

EP WELLS DAILY OPERATIONS REPORT

Report 5

03/28/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	5.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Jeannine Snyder	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor		24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	160,422/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	33,361	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	4

Operations Summary

24 Hour Summary
Rig up frac stack and zipper manifold
Update Since Report Time
24 Hour Forecast

EP WELLS DAILY OPERATIONS REPORT

Report 5

03/28/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
8:30	0.50	PREW	RUF			0		Hold pre job safety meeting
9:00		PREW	RUF			0		Rig up and torque Cactus hydraulic upper master valve; flowcross; goathead & crown valve on all four wells - 2501H, 2502H, 2503H, 2504H; Spot zipper manifold and install remaining center barrel spacer; Spot accumulators and run accumulator hoses to 2501H and 2502H.
Total	0.50							

Remarks

Re-start costs for trailers, R&R combo unit, Sunbelt forklift & manbasket

EP WELLS DAILY OPERATIONS REPORT

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03/31/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	8.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Jeannine Snyder	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor		24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	160,457/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	8,288	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	7

Operations Summary

24 Hour Summary
Finish rigging up wellhead grease skid
Update Since Report Time
Released forklift, manbasket, combo unit, light plants for 1-April-2019
24 Hour Forecast

EP WELLS DAILY OPERATIONS REPORT

Report 8

03/31/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
7:00	4.00	PREW	NOA			0		Finish rigging up wellhead grease skid.
Total	4.00							

Remarks

Released forklift, manbasket, combo unit, light plants for 4/1

EP WELLS DAILY OPERATIONS REPORT

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04/08/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	9.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Matt Randolph	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Nick Morrison	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	177,611/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	16,327	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	8

Operations Summary

24 Hour Summary
Update Since Report Time
24 Hour Forecast

EP WELLS DAILY OPERATIONS REPORT

Report 9

04/08/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00		FRAC	RIF			0		Wait for equipment and spot as it arrives. Rig up CIG sand storms. RU frac iron to manifold, RU crane, Spot and rig up WL equipment, RU Extreame pressure test unit. Load sand into sand boxes. Remove night caps, Install rig lock.
Total								

EP WELLS DAILY OPERATIONS REPORT

Report 10

04/09/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	10.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Matt Randolph	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Nick Morrison	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	193,938/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	16,327	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:							
Man Hours 1125							

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	9

Operations Summary

24 Hour Summary
Update Since Report Time
24 Hour Forecast

EP WELLS DAILY OPERATIONS REPORT

Report 10

04/09/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	9.75	FRAC	RIF			0		RU frac iron to manifold, Spot and rig up WL equipment, RU Extreame pressure test unit. Load sand into sand boxes. Remove night caps, Install rig lock. MU risers from manifold to well
9:45	6.25	FRAC	RIF			0		Shut down location for drug testing.
16:00	8.00	FRAC	RIF			0		Resume rig up risers to well and run restraints, install rig locks, function test WL BOP, Rund data cables to transducers, Set snd pressure test backside PRV,
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	3.25	PREW	PTC			0	Pressure test annulus to 2700 for 10 minutes and record on chart recorder. test failed due to not set right with new extreame pump. Move to the 3H-4H.
3:15	0.75	PREW	PTC			0	Reset PRV.to 2800 psi. Pressure test annulus to 2700 psi. Hold for 10 min. bleed to 0 psi.
4:00		PREW				0	Other pad Operations

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Report 11

04/10/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	11.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Matthew "Hank" Persaud	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Eric Brunet	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	210,266/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	16,327	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	10

Operations Summary

24 Hour Summary
Continue with Prework
Update Since Report Time
24 Hour Forecast
Continue with frac ops

EP WELLS DAILY OPERATIONS REPORT

Report 11

04/10/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	3.25	PREW	PTC			0		Pressure test annulus to 2700 for 10 minutes and record on chart recorder. test failed due to not set right with new extreame pump. Move to the 3H-4H.
3:15	0.75	PREW	PTC			0		Reset PRV.to 2800 psi. Pressure test annulus to 2700 psi. Hold for 10 min. bleed to 0 psi.
4:00	11.00	PREW				0		Other pad Operations
15:00	0.75	PREW	PTC			0		Prep for toe sleeve ops.
15:45	0.75	PREW	PTC			0		Bleed annulus to 0 psi and leave open to vent. Open well with 0 psi. TRRC test: 6900 - 6870 psi in 10 mins. Shell Integrity #1: 7580 - 7535 psi in 10 mins. Shell Integrity #2: 8435 - 8375 psi in 10 mins.
16:30	1.00	PREW	PTC			0		<p>Sleeve Open: 9411 psi. Stable rate and pressure on brine: 21 @ 10,400 psi. Stable rate and pressure pre-acid: 22 @ 10,500 psi. Stable rate and pressure post-acid (no soak): 38 @ 9,550 psi.</p> <p>Stage TP Summary University 20 PW 2502H Interval #N/A 0 0 0</p> <p>Open Well Pressure 18 0 0 psi Shut In Well Pressure 5,500 0 0 psi Max Treating Pressure 10,805 psi Max Slurry Rate 43.1 bpm Average Treating Pressure 8,095 psi Average Slurry Rate 19.5 bpm Average Rate w/ Prop on Bottom 0.0 bpm Breakdown Pressure 9,411 psi Breakdown Rate 1.0 bpm Breakdown Volume 546 gal Avg HHP 3,869 hp Final ISIP 5,638 psi Frac Gradient 0.899 psi/ft Pad Volume 1,680 gal Main Body Volume 33,039 gal Flush Volume 21,504 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 0 lbs Proppant in Formation 0 lbs Avg Proppant Concentration 0.00 lb/gal Max Proppant Concentration 0.00 lb/gal Load to Recover 787 bbls Load to Recover w/o Acid 714 bbls 15% HCL Spearhead 3,051 gal Slickwater Fluid Pumped 552 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 162 bbls Pump down volume 0 bbls pump down rate 0.0 bpm Max pump down pressure 0 psi Fluid Temp 76.4 ?F Total Pump Time 1:45 hr:min Pumps Lost During Job 0 0 0 0</p> <p>Treatment Start Time 15:43 0:00 0:00 0:00 Treatment End Time 17:28 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - Ball in place style plug was used - Toe Port opend at 9411 psi - Had to shut down briefly after injection due to needing to swap acid hose - 107 bbls of brine was pumped - 3051 gals 15% HCl was pumped.</p>

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04/10/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								- All proppant placed and the stage was treated with Fresh water Time between Stages (TBF) 0:47:00 Hours : Minutes Estimated Cost from Job Packet
Total	17.50							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		PREW	PTC			0	Other pad ops

EP WELLS DAILY OPERATIONS REPORT

Report 13

04/12/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	13.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Brett Oldenkamp/Lindy byerly	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Eric Brunet	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	356,611/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	130,018	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	12

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
24 Hour Forecast
Continue Frac Ops

EP WELLS DAILY OPERATIONS REPORT

Report 13

04/12/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.00	FRAC	OPO			0		Continue and complete 2502H Stage 1
1:00	3.50	FRAC	OPO			0		Other pad ops
4:30	0.08	FRAC	OPO			0		Handover well to wireline.
4:35	0.10	FRAC	WLT			0		Pressure test lubricator to 5000 psi.
4:41	1.75	FRAC	WLT			0		Open well with 3900 psi.
6:26	0.80	FRAC	WLT			0		"Stage #2 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog ECO Bridge Plug solid core Note Perform Casing test to 9900 psi for 10 min good test. Set plug @ 16265' Perforate as follows: 16245' - 16246' 16203' - 16204' 16160' - 16161' 16117' - 16118' Stabilized pressure after perforating: 5000 psi Final pump down rate: 12.5 bpm Pump down volume: 165 bbl"
7:14	0.88	FRAC	WLT			0		POOH
8:07	0.30	FRAC	GRS			0		Routine UMW greasing.
8:25	0.15	FRAC	WLT			0		Shut in well with 3528 psi. Handover to Frac
8:34	0.50	FRAC	OPO			0		Other Pad Ops
9:04	2.75	FRAC	FRT			0		Stage 2 Summary University 20 PW 2502H Interval 16117 - 16245 0 0 0 Open Well Pressure 3,600 0 0 psi Shut In Well Pressure 5,200 0 0 psi Max Treating Pressure 9,490 psi Max Slurry Rate 58.3 bpm Average Treating Pressure 9,048 psi Average Slurry Rate 55.2 bpm Average Rate w/ Prop on Bottom 56.0 bpm Breakdown Pressure 9,247 psi Breakdown Rate 22.0 bpm Breakdown Volume 1,260 gal Avg HHP 12,241 hp Final ISIP 5,375 psi Frac Gradient 0.878 psi/ft Pad Volume 15,204 gal Main Body Volume 326,485 gal Flush Volume 19,446 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 420,090 lbs Proppant in Formation 420,090 lbs Avg Proppant Concentration 1.48 lb/gal Max Proppant Concentration 3.00 lb/gal Load to Recover 7,773 bbls Load to Recover w/o Acid 7,767 bbls 15% HCL Spearhead 273 gal Slickwater Fluid Pumped 7,600 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 167 bbls pump down rate 12.5 bpm Max pump down pressure 7,100 psi

EP WELLS DAILY OPERATIONS REPORT

Report 13

04/12/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Fluid Temp 76.4 °F Total Pump Time 2:45 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 9:04 0:00 0:00 0:00 Treatment End Time 11:49 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - 273 gals 15% HCl was pumped. - Proppant was stepped up from 0.5 PPA to 3.0 PPA in 0.5 PPA increments - Bridge Plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 2:00:00 Hours : Minutes Estimated Cost from Job Packet \$ 36,890.88
11:49	0.10	FRAC	OPO			0		Other pad ops
11:55	0.17	FRAC	WLT			0		Handover well to wireline.
12:05	0.22	FRAC	WLT			0		Pressure test lubricator to 8000 psi.
12:18	1.07	FRAC	WLT			0		Open well with 4850 psi.
13:22	0.10	FRAC	WLT			0		"Stage #3 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology ECO Hybrid composite ball-drop frac plug. Set plug @ 16093' Perforate as follows: 16072' - 16073' 16031' - 16032' 15988' - 15989' 15945' - 15946' Stabilized pressure after perforating: 4700 psi Final pump down rate: 13 bpm Pump down volume: 165 bbl"
13:28	0.87	FRAC	WLT			0		POOH
14:20	0.13	FRAC	WLT			0		Routine UMV greasing.
14:28	0.13	FRAC	WLT			0		Shut in well with 4450 psi. Handover to Frac
14:36	1.28	FRAC	OPO			0		Other pad ops
15:53	2.30	FRAC	OPO			0		Stage 3 Summary University 20 PW 2502H Interval 15945 - 16072 0 0 0 Open Well Pressure 4,280 0 0 psi Shut In Well Pressure 5,271 0 0 psi Max Treating Pressure 9,600 psi Max Slurry Rate 59.7 bpm Average Treating Pressure 9,195 psi Average Slurry Rate 53.7 bpm Average Rate w/ Prop on Bottom 55.9 bpm Breakdown Pressure 8,916 psi Breakdown Rate 13.3 bpm Breakdown Volume 12,012 gal Avg HHP 12,102 hp Final ISIP 6,106 psi Frac Gradient 0.938 psi/ft Pad Volume 14,196 gal Main Body Volume 261,107 gal Flush Volume 19,404 gal 100 Mesh Brown Sand Pumped 0 lbs

EP WELLS DAILY OPERATIONS REPORT

Report 13

04/12/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 420,000 lbs Proppant in Formation 420,000 lbs Avg Proppant Concentration 1.91 lb/gal Max Proppant Concentration 3.00 lb/gal Load to Recover 6,217 bbls Load to Recover w/o Acid 6,210 bbls 15% HCL Spearhead 272 gal Slickwater Fluid Pumped 6,043 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 167 bbls pump down rate 13.0 bpm Max pump down pressure 6,600 psi Fluid Temp 76.4 ?F Total Pump Time 2:18 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 15:53 0:00 0:00 0:00 Treatment End Time 18:11 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - 272 gals 15% HCl was pumped. - Proppant was stepped up from 0.5 PPA to 3.0 PPA in 0.5 PPA increments - Ball drop plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 0:30:00 Hours : Minutes Estimated Cost from Job Packet \$ 34,936.39
18:11	0.32	FRAC	OPO			0		Other pad ops
18:30	0.18	FRAC	FWL			0		18:30 Handover well to wireline. 18:35 Pressure test lubricator to 5000 psi. 18:41 Open well with 5050 psi.
18:41	1.98	FRAC	WLT			0		19:52 "Stage #4 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology ECO Hybrid composite ball-drop frac plug. Set plug @ 15922' Perforate as follows: 15902' - 15903' 15859' - 15860' 15816' - 15817' 15774' - 15775' Stabilized pressure after perforating: 4700 psi Final pump down rate: 11 bpm Pump down volume: 145 bbl" 19:57 POOH
20:40	0.33	FRAC	GRS			0		20:40 Routine UMW greasing.
21:00	0.25	FRAC	WLF			0		21:00 Shut In Well @ 4700 psi 21:15 Handover well to frac.
21:15	2.75	FRAC	OPO			0		Other pad ops NOTE: WOW
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	2.25	FRAC	OPO			0	Other pad ops NOTE: WOW

EP WELLS DAILY OPERATIONS REPORT

Report 13

04/12/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
2:15	1.00	FRAC	OPO			0	Continue with Frac Ops
3:15	0.50	FRAC	OPO			0	Water transfer having problems with water transfer pump unable to maintain water for frac Frac shut down Extreme having problems with test pump working all issues
3:45		FRAC	OPO			0	Water transfer back up and running Frac Continue ops. Test pump up and running

EP WELLS DAILY OPERATIONS REPORT

Report 14

04/13/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	14.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Brett Oldenkamp/Lindy byerly	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Eric Brunet	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	Hole size(in)	
THF Datum			
Daily NPT(hr/%)	2.25/9.38	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	539,045/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	178,860	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	13

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
24 Hour Forecast
Continue Frac Ops.

