to 500, due to loss of partial returns (flow dropped from 42% - 27%). Pumped (2) 30 bbl 15ppb LCM (Tiger Bullets) sweeps back to back & established full returns. Staging pumps up slowly, keeping a close eye on losses.</p> <p>TD Intermediate Hole at 13:15 hrs on 10/14/14, 7,770' MD, TVD 7,747.01'</p> <p>Line Proximity: PTB @ 7,770' 5.1° Inc., 292.1° Azi., 9' Ahead & 7' Left of Plan 3 Line</p> <p>Distance From 18H - 344' & 19H - 383'. MWD Tool Temperature 122.7° F</p>	4.75
CIRC	<p>Circ. 2 x 40 bbl sweeps 7,500 strokes apart, of 85 vis 9.0 wt. w/15 ppb of Nut Plug/Tiger Bullets, condition mud w/YP 10, PV 8, WL 10.8, Pumped till Shakers cleaned up (an extra bottoms up), Full returns,</p> <p>Total gauge hole volume calculations = 10,587 strokes, Sweep back @ 14,036 strokes, (3449 excess strokes).</p> <p>Calculated 36% washout of open hole section.</p>	3.25
TOOH	<p>EJSA on TOOH, TOOH (SLM) F/7,770' - 7,100' pulling wet on trip tank, no excess drag & hole taking proper displacement. Flow check - no flow. Pump slug, TOOH (SLM) F/7,100' - BHA on trip tank, no excess drag & hole taking proper displacement. Racking back DP in derrick. P/U jt of DP to TD on so breaks will be rotated on trip out. Retrieve corrosion ring from HWDP.</p> <p>Note: SLM was 4.92' Long To Drillers Tally.</p> <p>Notified Schlumberger @ 17:00 Hrs. on 10/14/2014 W/Non Confirm Time for the intermediate cement job, spoke with Jeff, also sent an e-mail to Mike Bailey with the same information.</p>	5
BHA_HAN DLING	<p>L/D X.O. Sub, 12 - 8" DC's, Jars & Dir Assy. (1 - X.O Sub, 2 - 8" NMDC's, UBHO Sub, 11" Stabilizer, Motor & Bit)</p> <p>Note: Bit Graded 1/1/CT/S/1/0/BT/TD</p>	4
WEARBUS HING	<p>EJSA on pulling wear bushing. Pump out cellar. Verify wear bushing lockdown pins are backed out. Pull long wear bushing. No overpull. P/U wash sub and wash well head. Verify hole is full and close blind rams. Lay down wear bushing. Clean and clear rig floor for casing equipment.</p> <p>Perform BOP Function Test</p>	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

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
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 - 8.7906". 10 jts of 40 lb/ft casing - 8.8531". ID of single latch elevators - 9.625", OD of casing collars - 10.625".	1.5

Report #: 11 Daily Operation: 10/15/2014 06:00 - 10/16/2014 06:00

Job Category ORIG DRILLING	Primary Job Type ODR	AFE Number 033135
Days From Spud (days) 10	Days On Location (days) 11	End Depth (ftKB) 7,770.0
	End Depth (TVD) (ftKB) 7,747.0	Dens Last Mud (lb/gal) 8.90
	Rig H & P, 606	

Operations Summary

Run 9 5/8" Intermediate Casing, Circulate 1 Casing Volume, R/U Cementers. Begin cementing 9 5/8" Casing

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 9.1 Days From Spud, 9.5 Total Days On Well, 32 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 2 NPT for month of October

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

Estimated Pad Drilling Completion Date: 11/20/2014

Time Log Summary

Operation	Com	Dur (hr)
SAFETY	EJSA with H&P crew (day tour), Tesco Casing crew & PNR Representative over running casing. Discussed 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	Run 9 5/8" L-80 BT&C Casing w/ CRT tool @ 45 ft/min F/284' - 2,045' (44 jts. 43.5#), F/2,045' - 2,810' (17 jts. 40#), F/2,810' - 4,399' (27 jts. 40# RW & 8 jts. 40#) average torque to 9,600 ft/lbs. Hole displacing properly into trip tank 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 Schlumberger @ 08:30 Hrs 10/15/2014 W/Confirm Time Of 01:00 Hrs 10/16/2014 On Location. Spoke with Jeff. Contacted TRRC @ 08:45 Hrs. 10/15/2014 with Notification of cementing 9-5/8" Intermediate Casing, spoke with Ivy.	11.5
SAFETY	EJSA with H&P crew (night tour), 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. Contacted Schlumberger @ 18:00 Hrs 10/15/2014 W/Confirm Time Of 23:00 Hrs 10/15/2014 On Location. Spoke with Jeff.	0.5
CASE	Run 9 5/8" L-80 BT&C Casing w/ CRT tool @ 45 ft/min F/4,420' - 7,726' (73 jts. 40#), average torque to 9,600 ft/lbs. Hole displacing properly into trip tank and have 20 - 25% flow on each joint ran. Breaking circulation every 35 jts & CBU every 70 jts. PU & SO every 500' while in OH. Note: Schlumberger on Location @ 23:00 Hrs 10/15/2014, Lab Reports Done.	4.5
CASE	P/U & M/U landing joint & hanger, RIH F/7,726' - 7,760'. Hanger landed @ 23:55 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: 7,760' md. Float Collar depth: 7,664' md. Shoe Track length: 97.16' Solid Body Centralizers: 36	1
CIRC	Circulate 1 casing volume (586 bbls) with 6,414 strokes @ 8 bpm, 88 spm, 250 psi, full returns to surface until 4,600 strokes (B/Up). Lost returns. Staged pumps back to 40 spm. (3.6 bpm) 18% returns. Loss 40 bbls to hole. Contacted superintendant to discuss. Decision to proceed w/ cement job.	2.5
CMT	Held Safety Meeting/JSA W/Rig Crew, Schlumberger Cement Crew & PNR Co. Man on R/U Cement Equipment & R/U Cementers. Completed cement equipment rig up. Continued to circulate @ 30 spm. (2.7 bpm) w/ 18% returns while rigging up cementers.	1.5

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
CMT	<p>Schlumberger cement 9 5/8" Intermediate casing as follows:</p> <p>Pressure test cement lines to 4500 psi</p> <p>Drop bottom plug</p> <p>Pump 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>Pump 769 sk, 318 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>Pump 289 sk, 55 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>Prep to drop plug and displace casing w/ fresh water at report time.</p> <p>Note: Full Returns throught out cement job to this point.</p>	2

Report #: 12 Daily Operation: 10/16/2014 06:00 - 10/17/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033135
Days From Spud (days)	Days On Location (days)	End Depth (ftKB)
11	12	7,832.0
		End Depth (TVD) (ftKB)
		7,808.8
	Dens Last Mud (lb/gal)	Rig
	9.10	H & P, 606

