

FORGE Energy
UL 24 Voyager 2H
API Number: 42-371-39532

06/19/2017

Rig Name:

07:30 Voyager Frac Pit , PJSM , Rockwater unloaded Frac pit lining materials , Prep work to line pit , Removing T posts , Barb wire etc. , Too windy to line frac pit will line in am. Waterwell running into Voyager 2H Outer reserve pit.

06/20/2017

Rig Name:

07:30 PJSM

08:00 Rockwater lined Voyager frac pit and buried , lined inside bottom of frac pit w/ sand bags , Generator at waterwell was bad , Big D changed out generator , Waterline plugged somewhere between manifold and Voyager frac pit, Waterwell running into Voyager 2H outer reserve. Deep Well services hauling FW into Voyager Frac pit.

06/21/2017

Rig Name:

07:30 PJSM

08:00 Voyager Frac Pit , Took ck valve apart - good , Took 4" line apart and pumped through w/ Rockwater pump truck , pumped through 4" polyline , Hooked waterline up , Started filling Voayager frac pit.

11:15 Filling Voyager frac pit

14:30 Waterline plugged again from manifold to Voyager Frac pit , diverted waterwell to Voyager 2 h outer reserve , Venegas Contractors started installing fence around Voyager frac pit.

17:30 Took 4" waterline apart , M&W pump truck pumped through and cleared out waterline , Will leave waterwell running into Voyager 2h outer reserve. will replace 500' polypipe in am. SDFN

06/22/2017

Rig Name:

07:30 PJSM

08:00 Replaced 500' of 4" polyline , removed ck valve , Start filling Voyager Frac pit , Rate 3100 BWPD , Venegas Contractors continued to build fence around Voyager frac pit.

06/23/2017

Rig Name:

07:30 PJSM

08:00 Venegas contractors completed fence around Voyager frac pit. Will load and haul away old fence debris in am.

06/24/2017

Rig Name:

07:30 PJSM

08:00 Voyager Frac pit , Venegas contractors loaded and hauled away old fence debris from Voyager. Voyager Frac pit water level was just under 2' at 9am , filling Voyager frac pit at 3100 BWPD.

08/14/2017

Rig Name:

15:00 Right Light delivered Forklift and Manlift , KLX delivered test pump

08/15/2017

Rig Name:

07:30 PJSM w/ CER , KLX , M&V Roustabouts

08:30 NU Frac Stack , Torque to specs , KLX Pressure test Frac Stack 250 psi low , 8400 psi high for 10 min , Tested all valves - Test Ok , M&V roustabouts plumbed Intermediate Csg bleedoff line , Standard Safety RU light Pkg , Rockwater RU Flowback lines and manifold , Deepwell Services delivered 2 frac tanks and manifolded. Right Light delivered 2 LP , Trash trailer

13:30 M&W pump truck loaded 9 5/8" x 5 1/2" Intermediate csg w/ 1 bbl 2% kcl biocide , Pressure up 2500 psi and held for 10 min - test ok , Deepwell Services Filled tanks w/ 2% kcl biocide , Hobbs anchors set and tested anchors , KLX Pressure Tested Rockwater Flowback Lines lines and manifold 250 psi low , 8400 psi high for 10 min - test ok , Magneto welder welded mousehole cover , M&V roustabouts plumbed Surface csg bleedoff line , Standard safety delivered and set up shower trailer , finished setting up light pkg , Deepwell services pulled 6 loads from outer reserve. CER NU 1 9/16" 10K 1502 Companion Flanges

08/16/2017

Riq Name:

07:30 PJSM
 08:00 RU Renegade WL , KLX test pump , Make up RCBL/GR/CCL , Make up Lube to WH , Pressure test lube 3k - Test ok
 11:15 Open WH , RIH w/ WL , (Saw MJ at 6647') , Will correct MJ to 6660' on Log , Start Logging up from 7375' WLM - Uncorrected , Holding 500 psi on Csg to Surface , Shut-In Well , Break and LD RCBL tools , Est. Top of Cement 5530' , Renegade working on Cement bond log data , J-4 RU Defitt gauges , Elite rigging up , SD temporarily due to lightning storm
 16:00 PJSM , Pressure test lines 9472 psi - Test ok , Pressure up 3500 , 4000 , 4500 , 5000 , 5500 , 6000 psi , Holding at each step for 5 min , Pressure up to 6400 psi and hold for 30 min. , Pressure at 6365 psi after 30 min. , Pressure up to 7000 psi and hold for 5 min , Pressure up 7455 psi and TTS opened , Monitor pressure decline
 17:45 Pressure at 2870 psi after 5 min. , Start pumping at 2 bpm , Pressure slowly increasing , Increased rate to 3 bpm , pressure kicked out at 8400 psi at 8.7 bbls pumped , Resume pumping at 1.6 bpm at 4060 psi pumped 20 bbls , increase to 2.2 bpm at 4055 psi , Increase Rate to 3.1 bpm , 4050 psi at 30 bbls pumped , Increased rate to 4.2 bpm at 4340 psi at 40 bbls pumped , increased rate to 5.2 bpm at 4350 psi at 73 bbls pumped , Increased rate to 6.2 bpm at 4860 psi at 83 bbls pumped , At 100 bbls pumped - Attempted to get more rate , Frac pump having issues , SD at 121 bbls pumped to put isolation valve on x.o. , Resume pumping , Having issues w/ Frac pump , Pump kept dying , SD at 130 bbls pumped , will switch out frac pump in am , Shut-In Well , SDFN

