

**BAM Permian Operating, LLC  
University Stella #1  
1982 FEL & 467 FSL  
Section 31, Block 30 ULS  
Crane County, TX  
API: 42-103-36554  
Drilling Permit: 820894**

**12/29/2016**

Set 40' 20" Conductor Casing. Drill Rathole/Mousehole. Begin filling reserve w/ FW & BW. Continue rigging up O'Ryan Rig #5.

**12/30/2016**

Con't rigging up. Will spud tomorrow PM. Carry forward cost for location, damages, caliche, water, turnkey payment, etc.

DWC: \$283,150

CWC: \$283,150

**12/31/2016-Day 1**

Depth-305'

Con't rigging up. Unload 19 jts 13-3/8" 54.5# J-55 (807.5'). Clean, drift and tally pipe. Con't filling steel pits and reserve pits. Mix spud mud, make up BHA and spud in well at 11 PM. Drill 17-1/2" hole F/40' T/305' in 5.5 hrs (48.2 ft/hr).

ROP-51, MW-8.4, Visc-31, Survey-0.4 deg @ 247'

DWC: \$29,720

CWC: \$312,870

**1/1/2017-Day 2**

Depth-807'

Drill ahead F/305' T/396'. Bit plugged, TOH-bit plugged w/ pea gravel. Clear bit & TIH. Drill ahead F/396' T/807', 502' in 13 hrs. (38.6 Ft/hr). Survey-0.2 deg at 765'. Circulate hole, TOH & LD BHA. RIH w/ 13-3/8" FS, 13-3/8" 54.50# J-55 STC shoe jt, 13-3/8" FC, 18 jts 13-3/8" 54.50# J-55 STC w/ 8 centralizers and land casing at 807'. Circulate hole & rig up OTEX cementing. Test lines to 1,000 psi. Pump 20 bbl FW spacer & Lead-355 sx 12.9# 65:35:6 POZ C w/ ¼#/sk Cello Flake & 0.004 gps CF-41L, Tail-310 sx 14.8# Class C w/ 2% CaCl<sub>2</sub> & 0.004 gps CF-41L. Displace w/ 118 bbl FW and bump plug to 816 psi circulating 212 sx to surface. Bleed back 0.5 bbl, floats held then started flowing. Leave well shut-in. RDMO OTEX. WOC 4 hrs.

DWC: \$16,850

CWC: \$329,720

**1/2/2017-Day 3**

Depth-807'

Con't WOC. Cut conductor and surface casing. Weld on wellhead (C-22, 13-5/8" 3000# x 13-3/8" SOW) and test to 1,000 psi. NU BOP, MU BHA w/ 11" bit and TIH. Con't filling inside reserve with brine.

DWC: \$2,700

CWC: \$332,420

**1/3/2017-Day 4**

Depth-1,997'

Drill out wiper plug, FC, FS. Drill ahead F/807' T/1,997' in 20.75 hours (57.4 ft/hr).

ROP-79, MW-9.8, Visc-29, Survey-1.2 deg @ 1,775'

DWC: \$2,260

CWC: \$334,680

**1/4/2017-Day 5**

Depth-2,852'

Drill ahead F/1,997' T/2,852' in 21.25 hrs (40.2 ft/hr). Reduce WOB from 25k to 15k for deviation.

ROP-36, MW-9.9, Visc-29, Survey-1.9 deg @ 2,810'.

DWC: \$1,600

CWC: \$336,280

**1/5/2017-Day 6**

Depth-3,600'

Drill ahead F/2,852' T/3,600' in 21 hrs (35.6 ft/hr). Offload 97 jts. 8-5/8" 32# J-55 LTC, clean, drift and tally pipe (3,983.13').

ROP-42, MW-10.0, Visc-29, Survey-1.7 deg @ 3,443'.

DWC: \$52,750

CWC: \$389,030

**1/6/2017-Day 7**

Depth-3,983'

Drill ahead F/3,600' T/3,983' in 7 hrs (54.7 ft/hr). Pump 60 bbl sweep & circulate hole. TOH & LD BHA.

ROP-N/A, MW-10.1, Visc-30, Survey-1.6 deg @ 3,760'. RIH w/ 8-5/8" LTC FS, 8-5/8" 32# J-55 LTC Shoe Jt., 8-5/8" LTC FC, 96 Jts. 8-5/8" 32# J-55 LTC w/ 23 centralizers and land casing at 3,983'.