Operations Summary

Cement 9 5/8" casing, R/D Schlumberger, R/D Tesco CRT, P/U Dir. BHA, TIH, Perform Casing Test, Drill Cmt. & Fit. Equip. + 10' Open Hole, Perform FIT, Displace hole to OBM. Drill 8 1/2" Curve Section to 7,832'

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 10.1 Days From Spud, 10.5 Total Days On Well, 33 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 2 NPT for month of October

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 1%, Lateral - 0%

Estimated Pad Drilling Completion Date: 11/20/2014

Time Log Summary

Operation	Com	Dur (hr)
CMT	<p>Schlumberger cement 9 5/8" Intermediate casing as follows:</p> <p>Pressure test cement lines to 4500 psi</p> <p>Drop bottom plug</p> <p>Pump 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>Pump 769 sk, 318 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>Pump 289 sk, 55 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 570 bbls of 8.34 ppg Fresh Water w/ 0.084 gal/bbl Green-Cide 25G B244 at 4.5 - 6.3 bpm. Displaced final 20 bbls at 1.7 - 2.3 bpm. Bump plug @ 570 bbls with 1550 psi, 500 psi over final lift pressure of 1050 psi. Floats held, bled back 3.0 bbls after holding pressure for 5 minutes.</p> <p>Full Returns throught out cement job. No cement to surface</p> <p>Lift pressures: 50 bbl - 6.4 bpm 332 psi, 100 bbl - 6.3 bpm 203 psi, 200 bbl - 6.2 bpm 490 psi, 300 bbl - 6.1 bpm 389 psi, 400 bbl - 6.1 bpm 389 psi, 500 bbl - 6.1 bpm 538 psi, 550 bbl - 4.5 bpm 584 psi, 560 bbl - 1.7 bpm 949 psi, 570 bbl - 1.7 bpm 1050 / 1550 psi.</p> <p>*** - SLB supervisor taking & weighing slurry samples every 100 bbls (3 taken on Lead & 1 taken on Tail)</p>	2
CMT	EJSA with SLB cementers & H&P crew over rigging down cementers & iron. Flush and clean cement lines, R/D Cementers & iron.R/D cementers, wash thru BOP & choke.	1.5

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
WLHEAD	EJSA W/Seaboard, H&P rig crew & PNR CM over running packoff. Pull Landing Joint, Set Packoff, Test Packoff to 5,000 psi for 5 minutes Witnessed By Pioneer Rep., L/D Landing Joint	1
CASE	EJSA with Tesco CRT hands, H&P rig crew & PNR rep on laying down Tesco CRT. Rig down Tesco CRT per Tesco, lay down hydraulic stand & hoses, lay down CRT.	1.5
WEARBUS HING	Install short wear bushing, function test BOP, Install elevators, Recalibrate High/Low settings on Top Drive	0.5
BHA_HAN DLING	Clear Rig Floor, Gather directional tools, Hold safety meeting on picking up directional tools	0.5
BHA_HAN DLING	P/U Directional BHA #4, Motor, Stabilizer, UBHO, NMDC, Flex NMDC, & X.O. Sub, Scribe and install MWD, Test Motor & MWD, 80 spm, 306 gpm, test good, M/U Bit Note: TH Hill Job # T1-22485 SN IDS67542 on motor	1.5
SAFETY	TIH f/ BHA t/ 7,564'.	6
CUTDL	EJSA on Slip & Cut drill line. Cut drill line, crown saver test, and calibrate blocks.	2.5
TST_DO_FIT	Perform Casing Test To 2,500 psi for 30 minutes. Test Good.	1.5
TST_DO_FIT	TIH to 7,671'. Tag cmt. Drill out cement, Float equipment F/7,761' - 7,770" & Drill 10' of new hole to 7,780' WOB: 5-8K ; SPM: 105 / 402 GPM; RPM: 30. Note: Float collar @ 7,764' Float shoe @ 7,758'	2.5
TST_DO_FIT	Perform FIT w/ 9.1 ppg MW, (7,737' TVD) = 1,120 psi. Pressure drop to 729 in 10 min Leak-Off Calculated To 11.88 ppg EMW	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" Curve Section 52' @ 52 ft/hr: 15- 25 k WOB, 30 TDS rpm, 138 spm, 500 gpm, 250 motor rpm, 300-400 psi Diff, 2300 spp, 4-6 k TQ., Avg MSE 30. Full returns to surface.	1

Report #: 13 Daily Operation: 10/17/2014 06:00 - 10/18/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033135
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
12	13	8,534.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
8,467.3	10.60	H & P, 606

Operations Summary

Drill 8-1/2" Curve Section to 8,397'. Rig down damaged climb assist. Drill 8-1/2" Curve Section to 8,534'

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 11.1 Days From Spud, 11.5 Total Days On Well, 34 Total Days On Location

Rig NPT: 9 hrs previous 24 hrs. 11 NPT for month of October

Completion percentage: Surface - 100%, Intermediate - 100%, Curve - 64%, Lateral - 0%

Estimated Pad Drilling Completion Date: 11/20/2014

Time Log Summary

Operation	Com	Dur (hr)
DRL_SLIDE	Slide Drill 8-1/2" Production Curve 94' @ 31'/hr, 12-20 k WOB, 150 spm, 575 gpm, 288 Motor rpm, 350 psi Diff, 2750 psi SPP, 35 R GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Curve 177' @ 88.5'/hr. 30 k WOB, 30 TDS rpm, 130 spm, 500 gpm, 250 Motor rpm, 280 Total rpm, 500-700 psi Diff, 2,950 psi SPP, 8 k TQ. Avg MSE: 6. Full returns to surface.	2
DRL_SLIDE	Slide Drill 8-1/2" Production Curve 12' @ 24'/hr, 0 R GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Curve 82' @ 164'/hr. Avg MSE: 6. Full returns to surface.	1
DRL_SLIDE	Slide Drill 8-1/2" Production Curve 10' @ 20'/hr, 0 R GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Curve 84' @ 168'/hr. Avg MSE: 6. Full returns to surface.	0.5
DRL_SLIDE	Slide Drill 8-1/2" Production Curve 94' @ 31'/hr, 35 R GTF. Full returns to surface.	3
DRL_SLIDE	Slide Drill 8-1/2" Production Curve 47' @ 31'/hr, 25 R GTF. Full returns to surface.	1.5
DRL_SLIDE	Slide Drill 8-1/2" Production Curve 47' @ 47'/hr, 45 R GTF. Full returns to surface	1