EP WELLS DAILY OPERATIONS REPORT

Report 14

04/13/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	2.25	FRAC	OPO			1		Other pad ops NOTE: WOW
2:15	1.00	FRAC	FRT			0		Continue with Frac Ops
3:15	0.50	FRAC	FRT			0		Water transfer having problems with water transfer pump unable to maintain water for frac Frac shut down Extreme having problems with test pump working all issues
3:45	2.03	FRAC	FRT			0		<p>Water transfer back up and running Frac Continue ops. Test pump up and running</p> <p>Stage 4 Summary University 20 PW 2502H Interval 15774 - 15902 Frac 1 Frac 2 0 Open Well Pressure 4,100 5,097 0 psi Shut In Well Pressure 5,364 5,478 0 psi Max Treating Pressure 9,687 psi Max Slurry Rate 56.1 bpm Average Treating Pressure 8,780 psi Average Slurry Rate 49.5 bpm Average Rate w/ Prop on Bottom 51.1 bpm Breakdown Pressure 8,867 psi Breakdown Rate 10.0 bpm Breakdown Volume 9,786 gal Avg HHP 10,652 hp Final ISIP 5,630 psi Frac Gradient 0.899 psi/ft Pad Volume 17,010 gal Main Body Volume 300,275 gal Flush Volume 49,266 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 414,100 lbs Proppant in Formation 414,100 lbs Avg Proppant Concentration 1.82 lb/gal Max Proppant Concentration 3.00 lb/gal Load to Recover 7,149 bbls Load to Recover w/o Acid 7,143 bbls 15% HCL Spearhead 269 gal Slickwater Fluid Pumped 6,996 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 147 bbls pump down rate 11.0 bpm Max pump down pressure 6,400 psi Fluid Temp 76.4 ?F Total Pump Time 3:02 hr:min Pumps Lost During Job 2 Frac 1 Frac 2 0 Treatment Start Time 2:25 3:53 0:00 0:00 Treatment End Time 3:33 5:47 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - 272 gals 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 1.0 PPA before shutting down. Proppant was ramped from 0.5 PPA to 2.0 PPA then stepped up to 3.0 PPA in 0.5 PPA increments. - Had issues with water transfer and lost boost pressure at the blender causing a shutdown. We got back into it and flushed the well. - Ball drop plug was used - All proppant was placed and the stage was treated with Fresh water</p>

EP WELLS DAILY OPERATIONS REPORT

Report 14

04/13/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Time between Stages (TBF) 3:20:00 Hours : Minutes Estimated Cost from Job Packet \$ 36,202.80
5:47	2.55	FRAC	FWL			0		Other pad ops
8:20	0.17	FRAC	FWL			0		Handover well to wireline.
8:30	0.08	FRAC	WLT			0		Pressure test lubricator to 4500 psi.
8:35	1.00	FRAC	WLT			0		Open well with 4400 psi.
9:35	0.12	FRAC	WLT			0		"Stage #5 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 15750' Perforate as follows: 15731' - 15732' 15688' - 15689' 15645' - 15646' 15602' - 15603' Stabilized pressure after perforating: 5200 psi Final pump down rate: 12 bpm Pump down volume: 147 bbl"
9:42	0.80	FRAC	WLT			0		POOH
10:30	0.50	FRAC	WLT			0		Routine UMW greasing.
11:00	1.73	FRAC	OPO			0		Other pad ops Waiting on wireline
12:44	1.90	FRAC	FRT			0		Stage 5 Summary University 20 PW 2502H Interval 15602 - 15731 0 0 0 Open Well Pressure 4,100 0 0 psi Shut In Well Pressure 5,200 0 0 psi Max Treating Pressure 9,508 psi Max Slurry Rate 62.8 bpm Average Treating Pressure 9,149 psi Average Slurry Rate 57.0 bpm Average Rate w/ Prop on Bottom 59.0 bpm Breakdown Pressure 7,999 psi Breakdown Rate 8.0 bpm Breakdown Volume 294 gal Avg HHP 12,782 hp Final ISIP 5,331 psi Frac Gradient 0.874 psi/ft Pad Volume 13,800 gal Main Body Volume 229,756 gal Flush Volume 19,152 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 420,000 lbs Proppant in Formation 420,000 lbs Avg Proppant Concentration 2.21 lb/gal Max Proppant Concentration 3.00 lb/gal Load to Recover 5,470 bbls Load to Recover w/o Acid 5,464 bbls 15% HCL Spearhead 266 gal Slickwater Fluid Pumped 5,315 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 149 bbls pump down rate 12.0 bpm Max pump down pressure 7,100 psi Fluid Temp 76.4 ?F Total Pump Time 1:54 hr:min Pumps Lost During Job 0

EP WELLS DAILY OPERATIONS REPORT

Report 14

04/13/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								0 0 0 Treatment Start Time 12:44 0:00 0:00 0:00 Treatment End Time 14:38 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - 266 gal 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.0 PPA then stepped to 3.0 PPA - Ball in place plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 1:52:00 Hours : Minutes Estimated Cost from Job Packet \$ 34,025.43
14:38	3.37	FRAC	OPO			0		Other pad ops
18:00	0.30	FRAC	FWL			0		18:00 Handover well to wireline. 18:12 Pressure test lubricator to 5200 psi. 18:18 Open well with 4200 psi.
18:18	1.78	FRAC	WLT			0		19:17 "Stage #6 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 15578' Perforate as follows: 15559' - 15560' 15516' - 15517' 15473' - 15474' 14430' - 14431' Stabilized pressure after perforating: 5000 psi Final pump down rate: 12 bpm Pump down volume: 119 bbl" 19:21 POOH
20:05	0.25	FRAC	GRS			0		20:05 Routine UMW greasing.
20:20	0.17	FRAC	WLF			0		20:20 Shut in well with 4200 psi. 20:30 Handover well to frac.
20:30	0.42	FRAC	WLF			0		Other Pad ops.
20:55	1.73	FRAC	FRT			0		Stage 6 Summary University 20 PW 2502H Interval 15430 - 15559 0 0 0 Open Well Pressure 4,114 0 0 psi Shut In Well Pressure 5,232 0 0 psi Max Treating Pressure 9,323 psi Max Slurry Rate 60.2 bpm Average Treating Pressure 8,860 psi Average Slurry Rate 56.8 bpm Average Rate w/ Prop on Bottom 58.2 bpm Breakdown Pressure 9,057 psi Breakdown Rate 8.8 bpm Breakdown Volume 462 gal Avg HHP 12,335 hp Final ISIP 5,798 psi Frac Gradient 0.913 psi/ft Pad Volume 15,078 gal Main Body Volume 209,968 gal Flush Volume 19,740 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 419,140 lbs Proppant in Formation 419,140 lbs Avg Proppant Concentration 2.47 lb/gal Max Proppant Concentration 3.50 lb/gal Load to Recover 4,999 bbls Load to Recover w/o Acid 4,993 bbls

EP WELLS DAILY OPERATIONS REPORT

Report 14

04/13/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								15% HCL Spearhead 262 gal Slickwater Fluid Pumped 4,872 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 121 bbls pump down rate 12.0 bpm Max pump down pressure 6,400 psi Fluid Temp 76.4 °F Total Pump Time 1:44 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 20:55 0:00 0:00 0:00 Treatment End Time 22:39 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - 262 gal 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.0 PPA then stepped to 3.5 PPA - Ball in place plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 0:32:00 Hours : Minutes Estimated Cost from Job Packet \$ 33,170.00
22:39	1.35	FRAC	OPO			0		Other pad ops
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	0.17	FRAC	FWL			0	Other pad ops
0:10	0.08	FRAC	WLT			0	00:00 Handover well to wireline. 00:10 Pressure test lubricator to 5000 psi. 00:15 Open well with 4700 psi.
0:15	1.75	FRAC	WLT			0	01:14 "Stage #7 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 15407' Perforate as follows: 15387' - 15388' 15345' - 15346' 15302' - 15303' 15259' - 15260' Stabilized pressure after perforating: 5200 psi Final pump down rate: 12 bpm Pump down volume: 115 bbl" 01:18 POOH
2:00	0.15	FRAC	GRS			0	02:00 Routine UMW greasing.
2:09	0.10	FRAC	WLF			0	02:09 Shut in well with 4400 psi. 02:15 Handover well to frac.
2:15	0.85	FRAC	WLF			0	Other pad ops
3:06	1.88	FRAC	FRT			0	Stage 7 Summary University 20 PW 2502H Interval 15259 - 15387 0 0 0 Open Well Pressure 4,257 0 0 psi Shut In Well Pressure 5,310 0 0 psi Max Treating Pressure 9,753 psi Max Slurry Rate 62.0 bpm Average Treating Pressure 9,042 psi Average Slurry Rate 53.7 bpm

EP WELLS DAILY OPERATIONS REPORT

Report 14

04/13/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
							Average Rate w/ Prop on Bottom 56.3 bpm Breakdown Pressure 9,350 psi Breakdown Rate 9.8 bpm Breakdown Volume 210 gal Avg HHP 11,901 hp Final ISIP 6,866 psi Frac Gradient 1.001 psi/ft Pad Volume 8,442 gal Main Body Volume 229,700 gal Flush Volume 19,740 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 422,440 lbs Proppant in Formation 422,440 lbs Avg Proppant Concentration 2.15 lb/gal Max Proppant Concentration 3.00 lb/gal Load to Recover 5,469 bbls Load to Recover w/o Acid 5,463 bbls 15% HCL Spearhead 254 gal Slickwater Fluid Pumped 5,346 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 117 bbls pump down rate 12.0 bpm Max pump down pressure 6,200 psi Fluid Temp 76.4 ?F Total Pump Time 1:53 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 3:06 0:00 0:00 0:00 Treatment End Time 4:59 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - 257 gal 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.0 PPA then stepped to 3.0 PPA - Ball in place plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 1:32:00 Hours : Minutes Estimated Cost from Job Packet \$ 33,735.38
4:59		FRAC	OPO			0	Other pad ops

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
04/12/2019 21:15	SHELL	Wait On Weather	0.00	OPO	N		5.00	5.00	2	OPEN
Description: unable to continue ops due to lighting						Title: WOW				
Total							5.00	5.00		

EP WELLS DAILY OPERATIONS REPORT

Report 15

04/14/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	15.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Brett Oldenkamp/Lindy byerly	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Eric Brunet	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	Hole size(in)	
THF Datum			
Daily NPT(hr/%)	1.25/5.21	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	729,532/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	180,735	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	14

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
24 Hour Forecast

EP WELLS DAILY OPERATIONS REPORT

Report 15

04/14/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	0.17	FRAC	FWL			0		Other pad ops
0:10	0.08	FRAC	WLT			0		00:00 Handover well to wireline. 00:10 Pressure test lubricator to 5000 psi. 00:15 Open well with 4700 psi.
0:15	1.75	FRAC	WLT			0		01:14 "Stage #7 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 15407' Perforate as follows: 15387' - 15388' 15345' - 15346' 15302' - 15303' 15259' - 15260' Stabilized pressure after perforating: 5200 psi Final pump down rate: 12 bpm Pump down volume: 115 bbl" 01:18 POOH
2:00	0.15	FRAC	GRS			0		02:00 Routine UMW greasing.
2:09	0.10	FRAC	WLF			0		02:09 Shut in well with 4400 psi. 02:15 Handover well to frac.
2:15	0.85	FRAC	WLF			0		Other pad ops
3:06	1.88	FRAC	FRT			0		Stage 7 Summary University 20 PW 2502H Interval 15259 - 15387 0 0 0 Open Well Pressure 4,257 0 0 psi Shut In Well Pressure 5,310 0 0 psi Max Treating Pressure 9,753 psi Max Slurry Rate 62.0 bpm Average Treating Pressure 9,042 psi Average Slurry Rate 53.7 bpm Average Rate w/ Prop on Bottom 56.3 bpm Breakdown Pressure 9,350 psi Breakdown Rate 9.8 bpm Breakdown Volume 210 gal Avg HHP 11,901 hp Final ISIP 6,866 psi Frac Gradient 1.001 psi/ft Pad Volume 8,442 gal Main Body Volume 229,700 gal Flush Volume 19,740 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 422,440 lbs Proppant in Formation 422,440 lbs Avg Proppant Concentration 2.15 lb/gal Max Proppant Concentration 3.00 lb/gal Load to Recover 5,469 bbls Load to Recover w/o Acid 5,463 bbls 15% HCL Spearhead 254 gal Slickwater Fluid Pumped 5,346 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 117 bbls pump down rate 12.0 bpm Max pump down pressure 6,200 psi Fluid Temp 76.4 °F Total Pump Time 1:53 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 3:06 0:00 0:00 0:00 Treatment End Time 4:59 0:00 0:00 0:00 Diverter Slurry bbls

EP WELLS DAILY OPERATIONS REPORT

Report 15

04/14/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								- No incidents, accidents or spills to report. - FR was set at 0.75 gpt - 257 gal 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.0 PPA then stepped to 3.0 PPA - Ball in place plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 1:32:00 Hours : Minutes Estimated Cost from Job Packet \$ 33,735.38
4:59	0.10	FRAC	WLT			0		Handover well to wireline.
5:05	0.08	FRAC	WLT			0		Pressure test lubricator to 5200 psi.
5:10	1.33	FRAC	WLT			0		Open well with 5100 psi.
6:30	0.10	FRAC	WLT			0		"Stage #8 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 15232' Perforate as follows: 15216' - 15217' 15173' - 15174' 15130' - 15131' 15087' - 15088' Stabilized pressure after perforating: 5200 psi Final pump down rate: 12 bpm Pump down volume: 122 bbl"
6:36	0.82	FRAC	WLT			0		POOH
7:25	0.22	FRAC	WLT			0		Routine UMW greasing.
7:38	0.15	FRAC	WLT			0		Shut in well with 4600 psi.
7:47	1.78	FRAC	OPO			0		Handover to Frac Other Pad Ops
9:34	1.70	FRAC	FRT			0		Stage 8 Summary University 20 PW 2502H Interval 15087 - 15216 0 0 0 Open Well Pressure 4,300 0 0 psi Shut In Well Pressure 5,200 0 0 psi Max Treating Pressure 0 psi Max Slurry Rate 55.0 bpm Average Treating Pressure 8,921 psi Average Slurry Rate 51.2 bpm Average Rate w/ Prop on Bottom 53.5 bpm Breakdown Pressure 7,991 psi Breakdown Rate 10.0 bpm Breakdown Volume 294 gal Avg HHP 11,195 hp Final ISIP 5,463 psi Frac Gradient 0.885 psi/ft Pad Volume 1,420 gal Main Body Volume 202,216 gal Flush Volume 19,992 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 422,150 lbs Proppant in Formation 422,150 lbs Avg Proppant Concentration 2.40 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,815 bbls Load to Recover w/o Acid 4,815 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,690 bbls