Circulate hole and rig up O-TEX cementing. Test lines to 2,000 psi. Pump 20 bbl FW spacer & Lead-710 sx 50:50 Poz Class C, 10% Gel, 0.25#/sx Cello Flake, 5% Salt & 1 gal/100 sx CF-41L, Tail-200 sx Class C w/ 1% CaCl & 1 gal/100sx CF-41L. Displace w/ 240 bbl FW and bump plug to 1,520 psi, circulating 160 sx to surface.

Bleed back 1 bbl, floats held. RDMO O-TEX.

DWC: \$19,250

CWC: \$408,280

**1/7/2017-Day 8**

Depth-3,983'

Set slips, make casing cut and install "B" Section. NU BOP and test to 250L/1000H. MU BHA and TIH, drill out cement, FC, FS.

DWC: \$2,000

CWC: \$410,280

**1/8/2017-Day 9**

Depth-5,648'

Drill ahead F/3,983' T/5,648' in 22.5 hrs (74.0 ft/hr).

ROP-87, MW-9.1, Visc-29, Survey-1.2 deg @ 5,163'

DWC: \$101,200

CWC: \$511,480

**1/9/2017-Day 10**

Depth-6,660'

Drill ahead F/5,648' T/6,660' in 21 hrs (48.2 ft/hr). TOH to change bit.

ROP-N/A, MW-9.4, Visc-30, Survey-2.3 deg @ 6,586'

DWC: \$3,300

CWC: \$514,780

**1/10/2017-Day 11**

Depth-6,887'

Con't TOH for bit change. LD bit #3 and MU bit #4 (7-7/8" Ulterra 716). TIH 25 stands, bit plugged. TOH and clear bit. TIH and drill F/6,660' T/6,887' in 7 hours (32.4 ft/hr). Begin mud up and start mudlogging at 6,700'.

ROP-87, MW-9.4, Visc-32, WL-6, PH-10 Chlor-101,000, Survey-1.9 deg @ 6,853'

DWC: \$10,700

CWC: \$525,480

**1/11/2017-Day 12**

Depth-7,837'

Drill ahead F/6,887' T/7,837' in 23 hours (41.3 ft/hr).

ROP-36, MW-9.7, Visc-32, WL-6, PH-10, Chlor-104,000, Survey-1.4 deg @ 7,748'

DWC: \$2,800

CWC: \$528,280

**1/12/2017-Day 13**

Depth-8,275'

Drill ahead F/7,837' T/8,275' in 14 hrs (31.3 ft/hr). TOH to change bit/motor due to low ROP & high diff pressure. TIH w/ new motor and bit #5 (7-7/8" Ulterra 616).

ROP-N/A, MW-9.7, Visc-32, WL-5.5, PH-9.5, Chlor-98,000, Survey-1.4 deg @ 8,224'

DWC: \$3,950

CWC: \$532,230

**1/13/2017-Day 14**

Depth-8,883'

Con't TIH. Drill F/8,275' T/8,883' in 17.5 hrs. (34.7 ft/hr).

ROP-56, MW-9.8, Visc-32, WL-4.0, PH-9.5, Chlor-102,000, Survey-1.8 deg @ 8,826'

DWC: \$4,950

CWC: \$537,180

**1/14/2017-Day 15**

Depth-9,246'

Drill ahead F/8,883' T/9,246' in 13.5 hrs (26.9 ft/hr). Estimated Top of Devonian at 9,240' from mudlogger sample (lime & chert) and low ROP. Circulate hole and TOH. MU bit #6 (Ulterra 716) and TIH.

ROP-N/A, MW-9.9, Visc-33, WL-4.8, PH-9.5, Chlor-105,000, Survey-2.4 deg @ 9,042'

DWC: \$2,450

CWC: \$539,630

**1/15/2017-Day 16**

Depth-9,354'

Con't TIH. Drill F/9,246' T/9,354' in 7.5 hrs (14.4 ft/hr). TOH for bit change due to low ROP (2.5 ft/hr). MU and TIH w/ bit #7 (Reed HE37MRSV 3x18), rig repair 2 hrs.

