

EP WELLS DAILY OPERATIONS REPORT

Report 15

10/23/2017

Company	PERMIAN
Well Type	Development
Well	UNIVERSITY 19 PW UNIT 1406H
Wellbore	UNIVERSITY 19 PW UNIT 1406H
WBS No/API No	30266570 / 4230133213.00

Event Summary

Event Type	Completion only	Event Start Date	09/03/2017	Days on Location	15.00
Objective	Install Completion	Original Spud Date	04/30/2017		
Est. Days	31.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Tommy Hurdle	Measured Depth(ft)	
Engineer	Alex Villegas	TVD(ft)	
Other Supervisor	Nick Morrison	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,793.00 / 2,767.00	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	1,085,925/4,377,702.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.25	LOT/FIT EMW(ppg)	
Daily Cost	152,301	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 GOAL ZERO DAYS PS BARRIER EVENT PS barrier bowtie review			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	14

Operations Summary

24 Hour Summary
Frac Stages - 12, 13 WL Stages - 13, 14
Update Since Report Time
Frac stage 13
24 Hour Forecast
Standby for CT operations on the 0908H well.

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	0.17	FRAC	FWL			0		Shut in well with 4650 psi Break lubricator. All shots fired. MU night cap. LD tools and lub. Secure crown and wing valves. Handover from WL to frac.
0:10	0.22	FRAC	FWL			0		Other Pad Operations
0:23	0.10	FRAC	FRP			0		Prime up equalize to 5000 psi.
0:29	1.72	FRAC	FRT			0		<p>Stage 12 Summary University 19 PW Unit 1406H Interval 17439 - 17572</p> <p>Open Well Pressure 4,401 psi Max Treating Pressure 9,431 psi Max Slurry Rate 54.7 bpm Average Treating Pressure 8,868 psi Average Slurry Rate 44.1 bpm Breakdown Pressure 8,173 psi Breakdown Rate 13.3 bpm Breakdown Volume 265 gal Avg HHP 9,585 hp Final ISIP 5,437 psi Frac Gradient 0.898 psi/ft Pad Volume 647 gal Main Body Volume 159,008 gal Flush Volume 27,762 gal 100 MAZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 284,700 lbs 100 M Sand Pumped 136,120 lbs Proppant in Formation 420,820 lbs Avg Proppant Concentration 3.46 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 3,896 bbls Load to Recover w/o Acid 3,896 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 3,706 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 110 bbls pump down rate 9.0 bpm Max pump down pressure 6,000 psi Fluid Temp 72.0 ?F Total Pump Time 1:40 hr:min Pumps Lost During Job 1 Treatment Start Time 0:32 0:00 0:00 Treatment End Time 2:12 0:00 1:40 Diverter Slurry bbls - Proppant was pumped as a ramp from 0.50 PPA to 4.0 PPA, then a step of 4.0 PPA - Two 20# gel sweeps 40 bbls each were pumped prior to flush. - Did not run 15% HCL this stage - Ran ball in place plug</p> <p>Time for Prop on Perfs 18.5 minutes Time between Stages (TBF) 0:37 Hours/min</p>
2:12	0.22	FRAC	FWL			0		Other pad operations
2:25	0.32	FRAC	FWL			0		Handover from frac to wireline. Pick up lubricator. Remove night cap. PU tools. Stab lubricator. Fill lubricator. Pressure test lubricator to 8000 psi Open well with 4950 psi. RIH.
2:44	0.77	FRAC	WLT			0		"Stage #13 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 frac plug. Tie into liner top @ 11069. Bring on pumps at 11570'. Pump down as follows: 3 bpm @ 4800 psi

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								6 bpm @ 5200 psi 9 bpm @ 5600 psi 12 bpm @ psi Max:9 bpm. Max: 6000 psi Set plug @ 17419 ft Perforate as follows: 17395' - 17396' 17351' - 17352' 17307' - 17308' 17263' - 17264' Stabilized pressure after perforating: 5530 psi Pump down volume: 105 bbl"
3:30	0.78	FRAC	WLT			0		POOH
4:17	0.10	FRAC	WLF			0		Shut in well with 4650 psi Break lubricator. All shots fired. Drop ball. MU night cap. LD tools and lub. Grease crown and wing valve Secure crown and wing valves. Handover from WL to frac.
4:23	0.40	FRAC	OPO			0		Other pad operations
4:47	0.17	FRAC	FRP			0		Align valves prime uo equalize to 5000 psi. Finish fueling frac pumps.
4:57	1.50	FRAC	FRT			0		Stage 13 Summary University 19 PW Unit 1406H Interval 17307 - 17396 Open Well Pressure 4,444 psi Max Treating Pressure 9,484 psi Max Slurry Rate 54.8 bpm Average Treating Pressure 8,932 psi Average Slurry Rate 47.5 bpm Breakdown Pressure 8,180 psi Breakdown Rate 16.3 bpm Breakdown Volume 294 gal Avg HHP 10,399 hp Final ISIP 5,181 psi Frac Gradient 0.876 psi/ft Pad Volume 155 gal Main Body Volume 152,636 gal Flush Volume 27,636 gal 100 M AZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 4,000 lbs 100 M Sand Pumped 416,480 lbs Proppant in Formation 420,480 lbs Avg Proppant Concentration 3.53 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 3,739 bbls Load to Recover w/o Acid 3,739 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 3,554 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 105 bbls pump down rate 9.0 bpm Max pump down pressure 6,000 psi Fluid Temp 72.0 ?F Total Pump Time 1:27 hr:min Pumps Lost During Job 0 Treatment Start Time 5:00 0:00 0:00 Treatment End Time 6:27 0:00 1:27 Diverter Slurry bbls - Proppant was pumped as a ramp from 0.50 PPA to 4.0 PPA, then a step of 4.0 PPA - Two 20# gel sweeps 40 bbls each were pumped prior to flush. - Did not run 15% HCl this stage - Ran ball in place plug

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Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Time for Prop on Perfs 18.5 minutes Time between Stages (TBF) 0:43 Hours/min
6:27	0.23	FRAC	OPO			0		Other pad operations
6:41	0.32	FRAC	FWL			0		Handover from frac to wireline. Pick up lubricator. Remove night cap. PU tools. Stab lubricator. Fill lubricator. Pressure test lubricator to 8000 psi Open well with 5000 psi. RIH.
7:00	0.92	FRAC	WLT			0		"Stage #14 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 frac plug. Tie into liner top @11069. Bring on pumps at 11300'. Pump down as follows: 3bpm @ 4800psi @11300 6bpm @ 5670psi @11735 10bpm @ 5740psi @12200 10bpm w/ 6457psi Set plug @ 17243ft Perforate as follows: 17219' - 17220' 17174' - 17175' 17128' - 17129' 17085' - 17086' Stabilized pressure after perf: 5600psi Pump down volume: 108bbl"
7:55	0.92	FRAC	WLT			0		POOH. Held pause at 1000' from surface.
8:50	0.33	FRAC	WLF			0		Bump up and SIW @ 4680 psi. Bled off pressure and break lubricator. Lowered Perf guns out of lubricator and confirmed all shots fired. N/U nightcap and close crown valve. L/D perf guns, set BOP's on stand and L/D lubricator. Prepare for re-heading Greased LMV valve - grease time 10 min. HO to Frac
9:10	1.00	FRAC	OPO			0		Conduct pump maintenance. Grease zipper. Re-head and change grease tubes.
10:10	13.83	FRAC	OPO			0		Other Pad Ops. Look at 0908H report for CT status.
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	OPO			0	Other Pad Ops. Look at 0908H report for CT status.