EP WELLS DAILY OPERATIONS REPORT

Report 15

04/14/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 125 bbls pump down rate 12.0 bpm Max pump down pressure 6,400 psi Fluid Temp 76.4 ?F Total Pump Time 1:42 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 9:34 0:00 0:00 0:00 Treatment End Time 11:16 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - 254 gal 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.0 PPA then stepped to 4.0 PPA - Ball in place plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 0:11:00 Hours : Minutes Estimated Cost from Job Packet \$ 32,315.42
11:16	0.40	FRAC	FWL			0		Handover well to wireline.
11:40	0.10	FRAC	WLT			0		Pressure test lubricator to 4900 psi.
11:46	1.03	FRAC	WLT			0		Open well with 4900 psi.
12:48	0.12	FRAC	WLT			0		"Stage #9 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 15064' Perforate as follows: 15044' - 15045' 15001' - 15002' 15960' - 15961' 15915' - 15916' Stabilized pressure after perforating: 5300 psi Final pump down rate: 13 bpm Pump down volume: 132 bbl"
12:55	0.63	FRAC	WLT			0		POOH
13:33	0.28	FRAC	GRS			0		Routine UMW greasing.
13:50	0.08	FRAC	WLT			0		Shut in well with 4500 psi. Handover well to frac.
13:55	2.08	FRAC	OPO			0		Other Pad Ops
16:00	1.25	FRAC	FRT			1		***NPT*** Keane: Pump maintenance
17:15	0.12	FRAC	FRT			0		Continue with frac Ops stage 9
17:22	1.72	FRAC	FRT			0		Stage 9 Summary University 20 PW 2502H Interval 14915 - 15044 0 0 0 Open Well Pressure 4,300 0 0 psi Shut In Well Pressure 5,325 0 0 psi Max Treating Pressure 9,567 psi Max Slurry Rate 59.2 bpm Average Treating Pressure 9,069 psi Average Slurry Rate 53.1 bpm Average Rate w/ Prop on Bottom 55.2 bpm Breakdown Pressure 8,801 psi Breakdown Rate 10.0 bpm Breakdown Volume 294 gal

EP WELLS DAILY OPERATIONS REPORT

Report 15

04/14/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Avg HHP 11,803 hp Final ISIP 5,670 psi Frac Gradient 0.902 psi/ft Pad Volume 1,974 gal Main Body Volume 210,168 gal Flush Volume 18,900 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 422,150 lbs Proppant in Formation 422,150 lbs Avg Proppant Concentration 2.30 lb/gal Max Proppant Concentration 3.50 lb/gal Load to Recover 5,004 bbls Load to Recover w/o Acid 5,004 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,869 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 135 bbls pump down rate 13.0 bpm Max pump down pressure 6,900 psi Fluid Temp 76.4 ?F Total Pump Time 1:43 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 17:22 0:00 0:00 0:00 Treatment End Time 19:05 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was held at 0.5 PPA then ramped from 0.5 PPA to 2.0 PPA then stepped to 3.5 PPA - Ball in place plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 1:26:00 Hours : Minutes Estimated Cost from Job Packet \$ 32,472.56
19:05	0.05	FRAC	FWL			0		Other pad ops
19:08	0.12	FRAC	WLT			0		1908 Handover well to wireline. 1910 Pressure test lubricator to 5200 psi. 1915 Open well with 5100 psi.
19:15	1.75	FRAC	WLT			0		2031 "Stage #10 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 14892' Perforate as follows: 14873' - 14874' 14830' - 14831' 14787' - 14788' 14744' - 14745' Stabilized pressure after perforating: 5100 psi Final pump down rate: 12 bpm Pump down volume: 114 bbl" 2036 POOH
21:00	0.37	FRAC	GRS			0		2100 Routine UMW greasing.
21:22	0.13	FRAC	WLF			0		2122 Shut in well with 4500 psi. 2130 Handover well to frac.
21:30	2.50	FRAC	OPO			0		Other pad ops
Total	24.00							

EP WELLS DAILY OPERATIONS REPORT

Report 15

04/14/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	OPO			0	Other pad ops

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
04/14/2019 16:00				FRT	EN			1.25	2	
Description: Had to pull a couple pumps out and spot a couple pumps in. Then pressure test.						Title: Keane: Pump Maintenance				
Total								1.25		

EP WELLS DAILY OPERATIONS REPORT

Report 16

04/15/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	16.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Brett Oldenkamp/Lindy byerly	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Eric Brunet / Carly Haffner	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	Hole size(in)	
THF Datum			
Daily NPT(hr/%)	2.05/10.90	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	756,765/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	17,864	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	15

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
24 Hour Forecast

EP WELLS DAILY OPERATIONS REPORT

Report 16

04/15/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	4.95	FRAC	OPO			0		Other pad ops
4:57	1.88	FRAC	FRT			0		Stage 10 Summary University 20 PW 2502H Interval 14744 - 14873 0 0 0 Open Well Pressure 4,191 0 0 psi Shut In Well Pressure 5,300 0 0 psi Max Treating Pressure 9,628 psi Max Slurry Rate 64.2 bpm Average Treating Pressure 9,132 psi Average Slurry Rate 52.9 bpm Average Rate w/ Prop on Bottom 56.5 bpm Breakdown Pressure 8,195 psi Breakdown Rate 8.0 bpm Breakdown Volume 168 gal Avg HHP 11,840 hp Final ISIP 5,510 psi Frac Gradient 0.889 psi/ft Pad Volume 5,124 gal Main Body Volume 230,987 gal Flush Volume 18,984 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 419,500 lbs Proppant in Formation 419,500 lbs Avg Proppant Concentration 2.08 lb/gal Max Proppant Concentration 3.50 lb/gal Load to Recover 5,500 bbls Load to Recover w/o Acid 5,500 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 5,384 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 116 bbls pump down rate 12.0 bpm Max pump down pressure 6,400 psi Fluid Temp 76.4 ?F Total Pump Time 1:53 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 4:57 0:00 0:00 0:00 Treatment End Time 6:50 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.0 PPA then stepped to 3.5 PPA. - Ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 1:08:00 Hours : Minutes Estimated Cost from Job Packet \$ 33,383.91
6:50	2.67	FRAC	OPO			0		Other Pad Ops
9:30	0.13	FRAC	FWL			0		Handover well to wireline.
9:38	0.08	FRAC	FWL			0		Pressure test lubricator to 4600 psi.
9:43	1.05	FRAC	WLT			0		Open well with 4450 psi.
10:46	0.10	FRAC	WLT			0		"Stage #11 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 14722'

EP WELLS DAILY OPERATIONS REPORT

Report 16

04/15/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Perforate as follows: 14701' - 14702' 14658' - 14659' 14615' - 14616' 14572' - 14573' Stabilized pressure after perforating: 5200 psi Final pump down rate: 12 bpm Pump down volume: 105 bbl"
10:52	0.75	FRAC	WLT			0		POOH
11:37	0.18	FRAC	GRS			0		Routine UMW greasing.
11:48	0.12	FRAC	WLF			0		Shut in well with 4340 psi. Handover well to frac.
11:55	3.25	FRAC	OPO			0		Other Pad Ops
15:10	2.05	FRAC	WLF			1		***NPT***
17:13	1.58	FRAC	FRT			0		Keane: Pump Maintenance Stage 11 Summary University 20 PW 2502H Interval 14572 - 14701 0 0 0 Open Well Pressure 4,000 0 0 psi Shut In Well Pressure 5,275 0 0 psi Max Treating Pressure 9,791 psi Max Slurry Rate 65.6 bpm Average Treating Pressure 9,174 psi Average Slurry Rate 54.4 bpm Average Rate w/ Prop on Bottom 61.7 bpm Breakdown Pressure 8,262 psi Breakdown Rate 9.0 bpm Breakdown Volume 420 gal Avg HHP 12,232 hp Final ISIP 6,080 psi Frac Gradient 0.936 psi/ft Pad Volume 1,215 gal Main Body Volume 204,705 gal Flush Volume 19,320 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 424,350 lbs Proppant in Formation 424,350 lbs Avg Proppant Concentration 2.36 lb/gal Max Proppant Concentration 3.50 lb/gal Load to Recover 4,874 bbls Load to Recover w/o Acid 4,874 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,767 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 107 bbls pump down rate 12.0 bpm Max pump down pressure 6,500 psi Fluid Temp 76.4 ?F Total Pump Time 1:35 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 17:13 0:00 0:00 0:00 Treatment End Time 18:48 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.0 PPA then stepped to 3.5 PPA - Ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water

EP WELLS DAILY OPERATIONS REPORT

Report 16

04/15/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Time between Stages (TBF) 2:03:00 Hours : Minutes Estimated Cost from Job Packet \$ 32,660.73
Total	18.80							

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
04/15/2019 15:10	KEANE FRAC LP	Stimulation		WLF	EN		2.05	2.05	2	OPEN
Description: Had to change packing's on multiple pumps. Also had communication issues from pumps to the data van.						Title: FRAC: Pump Maintenance				
Total							2.05	2.05		

EP WELLS DAILY OPERATIONS REPORT

Report 17

04/16/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	17.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Brett Oldenkamp/Lindy byerly	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Eric Brunet / Carly Haffner	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	Hole size(in)	
THF Datum			
Daily NPT(hr/%)	1.77/7.36	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	999,609/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	128,986	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	16

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
24 Hour Forecast
Continue Frac Ops

EP WELLS DAILY OPERATIONS REPORT

Report 17

04/16/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.25	FRAC	FWL			0		Other pad ops
1:15	0.17	FRAC	WLT			0		1:15 Handover well to wireline. 1:20 Pressure test lubricator to 5000 psi. 1:25 Open well with 4000 psi.
1:25	1.58	FRAC	WLT			0		2:19 "Stage #12 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD HSC at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 14549' Perforate as follows: 14529' - 14530' 14487' - 14488' 14444' - 14445' 14403' - 14404' Stabilized pressure after perf.: 5200 psi Maximum pump down rate: 12 bpm Pump down volume: 91 bbl" 2:23 POOH
3:00	0.25	FRAC	WLF			0		3:00 Shut in well with 4100 psi. 3:15 Handover well to frac.
3:15	0.83	FRAC	OPO			0		Other pad ops
4:05	1.83	FRAC	FRT			0		Stage 12 Summary University 20 PW 2502H Interval 14401 - 14529 0 0 0 Open Well Pressure 4,132 0 0 psi Shut In Well Pressure 5,300 0 0 psi Max Treating Pressure 9,487 psi Max Slurry Rate 52.2 bpm Average Treating Pressure 8,483 psi Average Slurry Rate 48.8 bpm Average Rate w/ Prop on Bottom 50.1 bpm Breakdown Pressure 8,690 psi Breakdown Rate 10.0 bpm Breakdown Volume 210 gal Avg HHP 10,146 hp Final ISIP 5,558 psi Frac Gradient 0.893 psi/ft Pad Volume 1,848 gal Main Body Volume 206,727 gal Flush Volume 18,900 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 421,900 lbs Proppant in Formation 421,900 lbs Avg Proppant Concentration 2.32 lb/gal Max Proppant Concentration 3.50 lb/gal Load to Recover 4,922 bbls Load to Recover w/o Acid 4,922 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,831 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 91 bbls pump down rate 12.0 bpm Max pump down pressure 6,500 psi Fluid Temp 76.4 °F Total Pump Time 1:50 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 4:05 0:00 0:00 0:00 Treatment End Time 5:55 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt

EP WELLS DAILY OPERATIONS REPORT

Report 17

04/16/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								- No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.0 PPA then stepped to 3.5 PPA. - Ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 0:05:00 Hours : Minutes Estimated Cost from Job Packet \$ 32,625.59
5:55	5.42	FRAC	OPO			0		Other pad Ops
11:20	0.12	FRAC	FWL			0		Handover well to wireline.
11:27	0.10	FRAC	FWL			0		Pressure test lubricator to 4400 psi.
11:33	0.75	FRAC	WLT			0		Open well with 4150 psi.
12:18	0.07	FRAC	WLT			0		"Stage #13 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 14377' Perforate as follows: 14357' - 14358' 14315' - 14316' 14272' - 14273' 14229' - 14230' Stabilized pressure after perforating: 4500 psi Final pump down rate: 12 bpm Pump down volume: 91 bbl"
12:22	0.68	FRAC	WLT			0		POOH
13:03	0.12	FRAC	GRS			0		Routine UMW greasing.
13:10	0.08	FRAC	WLF			0		Shut in well with 4150 psi. Handover well to frac.
13:15	3.43	FRAC	WLF			0		Other Pad Ops
16:41	1.77	FRAC	FRT			1		***NPT*** Keane: Pumps Maintenance
18:27	1.67	FRAC	FRT			0		Stage 13 Summary University 20 PW 2502H Interval 14229 - 14358 0 0 0 Open Well Pressure 4,152 0 0 psi Shut In Well Pressure 5,289 0 0 psi Max Treating Pressure 9,708 psi Max Slurry Rate 62.9 bpm Average Treating Pressure 8,970 psi Average Slurry Rate 57.7 bpm Average Rate w/ Prop on Bottom 60.8 bpm Breakdown Pressure 8,771 psi Breakdown Rate 14.0 bpm Breakdown Volume 336 gal Avg HHP 12,686 hp Final ISIP 6,048 psi Frac Gradient 0.933 psi/ft Pad Volume 2,730 gal Main Body Volume 219,324 gal Flush Volume 18,816 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 419,370 lbs Proppant in Formation 419,370 lbs Avg Proppant Concentration 2.16 lb/gal Max Proppant Concentration 3.00 lb/gal Load to Recover 5,222 bbls Load to Recover w/o Acid 5,222 bbls