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
U_RIG	TOOH to 7,731' inside casing shoe, to repair derrick climb assist	1.5
U_RIG	Held EJSA on repairing climb assist. Discussed climbing safety, dropped objects, tethered tools, and line of fire. No one allowed on rig floor while repairs done overhead. Verify all tools recovered after job is complete.	0.5
U_RIG	Rig down and remove all climb assist equipment from derrick. Complete hot work permit for welding, Cut damaged / loose brackets & arms from crown. 3rd party Inspector viewed and approved work. Rig down welding equipment and all tools. Verify all tools removed from derrick. Note: Equipment needed to repair climb assist on order. H&P will restore climb assist to operations when operationally accessible.	6.5
U_RIG	TIH F/ 7,731' to 8,397'	0.5
DRL_ROT	Slide Drill 8-1/2" Production Curve 137' @ 30'/hr, 15 R GTF. Full returns to surface Note: Motor Yield 13.9' /100', Build rate needed 10.5' /100' PTB @ 8534', 40.3 Inc., 354 Azi., 27' Above and 17' Left of plan #3 line. Distance from original University 3-17 #3 = 338' MWD Tool Temperature 137°F	4.5

Report #: 14 Daily Operation: 10/18/2014 06:00 - 10/19/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033135
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
13	14	10,437.0
		End Depth (TVD) (ftKB)
		8,631.8
	Dens Last Mud (lb/gal)	Rig
	10.00	H & P, 606

Operations Summary

Drill 8-1/2" Lateral Section f/ 8,534' - 10,437'.

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 12.1 Days From Spud, 12.5 Total Days On Well, 35 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 11 NPT for month of October

Completion percentage: Surface - 100%, Intermediate - 100%, Curve -100%, Lateral - 15%

Estimated Pad Drilling Completion Date: 11/20/2014

Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8-1/2" Production Curve 20' @ 40'/hr. 30 k WOB, 30 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 318 Total rpm, 500 psi Diff, 3100 psi SPP, 8 k TQ. Avg MSE: 6. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8-1/2" Production Curve 32' @ 32'/hr, 20 k WOB, 150 spm, 575 gpm, 288 Motor rpm, 350 psi Diff, 2900 psi SPP, 10 R GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8-1/2" Production Curve 12' @ 24'/hr. Avg MSE: 6. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8-1/2" Production Curve 35' @ 70'/hr, 0 GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Curve 17' @ 34'/hr. Avg MSE: 5. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8-1/2" Production Curve 30' @ 60'/hr, 5 R GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Curve 17' @ 34'/hr. Avg MSE: 5. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8-1/2" Production Curve 30' @ 60'/hr, 15 L GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Curve 20' @ 40'/hr. Avg MSE: 5. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8-1/2" Production Curve 20' @ 40'/hr, 15 L GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Curve 12' @ 24'/hr. Avg MSE: 5. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8-1/2" Production Curve 20' @ 40'/hr, 15 L GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Curve 15' @ 30'/hr. Avg MSE: 6. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8-1/2" Production Curve 20' @ 40'/hr, 20 L GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Curve 17' @ 68'/hr. 25 k WOB, 30 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 318 Total rpm, 500 psi Diff, 3150 psi SPP, 10 k TQ. Avg MSE: 8. Full returns to surface. Note: drlg past University 3-17 #3, safety factor 0, distance 35' notified superintendent when safety factor was at 5 no problem reported	0.25

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
DRL_SLID E	Slide Drill 8-1/2" Production Curve 30' @ 60/hr, 0 GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 21' @ 84/hr. Avg MSE: 8. Full returns to surface. Land curve @ 8959' TD, TVD 8629' 30' above line per Geosteering & Engineer	0.25
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 30' @ 40/hr, 0 GTF. Full returns to surface.	0.75
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 47' @ 188/hr. Avg MSE: 5. Full returns to surface.	0.25
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 10' @ 20/hr, 0 GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 131' @ 87/hr. Avg MSE: 5. Full returns to surface.	1.5
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 12' @ 48/hr, 170 R GTF. Full returns to surface.	0.25
DRL_ROT	Rotate Drill 8-1/2" Production Curve 374' @ 136'/ hr. 24 k WOB, 75 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 363 Total rpm, 500 psi Diff, 3100 psi SPP, 8 k TQ. Avg MSE: 7. Full returns to surface.	2.75
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 12' @ 24/hr, 135 R GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Curve 83' @ 166'/ hr. 24 k WOB, 75 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 363 Total rpm, 550 psi Diff, 3100 psi SPP, 9 k TQ. Avg MSE: 8. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 15' @ 30/hr, 120 R GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Curve 456' @ 101'/ hr. 24 k WOB, 75 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 363 Total rpm, 550 psi Diff, 3100 psi SPP, 10 k TQ. Avg MSE: 9. Full returns to surface.	4.5
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 15' @ 30/hr, 125 R GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Curve 175' @ 175'/ hr. 24 k WOB, 75 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 363 Total rpm, 550 psi Diff, 3100 psi SPP, 11 k TQ. Avg MSE: 9. Full returns to surface.	1
RIG_SVC	Service rig & top drive	0.5
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 15' @ 30/hr, 120 R GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Curve 130' @ 130'/ hr. 24 k WOB, 75 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 363 Total rpm, 550 psi Diff, 3100 psi SPP, 11 k TQ. Avg MSE: 9. Full returns to surface. PTB @ 10,437', 88.5 Inc., 7' Above per Geo, 30' Above, and 23' Left of plan #3 line. MWD Tool Temperature 166°F	1

Report #: 15 Daily Operation: 10/19/2014 06:00 - 10/20/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033135
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
14	15	12,177.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
8,653.3	9.90	H & P, 606

Operations Summary

Drill 8-1/2" Lateral Section f/ 10,437' - 12,177'

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 13.1 Days From Spud, 13.5 Total Days On Well, 36 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 11 NPT for month of October

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

Estimated Pad Drilling Completion Date: 11/20/2014

Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8-1/2" Production Curve 136' @ 91'/ hr. 24 k WOB, 75 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 363 Total rpm, 550 psi Diff, 3100 psi SPP, 11 k TQ. Avg MSE: 9. Full returns to surface.	1.5
DRL_SLID E	Slide Drill 8-1/2" Production Curve 15' @ 30/hr, 20 k WOB, 150 spm, 575 gpm, 288 Motor rpm, 350 psi Diff, 2900 psi SPP, 160 L GTF. Full returns to surface.	0.5