08/17/2017

Rig Name:

08:30 SICP 5 1/2" 1100 PSI , PJSM
 08:45 Elite switched out Frac pump , Open WH w/ 1179 Psi , Start pumping to establish rate , 6.2 bpm at 5800 psi , Pump 28 bbls 2% kcl biocide , Pump 1000 gals 15 % hcl nefe acid , 6.5 bpm at 5600 psi w/ 90 bbls flush gone , Sd w/ 252 bbls flush gone , 6 bbls acid through TTS for acid soak , 6.5 bpm at 4550 psi just pryor to SD , ISIP 2887 psi , 5 min 2433 psi , 10 min 2275 psi , Resume pumping working rate up to 14.8 bpm at 4100 psi - just prior to SD , Overflushed 50 bbls , Flushed w/ 320 bbls 2% kcl biocide , ISIP 2816 psi , 5 min 2463 psi , 10 min 2290 psi , 15 min 2192 psi , Shut-In well
 11:15 RU Renegade WL , PJSM , Make up 3 1/8" 4 cluster gun assembly , 5 1/2" 23# Boss Hogg CBP , Make Up Lube to WH , Pressure test Lube 8500 psi , Open WH w/ 1700 psi
 13:00 Tie into MJ at 6660' , Pumped Plug and guns down at 12 bpm 3480 psi , 270 fpm , SD at 12,621' , Finish spotting 500 gals 15% NEFE acid , Pull up and set CBP at 12,613' , Pressure up 6300 psi and held for 5 min - Test ok , Pull up to Gun #1 depth , Fire gun #1 , 12,599' - 12,600' , 60 degree phasing , 6 spf , 11 shots ttl , Pull up to gun #2 depth , Put 6 bbls acid away , 3 bpm at 3010 psi , Fire gun #2 12,548' - 12,549' , 6 spf , 10 shots ttl , 60 degree phasing , Pull up and fire gun #3 12,496' - 12,497' , 6 spf , 10 shots ttl , 60 degree phasing , Pull up and fire gun #4 12,445' - 12,446' , 6 spf , 9 shots ttl , 60 degree phasing POOH w/ WL logging out. Out of hole w/ Renegade WL , LD Guns , Verified all shots fired , RD Renegade WL . 265 bbls 2% kcl pumped during pumpdown.
 16:15 Open WH w/ 1700 psi , Elite started pumping to put remaining acid away , 4 bpm at 3050 psi , 4 bpm at 2865 psi just prior to SD , pumped 30 bbls Ttl , Did Hard SD to start Defitt test. ISIP 2437 psi , 5 min 2200 psi , 10 min 2093 psi , 15 min 2022 psi , Shut-In Well.
 16:45 RDMO - Renegade WL , Elite , Klx , Met w/ C&J Rep. marking where to put frac tanks , They also caught water samples from vega and voyager frac pits.

08/18/2017

Rig Name:

08:30 SICP 5 1/2" 1300 psi , Intermediate SICP 0 , Surface SICP 0 , PJSM
 08:45 Sterling Hose and Reel tied into Vega waterwell , Laid .7 mi 8" layflat hose to Vega frac pit with one road crossing
 13:30 Texas Energy delivered and spotted 2 Acid tanks with containment liners
 15:00 Start filling Vega frac pit thorough both 8" and 3" lines , Check waterlines for leaks - no leaks , 8" starting meter reading 2,611,572 , 3" starting meter reading 58,797 filling Vega frac pit at a combined rate of 26.8 bpm

08/19/2017

Rig Name:

12:00 SICP 5 1/2" 1200 psi , Intermediate SICP 0 , Surface SICP 0 , PJSM
 12:15 Deepwell services delivered and spotted 9 frac tanks , Pumped 38,599 bbls of fw from Vega waterwell to Vega frac pit in last 24 hrs , 24 hr reading at 16:30

08/20/2017

Rig Name:

08:00 SICP 5 1/2" 1100 psi , Intermediate SICP 0 , Surface SICP 0 , PJSM
 08:15 Sterling Anchored down 8" layflat line going into Vega frac pit , removed kinks in 8" line

10:15 Deepwell services Transferred 3 loads of 2% kcl biocide from Frac tank on location to frac tanks inline
12:15 Deepwell services delivered 1 frac tank , moved another frac tank across location , 11 frac tanks inline , manifolded tanks together , grounded tanks.
16:15 Pumped 38,644 bbls of fw from Vega waterwell to Vega frac pit in last 24 hrs. Pumped 77,243 bbls fw ttl since started.

08/21/2017

Rig Name:

10:00 SICP 5 1/2" 1050 psi , Intermediate SICP 0 , Surface SICP 0 , PJSM
10:15 Deepwell services delivered and unloaded 195 bbls fw into both Acid tanks per C&J rep. request.
12:15 Pumped 38,316 bbls of fw from Vega waterwell to Vega frac pit in last 24 hrs. Pumped 115,559 bbls fw ttl since started filling Vega frac pit

08/22/2017

Rig Name:

10:00 SICP 5 1/2" 1000 psi , Intermediate SICP 0 , Surface SICP 0 , Check Vega frac pit , 6 1/2' from top of pit on NE side of pit. (Low Side) at 11 am
12:30 PJSM w/ Resource water transfer
13:00 Resource water transfer laid 1 mi of layflat from Vega frac pit.
16:00 Pumped 38,737 bbls of fw from Vega waterwell to Vega frac pit in last 24 hrs. Pumped 154,296 bbls fw ttl since started filling Vega frac pit. WL is 5' from top of Vega frac pit on NE side of pit. (Low Side) , Landowner to SD waterwell at approx. 6 pm , Will resume filling Vega frac pit in a.m.

