

## EP WELLS DAILY OPERATIONS REPORT

Report 17

11/29/2017

Company	PERMIAN
Well Type	Development
Well	UNIVERSITY 19 D 0904H
Wellbore	UNIVERSITY 19 D 0904H
WBS No/API No	30266560 / 4230133226.00

## Event Summary

Event Type	Completion only	Event Start Date	10/31/2017	Days on Location	17.00
Objective	Install Completion	Original Spud Date	06/19/2017		
Est. Days	65.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

## Well Status

Supervisor	Andrew Veroba	Measured Depth(ft)	
Engineer	Bobby Ramos	TVD(ft)	
Other Supervisor	M. Hank Persaud	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,799.10 / 2,771.10	Hole size(in)	
THF Datum			
Daily NPT(hr/%)	0/0	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	769,093/3,746,244.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.21	LOT/FIT EMW(ppg)	
Daily Cost	16,482	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:							

## HSE Drills

Drills/Tests	Date	Days Since Last		
Last Derrick Inspection Last BOP function test Last BOP Test Next BOP Test			JSA's/Toolbox Talks Days Since Last Drill	16

## Operations Summary

24 Hour Summary
Update Since Report Time
24 Hour Forecast

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## Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	0.25	FRAC	FRP			0		Wait on concurrent operations.
0:15	1.58	FRAC	FRT			0		<p>Stage 10 Summary University 19 D 0904H Interval 16681 - 16817 Open Well Pressure 4,729 psi Max Treating Pressure 9,178 psi Max Slurry Rate 54.2 bpm Average Treating Pressure 8,871 psi Average Slurry Rate 45.3 bpm Breakdown Pressure 7,099 psi Breakdown Rate 2.7 bpm Breakdown Volume 168 gal Avg HHP 9,849 hp Final ISIP 5,554 psi Frac Gradient 0.910 psi/ft Pad Volume 1,735 gal Main Body Volume 163,134 gal Flush Volume 27,342 gal 100 MAZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 142,760 lbs 100 M Sand Pumped 173,600 lbs Proppant in Formation 316,360 lbs Avg Proppant Concentration 2.52 lb/gal Max Proppant Concentration 3.50 lb/gal Load to Recover (incl. pumpdown) 4,006 bbls Load to Recover w/o Acid 3,999 bbls 15% HCL Spearhead 300 gal Slickwater Fluid Pumped 3,797 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 122 bbls pump down rate 11.0 bpm Max pump down pressure 6,950 psi Fluid Temp 72.0 ?F Total Pump Time 1:35 hr:min Pumps Lost During Job 0 Treatment Start Time 0:15 0:00 0:00 Treatment End Time 1:50 0:00 0:00 Diverter Slurry bbls - Proppant was pumped with a ramp of 0.50 - 2.50 PPA, then steps of 2.50 PPA, 3.00 PPA, 3.50 PPA. - Ran 300 gal of 15% HCl - Ran 2 shots of gel with a 20 bbl spacer. - A ball in place plug was utilized. - During the wireline run only 3/4 guns fired. Shell engineer made the decision to run 315,000 lb. of sand.</p> <p>Time for Prop on Perfs 28.0 minutes Time between Stages (TBF) 0:47 Hours/min</p>
1:50	2.92	FRAC	FWL			0		WOCO.
4:45	0.22	FRAC	FWL			0		<p>Pick up lubricator. Remove night cap. PU guns/plug. Stab lubricator. Fill lubricator. PT lubricator to 8kpsi. Open well with 4630 psi. RIH to 200'. Conduct switch checks.</p>
4:58	1.80	FRAC	WLT			0		<p>Stage 11 Plug and Perf RIH with (4) 1' Keane guns: 2.75" OD HSC at 6SPF with 60* phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Tie into liner top @ 10,990'. Bring on pumps at 11,500'. Pump down as follows: 3bpm @ 3800 psi 6bpm @ 4500 psi 9bpm @ 4900 psi 11bpm @ 5200</p> <p>Set plug @ 16,706ft Perforate as follows:</p>