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 169' @ 113/hr. Avg MSE: 5. Full returns to surface.	1.5
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 15' @ 30/hr, 180 GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 356' @ 142/hr. Avg MSE: 5. Full returns to surface.	2.5
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 13' @ 13/hr, 110 GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 75' @ 150/hr. Avg MSE: 5. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8-1/2" Production Curve 20' @ 20/hr, 90 R GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 84' @ 168/hr. Avg MSE: 4. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8-1/2" Production Curve 15' @ 15/hr, 70 R GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 69' @ 138/hr. Avg MSE: 5. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8-1/2" Production Curve 15' @ 30/hr, 0 GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 460' @ 83/hr. Avg MSE: 7. Full returns to surface.	5.5
DRL_SLID E	Slide Drill 8-1/2" Production Curve 15' @ 15/hr, 130 L GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 174' @ 87/hr. Avg MSE: 7. Full returns to surface.	2
DRL_SLID E	Slide Drill 8-1/2" Production Curve 15' @ 15/hr, 170 L GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 79' @ 79' / hr. Avg MSE: 7. Full returns to surface.	1
DRL_SLID E	Slide Drill 8-1/2" Production Curve 15' @ 10'/ hr, 150 L GTF. Full returns to surface. PTB @ 12,177', 90.7° Inclination, 1.1° Azimuth., 9' Above, and 8' Right of plan # 4 line. MWD Tool Temperature 177°F	1.5

Report #: 16 Daily Operation: 10/20/2014 06:00 - 10/21/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033135
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
15	16	12,816.0
		End Depth (TVD) (ftKB)
		8,672.8
		Dens Last Mud (lb/gal)
		9.90
		Rig
		H & P, 606

Operations Summary

Drill 8-1/2" Lateral Section f/ 12,177' - 12,816'. POOH for possible plugged bit nozzle. Lay Dn 8 1/2" Directional BHA.

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 14.1 Days From Spud, 14.5 Total Days On Well, 37 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 11 NPT for month of October

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

Estimated Pad Drilling Completion Date: 11/20/2014

Time Log Summary

Operation	Com	Dur (hr)
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 4' @ 8/hr, 20 k WOB, 150 spm, 575 gpm, 288 Motor rpm, 300 psi Diff, 3500 psi SPP, 180 GTF. Full returns to surface.	0.5

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 70' @ 70'/hr. 25 k WOB, 75 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 363 Total rpm, 550 psi Diff, 4000 psi SPP, 11 k TQ. Avg MSE: 11. Full returns to surface.	1
DRL_SLIDE	Slide Drill 8-1/2" Production Lateral 3' @ 6'/hr, 20 k WOB, 150 spm, 575 gpm, 288 Motor rpm, 300 psi Diff, 3500 psi SPP, 180 GTF. Full returns to surface. Note: Pump PSI climbing and sliding bit to bottom getting more difficult	0.5
CIRC	Perform K&M clean up cycle: 150 spm, 575 gpm while reciprocating 95' & rotating string @ 100 rpm, for 3 bottoms up @ 60 min per one bottom up (5850 stk). After 1st. bottoms up blown swab in #1 pump circ. w/ #2 pump till liner and swab changed in pod 1.	3
DRL_SLIDE	Slide Drill 8-1/2" Production Lateral 20' @ 10'/hr, 20 k WOB, 150 spm, 575 gpm, 288 Motor rpm, 300 psi Diff, 3400 psi SPP, 180 GTF. Full returns to surface.	2
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 542' @ 108'/hr. 25 k WOB, 80 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 368 Total rpm, 550 psi Diff, 4100 psi SPP, 13 k TQ. Avg MSE: 10. Full returns to surface. PTB @ 12, 816', 88.6° Inclination, 1.8° Azimuth., 5' Above, and 4' Left of plan # 4 line. MWD Tool Temperature 184°F	5
CIRC	Make up connection to next stand @ 12,816'. Pump pressure increase to 4,250 psi on 120 spm / 460 gpm w/ full returns to surface. Work pumps / rotary for possible plugged bit nozzle. Call superintendent to discuss. Decision made to POOH to change out BHA. Perform clean up cycle per K&M High Angle Hole Cleanup procedures, circulate 3 x bottoms up (shakers clean) @ 460 gpm, 4,250 psi, 80 TD rpm ,	3
TOOH	Check flow (no flow, well static), Pump slug. EJSA with H&P crew & PNR representative over tripping out of the hole. POOH f /12,816' - 101' (Directional BHA). No excessive drag and hole taking proper displacement from trip tank. Taking PU & SO every 500' while in OH & every 2,000' while in casing.	7
BHA_HANGLING	Clean OBM & clear off rig floor to handle BHA. EJSA On Rack back collars and L/Dn Directional BHA. Per DD instructions, L/Dn crossover and monel. Retrieve MWD tool & L/Dn same. Drain motor and break bit. Set Non mag / UBHO, Stabilizer in mousehole. L/Dn motor. Note: No restrictions found in bit nozzles. No restrictions found in motor screens. Helix free and clear. Unable to check motor for lock up due to rotary table not turning. Motor will have to be tested at shop.	2

Report #: 17 Daily Operation: 10/21/2014 06:00 - 10/22/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033135
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
16	17	13,592.0
		End Depth (TVD) (ftKB)
		8,688.2
	Dens Last Mud (lb/gal)	Rig
	10.00	H & P, 606

Operations Summary

P/Up new 8 1/2" Directional BHA. TIH. Drill 8-1/2" Production Lateral Section f/ 12,816' - 13,592'.

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 15.1 Days From Spud, 15.5 Total Days On Well, 38 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 11 NPT for month of October

Completion percentage: Surface - 100%, Intermediate - 100%, Curve -100%, Lateral - 47%

Estimated Pad Drilling Completion Date: 12/02/2014 (Updated)

Time Log Summary

Operation	Com	Dur (hr)
TOOH	Clean floor and tools from OBM	0.5
WEARBUSING	Remove & Inspect short wear bushing (ok). Wash out well head with wash sub, turn 1/4 and install wear bushing, dope & lock down wear bushing with 2- lock screws. Function test BOP (OK)	1
BHA_HANGLING	EJSA on picking up directional tools, P/U Directional Assy. #4, Motor, Stabilizer, UBHO, NMDC, Flex NMDC & X.O. Sub, Scribe & Install MWD, Test motor & MWD 80 spm, 308 gpm, 622 psi W/85 psi pulses. Good Test Note: TH Hill Job # T1-19109, Inspection # 18146, Inspector Bill Snedaker	1.5
TIH	EJSA, M/U bit, TIH F/BHA to 9510' , filling pipe every 35 stands, hole displacing properly w/ 22 - 25% flow on each stand w/ no drag	4.25
CIRC	Circ. BU @ 9510' (500' passed curve) 4600 stk w/ 557 gpm, 20 rpm, full returns	0.75