08/23/2017

Rig Name:

08:00 SICP 5 1/2" 1000 psi , Intermediate SICP 0 , Surface SICP 0 , Turn on Vega waterwell , Resume filling Vega frac pit , PJSM
09:00 Resource water transfer laid 2 mi of layflat (3 mi Ttl). Blade services backhoe filled in soft spots on location.
17:30 Pumped 18,481 bbls of fw from Vega waterwell to Vega frac pit since last reading yesterday. Pumped 172,777 bbls fw ttl since started filling Vega frac pit. WL is 3' from top of Vega frac pit on NE side of pit. (Low Side) , SD Vega waterwell at 6 pm , Will resume filling Vega frac pit in am

08/24/2017

Rig Name:

08:00 SICP 5 1/2" 1000 psi , Intermediate SICP 0 , Surface SICP 0 , Turn on Vega waterwell , Resume filling Vega frac pit.
10:30 PJSM , Resource water transfer laid 1 mi of layflat (4 mi Ttl)
13:30 Pumped 11,430 bbls of fw from Vega waterwell to Vega frac pit since last reading. Pumped 184,207 bbls fw ttl since started filling Vega frac pit. WL is 2' from top of Vega frac pit on NE side of pit. (Low Side) , SD Vega waterwell at 3 pm

08/25/2017

Rig Name:

09:00 SICP 5 1/2" 950 psi , Intermediate SICP 0 , Surface SICP 0
15:30 PJSM
16:00 Resource water transfer laid 1 mi of layflat (5 mi Ttl) of the 10 mi between Vega frac pit and Voyager frac pit and Voyager 2h location.

08/26/2017

Rig Name:

10:30 SICP 5 1/2" 950 psi , Intermediate SICP 0 , Surface SICP 0 , PJSM
11:00 Resource water transfer spotted , rigged up manifold and lines to frac tanks.

08/27/2017

Rig Name:

06:00 Cost Report only

08/28/2017

Rig Name:

06:00 Cost report only

08/29/2017

Rig Name:

17:00 SICP 5 1/2" 900 psi , Intermediate SICP 0 , Surface SICP 0 , PJSM w/ Resource water transfer.
17:30 Resource water transfer spotted main pump , backup pump at Voyager frac pit and ran lines.
19:00 Deepwell services emptied cellar and topped off with load from outer reserve and took to disposal.

08/30/2017

Rig Name:

16:30 SICP 5 1/2" 900 psi , Intermediate SICP 0 , Surface SICP 0 , Resource water transfer staged 2 pumps near Voyager frac pit.

08/31/2017

Rig Name:

15:30 SICP 5 1/2" 900 psi , Intermediate SICP 0 , Surface SICP 0 , PJSM

16:00 Resource water transfer staged 1 pump near Voyager frac pit , Spotted and set main pump at Vega frac pit.

09/01/2017

Rig Name:

16:00 SICP 5 1/2" 900 psi , Intermediate SICP 0 , Surface SICP 0 , Deepwell services pulled 2 loads from outer reserve and hauled to disposal.

09/02/2017

Rig Name:

08:00 SICP 5 1/2" 900 psi , Intermediate SICP 0 , Surface SICP 0 , Deepwell services pulling loads from outer reserve and taking to disposal

13:00 PJSM , Rockwater rigging up flowback lines and manifold , Right light delivered trash trailer and lightplants

14:00 Tan Mar delivered and setting up mobile housing , Set Stim oil frac tank , J-4 rigged down Defitt gauge and equipment , API dropped off WL unit and crane , C&J delivered and spotted 2 Sand movers , CER dropped off equipment

18:00 Rockwater finished rigging up , Tan Mar finished rigging up mobile housing

20:30 Standard delivered and setup shower trailer

09/03/2017

Rig Name:

07:30 Catalyst dropped off chemical float w/ biocide & kcl , C&J spotted 3rd Sand King , Deepwell services pulled load out of outer reserve and took to disposal , Resource water transfer laying layflat water transfer line. C&J frac equipment arriving to location , C&J staging equipment.

10:00 Deepwell services emptied water out of Acid tanks , Unloaded Stim oil into Stim oil frac tank , Rockwater rigged up 3" line for FRV , C&J staging equipment

12:30 Sand haulers unloading frac sand , Resource water transfer continue laying layflat. C&J staging equipment

16:00 Sand haulers unloading sand.(Have unloaded 10 of 15 loads) Set down containments , C&J Spotting frac equipment , (Blender & Hydration Unit) , Set 3 Iso Tanks - Gel , FR , CS. Resource Water transfer laid 3 mi of layflat today. Have laid 8 mi TTL of 10 mi.

17:30 PJSM

17:45 C&J finish RU backside, moved in & spotted 16 pumps, & high pressure missile. Finished unloading sand into sand kings (15 loads, kings are full). SDFN.

