EP WELLS DAILY OPERATIONS REPORT

Report 34 07/14/2017

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	33.00
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, Damon Marsh	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	1,625,473/4,757,442.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.34	LOT/FIT EMW(ppg)	
Daily Cost	75,978	Lithology	
		Formation/MD Top	

HSE Summary

Last Incident	Date	Days	Last Incident	Date	Days	KPI's	
LWC			PSI			TRCF	
RWC			NII			LWCF	
MTC			HPI			Safety Cards - Safe	
FAC			**GOAL ZERO DAYS**			Safety Card - Unsafe	
Last casing pressure test			**PS BARRIER EVENT**			SSE%	
			PS barrier bowtie review			Last casing pressure(psi)	

Safety Comments:

322 man hours
28 driving hours

HSE Drills

Drills/Tests	Date	Days Since Last		
Last Derrick Inspection			JSA's/Toolbox Talks	
Last BOP function test			Days Since Last Drill	32
Last BOP Test				
Next BOP Test				

Operations Summary

24 Hour Summary

RIH with BHA #3 / 2-5/8" basket overshot w mill packoff, engage fish 19,550', POOH, pinhole in pipe, bump up, no fish, cut 3,000' of 2-3/8" CT with cold band saw

Update Since Report Time

3000' of 2-3/8" CT cut, MU BHA #4 - test tools, AV sub, and hydraulic disconnect with 1.5" hydraulic overshot / RIH

24 Hour Forecast

Engage fish, POOH and check if recovered, prep for injection test and RD and/or continue fishing operations

EP WELLS DAILY OPERATIONS REPORT

Report 34 07/14/2017

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	2.00	WOR	OPO			1		Swing 5-1/8" lube to side, lower tools, no fish, BD 3.75" overshot dressed with 2.75" spiral grapple, (3) 3" 3.75" extension sections, and the 3.75" top sub and lay down same, inspect each as follows - Inspect 2.75" grapple, no markings or signs of engaging fish, grapple did appear pushed up, but had no markings - Inspect 3.75" cut lip overshot guide, no obvious marks from this run - BD each of (3) 3 foot extensions, inspect each section internally with no indication of fish inside, this was the 4th run for the overshot top sub, extensions, bowl, and guide, no definative indication of wear from this specific run, outside diameters have cumulative run scarring. - BD and inspect the inside of the overshot top sub, no indication of the top of the fish seating in the ID of the 3.75" overshot top sub. 12:45 Discuss options with fisherman, OSR, CT sup, Shell field sup and engineer, after discussions, will proceed as follows - MU 3.75" overshot dressed with 2-5/8" basket grapple with mill control packoff, no extension 01:15 Inspect 2-5/8" basket grapple and caliper ID of mill control at 2.7285", confirm mill control packoff did slip over the same fishing cable head and CCL that was fished out of the 1505H (what we have looking up in this well), this CCL has been calipered at 2.625", with OD's measured at 2.615" to 2.640" at the top of this CCL, witness MU 3.75" overshot and RIH with BHA #3 as follows BHA #4 (OD", ID", Length') - Slip Type Connector (3.125", 1.375", .99') - Dual BPV (2.875", 1", 1.42') - Accelerator (2.875", 15/16", 5.91') - Bi directional jars (2.875", 15/16", 5.61') - Hyd. Disconnect (2.875", 11/16", 2.12') - NOV Agitator (2.875", N/A, 4.32') - Rotational Hip Tripper (2.82", NA, 4.27') - XO 2-3/8" PAC 2-7/8" PAC (3.06", 1.38", 1.1') - Overshot top sub (3.75", 1.5", .82') - Overshot w 2-5/8" basket grapple with mill control packoff (3.75", 2.75", 1.13') - Cut-lip overshot guide (3.75", 3.13", .60') TOTAL BHA LENGTH 28.2 feet
0:00		WOR	OPO			2		
2:00	1.25	WOR	OPO			1		PU injector to well and stab same on 15K Quad BOP's, torque per spec, secure guywire package, 02:45 PAUSE, assemble valve team, 9 questions for safe pressure test, walk lines, break circulation to gas buster, close in at choke manifold, pressure test 500 psi / low / min, 8,000 psi / high / 10 min, good tests. 03:15 Bleed to 3,800 psi, open 7-1/16" FV 31 turns and confirm, well equalized at 3,700 psi, roll pumps on at .75 bpm and start chems POP at .25/10 bbls (will exit as CT enters heel), .1/10 bbls FR
3:15	3.75	WOR	OPO			1		05:00 7,600' current depth, RIH weight 8,000#, .75 bpm / 4,200 CP / 3,900 WH, 95 ft/min 05:30 Weight check at top of liner 10,800', PU 33K, .75 bpm / 4,100 CP / 3,800 WH, .30 ft/m through curve, POP exiting now, continue RIH. 06:30 Weight check at 13,000', PU 38K, RIH weight 20K, 60 ft/min, .75 bpm / 4100 CP / 3800 WH