EP WELLS DAILY OPERATIONS REPORT

Report 17

04/16/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								15% HCL Spearhead 0 gal Slickwater Fluid Pumped 5,128 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 94 bbls pump down rate 12.0 bpm Max pump down pressure 6,700 psi Fluid Temp 76.4 °F Total Pump Time 1:40 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 18:27 0:00 0:00 0:00 Treatment End Time 20:07 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.0 PPA then stepped to 3.0 PPA - Ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 2:34:00 Hours : Minutes Estimated Cost from Job Packet \$ 33,146.28
20:07	0.43	FRAC	FWL			0		Other pad Ops
20:33	0.20	FRAC	WLT			0		20:33 Handover well to wireline. 20:38 Pressure test lubricator to 5000 psi. 20:45 Open well with 4800 psi.
20:45	1.62	FRAC	WLT			0		21:44 "Stage #14 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 14206' Perforate as follows: 14186' - 14187' 14143' - 14144' 14100' - 14101' 14058' - 14059' Stabilized pressure after perforating: 4700 psi Final pump down rate: 12 bpm Pump down volume: 74 bbl" 21:47 POOH
22:22	0.15	FRAC	GRS			0		22:22 Routine UMW greasing.
22:31	0.23	FRAC	WLF			0		22:31 Shut in well with 4500 psi. 22:45 Handover well to frac.
22:45	1.25	FRAC	OPO			0		Other pad ops
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	OPO			0	Other pad ops

EP WELLS DAILY OPERATIONS REPORT

Report 17

04/16/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

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
04/16/2019 16:41				FRT	EN			1.77	2	CLOSED
Description: Had 10 pumps when we started the stage and ended with 8. Had to replace packing on one and the greaser wasn't working on another pump. Also had communication problems with the pumps to the data van.						Title: Keane: Pump Maintenance				
Total								1.77		

EP WELLS DAILY OPERATIONS REPORT

Report 18

04/17/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	18.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Brett Oldenkamp/Lindy byerly	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Eric Brunet / Carly Haffner	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	1,131,457/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	128,876	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	17

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
24 Hour Forecast
Continue Frac Ops

EP WELLS DAILY OPERATIONS REPORT

Report 18

04/17/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	3.83	FRAC	WLF			0		Other pad ops
3:50	1.65	FRAC	FRT			0		Stage 14 Summary University 20 PW 2502H Interval 14058 - 14186 0 0 0 Open Well Pressure 4,392 0 0 psi Shut In Well Pressure 5,295 0 0 psi Max Treating Pressure 9,506 psi Max Slurry Rate 58.5 bpm Average Treating Pressure 8,608 psi Average Slurry Rate 54.4 bpm Average Rate w/ Prop on Bottom 57.0 bpm Breakdown Pressure 7,490 psi Breakdown Rate 10.0 bpm Breakdown Volume 252 gal Avg HHP 11,477 hp Final ISIP 5,581 psi Frac Gradient 0.895 psi/ft Pad Volume 2,268 gal Main Body Volume 205,884 gal Flush Volume 19,950 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 421,650 lbs Proppant in Formation 421,650 lbs Avg Proppant Concentration 2.34 lb/gal Max Proppant Concentration 3.50 lb/gal Load to Recover 4,902 bbls Load to Recover w/o Acid 4,902 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,825 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 77 bbls pump down rate 12.0 bpm Max pump down pressure 6,200 psi Fluid Temp 76.4 ?F Total Pump Time 1:39 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 3:50 0:00 0:00 0:00 Treatment End Time 5:29 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.0 PPA then stepped to 3.5 PPA - Ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 0:28:00 Hours : Minutes Estimated Cost from Job Packet \$ 32,823.14
5:29	4.43	FRAC	OPO			0		Other pad ops
9:55	0.23	FRAC	FWL			0		09:55 Handover well to wireline. 10:03 Pressure test lubricator to 4400 psi. 10:09 Open well with 4175 psi.
10:09	1.73	FRAC	WLT			0		11:02 "Stage #15 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 14034' Perforate as follows: 14015' - 14016' 13972' - 13973'

EP WELLS DAILY OPERATIONS REPORT

Report 18

04/17/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								13929' - 13930' 13890' - 13891' Stabilized pressure after perforating: 5456 psi Final pump down rate: 12 bpm Pump down volume: 83 bbl" 11:06 POOH
11:53	0.17	FRAC	GRS			0		Routine UMV greasing.
12:03	0.12	FRAC	WLF			0		Shut in well with 4175 psi. Handover well to frac.
12:10	3.72	FRAC	OPO			0		Other Pad Ops
15:53	1.55	FRAC	FRT			0		Stage 15 Summary University 20 PW 2502H Interval 13890 - 14015 0 0 0 Open Well Pressure 4,423 0 0 psi Shut In Well Pressure 5,420 0 0 psi Max Treating Pressure 9,547 psi Max Slurry Rate 64.7 bpm Average Treating Pressure 8,765 psi Average Slurry Rate 58.0 bpm Average Rate w/ Prop on Bottom 60.8 bpm Breakdown Pressure 7,520 psi Breakdown Rate 10.6 bpm Breakdown Volume 378 gal Avg HHP 12,460 hp Final ISIP 5,657 psi Frac Gradient 0.901 psi/ft Pad Volume 1,764 gal Main Body Volume 205,170 gal Flush Volume 18,774 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 438,720 lbs Proppant in Formation 438,720 lbs Avg Proppant Concentration 2.42 lb/gal Max Proppant Concentration 3.50 lb/gal Load to Recover 4,885 bbls Load to Recover w/o Acid 4,885 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,802 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 83 bbls pump down rate 12.0 bpm Max pump down pressure 7,053 psi Fluid Temp 76.4 ?F Total Pump Time 1:33 hr:min Pumps Lost During Job 1 0 0 0 Treatment Start Time 15:53 0:00 0:00 0:00 Treatment End Time 17:26 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.5 PPA then stepped to 3.5 PPA - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 0:18:00 Hours : Minutes Estimated Cost from Job Packet \$ 32,591.08
17:26		FRAC	OPO			0		Other Pad Ops
Total	17.43							

EP WELLS DAILY OPERATIONS REPORT

Report 18 04/17/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	OPO			0	Other Pad Ops

EP WELLS DAILY OPERATIONS REPORT

Report 19

04/18/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	19.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Brett Oldenkamp/Lindy byerly	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Eric Brunet / Carly Haffner	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	1,253,557/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	121,853	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	18

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
24 Hour Forecast
Continue Frac Ops

EP WELLS DAILY OPERATIONS REPORT

Report 19

04/18/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	7.10	FRAC	OPO			0		Other Pad Ops
7:06	0.17	FRAC	FWL			0		07:06 Handover well to wireline. 07:10 Pressure test lubricator to 4400 psi. 07:16 Open well with 3950 psi.
7:16	1.58	FRAC	WLT			0		08:04 "Stage #16 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 13862' Perforate as follows: 13842' - 13843' 13800' - 13801' 13757' - 13758' 13714' - 13715' Stabilized pressure after perforating: 5266 psi Final pump down rate: 12 bpm Pump down volume: 73 bbl" 08:08 POOH
8:51	0.23	FRAC	GRS			0		Routine UMV greasing.
9:05	0.08	FRAC	WLF			0		Shut in well with 4325 psi. Handover well to frac.
9:10	3.98	FRAC	OPO			0		Other Pad Ops
13:09	1.47	FRAC	FRT			0		Stage 16 Summary University 20 PW 2502H Interval 13714 - 13843 0 0 0 Open Well Pressure 4,344 0 0 psi Shut In Well Pressure 5,355 0 0 psi Max Treating Pressure 9,830 psi Max Slurry Rate 65.5 bpm Average Treating Pressure 8,916 psi Average Slurry Rate 59.2 bpm Average Rate w/ Prop on Bottom 61.7 bpm Breakdown Pressure 8,407 psi Breakdown Rate 10.8 bpm Breakdown Volume 336 gal Avg HHP 12,937 hp Final ISIP 5,569 psi Frac Gradient 0.894 psi/ft Pad Volume 3,024 gal Main Body Volume 197,736 gal Flush Volume 19,110 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 432,920 lbs Proppant in Formation 432,920 lbs Avg Proppant Concentration 2.51 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,708 bbls Load to Recover w/o Acid 4,708 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,635 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 73 bbls pump down rate 12.0 bpm Max pump down pressure 6,480 psi Fluid Temp 76.4 °F Total Pump Time 1:28 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 13:09 0:00 0:00 0:00 Treatment End Time 14:37 0:00 0:00 0:00 Diverter Slurry bbls

EP WELLS DAILY OPERATIONS REPORT

Report 19

04/18/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								- No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.5 PPA then stepped to 4.0 PPA - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 0:13:00 Hours : Minutes Estimated Cost from Job Packet \$ 32,217.26
14:37	2.27	FRAC	OPO			0		Other Pad Ops
16:53	0.23	FRAC	WLT			0		16:53 Handover well to wireline. 17:06 Pressure test lubricator to 4800 psi. 1707 Open well with 4300 psi.
17:07	1.88	FRAC	WLT			0		18:12 "Stage #17 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 13691' Perforate as follows: 13671' - 13672' 13629' - 13630' 13586' - 13587' 13543' - 13544' Stabilized pressure after perforating: 4700 psi Final pump down rate: 12 bpm Pump down volume: 68 bbl" 18:17 POOH
19:00	0.25	FRAC	GRS			0		19:00 Routine UMW greasing.
19:15	0.25	FRAC	WLF			0		19:15 Shut in well with 4200 psi. 19:30 Handover well to frac.
19:30	1.97	FRAC	OPO			0		Other pad ops
21:28	1.40	FRAC	FRT			0		Stage 17 Summary University 20 PW 2502H Interval 13543 - 13671 0 0 0 Open Well Pressure 4,382 0 0 psi Shut In Well Pressure 5,303 0 0 psi Max Treating Pressure 9,836 psi Max Slurry Rate 66.5 bpm Average Treating Pressure 9,219 psi Average Slurry Rate 59.9 bpm Average Rate w/ Prop on Bottom 61.8 bpm Breakdown Pressure 7,952 psi Breakdown Rate 10.0 bpm Breakdown Volume 126 gal Avg HHP 13,535 hp Final ISIP 5,348 psi Frac Gradient 0.875 psi/ft Pad Volume 1,260 gal Main Body Volume 189,252 gal Flush Volume 18,480 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 425,500 lbs Proppant in Formation 425,500 lbs Avg Proppant Concentration 2.56 lb/gal Max Proppant Concentration 3.00 lb/gal Load to Recover 4,506 bbls Load to Recover w/o Acid 4,506 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,435 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls

EP WELLS DAILY OPERATIONS REPORT

Report 19

04/18/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Pump down volume 71 bbls pump down rate 12.0 bpm Max pump down pressure 6,900 psi Fluid Temp 76.4 ?F Total Pump Time 1:24 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 21:28 0:00 0:00 0:00 Treatment End Time 22:52 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 3.0 PPA - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 0:10:00 Hours : Minutes Estimated Cost from Job Packet \$ 31,884.80
22:52	1.13	FRAC	OPO			0		Other pad ops
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	3.00	FRAC	OPO			0	Other pad ops
3:00		FRAC	OPO			0	Wireline lay down lubricator to repack stuffing box

EP WELLS DAILY OPERATIONS REPORT

Report 20

04/19/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	20.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Brett Oldenkamp	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Eric Brunet / Carly Haffner	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	1,385,897/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	126,095	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	19

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
24 Hour Forecast
Continue Frac Ops

EP WELLS DAILY OPERATIONS REPORT

Report 20

04/19/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	3.00	FRAC	OPO			0		Other pad ops
3:00	3.50	FRAC	OPO			0		Wireline lay down lubricator to repack stuffing box
6:30	0.38	FRAC	FWL			0		06:30 Handover well to wireline. 06:40 Pressure test lubricator to 8000 psi. 06:53 Open well with 4200 psi.
6:53	1.53	FRAC	WLT			0		07:41 "Stage #18 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 13519' Perforate as follows: 13500' - 13501' 13457' - 13458' 13414' - 13415' 13371' - 13372' Stabilized pressure after perforating: 5156 psi Final pump down rate: 12 bpm Pump down volume: 63 bbl" 07:46 POOH
8:25	0.27	FRAC	GRS			0		Routine UMW greasing.
8:41	0.15	FRAC	WLF			0		Shut in well with 4050 psi. Handover well to frac.
8:50	0.32	FRAC	FRP			0		Frac Prep
9:09	1.43	FRAC	FRT			0		Stage 18 Summary University 20 PW 2502H Interval 13371 - 13500 0 0 0 Open Well Pressure 4,000 0 0 psi Shut In Well Pressure 5,200 0 0 psi Max Treating Pressure 9,592 psi Max Slurry Rate 63.7 bpm Average Treating Pressure 9,085 psi Average Slurry Rate 53.8 bpm Average Rate w/ Prop on Bottom 59.3 bpm Breakdown Pressure 9,009 psi Breakdown Rate 10.6 bpm Breakdown Volume 378 gal Avg HHP 11,980 hp Final ISIP 5,637 psi Frac Gradient 0.899 psi/ft Pad Volume 1,932 gal Main Body Volume 179,466 gal Flush Volume 18,480 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 430,790 lbs Proppant in Formation 430,790 lbs Avg Proppant Concentration 2.75 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,273 bbls Load to Recover w/o Acid 4,273 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,210 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 63 bbls pump down rate 12.0 bpm Max pump down pressure 6,550 psi Fluid Temp 76.4 ?F Total Pump Time 1:26 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 9:09 0:00 0:00 0:00

