

Completion Data

Well Name: Queen Bee SWD 1

| | | | | | |
|--|------------------------------|--|-------------------------------------|-------------------------|-------------------------------------|
| API/UWI 42-003-47807 | Well ID Number 801845 | Operational Field Name UL Beekeeper | License # 839422 | State/Province Texas | Well Configuration Type Vertical |
| Original KB Elevation (ft) 2,993.10 | KB-Tubing Head Distance (ft) | Spud Date 9/17/2018 09:00 | Rig Release Date 11/8/2018 08:00 | PBTD (All) (ftKB) | Total Depth All (TVD) (ftKB) |

| | | | |
|-----------------------------------|--|--|----------|
| Job Category COMPLETION | Primary Job Type Initial Completion | Secondary Job Type AFE - COMPLETION | Status 1 |
| AFE Number | Start Date 11/15/2018 00:00 | End Date 12/10/2018 00:00 | |

| Rpt # | End Date | Summary |
|-------|------------|---|
| 1.0 | | |
| 2.0 | 11/16/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. HSM. Road rig to Queen Bee SWD # 1. Finish blading location. Spot rig. HSM. MIRUDDU. Nipple down well cap. Make measurements for secondary seal on 7" casing. Cut and bevel casing. Install secondary seal and nipple up 13 5/8" - 5K X 7 1/16" - 5K production wellhead. Nipple up 7 1/16" hydraulic BOP. Finish rig up. Install new tbg line on pulling unit. Move in and rig up 10 K pump package. Set frac tanks and rig up water line. Move in and rack 486 joints of 2 7/8" - 10.4 # - S-135 drill pipe. Off load drill collars, drlg jars, and handling equipment. Strap 2 7/8" drill pipe and prepare to pick up clean out BHA. |
| 3.0 | 11/17/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Pick up and make up 6" skirted and bored sealed bearing rock bit, X-O, eight 4 1/8" drill collars, X-O. TBHA = 252.48 Swap out slips and elevators to handle 2 7/8" drill pipe. PU 26 joints of 2 7/8" - 10.40 # - S-135 drill pipe. Pick up 4 7/8" Hydraquaker drilling jars. Continue picking up 2 7/8" drill pipe. Pick up 311 joints of 2 7/8" drill pipe. Install FOSV and close pipe rams. SDFN. |
| 4.0 | 11/18/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. PU 2 7/8" drill pipe. Tag solid at 12,112' SLM. (13' in on joint # 383.) Lay down jt # 383. HSM. PU power swivel and nipple up BIW stripper. Establish reverse circulation. Drill cement from 12,112' to solid tag on DV tool @ 12,117' SLM. Drill plugs and DV tool. Rotate and reciprocate at DV tool to ensure smooth csg ID. Run bit to 12,162' and circulate clean. Test csg to 500 psig for fifteen minutes. (OK.) HSM. Lay down power swivel and nipple down BIW stripper. Pick up 2 7/8" drill pipe. Tag @ 15,502'. Pick up power swivel and nipple up BIW stripper. Establish reverse circulation. Drill cement from 13,502' to DV tool @ 13,513'. Drill plug on DV tool. Circulate clean. Close BOP and secure well. |
| 5.0 | 11/19/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Open valves and BOP. Establish reverse circulation. Drill DV tool and Cement from 13,513' to 13,525'. Circulate clean. Establish conventional circulation and record pump rates @ 3, 4, and 5 BPM. Drill from 13,525' to float collar @ 13,531'. Encountered difficulty drilling float collar. Finish drilling FC and fall out of cement @ 13,534'. Make connections and ream / back ream from 13,534' to 13,745'. (Started FR drip to lower circulating pressure.) Pump two sweeps with a twenty barrel pad between sweeps. Saw small amount of drilling mud at surface prior to sweeps clearing hole. (AVDP - 180 FPM.) Minimal fluid losses after drilling out FC. HSM. Lay down power swivel. TOOHH with ten joints of 2 7/8" drill pipe. (Bit @ 13,435'.) Install FOSV and close BOP. Secure well and location. |