EP WELLS DAILY OPERATIONS REPORT

Report 34 07/14/2017

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
								06:30 Days safety meeting, discuss plan, let day crew know a ratttlesnack was discovered underneath a pallet, the area was coned up and tape was put up, the snack was discovered gone at 04:30, discuss LWC finger injury due to jewelry, remind crew about policy, line of fire, suspended loads coming off well, pressure testing, review JSA's and open permits, crew change. 06:55 14,310' current depth, RIH weight 19K, .75 bpm / 4,100 CP / 3,850 WH / 50 ft/min
7:00	0.33	WOR	OPO			1		Continue RIH to 15000 ft CTM. 18k running wt, 55 ft/min, .7 bbl/min bbl in - bbl out, P circ 4200 psi WHP 3700 psi, PoP .2 gal/10 bbl FR .04 gal/10 bbl.
7:20	0.25	WOR	OPO			1		Continue RIH to 16000 ft CTM. 17k running wt, 55 ft/min, .7 bbl/min bbl in - bbl out, P circ 4150 psi WHP 3800 psi, PoP .2 gal/10 bbl FR .04 gal/10 bbl.
7:35	0.10	WOR	OPO			1		At 16795 ft CTM bring pump rate up to 1 bbl/min. 1 bbl/min bbl in - bbl out, P circ 4500 psi WHP 3800 psi, PoP .2 gal/10 bbl FR .04 gal/10 bbl.
7:41	0.30	WOR	OPO			1		Continue RIH to 17000 ft CTM. 16k running wt, 50 ft/min, 1 bbl/min bbl in - bbl out, P circ 4500 psi WHP 3900 psi, PoP .2 gal/10 bbl FR .08 gal/10 bbl. (Note change in FR loading)
7:59	0.25	WOR	OPO			1		Continue RIH to 18000 ft CTM. 15k running wt, 50 ft/min, 1 bbl/min bbl in - bbl out, P circ 4600 psi WHP 4000 psi, PoP .25 gal/10 bbl FR .08 gal/10 bbl. Bring FR to .15 gal/10 bbl.
8:14	0.22	WOR	OPO			1		Continue RIH to 19000 ft CTM. 10k running wt, 45 ft/min, 2 bbl/min bbl in - bbl out, P circ 6000 psi WHP 3800 psi, PoP .3 gal/10 bbl FR .08 gal/10 bbl. (Note change in rate)
8:27	0.17	WOR	OPO			1		Continue RIH at 19300 ft CTM. 8k running wt, 45 ft/min, 1 bbl/min bbl in - bbl out, P circ 4500 psi WHP 4000 psi, PoP .3 gal/10 bbl FR .08 gal/10 bbl. (Reduced rate, did not see it helping RIH wt).
8:37	0.98	WOR	OPO			1		At 19300 start losing wt gradually. Tag at 19552.5 ft CTM, see 600 psi pressure increase with packoff around fish, set down to -3k lbf. Circ P to 5150 psi, WHP 3600 psi. PU to 15527 ft CTM, after pickup wt 52k lbf Circ P dropped and equalized indicating we had come off fish. Bring on pump to .75 bbl/min, Circ P 4200 psi, RBIH to 19543 ft CTM and stack wt without pressure increase. Bring on pump to 2.5 bbl/min, let agitator pull fishing tools down to pressure increase. Begin picking up, after pickup wt 53k lbf Circ P dropped and equalized indicating we had come off fish again. Bring on pumps at 1.5 bbl/min Circ P to 4700 psi, at 2 bbl/min Circ P to 5200 psi, RIH to 19550 ft CTM and pressure increased by 600 psi indicating packoff around fish. PU to 19520 ft CTM, after pickup wt 52k lbf Circ P drops again indicating no grip on fish. RBIH to 19540 ft CTM, stack wt, bring pump up to 2.5 bbl/min, allow agitator to give back 10k lbf weight, Circ P 5300 psi WP 4000 psi. RIH to 19549 ft CTM, bring pump up to 2.75 bbl/min, Circ P to 8100 psi WHP 4000 psi, come offline with pump and Circ P falls to 6000 psi. Set down to -6000 lbf. Bleed Circ P to 3000 psi, set down to -5000 lbf. PU to 19528 ft CTM, pickup wt 51k lbf. At pump rate .75 bbl/min Circ P to 3600 psi, at 1.25 bbl/min Circ P to 4600 psi, at 2 bbl/min Circ P 5400 psi. Tag fish at 19552 ft CTM and Circ P jumps to 6700 psi. PU, at pickup wt 51k lbf Circ P drops again indicating fish lost. PU to 19500 ft CTM, bring pump on at 2 bbl/min Circ P 5000 psi WHP 3800 psi. Shut down pumps just before tag at 19552.7 ft CTM, set down to -9k lbf. PU to 19527 ft CTM, at pickup wt 51k lbf Circ P drops again indicating fish lost. RBIH to 19547 ft CTM, pumping at 1 bbl/min, allow hip tripper to