ROP-N/A, MW-9.8, Visc-32, WL-4.0, PH-9.5, Chlor-98,000, Survey-2.6 deg @ 9,301'

DWC: \$3,700

CWC: \$543,330

**1/16/2017-Day 17**

Depth-9,401'

Con't TIH. Drill F/9,354 T/9,401' in 5 hrs (9.4 ft/hr). ROP fell to 0 ft/hr. TOH to change bit (cutters completely worn & bad bearing). TIH w/ bit #8 (Varel HE 37 3x18).

ROP-N/A, MW-9.9, Visc-34, WL-2.0, PH-9.5, Chlor-101,000, Survey-2.6 deg @ 9,301'

DWC: \$6,600

CWC: \$549,930

**1/17/2017-Day 18**

Depth-9,485' (TD)

Con't TIH & Drill ahead F/9,401' T/9,485' in 10.5 hrs (8.0 ft/hr). Circulate hole. Short trip 15 stands (8,027-9,485'-no fill). Pump sweep and spot 80 bbl 56 visc pill at TD. TOH. Unload 214 jts (9,672.57') 5-1/2" 20# L-80 & DV tool/float equipment. Clean, drift & tally pipe. MIRU Schlumberger WLU & RIH w/ SGR/CNL/DLL, logging from 9,494' (loggers TD) to 3,983'. POOH & RDMO SLB.

DWC: \$100,100

CWC: \$650,030

**1/18/2017-Day 19**

Depth-9,485' (TD)

TIH w/ drill pipe to TD, tag 1' fill, circulate hole and spot 80 bbl 50 visc pill on bottom for casing. TOH laying down drill pipe and collars. MIRU casing crew & run 210 jts 5.5" 20# L-80 w/ 35 centralizers to 9,485'. FS-9,484', FC-9,438', DV tool-7,262'. Circulate hole.

DWC: \$3,050

CWC: \$653,080

**1/19/2017-Day 20**

Depth-9,485' (TD)

MIRU OTEX Cementing. Test lines to 3,000 psi and pump Stage 1- 24 bbl mudwash spacer & Tail-443 sx 14.4# 50:50 POZ H w/ 2% gel, ¼#/sx Cello Flakes, 0.3% C-12, 0.2% C-49, 0.2% SMS, 0.3% O-TX, 0.004 gps CF-41L. Drop plug & displace w/ 211 bbl FW, bump plug to 1,415 psi. Bleed back 1.0 bbl, floats held. Drop bomb and open DV tool at 1,336 psi. Circulate 4 hours. Pump Stage 2- 20 bbl FW spacer & Lead-420 sx 50:50 POZ H w/ 10% gel, 0.1% C-20, 5% salt & ¼#/sx Cello flakes, 0.004 gps CF-41L, Tail-204 sx Class H w/ 0.1% O-TX20, 0.004 gps CF-41L. Drop plug and displace w/ 165 bbl FW. Land plug at 1,535 psi & bump up to 3,026 psi. Bled back 1.5 bbl, floats held. RDMO OTEX. ND BOP and set slips. Make final cut and install tubing head. Test WH to 3,000 psi. Rigging down O'Ryan Rig #5.

DWC: \$242,350

CWC: \$895,430

## **Completion Report**

### **1/31/2017**

Clean location, set pipe racks and rig mat. Set and test anchors. Offload 298 jts. 2-3/8" 4.7# L-80 tubing. Pulling unit to MIRU in AM.

DWC: \$40,700

CWC: \$936,130

### **2/1/2017**

MIRU Lucky Services PU & RU. MU & RIH w/ 4-5/8" bit, BS, X-Over, 6 DC's and 223 jts. 2-3/8" L-80. Tag up at 7,258'. RU Swivel. Drill out 1.5' of DV tool. Circulate hole clean and shut down at dark. Close BOP. Set 2-500 bbl oil tanks, 1-500 bbl water tank, 3x10 2 phase 125 psi separator & 6x20 3 phase 75 psi Heater Treater.

