

EP WELLS DAILY OPERATIONS REPORT

Report 23

10/31/2017

Company	PERMIAN
Well Type	Development
Well	UNIVERSITY 19 PW UNIT 1406H
Wellbore	UNIVERSITY 19 PW UNIT 1406H
WBS No/API No	30266570 / 4230133213.00

Event Summary

Event Type	Completion only	Event Start Date	09/03/2017	Days on Location	23.00
Objective	Install Completion	Original Spud Date	04/30/2017		
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	Tina Grega / Andrew Veroba	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,793.00 / 2,767.00	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	2,662,345/4,377,702.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.61	LOT/FIT EMW(ppg)	
Daily Cost	148,699	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:							
Manhours = 1222							

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	22

Operations Summary

24 Hour Summary
WL Stages - 33, 34 Frac Stages - 32, 33, 34
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	0.55	FRAC	FRT			0		Stage 32 Summary University 19 PW Unit 1406H Interval 13915 - 14048 Open Well Pressure 4,438 psi Max Treating Pressure 9,245 psi Max Slurry Rate 60.6 bpm Average Treating Pressure 8,752 psi Average Slurry Rate 48.9 bpm Breakdown Pressure 8,333 psi Breakdown Rate 8.3 bpm Breakdown Volume 294 gal Avg HHP 10,490 hp Final ISIP 5,576 psi Frac Gradient 0.910 psi/ft Pad Volume 1,176 gal Main Body Volume 150,024 gal Flush Volume 25,116 gal 100 M AZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 149,340 lbs 100 M Sand Pumped 270,020 lbs Proppant in Formation 419,360 lbs Avg Proppant Concentration 3.57 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 3,617 bbls Load to Recover w/o Acid 3,617 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 3,492 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 45 bbls pump down rate 9.0 bpm Max pump down pressure 5,400 psi Fluid Temp 72.0 ?F Total Pump Time 1:25 hr:min Pumps Lost During Job 0 Treatment Start Time 23:08 0:00 0:00 Treatment End Time 0:33 0:00 1:25 Diverter Slurry bbls - Proppant was pumped as a ramp from 0.50 PPA to 4.0 PPA, followed by a 4.0 PPA hold. - Ran two 40 bbl shots of gel with a 20 bbl spacer. - Did not run 15% HCL this stage - Ran ball in place plug.
0:33	0.28	FRAC	FRT			0		SIW @ 5200 psi. Bleed off well and HO to WL. Held pause to discuss AAR on frac stage
0:50	0.23	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 4800 psi. RIH to 200' conduct checks
1:04	0.65	FRAC	FWL			0		"Stage 33 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 @11069". Pump down as follows: 3bpm @ 4800psi11380 6bpm @ 5200psi11600 9bpm @ 5500psi Set plug @ 13895ft Perforate as follows: 13871' - 13872' 13827' - 13828' 13783' - 13784' 13739' - 13740' Stabilized pressure after perf: 5700psi Pump down volume: 41bbl"

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								POOH
1:43	1.20	FRAC	FWL			0		POOH. Held pause at 1000' for surface. Discuss coming off the well.
2:55	0.25	FRAC	FWL			0		Bump up and SIW @ 4610 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
3:10	0.50	FRAC	FWL			0		Prime and pressure test to 9500 psi - Test Good. Bleed down to equalize. Open well @ 4400 psi.
3:40	1.38	FRAC	FRT			0		<p>Stage 33 Summary University 19 PW Unit 1406H Interval 13739 - 13872</p> <p>Open Well Pressure 4,450 psi Max Treating Pressure 9,368 psi Max Slurry Rate 59.9 bpm Average Treating Pressure 8,786 psi Average Slurry Rate 50.2 bpm Breakdown Pressure 7,139 psi Breakdown Rate 7.7 bpm Breakdown Volume 168 gal Avg HHP 10,810 hp Final ISIP 5,588 psi Frac Gradient 0.911 psi/ft Pad Volume 1,218 gal Main Body Volume 151,326 gal Flush Volume 25,368 gal 100 MAZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 237,620 lbs 100 M Sand Pumped 181,800 lbs Proppant in Formation 419,420 lbs Avg Proppant Concentration 3.51 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 3,644 bbls Load to Recover w/o Acid 3,644 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 3,523 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 41 bbls pump down rate 9.0 bpm Max pump down pressure 5,800 psi Fluid Temp 72.0 ?F Total Pump Time 1:24 hr:min Pumps Lost During Job 0 Treatment Start Time 3:40 0:00 0:00 Treatment End Time 5:04 0:00 1:24 Diverter Slurry bbls - Proppant was pumped as a ramp from 0.50 PPA to 4.0 PPA, followed by a 4.0 PPA hold. - Ran two 40 bbl shots of gel with a 20 bbl spacer. - Did not run 15% HCl this stage - Ran ball in place plug.</p>
5:03	0.03	FRAC	FRT			0		SIW @ 5322 psi. Bleed off well and HO to WL. Held pause to discuss AAR on frac stage
5:05	0.42	FRAC	FRT			0		Other Pad Ops
5:30	0.50	FRAC	FWL			0		<p>Pick up lubricator. Remove night cap. PU guns/plug. Stab lubricator. Fill lubricator. PT lubricator to 1k-8kpsi. Open well with 4800 psi. RIH to 200' conduct checks.</p> <p>0530 - 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.</p>
6:00	0.75	FRAC	WLT			0		<p>"Stage #34 Plug and Perf RIH with (4) 1' Keane guns: 2.75" OD HSC at 6SPF with 60"</p>

