

EP WELLS DAILY OPERATIONS REPORT

Report 42

10/26/2017

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	42.00
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	2,682,186/4,135,334.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.65	LOT/FIT EMW(ppg)	
Daily Cost	234,280	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	41

Operations Summary

24 Hour Summary
WL stages - 28,29,30,31 Frac Stages 28,29,30
Update Since Report Time
24 Hour Forecast
Continue Frac Ops

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	0.17	FRAC	WLT			0		<p>"Stage #28 Plug and Perf</p> <p>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:</p> <p>3bpm @ 4700psi11380 6bpm @ 5200psi11600 9bpm @ 5800psi11730</p> <p>9bpm @ 6700psi</p> <p>Set plug @ 14331ft</p> <p>Perforate as follows:</p> <p>14307' - 14308' 14263' - 14264' 14219' - 14220 14175' - 14176</p> <p>Stabilized pressure after perf: 400psi Pump down volume: 50bbl</p>
0:10	1.50	FRAC	WLT			0		POOH. Held pause at 1000' for surface. Discuss coming off the well.
1:40	0.32	FRAC	WLF			0		Bump up and SIW @ 670 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 hydr/wing valve - grease time 10 min. HO to Frac
1:59	1.48	FRAC	WLF			0		<p>Stage 28 Summary University 19 H 0908H</p> <p>Interval 14175 - 14308</p> <p>Open Well Pressure 4,298 psi Max Treating Pressure 9,258 psi Max Slurry Rate 60.8 bpm Average Treating Pressure 8,535 psi Average Slurry Rate 50.4 bpm Breakdown Pressure 9,148 psi Breakdown Rate 9.0 bpm Breakdown Volume 378 gal Avg HHP 10,543 hp Final ISIP 5,563 psi Frac Gradient 0.914 psi/ft Pad Volume 3,024 gal Main Body Volume 172,410 gal Flush Volume 25,620 gal 100 MAZ Sand Pumped 4,000 lbs 100 M Brown Sand Pumped 0 lbs 100 M Sand Pumped 416,120 lbs Proppant in Formation 420,120 lbs Avg Proppant Concentration 3.04 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,155 bbls Load to Recover w/o Acid 4,155 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,025 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 50 bbls pump down rate 9.0 bpm Max pump down pressure 6,700 psi Fluid Temp 72.0 ?F Total Pump Time 1:29 hr:min Pumps Lost During Job 0 Treatment Start Time 1:59 0:00 0:00 Treatment End Time 3:28 0:00 1:29 Diverter Slurry bbls - Proppant was pumped as a ramp from 0.50 PPA to 3.0 PPA, then a 3 PPA, 3.5 PPA AND 4.0 PPAstep. - Two 20# gel sweeps 40 bbls each were pumped prior to flush.</p>

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								- Did not run 15% HCl this stage - Ran ball in place plug
3:28	2.03	FRAC	WLF			0		Lay down Lubicator from 1406, Rehead rope socket and replace outrigger matts on Crane . Grease zipper manifold.
5:30	0.37	FRAC	WLF			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 4850 psi. RIH to 200' conduct checks. 1730 - Held Pre-Tower Safety Meeting. Covered focus areas - SSE, Barrier Ownership, Hands Free and DROPS. After pre-tower crews held respective TBT for their areas. Then conducted their handovers.
5:52	0.80	FRAC	WLT			0		"Stage 29 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 @ 5700psi11730 10bpm @ 7100psi Set plug @ 14155ft Perforate as follows: 14131' - 14132' 14085' - 14086' 14045' - 14046 14000' - 14001 Stabilized pressure after perf: 5600psi Pump down volume: 47bbl"
6:40	1.22	FRAC	WLT			0		POOH. Held pause at 1000' to discuss coming off the well.
7:53	0.37	FRAC	WLF			0		Bump up and SIW @ 4200 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
8:15	0.33	FRAC	WLF			0		Other Pad Ops
8:35	0.05	FRAC	FRP			0		Prime and equalize. Open well @ 4486 psi.
8:38	1.55	FRAC	FRT			0		Stage 29 Summary University 19 H 0908H Interval 14000 - 14132 Open Well Pressure 4,486 psi Max Treating Pressure 9,480 psi Max Slurry Rate 60.0 bpm Average Treating Pressure 8,633 psi Average Slurry Rate 52.5 bpm Breakdown Pressure 8,197 psi Breakdown Rate 10.3 bpm Breakdown Volume 882 gal Avg HHP 11,109 hp Final ISIP 5,558 psi Frac Gradient 0.914 psi/ft Pad Volume 1,260 gal Main Body Volume 178,122 gal Flush Volume 25,452 gal 100 M AZ Sand Pumped 94,100 lbs 100 M Brown Sand Pumped 0 lbs 100 M Sand Pumped 326,500 lbs Proppant in Formation 420,600 lbs Avg Proppant Concentration 2.90 lb/gal Max Proppant Concentration 4.00 lb/gal