EP WELLS DAILY OPERATIONS REPORT

Report 34 07/14/2017

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
								stroke, PU again and Circ P reduces indicating fish loose.
9:36	2.83	WOR	OPO			1		Decide to POOH, pumping at 2 bbl/min bbl in - bbl out, Circ P 5400 psi WHP 4000 psi.
12:26	2.63	WOR	OPO			1		Continue POOH at 10000 ft CTM, SD pump and shut in backside. Bring pump on at 10500 ft CTM, .6 bbl/min, bbl in - bbl out, Circ P 3900 psi WHP 3700 psi (to maintain WHP).
15:04	1.03	WOR	OPO			1		While POOH at approx 2825 ft CTM, observe pinhole leak approx 30' from reel. SD pump, shut in backside. Monitor for flow, dual flapper check valves holding. Bleed pressure off CT. Inspect pinhole from behind reel trailer, appears to be mechical damage from piece of debris lodged in CT. Small hole, minimal flow cut, decide to POOH slowly. With 4 wraps back on reel, continue POOH. All CT and tools retrieved to surface without incident.
16:06	0.90	WOR	OPO			1		Bump up, shut in and bleed off stack. 3600 psi SICP. Break bottom lubricator connection to quad BOPs. Multiple visible marks on perimeter and interior of cutlip guide. Marks on outside possibly casing, scarring on perimeter has copper color possibly conductor, noticeable wear on cutlip guide. Small shard of soft metal in cutlip guide as well (not from fishing tools), minor knicks on grapple control and abrasion in grapple itself. Break down tools and prepare to cut CT.
17:00	0.50	WOR	OPO			2		*** START NPT (WU) STEP CT PINHOLE LEAK IN CT ***. Inspect injector head to identify potential cause of pinhole/debris lodged in CT.
17:30	1.50	WOR	OPO			2		Hold PJSM for cutting 3000' of CT to clear pinhole. Discuss risks and mitigations/preventions, write JSA and permit and prepare/inspect equipment for work. 18:30 Nights safety meeting, make plan, review procedure to cut CT in 25' sections, LD and move to side of location, discuss tethered tools in manlift, suspended loads and drops, no go zone, burrs on cut ends, discuss and remind Shell policy for jewelry, line of fire, pressure testing, review JSA's and open permits, crew change
19:00	5.00	WOR	OPO			2		PAUSE, nights relieves days, check area for laying down 2-3/8" after cutting in 25' sections, check tools, continue cutting with cold band saw. 22:00 1,100' of 2-3/8" CT cut / 300' average per hour 23:55
Total	**24.00**							

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
07/14/2017 17:00	STEP ENERGY SERVICES USA LTD	Rig/Work Unit Misc		OPO	EN	Coil Tubing Downhole Equipment	0.00	0.00		OPEN

Description: INSPECT INJECTOR HEAD TO IDENTIFY POTENTIAL CAUSE OF PINHOLE/DEBRIS LODGED IN CT

Title: PINHOLE LEAK IN COIL TUBING

Total 0.00 0.00