| 6.0 | 11/20/2018 | Pulling unit, war Horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Check well pressure. (Well on vacuum.) Open BOP. TIH with 10 joints. HSM. Pick up power swivel and change BIW stripper. Establish conventional circulation. (18 bbl's.) Wash and ream from 13,745' to solid tag @ 13,960. Drill and ream from 13,960' to solid TD tag @ 14,397. Ream and back ream every joint four cycles with high RPM in attempt to remove any cement from walls of 8 1/2" open hole. Start continuous FR drip at start of clean out operation to lower circulating pressure. Pump numerous sweeps to keep hole clean. (Minimal fluid losses during operations.) Rotate and reciprocate while pumping four separate sweeps with twenty barrel pads between sweeps. (Returns during early part of clean out were 90% cement with celloflake fluid loss additive and 10 % formation. Returns from tail end of clean out were 90 % formation, and 10 % cement.) Sweep # 4 was still heavy with formation. Pump two more sweeps with thirty barrel pad between sweeps. First sweep was heavy, second sweep was almost completely clean. Continue circulating untill returns were clean. (1,548 bbl's circulated to clean hole.) HSM. Lay down power swivel. TOOHH with fifteen stands of 2 7/8" drill pipe. Bit @ 13,450'. Install FOSV and close BOP. Secure well and shut down. |
| 7.0 | 11/21/2018 | Pulling unit, War Horse # 14. Operator Jose Luis Garcia. Transport crew to location. HSM. Check well pressure. (On vacuum.) Open BOP. TOOHH with 400 joints of 2 7/8" drill pipe. Lay down 4 7/8" drilling jars. TOOHH with 26 joints of 2 7/8" drill pipe. Stand back 4 1/8" drill collars. Break and lay down 6" mill tooth bit. (Had difficulty breaking DC'S, indications are that hydraulic system is not putting up required torque. Will have mechanic check system in AM.) HSM. Rig up Renegade wireline services. RIH with GR / CCL / CNL. Loggers TD @ 14,332'. Pick up casing shoe at 13,528' WLM. (Indications are that tools set down on ledge, or there is 65' of fill.) Log open hole interval and cased hole up to 13,100'. POOH with wireline. Pick up CBL. RIH with CBL. (Wireline picking up fluid level @ 960'.) Pull CBL. (Logs to be sent for interpretation.) HSM. Rig down Renegade wireline services. Close blind rams and secure well. |
| 8.0 | 11/22/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. transport crew to location. HSM. TIH with 456 joints of 2 7/8" drill pipe. Pick up seven joints of drill pipe and tag solid at 14,344'. (53' of solid fill from previously reached depth of 14,397'.) Pick up to 14,340'. Load csg with fresh water. (31 bbl's to load.) Install FOSV and close BOP. HSM. Rig up Basic cementing services. Test lines to 1,000 psig. Pump 20 bbl pad of resh water. Pump 65 sx of class H cement with 2 % C-23 retarder. (13.6 bbl's of 15.6 ppg slurry.) Displace with 62 bbl's of fresh water. Rig down Basic. Pull 14 stands of 2 7/8" drill pipe. (Slow to avoid possibility of swabbing cement.) Rig up reverse unit pump to drill pipe. Establish conventional circulation. Pump 450 bbl's of fresh water to ensure clean drill pipe and casing ID. (Lost 7 1/4 bbl's of water from pit during circulation) Close FOSV and BOP. Secure well and shut down. |
| 9.0 | 11/27/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Check well pressure. (Light vacuum.) TIH with 2 7/8" drill pipe. Tag solid cement @ 14,166' SLM. TOOHH with 45 stands of 2 7/8" drill pipe. Rig down reverse unit and load out power swivel. Continue TOOHH with 2 7/8" drill pipe. Wait on Dodd tool. Pick up Dodd tool, X-O. TIH with 77 joints of 2 7/8" drill pipe. Rigged up flowline while waiting on tools. |