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								16,681' – 16,682' 16,636' – 16,637' 16,591' – 16,592' 16,546' – 16,547' Stabilized pressure after perf: 4863 psi Pump down volume: 111 bbl POOH to 1000'. Conduct Pause. Pull to 200' and wait on frac.
6:46	0.42	FRAC	WLF			0		Bump up and SIW @ 4750 psi. Bled off pressure and break lubricator/BOP's. Lowered Perf guns out of lubricator and confirmed all shots fired. N/U nightcap and close crown valve. L/D perf guns and setting tool. Greased UMW and LMV. HO to Frac.
7:11	0.38	FRAC	WLF			0		Wait on concurrent operations.
7:34	1.83	FRAC	FRT			0		<p>Stage 11 Summary University 19 D 0904H Interval 16546 - 16682 Open Well Pressure 4,887 psi Max Treating Pressure 9,287 psi Max Slurry Rate 56.5 bpm Average Treating Pressure 8,868 psi Average Slurry Rate 47.8 bpm Breakdown Pressure 7,401 psi Breakdown Rate 5.0 bpm Breakdown Volume 126 gal Avg HHP 10,389 hp Final ISIP 5,414 psi Frac Gradient 0.898 psi/ft Pad Volume 1,008 gal Main Body Volume 200,760 gal Flush Volume 27,174 gal 100 MAZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 326,780 lbs 100 M Sand Pumped 93,660 lbs Proppant in Formation 420,440 lbs Avg Proppant Concentration 2.54 lb/gal Max Proppant Concentration 3.50 lb/gal Load to Recover (incl. pumpdown) 4,891 bbls Load to Recover w/o Acid 4,884 bbls 15% HCL Spearhead 294 gal Slickwater Fluid Pumped 4,693 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 111 bbls pump down rate 11.0 bpm Max pump down pressure 6,137 psi Fluid Temp 72.0 ?F Total Pump Time 1:50 hr:min Pumps Lost During Job 0 Treatment Start Time 7:34 0:00 0:00 Treatment End Time 9:24 0:00 0:00 Diverter Slurry bbls - Proppant was pumped with a ramp of 0.50 - 2.50 PPA, then steps of 2.50 PPA, 3.00 PPA, 3.50 PPA. - Ran 300 gal of 15% HCl - Ran 2 shots of gel with a 20 bbl spacer. - A ball in place plug was utilized.</p> <p>Time for Prop on Perfs 19.0 minutes Time between Stages (TBF) 0:50 Hours/min</p>
9:24	3.60	FRAC	FWL			0		Wait on concurrent operations.
13:00	0.22	FRAC	FWL			0		Pick up lubricator. Remove night cap. PU guns/plug. Stab lubricator. Fill lubricator. PT lubricator to 8kpsi. Open well with 4450 psi. RIH to 200'. Conduct switch checks.
13:13	1.78	FRAC	WLT			0		Stage 12 Plug and Perf RIH with (4) 1' Keane guns: 2.75" OD HSC at 6SPF with 60* phased perforating guns and Downhole Technology Boss Hog

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								composite ball-in-place frac plug. Tie into liner top @ 10,990'. Bring on pumps at 11,446'. Pump down as follows: 3bpm @ 4200 psi 6bpm @ 4500 psi 9bpm @ 4700 psi 11bpm @ 5270 psi  Set plug @ 16,526ft Perforate as follows: 16,501' – 16,502' 16,456' – 16,457' 16,411' – 16,412' 16,366' – 16,367' Stabilized pressure after perf: 5312 psi Pump down volume: 111 bbl POOH to 1000'. Conduct Pause. Pull to 200' and wait on frac.
15:00	0.33	FRAC	WLF			0		Bump up and SIW @ 4550 psi. Bled off pressure and break lubricator/BOP's. Lowered Perf guns out of lubricator and confirmed all shots fired. N/U nightcap and close crown valve. L/D perf guns and setting tool. Greased wing and hydraulic valve. HO to Frac.
15:20	0.33	FRAC	WLF			0		Wait on concurrent operations.
15:40		FRAC	FRT			0		
15:41		FRAC	FWL			0		WOCO.
21:30	2.00	FRAC	FWL			0		*** Start NPT (PERF) on Keane Wireline at 2130 ***  Bridle and wireline twisted while picking up. Analyze. Lay down to assess. Re-head.
23:30	0.22	FRAC	FWL			0		Handover from frac to wireline. Pick up lubricator. Remove night cap. PU tools. Stab lubricator. Fill lubricator. Pressure test lubricator to 7000 psi
23:43	0.28	FRAC	WLT			0		RIH for stage 13 - summary on 11/20/2017 report.
<b>Total</b>	<b>18.17</b>							

## 06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	WLT			0	RIH for stage 13 - summary on 11/20/2017 report.