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
TIH	EJSA, M/U bit, TIH F/9,510' to 11,100 , filling pipe every 35 stands, hole displacing properly w/22 - 25% flow on each stand w/ no drag. Completion percentage: Surface - 100%, Intermediate - 100%, Curve -100%, Lateral - 39%	2.5
LOG	Re log gama from 12786' to 12816'	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 194' @ 97'/ hr. 25 k WOB, 80 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 368 Total rpm, 650 psi Diff, 3750 psi SPP, 11 k TQ. Avg MSE: 11. Full returns to surface.	2
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 16' @ 16'/hr, 20 k WOB, 150 spm, 575 gpm, 288 Motor rpm, 300 psi Diff, 3500 psi SPP, 130 L GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 59' @ 59'/ hr. 25 k WOB, 80 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 368 Total rpm, 650 psi Diff, 3750 psi SPP, 11 k TQ. Avg MSE: 12. Full returns to surface.	1
CIRC	Found washout in connection between 2 DP joints in top stand above rig floor. Broke off and set stand in mousehole, Checked connection torque. Torque OK. Broke and inspected connection for washout. Washout not apparent. L/Dn 2 jts DP and replace in stand.	1
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 208' @ 104'/ hr. 25 k WOB, 80 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 368 Total rpm, 650 psi Diff, 3750 psi SPP, 11 k TQ. Avg MSE: 12. Full returns to surface.	2
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 22' @ 15'/ hr, 20 k WOB, 150 spm, 575 gpm, 288 Motor rpm, 300 psi Diff, 3500 psi SPP, 120 L GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 72' @ 144'/ hr. 25 k WOB, 80 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 368 Total rpm, 650 psi Diff, 3750 psi SPP, 11 k TQ. Avg MSE: 12. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 25' @ 17'/ hr, 20 k WOB, 150 spm, 575 gpm, 288 Motor rpm, 300 psi Diff, 3500 psi SPP, 120 L GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 54' @ 108'/ hr. 25 k WOB, 80 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 368 Total rpm, 650 psi Diff, 3750 psi SPP, 11 k TQ. Avg MSE: 12. Full returns to surface.	0.5
RIG_SVC	Service rig & top drive.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 126' @ 84'/ hr. 25 k WOB, 80 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 368 Total rpm, 650 psi Diff, 3750 psi SPP, 11 k TQ. Avg MSE: 11. Full returns to surface. PTB @ 13,592', 88.5° Inclination, 1.9° Azimuth., 2' Above, and 7' Right of plan # 4 line. MWD Tool Temperature 173°F	1.5

Report #: 18 Daily Operation: 10/22/2014 06:00 - 10/23/2014 06:00

Job Category	Primary Job Type	AFE Number
ORIG DRILLING	ODR	033135
Days From Spud (days)	Days on Location (days)	End Depth (ftKB)
17	18	15,256.0
End Depth (TVD) (ftKB)	Dens Last Mud (lb/gal)	Rig
8,685.0	9.80	H & P, 606

Operations Summary

Drill 8-1/2" Production Lateral Section F/13,592' - 15,256'

Remarks

Rig (H&P 606) & Well Progress: 4 Rig Move Days, 16.1 Days From Spud, 16.5 Total Days On Well, 39 Total Days On Location

Rig NPT: 0 hrs previous 24 hrs. 11 NPT for month of October

Completion percentage: Surface - 100%, Intermediate - 100%, Curve -100%, Lateral - 64%

Estimated Pad Drilling Completion Date: 12/02/2014 (Updated)

Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 73' @ 73'/ hr. 28 k WOB, 80 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 368 Total rpm, 650 psi Diff, 3750 psi SPP, 13 k TQ. Avg MSE: 11. Full returns to surface.	1
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 25' @ 25'/ hr, 35 k WOB, 150 spm, 575 gpm, 288 Motor rpm, 200 psi Diff, 3400 psi SPP, 100 L GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 79' @ 79'/ hr. 28 k WOB, 80 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 368 Total rpm, 650 psi Diff, 3750 psi SPP, 13 k TQ. Avg MSE: 11. Full returns to surface.	1
U_WT	Found washout in connection between 2 DP joints in top stand above rig floor. Broke off and set stand in mousehole, Checked connection torque. Torque OK. Broke and inspected connection for washout. Washout not apparent. L/Dn 2 jts DP and replace in stand.	0.5

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Time Log Summary

Operation	Com	Dur (hr)
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 184' @ 92'/ hr. 28 k WOB, 80 TDS rpm, 150 spm, 575 gpm, 288 Motor rpm, 368 Total rpm, 650 psi Diff, 3750 psi SPP, 13 k TQ. Avg MSE: 11. Full returns to surface. Note: check torque on ST-80 to 31,050 ft/lb, placed vertical mark on tool joint, re-torque with manual tong to 31,050 ft/lb, mark did not move. (ST-80 good) re-set torque to max 33,000 ft/lb.	2
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 15' @ 30'/ hr, 30 L GTF. Full returns to surface.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 79' @ 79'/ hr. Avg MSE: 12. Full returns to surface.	1
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 20' @ 20'/ hr, 10 L GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 71' @ 142'/ hr. Avg MSE: 10. Full returns to surface.	0.5
U_WT	Found washout in connection between 2 DP joints in top stand above rig floor. Broke off and set stand in mouse hole, Checked connection torque. Torque OK. Broke and inspected connection for washout. Washout not apparent. L/Dn 2 jts DP and replace in stand. Note: Called drill pipe inspector to inspect the joints that were laid down.	0.5
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 8' @ 16'/ hr. Avg MSE: 10. Full returns to surface.	0.5
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 15' @ 15'/ hr, 150 L GTF. Full returns to surface.	1
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 357' @ 119'/ hr. Avg MSE: 10. Full returns to surface.	3
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 27' @ 13.5'/ hr, 120 L GTF. Full returns to surface.	2
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 67' @ 89.33'/ hr. Avg MSE: 10. Full returns to surface.	0.75
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 23' @ 30.66'/ hr, 120 L GTF. Full returns to surface.	0.75
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 165' @ 110'/ hr. Avg MSE: 10. Full returns to surface.	1.5
DRL_SLID E	Slide Drill 8-1/2" Production Lateral 30' @ 20'/ hr, 135 L GTF. Full returns to surface.	1.5
DRL_ROT	Rotate Drill 8-1/2" Production Lateral 426' @ 106.5'/ hr. Avg MSE: 11. Full returns to surface. PTB @ 15,256', 88.9° Inc., 359.80° Azi., 4' Below, and 4' Right of plan # 4 line. MWD Tool Temperature - 187.8°F Distance From University 8B #4 - 318'	4

WELL DETAILS

Well Name UNIVERSITY 178B 17H	API/UWI 42-461-39444-0000	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	9/1/2014
Surface	17 1/2	146.0	1,120.0	10/6/2014	10/6/2014
Intermediate	12 1/4	1,120.0	7,770.0	10/8/2014	10/14/2014
Production	8 1/2	7,770.0		10/17/2014	