09/04/2017

Rig Name:

06:00 PJSM , RU C&J Crane , RU Manifold and treating lines , 90% Rigged up , Lack 1 more load Acid for acid tanks , Resource water transfer lacks 1.5 mi of having water transfer line laid from Vega frac pit to Voyager frac pit , Road crossings in place , 2 booster pumps in place.

13:00 Acid tanks are full ,Titrated acid in tanks (15%) , Continue RU , RU restraints , L&M backhoe built Road crossing ramps over flowback iron , 3" FRV bleedoff line , C&J line.

15:00 Spot 4th sand king and start filling with sand , C&J is rigged up and ready to prime up , Resource water transfer is continuing to lay layflat line , C&J will not frac in am due to fuel issues.

17:30 PJSM

17:45 Sand trucks filled 4th sand king. Resource continue RU, @ 21:30 hrs, had 5 booster pumps set, 9 road crossings set, 90 % RU, will finish RU in the morning & be ready to fill tanks. SDFN.

09/05/2017

Rig Name:

07:00 PJSM

07:15 Resource water transfer continue laying layflat line and continue rigging up. Wait on fuel for frac. Right Light delivered 2 LP , 1 for Vega frac pit , 1 for Voyager frac pit.

13:30 Resource water transfer has line laid and rigged up , Start pumping from Vega frac pit to Voyager frac pit - Rate 40 bpm (Fill Line) , Filled frac tanks on location at 75 bpm (Frac Line) ,

16:30 Continue filling Voyager frac pit from Vega frac pit.

17:30 PJSM

17:45 Resource continue filling Voyager pit, transferred approximately 13,000 bbls from Vega pit to Voyager pit. SDFN.

21:00 SI, no activity.

09/06/2017

Rig Name:

07:00 PJSM

07:30 Resource water transfer started Pumping from Vega frac pit to Voyager frac pit , pumped 7500 bbls today and SD , Voyager pit level at 8' , Turned on Vega waterwell at 10 am, filling Vega frac pit

15:00 Continue filling Vega frac pit

17:30 PJSM

17:45 RU CER test pump, test FB iron & choke manifolds to 8,400 psi- high, held for 15 min (good test), 250 psi- low, held for 15 min (good test). RD CER test pump.

18:45 Continue filling Vega pit, drove to pit & checked fluid level (5-6' from top). Spoke with landowner & he confirmed it would be OK to leave water well running all night to pit. Will check fluid level in the AM.

09/07/2017

Rig Name:

06:00 Continue to fill Vega frac pit , 10 am , pumped 37,825 bbls fw last 24 hrs , SD Vega waterwell filling Vega frac pit at 1 pm , pumped 42,333 bbls fw into Vega frac pit to top off. WL is 2' from top on low side of Vega frac pit.

13:00 Wait for KLX & C&J

14:30 PJSM w/ KLX , C&J

14:45 KLX , C&J rigging up FRV Unit , API spotting WL equipment

17:30 PJSM

17:45 RU API WL truck, crane, & pressure control unit, 100 % RU @ 20:00 hrs.

20:00 SI, no activity.

03:30 C&J day crew on location @ 03:30 hrs. PJSM, crew will double check pumps, lines, hoses, & all other equipment before starting bucket test.

09/08/2017

Rig Name:

06:00 PJSM , Preparing for Bucket test.

07:30 Bucket test , Pressure test lines 9240 psi , N2 popoff set at 8365 psi , Intermediate mechanical popoff set at 2755 psi , Set FRV at 2500 psi , pressure up 1200 psi on intermediate and hold.

13:00 Hydraulic block leaking on hydration unit , Locate part for hydration unit. Part located.

15:00 Part Enroute

17:30 PJSM

17:45 Part AOL @ 19:00 hrs. Mechanic swapped out busted hose on hydration unit, function tested it, prepare for stage 1 frac.

20:30 Frac Stage 1 , Open Well SICP 938 psi. Pump Stage #1. Pumped 4,000 gals 15% HCl, pumped 347,592 gals of Slickwater, 129,108 gals of 15# X-link fluid, w/ 209,280 lbs 100 mesh, 167,140 lbs 40/70 White, 60,200 30/50 -Max psi: 7,893 psi, Avg psi: 7,072 psi, Max rate: 80.6 bpm, Avg rate: 73.1 bpm, 1.09 Frac. Gradient. Approx load to rec 11,775 bbls. ISIP: 4,872 psi, 5 min: 3,419 psi, 10 min: 2,819 psi, 15 min: 2,538 psi, 5 1/2" X 9-5/8" intermediate, Begin psi- 852 psi, average psi- 1,295 psi, ending psi- 1,422 psi.

00:15 NU WL adapter flange, BOP's, & tool trap.

