

EP WELLS DAILY OPERATIONS REPORT

Report 45

10/29/2017

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	45.00
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	Tommy Hurdle	Measured Depth(ft)	
Engineer	Alex Villegas	TVD(ft)	
Other Supervisor	Tine Grega	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	3,336,905/4,135,334.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.81	LOT/FIT EMW(ppg)	
Daily Cost	216,867	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:							
Man hours = 1196							

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	44

Operations Summary

24 Hour Summary
Frac stages = 37,38,39 Perf stages = 37,38,39,40
Update Since Report Time
24 Hour Forecast
Continue zipper fracing

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	0.07	FRAC	FRT			0		Wait on pad operations, Rehead and grease zipper manifold
0:04	0.32	FRAC	FRT			0		Pick up lubricator. Remove night cap. PU guns/plug. Stab lubricator. Fill lubricator. PT lubricator to 1k-8kpsi 5 min low and 10 min high. Open well with 4600 psi. RIH to 200' conduct checks.
0:23	0.70	FRAC	WLT			0		"Stage 37 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-drop frac plug. Tie into liner top @11016". Pump down as follows: 3bpm @ 4500psi11380 6bpm @ 5400psi11600 6bpm @ 5400psi Set plug @ 12749ft Perforate as follows: 12722' - 12723' 12675' - 12676' 12637' - 12638' 12593' - 12594' Stabilized pressure after perf: 5000psi Pump down volume: 21bbl" POOH
1:05	1.28	FRAC	WLT			0		POOH
2:22	0.37	FRAC	WLF			0		Bump up and SIW @ 4470 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 P/U next set of guns for next run. Greased Crown and Hyd valve - grease time 10 min. HO to Frac
2:44	0.38	FRAC	WLF			0		Other Pad Ops
3:07	1.23	FRAC	FRT			0		Stage 37 Summary University 19 H 0908H Interval 12593 - 12726 Open Well Pressure 4,461 psi Max Treating Pressure 8,924 psi Max Slurry Rate 61.3 bpm Average Treating Pressure 8,194 psi Average Slurry Rate 55.7 bpm Breakdown Pressure 7,948 psi Breakdown Rate 16.2 bpm Breakdown Volume 630 gal Avg HHP 11,186 hp Final ISIP 5,546 psi Frac Gradient 0.913 psi/ft Pad Volume 546 gal Main Body Volume 149,100 gal Flush Volume 24,528 gal 100 MAZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 95,200 lbs 100 M Sand Pumped 325,900 lbs Proppant in Formation 421,100 lbs Avg Proppant Concentration 3.58 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 3,571 bbls Load to Recover w/o Acid 3,571 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 3,470 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 21 bbls pump down rate 6.0 bpm Max pump down pressure 5,800 psi Fluid Temp 72.0 ?F

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Total Pump Time 1:14 hr:min Pumps Lost During Job 0 Treatment Start Time 3:07 0:00 0:00 Treatment End Time 4:21 0:00 1:14 Diverter Slurry bbls - Proppant was pumped as a ramp from 0.50 PPA to 4.0 PPA, followed by a 4.0 PPA hold. - Two 20# gel sweeps 40 bbls each were pumped prior to flush. - Did not run 15% HCl this stage - Ran ball in place plug Time for Prop on Perfs 14.0 minutes Time between Stages (TBF) 0:46 Hours/min
4:21	0.07	FRAC	FWL			0		SIW @ 5350 psi. Bleed off pressure and HO to WL. Held pause to discuss AAR on frac stage.
4:25	2.33	FRAC	FWL			0		Other Pad Ops
6:45	0.58	FRAC	FWL			0		Pick up lubricator. Remove night cap. PU guns/plug. Stab lubricator. Fill lubricator. PT lubricator to 1k-8kpsi. Greased locked for 20 minutes. Open well with 4700 psi. RIH to 200' conduct checks.
7:20	0.75	FRAC	WLT			0		"Stage #38 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 11600'. Pump down as follows: 3bpm @ 4600psi @11600 6bpm @ 5000psi @11700 8bpm @ 5100psi @11800 8bpm w/ 6525psi Set plug @ 12573ft Perforate as follows: 12549' - 12550' 12505' - 12506' 12461' - 12462' 12417' - 12418' Stabilized pressure after perf: 4720psi Pump down volume: 18bbl"
8:05	0.50	FRAC	WLT			0		POOH. Held pause at 1000' from surface. Discussed
8:35	0.25	FRAC	FWL			0		Bump up and SIW @ 4700 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 P/U next set of guns for next run. Greased LMV valve - grease time 5 min. HO to Frac
8:50	0.67	FRAC	FWL			0		Re-head WL and grease zipper.
9:30	4.83	FRAC	OPO			0		Other Pad Ops
14:20	0.08	FRAC	FRT			0		Prim and Equalize well. Open well @ 4372psi.
14:25	1.33	FRAC	FRT			0		Stage 38 Summary University 19 H 0908H Interval 12417 - 12550 Open Well Pressure 43,372 psi Max Treating Pressure 9,157 psi Max Slurry Rate 60.7 bpm Average Treating Pressure 8,026 psi Average Slurry Rate 56.5 bpm Breakdown Pressure 8,137 psi Breakdown Rate 10.3 bpm Breakdown Volume 420 gal Avg HHP 11,114 hp Final ISIP 5,601 psi Frac Gradient 0.918 psi/ft Pad Volume 1,050 gal

