

**EP WELLS DAILY OPERATIONS REPORT**

Report 35

07/15/2017

Company PERMIAN  
 Well Type Development  
 Well UNIVERSITY 19 PW UNIT 1504H  
 Wellbore UNIVERSITY 19 PW UNIT 1504H  
 WBS No/API No 30265014 / 4230133171.00

**Event Summary**

Event Type	Completion only	Event Start Date	04/28/2017	Days on Location	34.00
Objective	Install Completion	Original Spud Date	02/02/2017		
Est. Days	25.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

**Well Status**

Supervisor	Bruce Smiley, Jeff Pontell	Measured Depth(ft)	
Engineer	Joddie Carlile	TVD(ft)	
Other Supervisor	Mike Reber	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,761.75 / 2,736.10	Hole size(in)	
THF Datum			
Daily NPT(hr/%)	24.00/100.00	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	1,712,803/4,757,442.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.36	LOT/FIT EMW(ppg)	
Daily Cost	81,401	Lithology	
		Formation/MD Top	

**HSE Summary**

Last Incident	Date	Days	Last Incident	Date	Days	KPI's
LWC RWC MTC FAC Last casing pressure test			PSI NII HPI <b>GOAL ZERO DAYS</b> <b>PS BARRIER EVENT</b> <b>PS barrier bowtie review</b>			TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)
Safety Comments:						
329 man hours 24 driving hours						

**HSE Drills**

Drills/Tests	Date	Days Since Last	JSA's/Toolbox Talks Days Since Last Drill
Last Derrick Inspection Last BOP function test Last BOP Test Next BOP Test			33

**Operations Summary**

<b>24 Hour Summary</b>
Cut 3,176' of CT off reel, MU BHA #4 Hydraulic Overshot, RIH,tag top of liner, POOH, MU BHA #5 venturi/burn shoe and washpipe, test, RIH at report time 16,600'
<b>Update Since Report Time</b>
RIH with BHA #5, burn over and dress fish
<b>24 Hour Forecast</b>
POOH with BHA #5, RIH with 2.75" spiral grapple and extensions, engage fish