EP WELLS DAILY OPERATIONS REPORT

Report 20

04/19/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Treatment End Time 10:35 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.5 PPA then stepped up to 4.0 PPA - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 3:38:00 Hours : Minutes Estimated Cost from Job Packet \$ 31,626.78
10:35	5.67	FRAC	OPO			0		Other Pad Ops
16:15	0.15	FRAC	WLT			0		16:15 Handover well to wireline. 16:19 Pressure test lubricator to 4400 psi. 16:24 Open well with 4000 psi.
16:24	1.60	FRAC	WLT			0		17:07 "Stage #19 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 13348' Perforate as follows: 13326' - 13327' 13285' - 13286' 13242' - 13243' 13200' - 13201' Stabilized pressure after perforating: 4902 psi Final pump down rate: 11 bpm Pump down volume: 54 bbl" 17:11 POOH
18:00	0.20	FRAC	GRS			0		18:00 Routine UMW greasing.
18:12	0.13	FRAC	WLF			0		18:12 Shut in well with 4100 psi. 18:20 Handover well to frac.
18:20	1.98	FRAC	OPO			0		Other pad ops
20:19	1.38	FRAC	FRT			0		Stage 19 Summary University 20 PW 2502H Interval 13200 - 13328 0 0 0 Open Well Pressure 4,052 0 0 psi Shut In Well Pressure 5,343 0 0 psi Max Treating Pressure 9,719 psi Max Slurry Rate 63.2 bpm Average Treating Pressure 8,702 psi Average Slurry Rate 59.3 bpm Average Rate w/ Prop on Bottom 61.7 bpm Breakdown Pressure 8,772 psi Breakdown Rate 10.0 bpm Breakdown Volume 210 gal Avg HHP 12,648 hp Final ISIP 5,931 psi Frac Gradient 0.924 psi/ft Pad Volume 1,764 gal Main Body Volume 182,700 gal Flush Volume 18,270 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 427,700 lbs Proppant in Formation 427,700 lbs Avg Proppant Concentration 2.67 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,350 bbls Load to Recover w/o Acid 4,350 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,296 bbls

EP WELLS DAILY OPERATIONS REPORT

Report 20

04/19/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 54 bbls pump down rate 11.0 bpm Max pump down pressure 6,015 psi Fluid Temp 76.4 ?F Total Pump Time 1:23 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 20:19 0:00 0:00 0:00 Treatment End Time 21:42 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.5 PPA then stepped up to 4.0 PPA - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 1:00:00 Hours : Minutes Estimated Cost from Job Packet \$ 31,969.15
21:42	2.30	FRAC	OPO			0		Other pad ops
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	OPO			0	Other pad ops

EP WELLS DAILY OPERATIONS REPORT

Report 21

04/20/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	21.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Brett Oldenkamp	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Eric Brunet / Carly Haffner	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	1,454,895/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	68,998	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	20

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
24 Hour Forecast
Continue Frac Ops

EP WELLS DAILY OPERATIONS REPORT

Report 21

04/20/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	3.00	FRAC	OPO			0		Other pad ops
3:00	0.27	FRAC	WLT			0		03:00 Handover well to wireline. 03:09 Pressure test lubricator to 4800 psi. 03:16 Open well with 4100 psi.
3:16	1.55	FRAC	WLT			0		04:09 "Stage #20 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 13176' Perforate as follows: 13157' - 13158' 13114' - 13115' 13071' - 13072' 13028' - 13029' Stabilized pressure after perforating: 4700 psi Final pump down rate: 12 bpm Pump down volume: 46 bbl" 04:12 POOH
4:49	0.35	FRAC	GRS			0		04:49 Routine UMW greasing.
5:10	0.17	FRAC	WLF			0		05:10 Shut in well with 4100 psi. 05:20 Handover well to frac.
5:20	7.58	FRAC	WLF			0		Other pad ops
12:55	1.45	FRAC	FRT			0		Stage 20 Summary University 20 PW 2502H Interval 13028 - 13157 0 0 0 Open Well Pressure 4,004 0 0 psi Shut In Well Pressure 5,394 0 0 psi Max Treating Pressure 9,378 psi Max Slurry Rate 58.6 bpm Average Treating Pressure 8,365 psi Average Slurry Rate 55.4 bpm Average Rate w/ Prop on Bottom 57.3 bpm Breakdown Pressure 7,919 psi Breakdown Rate 9.3 bpm Breakdown Volume 210 gal Avg HHP 11,358 hp Final ISIP 5,654 psi Frac Gradient 0.901 psi/ft Pad Volume 5,670 gal Main Body Volume 179,466 gal Flush Volume 19,362 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 429,300 lbs Proppant in Formation 429,300 lbs Avg Proppant Concentration 2.82 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,273 bbls Load to Recover w/o Acid 4,273 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,226 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 47 bbls pump down rate 12.0 bpm Max pump down pressure 6,200 psi Fluid Temp 76.4 °F Total Pump Time 1:27 hr:min Pumps Lost During Job 2 0 0 0 Treatment Start Time 12:55 0:00 0:00 0:00 Treatment End Time 14:22 0:00 0:00 0:00 Diverter Slurry bbls

EP WELLS DAILY OPERATIONS REPORT

Report 21

04/20/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								- No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 3.0 PPA then stepped up to 4.0 PPA - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 1:24:00 Hours : Minutes Estimated Cost from Job Packet \$ 31,946.23
14:22	1.20	FRAC	OPO			0		Other Pad Ops
15:34	0.22	FRAC	FWL			0		15:34 Handover well to wireline. 15:46 Pressure test lubricator to 4700 psi. 15:47 Open well with 5000 psi.
15:47	1.63	FRAC	WLT			0		16:46 "Stage #21 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 13004' Perforate as follows: 12985' - 12986' 12942' - 12943' 12899' - 12900' 12859' - 12860' Stabilized pressure after perforating: 5078 psi Final pump down rate: 12 bpm Pump down volume: 46 bbl" 16:50 POOH
17:25	0.25	FRAC	GRS			0		Routine UMW greasing.
17:40	0.12	FRAC	WLF			0		17:40 Shut in well with 4700 psi. 17:47 Handover well to frac.
17:47	6.22	FRAC	OPO			0		Other pad ops
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	3.28	FRAC	WLF			0	Other pad ops
3:17	1.30	FRAC	FRT			0	Stage 21 Summary University 20 PW 2502H Interval 12859 - 12985 0 0 0 Open Well Pressure 4,063 0 0 psi Shut In Well Pressure 5,408 0 0 psi Max Treating Pressure 9,633 psi Max Slurry Rate 63.2 bpm Average Treating Pressure 8,932 psi Average Slurry Rate 59.1 bpm Average Rate w/ Prop on Bottom 61.6 bpm Breakdown Pressure 8,270 psi Breakdown Rate 11.0 bpm Breakdown Volume 210 gal Avg HHP 12,938 hp Final ISIP 5,587 psi Frac Gradient 0.895 psi/ft Pad Volume 1,218 gal Main Body Volume 170,352 gal Flush Volume 18,102 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 423,420 lbs

EP WELLS DAILY OPERATIONS REPORT

Report 21

04/20/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
							Proppant in Formation 423,420 lbs Avg Proppant Concentration 2.84 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,056 bbls Load to Recover w/o Acid 4,056 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,010 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 46 bbls pump down rate 12.0 bpm Max pump down pressure 6,281 psi Fluid Temp 76.4 °F Total Pump Time 1:18 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 3:17 0:00 0:00 0:00 Treatment End Time 4:35 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 3.0 PPA then stepped up to 4.0 PPA. - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 1:27:00 Hours : Minutes Estimated Cost from Job Packet \$ 31,306.51
4:35	0.05	FRAC	FWL			0	Pad ops
4:38	0.12	FRAC	FWL			0	04:38 Handover well to wireline. 04:40 Pressure test lubricator to 5500 psi. 04:45 Open well with 5200 psi.
4:45		FRAC	FWL			0	

EP WELLS DAILY OPERATIONS REPORT

Report 22

04/21/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	22.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Brett Oldenkamp	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Eric Brunet / Carly Haffner	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	1,627,991/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	170,023	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	21

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
24 Hour Forecast
Continue Frac Ops

EP WELLS DAILY OPERATIONS REPORT

Report 22

04/21/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	3.28	FRAC	WLF			0		Other pad ops
3:17	1.30	FRAC	FRT			0		Stage 21 Summary University 20 PW 2502H Interval 12859 - 12985 0 0 0 Open Well Pressure 4,063 0 0 psi Shut In Well Pressure 5,408 0 0 psi Max Treating Pressure 9,633 psi Max Slurry Rate 63.2 bpm Average Treating Pressure 8,932 psi Average Slurry Rate 59.1 bpm Average Rate w/ Prop on Bottom 61.6 bpm Breakdown Pressure 8,270 psi Breakdown Rate 11.0 bpm Breakdown Volume 210 gal Avg HHP 12,938 hp Final ISIP 5,587 psi Frac Gradient 0.895 psi/ft Pad Volume 1,218 gal Main Body Volume 170,352 gal Flush Volume 18,102 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 423,420 lbs Proppant in Formation 423,420 lbs Avg Proppant Concentration 2.84 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,056 bbls Load to Recover w/o Acid 4,056 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,010 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 46 bbls pump down rate 12.0 bpm Max pump down pressure 6,281 psi Fluid Temp 76.4 ?F Total Pump Time 1:18 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 3:17 0:00 0:00 0:00 Treatment End Time 4:35 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 3.0 PPA then stepped up to 4.0 PPA. - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 1:27:00 Hours : Minutes Estimated Cost from Job Packet \$ 31,306.51
4:35	0.05	FRAC	FWL			0		Pad ops
4:38	0.12	FRAC	WLT			0		04:38 Handover well to wireline. 04:40 Pressure test lubricator to 5500 psi. 04:45 Open well with 5200 psi.
4:45	1.97	FRAC	WLT			0		05:47 "Stage #22 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 12833' Perforate as follows: 12813' - 12814' 12771' - 12772'

EP WELLS DAILY OPERATIONS REPORT

Report 22

04/21/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								12728' - 12729' 12685' - 12686' Stabilized pressure after perforating: 4900 psi Final pump down rate: 12 bpm Pump down volume: 41 bbl" 05:52 POOH
6:43	0.08	FRAC	GRS			0		Routine UMV greasing.
6:48	0.12	FRAC	WLF			0		06:48 Shut in well with 4600 psi. 06:55 Handover well to frac.
6:55	4.42	FRAC	OPO			0		Other pad operations.
11:20	1.40	FRAC	FRT			0		Stage 22 Summary University 20 PW 2502H Interval 12685 - 12813 0 0 0 Open Well Pressure 4,315 0 0 psi Shut In Well Pressure 5,330 0 0 psi Max Treating Pressure 9,803 psi Max Slurry Rate 63.9 bpm Average Treating Pressure 9,374 psi Average Slurry Rate 56.1 bpm Average Rate w/ Prop on Bottom 59.7 bpm Breakdown Pressure 8,801 psi Breakdown Rate 17.1 bpm Breakdown Volume 966 gal Avg HHP 12,889 hp Final ISIP 5,847 psi Frac Gradient 0.917 psi/ft Pad Volume 1,974 gal Main Body Volume 180,894 gal Flush Volume 18,732 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 433,340 lbs Proppant in Formation 433,340 lbs Avg Proppant Concentration 2.74 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,307 bbls Load to Recover w/o Acid 4,307 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,264 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 43 bbls pump down rate 12.0 bpm Max pump down pressure 6,400 psi Fluid Temp 76.4 ?F Total Pump Time 1:24 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 11:20 0:00 0:00 0:00 Treatment End Time 12:44 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 3.0 PPA then stepped to 4.0 PPA. - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 0:12:00 Hours : Minutes Estimated Cost from Job Packet \$ 31,862.95
12:44	2.13	FRAC	OPO			0		Other Pad Ops
14:52	1.43	FRAC	WLT			0		14:52 Handover well to wireline. Wait on pumpdown pump maintenance and 2503H/2504H RigLock maintenance.

EP WELLS DAILY OPERATIONS REPORT

Report 22

04/21/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								16:14 Pressure test lubricator to 4600 psi. 16:18 Open well with 4300 psi.
16:18	1.62	FRAC	WLT			0		17:05 "Stage #23 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 12661' Perforate as follows: 12642' - 12643' 12599' - 12600' 12556' - 12557' 12513' - 12514' Stabilized pressure after perforating: 4760 psi Final pump down rate: 12 bpm Pump down volume: 36 bbl" 17:10 POOH
17:55	0.23	FRAC	GRS			0		17:55 Routine UMW greasing.
18:09	0.18	FRAC	WLF			0		18:09 Shut in well with 4100 psi. 18:20 Handover well to frac.
18:20	3.93	FRAC	OPO			0		Other pad ops
22:16	1.30	FRAC	FRT			0		Stage 23 Summary University 20 PW 2502H Interval 12513 - 12642 0 0 0 Open Well Pressure 4,151 0 0 psi Shut In Well Pressure 5,327 0 0 psi Max Treating Pressure 9,846 psi Max Slurry Rate 66.4 bpm Average Treating Pressure 8,927 psi Average Slurry Rate 60.1 bpm Average Rate w/ Prop on Bottom 63.4 bpm Breakdown Pressure 8,279 psi Breakdown Rate 13.0 bpm Breakdown Volume 210 gal Avg HHP 13,150 hp Final ISIP 5,354 psi Frac Gradient 0.876 psi/ft Pad Volume 3,024 gal Main Body Volume 174,594 gal Flush Volume 17,808 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 432,620 lbs Proppant in Formation 432,620 lbs Avg Proppant Concentration 2.84 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,157 bbls Load to Recover w/o Acid 4,157 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,121 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 36 bbls pump down rate 12.0 bpm Max pump down pressure 7,054 psi Fluid Temp 76.4 °F Total Pump Time 1:18 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 22:16 0:00 0:00 0:00 Treatment End Time 23:34 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped.

