

**EP WELLS DAILY OPERATIONS REPORT**

Report 16

10/01/2017

Company PERMIAN  
 Well Type Development  
 Well UNIVERSITY 19 PW UNIT 1407H  
 Wellbore UNIVERSITY 19 PW UNIT 1407H  
 WBS No/API No 30266571 / 4230133203

**Event Summary**

Event Type	Completion only	Event Start Date	09/03/2017	Days on Location	16.00
Objective	Install Completion	Original Spud Date	05/11/2017		
Est. Days	31.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

**Well Status**

Supervisor	Tina	Measured Depth(ft)	
Engineer	Alex Villegas	TVD(ft)	
Other Supervisor	J.Steele, Morgan, Brett.O	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,792.70 / 2,766.70	Hole size(in)	
THF Datum			
Daily NPT(hr/%)	2.63/10.97	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	495,682/4,701,640.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.11	LOT/FIT EMW(ppg)	
Daily Cost	143,366	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	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
PER AND FRAC 2 STAGES 4,5
Update Since Report Time
24 Hour Forecast
PERF AND FRAC OPERATIONS

EP WELLS DAILY OPERATIONS REPORT

Well UNIVERSITY 19 PW UNIT 1407H  
 Wellbore UNIVERSITY 19 PW UNIT 1407H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	0.40	FRAC	WLT			0		RIH TO PERF
0:24	2.48	FRAC	WLT			0		"Stage #4 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 @ 11122. Bring on pumps at 11800'. Pump down as follows: 3 bpm @ 4100 psi 6 bpm @ 4300 psi11850 9 bpm @ 4800 psi11950 10 bpm @ 5500 psi12300 11 bpm @ 6400 psi16100 Max:11 bpm. Max: 6635 psi19869  Set plug @ 19856 ft Perforate as follows: 19844' - 19845' 19800' - 19801' 19755' - 19756' ' - 1' Stabilized pressure after perforating: 4400 psi Pump down volume: 205 bbl" POOH
2:53	0.23	FRAC	WLF			0		Shut in well with 4150 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.
3:07	2.63	FRAC	FRT			1		**** NPT TIME STARTS SHELL**** SWAP OUT ACID TRUCKS, LOCATION TO SOFT TO GET OUT FROM UNDER TRAILER, HAD TO MOVE TO STAGING PAD TO SWAP OUT TRANSPORTS.
5:45	2.33	FRAC	FRT			0		**** NPT TIME STOPS SHELL**** Stage 4 Summary University 19 PW Unit 1407H Interval 19711 - 19845 Open Well Pressure 3,940 psi Max Treating Pressure 9,425 psi Max Slurry Rate 55.5 bpm Average Treating Pressure 9,174 psi Average Slurry Rate 49.3 bpm Breakdown Pressure 4,695 psi Breakdown Rate 5.8 bpm Breakdown Volume 126 gal Avg HHP 11,085 hp Final ISIP 5,365 psi Frac Gradient 0.937 psi/ft Pad Volume 21,084 gal Main Body Volume 221,634 gal Flush Volume 29,316 gal 100 MAZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 420,020 lbs 100 M Sand Pumped 0 lbs Proppant in Formation 420,020 lbs Avg Proppant Concentration 2.55 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 5,482 bbls Load to Recover w/o Acid 5,470 bbls 15% HCL Spearhead 504 gal Slickwater Fluid Pumped 5,185 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 205 bbls pump down rate 11.0 bpm Max pump down pressure 6,635 psi Fluid Temp 72.0 ?F Total Pump Time 2:21 hr:min Pumps Lost During Job 0

