

University 18-19-3A  
Deepening

12-05-18 Test anchors (all 4 good).

12-07-18 MI & RU Basic Well Service PU (Sergio). Unhang polish rod & attempt to unseat pump. Worked loose & POOH with rods & pump pull rod. NDWH, NU BOP & unseat the TAC. SDFD.

Daily Cost \$ 3,000

Cum Cost \$ 3,000

12-08-18 TOO H with 2 3/8" tubing. SI&SDFD.

Daily Cost \$ 3,000

Cum Cost \$ 6,000

12-09-18 SDFWE.

12-10-18 SDFWE.

12-11-18 Unload & tally Graco 2 7/8", N-80, 8rd work string. PU 6 1/4" bit, (10) 4 1/4" DCs & 156 jts of the work string. Tag fill @ 5,200'. RU reverse unit, NU stripper head, SI & SDFD.

Daily Cost \$ 7,000

Cum Cost \$ 14,000

12-12-18 RU power swivel & pumped 180 bbls 9.5# brine. Pumping rate was 2 1/2 bpm with 1/2 bpm returns. RU Foam unit & half frac with gas buster. Start foam unit & well unloaded (filled half frac quickly). Only had one truck to haul off returns so decided to re-start again in the morning with 2 trucks hauling to disposal.

Daily Cost \$ 8,000

Cum Cost \$ 22,000

12-13-18 Break circulation with foam & clean out fill. Drill out 7" casing shoe & 3' of formation. Kill the well with brine & LD power swivel. POOH with mill tooth bit, PU 6 1/4" PDC bit & RBIH. SDFD 3 jts off of bottom.

Daily Cost \$ 10,000

Cum Cost \$ 32,000

12-14-18 Continue in the hole with bit & start drilling. Drilled with foam from 5,279' to 5,392' (113'). Pull bit back into 7" casing & SDFD.

Daily Cost \$ 11,000

Cum Cost \$ 43,000

12-15-18 Continue drilling from 5,392' to 5,565' (173'). Circulate the hole clean with foam then load the hole with 9.5# brine. Pull & LD 10 jts 2 7/8" tubing. SI&SDFD.

Daily Cost \$ 12,000

Cum Cost \$ 55,000

12-16-18 Continue out of the hole with bit. RU Allied Horizontal open hole loggers. Log interval from 5,574' (WLM) to 5,280'. RD loggers, SI & SDFD.

Daily Cost \$ 12,000

Cum Cost \$ 67,000

12-17-18 SDFWE.

12-18-18 PU PU 4 1/2" duplex shoe, 10 jts of 4 1/2" 8rd J-55 casing with reentry guide on top (425.65' total). PU duplex shoe stinger, 2 3/8" SN & start in the hole with 2 3/8" tubing. After lowering the 1 jt in the hole, dropped it in the hole (slips jumped open after the elevators were unlatched. RIH with 13 more joints & screwed into fish but unable to get off of duplex shoe (turn to the right to get off). After working with it was able to work the tubing up the hole about 15' above the shoe with out moving the 4 1/2" up also (can still go down). Attempted a blind back off of the 2 3/8" tubing but would only spin.

12-19-18 Continue to work tubing out of the hole after securing 4 1/2" casing (chain down). LD fish (stinger, SN & one jt of cork screwed 2 3/8" tubing). POOH with 9 of 10 jts of 4 1/2" casing, PU over shot (dressed to catch 4 1/2" casing collar) & bumper sub. RIH with 2 7/8" tubing. Could get over casing collar but could catch (overshot kept slipping off). POOH & SDFD.

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### Deepening

12-20-18 PU spear & RIH with bumper sub, DCs & 2 7/8" tubing. Catch fish & POOH with same. LD Fish (one jt of 4 1/2" casing with duplex shoe - 45' total length). SI&SDFD.

12-21-18 SD waiting on new 4 1/2" duplex shoe.

12-22-18 No operations.

12-23-18 SDFWE.

12-24-18 SDFWE.

12-25-18 SDF Christmas Eve.

12-26-18 SDF Christmas day.

12-27-18 Re-install all Basic Well Service PU tools (Removed for long week end security) & prep to re-run liner. SD for high winds.

Daily Cost \$ 5,000

Cum Cost \$ 72,000

12-28-18 RU West Texas Cementers, PU a new 4 1/2" duplex shoe (Peak) & RIH with 9 jts (384.84') of 4 1/2", J-55, ST&C casing for liner. Land liner on 4 1/2" manual slips at the surface BOP. PU 2 3/8" right hand release stinger, 2 3/8" expansion jt (3' long with 18" of travel) & 2 3/8" seating nipple. RIH on 2 3/8" tubing (422.84') & screw into shoe using 24" pipe wrench by hand. Noticed when screwing into the shoe that the tubing continued turning after seating the stinger. Attempted to get off of the shoe but could not after several attempts. We think the expansion jt key stripped out. Loaded 2 3/8" X 4 1/2" annulus & continued to attempt screw out, but could not. Drop standing valve, load the tubing & pressure to 200 psig ok. Released West Texas Cementers, SI & SDFD.