Conductor Casing

Run Date	Set Depth (ftKB)				Centralizers			
	120.0							
Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Conductor	20	19.124	94.00	H-40	120.00	1	0.0	120.0
Run Date	Set Depth (ftKB)				Centralizers			
9/3/2014	146.0				None			
Item Des	OD (in)	ID (in)	Wt (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)	Run Date	Centralizers						
1,101.0	10/7/2014	6						
Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Casing Joints	13 3/8	12.615	54.50	J-55	0.00	0	26.0	26.0
Cut off	13 3/8	12.615		J-55	11.74	1	26.0	37.7

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Item Des		OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Casing Joints		13 3/8	12.615	54.50	J-55	1,017.46	24	37.7	1,055.2
Float Collar		13 3/8	12.615		J-55	1.30	1	1,055.2	1,056.5
Casing Joints		13 3/8	12.615	54.50	J-55	42.33	1	1,056.5	1,098.8
Float Collar		13 3/8	12.615		J-55	1.30	1	1,098.8	1,100.1
Texas Pattern Shoe		13 3/8	12.615		J-55	0.87	1	1,100.1	1,101.0
Set Depth (ftKB)	Run Date		Centralizers						
2,025.0									
Item Des		OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Casing Joints		13 3/8		48.00	J-55	1,999.00	50	26.0	2,025.0
Surface Casing Cement									
Type	String	Cementing Start Date	Cementing End Date	Cementing Company				Top (ftKB)	Btm (ftKB)
Casing	Surface, 1,101.0ftKB	10/7/2014	10/7/2014	Crest Pumping Services				30.0	1,120.0
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
Class C Poz	500	1.90		Density (lb/gal)					
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
Class C	230	1.75		Density (lb/gal)					
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
Type	String	Cementing Start Date	Cementing End Date	Cementing Company				Top (ftKB)	Btm (ftKB)
Casing	Surface, 1,101.0ftKB	10/7/2014	10/7/2014	Crest Pumping Services				26.0	276.0
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
Class H	200								
Intermediate Casing									
Set Depth (ftKB)	Run Date		Centralizers						
5,025.0									
Item Des		OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Casing Joints		9 5/8		40.00	L-80 IC	4,999.00	125	26.0	5,025.0
Set Depth (ftKB)	Run Date		Centralizers						
7,760.0	10/16/2014		36						
Item Des		OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Landing Joint		9 5/8	8.835		L-80	0.00	0	29.4	29.4
Casing Hanger		9 5/8	8.835		L-80	4.00	1	29.4	33.4
Casing Joints		9 5/8	8.835	40.00	L-80	3,671.50	83	33.4	3,704.9
Casing Joints - RytWrap		9 5/8	8.835	40.00	L-80	1,244.18	27	3,704.9	4,949.1
Casing Joints		9 5/8	8.835	40.00	L-80	765.49	17	4,949.1	5,714.6
Casing Joints		9 5/8	8.755	43.50	L-80	2,043.65	45	5,714.6	7,758.3
Float Shoe		9 5/8	8.755			1.75	1	7,758.3	7,760.0
Intermediate Casing Cement									
Type	String	Cementing Start Date	Cementing End Date	Cementing Company				Top (ftKB)	Btm (ftKB)
Casing	Intermediate, 7,760.0ftKB	10/16/2014	10/16/2014	Schlumberger				26.0	7,770.0
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
None	0			9.40					
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
LITECRETE	769	2.33		9.70					
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
Class H	289	1.07		16.40					
Class	Amount (sacks)	Yield (ft³/sack)		Density (lb/gal)					
None	0								
Production Casing									
Set Depth (ftKB)	Run Date		Centralizers						
Item Des		OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)
Landing Joint						0.00	0	0.0	0.0
Casing Hanger						0.00	0	0.0	0.0
Pup Joint						0.00	0	0.0	0.0
Casing Joints		5 1/2		20.00	P-110	0.00	0	0.0	0.0
Marker Joint						0.00	0	0.0	0.0
Casing Joints		5 1/2		20.00	P-110	0.00	0	0.0	0.0
Marker Joint						0.00	0	0.0	0.0
Casing Joints		5 1/2		20.00	P-110	0.00	0	0.0	0.0
Pup Joint						0.00	0	0.0	0.0
Toe Sleeve						0.00	0	0.0	0.0
Pup Joint						0.00	0	0.0	0.0

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)		
Float Collar					0.00	0	0.0	0.0		
Casing Joints	5 1/2		20.00	P-110	0.00	0	0.0	0.0		
Guide Shoe					0.00	0	0.0	0.0		
Set Depth (ftKB)	16,825.0	Run Date	Centralizers							
Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Jts	Top (ftKB)	Btm (ftKB)		
Casing Joints	5 1/2		20.00	P-110 IC	16,799.00	420	26.0	16,825.0		
Production Casing Cement										
Type	String	Cementing Start Date	Cementing End Date	Cementing Company	Top (ftKB)	Btm (ftKB)				
Class	Amount (sacks)	Yield (ft³/sack)	Density (lb/gal)							
Cement Squeeze										
Description	Type	String	Cementing Start Date	Cementing End Date	Top (ftKB)	Btm (ftKB)				
Amount (sacks)	Yield (ft³/sack)	Dens (lb/gal)								
Perforations										
Top (ftKB)	Btm (ftKB)	Zone	Shot Dens (shots/ft)	Entered Shot Total	Com					
Completion (FRAC) Details										
<typ> on <dtm>										
Date	Type	Zone	Stim/Treat Company	Min Top Depth (ftKB)	Max Btm Depth (ftKB)					
GEL										
Fluid Name	Total Clean Volume (bbl)									
SAND & ACID										
Additive	Type	Amount	Units	Sand Size	Concentration...					
Zones										
Zone Name	Top (ftKB)									
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
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	10/5/2014	Description	MAIN HOLE SURVEY							
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company				
10/9/2014	0.00	0.00	0.00	0.00	0.00					
10/6/2014	166.00	0.70	41.00	166.00	1.01					
10/6/2014	235.00	0.80	50.70	234.99	1.91					
10/6/2014	324.00	0.90	62.00	323.98	3.23					
10/6/2014	416.00	0.90	64.20	415.97	4.67					
10/6/2014	508.00	0.60	62.00	507.96	5.88					
10/6/2014	598.00	0.30	53.60	597.96	6.58					
10/6/2014	690.00	0.10	103.30	689.96	6.88					