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Load to Recover 4,288 bbls Load to Recover w/o Acid 4,288 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,161 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 47 bbls pump down rate 10.0 bpm Max pump down pressure 7,096 psi Fluid Temp 72.0 ?F Total Pump Time 1:33 hr:min Pumps Lost During Job 0 Treatment Start Time 8:38 0:00 0:00 Treatment End Time 10:11 0:00 1:33 Diverter Slurry bbls - Proppant was pumped as a ramp from 0.50 PPA to 3.0 PPA, followed by 3.0 PPA, 3.50 PPA and 4.00 PPA steps. - 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 20.0 minutes Time between Stages (TBF) :50 Hours/min
10:11	0.07	FRAC	FWL			0		SIW @ 5290 psi. Bleed off pressure and HO to WL. Held pause to discuss AAR on fra stage.
10:15	2.92	FRAC	FWL			0		Other Pad Ops
13:10	0.25	FRAC	FWL			0		Pick up lubricator. Remove night cap. PU guns/plug. Stab lubricator. Fill lubricator. PT lubricator to 1k-8kpsi. Open well with 4450 psi. RIH to 200' conduct checks.
13:25	0.83	FRAC	WLT			0		"Stage #30 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 @ 4300psi @11600 6bpm @ 4500psi @11700 10bpm @ 4700psi @11800 10bpm w/ 6311psi @ Set plug @ 13980ft Perforate as follows: 13956' - 13957' 13912' - 13913' 13868' - 13869' 13824' - 13825' Stabilized pressure after perf: 5050psi Pump down volume: 41bbl"
14:15	0.75	FRAC	WLT			0		POOH. Held pause at 1000' from surface. Discussed WL ops.
15:00	0.33	FRAC	WLT			0		Bump up and SIW @ 4350 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
15:20	0.25	FRAC	WLT			0		Other Pad Ops
15:35	0.10	FRAC	FRP			0		Prime and equalize. Open well @ 4217 psi.
15:41	1.42	FRAC	FRT			0		Stage 30 Summary University 19 H 0908H Interval 13824 - 13957 Open Well Pressure 4,217 psi Max Treating Pressure 9,206 psi Max Slurry Rate 60.7 bpm Average Treating Pressure 8,294 psi Average Slurry Rate 53.5 bpm

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Breakdown Pressure 8,286 psi Breakdown Rate 10.2 bpm Breakdown Volume 336 gal Avg HHP 10,876 hp Final ISIP 5,542 psi Frac Gradient 0.912 psi/ft Pad Volume 1,512 gal Main Body Volume 165,144 gal Flush Volume 25,452 gal 100 MAZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 45,380 lbs 100 M Sand Pumped 377,620 lbs Proppant in Formation 423,000 lbs Avg Proppant Concentration 3.19 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 3,973 bbls Load to Recover w/o Acid 3,973 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 3,852 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 41 bbls pump down rate 10.0 bpm Max pump down pressure 6,311 psi Fluid Temp 72.0 ?F Total Pump Time 1:25 hr:min Pumps Lost During Job 0 Treatment Start Time 15:41 0:00 0:00 Treatment End Time 17:06 0:00 1:25 Diverter Slurry bbls - Proppant was pumped as a ramp from 0.50 PPA to 3.50 PPA, followed by 3.50 PPA and 4.00 PPA steps. - 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 19.0 minutes Time between Stages (TBF) :41 Hours/min
17:06	0.07	FRAC	FWL			0		SIW @ 4200 psi. Bleed off pressure and HO to WL. Held AAR to discuss frac stage
17:10	3.77	FRAC	FWL			0		Other Pad Ops, Rehead rope socket, Grease zipper manifold
20:56	0.27	FRAC	FWL			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 4630 psi. RIH to 200' conduct checks.
21:12	1.63	FRAC	FWL			0		"Stage 31 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 @ 4300psi11380 6bpm @ 4700psi11600 9bpm @ 5300psi11730 9bpm @ 6100psi Set plug @ 13802ft Perforate as follows: 13780' - 13781' 13736' - 13737' 13692' - 13693 13648' - 13649 Stabilized pressure after perf: 5200psi Pump down volume: 41bbl" POOH

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Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
22:50	0.27	FRAC	FWL			0		POOH. Held pause at 1000' from surface. Discussed WL ops.
23:06	0.17	FRAC	FWL			0		Bump up and SIW @ 4300 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
23:16	0.73	FRAC	FWL			0		Wait on pad operations
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	2.92	FRAC	FWL			0	Wait on pad operations
2:55		FRAC	FRT			0	FRAC #20