

EP WELLS DAILY OPERATIONS REPORT

Report 45

08/20/2017

Company	PERMIAN
Well Type	Development
Well	UNIVERSITY 19 PW UNIT 1504H
Wellbore	UNIVERSITY 19 PW UNIT 1504H ST01
WBS No/API No	30265014 / 4230133171.01

Event Summary

Event Type	Completion only	Event Start Date	04/28/2017	Days on Location	44.00
Objective	Install Completion	Original Spud Date	02/02/2017		
Est. Days	25.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Nick Morrison	Measured Depth(ft)	
Engineer	Bobby Ramos	TVD(ft)	
Other Supervisor	Ben Dickinson	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,761.75 / 2,736.10	Hole size(in)	
THF Datum			
Daily NPT(hr/%)	1.85/7.71	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	2,657,600/4,757,442.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.56	LOT/FIT EMW(ppg)	
Daily Cost	158,637	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:	No incidents or spills to report. 966 MAN HOURS						

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	43

Operations Summary

24 Hour Summary
Frac Operations Frac stage 11, 12 WL stage 12, 13
Update Since Report Time
24 Hour Forecast
Cont. Frac Operations

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	0.75	FRAC	WLT			0		WL POOH
0:45	0.67	FRAC	WLT			0		WL @ 200' wait on frac
1:25	0.05	FRAC	WLT			0		Valve team shut UMW and bleed off. End WL perf 1504 Stage 11.
1:28	0.20	FRAC	GRS			0		Oil States grease UMW, LMV and HW.
1:40	0.03	FRAC	WLT			0		WL break off lube and PCE. Swing back and drop out spent tools. ALL SHOTS FIRED.
1:42	0.05	FRAC	WLT			0		Balls away. WL stab night cap and shut crown valve.
1:45	1.02	FRAC	OPO			0		Wait for other pad operations.
2:46	2.83	FRAC	FRT			0		<p>Valve team open UMW. Start Frac 1504 Stage 11</p> <p>Stage 11 Summary University 19 PW Unit 1504H Interval 18562 - 18697 Open Well Pressure 4,303 psi Max Treating Pressure 9,462 psi Max Slurry Rate 45.3 bpm Average Treating Pressure 8,898 psi Average Slurry Rate 41.5 bpm Breakdown Pressure 7,917 psi Breakdown Rate 10.1 bpm Breakdown Volume 17,892 gal Avg HHP 9,051 hp Final ISIP 5,457 psi Frac Gradient 0.905 psi/ft Pad Volume 20,790 gal Main Body Volume 248,094 gal Flush Volume 28,140 gal 30/50 AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 420,140 lbs Proppant in Formation 420,140 lbs Avg Proppant Concentration 2.19 lb/gal Max Proppant Concentration 2.50 lb/gal Load to Recover 6,078 bbls Load to Recover w/o Acid 6,066 bbls 15% HCL Spearhead 504 gal Slickwater Fluid Pumped 5,815 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 171 bbls pump down rate 11.0 bpm Max pump down pressure 6,250 psi Fluid Temp 72.0 ?F Total Pump Time 2:49 hr:min Pumps Lost During Job 0 Treatment Start Time 2:46 0:00 0:00 Treatment End Time 5:35 0:00 2:49 Diverter Slurry bbls Proppant pumped as a ramp from 0.5PPA-2.0PPA, then 2.0PPA, and 2.5PPA. All proppant placed. - 500gal of 15% HCl was placed and two 20# gel sweeps were pumped at 40 bbls each prior to flush.</p> <p>Regards, Nolan Beasley Field Engineer Keane Group 8200 E IH-20 Odessa, TX 79766</p>

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Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Cell: (432) 208-2919 Email: nbeasley@keanegrp.com
5:36	0.07	FRAC	FWL			0		Valve team shut UMW. End frac 1504 Stage 11. Frac HO to WL
5:40	0.95	FRAC	OPO			0		Standby for other pad operations.
6:37	0.20	FRAC	GRS			1		***NPT OIL STATES*** pressure leaking by UMW. Grease up valve before WL can stab on
6:49	0.03	FRAC	WLT			0		Valve team line out valves. WL pick up lube and PCE + new guns and plug. WL break off night cap, swing over and stab 1504.
6:51	0.32	FRAC	FWL			0		Crew change and handover. Walk thru valve alignment. Pressure test lubricator to 8000 psi Open well with 4600 psi. RIH.
7:10	1.12	FRAC	WLT			0		Stage #12 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 @ . Bring on pumps at ' Pump down as follows: 3 bpm @ 4503 psi 6 bpm @ 4766 psi 10 bpm @ 5222 psi 12 bpm @ psi Max:10 bpm. Max: 5957 psi Set plug @ 18542 ft Perforate as follows: 18518' - 18519' 18473' - 18474' 18429' - 18430' 18384' - 18385' Stabilized pressure after perforating: 4571 psi Pump down volume: 176 bbl"
8:17	0.85	FRAC	WLT			0		POOH to 200'
9:08	1.28	FRAC	OPO			0		Wait at 200 ft for frac
10:25	0.13	FRAC	WLF			0		Grease UMW Shut in well with 4278 psi Break lubricator. Grease wing valve All shots fired. Drop ball. MU night cap. LD tools and lub. Secure crown and wing valves. Handover from WL to frac.
10:33	0.62	FRAC	OPO			0		Other pad operations.
11:10	0.18	FRAC	FRT			0		Align valves, pressure test to 9500 psi. test good. Equalize to 4500 psi open well with 4200 psi.
11:21	2.72	FRAC	FRT			0		Stage 12 Summary University 19 PW Unit 1504H Interval 18384 - 18519 Open Well Pressure 4,202 psi Max Treating Pressure 9,295 psi Max Slurry Rate 47.5 bpm Average Treating Pressure 8,886 psi Average Slurry Rate 42.7 bpm Breakdown Pressure 7,292 psi Breakdown Rate 9.4 bpm Breakdown Volume 17,472 gal Avg HHP 9,300 hp Final ISIP 5,270 psi Frac Gradient 0.889 psi/ft Pad Volume 18,144 gal Main Body Volume 240,828 gal Flush Volume 28,266 gal 30/50 AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 421,200 lbs

