

EP WELLS DAILY OPERATIONS REPORT

Report 19

05/05/2017

Company	PERMIAN
Well Type	Development
Well	UNIVERSITY 19 PW UNIT 1507H
Wellbore	UNIVERSITY 19 PW UNIT 1507H
WBS No/API No	30265017 / 4230133144.00

Event Summary

Event Type	Completion only	Event Start Date	04/15/2017	Days on Location	19.00
Objective	Install Completion	Original Spud Date	01/22/2017		
Est. Days	21.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	W. Garver/ E. Huls	Measured Depth(ft)	
Engineer	ALEJANDRO VILEGAS	TVD(ft)	
Other Supervisor	T. Hurdle	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,769.50 / 2,743.50	Hole size(in)	
THF Datum			
Daily NPT(hr/%)	1.50/6.28	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	971,981/5,609,575.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.17	LOT/FIT EMW(ppg)	
Daily Cost	143,506	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)	10
Safety Comments: ***Held Hazard Hunt on Location and picked up trash.*** Total Employees - 101 Total Man Hours - 1174 Total Driving Hours - 110							

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	18

Operations Summary

24 Hour Summary
Frac Stg 6. Perf and Frac Stg 7. Perf Stg 8
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	1.58	FRAC	FRT			0		Stage 6 Summary University 19 PW Unit 1507H Interval 21119 - 21253 Open Well Pressure 4,180 psi Max Treating Pressure 9,356 psi Max Slurry Rate 51.9 bpm Average Treating Pressure 8,884 psi Average Slurry Rate 49.7 bpm Breakdown Pressure 6,835 psi Breakdown Rate 9.6 bpm Breakdown Volume 21,294 gal Avg HHP 10,822 hp Final ISIP 5,065 psi Frac Gradient 0.870 psi/ft Pad Volume 20,286 gal Main Body Volume 209,702 gal Flush Volume 33,516 gal 30/50 AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 412,720 lbs Proppant in Formation 412,720 lbs Avg Proppant Concentration 2.89 lb/gal Max Proppant Concentration 4.04 lb/gal Load to Recover 4,993 bbls Load to Recover w/o Acid 4,981 bbls 15% HCL Spearhead 500 gal Slickwater Fluid Pumped 4,589 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 312 bbls pump down rate 15.2 bpm Max pump down pressure 7,327 psi Fluid Temp 72.0 ?F Total Pump Time 2:04 hr:min Pumps Lost During Job 0 Treatment Start Time 23:29 0:00 0:00 Treatment End Time 1:33 0:00 0:00 Diverter Slurry bbls All sand placed. Pumped 500 gals of 15% HCL, Pumped sand in Ramp from 0.5 PPA - 3.0 PPA, 3.0 PPA, 3.5.PPA and 4.0 PPA.
1:33	0.03	FRAC	OPO			0		SIW @ 4900. Bleed off pressure HO to WL
1:35	2.92	FRAC	OPO			0		Other Well Ops
4:30	0.25	FRAC	WLT			0		Pick up lubricator. Remove night cap. PU guns/plug. Stab lubricator. Fill lubricator. PT lubricator to 1k-8kpsi. Open well with psi.
4:45	2.25	FRAC	WLT			0		"Stage #7 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 @10,911. Bring on pumps at 11,200'. Pump down as follows: 3bpm @ 4,500psi @11,200 6bpm @ 4,700psi @11,300 9bpm @ 4,800psi @11,350 12bpm w/ 5,200psi @11,400 15bpm w/ 5,400psi @11,450 Max Rate 15bpm w/ 6,920psi Set plug @ 21097ft Perforate as follows: 20,727' - 20,728' 20,683' - 20,684' 20,638' - 20,639' 20,597' - 20,598' Stabilized pressure after perf: 4,730psi Pump down volume: 226 bbl" POOH wait at 200' for Frac to finish

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Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
7:10	0.25	FRAC	WLF			0		Bump up and SIW @ 4250. Bled off pressure and break lubricator. Lowered Perf guns out of lubricator and confirmed all shots fired. Drop ball, N/U nightcap and close crown valve. L/D perf guns and P/U next set of guns for next run. Move WL BOP's to next well. Greased Crown & Hyd - grease time 10 min.
7:25	0.67	FRAC	WLF			0		Grease zipper manifold.
8:05	2.75	FRAC	WLF			0		Wait on WL to RH and change out grease tubes.
10:50	0.17	FRAC	WLF			0		Prime up and equalize pressure, seen leak on the bleed offs on the frac side. Bleed down pressure and fix leak.
11:00	0.40	FRAC	WLF			0		Prime up and PT lines. Equalize pressure and gather valve team and open well. Frac stg 7
11:24	2.23	FRAC	WLF			0		Stage 7 Summary University 19 PW Unit 1507H Interval 20943 - 21076 Open Well Pressure 4,080 psi Max Treating Pressure 9,199 psi Max Slurry Rate 51.1 bpm Average Treating Pressure 8,742 psi Average Slurry Rate 45.3 bpm Breakdown Pressure 7,833 psi Breakdown Rate 10.3 bpm Breakdown Volume 20,622 gal Avg HHP 9,706 hp Final ISIP 5,170 psi Frac Gradient 0.879 psi/ft Pad Volume 20,706 gal Main Body Volume 208,148 gal Flush Volume 32,928 gal 30/50 AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 425,800 lbs Proppant in Formation 425,800 lbs Avg Proppant Concentration 2.86 lb/gal Max Proppant Concentration 4.01 lb/gal Load to Recover 4,956 bbls Load to Recover w/o Acid 4,944 bbls 15% HCL Spearhead 500 gal Slickwater Fluid Pumped 4,638 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 226 bbls pump down rate 15.2 bpm Max pump down pressure 6,920 psi Fluid Temp 72.0 ?F Total Pump Time 2:14 hr:min Pumps Lost During Job 1 Treatment Start Time 11:24 0:00 0:00 Treatment End Time 13:38 0:00 0:00 Diverter Slurry bbls All sand placed. Pumped 500 gals of 15% HCL, Pumped sand in Ramp from 0.5 PPA - 3.0 PPA, 3.0 PPA, 3.5 PPA and 4.0 PPA. Lost pump 10084 - D-Ring, Lost hopper - Sand Hog Issues during the stage
13:38	0.28	FRAC	WLF			0		SIW, bleed off pressure, HO to WL.
13:55	0.75	FRAC	WLF			0		Retorque zipper manifold. And paint nuts for indicator. Found some loose nuts.
14:40	0.38	FRAC	WLF			0		Prime up and PT zipper manifold.
15:03	3.45	FRAC	WLF			0		PT good bleed off zipper, HO to WL. Wait on other ops.
18:30	0.50	FRAC	SAF			0		Safety meeting, go over jsa's and permits, discuss 12 LSR's, process safety, hand placement, L&H, potential drops, good communication, UnCAAP, and stop the job authority.
19:00	1.50	FRAC	WLT			1		***NPT Keane WL*** Bad bearing in measuring head. Replace and rebuild measuring head.Changed out hydraulic fitting on the grease pump.