EP WELLS DAILY OPERATIONS REPORT

Report 22

04/21/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								- Proppant was ramped from 0.5 PPA to 3.0 PPA then stepped to 4.0 PPA. - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 1:45:00 Hours : Minutes Estimated Cost from Job Packet \$ 31,421.47
23:34	0.43	FRAC	OPO			0		Other pad ops
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	FRT			0	

EP WELLS DAILY OPERATIONS REPORT

Report 23

04/22/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	23.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Brett Oldenkamp	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Eric Brunet / Carly Haffner	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	1,709,907/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	72,782	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	22

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
24 Hour Forecast
Continue Frac Ops

EP WELLS DAILY OPERATIONS REPORT

Report 23

04/22/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	10.35	FRAC	OPO			0		Other Pad Ops
10:21	0.22	FRAC	OPO			0		10:21 Handover well to wireline. 10:28 Pressure test lubricator to 4600 psi. 10:34 Open well with 4200 psi.
10:34	1.57	FRAC	WLT			0		11:27 "Stage #24 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 12490' Perforate as follows: 12470' - 12471' 12427' - 12428' 12384' - 12385' 12342' - 12343' Stabilized pressure after perforating: 5043 psi Final pump down rate: 12 bpm Pump down volume: 32 bbl" 11:31 POOH
12:08	0.20	FRAC	GRS			0		Routine UMV greasing.
12:20	0.10	FRAC	WLF			0		Shut in well with 4200 psi. Handover well to frac.
12:26	0.28	FRAC	OPO			0		Other Pad Ops
12:43	1.67	FRAC	FRT			0		Stage 24 Summary University 20 PW 2502H Interval 12342 - 12470 0 0 0 Open Well Pressure 4,190 0 0 psi Shut In Well Pressure 5,180 0 0 psi Max Treating Pressure 9,918 psi Max Slurry Rate 65.5 bpm Average Treating Pressure 8,952 psi Average Slurry Rate 54.4 bpm Average Rate w/ Prop on Bottom 60.3 bpm Breakdown Pressure 8,933 psi Breakdown Rate 13.1 bpm Breakdown Volume 462 gal Avg HHP 11,936 hp Final ISIP 5,845 psi Frac Gradient 0.917 psi/ft Pad Volume 2,982 gal Main Body Volume 209,580 gal Flush Volume 19,866 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 408,710 lbs Proppant in Formation 408,710 lbs Avg Proppant Concentration 2.20 lb/gal Max Proppant Concentration 3.50 lb/gal Load to Recover 4,990 bbls Load to Recover w/o Acid 4,990 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,958 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 32 bbls pump down rate 12.0 bpm Max pump down pressure 6,785 psi Fluid Temp 76.4 °F Total Pump Time 1:40 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 12:43 0:00 0:00 0:00 Treatment End Time 14:23 0:00 0:00 0:00 Diverter Slurry bbls

EP WELLS DAILY OPERATIONS REPORT

Report 23

04/22/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								- No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCl was pumped. - Proppant was ramped from 0.5 PPA to 2.5 PPA then stepped up to 3.5 PPA. Experienced increasing pressure at 3.5 PPA and dropped back down to 3.0 PPA. Stepped back up to 3.5 PPA after pressure lined out. - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 0:19:00 Hours : Minutes Estimated Cost from Job Packet \$ 32,676.16
14:23	9.62	FRAC	OPO			0		Other Pad Ops
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	OPO			0	Other Pad Ops

EP WELLS DAILY OPERATIONS REPORT

Report 24

04/23/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	24.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Brett Oldenkamp	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Eric Brunet / Carly Haffner	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	1,727,691/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	17,784	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	23

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
24 Hour Forecast
Continue Frac Ops

EP WELLS DAILY OPERATIONS REPORT

Report 24

04/23/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	24.00	FRAC	OPO			0		Other Pad Ops
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	OPO			0	Other Pad Ops

EP WELLS DAILY OPERATIONS REPORT

Report 25

04/24/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	25.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Nick Morrison	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Matt Randolph / Mike Parker	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	Hole size(in)	
THF Datum			
Daily NPT(hr/%)	3.00/12.50	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	1,745,211/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	17,519	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:							
Man Hours See 1H							

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	24

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
24 Hour Forecast
Continue Frac Ops

EP WELLS DAILY OPERATIONS REPORT

Report 25

04/24/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	8.73	FRAC	OPO			0		Other Pad Ops
8:44	0.15	FRAC	FWL			0		Equalize to 4700 psi. Open well with 4200 psi. Flush well. 2H Flush - Stage 25 4/24/2019 Start Time 8:39 Max PSI 9344 Start PSI 4194 Avg PSI 7842 End Time 8:53 Max Rate 46.4 End PSI 5416 Avg Rate 29.4 ISIP 5840 Total BBL 384
8:53	0.28	FRAC	WLT			0		Handover well to wireline. Pressure test lubricator to 5700 psi. Open well with 4700 psi.
9:10	1.00	FRAC	WLT			0		"Stage #25 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 12318' Perforate as follows: 12299' - 12300' 12256' - 12257' 12213' - 12214' 12170' - 12171' Stabilized pressure after perforating: 5229 psi Final pump down rate: 12 bpm Pump down volume: 22 bbl"
10:10	0.75	FRAC	WLT			0		POOH
10:55	0.28	FRAC	WLF			0		Routine UMW greasing and wing valves Shut in well with 4300 psi. Handover well to frac.
11:12	1.13	FRAC	WLF			0		Grease zipper manifold
12:20	6.98	FRAC	OPO			0		Other pad operations
19:19	0.52	FRAC	WLF			0		WL to Frac
19:50	1.02	FRAC	FRT			0		Open Well @ 4280 psi, Stage 25
20:51	0.58	FRAC	FRT			1		Start NPT, Bear failed will not start, CIG
21:26	2.38	FRAC	NOA			1		SI well @ 5500 psi, Bleed to 0 psi, Stand by to repair Bear, CIG
23:49	0.03	FRAC	FRT			1		EQ = 4500 psi
23:51	0.15	FRAC	FRT			0		Open Well @ 4250 psi, Round 2
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	1.80	FRAC	FRT			0	Stage 25 Summary University 20 PW 2502H Interval 12170 - 12301 Flush Frac 1 Frac 2 Open Well Pressure 4,194 4,280 4,250 psi Shut In Well Pressure 5,416 5,500 5,200 psi Max Treating Pressure 9,978 psi Max Slurry Rate 65.5 bpm Average Treating Pressure 9,038 psi Average Slurry Rate 54.8 bpm Average Rate w/ Prop on Bottom 61.9 bpm Breakdown Pressure 9,978 psi

EP WELLS DAILY OPERATIONS REPORT

Report 25

04/24/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
							Breakdown Rate 11.0 bpm Breakdown Volume 336 gal Avg HHP 12,139 hp Final ISIP 5,409 psi Frac Gradient 0.881 psi/ft Pad Volume 15,994 gal Main Body Volume 272,130 gal Flush Volume 36,288 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 433,310 lbs Proppant in Formation 433,310 lbs Avg Proppant Concentration 1.98 lb/gal Max Proppant Concentration 3.50 lb/gal Load to Recover 6,479 bbls Load to Recover w/o Acid 6,473 bbls 15% HCL Spearhead 267 gal Slickwater Fluid Pumped 6,451 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 22 bbls pump down rate 12.0 bpm Max pump down pressure 7,538 psi Fluid Temp 76.4 °F Total Pump Time 3:12 hr:min Pumps Lost During Job 0 Flush Frac 1 Frac 2 Treatment Start Time 8:39 19:49 23:52 0:00 Treatment End Time 8:53 20:51 1:48 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - 267 gallons of 15% HCl was pumped. - Soaked acid for 30 minutes then shut down due to CIG having issues with their belt - Sand was stepped from 0.5 PPA to 3.5 PPA - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water - The well was flushed prior to wireline making their run Time between Stages (TBF) 3:01:00 Hours : Minutes Estimated Cost from Job Packet \$ 35,259.70
1:48	0.22	FRAC	FWL			0	SI Well @ 5200 psi, Frac To WL Pressure test lubricator to 5700 psi. Open well with 4800 psi.
2:01		FRAC	WLT			0	"Stage #26 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Eco composite ball-in-place frac plug. Set plug @ 12146' Perforate as follows: 12127' - 12128' 12084' - 12085' 12041' - 12042' 11998' - 11999' Stabilized pressure after perforating: 5000 psi Final pump down rate: 9 bpm Pump down volume: 14 bbl"

EP WELLS DAILY OPERATIONS REPORT

Report 25

04/24/2019

Well
WellboreUNIVERSITY 20 PW 2502H
UNIVERSITY 20 PW 2502H

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
04/24/2019 20:51	CONTINENTAL INTERMODAL GROUP	Sand Control		FRT	EN	Frac - Other Equipment	3.00	3.00		OPEN
Description: Bear that operates the Sand Storn failed, will not start. Replaced with back up.						Title: Bear that operates the Sand Storn failed, will not start.				
Total							3.00	3.00		

EP WELLS DAILY OPERATIONS REPORT

Report 26

04/25/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	26.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Nick Morrison	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Matt Randolph / Mike Parker	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	Hole size(in)	
THF Datum			
Daily NPT(hr/%)	1.00/4.17	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	1,921,669/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	176,458	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:							
Man Hours, see 1H report							

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	25

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
27
24 Hour Forecast
Continue Frac Ops

EP WELLS DAILY OPERATIONS REPORT

Report 26

04/25/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.80	FRAC	FRT			0		Stage 25 Summary University 20 PW 2502H Interval 12170 - 12301 Flush Frac 1 Frac 2 Open Well Pressure 4,194 4,280 4,250 psi Shut In Well Pressure 5,416 5,500 5,200 psi Max Treating Pressure 9,978 psi Max Slurry Rate 65.5 bpm Average Treating Pressure 9,038 psi Average Slurry Rate 54.8 bpm Average Rate w/ Prop on Bottom 61.9 bpm Breakdown Pressure 9,978 psi Breakdown Rate 11.0 bpm Breakdown Volume 336 gal Avg HHP 12,139 hp Final ISIP 5,409 psi Frac Gradient 0.881 psi/ft Pad Volume 15,994 gal Main Body Volume 272,130 gal Flush Volume 36,288 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 433,310 lbs Proppant in Formation 433,310 lbs Avg Proppant Concentration 1.98 lb/gal Max Proppant Concentration 3.50 lb/gal Load to Recover 6,479 bbls Load to Recover w/o Acid 6,473 bbls 15% HCL Spearhead 267 gal Slickwater Fluid Pumped 6,451 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 22 bbls pump down rate 12.0 bpm Max pump down pressure 7,538 psi Fluid Temp 76.4 ?F Total Pump Time 3:12 hr:min Pumps Lost During Job 0 Flush Frac 1 Frac 2 Treatment Start Time 8:39 19:49 23:52 0:00 Treatment End Time 8:53 20:51 1:48 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - 267 gallons of 15% HCl was pumped. - Soaked acid for 30 minutes then shut down due to CIG having issues with their belt - Sand was stepped from 0.5 PPA to 3.5 PPA - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water - The well was flushed prior to wireline making their run Time between Stages (TBF) 3:01:00 Hours : Minutes Estimated Cost from Job Packet \$ 35,259.70
1:48	0.22	FRAC	FWL			0		SI Well @ 5200 psi, Frac To WL Pressure test lubricator to 5700 psi. Open well with 4800 psi.
2:01	0.98	FRAC	WLT			0		"Stage #26 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Eco composite ball-in-place frac plug. Set plug @ 12146' Perforate as follows: 12127' - 12128' 12084' - 12085' 12041' - 12042'

EP WELLS DAILY OPERATIONS REPORT

Report 26

04/25/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								11998' - 11999' Stabilized pressure after perforating: 5000 psi Final pump down rate: 9 bpm Pump down volume: 14 bbl"
3:00	1.00	FRAC	WLT			0		POOH
4:00	0.33	FRAC	WLT			0		Routine UMW greasing. Shut in well with 4700 psi Handover well to frac.
4:20	4.45	FRAC	WLF			0		Other pad operations
8:47	0.93	FRAC	FRP			0		Pump maintenance
9:43	0.25	FRAC	FRP			0		Pressure test to 9800 psi. equalize open well with 4250 psi
9:58	0.53	FRAC	FRT			0		Start frac stage 26
10:30	1.00	FRAC				1		Went to flush zipper 3 H leaking by
11:30	1.57	FRAC				0		Stage 26 Summary University 20 PW 2502H Interval 11998 - 12127 Frac A Frac B 0 Open Well Pressure 4,250 5,140 0 psi Shut In Well Pressure 5,374 5,350 0 psi Max Treating Pressure 9,654 psi Max Slurry Rate 64.3 bpm Average Treating Pressure 9,214 psi Average Slurry Rate 56.5 bpm Average Rate w/ Prop on Bottom 57.9 bpm Breakdown Pressure 9,298 psi Breakdown Rate 10.3 bpm Breakdown Volume 546 gal Avg HHP 12,760 hp Final ISIP 5,503 psi Frac Gradient 0.888 psi/ft Pad Volume 4,998 gal Main Body Volume 266,070 gal Flush Volume 32,046 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 429,720 lbs Proppant in Formation 429,720 lbs Avg Proppant Concentration 2.08 lb/gal Max Proppant Concentration 3.50 lb/gal Load to Recover 6,335 bbls Load to Recover w/o Acid 6,335 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 6,318 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 17 bbls pump down rate 9.0 bpm Max pump down pressure 5,900 psi Fluid Temp 76.4 ?F Total Pump Time 2:15 hr:min Pumps Lost During Job 0 Frac A Frac B 0 Treatment Start Time 9:57 11:19 0:00 0:00 Treatment End Time 10:28 13:03 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - Sand was initially started with a 0.5 PPA hold due to pressure - Sand was ramped 0.5 PPA to 2.5 PPA then stepped to 3.5 PPA - After 344 bbls into the ramp, we cut sand and flushed the well due to pressure leaking by the zipper manifold. - A ball in place style plug was used