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								phased perforating guns and Downhole Technology Boss Hog composite frac plug. Tie into liner top @11069. Bring on pumps at 11700'. Pump down as follows: 3bpm @ 4500psi @11700 6bpm @ 4600psi @11800 10bpm @ 4800psi @11850 10bpm w/ 6216psi Set plug @ 13719ft Perforate as follows: 13695' - 13696' 13651' - 13652' 13607' - 13608' 13562' - 13563' Stabilized pressure after perf: 5178psi Pump down volume: 37bbl"
6:45	0.83	FRAC	WLT			0		POOH. Held pause at 1000' from surface.
7:35	0.42	FRAC	OPO			0		Wait on frac to finish.
8:00	0.25	FRAC	WLF			0		Bump up and SIW @ 4450 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
8:15	0.33	FRAC	WLF			0		Other Pad Ops
8:35	0.47	FRAC	WLF			0		Change packing on pump. Prime up and pressure test to 9500 - Test Good. Bleed down and equalize. Open well @
9:03	1.48	FRAC	FRT			0		Stage 34 Summary University 19 PW Unit 1406H Interval 13562 - 13696 Open Well Pressure 4,293 psi Max Treating Pressure 9,390 psi Max Slurry Rate 52.7 bpm Average Treating Pressure 8,764 psi Average Slurry Rate 47.2 bpm Breakdown Pressure 7,437 psi Breakdown Rate 7.5 bpm Breakdown Volume 168 gal Avg HHP 10,139 hp Final ISIP 5,625 psi Frac Gradient 0.914 psi/ft Pad Volume 1,428 gal Main Body Volume 151,494 gal Flush Volume 25,368 gal 100 MAZ Sand Pumped 0 lbs 100 M Brown Sand Pumped 236,580 lbs 100 M Sand Pumped 183,260 lbs Proppant in Formation 419,840 lbs Avg Proppant Concentration 3.53 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 3,644 bbls Load to Recover w/o Acid 3,644 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 3,527 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 37 bbls pump down rate 10.0 bpm Max pump down pressure 6,216 psi Fluid Temp 72.0 ?F Total Pump Time 1:29 hr:min Pumps Lost During Job 0 Treatment Start Time 9:03 0:00 0:00 Treatment End Time 10:32 0:00 1:29 Diverter Slurry bbls - Proppant was pumped as a ramp from 0.50 PPA to 4.0 PPA,

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								followed by a 4.0 PPA hold. - Ran two 40 bbl shots of gel with a 20 bbl spacer. - Did not run 15% HCl this stage - Ran ball in place plug. Time for Prop on Perfs 16.0 minutes Time between Stages (TBF) 1:07 Hours/min
10:32	0.05	FRAC	FWL			0		SIW @ 5231. Bleed off pressure and HO to WL. Held pause to discuss AAR on frac stage
10:35	0.25	FRAC	FWL			0		Other Pad ops
10:50	0.17	FRAC	FWL			0		Re-head and grease zipper. Conduct pump maintenance.
11:00	13.00	FRAC	FWL			0		Noted leak at THF to LMV connection. Continue Ops on 0909 well while waiting on Cameron.
Total	24.00							