DWC: \$63,850

CWC: \$999,980

### **2/2/2017**

Con't drill out DV tool, 10 minutes to get through. Circulate hole. LD swivel and con't in hole. Tag up at 9,339', RU swivel and drill out cement, wiper plug and cement to PBTD at 9,435', Close BOP and test casing to 1,500 psi. Circulate hole clean with 210 bbl 2% KCl. LD swivel and POOH laying down 270 jts 2-3/8" 4.7# L-80. Close BOP & SDON.

DWC: \$9,170

CWC: \$1,010,150

### **2/3/2017**

Con't POOH laying down 2-3/8" 4.7# L-80, 6 3-1/2" DC's, BS and 4-5/8" bit. RDMO PU. MIRU Capitan WLU. RIH w/ 4.50" GR/JB to 7,272' (WLD) and set down in DV tool. GR stuck, jar free and POOH. RIH w/ 4.34" GR/JB to PBTD at 9,437' (WLD), POOH. RIH w/ GR/RCBL/VDL to PBTD at 9,437' and log out to TOC at 1,850' while holding 1,000 psi. RDMO WLU.

DWC: \$10,750

CWC: \$1,020,900

### **2/5/2017**

Begin hauling and filling frac tanks w/ freshwater. Finish hooking up battery.

DWC: \$9,320

CWC: \$1,030,220

## **2/7/2017**

Con't setting and filling frac tanks. Fill in cellar and move pipe racks. Haul in chat for pumping unit.

DWC: \$11,600

CWC: \$1,041,820

## **2/8/2017**

Set BODE 320-256-120 pumping unit. Con't filling frac tanks.

DWC: \$38,900

CWC: \$1,080,720

## **2/9/2017**

ND WH. NU 10k Frac Valve and Goat Head. Pressure test frac valve and casing to 5,000 psi, bleed off pressure. RIH w/ 4.375" GR/JB to PBD at 9,437' (no tension loss or gain going down or coming up through DV tool). POOH. RIH and perforate Stage 1 Devonian at 6 spf with Titan 19 Gram EXP-3319-323T 0.38" EHD as follows:

**9,338-9,341' (18 shots)**

**9,311-9,314' (18 shots)**

**9,281-9,284' (18 shots) 54 total perfs.** POOH. Break down perfs at 3,800 psi and establish injection rate of 0.5 BPM at 3,625 psi. RIH and dump bail 15 gal 15% NEFE HCL across perfs 9,311-9,314'. POOH. Break down perfs at 3,700 psi, pressure broke back to 2,450 psi at 0.75 BPM. Bleed off pressure and close valves. Rigging up Basic Frac Crew.

DWC: \$8,450

CWC: \$1,089,170

## **2/10/2017**

Con't rigging up Basic Frac Crew. Waiting on two pumps and chemicals. Test lines and FV to 7,500 psi. Open well with 536 psi & EIR of 2.6 bpm and break down perfs at 5,112 psi. Frac Stage 1 Devonian (9,281-9,341') w/ 2,500 gal 15% HCl, 952 bbl 12# X-Link Pad, 3,072 bbl proppant laden 12# XL (0.5-4.0 ppg) & 12 bbl (500 gal) 15% HCl and 175 bbl slickwater flush. Bottom of acid spot to 8,399'. Proppant details-18,000 lbs 40/70 Ottawa, 143,080# 30/50 White & 64,000# 30/50 SDC (total prop-225,080#). Max Rate-92 bpm, Avg Rate-88 bpm, Max TP-4,548 psi, Avg TP-3,908 psi. ISIP-2,858 psi, 5 min-2,664 psi. SWI. FG-0.739 psi/ft. Stage LTR-4,343 bbl.

NU 5k Lubricator and equalize. RIH w/ 5.5" (4.370" OD) Warden CBP and guns. Set plug at **9,100'** and pressure test to 3,500 psi. Pull up hole & perforate Stage 2 Atoka at 6 spf with Titan 19 Gram EXP-3319-323T 0.38" EHD as follows:

**8,487-8,489' (12 shots)**

**8,474-8,476' (12 shots)**

**8,449-8,450' (6 shots)**

**8,415-8,417' (12 shots)**

**8,399-8,401' (12 shots) 54 total perfs.** POOH.

Open well with 263 psi, EIR of 2.2 bpm and break down perms at 4,367 psi. Frac Stage 2 Atoka (8,399-8,489') w/ 2,000 gal 15% HCl, 762 bbl 12# X-Link Pad, 2,169 bbl proppant laden 12# XL (0.5-4.0 ppg) & 186 bbl 12# linear flush. Proppant details-18,000 lbs 40/70 Ottawa, 90,000 30/50 White & 44,000# 30/50 SDC (total prop-152,000#). Max Rate-90 bpm, Avg Rate-88 bpm, Max TP-5,422 psi, Avg TP-4,097 psi. ISIP-3,148 psi, 5 min-2,902 psi. SWI. FG-0.804 psi/ft, Stage LTR-3,166 bbl, TLTR-7,509 bbl.