Daily Cost \$ 8,000

Cum Cost \$ 80,000

12-29-18 RU Renegade Wireline & cut the 2 3/8" tubing @ 377' (just above the standing valve). POOH with tubing. Started out of the hole with the 4 1/2" casing (4 jts) and rig broke down (hydraulic pump that runs the winch went out). Replace pump & continue out of the hole with the rest of the 4 1/2" casing. LD shoe & recovered stinger & the stripped out expansion jt. SI&SDFD.

Daily Cost \$

12-30-18 SDFWE.

12-31-18 SDFWE.

01-01-19 SD for New Year's Eve.

01-02-19 SD for New Year's Day.

01-02-19 PU & re-run 4 1/2" duplex shoe (Peak). RIH with 9 jts (384.84') of 4 1/2", J-55, ST&C casing for liner. Land liner on 4 1/2" manual slips at the surface BOP. PU 2 3/8" right hand release stinger, 2 3/8" seating nipple & RIH on 2 3/8" tubing & screw into shoe. Load the 2 3/8" X 4 1/2" annulus with 10# brine. PU 2 3/8" X 2 7/8" X-over & RIH with 2 7/8", 8rd tubing work string. Stop at the 7" casing shoe (5,276'), load the tubing with 10# brine & break circulation to surface (pumped a total of 40 bbls). Continue in the hole with the work string to 5,525' (40' feet off bottom no fill so far). SI&SDFD.

Daily Cost \$ 8,000

Cum Cost \$ 96,000

01-03-18 Continue in the hole with 2 7/8" tubing. Tag TD (5,574' WLM) with the 4 1/2" liner & loaded the hole with 35 bbls of brine. Broke circulation & circulated for 30 min while rigging up WTC to cement. Mixed & pumped 50 sxs Class C with .2% FR-20 .2 FL 2251 & .005GPS Nofoam V1A. Washed up pump truck & displaced cement to within 1 bbl of the duplex shoe (31 bbls). RD WTC, Rotate out of the shoe & POOH with 2 7/8 & 2 3/8" tubing. SI&SDFD. **Note:** TOP of Liner = 5,189'.

Daily Cost \$ 16,000

Cum Cost \$ 112,000

## University 18-19-3A

### Deepening

01-05-18 PU 6 1/4" (re-run) bit, DCs & RIH with 2 7/8" tubing. Tag the top of the liner & break circulation (took 8 bbls). Circulate bottoms up & saw no cement in the returns. POOH with 2 7/8" tubing, LD 10-4 1/4" DCs & 6 1/4" bit.

Daily Cost \$ 8,000

Cum Cost \$ 120,000

01-06-18 SDFWE.

01-07-18 SDFWE.

01-08-18 PU 3 7/8" bit, bit sub & RIH with 2 3/8" & 2 7/8" tubing. Tagged cmt at 5,235', PU swivel & loaded the hole (took 28 bbls). Broke circulation & drilled out 1' stringer. Continue in the hole & retagged @ 5,546'. Clean out to 5,550' & POOH with tubing & bit. SI&SDFD.

Daily Cost \$ 8,000

Cum Cost \$ 128,000

01-09-19 RU Renegade Wireline to run Gamma/CBL log. Pull log from PBTD (5,560' to 5,162'. **Top of the liner WLM is 5,188'**. Bond looked good with possible top of cement @ 5,270'. The old perfs in the 7" @ 5,220' – 5,247'. RD Renegade, PU 7 " PKR & RIH to 5,090'. Set PKR, Load backside & immediately pressured to 500 psig. Held ok. Load tubing & immediately pressured liner top to 500 psig. Held ok (old perfs must have taken some cement). Unset PKR & POOH laying down 80 jts of 2 7/8" tubing work string. SI&SDFD.

Daily Cost \$ 8,000

Cum Cost \$ 136,000

01-10-19 Continue LD Work string, RD&MO reverse unit. Tally in the hole with 2 3/8" tubing (old production tubing). Tag PBTD (5,560'), LD one jt & SDFD.

Daily Cost \$ 7,000

Cum Cost \$ 143,000

01-11-19 RU Big E Services. Pump 250 gals 7 1/2 % HCl ahead of 205 bbls of 1% KCl to circulate the hole with 1% KCl (tubing needed to be cleaned of light Iron Sulfide & rust). Spot 500 gal 10% acetic across interval. RD Big E & POOH with 2 3/8" tubing. RU Renegade Wireline & perforate 2 shots/foot (5,439' – 42', 5,464' – 67' & 5,471' – 73'). RD Renegade, SI & SDFD.

