

EP WELLS DAILY OPERATIONS REPORT

Report 16

09/30/2017

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 19 H 0908H
 Wellbore UNIVERSITY 19 H 0908H
 WBS No/API No 30266564 / 4230133234.00

Event Summary

Event Type	Completion only	Event Start Date	09/03/2017	Days on Location	16.00
Objective	Install Completion	Original Spud Date	05/08/2017		
Est. Days	31.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	T GREGA	Measured Depth(ft)	
Engineer	Alex Villegas	TVD(ft)	
Other Supervisor	STEELE,MORGAN BRETT	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,792.80 / 2,766.80	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	325,556/4,135,334.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.08	LOT/FIT EMW(ppg)	
Daily Cost	161,657	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	JSA's/Toolbox Talks Days Since Last Drill
Last Derrick Inspection Last BOP function test Last BOP Test Next BOP Test			15

Operations Summary

24 Hour Summary
FINISH RIG UP AND START PERF AND FRAC OPNS FRAC STG 2,3 PERF STG 2, 3
Update Since Report Time
PERF AND FRAC
24 Hour Forecast
PERF AND FRAC

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.47	FRAC	FWL			0		OTHER PAD OPERATIONS
1:28	0.20	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 4150 psi. RIH.
1:40	2.92	FRAC	WLT			0		"Stage #2 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 @ 11016. Bring on pumps at 11700'. Pump down as follows: 3 bpm @ 4400 psi 6 bpm @ 4630 psi11800 9 bpm @ 5400 psi11900 10 bpm @ 5800 psi12100 11 bpm @ 5900 psi15000 Max:11 bpm. Max: 6049 psi18886 Set plug @ 18898 ft Perforate as follows: 18878' - 18879' 18834' - 18835' 18790' - 18791' 18746' - 18747' Stabilized pressure after perforating: 4632 psi Pump down volume: 175 bbl" POOH
4:35	0.75	FRAC	WLF			0		Shut in well with 4400 psi. Bleed off. Break lubricator. All shots fired. Drop ball. MU night cap. LD tools and lub. Secure crown and wing valves. Handover from WL to frac.
5:20	1.37	FRAC	WLF			0		Wait on other pad operations.
6:42	2.15	FRAC	FRT			0		Stage 2 Summary University 19 H 0908H Interval 18746 - 18879 Open Well Pressure 4,123 psi Max Treating Pressure 9,172 psi Max Slurry Rate 61.6 bpm Average Treating Pressure 8,719 psi Average Slurry Rate 57.0 bpm Breakdown Pressure 6,083 psi Breakdown Rate 8.0 bpm Breakdown Volume 1,243 gal Avg HHP 12,181 hp Final ISIP 5,193 psi Frac Gradient 0.882 psi/ft Pad Volume 18,144 gal Main Body Volume 228,589 gal Flush Volume 28,644 gal 100 MAZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 0 lbs 100 M Sand Pumped 419,840 lbs Proppant in Formation 419,840 lbs Avg Proppant Concentration 2.43 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 5,618 bbls Load to Recover w/o Acid 5,594 bbls 15% HCL Spearhead 1,008 gal Slickwater Fluid Pumped 5,339 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 175 bbls pump down rate 11.6 bpm Max pump down pressure 6,049 psi Fluid Temp 72.0 ?F Total Pump Time 2:09 hr:min

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								Pumps Lost During Job 1 Treatment Start Time 6:42 0:00 0:00 Treatment End Time 8:51 0:00 2:09 Diverter Slurry bbls -Pumped sand in a 0.50 PPA -2.00 PPA ramp, 2 PPA, 2.50 PPA, 3.00 PPA, 3.50 PPA, 4.00 PPA steps. -Two 20# gel sweeps 40 bbls each were pumped prior to flush. -Ran two 500gal shots of acid with a 30bbl spacer.
8:51	4.95	FRAC	FRT			0		Wait on other pad operations
13:48	0.87	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 4278 psi. RIH.
14:40	1.03	FRAC	WLT			0		"Stage #3 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 @ 11016. Bring on pumps at 11700'. Pump down as follows: 3 bpm @ 4390 psi 6 bpm @ 4663 psi 11800 9 bpm @ 5505 psi 11900 11.5 bpm @ 5572 psi 15000 Max: 11.5 bpm. Max: 6278 psi 18886 Set plug @ 18726 ft Perforate as follows: 18702' - 18703' 18658' - 18659' 18614' - 18615' 18570' - 18571' Stabilized pressure after perforating: 4630 psi Pump down volume: 178 bbl"
15:42	1.38	FRAC	WLT			0		Wait @ 200ft for frac operations
17:05	0.33	FRAC	WLT			0		1705 POOH 1706 Shut in well with 4400psi. Bleed off. 1714 Break lubricator. All shots fired. Drop ball. MU night cap. LD tools and lub. Secure crown and wing valves. 1727 Handover from WL to frac.
17:25	1.78	FRAC	WLF			0		WAIT ON OTHER PAD OPERATIONS
19:12	2.80	FRAC	FRT			0		Stage 3 Summary University 19 H 0908H Interval 18570 - 18703 Open Well Pressure 4,127 psi Max Treating Pressure 9,163 psi Max Slurry Rate 60.6 bpm Average Treating Pressure 8,561 psi Average Slurry Rate 53.6 bpm Breakdown Pressure 5,976 psi Breakdown Rate 8.0 bpm Breakdown Volume 168 gal Avg HHP 11,247 hp Final ISIP 5,262 psi Frac Gradient 0.888 psi/ft Pad Volume 27,930 gal Main Body Volume 219,576 gal Flush Volume 28,476 gal 100 M AZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 373,500 lbs 100 M Sand Pumped 47,220 lbs Proppant in Formation 420,720 lbs Avg Proppant Concentration 2.73 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 5,406 bbls

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								Load to Recover w/o Acid 5,382 bbls 15% HCL Spearhead 1,008 gal Slickwater Fluid Pumped 5,124 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 178 bbls pump down rate 11.8 bpm Max pump down pressure 6,100 psi Fluid Temp 72.0 ?F Total Pump Time 2:23 hr:min Pumps Lost During Job 0 Treatment Start Time 19:11 20:25 0:00 Treatment End Time 19:59 22:00 2:23 Diverter Slurry bbls -Didn't see a ball. Acid hit at 9.5 bpm. After displacing acid, we shut down in order to pump through the wing valves to dislodge the ball if it's in there. -Pumped sand in a 0.50 PPA -2.00 PPA ramp, 2 PPA, 2.50 PPA, 3.00 PPA, 3.50 PPA, 4.00 PPA steps. Due to high pressure, we dropped from 4.00 PPA to 3.50 PPA after 944 Bbls at 4.00 PPA. We finished on 3.50 PPA. -Two 20# gel sweeps 40 bbls each were pumped prior to flush. - Ran two 500gal shots of acid with a 30bbl spacer. Time for Prop on Perfs 69.0 minutes
22:00	2.00	FRAC	FWL			0		WAIT ON OTHER PAD OPERATIONS
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	FWL			0	WAIT ON OTHER PAD OPERATIONS