NU 5k Lubricator and equalize. RIH w/ 5.5" (4.370" OD) Warden CBP. Set plug at **8,020'** and bleed off pressure to 0 psi to test. POOH. SWI. RDMO Frac Crew & WLU.

DWC: \$144,150  
CWC: \$1,233,320

### **2/13/2017**

ND 10k Frac Valve and Goat Head, NU WH. MIRU Reverse Unit and PU. NU BOP and Annular. RU flowback manifold. MU 4.5" Varel bit, 2-3/8" Flow thru bit sub with float, 2-3/8" SN & 143 jts. 2-3/8" 4.7# L-80 tubing. Close BOP and put TIW in tubing. SDFN.

DWC: \$11,950  
CWC: \$1,245,270

### **2/14/2017**

Con't RIH w/ 253 total jts. 4.7# 2-3/8" L-80. Tag up at 8,008'. RU swivel and stripping head. Break circulation w/ 31 bbl FW. Close Pipe rams and test BOP to 2,000 psi. Open rams and test Annular to 2,000 psi. Wash 6' sand and drill up CBP#1 in 15 min., 400 psi under plug. Circulate 90 bbl FW. LD Swivel and RIH w/ 35 jts. 2-3/8" 4.7# L-80 (288 jts. total). Tag up at 9,080' and drill up plug remnants, sand and CBP #2 in 20 min., 950 psi under plug. Circulate w/ 45 bbl FW. LD Swivel and RIH w/ 2-3/8" 4.7# L-80 to 9,406'. PU swivel and drill out to 9,408' in 25 min., quit making hole. Circulate hole clean w/ 225 bbl FW. POOH and LD 34 jts. 2-3/8" 4.7# L-80. EOT at 8,340'. Close BOP and put TIW in tubing. Leave well flowing to pit on 12/64" at 750 psi & 30 bbl fluid/hr. TLR-340 bbl, TLLTR-7,169 bbl, 4.5% LR.

DWC: \$10,650  
CWC: \$1,255,920

### **2/15/2017**

FCP-350 psi on 15/64" choke at 27 bbl fluid/hr. Circulate hole w/ 190 bbl FW. SWI and close pipe rams. ND stripping head. Install wrap around & close annular. Open pipe rams and land wrap around. ND BOP and Annular. Drop ball and install flow tree. Pressure up to 2,400 psi and shear pins in flow sub. Release all rental equipment. Hook up flowline to wellhead and open tubing on 12/64" choke at 600 psi & 22 bbl/hr. Pressure fell to 425 psi & 14 bbl/hr after 4 hours, open choke to 14/64" choke at 375 psi & 18 bbl/hr. FTP-225 psi, SICP-300 psi on 16/64" at time of report TLR-625 bbl, TLLTR-6,884 bbl, 8.3% LR.

DWC: \$6,150  
CWC: \$1,262,070

**2/16/2017**

FTP-125 psi, SICP-200 psi on 18/64" choke. Recover 305 bbl load water. Open choke to 24/64" & 12 bbl fluid/hr. TLR-930 bbl, TLLTR-6,579 bbl, 12.3% LR.

DWC: \$550

CWC: \$1,262,620

**2/17/2017**

FTP-0 psi, SCIP-50 psi on 28/64" choke. Recover 145 bbl load water. SWI to build pressure.

TLR-1,075 bbl, TLLTR-6,434 bbl, 14.3 % LR.

DWC: \$0

CWC: \$1,262,620

**2/18/2017**

SITP-80 psi, SICP-100 psi. Open well on 48/64" choke (full open) and recover 80 bbl load water. Well dead at 5 PM. SWI to build pressure.