02:45 Stage #2 Pump Down. P/U 4.28" OD RZR Choice Composite Ball Drop Frac Plug for 5 1/2, 23# Csg on Baker 20 setting tool & 3-1/8" - 4 Cluster Perf Assy . Test Lubricator to 8,500 PSI. Closed ground valve that is hooked up to EFRV unit before RIH. Open Well SICP 1,570 psi. RIH & get on depth w/ MJ @ 6,660'-6,680'. RIH & Pump Down @ 16 bpm @ 4,300 psi, 250 FPM, Spot frac plug @ 12,421'. 3,500 psi SIP, Set frac plug @ 12,421', PU & Fire Gun #1 @ 12,394'- 12,395', 11 Shots. P/U and Fire Gun #2 @ 12,343'- 12,344', 10 Shots. P/U & Fire Gun #3 @ 12,291'- 12,292', 10 Shots, P/U & Fire Gun #4 @ 12,240' - 12,241', 9 Shots. (All Slick Perf Guns, 6 SPF, 60 Degree Phasing, 19 Gram Charge,.38 EHD.)POOH logging w/ CCL, SWI, LD w/ Baker 20 setting tool & 3 1/8" - 4 Cluster spent Perf Assy . Verified all shots fired , Max Rate 16 bpm , Max Pressure 4,350 PSI , Total bbl pumped 352 bbl. Drop 2.90" Composite Frac Ball. Tools clean, no sand.

05:15 Flush out FRV unit to pit, wait for 2 sand trucks to unload 40/70 sand before starting stage 2 frac. (PJSM - Day's)

09/09/2017

Rig Name:

06:00 Wait for sand truck to unload

06:15 Frac Stage 2 , Open Well and launch ball , SICP 1473 psi. Ball seated at 216 bbls , Pump Stage #2. Pumped 3986 gals 15% HCl, pumped 389,486 gals of Slickwater, 35,800 gals of 15# X-link fluid, w/ 209,380 lbs 100 mesh, 172,860 lbs 40/70 White, 60,090 lbs 30/50 White -Max psi: 7848 psi, Avg psi: 7219 psi, Max rate: 73.7 bpm, Avg rate: 70.0 bpm, 0.99 Frac. Gradient. Approx load to rec 12,721 bbls. ISIP: 4129 psi, 5 min: 3342 psi, 10 min: 2988 psi, 15 min: 2762 psi, 5 1/2" X 9-5/8" intermediate, Begin psi- 1255 psi, average psi- 1261 psi. ending psi- 890 psi

09:45 Make up stage 3 plug and guns , pressure test lube 8500 psi , xo leaking , change out oring on xo , Acid tank leaking , 117 bbls acid remaining in N. acid tank , Change out oring on xo , Transfer Acid from N. acid tank to S. acid tank , transferred 115 bbls , pulled leaking acid tank down to 1/2"

11:45 Stage #3 Pump Down. P/U 4.28" OD RZR Choice Composite Ball Drop Frac Plug for 5 1/2, 23# Csg on Baker 20 setting tool & 3-1/8" - 4 Cluster Perf Assy . Test Lubricator to 8,500 PSI. Closed ground valve that is hooked up to EFRV unit before RIH. Open Well SICP 2,050 psi. RIH & get on depth w/ MJ @ 6,660'-6,680'. RIH & Pump Down @ 16 bpm @ 4870 psi, 260 FPM, Spot frac plug @ 12,228'. 3315 psi SIP, Set frac plug @ 12,218', moved 2' due to collar , PU & Fire Gun #1 @ 12,189'- 12,190', 11 Shots. P/U and Fire Gun #2 @ 12,137'- 12,138', 10 Shots. P/U & Fire Gun #3 @ 12,086'- 12,087', 10 Shots, P/U & Fire Gun #4 @ 12,035' - 12,036', 9 Shots. (All Slick Perf Guns, 6 SPF, 60 Degree Phasing, 19 Gram Charge,.38 EHD.)POOH w/ WL , LD w/ Baker 20 setting tool & 3 1/8" - 4 Cluster spent Perf Assy . Verified all shots fired , Max Rate 16 bpm , Max Pressure 5103 PSI , Total bbl pumped 282 bbl. Load 2.90" Composite Frac Ball. Tools clean, no sand. Clean out FRV unit. Turned on Vega waterwell at 1 pm to fill Vega frac pit.

13:45 Frac Stage 3 , Open Well and launch ball , SICP 1645 psi. Ball seated at 222 bbls , Pump Stage #3. Pumped 4043 gals 15% HCl, pumped 430,720 gals of Slickwater, 56,737 gals of 15# X-link fluid, 38,414 gals of 15# Linear gel , 203,620 lbs 100 mesh, 172,250 lbs 40/70 White, 66,140 lbs 30/50 White -Max psi: 7853 psi, Avg psi: 7275 psi, Max rate: 80.0 bpm, Avg rate: 77.0 bpm, 1.01 Frac. Gradient. Approx load to rec 12,677 bbls. ISIP: 4308 psi, 5 min: 3230 psi, 10 min: 2733 psi, 15 min: 2532 psi, 5 1/2" X 9-5/8" intermediate, Begin psi- 1317 psi, average psi- 1597 psi, ending psi- 1465 psi

