

**EP WELLS DAILY OPERATIONS REPORT**

Report 37

07/17/2017

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	36.00
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	1,866,333/4,757,442.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.39	LOT/FIT EMW(ppg)	
Daily Cost	65,045	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:						
353 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			35

**Operations Summary**

<b>24 Hour Summary</b>
Tag TOF at 19544' w 3.75" overshot dressed with 2.75' spiral grapple x3, POOH, SD at 12,206' due to reel circuit losing psi, NPT, repaired, POOH from 13,030', 6,070' POOH 90 ft/min at report time
<b>Update Since Report Time</b>
Cool guns at 200', POOH bump up, SI, bleed, BOP drill, BD lube and check for fish, BD fish and tools
<b>24 Hour Forecast</b>
BD fish and tools, establish injection rate and flush well volume 532 bbls at max rate possible, RD CT package

EP WELLS DAILY OPERATIONS REPORT

Report 37

07/17/2017

Well UNIVERSITY 19 PW UNIT 1504H  
Wellbore UNIVERSITY 19 PW UNIT 1504H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.92	WOR	OPO			1		<p>1ST TIME WASHOVER WITH 3.75" OVERSHOT</p> <p>Continue RIH to TOF                      - 17,000' / RIH weight 19.3K to 20K                      - 17,500' / RIH weight 18.9K to 20.2K                      - 18,000' / RIH weight 17.4K to 18.6K                      - 18,750' / RIH weight 15.8K to 17K</p> <p>01:07 Weight check 19,000' / PU 51.1K (1,570 psi hyd) / .8 bpm / 3,947 CP / 3,800 WH - set baseline pump rates / 1 bpm - 4,232 psi / 1.5 bpm - 4,748 psi / 2 bpm - 5,373 psi                      - set trips 5,500 psi</p> <p>Continue RIH to TOF                      -19,125' / RIH weight 15.2K to 16.0K                      -19,175' / RIH weight 14.7K to 14.9K                      -19,300' / RIH weight 14.4K to 15.6K                      -19,425' / RIH weight 12.2 to 13.8K                      -19,530' / RIH weight 11.3K to 12.4K</p> <p>01:36 19,543' / RIH weight 7,600# / pump pressure increased from 4,300 psi to 4,900 psi while pumping 1.0 bpm</p> <p>01:37 TAG FISH at 19,544', RIH weight dropped from 8,600K to 6,500K, start wash over fish working weight to 5,000# then recovering weight to 8,600#, RIH speeds during initial washover vary from low of .1 ft/min to 1.0 ft/min                      - Hlpp Tripper working well in first 2 feet, with pressure increasing at 1.0 bpm from 4,320 psi to 4,600 psi, Hipp Tripper hitting x6, very good action</p> <p>01:54 TAG AT TOP OF EXTENSIONS at 19,553', Shut down pump, stack 5,000# and recover weight back to 7,756#, slack off 2,000# additional to 6,000# and are not recovering any weight back at 19,553.5</p> <p>01:55 POOH off bottom at 12 ft/min, OVERPULL to 59K (8K overpull) then weight fell off to 51K, continue POOH with 1,600 psi hydraulic pressure to 19,500', with POOH weight varying between 50.7K to 52.5K</p>
1:55	0.45	WOR	OPO			1		<p>2ND TIME WASHOVER WITH 3.75" OVERSHOT</p> <p>Bring pump on at 1.0 bpm / 4,276 psi CP / 3,800 psi WH, RIH from 19,500' at 15 ft/min, RIH weight 13.4K</p> <p>02:07 TAG at 19,551' with 5,000#, stack 3,000# additional, and SD pump, recover weight to 6,336# with no more weight recovery, continue slack off to 0# with final depth 19,555', recovering weight back to 513#, no additional recovery.</p> <p>02:12 POOH from 19,555' at 15 ft/min to 19,495', Pulled heavy at 55.4 max (1,710 psi hyd pressure),                      - Continue POOH 19,498# / 54.3K max / 1,703 psi hydraulic pressure, RIH with weights as follows                      19,500' / 11.8K                      19,525' / 7.2K to 10.7K                      19,544' / 10.8 to 12.4K</p>
2:22	0.13	WOR	OPO			1		<p>3RD TIME WASHOVER WITH 3.75" OVERSHOT</p> <p>Bring pump on at 1.0 bpm / 4,386 psi CP / 3,800 psi WH, TAG at 19,555' with 300# (10K down)</p> <p>02:25 POOH, weight increased to 58K then dropped off to 54K, hydraulic pressure 1,730 psi, POOH weight is higher than ever been in this well, typical POOH weight is 49K                      - Continue POOH with 55.2K max (1,730 psi hyd pressure) at 18</p>

