

## EP WELLS DAILY OPERATIONS REPORT

Report 25

12/07/2017

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	25.00
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	WW Horton	Measured Depth(ft)	
Engineer	Bobby Ramos	TVD(ft)	
Other Supervisor	John Bevans	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	2,801,036/3,746,244.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.75	LOT/FIT EMW(ppg)	
Daily Cost	215,392	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	24

## Operations Summary

24 Hour Summary
frac stages 34-
Update Since Report Time
24 Hour Forecast

## EP WELLS DAILY OPERATIONS REPORT

Report 25

12/07/2017

Well UNIVERSITY 19 D 0904H  
Wellbore UNIVERSITY 19 D 0904H

## Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.72	FRAC	WLT			0		WL Start perf University 0904H Stage 34 Tie into liner top at 10990 ft Initial WHP 4835 psi  Pumpdown Pressures 3bpm 4100 6bpm 4800 psi 9bpm 5000 psi 9bpm psi 9bpm psi  Max Pressure 7609 psi Total Fluid to recover 21 bbls  Plug set @ 12566 Minus 1' Boss Hog Composite Frac Plug/ Ball in place plug Plug OD 3.65 in Pre-set Tension 1570 lbs Post-set Tension 1200 lbs  Pre-Perf Pressure 5630 psi  Perforation Summary: (4 count) 1' Keane Guns: 2.75" OD HSC at 6 spf @ 60 deg phasing  12541' - 12542' 6 shots 12496' - 12497' 6 shots 12448' - 12449' 6 shots Minus 3' 12406' - 12407' 6 shots  Post-Perf Pressure 5475 psi WL POOH 0:57 Bump up. grease crown. valve. Shut in well with 4600 psi. Bleed off. Break lubricator. All shots fired. MU night cap. Secure crown and wing valve
1:43	0.50	FRAC	FRT			0		Prime and pressure test frac.
2:13	1.43	FRAC	FRT			0		Stage 34 Summary University 19 D 0904H Interval 12406 - 12542 Open Well Pressure 4,718 psi Max Treating Pressure 9,030 psi Max Slurry Rate 60.7 bpm Average Treating Pressure 8,241 psi Average Slurry Rate 51.6 bpm Breakdown Pressure 8,674 psi Breakdown Rate 9.8 bpm Breakdown Volume 378 gal Avg HHP 10,422 hp Final ISIP 5,566 psi Frac Gradient 0.911 psi/ft Pad Volume 4,620 gal Main Body Volume 152,922 gal Flush Volume 24,486 gal 100 MAZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 0 lbs 100 M Sand Pumped 420,420 lbs Proppant in Formation 420,420 lbs Avg Proppant Concentration 3.59 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover (incl. pumpdown) 3,662 bbls Load to Recover w/o Acid 3,662 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 3,561 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls

## EP WELLS DAILY OPERATIONS REPORT

Report 25

12/07/2017

Well UNIVERSITY 19 D 0904H  
Wellbore UNIVERSITY 19 D 0904H

## Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Pump down volume 21 bbls pump down rate 9.0 bpm Max pump down pressure 7,609 psi Fluid Temp 72.0 ?F Total Pump Time 1:23 hr:min Pumps Lost During Job 0 Treatment Start Time 2:14 Treatment End Time 3:37 Diverter Slurry bbls  - Proppant was pumped with a ramp of 0.50 - 4.0 PPA and then staged 4.00 PPA - Did not pump acid this stage. - Ran 2 shots of gel with a 20 bbl spacer. - A ball in place plug was utilized  Time for Prop on Perfs 23.0 minutes Time between Stages (TBF) 0:45 Hours/min Shut in well w/ 5375 psi.
3:39	4.12	FRAC	FWL			0		Handover from Frac to WL. Wait on other pad ops.
7:46	0.03	FRAC	FWL			0		Remove night cap. PU tools.
7:48	0.12	FRAC	FWL			0		Stab lubricator.
7:55	0.25	FRAC	FWL			0		Fill and pressure test lubricator to 8000 psi. Good test.
8:10	0.88	FRAC	WLT			0		Stage #35 Plug and Perf Open well with 4057and RIH with (4) 2' 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 @ 10990. Bring on pumps at 11600'. Pump down as follows: 3 bpm @ 4134 psi at 11600' 6 bpm @ 4356 psi at 11700' 9 bpm @ 4881 psi at 11800' Max rate: 9 bpm. Max pressure: 5291 psi  Set plug @ 12386 ft w/ 2 bpm pumping Perforate as follows: 12361' - 12362' 12316' - 12317' 12271' - 12272' 12226' - 12227' Stabilized pressure after perforating: 4196 psi Pump down volume: 16 bbls
9:03	0.57	FRAC	WLT			0		POOH with Wireline.
9:37	0.12	FRAC	WLT			0		Bump up. Grease UM valve.
9:44	0.27	FRAC	WLT			0		Shut in well with 4033 psi. Bleed off. Break lubricator. All shots fired. MU night cap. Secure crown and wing valves. Grease UM valve.
10:00	0.88	FRAC	WLF			0		Handover from WL to Frac. Wait on other pad ops.
10:53	1.37	FRAC	FRT			0		Equalize and open well with 4063 psi. Begin stage 35 Frac. Stage 35 Summary University 19 D 0904H Interval 12226 - 12362 Open Well Pressure 4,063 psi Max Treating Pressure 9,317 psi Max Slurry Rate 61.3 bpm Average Treating Pressure 7,834 psi Average Slurry Rate 52.8 bpm Breakdown Pressure 9,137 psi Breakdown Rate 17.0 bpm Breakdown Volume 798 gal Avg HHP 10,138 hp