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Proppant in Formation 421,200 lbs Avg Proppant Concentration 2.24 lb/gal Max Proppant Concentration 2.50 lb/gal Load to Recover 5,910 bbls Load to Recover w/o Acid 5,898 bbls 15% HCL Spearhead 504 gal Slickwater Fluid Pumped 5,642 bbls 20# Linear Fluid Pumped 80 bbls 20# Crosslink Fluid Pumped 0 bbls Pump down volume 176 bbls pump down rate 10.0 bpm Max pump down pressure 5,957 psi Fluid Temp 72.0 ?F Total Pump Time 2:43 hr:min Pumps Lost During Job 0 Treatment Start Time 11:21 0:00 0:00 Treatment End Time 14:04 0:00 2:43 Diverter Slurry bbls Proppant pumped as a ramp from 0.5PPA-2.0PPA, then 2.0PPA, and 2.5PPA. All proppant placed. 500gal of 15% HCl was placed and two 20# gel sweeps were pumped at 40 bbls each prior to flush.
14:04	0.35	FRAC	FWL			0		Other pad operations
14:25	0.23	FRAC	WLT			0		Handover from frac to wireline. Pick up lubricator. Remove night cap. PU tools. Stab lubricator. Fill lubricator. Pressure test lubricator to 8900 psi Open well with 4800 psi. RIH.
14:39	1.07	FRAC				0		"Stage #13 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 @ . Bring on pumps at 11200'. Pump down as follows: 3 bpm @ 4798 psi 6 bpm @ 4803 psi 10 bpm @ 5338 psi 12 bpm @ psi Max:10 bpm. Max: 5782 psi Set plug @ 18364 ft Perforate as follows: 18341' - 18342' 18293' - 18294' 18250' - 18251' 18206' - 18207' Stabilized pressure after perforating: 4635 psi Pump down volume: 166 bbl"
15:43	0.78	FRAC	OPO			0		Pooh to 200'
16:30	2.13	FRAC	NOA			0		Wait at 200 ft for frac
18:38	1.07	FRAC	NOA			1		*** NPT WEATHER*** Wait on weather to come off the well with wireline
19:42	0.30	FRAC	WLT			0		WL POOH to surface.
20:00	0.33	FRAC	SAF			0		SAFETY PAUSE discuss WL coming off the well. WL at surface. Valve team shut UMW and bleed off.
20:20	0.10	FRAC	WLT			0		WL break off lube and PCE Swing back and drop out spent tools. All shots fired.
20:26	0.03	FRAC	WLT			0		WL lay down spent tools and MU new tools. Take ODs and Lengths of BHA to update BHA sheet.
20:28	0.65	FRAC	GRS			0		Oil States grease crown valve and HCR.

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
21:07	0.35	FRAC	OPO			0		Other pad activities.
21:28	0.33	FRAC	FRP			0		Valve team line up zipper manifold to the 1504. Frac pressure test to 9500 psi. Test good, bleed back and equalize.
21:48	1.07	FRAC	FRT			0		Valve team open UMV. Start FRAC 1504 Stage 13
22:52	0.58	FRAC	FRT			1		*** NPT WEATHER *** lightning storm blow in, go to flush and shut down frac. Valve team shut in 1504 UMV. @ 23:15 ALL CLEAR, fire up frac van and get ready
23:27	0.55	FRAC	FRT			0		Valve team open up UMV. Resume FRAC on 1504 stage 13
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	FRT			0	Cont. Frac of 1504 Stage 13

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
08/20/2017 06:37	OIL STATES ENERGY SERVICES LLC	Wellhead (Surface)		GRS	EN	Wellhead Gate Valves	0.20	0.20	1	OPEN
Description: Grease UMV due to pressure leaking by before WL can stab on .						Title: Pressure leaking by UMV				
08/20/2017 18:38	SHELL	Wait On Weather		NOA	N		1.07	1.07	1	OPEN
Description: shut down for weather.						Title: WOW				
08/20/2017 22:52	SHELL	Wait On Weather		FRT	N		0.58	0.58	1	OPEN
Description: Shut down for weather.						Title: WOW				
Total							1.85	1.85		