EP WELLS DAILY OPERATIONS REPORT

Report 37

07/17/2017

Well UNIVERSITY 19 PW UNIT 1504H  
Wellbore UNIVERSITY 19 PW UNIT 1504H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								ft/min  02:27 19,495' current depth, .7 bpm / 4,000 CP / 3,800 WH, POOH weight dropped from 54.0K to 52.0K with 1,717 hyd pressure, 2.75" grapple definitely appears to be dragging all or part of fish  NOTES / SUMMARY: RIH with BHA #6 / 3.75" overshot dressed with 2.75" spiral grapple with 2.875" Hipp Tripper, 1st tag was at 19,544' (19,543' last night), with pressure increasing at 1.0 bpm from 4,300 psi to 4,900 psi, start working overshot down at .1 ft/min to 1.0 ft/min, weight at tag was 8,600#, the fish was washed over with string weight at 3000# and recovering weight fairly quickly, very good Hipp Tripper action in the first 2-3 feet with x6, the
2:30	4.00	WOR	OPO			1		POOH with BHA #6, 3.75" overshot with 2.75" spiral grapple, average POOH weights between 19,000' and 19,400' are 52.5K with 57.4K max at 19,045' (500' off bottom)  02:40 19,180' to 19,400' / Average POOH weights 52.6K with 53.3K max / 1,745 hyd psi 02:45 19,000' to 19,180' / Average POOH weights 53.8K with 57.4K max / 1,747 hyd psi 02:48 18,978' / POOH weight 55.5K / 1,745 hyd psi  04:30 16,280' current depth / POOH weight 48K to 49K / POOH at 30 ft/min  05:30 14,375' current depth / POOH weight 47K to 48K / POOH at 30 ft/min / .75 bpm / 3,850 psi CP / 3,800 psi WH  06:15 12,380' current depth / POOH weight 45K / POOH at 30 ft/min  06:30 12,206' current depth / POOH weight 45K / POOH at 30 ft/min, SD, reel drag will not maintain pressure
6:30	12.50	WOR	OPO			2		*** START NPT (WU) STEP CT CANNOT MAINTAIN REEL CIRCUIT PRESSURE****.  While POOH, dropping from approx. 2000 psi hydraulic pressure to reel motor down to 500 psi, causing temporary loss of tension in reel. No issues sustaining approx 1500 psi RIH. RBlH to fix bad wraps caused BY loss of full tension. Two STEP mechanics AOL and begin to troubleshoot. Replace relays, troubleshoot electronics on panel and conduct continuity tests, inspect durst box and reel motor. Consult with STEP remote support and believe cause for loss of hydraulic pressure on reel pump is stuck shuttle or check valve. Replacement reel hydraulic pump was ordered from South Texas at 0830. Shut slip rams and lock. Remove malfunctioning hydraulic pump. Await arrival of new pump. Estimated AOL 1830 estimated installed and tested 2130. Develop alternative plans in case hydraulic pump swap unsuccessful.  *** CONTINUE NPT (WU) STEP CT CANNOT MAINTAIN REEL CIRCUIT PRESSURE ***
19:00	2.75	WOR	OPO			2		*** START NPT (WU) STEP CT CANNOT MAINTAIN REEL CIRCUIT PRESSURE ***  19:30 Hydraulic pump on location, crews go to work to install  21:00 Hydraulic pump has been replaced and function tested, back off manual lock pins on #3 pipe slips, pull string weight 45K, open #3 pipe slip rams, RIH from 12,679' to 13,037' to tighten wraps on CT reel, RIH weight 17K, start POOH with weight 45K / 1,700 hyd psi  21:45 TOTAL NPT time 15.25 hours (06:30 to 21:45) *** END NPT (WU) STEP CT CANNOT MAINTAIN REEL CIRCUIT PRESSURE ***

EP WELLS DAILY OPERATIONS REPORT

Report 37

07/17/2017

Well UNIVERSITY 19 PW UNIT 1504H  
Wellbore UNIVERSITY 19 PW UNIT 1504H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
21:45	2.25	WOR	OPO			1		22:12 11,900' current depth (bottom of heel), POOH weight 45k / 1,630 psi hydraulic 30 ftm - prep to slow through heel at 25 ft/min  22:38 11,300' current depth (middle of heel), POOH weight 43K / 1,450 psi hydraulic / 25 ftm  22:54 10,750' current depth (vertical), POOH weight 38K / bring pump on at .75 bpm for pipe displacement / 3,600 psi CP / 3,800 psi WH, shut in and monitor while POOH  23:55 6,070' current depth, POOH weight 18K at 90 ft/min / .75 bpm / 4,200 psi CP / 3,800 psi WH
<b>Total</b>	<b>24.00</b>							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	2.33	WOR	OPO			1	00:30 3,370' current depth, POOH at 90 ft/min, .75 bpm / 3,800 WH and maintain  01:15 200' current depth, wait 30 min for guns to cool, POOH and bump up, shut (2) 7-1/16" 10K FV and confirm, bleed off to gas buster, final well pressure 3,800 psi  02:00 BOP DRILL, CT long horn blast, muster #1 at entrance to location, head count, all hands present by sign in sheet, muster time 1 minute 56 seconds, discuss pinhole, prevailing winds, buddy system, work yourself around side of location if on other side, good drill, enter into Wellview and email field sups and HSE.
2:20		WOR	OPO			1	

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
07/17/2017 06:30	STEP ENERGY SERVICES USA LTD	Rig/Work Unit Misc		OPO	EN	Coil Tubing Surface Equipment	15.25	15.25		OPEN
<p><b>Description:</b> While POOH, dropping from approx. 2000 psi hydraulic pressure to reel motor down to 500 psi, causing temporary loss of tension in reel. No issues sustaining approx 1500 psi RIH. RBIH to fix bad wraps caused BY loss of full tension. Two STEP mechanics AOL and begin to troubleshoot. Replace relays, troubleshoot electronics on panel and conduct continuity tests, inspect durst box and reel motor. Consult with STEP remote support and believe cause for loss of hydraulic pressure on reel pump is stuck shuttle or check valve. Replacement reel hydraulic pump was ordered from South Texas at 0830. Shut slip rams and lock. Remove malfunctioning hydraulic pump. Await arrival of new pump. Estimated AOL 1830 estimated installed and tested 2130. Develop alternative plans in case hydraulic pump swap unsuccessful.</p>							<p><b>Title:</b> CANNOT MAINTAIN REEL CIRCUIT PRESSURE</p>			
<b>Total</b>							<b>15.25</b>	<b>15.25</b>		