17:30 PJSM

17:45 Stage #4 Pump Down. P/U 4.28" OD RZR Choice Composite Ball Drop Frac Plug for 5 1/2, 23# Csg on Baker 20 setting tool & 3-1/8" - 4 Cluster Perf Assy . Test Lubricator to 8,500 PSI. Closed ground valve that is hooked up to EFRV unit before RIH. Open Well SICP 2,100 psi. RIH & get on depth w/ MJ @ 6,660'-6,680'. RIH & Pump Down @ 18 bpm @ 4,500 psi, 260 FPM, Spot frac plug @ 12,010'. 3,900 psi SIP, Set frac plug @ 12,010', PU & Fire Gun #1 @ 11,983'- 11,984' 11 Shots. P/U and Fire Gun #2 @ 11,932'- 11,933', 10 Shots. P/U & Fire Gun #3 @ 11,881'- 11,882', 10 Shots, P/U & Fire Gun #4 @ 11,830' - 11,831', 9 Shots. (All Slick Perf Guns, 6 SPF, 60 Degree Phasing, 19 Gram Charge,.38 EHD.)POOH w/ WL , LD w/ Baker 20 setting tool & 3 1/8" - 4 Cluster spent Perf Assy . Verified all shots fired , Max Rate 18 bpm , Max Pressure 4,900 PSI , Total bbl pumped 391 bbl. Load 2.90" Composite Frac Ball. Tools clean, no sand. Clean out FRV unit

19:30 Frac Stage 4 , Open Well and launch ball , SICP 1,740 psi. Ball seated at 213 bbls , Pump Stage #4. Pumped 4,000 gals 15% HCl, pumped 339,528 gals of Slickwater, 98,154 gals of 15# X-link fluid, 15,960 gals of 15# Linear gel , 209,540 lbs 100 mesh, 173,140 lbs 40/70 White, 60,110 lbs 30/50 White -Max psi: 8,010 psi, Avg psi: 7,602 psi, Max rate: 80.7 bpm, Avg rate: 71.4 bpm, 1.14 Frac. Gradient. Approx load to rec 11,156 bbls. ISIP: 5,240 psi, 5 min: 3,436 psi, 10 min: 2,961 psi, 15 min: 2,789 psi, 5 1/2" X 9-5/8" intermediate, Begin psi- 1,262 psi, average psi- 1,684 psi, ending psi- 1,445 psi. Valve on N. acid tank could not be repaired.

22:45 Stage #5 Pump Down. P/U 4.28" OD RZR Choice Composite Ball Drop Frac Plug for 5 1/2, 23# Csg on Baker 20 setting tool & 3-1/8" - 4 Cluster Perf Assy . Test Lubricator to 8,500 PSI. Closed ground valve that is hooked up to EFRV unit before RIH. Open Well SICP 2,600 psi. RIH & get on depth w/ MJ @ 6,660'-6,680'. RIH & Pump Down @ 18 bpm @ 5,000 psi, 270 FPM, Spot frac plug @ 11,805'. 4,600 psi SIP, Set frac plug @ 11,805', PU & Fire Gun #1 @ 11,778'- 11,779' 11 Shots. P/U and Fire Gun #2 @ 11,727'- 11,728', 10 Shots. P/U & Fire Gun #3 @ 11,676'- 11,677', 10 Shots, P/U & Fire Gun #4 @ 11,624' - 11,625', 9 Shots. (All Slick Perf Guns, 6 SPF, 60 Degree Phasing, 19 Gram Charge,.38 EHD.)POOH w/ WL , LD w/ Baker 20 setting tool & 3 1/8" - 4 Cluster spent Perf Assy . Verified all shots fired , Max Rate 18 bpm , Max Pressure 5,500 PSI , Total bbl pumped 297 bbl. Load 2.90" Composite Frac Ball. Tools clean, no sand. Clean out FRV unit

01:00 Wait on sand truck to AOL & unload 1 load of 30/50.

02:30 Frac Stage 5 , Open Well and launch ball , SICP 1,791 psi. Ball seated at 206 bbls , Pump Stage #5. Pumped 4,000 gals 15% HCl, pumped 386,652 gals of Slickwater, 97,314 gals of 15# X-link fluid, 16,632 gals of 15# Linear gel , 209,960 lbs 100 mesh, 172,680 lbs 40/70 White, 60,000 lbs 30/50 White -Max psi: 7,969 psi, Avg psi: 7,612 psi, Max rate: 80.5 bpm, Avg rate: 73.7 bpm, .99 Frac. Gradient. Approx load to rec 12,014 bbls. ISIP: 4,133 psi, 5 min: 3,570 psi, 10 min: 3,244 psi, 15 min: 3,011 psi, 5 1/2" X 9-5/8" intermediate, Begin psi- 1,364 psi, average psi- 1,616 psi, ending psi- 1,463 psi

09/10/2017

Rig Name:

06:00 PJSM , Stage #6 Pump Down. P/U 4.28" OD RZR Choice Composite Ball Drop Frac Plug for 5 1/2, 23# Csg on Baker 20 setting tool & 3-1/8" - 4 Cluster Perf

Assy . Test Lubricator to 8,500 PSI. Closed ground valve that is hooked up to EFRV unit before RIH. Open Well SICP 2,650 psi. RIH & get on depth w/ MJ @ 6,660'-6,680'. RIH & Pump Down @ 16 bpm @ 4100 psi, 260 FPM, Spot frac plug @ 11,610'. 4277 psi SIP, Set frac plug @ 11,600', PU & Fire Gun #1 @ 11,573'- 11,574', 11 Shots. P/U and Fire Gun #2 @ 11,522'- 11,523', 10 Shots. P/U & Fire Gun #3 @ 11,470'- 11,471', 10 Shots, P/U & Fire Gun #4 @ 11,419' - 11,420', 9 Shots. (All Slick Perf Guns, 6 SPF, 60 Degree Phasing, 19 Gram Charge,.38 EHD.)POOH w/ WL , LD w/ Baker 20 setting tool & 3 1/8" - 4 Cluster spent Perf Assy . Verified all shots fired , Max Rate 16 bpm , Max Pressure 4277 PSI , Total bbl pumped 249 bbl. Load 2.90" Composite Frac Ball. Tools clean, no sand. Clean out FRV unit.