Completion Data

Well Name: Queen Bee SWD 1

| | | | | | |
|--|------------------------------|--|-------------------------------------|-------------------------|-------------------------------------|
| API/UWI 42-003-47807 | Well ID Number 801845 | Operational Field Name UL Beekeeper | License # 839422 | State/Province Texas | Well Configuration Type Vertical |
| Original KB Elevation (ft) 2,993.10 | KB-Tubing Head Distance (ft) | Spud Date 9/17/2018 09:00 | Rig Release Date 11/8/2018 08:00 | PBTD (All) (ftKB) | Total Depth All (TVD) (ftKB) |

| Rpt # | End Date | Summary |
|-------|------------|---|
| 10.0 | 11/28/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Check well pressure. (Light vacuum.) Start light plants. TIH with 2 7/8" drill pipe. Install float sub on bottom of joint # 431. Continue TIH. Nipple up BIW stripper on joint # 437. HSM. Rig up standpipe in derrick. Test Petroplex lines to 5,000 psig. Start Dodd tool acidizing procedure. Pump 5 bbl's fresh water and caught pressure. Go to acid. Pump 22 bbl's of 15 % acid. Pump 6.6 bbl fresh water spacer. Pump 22 bbl's of 15 %. (Established returns @35 bbl's.) ICP was 4600 psig @ 4.6 bpm. Cycle Dodd tool from 13,530' to 13,593' during entire process. When acid reached discharge on Dodd tool, reduce pump rate from 4.6 bpm to 2.3 bpm and close return line. Pressure on casing slowly climbed to 920 psig, then started to break over. Shut down pumps to make connection and casing went on vacuum. Continue pumping 22 bbl's of acid with 6.6 bbl spacers and cycle Dodd tool continuously from 13,530' to within six feet of PBTD @ 14,166' SLM. Reverse process and continue pumping acid with water spacers from 14,166' up to 13,530'. (Casing remained on strong vacuum during entire operation.) It was taking 7.5 bbl's to catch pressure after killing pumps on connections. Rig up Petroplex to casing and pump fresh water down casing while pulling additional 17 stands of drill pipe. (Pump water down casing in attempt to push any remaining acid from 7" casing into open hole.) Dodd tool at 12,442' SLM. HSM. Rig down Petroplex standpipe from derrick. Install FOSV and close BOP. Pumped a total of 496 bbl's of 15 % acid. Prior to TOOH displaced acid from drill pipe. Pump a total of 385 bbl's of fresh water down casing to ensure that no acid remained in 7" csg annulus. Finish rigging down Petroplex acidizing services. Secure location and shut down |
| 11.0 | 11/29/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Check well pressure. (Light vacuum.) Open BOP and TOOH with 2 7/8" drill pipe. Rig down floor. Wait on on master valve and goat head. Nipple down 7 1/16" BOP. Nipple up 7 1/16" master valve and four outlet goat head. Secure well and clean location. |
| 12.0 | 11/30/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Check well pressure. (Light vacuum.) HSM. Rig up Petroplex acidizing services. HSM. Test lines to 6,500 psig. Pump 54 bbl's of fresh water and caught pressure. Establish initial injection pressure. (1500 psig @ 28 BPM.) Pump 120 bbl's of 15 % acid, drop 5,000 # rock salt with 100 bbl's brine. Pump 120 bbl's 15 % acid followed by 415 bbl fresh water spacer. (Saw 250 psig increase with salt on form.) Drop 10 K block w/ 150 bbl's brine, followed by 120 bbl's 15 %, then 415 bbl fresh water spacer. (Saw 460 psig increase with salt on form.) Drop 15 K block w/ 232 bbl's brine. Pump final 129 bbl's of 15 % and flush w/ 700 bbl's fresh water. (Saw 664 psig increase w/ salt on form.) Final circulating pressure 1,800 psig @ 30.4 BPM. SICP = 1,021 psig. 5 min, 592 psig. 10 mi, 505 psig. 15 min, 433 psig. 20 min, 371 psig, 30 min, 253 psig. 45 min, 0 psig. Total volume pumped, 2,823 bbl's. (Acid, 20,538 gallons.) HSM. Rig down Petroplex acidizers. Nipple down 7 1/16" goathead and master valve. Nipple up 7 1/16" BOP. Rig up PU floor. Function test BOP. HSM. Rig up Renegade wireline services. Make up 10 K composite plug on Baker # 20 setting tool dressed with slow burn charge. RIH with CBP. Correlate depth with GRCL. Set bottom of CBP @ 13,526'. POOH with WL. Load 7" csg. (28 bbl's to load.) Test csg and plug to 1,000 psig for fifteen minutes. (OK.) Bleed pressure off 7" csg. PU and RIH w/ 3 3/8" perf gun loaded w/ 25 gram charges, 4 SPF. Ease down and tag plug and use collar loc to correlate. Shoot 4 SPF from 13,523' to 13,503'. 80 holes. (Well went on vacuum.) Tag plug prior to POOH. Lay down perf gun. (All shots fired.) PU 3 3/8" gun dressed w/ 25 gram charges, 4 SPF. RIH w/ gun. Use CL to correlate. Shoot 4 holes from 13,502' to 13,503'. Pull up and shoot 24 holes from 13,496' to 13,490'. POOH. LD gun. RD Renegade. Close BOP. Secure well. SDFN. |