Daily Cost \$ 16,000

Cum Cost \$ 159,000

01-12-19 RIH with 4 1/2" PKR to 5,352' testing tubing to 5,000 psig. Found one jt with paraffin & 2 bent jts-no busts. RU Big E Services, reverse circulate spot acid into tubing & set PKR. Put spot acid away. Max rate = .6 bpm, min rate = .4 bpm & avg rate = .5 bpm. Max pressure (break down) = 1,427 psig & avg pressure = 900 psig. ISIP = 545 psig, 5 min = 487 psig, 10 min = 437 psig & 15 min = 390 psig. LWTR = 33 bbls. SI well for one hour & started swabbing. Made a total of 8 runs & recovered 63 bbls of water. No oil or gas shows. EFL= SN (5,349').

Daily Cost 10,000

Cum Cost \$ 169,000

01-13-19 SDFWE.

01-14-19 SDFWE.

01-15-19 SITP = 0 psig. IFL = 700', pulled from 1,300' & recovered 100% water. Made a total of 11 runs & recovered 23 bbls of water (56 bbls over load). RD swab, unseat PKR & POOH. SI&SDFD.

Daily Cost \$ 5,000

Cum Cost \$ 174,000

01-16-19 RU Renegade Wireline (had to wait 6 hours). PU 4 1/2" CIBP, RIH & set @ 5,425'. Perforate 2 shots/foot (5,380' – 81', 5,385' – 86', 5,391' – 92' and 5,395' – 96'). RD Renegade, SI & SDFD.

Daily Cost \$ 9,000

Cum Cost \$ 183,000

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Deepening

01-17-19 PU 4 ½" PKR & RIH with 2 3/8" tubing to 5,417'. Leave PKR swinging & wait on Big E to acidize with 500 gal 7 ½ % HCL (SS formula). Had job set up for 1:00 PM, Big E canceled because they got tied up on another job. SI&SDFD.

Daily Cost \$ 5,000

Cum Cost \$ 188,000

01-18-19 RU Big E Services, break circulation with 1% KCl water & spot 500 gal 7 ½ % HCl (SS formula) across interval. PUH with the PKR to 5,352' & reverse acid into tubing (12 bbls). Set PKR & put acid away. Formation broke @ 932 psig. Avg rate = 1 bpm, Avg pressure = 600 psig. ISIP = 470 psig & 5 min = 435 psig. LWTR = 34 bbls. Leave well SI one hour. SITP = 100 psig. Bled well down & started swabbing. IFL = surface. Made 12 runs & recovered 34 bbls of LW. EFL = SN (5,350'). SI & SDFD.

Daily Cost \$ 9,000

Cum Cost \$ 197,000

01-19-19 SITP = 0 psig. Spent most of the morning cutting sand line (500') & pouring a new rope socket. IFL = 2,500', pulled from 3,500' & recovered water with a show of oil & gas. Well swabbed dry in 2 more runs & recovered approx 6 bbls of fluid. Waited one hour to make last run. EFL = 4,800'. SI&SDFD.

Daily Cost \$ 3,000

Cum Cost \$ 200,000

01-20-19 SDFWE.

01-21-19 SDFWE.

01-22-19 SITP = 0 psig. IFL = 1,700' from surface, pulled from 2,700' & recovered water with a trace of oil. Made a total of 8 runs & recovered a total of 8 bbls of fluid. EFL = SN. SI&SDFD.

Daily Cost \$ 3,000

Cum Cost \$ 203,000

01-24-19 Continue in the hole with RBP & PKR. Set RBP @ 5,371' & PKR @ 5,360'. Test RBP to 1,000 psig ok. Unseat PKR & Spot (Cudd) 500 gal 7 ½ % HCl (SS formulation) across interval. Pull PKR to 5,260', reverse acid into tubing & re-set PKR. Put acid away. Breakdown press = 828 psig. Max Rate = 1.2 bpm, Avg rate = 1.2 bpm. Avg pressure = 355 psig. ISIP = 551 psig, 5 min = 368 psig, 10 min = 322 psig & 15 min = 276 psig. RD Cudd & RU swab. LWTR = 36 bbls. Made 10 runs with swab & recovered 27 bbls of LW. LWTR = 9 bbls. IFL = surface. EFL = SN ( 5,260'). SI & SDFD.

Daily Cost \$ 9,000

Cum Cost \$ 221,000

01-25-19 SITP = 0 psig. IFL = 1,400', pulled from 2,400' & recovered 100% water. Started cutting oil on 7th run (6% oil). Made a total of 14 runs & recovered 25 bbls of fluid. FL remained @ 3,700' after 7<sup>th</sup> run. Oil cut varied from 6-10% for the rest of the runs. SI&SDFD.

Daily Cost \$ 4,000

Cum Cost \$ 225,000

01-26-19 SITP = 10 psig. Open well with a puff of gas. IFL = 1,500', pulled from 2,500' & recovered 20% oil. Kolor Kut tanks showed 20 BO for yesterday. Made six total runs with recoveries similar to yesterday. RD swab, release packer and started out of hole. Tongs broke down and SDFD.

Daily Cost \$ 4,000

Cum Cost \$ 229,000

01-27-19 SDFWE.

01-28-19 SDFWE.