08:00 CER Greased Frac valves

09:00 Start Stage 6 Frac , Open Well and launch ball , SICP 1722 psi. Ball seated at 208 bbls , Pump Stage #6. Pumped 4000 gals 15% HCl, The data van router lost power and we lost all communication with everything , All pumps SD with .75 ppg 100 mesh in well (Top to Bottom) Regained communication , After pumping wellbore volume ran a FR sweep 4 gpt with breaker 80 bpm , walked rate to 80 bpm. SD ISIP 4044 psi

10:45 ET troubleshooting problem. Found problem and corrected issue.

11:45 Resume pumping stage 6 Frac , Pumped 493,126 gals of Slickwater, 110,461 gals of 15# X-link fluid, 6168 gals of 15# Linear gel , 210,420 lbs 100 mesh, 172,780 lbs 40/70 White, 58,170 lbs 30/50 White -Max psi: 7787 psi, Avg psi: 7155 psi, Max rate: 80.6 bpm, Avg rate: 76.3 bpm, 0.98 Frac. Gradient. Approx load to rec 14,610 bbls. ISIP: 4050 psi, 5 min: 3126 psi, 10 min: 2676 psi, 15 min: 2386 psi, 5 1/2" X 9-5/8" intermediate, Begin psi- 1344 psi, average psi- 1387 psi, ending psi- 1298 psi. Vega waterwell pumped 10,712 bbls last 24 hrs , Waterwell died , Could not restart , Landowner checked out problem. Changed out fuse. 13:00 Vega waterwell is running into Vega frac pit.

14:15 Stage #7 Pump Down. P/U 4.28" OD RZR Choice Composite Ball Drop Frac Plug for 5 1/2, 23# Csg on Baker 20 setting tool & 3-1/8" - 4 Cluster Perf Assy . Test Lubricator to 8,500 PSI. Closed ground valve that is hooked up to EFRV unit before RIH. Open Well SICP 2199 psi. RIH & get on depth w/ MJ @ 6,660'-6,680'. RIH & Pump Down @ 16 bpm @ 4500 psi, 260 FPM, Spot frac plug @ 11,405'. 3648 psi SIP, Set frac plug @ 11,395', PU & Fire Gun #1 @ 11,368'- 11,369', 11 Shots. P/U and Fire Gun #2 @ 11,317'- 11,318', 10 Shots. P/U & Fire Gun #3 @ 11,265'- 11,266', 10 Shots, P/U & Fire Gun #4 @ 11,221' - 11,222', 9 Shots. (All Slick Perf Guns, 6 SPF, 60 Degree Phasing, 19 Gram Charge,.38 EHD.)POOH w/ WL , LD w/ Baker 20 setting tool & 3 1/8" - 4 Cluster spent Perf Assy . Verified all shots fired , Max Rate 16 bpm , Max Pressure 4905 PSI , Total bbl pumped 247 bbl. Load 2.90" Composite Frac Ball. Tools clean, no sand. Clean out FRV unit

16:30 PJSM, Frac Stage 7 , Open Well and launch ball , SICP 1,865 psi. Ball seated at 199 bbls , Pump Stage #7. Pumped 4,000 gals 15% HCl, pumped 341,712 gals of Slickwater, 111,342 gals of 15# X-link fluid, 19,236 gals of 15# Linear gel , 208,420 lbs 100 mesh, 17,140 lbs 40/70 White, 59,250 lbs 30/50 White -Max psi: 8,012 psi, Avg psi: 7,554 psi, Max rate: 80.4 bpm, Avg rate: 75.4 bpm, 1.08 Frac. Gradient. Approx load to rec 11,338 bbls. ISIP: 4,775 psi, 5 min: 4,031 psi, 10 min: 3,701 psi, 15 min: 3,464 psi, 5 1/2" X 9-5/8" intermediate, Begin psi- 1,221 psi, average psi- 1,524 psi, ending psi- 1,366 psi

20:15 Stage #8 Pump Down. P/U 4.375" OD Eco-Boss Composite Bridge Plug for 5 1/2, 23# Csg on Baker 20 setting tool & 3-1/8" - 4 Cluster Perf Assy . Test Lubricator to 8,500 PSI. Closed ground valve that is hooked up to EFRV unit before RIH. Open Well SICP 3,300 psi. RIH & get on depth w/ MJ @ 6,660'-6,680'. RIH & Pump Down @ 15 bpm @ 4,600 psi, time spot 4,000 gal 15% HCL acid, 300 FPM, Spot CBP @ 11,196'. 3,700 psi SIP, Set CBP @ 11,196', test to 6,550 psi, held for 5 min (good test). PU & Fire Gun #1 @ 11,169'- 11,170', 11 Shots, PSI dropped 100 psi, inject 6 bbls of acid in 1st cluster, P/U and Fire Gun #2 @ 11,111'- 11,112', 10 Shots, PSI dropped to 4,650 psi, P/U & Fire Gun #3 @ 11,054'- 11,055', 10 Shots, PSI dropped to 4,500 psi, P/U & Fire Gun #4 @ 11,009' - 11,010', 9 Shots, PSI dropped to 4,300 psi. (All Slick Perf Guns, 6 SPF, 60 Degree Phasing, 19 Gram Charge,.38 EHD.)POOH w/ WL , LD w/ Baker 20 setting tool & 3 1/8" - 4 Cluster spent Perf Assy . Verified all shots fired , Max Rate 15 bpm , Max Pressure 6,700 PSI , Total bbl pumped 239 bbl. Tools clean, no sand.

