

EP WELLS DAILY OPERATIONS REPORT

Report 41

10/25/2017

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	41.00
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	2,310,456/4,135,334.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.56	LOT/FIT EMW(ppg)	
Daily Cost	15,437	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	40

Operations Summary

24 Hour Summary
Jet Coil tubing dry, RD Coil tubing equipment. Rig up Hydraulic valve, goat head and crown valve. R/U risers to goathead and install restraints Frac Stages - 26,27 WL Stages -26,27,28
Update Since Report Time
24 Hour Forecast
Continue perf and frac operations

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	3.50	COIL	RGO			0		Continue to jet CT dry. RD lubricator, injector. RD CT BOP and remaining equipment.
3:30	2.00	PREW	RUF			0		N/D crown valve and install hydraulic valve and goat head and crown valve.
5:30	0.50	PREW	SAF			0		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.
6:00	4.33	FRAC	RIF			0		Finish N/U Frac tree. R/U risers on goathead. Install restraints. Spot crane and pickup lubricator. Function tested WL BOP's - Test Good.
10:20	0.38	FRAC	MNW			0		Prime up and pressure test 500 low for 5 minutes and 9500 high for 10 minutes. - Test Good. Bleed down to equalize. Open well @ 4068 psi.
10:43	0.28	FRAC	FWL			0		Pump 40-20-40 gel sweep. Ramped up to 49 bpm @ 9000 psi. Pumped a total of
11:00	1.50	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.
12:30	0.83	FRAC	WLT			0		"Stage #26 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 @ 4500psi @11600 6bpm @ 4700psi @11700 10bpm @ 5400psi @11800 10bpm w/ 6948psi @ Set plug @ 14683ft Perforate as follows: 14659' - 14660' 14613' - 14614' 14571' - 14572' 14527' - 14528' Stabilized pressure after perf: 5457psi Pump down volume: 56bbl"
13:20	0.88	FRAC	WLT			0		POOH. Held pause at 1000' for surface. Discuss coming off the well.
14:13	0.37	FRAC	WLF			0		Bump up and SIW @ 4510 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
14:35	0.33	FRAC	WLF			0		Other Pad Ops
14:55	1.83	FRAC	FRT			0		Stage 26 Summary University 19 H 0908H Interval 14527 - 14660 Open Well Pressure 4,407 psi Max Treating Pressure 9,489 psi Max Slurry Rate 60.0 bpm Average Treating Pressure 8,845 psi Average Slurry Rate 45.2 bpm Breakdown Pressure 7,787 psi Breakdown Rate 6.1 bpm Breakdown Volume 252 gal Avg HHP 9,799 hp Final ISIP 5,610 psi Frac Gradient 0.918 psi/ft Pad Volume 4,536 gal Main Body Volume 175,644 gal Flush Volume 53,508 gal 100 M AZ Sand Pumped 272,340 lbs 100 M Brown Sand Pumped 50,920 lbs 100 M Sand Pumped 96,880 lbs Proppant in Formation 420,140 lbs

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								Avg Proppant Concentration 3.00 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,238 bbls Load to Recover w/o Acid 4,238 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,102 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 56 bbls pump down rate 10.0 bpm Max pump down pressure 6,948 psi Fluid Temp 72.0 ?F Total Pump Time 1:45 hr:min Pumps Lost During Job 0 Treatment Start Time 15:00 0:00 0:00 Treatment End Time 16:45 0:00 1:45 Diverter Slurry bbls - Proppant was pumped as a ramp from 0.50 PPA to 3.0 PPA, then 3.0 PPA, 3.50 and 4.0 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 - The stage totals include the pre-pumpdown sweep and flush volume that we performed as well as the chemicals . Volume was 652 Bbls.. Chemicals were 7.5 gals Scale Inhibitor, 3.75 gals Bio, 18 gals of FR and 25.375 gals of Gel. Time for Prop on Perfs 24.0 minutes Time between Stages (TBF) :52 Hours/min
16:45	0.08	FRAC	FWL			0		SIW @ 5322 psi. Bleed off well and HO to WL. Held pause to discuss AAR on frac stage
16:50	0.33	FRAC	OPO			0		Other Pad Ops
17:10	0.75	FRAC	FWL			0		Pick up lubricator. Remove night cap. PU guns/plug. Stab lubricator. Fill lubricator. HAd problems with getting greased locked. Pumped and dumped the grease unit 3 times to get free. PT lubricator to 1k-8kpsi. Open well with 4900 psi. RIH to 200' conduct checks.
17:55	0.83	FRAC	WLT			0		"Stage #27 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 @ 4700psi @11600 6bpm @ 5100psi @11700 9bpm @ 5400psi @11800 9bpm w/ 6200psi Set plug @ 14506.5ft Perforate as follows: 14483' - 14484' 14439' - 14440' 14395' - 14396' 14351' - 14352' Stabilized pressure after perf: 5350psi Pump down volume: 54bbl"
18:45	1.25	FRAC	WLT			0		POOH. Held pause at 1000' for surface. Discuss coming off the well.
20:00	0.20	FRAC	WLF			0		Bump up and SIW @ 4510 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
20:12	0.68	FRAC	WLF			0		Prime and equalize. Open well @ 4487 psi.

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Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
20:53	1.72	FRAC	FRT			0		Stage 27 Summary University 19 H 0908H Interval 14351 - 14484 Open Well Pressure 4,454 psi Max Treating Pressure 9,506 psi Max Slurry Rate 61.6 bpm Average Treating Pressure 8,981 psi Average Slurry Rate 45.7 bpm Breakdown Pressure 8,449 psi Breakdown Rate 11.8 bpm Breakdown Volume 256 gal Avg HHP 10,060 hp Final ISIP 5,238 psi Frac Gradient 0.886 psi/ft Pad Volume 1,386 gal Main Body Volume 174,010 gal Flush Volume 25,620 gal 100 MAZ Sand Pumped 329,580 lbs 100 M Brown Sand Pumped 0 lbs 100 M Sand Pumped 90,860 lbs Proppant in Formation 420,440 lbs Avg Proppant Concentration 3.00 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,197 bbls Load to Recover w/o Acid 4,197 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,063 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 54 bbls pump down rate 9.0 bpm Max pump down pressure 6,200 psi Fluid Temp 72.0 ?F Total Pump Time 1:43 hr:min Pumps Lost During Job 0 Treatment Start Time 20:53 0:00 0:00 Treatment End Time 22:36 0:00 1:43 Diverter Slurry bbls - Proppant was pumped as a ramp from 0.50 PPA to 3.0 PPA, then a 3.0 PPA, 3.5 PPA, 4 PPA step. - Two 20# gel sweeps 40 bbls each were pumped prior to flush. - Did not run 15% HCl this stage - Ran ball in place plug
22:36	0.42	FRAC	FWL			0		SIW @ 5145 psi. Bleed off well and HO to WL. Held pause to discuss AAR on frac stage
23:01	0.22	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 4730 psi. RIH to 200' conduct checks.
23:14	0.77	FRAC	FRT			0		Perf # 28
Total	24.00							