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Wellbore UNIVERSITY 19 H 0908H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Main Body Volume 153,384 gal Flush Volume 24,486 gal 100 M AZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 93,240 lbs 100 M Sand Pumped 318,380 lbs Proppant in Formation 411,620 lbs Avg Proppant Concentration 3.39 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 3,670 bbls Load to Recover w/o Acid 3,670 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 3,572 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 18 bbls pump down rate 8.0 bpm Max pump down pressure 6,525 psi Fluid Temp 72.0 ?F Total Pump Time 1:16 hr:min Pumps Lost During Job 0 Treatment Start Time 14:26 0:00 0:00 Treatment End Time 15:42 0:00 1:16 Diverter Slurry bbls - Proppant was pumped as a ramp from 0.50 PPA to 4.0 PPA, followed by a 4.0 PPA hold. - Two 20# gel sweeps 40 bbls each were pumped prior to flush. - Did not run 15% HCl this stage - Ran ball in place plug. Time for Prop on Perfs 14.0 minutes Time between Stages (TBF) :52 Hours/min
15:45	0.08	FRAC	FRT			0		SIW @ 5331. Bleed Off Pressure and HO to Wireline. Held Pause to Discuss AAR.
15:50	0.33	FRAC	FRT			0		Other Pad Ops.
16:10	0.33	FRAC	FWL			0		Pick up lubricator. Remove night cap. PU guns/plug. Stab lubricator. Fill lubricator. PT lubricator to 1k-8kpsi. Open well with 4900 psi. RIH to 200' conduct checks.
16:30	0.67	FRAC	FWL			0		"Stage #39 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 12000'. Pump down as follows: 3bpm @ 4400psi @12000 6bpm @ 4900psi @12050 8bpm @ 5000psi @12100 8bpm w/ 5676psi @ Set plug @ 12394ft Perforate as follows: 12373' - 12374' 12329' - 12330' 12285' - 12286' 12242' - 12243' Stabilized pressure after perf: 4936psi Pump down volume: 10bbl"
17:10	3.33	FRAC	FWL			0		POOH. Held Pause @ 1000' from Surface.
20:30	0.23	FRAC	FWL			0		Bump up and SIW @ 4910 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 P/U next set of guns for next run. Greased LMV valve - grease time 10 min. HO to Frac
20:44	1.27	FRAC	FRT			0		Stage 39 Summary University 19 H 0908H Interval 12242 - 12374 Open Well Pressure 4,522 psi