Drilling & Completion Summary - Ascending

Well Name: UNIVERSITY 178B 17H

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company
10/6/2014	781.00	0.30	132.40	780.96	7.19	
10/6/2014	875.00	0.40	160.40	874.96	7.75	
10/6/2014	969.00	0.50	180.40	968.95	8.48	
10/6/2014	1,038.00	0.70	186.00	1,037.95	9.20	
10/8/2014	1,185.00	0.50	218.10	1,184.94	10.68	
10/8/2014	1,280.00	0.70	200.30	1,279.94	11.66	
10/8/2014	1,374.00	0.60	235.20	1,373.93	12.68	
10/8/2014	1,468.00	0.50	229.90	1,467.93	13.58	
10/8/2014	1,563.00	0.50	229.10	1,562.92	14.41	
10/8/2014	1,657.00	0.50	173.80	1,656.92	15.14	
10/8/2014	1,752.00	0.70	179.00	1,751.91	16.13	
10/8/2014	1,846.00	0.60	212.90	1,845.91	17.15	
10/8/2014	1,940.00	0.50	177.50	1,939.90	18.01	
10/8/2014	2,034.00	0.40	224.40	2,033.90	18.69	
10/8/2014	2,128.00	0.60	178.90	2,127.90	19.45	
10/8/2014	2,223.00	0.40	232.30	2,222.89	20.19	
10/8/2014	2,317.00	0.80	195.60	2,316.89	21.13	
10/8/2014	2,411.00	0.60	192.50	2,410.88	22.28	
10/8/2014	2,506.00	0.70	194.10	2,505.88	23.36	
10/8/2014	2,600.00	1.10	212.00	2,599.86	24.82	
10/9/2014	2,694.00	1.30	207.30	2,693.84	26.78	
10/9/2014	2,789.00	1.60	190.50	2,788.81	29.16	
10/9/2014	2,883.00	0.70	207.20	2,882.79	31.03	
10/9/2014	2,977.00	0.40	248.90	2,976.79	31.88	
10/9/2014	3,071.00	0.40	287.00	3,070.79	32.50	
10/9/2014	3,166.00	0.30	268.10	3,165.79	33.07	
10/9/2014	3,260.00	0.40	311.90	3,259.78	33.61	
10/9/2014	3,354.00	0.30	329.10	3,353.78	34.17	
10/9/2014	3,448.00	0.30	111.10	3,447.78	34.33	
10/9/2014	3,543.00	0.40	0.40	3,542.78	34.67	
10/9/2014	3,637.00	0.90	319.50	3,636.78	35.68	
10/9/2014	3,731.00	1.50	317.70	3,730.75	37.65	
10/9/2014	3,825.00	1.20	333.30	3,824.73	39.84	
10/9/2014	3,920.00	2.10	317.20	3,919.69	42.55	
10/9/2014	4,014.00	3.80	306.20	4,013.56	47.37	
10/9/2014	4,108.00	4.40	305.80	4,107.32	54.09	
10/9/2014	4,202.00	4.20	303.20	4,201.06	61.14	
10/9/2014	4,297.00	4.30	301.90	4,295.79	68.18	
10/9/2014	4,391.00	3.90	299.90	4,389.55	74.90	
10/9/2014	4,485.00	4.10	301.70	4,483.33	81.45	
10/10/2014	4,579.00	4.40	299.90	4,577.07	88.42	
10/10/2014	4,674.00	4.70	296.50	4,671.77	95.95	
10/10/2014	4,768.00	5.40	296.60	4,765.40	104.23	
10/10/2014	4,862.00	4.50	296.80	4,859.05	112.34	
10/10/2014	4,957.00	4.00	295.80	4,953.79	119.38	
10/10/2014	5,051.00	4.70	294.70	5,047.52	126.51	
10/10/2014	5,146.00	4.70	300.00	5,142.20	134.28	
10/10/2014	5,240.00	5.20	299.90	5,235.85	142.39	
10/10/2014	5,334.00	5.80	300.10	5,329.41	151.40	
10/10/2014	5,428.00	6.60	307.00	5,422.87	161.54	
10/10/2014	5,523.00	7.10	303.70	5,517.19	172.86	
10/10/2014	5,617.00	6.60	303.20	5,610.52	184.07	
10/10/2014	5,711.00	7.20	303.70	5,703.83	195.37	
10/10/2014	5,805.00	7.10	304.50	5,797.10	207.07	
10/10/2014	5,899.00	7.10	301.40	5,890.38	218.68	
10/10/2014	5,994.00	7.60	300.10	5,984.60	230.83	

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Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company
10/10/2014	6,088.00	7.20	299.00	6,077.82	242.94	
10/10/2014	6,182.00	7.00	294.30	6,171.10	254.55	
10/10/2014	6,277.00	7.30	295.60	6,265.36	266.37	
10/10/2014	6,371.00	7.30	300.90	6,358.60	278.30	
10/10/2014	6,465.00	7.80	300.80	6,451.78	290.65	
10/10/2014	6,560.00	7.30	304.80	6,545.96	303.13	
10/10/2014	6,654.00	7.40	306.50	6,639.19	315.15	
10/10/2014	6,748.00	7.70	308.80	6,732.37	327.50	
10/10/2014	6,842.00	8.20	303.60	6,825.47	340.49	
10/10/2014	6,937.00	7.70	297.90	6,919.56	353.61	
10/10/2014	7,031.00	7.90	294.50	7,012.69	366.36	
10/10/2014	7,125.00	7.60	295.20	7,105.83	379.04	
10/10/2014	7,219.00	6.70	297.60	7,199.10	390.74	
10/10/2014	7,314.00	6.70	297.60	7,293.45	401.82	
10/10/2014	7,408.00	6.60	298.10	7,386.82	412.71	
10/10/2014	7,502.00	6.00	295.50	7,480.25	423.02	
10/10/2014	7,596.00	5.70	293.10	7,573.76	432.60	
10/10/2014	7,691.00	5.30	292.10	7,668.32	441.70	
10/10/2014	7,710.00	5.10	292.10	7,687.25	443.42	
10/10/2014	7,782.00	4.90	295.10	7,758.97	449.70	
10/10/2014	7,876.00	6.50	306.40	7,852.51	458.99	
10/10/2014	7,971.00	6.00	303.50	7,946.94	469.33	
10/10/2014	8,065.00	7.80	307.90	8,040.26	480.61	
10/10/2014	8,159.00	9.10	309.20	8,133.24	494.42	
10/10/2014	8,206.00	9.50	308.80	8,179.62	502.02	
10/10/2014	8,253.00	14.00	317.60	8,225.62	511.56	
10/10/2014	8,300.00	19.70	326.20	8,270.60	525.14	
10/10/2014	8,347.00	24.70	334.30	8,314.11	542.86	
10/10/2014	8,394.00	28.50	344.20	8,356.15	563.83	
10/10/2014	8,442.00	34.40	350.20	8,397.09	588.84	
10/10/2014	8,489.00	40.40	355.10	8,434.42	617.35	
10/10/2014	8,536.00	45.90	359.00	8,468.70	649.47	
10/10/2014	8,583.00	50.70	1.10	8,499.96	684.55	
10/10/2014	8,630.00	55.80	2.20	8,528.07	722.19	
10/10/2014	8,677.00	60.60	2.50	8,552.83	762.13	
10/10/2014	8,724.00	64.40	2.10	8,574.53	803.81	
10/10/2014	8,771.00	68.60	2.10	8,593.26	846.90	
10/10/2014	8,818.00	74.00	0.80	8,608.33	891.40	
10/10/2014	8,865.00	79.30	0.10	8,619.18	937.11	
10/10/2014	8,912.00	83.60	0.30	8,626.16	983.58	
10/10/2014	8,959.00	87.70	1.20	8,629.73	1,030.43	
10/10/2014	9,006.00	89.20	1.00	8,631.00	1,077.42	
10/10/2014	9,100.00	92.00	0.50	8,630.01	1,171.40	
10/10/2014	9,194.00	88.70	0.10	8,629.44	1,265.39	
10/10/2014	9,288.00	90.20	359.20	8,630.34	1,359.38	
10/10/2014	9,382.00	91.00	359.00	8,629.36	1,453.37	
10/10/2014	9,476.00	91.90	358.70	8,626.98	1,547.34	
10/10/2014	9,571.00	90.10	358.40	8,625.32	1,642.32	
10/10/2014	9,665.00	88.20	0.40	8,626.72	1,736.30	
10/10/2014	9,759.00	89.00	0.80	8,629.01	1,830.27	
10/10/2014	9,853.00	90.30	0.90	8,629.59	1,924.27	
10/10/2014	9,947.00	90.50	1.00	8,628.93	2,018.27	
10/10/2014	10,042.00	91.20	0.40	8,627.52	2,113.26	
10/10/2014	10,136.00	89.10	1.10	8,627.27	2,207.25	
10/10/2014	10,230.00	89.40	0.60	8,628.51	2,301.24	
10/10/2014	10,324.00	88.50	2.50	8,630.23	2,395.22	