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Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
20:30	0.25	FRAC	WLT			0		***STOP NPT on Keane WL *** Pick up lubricator. Remove night cap. PU guns/plug. Stab lubricator. Fill lubricator. PT lubricator to 1k-8kpsi. Open well with psi.
20:45	2.17	FRAC	WLT			0		"Stage #8 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 @10,911. Bring on pumps at 11,100'. Pump down as follows: 3bpm @ 4,500psi @11,100 6bpm @ 4,600psi @11,150 9bpm @ 4,900psi @11,200 12bpm w/ 5,500psi @11,250 15bpm w/ 6,200psi @11,300 Max Rate 15bpm w/ 6,850psi Set plug @ 20,927ft - Moved down 6' Perforate as follows: 20,899' - 20,900' 20,854' - 20,855' 20,810' - 20,811' 20,766' - 20,767' Stabilized pressure after perf: 4,570psi Pump down volume: 206 bbl" POOH wait @ 200' for Frac to finish.
22:55	0.67	FRAC	WLF			0		Bump up and SIW @ 4060. Bled off pressure and break lubricator. Lowered Perf guns out of lubricator and confirmed all shots fired. Drop ball, N/U nightcap and close crown valve. L/D perf guns and P/U next set of guns for next run. Move WL BOP's to next well. Greased LMV - grease time 7 min.
23:35	0.42	FRAC	FRT			0		Start Frac on Stg 8
Total	23.87							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	1.67	FRAC	FRT			0	Stage 8 Summary University 19 PW Unit 1507H Interval 20766 - 20900 Open Well Pressure 4,115 psi Max Treating Pressure 9,333 psi Max Slurry Rate 53.6 bpm Average Treating Pressure 8,826 psi Average Slurry Rate 49.1 bpm Breakdown Pressure 6,790 psi Breakdown Rate 9.5 bpm Breakdown Volume 21,504 gal Avg HHP 10,621 hp Final ISIP 5,200 psi Frac Gradient 0.881 psi/ft Pad Volume 20,748 gal Main Body Volume 212,138 gal Flush Volume 33,474 gal 30/50 AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 424,380 lbs Proppant in Formation 424,380 lbs Avg Proppant Concentration 2.67 lb/gal Max Proppant Concentration 4.02 lb/gal Load to Recover 5,051 bbls Load to Recover w/o Acid 5,039 bbls 15% HCL Spearhead 500 gal Slickwater Fluid Pumped 4,753 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 206 bbls

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06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
							<p>pump down rate 15.2 bpm Max pump down pressure 6,850 psi Fluid Temp 72.0 ?F Total Pump Time 2:09 hr:min Pumps Lost During Job 0 Treatment Start Time 23:32 0:00 0:00 Treatment End Time 1:41 0:00 0:00 Diverter Slurry bbls All sand placed. Pumped 500 gals of 15% HCL, Pumped sand in Ramp from 0.5 PPA - 3.0 PPA, 3.0 PPA, 3.5.PPA and 4.0 PPA. Lost hopper due to sand hog 4 having issues during 4.0 PPA sand, swapped over to hog 3 and ran the design amount.</p>
1:40	0.08	FRAC	FRT			0	SIW @ 4000 , bleed off pressure. HO to WL. Prep to frac stg 8 on the 1508H.
1:45	2.67	FRAC	OPO			0	Other Well Ops
4:25	0.58	FRAC	GRS			0	Grease Frac Manifold. WL Re-Head Line.
5:00	0.25	FRAC	WLT			0	Pick up lubricator. Remove night cap. PU guns/plug. Stab lubricator. Fill lubricator. PT lubricator to 1k-8kpsi. Open well with psi.
5:15	1.75	FRAC	WLT			0	Perf Stg 9

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
05/05/2017 19:00	KEANE FRAC LP	Perforation		WLT	EN	Elect W/L Surface Equipment	1.50	1.50		OPEN
Description: Bad bearing in measuring head. Replace and rebuild measuring head. Changed out hydraulic fitting on the grease pump.						Title: REPAIR				
Total							1.50	1.50		