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Max Treating Pressure 9,134 psi Max Slurry Rate 61.5 bpm Average Treating Pressure 8,000 psi Average Slurry Rate 55.3 bpm Breakdown Pressure 8,888 psi Breakdown Rate 9.3 bpm Breakdown Volume 126 gal Avg HHP 10,843 hp Final ISIP 5,643 psi Frac Gradient 0.921 psi/ft Pad Volume 1,092 gal Main Body Volume 154,056 gal Flush Volume 24,360 gal 100 MAZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 26,520 lbs 100 M Sand Pumped 393,840 lbs Proppant in Formation 420,360 lbs Avg Proppant Concentration 3.45 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 3,678 bbls Load to Recover w/o Acid 3,678 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 3,588 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 10 bbls pump down rate 8.0 bpm Max pump down pressure 5,676 psi Fluid Temp 72.0 ?F Total Pump Time 1:17 hr:min Pumps Lost During Job 0 Treatment Start Time 20:43 0:00 0:00 Treatment End Time 22:00 0:00 1:17 Diverter Slurry bbls - Proppant was pumped as a ramp from 0.50 PPA to 4.0 PPA, followed by a 4.0 PPA hold. - Two 20# gel sweeps 40 bbls each were pumped prior to flush. - Did not run 15% HCl this stage - Ran ball in place plug.
22:00	0.25	FRAC	FWL			0		SIW @ 5022 psi. Bleed off well and HO to WL. Held pause to discuss AAR on frac stage
22:15	0.27	FRAC	WLT			0		Pick up lubricator. Remove night cap. PU guns/plug. Stab lubricator. Fill lubricator. PT lubricator to 1k-8kpsi 5 min low and 10 min high. Open well with 4800 psi. RIH to 200' conduct checks.
22:31	1.48	FRAC	WLT			0		"Stage 40 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-drop frac plug. Tie into liner top @11016". Pump down as follows: 3bpm @ 4800psi11380 6bpm @ 5000psi11600 9bpm @ 5000psi Set plug @ 12222ft Perforate as follows: 12198' - 12199' 12154' - 12155' 12110' - 12111' 12088' - 12089' 12066' - 12067' Stabilized pressure after perf: 4900psi Pump down volume: 20bbl" POOH
Total	24.00							

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Wellbore UNIVERSITY 19 H 0908H

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	0.78	FRAC	WLT			0	Bump up and SIW @ 4500 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 P/U next set of guns for next run. Greased UMW/Wing valve - grease time 10 min. HO to Frac
0:47	0.72	FRAC	WLT			0	Retie rope socket and grease zipper manifold.
1:30	0.50	FRAC	WLT			0	Wait on pad operations
2:00	0.27	FRAC	FRT			0	Prime and pressure test to 9500 psi - Test Good. Bleed down to equalize. Open well @ 4300 psi.
2:16	1.22	FRAC	FRT			0	<p>Stage 40 Summary University 19 H 0908H Interval 12066 - 12199</p> <p>Open Well Pressure 4,295 psi Max Treating Pressure 9,163 psi Max Slurry Rate 61.9 bpm Average Treating Pressure 8,088 psi Average Slurry Rate 57.4 bpm Breakdown Pressure 8,186 psi Breakdown Rate 8.3 bpm Breakdown Volume 462 gal Avg HHP 11,379 hp Final ISIP 5,660 psi Frac Gradient 0.923 psi/ft Pad Volume 2,562 gal Main Body Volume 146,874 gal Flush Volume 24,486 gal 100 M AZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 7,060 lbs 100 M Sand Pumped 413,520 lbs Proppant in Formation 420,580 lbs Avg Proppant Concentration 3.52 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 3,507 bbls Load to Recover w/o Acid 3,507 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 3,497 bbls 20# Linear Fluid Pumped 0 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 10 bbls pump down rate 6.0 bpm Max pump down pressure 5,000 psi Fluid Temp 72.0 ?F Total Pump Time 1:13 hr:min Pumps Lost During Job 0 Treatment Start Time 2:16 0:00 0:00 Treatment End Time 3:29 0:00 1:13 Diverter Slurry bbls - Proppant was pumped as a ramp from 0.50 PPA to 4.0 PPA, followed by a 4.0 PPA hold. - Did not run gel since it is the last stage on well. - Did not run 15% HCl this stage - Ran ball in place plug.</p>
3:29	0.07	FRAC	FRT			0	SIW @ 5120 psi. Bleed off well and HO to WL. Held pause to discuss AAR on frac stage
3:33	0.45	FRAC	FRT			0	Grease LWV/UPV/3'IN & 2IN WINGS for coil operations. All frac operations complete