EP WELLS DAILY OPERATIONS REPORT

Report 26

04/25/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								- All proppant was placed and the stage was treated with Fresh water - Datavan computer crashed during the second ramp after 650 bbls. Cut sand and swept while the computer rebooted. Resumed the ramp once the computers rebooted. Time between Stages (TBF) 1:11:00 Hours : Minutes Estimated Cost from Job Packet \$ 34,603.34
13:04	0.25	FRAC	FWL			0		Handover well to wireline. Pressure test lubricator to 5200 psi. Open well with 4900 psi.
13:19	1.03	FRAC	WLT			0		"Stage #27 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Boss Hog composite ball-in-place frac plug. Set plug @ 11975' Perforate as follows: 11955' - 11956' 11913' - 11914' 11870' - 11871' 11827' - 11828' Stabilized pressure after perforating: 5091 psi Final pump down rate: 9 bpm Pump down volume: 10 bbl"
14:21	0.48	FRAC	WLT			0		Pooh
14:50	0.20	FRAC	WLF			0		Routine UMW greasing and crown valve Shut in well with 4600 psi. Handover well to frac.
15:02	6.37	FRAC	WLF			0		Other pad Operations
21:24	0.62	FRAC	WLF			0		WL to Frac, PTest = 9800 psi, EQ = 4500 psi Open well @ 4100 psi
22:01	1.52	FRAC	FRT			0		Stage 27 Summary University 20 PW 2502H Interval 11827 - 11955 0 0 0 Open Well Pressure 4,100 0 0 psi Shut In Well Pressure 5,000 0 0 psi Max Treating Pressure 9,644 psi Max Slurry Rate 65.5 bpm Average Treating Pressure 8,586 psi Average Slurry Rate 61.2 bpm Average Rate w/ Prop on Bottom 64.3 bpm Breakdown Pressure 8,370 psi Breakdown Rate 7.0 bpm Breakdown Volume 252 gal Avg HHP 12,879 hp Final ISIP 5,147 psi Frac Gradient 0.859 psi/ft Pad Volume 3,954 gal Main Body Volume 179,468 gal Flush Volume 16,884 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 416,380 lbs Proppant in Formation 416,380 lbs Avg Proppant Concentration 2.63 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,273 bbls Load to Recover w/o Acid 4,273 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,263 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 10 bbls pump down rate 9.0 bpm Max pump down pressure 6,423 psi

EP WELLS DAILY OPERATIONS REPORT

Report 26

04/25/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								Fluid Temp 76.4 ?F Total Pump Time 1:36 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 22:01 0:00 0:00 0:00 Treatment End Time 23:37 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCL was pumped - Sand was stepped from 0.5 PPA then ramped 1.0 PPA to 3.0 PPA then stepped to 4.0 PPA - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 0:36:00 Hours : Minutes Estimated Cost from Job Packet \$ 31,853.68
23:32	0.47	FRAC	WLF			0		SI Well @ 5000 psi, Frac to WL Pressure test lubricator to 5200 psi. Open well with 4800 psi. WL stage 28
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	1.57	FRAC	WLT			0	"Stage #28 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Eco composite ball-in-place frac plug. Set plug @ 11803' Perforate as follows: 11784' - 11785' 11741' - 11742' 11698' - 11699' 11808' - 11809' Stabilized pressure after perforating: 4900 psi Final pump down rate: 3 bpm Pump down volume: 4 bbl"
1:34	0.17	FRAC	WLF			0	POOH 0102 hrs Routine UMW,Fcross, Pdown, inner/outer wing Shut in well with 4500 psi. Handover well to frac, WL to Frac
1:44		FRAC	OPO			0	OPO

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
04/25/2019 10:30	CACTUS WELLHEAD LLC	Stimulation			EN	Frac Wellhead		1.00	2	OPEN
Description: Zipper on the 3H showing pressure of frac commuincation. flush and SD and grease valve						Title: Zipper leaking				
Total								1.00		

EP WELLS DAILY OPERATIONS REPORT

Report 27

04/26/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	27.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Nick Morrison	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Matt Randolph / Mike Parker	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	1,948,725/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	17,519	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:	See Man Hours on 1H report						

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	26

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
On NPT / Fuel
24 Hour Forecast
Continue Frac Ops

EP WELLS DAILY OPERATIONS REPORT

Report 27

04/26/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.57	FRAC	WLT			0		"Stage #28 Plug and Perf. RIH with (4) 1' Keane guns: 2.75" OD 16g HMX at 6 SPF with 60° phased perforating guns and Downhole Technology Eco composite ball-in-place frac plug. Set plug @ 11803' Perforate as follows: 11784' - 11785' 11741' - 11742' 11698' - 11699' 11808' - 11809' Stabilized pressure after perforating: 4900 psi Final pump down rate: 3 bpm Pump down volume: 4 bbl" POOH 0102 hrs
1:34	0.17	FRAC	WLF			0		Routine UMW, Fcross, Pdown, inner/outer wing Shut in well with 4500 psi. Handover well to frac, WL to Frac
1:44	22.27	FRAC	OPO			0		OPO
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	OPO			0	OPO

EP WELLS DAILY OPERATIONS REPORT

Report 28

04/27/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	28.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Nick Morrison	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Matt Randolph / Mike Parker	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	2,013,252/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	64,527	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:							
Man Hours, 1H report							

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	27

Operations Summary

24 Hour Summary
Frac Ops
Update Since Report Time
28, Final Stage
24 Hour Forecast
Continue Frac Ops

EP WELLS DAILY OPERATIONS REPORT

Report 28

04/27/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	19.02	FRAC	OPO			0		OPO
19:01	0.23	FRAC	WLF			0		WL to Frac, Ptest frac iron, EQ= 5000 psi Open Well @ 4100 psi, Start Frac Stage 28
19:15	1.32	FRAC	FRT			0		Stage 28 Summary University 20 PW 2502H Interval 11655 - 11784 0 0 0 Open Well Pressure 4,100 0 0 psi Shut In Well Pressure 5,200 0 0 psi Max Treating Pressure 9,576 psi Max Slurry Rate 65.4 bpm Average Treating Pressure 8,566 psi Average Slurry Rate 57.1 bpm Average Rate w/ Prop on Bottom 62.3 bpm Breakdown Pressure 8,963 psi Breakdown Rate 11.0 bpm Breakdown Volume 420 gal Avg HHP 11,992 hp Final ISIP 5,345 psi Frac Gradient 0.875 psi/ft Pad Volume 1,287 gal Main Body Volume 168,946 gal Flush Volume 11,676 gal 100 Mesh Brown Sand Pumped 0 lbs 100 Mesh AZ Sand Pumped 0 lbs 100 Mesh Sand Pumped 430,810 lbs Proppant in Formation 430,810 lbs Avg Proppant Concentration 2.77 lb/gal Max Proppant Concentration 4.00 lb/gal Load to Recover 4,023 bbls Load to Recover w/o Acid 4,023 bbls 15% HCL Spearhead 0 gal Slickwater Fluid Pumped 4,017 bbls 20# Linear Fluid Pumped 0 bbls Brine Fluid Pumped 0 bbls Pump down volume 6 bbls pump down rate 3.0 bpm Max pump down pressure 5,100 psi Fluid Temp 76.4 ?F Total Pump Time 1:21 hr:min Pumps Lost During Job 0 0 0 0 Treatment Start Time 19:13 0:00 0:00 0:00 Treatment End Time 20:34 0:00 0:00 0:00 Diverter Slurry bbls - No incidents, accidents or spills to report. - FR was set at 0.75 gpt - No 15% HCL was pumped - Sand was was ramped from 0.5 PPA to 3.0 PPA then stepped to 4.0 PPA then back to 3.5 PPA due to pressure - A ball in place style plug was used - All proppant was placed and the stage was treated with Fresh water Time between Stages (TBF) 0:12:00 Hours : Minutes Estimated Cost from Job Packet \$ 31,318.19
20:34	0.10	FRAC	OPO			0		SI well @ 5200 psi, Greased LMV / UMW Final Stage, Well Secure
20:40	3.33	FRAC	OPO			0		OPO, Stand By for CTDO
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
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EP WELLS DAILY OPERATIONS REPORT

Report 28

04/27/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	24.00	FRAC	OPO			0	OPO, Stand By for CTDO

EP WELLS DAILY OPERATIONS REPORT

Report 29

04/28/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	29.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Nick Morrison	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Matt Randolph / Mike Parker	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	2,029,499/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	16,247	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:							
Man Hours, 1H report							

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	28

Operations Summary

24 Hour Summary
No Activity
Update Since Report Time
No Activity, Standby CTDO
24 Hour Forecast
RDMO frac spread

EP WELLS DAILY OPERATIONS REPORT

Report 29

04/28/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	9.00	FRAC	OPO			0		OPO,
9:00	15.00	FRAC	ROF			0		Daily Report on 1H
Total	24.00							

06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00		FRAC	ROF			0	Capture Cost

EP WELLS DAILY OPERATIONS REPORT

Report 30

04/29/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 4249534182.00



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	30.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est. Days	0.00	Contractor	PERMIAN WELL SVC		
Work Unit	PERMIAN COMPLETIONS	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	Nick Morrison	Measured Depth(ft)	
Engineer	Matt Bowman	TVD(ft)	
Other Supervisor	Matt Randolph / Mike Parker	24 Hr Progress(ft)	
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,798.10 / 2,772.10	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	2,041,222/	Current MW / BH EMW(ppg)	/
Actual divided by AFE		LOT/FIT EMW(ppg)	
Daily Cost	11,723	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	29

Operations Summary

24 Hour Summary
RDMO Frac Spread
Update Since Report Time
No Activity
24 Hour Forecast
Stand By CTDO

EP WELLS DAILY OPERATIONS REPORT

Report 30 04/29/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00		FRAC	ROF			0		Capture Cost
Total								

EP WELLS DAILY OPERATIONS REPORT

Report 31

05/02/2019

Company PERMIAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 42495341820000



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	31.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est.Days		Contractor			
Work Unit		Days To Release			
		Rig Phone/Fax No.			

Well Status

Supervisor	Tommy Hurdle	Measured Depth (ft)	
Engineer	Matt Bowman	TVD (ft)	
Other Supervisor	Mike Harris	24 Hr Progress (ft)	
Depth Ref/Grd Elev/Water Depth (ft)	DfE: 2,798.10 / 2,772.10	Hole Size (in)	
THF Datum			
Daily NPT (hr/%)	/ 0.00	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	2,067,668 / 0.00	Current MWM / BH EMW (ppg)	
Actual Divided by AFE	0.00	LOT/FIT EMW (ppg)	
Daily Cost	\$23,736.00	Lithology	
		Formation/MDTop	

HSE Summary

Last Incident	Date	Days	Last Incident	Date	Days	KPI's	
LWC			PSI			TRCF	
RWC			NII			LWCF	
MTC			HPI			Safety Cards - Safe	
FAC			GOAL ZERO DAYS			Safety card - Unsafe	
Last casing pressure test			PS BARRIER EVENT			SSE%	
			PS barrier bowtie review			Last casing pressure (psi)	
Safety Comments:							

HSE Drills

Drills/Tests	Date	Days Since Last	JSA's/Toolbox Talks	
Last Derrick Inspection			Day's Since Last Drill	30
Last BOP Function Test				
Last BOP Test				
Next BOP Test				

Operations Summary

24 Hour Summary
R/U CTU. RIH w/ cleanout BHA. Mill plugs
Update Since Report Time
24 Hour Forecast
Move to next well

EP WELLS DAILY OPERATIONS REPORT

Report 31

05/02/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H



Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT Level	Rig Rate	Description
03:15	2.25	COIL	RGU			0		N/D night cap. N/U CT BOP's.
05:30	0.25	COIL	SAF			0		HELD AAR & TTW MEETINGS
05:45	0.75	COIL	PPW			0		TESTED CT EQUIPMENT AT 500 LOW AND 8M HIGH - GOOD
06:30	3.00	COIL	CTR			0		SICP 3700 PSI, TIH
09:30	0.25	COIL	MIL			0		"Tag #1 @ 11810' WELLHEAD=3550 CIRC PRES= 6100 PUMP RATE= 3.3 RETURN RATE= 3.6 RETURN DESCRIPTION= MILL TIME = 9 TRIP TIME BETWEEN PLUGS= 24 STALLS= 0 FR= 0.3 POP= 0 0 RIH TO NEXT PLUG"
09:45	1.00	COIL	MIL			0		"Tag #2 @ 11978' WELLHEAD=3450 CIRC PRES= 6100 PUMP RATE= 3.3 RETURN RATE= 3.4 RETURN DESCRIPTION= MILL TIME = 16 TRIP TIME BETWEEN PLUGS= 18 STALLS= 0 FR= 0.3 POP= 0 0 RIH TO NEXT PLUG"
10:45	0.50	COIL	MIL			0		"Tag #3 @ 12143' WELLHEAD=3500 CIRC PRES= 6300 PUMP RATE= 3.3 RETURN RATE= 3.4 RETURN DESCRIPTION= MILL TIME = 10 TRIP TIME BETWEEN PLUGS= 22 STALLS= 0 FR= 0.3 POP= 0 light sand RIH TO NEXT PLUG"
11:15	1.00	COIL	MIL			0		"Tag #4 @ 12322' WELLHEAD=3450 CIRC PRES= 6200 PUMP RATE= 3.3 RETURN RATE= 3.4 RETURN DESCRIPTION= MILL TIME = 31 TRIP TIME BETWEEN PLUGS= 22 STALLS= 0 FR= 0.25 POP= 0 light sand RIH TO NEXT PLUG"

EP WELLS DAILY OPERATIONS REPORT

Report 31

05/02/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H



12:15	0.50	COIL	MIL			0	"Tag #5@ 12488' WELLHEAD=3550 CIRC PRES= 6200 PUMP RATE= 3.3 RETURN RATE= 3.4 RETURN DESCRIPTION= MILL TIME = 16 TRIP TIME BETWEEN PLUGS= 23 STALLS= 0 FR= 0.25 POP= 0 light sand RIH TO NEXT PLUG"
12:45	0.75	COIL	MIL			0	"Tag #6@ 12663' WELLHEAD=3500 CIRC PRES= 6300 PUMP RATE= 3.3 RETURN RATE= 3.4 RETURN DESCRIPTION= MILL TIME = 12 TRIP TIME BETWEEN PLUGS= 22 STALLS= 0 FR= 0.25 POP= 0 0 RIH TO NEXT PLUG"
13:30	0.75	COIL	MIL			0	"Tag #7@ 12833' WELLHEAD=3550 CIRC PRES= 6200 PUMP RATE= 3.3 RETURN RATE= 3.4 RETURN DESCRIPTION= MILL TIME = 19 TRIP TIME BETWEEN PLUGS= 25 STALLS= 0 FR= 0.25 POP= 0 light sand RIH TO NEXT PLUG"
14:15	0.50	COIL	MIL			0	"Tag #8@ 13011' WELLHEAD=3500 CIRC PRES= 6300 PUMP RATE= 3.3 RETURN RATE= 3.4 RETURN DESCRIPTION= MILL TIME = 7 TRIP TIME BETWEEN PLUGS= 29 STALLS= 0 FR= 0.25 POP= 0 light /med sand RIH TO NEXT PLUG"
14:45	0.50	COIL	MIL			0	"Tag #9@ 13180' WELLHEAD=3500 CIRC PRES= 6300 PUMP RATE= 3.3 RETURN RATE= 3.4 RETURN DESCRIPTION= MILL TIME = 6 TRIP TIME BETWEEN PLUGS= 24 STALLS= 0 FR= 0.25 POP= 0 0 RIH TO NEXT PLUG"