EP WELLS DAILY OPERATIONS REPORT

Well UNIVERSITY 19 PW UNIT 1407H  
Wellbore UNIVERSITY 19 PW UNIT 1407H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Treatment Start Time 5:44 0:00 0:00 Treatment End Time 8:05 0:00 2:21 Diverter Slurry bbls  -Pumped sand in a 0.50 PPA -2.50 PPA ramp,2.50 PPA, 3.00 PPA, and 3.50 PPA steps. -Two 20# gel sweeps 40 bbls each were pumped prior to flush. - Ran one 500gal shot of acid.
8:05	5.50	FRAC	FRT			0		Wait on other pad operations.
13:35	0.45	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 4250 psi. RIH
14:02	1.22	FRAC	WLT			0		"Stage #5 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 with ball in place. Tie into liner top @ 11122. Bring on pumps at 11800'. Pump down as follows: 3 bpm @ 4350 psi 6 bpm @ 4600 psi11850 9 bpm @ 5100 psi11950 11.5 bpm @ 5900 psi12100 Max:11.5 bpm. Max: 6900 psi  Set plug @ 19691 ft Perforate as follows: 19666' - 19667' 19622' - 19623' 19577' - 19578' 19533' - 19534' Stabilized pressure after perforating: 5200 psi Pump down volume: 201 bbl" POOH
15:15	1.67	FRAC	WLT			0		Wait @ 200ft for frac operations to be completed.
16:55	0.08	FRAC	WLF			0		Shut in well with 4150 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.
17:00	0.77	FRAC	WLF			0		Wait on pad operations
17:46	2.02	FRAC	FRT			0		Stage 5 Summary University 19 PW Unit 1407H Interval 19533 - 19667 Open Well Pressure 4,160 psi Max Treating Pressure 9,595 psi Max Slurry Rate 54.6 bpm Average Treating Pressure 9,079 psi Average Slurry Rate 46.7 bpm Breakdown Pressure 8,139 psi Breakdown Rate 7.0 bpm Breakdown Volume 239 gal Avg HHP 10,392 hp Final ISIP 5,504 psi Frac Gradient 0.950 psi/ft Pad Volume 5,250 gal Main Body Volume 209,357 gal Flush Volume 29,190 gal 100 MAZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 422,200 lbs 100 M Sand Pumped 0 lbs Proppant in Formation 422,200 lbs Avg Proppant Concentration 2.51 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 5,186 bbls Load to Recover w/o Acid 5,174 bbls

**EP WELLS DAILY OPERATIONS REPORT**

Report 16

10/01/2017

Well UNIVERSITY 19 PW UNIT 1407H  
 Wellbore UNIVERSITY 19 PW UNIT 1407H

**Time Summary**

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								15% HCL Spearhead 504 gal Slickwater Fluid Pumped 4,893 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 201 bbls pump down rate 11.5 bpm Max pump down pressure 6,900 psi Fluid Temp 72.0 ?F Total Pump Time 2:01 hr:min Pumps Lost During Job 0 Treatment Start Time 17:46 0:00 0:00 Treatment End Time 19:47 0:00 2:01 Diverter Slurry bbls  -Pumped sand in a 0.50 PPA -2.50 PPA ramp, 2.50 PPA, 3.00 PPA, 3.50 PPA steps. -Two 20# gel sweeps 40 bbls each were pumped prior to flush. - Pumped one 500gal shot of acid. - Ran a ball in place plug.  Time for Prop on Perfs 31.0 minutes
19:47	4.22	FRAC	FWL			0		WAIT ON OTHER PAD OPERATIONS
<b>Total</b>	<b>24.00</b>							

**06.00 Update**

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	FWL			0	

**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
10/01/2017 03:07	SHELL	Wait On Weather		FRT	N		2.63	2.63	1	OPEN
<b>Description:</b> SWAP OUT ACID TRUCKS, LOCATION TO SOFT TO GET OUT FROM UNDER TRAILER, HAD TO MOVE TO STAGING PAD TO SWAP OUT TRANSPORTS.							<b>Title:</b> WEATHER Related Issue			
							<b>Total</b>	<b>2.63</b>	<b>2.63</b>	