TLR-1,155 bbl, TLLTR-6,354 bbl, 15.5% LR

DWC: \$0

CWC: \$1,262,620

**2/19/2017**

SITP-120 psi, SICP-150 psi. Open well on 48/64", well started cutting oil and heavy gas at 4 pm. FTP-150 psi, SICP-250 psi. Reduce choke to 24/64" and turn well to battery, filling separators. Oil cut between 10-70%. FTP-250 psi, SICP-650 psi on 20/64" at time of report. Recover 95 bbl load water and 20 bbl oil.

TLR-1,250 bbl, TLLTR-6,259 bbl, 16.6% LR

DWC: \$0

CWC: \$1,262,620

**2/20/2017**

FTP-0 psi, SICP-725 psi. Well died overnight. Leave well open to flowline. Build firewall around battery and set electric poles.

DWC: \$19,500

CWC: \$1,282,120

**2/21/2017**

FTP-0 psi, SICP-850 psi. No fluid recovered. MIRU Lucky PU.

DWC: \$1,200

CWC: \$1,283,320

**2/22/2017**

FTP-0 psi, SICP-925 psi. Blow casing down, started flowing oil and water at 350 psi and 24/64" choke. Turn well to battery, pressure holding at 200 psi. Kill well w/ 110 bbl BW down casing and 20 bbl down tubing. ND flow tree and wrap around, NU BOP. POOH w/ 263 jts. 2-3/8" 4.7# L-80, SN, flow thru bit

sub and bit (Cone missing on bit). RIH w/ 2-7/8" collar size slotted BPMA, 2-3/8" SN, 32 jts. 2-3/8" 4.7# L-80, 2-3/8"x5-1/2" TAC & 221 jts. 2-3/8" 4.7# L-80. Close BOP and turn tubing to flowline. Unload rods, pump and wellhead supplies.

DWC: \$40,500  
CWC: \$1,323,820

**2/23/2017**

FTP-50 psi, SICP-0 psi. Blow down tubing and well started flowing. Kill tubing w/ 5 bbl BW. RIH w/ 8 jts. 2-3/8" 4.7" L-80 and tagged up. Unable to work through, TAC at DV tool depth of 7,259' tbg measurement (TAC 4.50" OD). POOH w/ tubing and LD TAC, TAC had 1/2" mark on one side. PU 2-3/8"x5-1/2" Slim Hole TAC (4.20" OD) and RIH w/ tubing design as follows:

**Note: Run slim hole TAC in this wellbore.**

Description	Jts	Grade	Weight	Length	Depth
KB (16 minus 3)				13	13
2-3/8" 4.7# L-80	262	L-80	4.7	8297.56	8,311
2-3/8"x5-1/2" TAC (Slim hole 4.20")	1	L-80		3.2	8,314
2-3/8" 4.7# L-80	32	L-80	4.7	1014.67	9,328
2-3/8" SN	1	L-80		1.1	9,330
2-3/8" x 2-7/8" X-Over	1	L-80		0.4	9,330
2-7/8" Slotted BPMA	1	L-80		29.6	9,360
Total					9,360

Set TAC w/ 15 points tension. ND BOP, NU tubing slips. Pulling unit shut down due to 40+ MPH winds. Plumb in wellhead to flowline.

DWC: \$5,450  
CWC: \$1,329,270

**2/24/2017**

SITP-80 psi, SICP-0 psi. Blow well down and tubing started flowing. Kill well with 10 bbl BW. RIH w/ pump and rods as follows:

Description	No.	Grade	Length
1-1/4"x26' PR w/ 16' 1-1/2" PR Liner	1	SM	26
3', 9', 18' 0.98 " FG Pony	3	FG	30
0.98" FG	81	FG	4763
7/8" JCQ79	108	D	2700
3/4" JCQ79	58	D	1450
1.5" Sinker Bars	9	C	225
3/4" Shear Tool	1	26k	1
1.5" Sinker Bars	1	C	25
20-125-24-5-2 HHBC (John Crane)	1	N/A	26

Load tubing w/ 1 bbl and pressure test to 500 psi. Bleed off pressure and pump up to 500 psi. Space well out w/ 38". Hang well on begin pumping to battery at 3:30 PM. RDMO PU.

DWC: \$17,850

CWC: \$1,347,120