EP WELLS DAILY OPERATIONS REPORT

Report 31

05/02/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H



15:15	0.50	COIL	MIL			0	"Tag #10@ 13355' WELLHEAD=3500 CIRC PRES= 6300 PUMP RATE= 3.2 RETURN RATE= 3.3 RETURN DESCRIPTION= MILL TIME = 5 TRIP TIME BETWEEN PLUGS= 25 STALLS= 0 FR= 0.25 POP= 0 0 RIH TO NEXT PLUG"
15:45	0.50	COIL	MIL			0	"Tag #11@ 13523' WELLHEAD=3500 CIRC PRES= 6200 PUMP RATE= 3.2 RETURN RATE= 3.3 RETURN DESCRIPTION= MILL TIME = 4 TRIP TIME BETWEEN PLUGS= 24 STALLS= 0 FR= 0.25 POP= 0 light sand RIH TO NEXT PLUG"
16:15	0.50	COIL	MIL			0	"Tag #12@ 13699' WELLHEAD=3500 CIRC PRES= 6400 PUMP RATE= 3.2 RETURN RATE= 3.4 RETURN DESCRIPTION= MILL TIME = 26 TRIP TIME BETWEEN PLUGS= 2 STALLS= 0 FR= 0.25 POP= 0 light /med sand RIH TO NEXT PLUG"
16:45		COIL	MIL			0	"Tag #13@ 13867' WELLHEAD=3500 CIRC PRES= 6300 PUMP RATE= 3.2 RETURN RATE= 3.4 RETURN DESCRIPTION= MILL TIME = 4 TRIP TIME BETWEEN PLUGS= 17 STALLS= 0 FR= 0.25 POP= 0 med sand RIH TO NEXT PLUG"
Total	13.50						

EP WELLS DAILY OPERATIONS REPORT

Report 32

05/03/2019

Company PERMAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 42495341820000



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	32.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est.Days		Contractor			
Work Unit		Days To Release			
		Rig Phone/Fax No.			

Well Status

Supervisor	Mike Harris	Measured Depth (ft)	
Engineer	Matt Bowman	TVD (ft)	
Other Supervisor	Tommy Hurdle	24 Hr Progress (ft)	
Depth Ref/Grd Elev/Water Depth (ft)	DfE: 2,798.10 / 2,772.10	Hole Size (in)	
THF Datum			
Daily NPT (hr/%)	/ 0.00	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	2,081,304 / 0.00	Current MWM / BH EMW (ppg)	
Actual Divided by AFE	0.00	LOT/FIT EMW (ppg)	
Daily Cost	\$37,241.42	Lithology	
		Formation/MDTop	

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	JSA's/Toolbox Talks Day's Since Last Drill	
Last Derrick Inspection Last BOP Function Test Last BOP Test Next BOP Test				31

Operations Summary

24 Hour Summary
RU DRILL OUT PLUGS
Update Since Report Time
RDMO
24 Hour Forecast
PREP FOR PKR

EP WELLS DAILY OPERATIONS REPORT

Report 32

05/03/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H



Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT Level	Rig Rate	Description
00:00	0.25	COIL	MIL			0		"Tag #26@ 16090' WELLHEAD=3500 CIRC PRES= 6300 PUMP RATE= 3.3 RETURN RATE= 3.4 RETURN DESCRIPTION= Light Sand MILL TIME = 6 TRIP TIME BETWEEN PLUGS= 34 STALLS= 0 FR= 0.25 POP= 0 RIH TO NEXT PLUG"
00:15	0.25	COIL	MIL			0		"Tag #27@ 16279' WELLHEAD=3600 CIRC PRES= 6400 PUMP RATE= 3.3 RETURN RATE= 3.4 RETURN DESCRIPTION= Light Sand MILL TIME = 731 TRIP TIME BETWEEN PLUGS= 11 STALLS= 0 FR= 0.25 POP= 0 RIH TO Toe Sleeve
00:30	1.17	COIL	MIL			0		RIH tagged toe sleeve at 16,413'. Continued down to TD 16,463'. Pumped 10-10-10 sweep. Allowed it to reach EOT.
01:40	3.83	COIL	PCT			0		POOH @ 60 FPM. Cir 6,100 psi - WH 3,500 psi. Pumped another 10-10-10 sweep at heel. Ramped up to 100 fpm at vertical.
05:30	0.25	COIL	SAF			0		HELD TTW MEETING
06:00	0.50	COIL	RGO			0		HELD 7 SM ND INJECTOR AND LD BHA, BHA SHOWED NORMAL WEAR
06:30	9.00	COIL	RGO			0		WOOO
15:30	0.50	COIL	RGO			0		ND BOP, INSTALLED TREE CAP
16:00		COIL	RGO			0		EOD
Total	15.75							

EP WELLS DAILY OPERATIONS REPORT

Report 33

05/05/2019

Company PERMAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 42495341820000



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	33.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est.Days		Contractor			
Work Unit		Days To Release			
		Rig Phone/Fax No.			

Well Status

Supervisor	Mike Harris	Measured Depth (ft)	
Engineer	Matt Bowman	TVD (ft)	
Other Supervisor	Tommy Hurdle	24 Hr Progress (ft)	
Depth Ref/Grd Elev/Water Depth (ft)	DfE: 2,798.10 / 2,772.10	Hole Size (in)	
THF Datum			
Daily NPT (hr/%)	/ 0.00	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	2,171,280 / 0.00	Current MWM / BH EMW (ppg)	
Actual Divided by AFE	0.00	LOT/FIT EMW (ppg)	
Daily Cost	\$15,692.00	Lithology	
		Formation/MDTop	

HSE Summary

Last Incident	Date	Days	Last Incident	Date	Days	KPI's	
LWC			PSI			TRCF	
RWC			NII			LWCF	
MTC			HPI			Safety Cards - Safe	
FAC			GOAL ZERO DAYS			Safety card - Unsafe	
Last casing pressure test			PS BARRIER EVENT			SSE%	
			PS barrier bowtie review			Last casing pressure (psi)	
Safety Comments:							

HSE Drills

Drills/Tests	Date	Days Since Last	JSA's/Toolbox Talks	
Last Derrick Inspection			Day's Since Last Drill	32
Last BOP Function Test				
Last BOP Test				
Next BOP Test				

Operations Summary

24 Hour Summary
R/U WL. RIH w/ gauge ring. RIH w/ packer.
Update Since Report Time
HES VERSA SET PKR SET AT 11226' (TOP) XN NIPPLE 11247; EOT 11257'
24 Hour Forecast
Move to next well

EP WELLS DAILY OPERATIONS REPORT

Report 33

05/05/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H



Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT Level	Rig Rate	Description
00:00	0.75	COIL	RGO			0		M/U lubricator and BOP's to the well. Pressure test 500 psi low - 5 min & 8000 psi high - 5 min. Test good. Bleed down to 4500 psi. Open well and equalize at 3900 psi.
00:45	1.00	WINF	DRF			0		RIH w/ 4.51 gauge ring. Tagged Drilling XO @ 11,279' WLM. Made -14' correction for 11,265 corrected drilling XO depth.
01:45	1.00	WINF	DRF			0		POOH.
02:45	0.25	WINF	DRF			0		Shut in well @ 3900 psi. Bleed off pressure. Break lubricator. L/D GR BHA and lubricator. M/U packer assy. P/U lubricator & packer BHA. M/U to well. Pressure test to 8000 psi. Test Good.
03:00	0.50	WINF	SPB			0		M/U packer assy. P/U lubricator & packer BHA. M/U to well. Pressure test to 8000 psi. Test Good. Bleed down to 4000 psi. Open well, equalize at 3900 psi.
03:30	2.25	WINF	SPB			0		RIH w/ packer assy. correlated and set HES PKR at 11226' (top) EOT 11257'
05:45	0.75	WINF	SPB			0		POOH, SICP 3800 PSI, OPEN WELL TO FLOW ON AT 18/64" CHOKE RECOVERED 13 BBL WELL DEAD CONTINUED TO POOH & MONIOR
07:15	0.25	WINF	SAF			0		SICP 0 PSI, HELD 7 STEP , REVIEWED 12 QUESTIIONS
07:30	2.00	WINF	RGO			0		RD E-LINE, ND FRAC TREE, INSTALLED TREE CAP, SICP ZERO PSI
09:30		WINF	RGO			0		EOD
Total	8.75							

EP WELLS DAILY OPERATIONS REPORT

Report 36

05/08/2019

Company PERMAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 42495341820000



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	36.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est.Days		Contractor			
Work Unit		Days To Release			
		Rig Phone/Fax No.			

Well Status

Supervisor	Rafael Diaz, Donnie VanNess, Elsa Garcia	Measured Depth (ft)	
Engineer	Matt Bowman	TVD (ft)	
Other Supervisor	Tommy Hurdle/James Light	24 Hr Progress (ft)	
Depth Ref/Grd Elev/Water Depth (ft)	DFE: 2,798.10 / 2,772.10	Hole Size (in)	
THF Datum			
Daily NPT (hr/%)	/ 0.00	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	2,376,714 / 0.00	Current MWM / BH EMW (ppg)	
Actual Divided by AFE	0.00	LOT/FIT EMW (ppg)	
Daily Cost	\$36,417.76	Lithology	
		Formation/MDTop	

HSE Summary

Last Incident	Date	Days	Last Incident	Date	Days	KPI's	
LWC			PSI			TRCF	
RWC			NII			LWCF	
MTC			HPI			Safety Cards - Safe	
FAC			GOAL ZERO DAYS			Safety card - Unsafe	
Last casing pressure test			PS BARRIER EVENT			SSE%	
			PS barrier bowtie review			Last casing pressure (psi)	
Safety Comments:							

HSE Drills

Drills/Tests	Date	Days Since Last		
Last Derrick Inspection			JSA's/Toolbox Talks	35
Last BOP Function Test			Day's Since Last Drill	
Last BOP Test				
Next BOP Test				

Operations Summary

24 Hour Summary
Run tubing, land hanger, install Tree, Test RDMO
Update Since Report Time
24 Hour Forecast

EP WELLS DAILY OPERATIONS REPORT

Report 36

05/08/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H



Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT Level	Rig Rate	Description
00:05	2.25	WOR	TBG			0		Continue TIH
02:20	0.67	WOR	SOH			0		Tagged packer on joint 344 1 foot in. Space out using 6.19 foot pup, 6.14 foot, 4.22 foot and 4.2 foot pup.
03:00	0.17	WOR	TBG			0		Prepare to pump packer fluid.
03:10	1.33	WOR	TBG			0		Pump 240 bbls of packer fluid.
04:30	1.00	WOR	SOH			0		R/D pump hose. M/U hanger to tubing. Pickup landing joint with hanger setting tool. Sat down 10k for 5 minutes. Picked up 85k and held for 5 minutes to confirm the on/off tool latched on the packer. S/O to 56k and set packer in 8k compression - hanger landed. Turn landing joint to the right twice and engage lock rings for the hanger. Pull test hanger lock ring 20k over string weight (88k). Verified lock. Seal tested the hanger body seals to 10k – Test Good. Release setting tool and L/D. Set BPV.
05:30	0.50	WOR	SOH			0		Daylight Tour Crew Change: PJSM, JSA's, WP & 7 step w/ rig crew, halliburton, superior: RD move on to 2503H, Test Tree & BOP, RU
06:00	3.00	WOR	SOH			0		RD birdbath, set BPV, RD BOP, RD 15K Frac valve, install tree, test void 10k, 10min, good test, OSR witness. Shell Test Tree Chart Record , low 250 / high 10K psi, 5 min/ 10 min - good test. Install cellar grating, end caps on tree, close upper & lower mstr, swab & wing valves.
Total	8.92							

EP WELLS DAILY OPERATIONS REPORT

Report 37

05/10/2019

Company PERMAN
 Well Type Development
 Well UNIVERSITY 20 PW 2502H
 Wellbore UNIVERSITY 20 PW 2502H
 WBS No/API No 30296778 / 42495341820000



Event Summary

Event Type	Completion only	Event Start Date	02/23/2019	Days on Location	37.00
Objective	Install Completion	Original Spud Date	12/18/2018		
Est.Days		Contractor			
Work Unit		Days To Release			
		Rig Phone/Fax No.			

Well Status

Supervisor	Rafael Diaz, Donnie VanNess, Elsa Garcia	Measured Depth (ft)	
Engineer	Matt Bowman	TVD (ft)	
Other Supervisor	Tommy Hurdle/James Light	24 Hr Progress (ft)	
Depth Ref/Grd Elev/Water Depth (ft)	DFE: 2,798.10 / 2,772.10	Hole Size (in)	
THF Datum			
Daily NPT (hr/%)	/ 0.00	Last Casing MD	
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	
Actual cost to date/AFE	2,414,562 / 0.00	Current MWM / BH EMW (ppg)	
Actual Divided by AFE	0.00	LOT/FIT EMW (ppg)	
Daily Cost	\$35,461.00	Lithology	
		Formation/MDTop	

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 Day's Since Last Drill	36

Operations Summary

24 Hour Summary
Pressure test tubing and rupture disk.
Update Since Report Time
24 Hour Forecast

EP WELLS DAILY OPERATIONS REPORT

Report 37

05/10/2019

Well UNIVERSITY 20 PW 2502H
Wellbore UNIVERSITY 20 PW 2502H



Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT Level	Rig Rate	Description
		WOR	SOH			0		Pressure test tubing and rupture disk.
Total								