| 13.0 | 12/1/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Start light plants. Check well pressure. (Light vacuum.) Make up X-O and Dodd treating tool. TIH with 2 7/8" drill pipe. Nipple up BIW stripper on joint # 435. Ease down and confirm plug depth. (Tag plug @ 13,521' SLM.) HSM. Rig up Petroplex acidizing services and hang standpipe in derrick. Test lines to 5,000 psig. Pump 4.3 bbl's and catch pressure. (Fluid level @ 980'.) Pump 36 bbl's of 15 % acid and flush with 62 bbl's fresh water. (Pumped @ 4.5 BPM w/ 4,400 psig.) Well was on a vacuum during entire pumping operation. Pump 100 bbl's of fresh water down csg to flush any unspent acid into perforations. HSM. Rig down Petroplex acidizing services. Lay down two joints of drill pipe. Install FOSV and close BOP. Shut down operations due to unsafe weather conditions. |
| 14.0 | 12/2/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Check well pressure. (Light vacuum.) TOOH with 2 7/8" drill pipe and Dodd tool. Nipple down 7 1/16" BOP. Nipple up 7 1/16" master valve and four outlet Goat head. Make preparations for acidizing operation. Clean location. Secure well. |
| 15.0 | 12/4/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Start light plants. Rig up Petroplex acidizing services. HSM. Test lines to 7,500 psig. Load casing. (50 bbl's to load. Fluid level @ 1,346'.) Establish initial injection pressure. (31.1 BPM @ 1,085 psig.) Go to acid and pump 2500 gls of 15 % followed by 1,000 # RS w/ 20 bbl's of brine. Pump remaining 2500 gls of 15 % acid and flush w/ 700 bbl's of fresh water. No pressure increase noted with salt on formation. ISICP = 471 psig, 5 min, 219 psig, 10 min, 137 psig, 15 min, 73 psig, 23 minutes and casing went on vacuum. HSM. Rig down Petroplex services. Nipple down 7 1/16" goathead and master valve. Nipple up 7 1/16" hydraulic BOP. PU 6" skirted and bored mill tooth bit, X-O, 8 - 4 1/8" drill collars, X-O. TBHA = 251.98 TIH with clean out BHA. Tag CBP @ 13,524' SLM. (No salt on CBP.) Lay down one joint. HSM. PU power swivel and nipple up BIW stripper. Close BOP and secure well. Will drill up CBP first thing in AM and clean out to PBTD @ 14,166' SLM. |
| 16.0 | 12/5/2018 | Pulling unit, War horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Check well pressure. (Light vacuum.) Drill up CBP @ 13,524' SLM. (Pumping 3 BPM @ 1,900 psig.) Rotate and reciprocate. HSM. Lay down power swivel. TIH with stands from derrick. Tag solid @ 14,130' SLM. (36' of salt on top of cement plug.) HSM. Pick up power swivel. Wash salt and drill on plug debris from 14,130' to top of cement plug @ 14,166' SLM. Pump 400 bbl's of fresh water to ensure that salt was dissolved. HSM. Break and rack out power swivel. Lay down 21 joints to pull bit into 7" casing. Nipple down BIW stripper. Lay down 2 7/8" drill pipe. Lay down a total of 240 joints of 2 7/8" drill pipe. Install FOSV and close BOP. Secure well and shut down. |
| 17.0 | 12/6/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Check well pressure. (Light vacuum.) Open BOP and lay down 2 7/8" drill pipe. Lay down 8 - 4 1/8" drill collars. Rig down floor. Nipple down 7 1/16" BOP. Nipple down 5 K wellhead and nipple up 10 K wellhead. Nipple up 10 K X 5 K spool and 7 1/16" hydraulic BOP. Rig up floor and PU equipment to handle 4 1/2" 14.25 # production tbg. Install 4 1/2" tbg rams in BOP. Move out 486 joints of 2 7/8" drill pipe. Set extra pipe racks and off load 4 1/2" injection tbg. Remove protectors and strap tbg. Prepare to PU 7" injection packer. (Unable to Pick up packer due to incorrect X-O sub.) Close Blind rams and secure well. |