22:30 Frac Stage 8 , Open well, SICP- 2,121 psi. Pump Stage #8. Pumped 3,000 gals HCL acid, Pumped 400,470 gals of Slickwater, 111,594 gals of 15# X-link fluid, 16,128 gals of 15# Linear gel , 172,880 lbs 100 mesh, 169,840 lbs 40/70 White, 60,000 lbs 30/50 White -Max psi: 8,122 psi, Avg psi: 7,734 psi, Max rate: 72.7 bpm, Avg rate: 64.8 bpm, 1.08 Frac. Gradient. Approx load to rec 12,647 bbls. ISIP: 4,782 psi, 5 min: 4,032 psi, 10 min: 3,791 psi, 15 min: 3,622 psi, 5 1/2" X 9-5/8" intermediate, Begin psi- 1,472 psi, average psi- 1,618 psi, ending psi- 1,413 psi

02:45 Stage #9 Pump Down. P/U 4.28" OD RZR Choice Composite Ball Drop Frac Plug for 5 1/2, 23# Csg on Baker 20 setting tool & 3-1/8" - 4 Cluster Perf Assy . Test Lubricator to 8,500 PSI. Closed ground valve that is hooked up to EFRV unit before RIH. Open Well SICP 3,380 psi. RIH & get on depth w/ MJ @ 6,660'-6,680'. RIH & Pump Down @ 18 bpm @ 5,100 psi, 270 FPM, Spot frac

plug @ 10,984'. 5,300 psi SIP, Set frac plug @ 10,984', PU & Fire Gun #1 @ 10,957'- 10,958', 11 Shots. P/U and Fire Gun #2 @ 10,906'- 10,907', 10 Shots. P/U & Fire Gun #3 @ 10,855'- 10,856', 10 Shots, P/U & Fire Gun #4 @ 10,804' - 10,805', 9 Shots. (All Slick Perf Guns, 6 SPF, 60 Degree Phasing, 19 Gram Charge,.38 EHD.)POOH w/ WL , LD w/ Baker 20 setting tool & 3 1/8" - 4 Cluster spent Perf Assy . Verified all shots fired , Max Rate 18 bpm , Max Pressure 6,300 PSI , Total bbl pumped 257 bbl. Load 2.90" Composite Frac Ball. Tools clean, no sand. Clean out FRV unit

04:30 Wait on 2 loads of 40/70 sand to AOL & unload before starting stage 9 frac.

09/11/2017

Rig Name:

06:00 PJSM , Waiting on 2 loads 40/70 sand to arrive and unload to Start Stage 9 Frac , Service equipment , 1 load of 40/70 sand arrived , Unloaded , 2nd load on location , unload.

10:45 Frac Stage 9 , Open Well and launch ball , SICP 2075 psi. Ball seated at 192 bbls , Pump Stage #9. Pumped 4,000 gals 15% HCl, pumped xxx gals of Slickwater, xxx gals of 15# X-link fluid, xxx gals of 15# Linear gel , xxx lbs 100 mesh, xxx lbs 40/70 White, xxx lbs 30/50 White -Max psi: xxx psi, Avg psi: xxx psi, Max rate: xx bpm, Avg rate: xx bpm, xx Frac. Gradient. Approx load to rec xxx bbls. ISIP: xxx psi, 5 min: xxx psi, 10 min: xxx psi, 15 min: xxx psi, 5 1/2" X 9-5/8" intermediate, Begin psi- 1471 psi, average psi- xxx psi, ending psi- xxx psi

14:15 Stage #10 Pump Down. P/U 4.28" OD RZR Choice Composite Ball Drop Frac Plug for 5 1/2, 23# Csg on Baker 20 setting tool & 3-1/8" - 4 Cluster Perf Assy . Test Lubricator to 8,500 PSI. Closed ground valve that is hooked up to EFRV unit before RIH. Open Well SICP xxx psi. RIH & get on depth w/ MJ @ 6,660'-6,680'. RIH & Pump Down @ xx bpm @ xxx psi, xxx FPM, Spot frac plug @ xxx'. xxx psi SIP, Set frac plug @ xxx', PU & Fire Gun #1 @ xxx'- xxx', 11 Shots. P/U and Fire Gun #2 @ xxx'- xxx', 10 Shots. P/U & Fire Gun #3 @ xxx'- xxx', 10 Shots, P/U & Fire Gun #4 @ xxx' - xxx', 9 Shots. (All Slick Perf Guns, 6 SPF, 60 Degree Phasing, 19 Gram Charge,.38 EHD.)POOH w/ WL , LD w/ Baker 20 setting tool & 3 1/8" - 4 Cluster spent Perf Assy . Verified all shots fired , Max Rate xx bpm , Max Pressure xxx PSI , Total bbl pumped xxx bbl. Load 2.90" Composite Frac Ball. Tools clean, no sand. Clean out FRV unit