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Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	Unwrap Displace (ft)	Survey Company
10/10/2014	10,419.00	89.70	2.60	8,631.72	2,490.21	
10/10/2014	10,513.00	90.50	3.40	8,631.56	2,584.21	
10/10/2014	10,605.00	89.30	1.80	8,631.72	2,676.20	
10/10/2014	10,697.00	90.00	2.00	8,632.28	2,768.20	
10/10/2014	10,788.00	88.20	0.60	8,633.71	2,859.18	
10/10/2014	10,879.00	87.90	359.50	8,636.80	2,950.13	
10/10/2014	10,971.00	88.50	359.80	8,639.69	3,042.08	
10/10/2014	11,062.00	89.10	359.60	8,641.60	3,133.06	
10/10/2014	11,156.00	88.50	358.10	8,643.57	3,227.04	
10/10/2014	11,250.00	86.90	0.40	8,647.34	3,320.95	
10/10/2014	11,344.00	86.90	2.60	8,652.43	3,414.81	
10/10/2014	11,438.00	89.00	2.90	8,655.79	3,508.74	
10/10/2014	11,532.00	88.70	2.70	8,657.67	3,602.72	
10/10/2014	11,626.00	89.40	2.80	8,659.23	3,696.71	
10/10/2014	11,720.00	90.70	3.20	8,659.15	3,790.71	
10/10/2014	11,814.00	91.00	3.20	8,657.76	3,884.70	
10/10/2014	11,909.00	90.20	1.40	8,656.76	3,979.69	
10/10/2014	12,003.00	91.00	1.30	8,655.78	4,073.68	
10/10/2014	12,097.00	90.70	1.10	8,654.38	4,167.67	
10/10/2014	12,191.00	90.80	1.00	8,653.15	4,261.66	
10/10/2014	12,285.00	87.70	0.80	8,654.38	4,355.64	
10/10/2014	12,380.00	87.90	1.40	8,658.03	4,450.57	
10/10/2014	12,474.00	87.60	1.00	8,661.72	4,544.50	
10/10/2014	12,568.00	87.80	0.80	8,665.49	4,638.43	
10/10/2014	12,662.00	88.20	1.50	8,668.77	4,732.37	
10/10/2014	12,757.00	88.60	1.80	8,671.43	4,827.33	
10/10/2014	12,851.00	88.80	2.50	8,673.56	4,921.30	
10/10/2014	12,945.00	89.20	3.10	8,675.20	5,015.29	
10/10/2014	13,039.00	88.30	2.50	8,677.25	5,109.27	
10/10/2014	13,134.00	88.50	3.10	8,679.90	5,204.23	
10/10/2014	13,228.00	89.30	4.30	8,681.71	5,298.21	
10/10/2014	13,322.00	89.40	3.40	8,682.77	5,392.20	
10/10/2014	13,416.00	88.50	1.90	8,684.50	5,486.18	
10/10/2014	13,511.00	88.80	1.90	8,686.73	5,581.16	
10/10/2014	13,605.00	89.10	2.70	8,688.46	5,675.14	
10/10/2014	13,699.00	89.10	1.10	8,689.93	5,769.12	
10/10/2014	13,793.00	88.90	1.20	8,691.57	5,863.11	
10/10/2014	13,888.00	88.50	1.20	8,693.73	5,958.09	
10/10/2014	13,982.00	89.20	0.70	8,695.62	6,052.07	
10/10/2014	14,076.00	91.70	2.00	8,694.88	6,146.05	
10/10/2014	14,170.00	91.00	1.50	8,692.66	6,240.03	
10/10/2014	14,264.00	91.30	1.20	8,690.78	6,334.01	
10/10/2014	14,358.00	91.10	1.60	8,688.81	6,427.99	
10/10/2014	14,453.00	92.00	2.60	8,686.24	6,522.95	
10/10/2014	14,547.00	92.00	1.80	8,682.96	6,616.89	
10/10/2014	14,641.00	90.60	1.10	8,680.82	6,710.86	
10/23/2014	14,735.00	91.30	1.30	8,679.27	6,804.85	
10/23/2014	14,829.00	89.10	359.60	8,678.94	6,898.84	
10/23/2014	14,924.00	89.60	359.90	8,680.02	6,993.83	
10/23/2014	15,018.00	89.40	359.60	8,680.84	7,087.83	
10/23/2014	15,112.00	88.90	359.80	8,682.23	7,181.82	
10/23/2014	15,256.00	88.90	359.80	8,684.99	7,325.79	