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Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description																																												
0:00	5.50	WOR	OPO			2		<p>*** CONTINUE NPT (WU) STEP CT PINHOLE LEAK IN CT CUT PIPE ***</p> <p>02:00 2,175' of 2-3/8" CT cut with cold cut band saw and move to side of location.</p> <p>03:00 2,500' of 2-3/8" CT cut and removed to side of location, plan to cut 3,000'</p> <p>04:00 2,900' of 2-3/8" CT cut and removed to side of location, prep to inspect gripper blocks and chains on injector.</p> <p>05:00 3,085' 2-3/8" CT cut, pinhole at ground level, cut section out, will cut additional 100' past this point</p> <p>05:30 3,176' total 2-3/8" CT cut and removed, prep to inspect injector gripper blocks on chains</p> <p>06:30 Days safety meeting, discuss SSE, hand awareness, suspended load, pressure testing, review JSA's and open permits</p>																																												
5:30	1.82	WOR	OPO			2		<p>PAUSE, revised JSA, crews discussed plan to check 2-3/8" gripper block bolts/nuts, crew will check torque on each gripper block, spec is 55 ft-lbs, crew will check tightness at 35 ft-lbs, discuss tethered tools, clear no go of personnel, drops, hand off/awareness, good communication with operator</p> <p>06:30 Measure and caliper 2-3/8" external slip type connector (will include measurements in BHA #4 detail), dress EOT, mark and install 2-3/8" connector, prep to pull test at report time.</p>																																												
7:19	0.43	WOR	OPO			1		<p>*** END NPT (WU) STEP CT. 14.32 total hr NPT***</p> <p>Pull test slip type connector, fails at 15k lbf. Examining connector and slips installed upside down. Cut 3' CT, dress off EOT, MU second slip type connector, total CT length on reel 20241'. Pull test connector to 15k lbf good, 30k lbf good, 45k lbf good (at 1495 psi hydraulic pressure 30.1 ratio good).</p>																																												
7:45	0.38	WOR	OPO			1		<p>Torque bolts on injector head per explanation above.</p>																																												
8:08	1.35	WOR	OPO			1		<p>Measure and drift all BHA components, MU BHA #4 as follows:</p> <table border="1"> <thead> <tr> <th>Tool</th> <th>OD (")</th> <th>L (')</th> <th>ID (")</th> </tr> </thead> <tbody> <tr> <td>Slip type connector</td> <td>3.125</td> <td>.96</td> <td>1-3/8</td> </tr> <tr> <td>Dual BPV sub</td> <td>2.785</td> <td>1.42</td> <td>N/A</td> </tr> <tr> <td>Accelerator</td> <td>2.89</td> <td>5.89</td> <td>15/16</td> </tr> <tr> <td>Bidirectional jars</td> <td>2.89</td> <td>5.61</td> <td>15/16</td> </tr> <tr> <td>Hydraulic disconnect</td> <td>2.88</td> <td>2.13</td> <td>11/16</td> </tr> <tr> <td>Agitator</td> <td>2.876</td> <td>4.31</td> <td>N/A</td> </tr> <tr> <td>Hip tripper</td> <td>2.876</td> <td>4.36</td> <td>N/A</td> </tr> <tr> <td>AV sub*</td> <td>2.88</td> <td>1.09</td> <td>1</td> </tr> <tr> <td>2-3/8" PAC x 1.5" MT x over</td> <td>2.87</td> <td>.84</td> <td>1-1/16"</td> </tr> <tr> <td>Hydraulic overshoot**</td> <td>2.6475</td> <td>1.74</td> <td>1/4</td> </tr> </tbody> </table> <p>* AV sub plugged/ported for every 2.5 bbl, .4 bbl through end/to overshoot ** Overshot 1.5" nominal with 1/16" tolerance either way</p> <p>Pressure test BHA down to hip tripper to 3000 psi, good test.</p> <p>Function test entire BHA as follows: (1 bbl/min, 500 psi) (1.25 bbl/min, 1000 psi) (1.5 bbl/min, 1000 psi) (1.75 bbl/min, 1400 psi) (2 bbl/min, 1950 psi) (2.5 bbl/min, 2700 psi) (2.75 bbl/min, 3400 psi)</p> <p>Hydraulic overshoot released at ~1.25 - 1.5 bbl/min.</p>	Tool	OD (")	L (')	ID (")	Slip type connector	3.125	.96	1-3/8	Dual BPV sub	2.785	1.42	N/A	Accelerator	2.89	5.89	15/16	Bidirectional jars	2.89	5.61	15/16	Hydraulic disconnect	2.88	2.13	11/16	Agitator	2.876	4.31	N/A	Hip tripper	2.876	4.36	N/A	AV sub*	2.88	1.09	1	2-3/8" PAC x 1.5" MT x over	2.87	.84	1-1/16"	Hydraulic overshoot**	2.6475	1.74	1/4
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9:29	0.42	WOR	OPO			1		<p>Torque up bottom lubricator joint to quad BOPs.</p>																																												