## EP WELLS DAILY OPERATIONS REPORT

Report 25

12/07/2017

Well UNIVERSITY 19 D 0904H  
Wellbore UNIVERSITY 19 D 0904H

## Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Final ISIP 5,631 psi Frac Gradient 0.917 psi/ft Pad Volume 3,318 gal Main Body Volume 153,762 gal Flush Volume 24,318 gal 100 M AZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 94,240 lbs 100 M Sand Pumped 328,040 lbs Proppant in Formation 422,280 lbs Avg Proppant Concentration 3.55 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover (incl. pumpdown) 3,677 bbls Load to Recover w/o Acid 3,677 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 3,581 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 16 bbls pump down rate 9.0 bpm Max pump down pressure 5,291 psi Fluid Temp 72.0 ?F Total Pump Time 1:20 hr:min Pumps Lost During Job 0 Treatment Start Time 10:54 Treatment End Time 12:14 Diverter Slurry bbls  - Proppant was pumped with a ramp of 0.50 - 4.0 PPA and then staged 4.00 PPA - Did not pump acid this stage. - Ran 2 shots of gel with a 20 bbl spacer. - A ball in place plug was utilized  Time for Prop on Perfs 19.0 minutes Time between Stages (TBF) 1:22 Hours/min
12:15	2.25	FRAC	FWL			0		Handover from Frac to WL. Wait on other pad ops.
14:30	0.03	FRAC	FWL			0		Pick up lubricator. Remove night cap. PU tools.
14:32	0.17	FRAC	FWL			0		Stab lubricator.
14:42	0.08	FRAC	FWL			0		Fill and pressure test lubricator to 8000 psi. Good test.
14:47	0.72	FRAC	WLT			0		Stage #36 Plug and Perf Open well with 4385 psi and RIH with (4) 2' 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 @ 10990. Bring on pumps at 11500'. Pump down as follows: 3 bpm @ 4546 psi at 11500' 6 bpm @ 4672 psi at 11600' 9 bpm @ 5067 psi at 11700' Max rate: 9 bpm. Max pressure: 5175 psi  Set plug @ 12206 ft w/ 2 bpm pumping Perforate as follows: 12181' - 12182' 12136' - 12137' 12091' - 12092' 12046' - 12047' Stabilized pressure after perforating: 4350 psi Pump down volume: 14 bbls
15:30	0.65	FRAC	WLT			0		POOH with Wireline.
16:09	0.67	FRAC	WLT			0		Shut in well with 4480 psi. Bleed off. Break lubricator. All shots fired. MU night cap. Secure crown and wing valves. Had an issue with the tool trap flag indicator. Sat down BOP's on stand. Broke off

Well	UNIVERSITY 19 D 0904H
Wellbore	UNIVERSITY 19 D 0904H

## Time Summary

[illegible]

## 06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	1.67	FRAC	FWL			0	Shut in well w/ 5206 psi. Handover from Frac to WL. Wait on other pad ops.

## EP WELLS DAILY OPERATIONS REPORT

Report 25

12/07/2017

Well UNIVERSITY 19 D 0904H  
Wellbore UNIVERSITY 19 D 0904H

## 06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
1:40	0.25	FRAC	FWL			0	Remove night cap. PU tools. Stab lubricator. Fill lubricator. Pressure test lubricator to 8000 psi. Good test
1:55	1.72	FRAC	WLT			0	<p>WL Start perf University 904H Stage 37 Tie into liner top at 10990 ft Initial WHP 4000 psi</p> <p>Pumpdown Pressures 3bpm 4200 6bpm 4500 psi 9bpm psi 9bpm psi 9bpm psi</p> <p>Max Pressure 6130 psi Total Fluid to recover 9 bbls</p> <p>Plug set @ 12026 Boss Hog Composite Frac Plug/ Ball in place plug Plug OD 3.65 in Pre-set Tension 1870 lbs Post-set Tension 1500 lbs</p> <p>Pre-Perf Pressure 4700 psi</p> <p>Perforation Summary: (4 count) 1' Keane Guns: 2.75" OD HSC at 6 spf @ 60 deg phasing</p> <p>12001' - 12002' 6 shots 11956' - 11957' 6 shots 11911' - 11912' 6 shots 11866' - 11867' 6 shots</p> <p>Post-Perf Pressure 4650 psi WL POOH 2:42 Bump up.. Shut in well with 4300 psi. Bleed off. Break lubricator. All shots fired. MU night cap. Secure crown and wing valves.</p>
3:38	0.28	FRAC	WLF			0	Prime and pressure test frac.
3:55		FRAC	WLF			0	