Completion Data

Well Name: Queen Bee SWD 1

| | | | | | |
|--|------------------------------|--|-------------------------------------|-------------------------|-------------------------------------|
| API/UWI 42-003-47807 | Well ID Number 801845 | Operational Field Name UL Beekeeper | License # 839422 | State/Province Texas | Well Configuration Type Vertical |
| Original KB Elevation (ft) 2,993.10 | KB-Tubing Head Distance (ft) | Spud Date 9/17/2018 09:00 | Rig Release Date 11/8/2018 08:00 | PBTD (All) (ftKB) | Total Depth All (TVD) (ftKB) |

| Rpt # | End Date | Summary |
|-------|------------|---|
| 18.0 | 12/7/2018 | Pulling unit, War horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Check well pressure. (Light vacuum.) Pick up and make up 4 1/2" EUE B X 3 1/2" EUE P, On - Off tool, 2.81 X profile nipple, 7" X 3 1/2" AS1X packer, 2.81 XN profile nipple, pump out plug housing. TBHA = 13.17 (All components are nickel plated for corrosion resistance.) Rig up tbg drift assembly. Pick up 4 1/2" 14.25 # - L-80 - composite lining systems fiber bore tubing. Every joint visually inspected and drifted by Composite lining systems technician. Fill tubing with freshh water on joint # 50. Continue picking up 4 1/2" tubing and filling pipe every 50 joints. Pick up a total of 296 joints. Install safety valve and secure well. |
| 19.0 | 12/8/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Check well pressure. (0 psig.) Pick up 4 1/2" fiber lined injection tubing. Every joint was visually inspected and drifted by a Composite lining systems technician. Swap out elevators to pick up joint # 415. (Jt had been recut with a 4 1/2" LTC thread and coupled with an L-80 coupling.) Pick up a 4 1/2" L-80 - 13.50 # pup jt to set packer. Set packer at 13,439' SLM. (51' above top perforation @ 13,490'.) Load csg / tbg annulus. (16 bbls to load, fluid level @ 916' from surface.) Test and chart tubing / casing annulus to 500 psig for thirty minutes. (OK.) Bleed pressure off casing. Release from on - off tool. Pump 300 bbl's of packer fluid down casing and return out tubing. (Tbg / csg annulus capacity = 237 bbls.) Re-engage injection packer with on - off tool. Close BOP and secure well. Will test and chart casing in AM. Nipple down BOP and spool. Set slips on 4 1/2" tubing and install secondary seal. Perform preliminary H-5 test. Make preparations for TRRC witnessed H-5 and injectivity test on 12/10/2018. RDDDU. (TRRC job # 157949) |
| 20.0 | 12/9/2018 | Pulling unit, War Horse # 14. Operator, Jose Luis Garcia. Transport crew to location. HSM. Load casing with packer fluid and rig up chart recorder. Perform preliminary H-5 test. (560 psig for 30 min. OK.) Bleed pressure off casing. Rig down recorder. Rig down floor. Nipple down 7 1/16 BOP. Nipple down 10 K X 5 K spool. Set self energizing 4 1/2" slips. (Packer was set in 23,000 pounds of compression.) Remove 4 1/2" LTC collar and install secondary seal on well head. Inspect gasket on composite tbg. Install LTC collar and safety valve on 4 1/2" tbg. Rig up recorder and perform H-5 test. (OK.) Rig down recorder. RDDDU. Nipple up 2" 10 K valve. Clean location. Make preparations to move the Beekeeper SWD #1. Will perform final H-5 test and injectivity test on 12/10/2018 TRRC has been notified and has issued a job number. University lands representative was also notified. |
| 21.0 | 12/11/2018 | HSM. Rig up pump truck and chart recorder. Perform H-5 test. (TRRC job # 157949) Test @ 540 psig for 30 minutes. OK. Bleed pressure off casing and rig down pump truck. HSM. Rig up Petroplex services to perform injectivity test. Test lines to 6,500 psig. Apply pressure to tbg and pump out blanking plug. (1,291 psig to POP.) Start injectivity test. 2 BPM f/ 30 min. 0 psig. 4 BPM f/ 30 mi. 0 psig. 6 BPM f/ 20 min. 30 psig. 8 BPM f/ 15 min. 319 /max/ 301 avg. 10 BPM / 15 min. 687/663. 12 BPM / 10 min. 1013/995 14 BPM / 10 min. 1,434/1,406. 16 BPM / 10 min. 1,933/1,907. 18 BPM / 10 min. 2,429/2,392. 20 BPM / 10 min. 2,983/2,920. ISIP, 0 psig. Monitor tbg pressure f /15 minutes. 0 psig. HSM. Rig down Petroplex pumping services. Install safety valve and secure well. (Waiting on nickel coated flange and 10 K special trim valve to complete wellhead assembly.) |
| 22.0 | 12/13/2018 | |