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9:54	0.75	WOR	OPO			1		Walk the line, discuss 9QFSPT, break circulation to OTT. Test stack and return line to 800 psi low 5 min, 8250 psi high 10 min good test. Negative test BPVs to 500 psi, good test. Equalize to SICP 3700 psi, open well and begin RIH with BHA #4.																																																																								
10:39	2.72	WOR	OPO			1		RIH at 95 ft/min in vertical, wt check at 6000 ft CTM 13k lbf. Bring pumps on at .75 bbl/min, bbl in - bbl out, Circ P 4100 WHP psi 3900 psi PoP .2 gal/10 bbl. Wt check at 10800 ft CTM 32k lbf.																																																																								
13:22	0.48	WOR	OPO			1		Tag LT, pickup after setting down approx 3k lbf.  Bring on pumps 2 bbl/min, bbl in - bbl out, Circ P 5500 psi WHP 3900 psi. Attempt to slide through LT no success.  PU 10', come off pump and shut in backside, RBIH at 5 ft/min and tag LT again.  PU 10', work pump between .5 bbl/min and 2.5 bbl/min to help agitate pipe, RBIH 5 ft/min and tag LT again.  PU 100', bring pump rate to 2.5 bbl/min, shut in backside, Circ P 7500 psi WHP 4200 psi, RIH and pressure spiked to 8500 psi around LT.  PU 10', off LT bring pump on to 1.75 bbl/min, pressure lines out 5800 psi.  RIH and tag LT, bring pump on to 1.75 bbl/min, pressure spikes to 7600 psi.  Believe hip tripper is siezed up with no bypass with weight set down on tool but bypass with no weight set on tool. Decide to POOH.  ***START NESTED LEVEL 2 NPT (DS) WELLBORE FISHING AND RENTALS***. HIP TRIPPER SIEZED UP. WILL END WHEN WE REACH LT ON NEXT RUN.																																																																								
13:51	2.43	WOR	OPO			2		POOH at 90 ft/min maintaining 4000 psi on WH using pump.																																																																								
16:17	0.73	WOR	OPO			3		*** START NESTED LEVEL 3 NPT (WOW) SHELL*** LIGHTNING IN AREA.  *** END NESTED LEVEL 3 NPT (WOW) SHELL*** LIGHTNING IN AREA END NPT total .73 hr.																																																																								
17:01	0.32	WOR	OPO			2		Break off lowest lubricator section and inspect tools. Find hip tripper siezed and indentation in hydraulic overshot indicating LT.																																																																								
17:20	0.83	WOR	OPO			2		MU BHA #5 as follows.  <table border="0"> <thead> <tr> <th>Tool</th> <th>OD (")</th> <th>L (")</th> <th>ID (")</th> </tr> </thead> <tbody> <tr> <td>Slip type connector</td> <td>3.125</td> <td>.96</td> <td>1-3/8</td> </tr> <tr> <td>Dual BPV sub</td> <td>2.875</td> <td>1.42</td> <td>N/A</td> </tr> <tr> <td>Accelerator</td> <td>2.89</td> <td>5.89</td> <td>15/16</td> </tr> <tr> <td>Bidirectional jars</td> <td>2.89</td> <td>5.61</td> <td>15/16</td> </tr> <tr> <td>Hydraulic disconnect</td> <td>2.88</td> <td>2.13</td> <td>11/16</td> </tr> <tr> <td>Agitator</td> <td>2.876</td> <td>4.31</td> <td>N/A</td> </tr> <tr> <td>Motor</td> <td>2.88</td> <td>13.65</td> <td>N/A</td> </tr> <tr> <td>Venturi sub</td> <td>3.125</td> <td>3.28</td> <td>N/A</td> </tr> <tr> <td>Venturi extension</td> <td>3.129</td> <td>5</td> <td>2-1/2</td> </tr> <tr> <td>Venturi bushing</td> <td>3.625</td> <td>1.4</td> <td>2-1/8</td> </tr> <tr> <td>Washpipe with stop #1</td> <td>3.601</td> <td>4.45</td> <td></td> </tr> <tr> <td>2-5/8</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Washpipe extension #2</td> <td>3.61</td> <td>3.24</td> <td></td> </tr> <tr> <td>5.01</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Washpipe extension #3</td> <td>3.61</td> <td>3.24</td> <td></td> </tr> <tr> <td>5.03</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Burn shoe</td> <td>3.621</td> <td>3.125</td> <td>3.75</td> </tr> </tbody> </table> <p>NOTES:</p>	Tool	OD (")	L (")	ID (")	Slip type connector	3.125	.96	1-3/8	Dual BPV sub	2.875	1.42	N/A	Accelerator	2.89	5.89	15/16	Bidirectional jars	2.89	5.61	15/16	Hydraulic disconnect	2.88	2.13	11/16	Agitator	2.876	4.31	N/A	Motor	2.88	13.65	N/A	Venturi sub	3.125	3.28	N/A	Venturi extension	3.129	5	2-1/2	Venturi bushing	3.625	1.4	2-1/8	Washpipe with stop #1	3.601	4.45		2-5/8				Washpipe extension #2	3.61	3.24		5.01				Washpipe extension #3	3.61	3.24		5.03				Burn shoe	3.621	3.125	3.75
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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								- 15.68' from stop to end of burn shoe (can swallow) - Tattle tails installed 1' inside #1/stop extension (from bottom) and 1' and 4' inside extensions #2 and #3
18:10	1.00	WOR	OPO			2		MU lubricator to top of quad BOPs and prepare to pressure test, 9 questions for safe pressure test, walk lines, break circulation to gas buster, close well in at choke manifold, pressure test 500 psi / low, 8,000 psi / high, 5/10, good test, bleed to 3,800 psi, prep to open well.
19:10	2.33	WOR	OPO			2		Open well, (2) 7-1/16" 10K FV 31 turns and confirm, well equalized at 3,800 psi, RIH with BHA #5  20:35 Weight check 6,000', PU 15K (610 psi hydraulic pressure), RIH 5K, .75 bpm / 4,000 CP / 3,800 WH, POP .25 gal / 10 bbl, FR .04 gal / 10 bbl  21:30 Weight check 10,500' (top of liner), PU 34K, RIH 19K, .75 bpm / 4,000 CP / 3,800 WH - RIH with BHA #5 / No indication of liner top / continue RIH to burn over fish
21:30	2.50	WOR	OPO			1		22:45 Weight check 13,000', PU 40K (1,230 psi hydraulic pressure), RIH 22K, .75 bpm / 3,850 CP / 3,750 WH  23:46 Weight check 16,000', PU 43K (1,340 psi hydraulic pressure), RIH 22K, .75 bpm / 3,900 CP / 3,800 WH  23:58 Continue RIH 16,625' at report time
<b>Total</b>	<b>24.00</b>							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	1.92	WOR	OPO			2	00:20 17,500' current depth, RIH 19.2K, .6 bpm / 3,980 CP / 3,826 WH, 51 ft/min  00:57 Weight check 19,300', PU 47.1K (1,440 psi hyd), .6 bpm / 3,980 CP / 3,815 WH - SD / set baseline pump rates in preparation for wash over ops as follows .6 / 3,947 psi CP 1.0 / 4,080 psi CP 2.0 / 4,955 psi CP 3.0 / 6,250 psi CP  01:00 Reduce rate to 2.0 bpm / 5,110 psi CP, RIH 14.6K - 15.1K / RIH at 10 ft/min - Set trips to 6,500 psi  01:17 19,540' current depth, RIH weight 13.3K to 13.8K, 5,055 psi CP, 2.0 bpm  FIRST TAG AND WASHOVER  01:18 TAG fish at 19,543' / Pressure increased from 5,055 psi CP to 5,275 psi CP - Set 1,500# down, 5,154 psi max CP (motor differential 100 psi) - WOS (shoe) varied while washing down to stop from 13.9K to 16.0K  01:45 Soft tag at 19,557', psi increased from 5,121 psi to 5,340 psi, 13.8K, 2200# down - Expected tag at the 2.625" stop 1.8' inside the top extension was 19,558'  01:55 POOH to 19,480', PU 46.9K to 47.5K, 2.0 bpm / 5,033 ps CP

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Wellbore UNIVERSITY 19 PW UNIT 1504H

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
							NOTE / SUMMARY: 1st washover indicated top of fish at 19,543' by 220 psi motor differential, fish should tag at 2.625" stop at 19,558' it tagged at 19,557' at this point pressure increased to 5,340 psi, 13.8K with 2,200# down, after PU off fish the 5,340 psi pressure dumped at 19,547' as the washpipe started coming off the 2.75" OD of the guns
1:55	0.58	WOR	OPO			2	<p>SECOND TAG AND WASHOVER</p> <p>02:02 RIH from 19,480', RIH weight 11.3K to 12.7K / 10 ftn / 2.0 bpm / 5,000 psi CP - slow to 5 ft/min / 13.0K to 13.6K weight</p> <p>02:12 Very minimal indication of top of fish at 19,543', pressure increased from 5,066 psi to 5,088 psi, RIH weight 13.6K to 14.0K - soft tag at same place, 19,557', pressure increased from 5,099 psi to 5,308 psi - string weight 12,293K with 1,700# WOS (shoe) - stack 500# more down, 2,200# total, no weight back - FLAG at 19,557' on 2-3/8" CT with orange paint, what appears to be 15.7' of fish swallowed</p> <p>02:23 POOH to 19,450', pressure at 5,329 psi CP, PU 48K (1,550 psi hydraulic psi / 30.1) - after PU to 19,550', pressure dropped to 5,225 psi CP - after PU to 19,545', pressure dropped to 5,055 psi CP as burn shoe pulled of TOF</p> <p>NOTE / SUMMARY: 2nd washover had very subtle indication of fish at 19,543' with 20 psi increase in CP, no obvious signature as fish was washed over by weight, fish tagged the 2.625" stop that is 15.7' from the bottom of the burn shoe at 19,557', exact same place, as the BHA #5 was POOH, the pressure decreased 274 psi as predicted when the burn shoe pulled off the fish.</p>

NPT Summary

Start Date/Time	Responsible Company	NPT Code	Failure MD (ft)	Ops Code	Type*	Equipment Type	Net time (hr)	Gross time (hr)	Severity	Status
07/15/2017 13:51	WELLSBORE FISHING AND RENTAL TOOLS	Rig/Work Unit Misc		OPO	EN	Coil Milling Tools	6.92	7.65		OPEN
<b>Description:</b> HIP TRIPPER SEIZED UP						<b>Title:</b> HIP TRIPPER SEIZED UP				
07/15/2017 16:17	SHELL	Wait On Weather		OPO	N		0.73	0.73	1	OPEN
<b>Description:</b> Lightning						<b>Title:</b> WOW				
<b>Total</b>							<b>7.65</b>	<b>8.38</b>		