

**BAM Permian Operating, LLC  
University Amanda #3  
2003 FWL & 1877 FSL  
Section 6, Block 30 ULS  
Crane County, TX  
API: 42-103-36543  
Drilling Permit: 810420**

**Drilling Report**

**10/18/2015-Day 1**

Depth-684'

Finish rigging up O'Rryan #8. MU BHA & Bit. Mix spud mud and spud in at 5:00 PM. Drill F/ Surface T/ 684' in 13 hrs.

ROP-57, MW-8.4, Visc-33, Survey-0.5 deg @ 492'

DWC: \$5,200

CWC: \$186,515

\*CWC carried forward to include Location, Damages, Surveys, Permits, Water, Move-In, Etc.

**10/19/2015-Day 2**

Depth-906'

Drill 684-906' in 1.5 hrs. Circulate hole clean. TOH & LD BHA. RIH w/ 13-3/8" BTC FS, 13-3/8" 54.50# J-55 BTC shoe jt, 13-3/8" BTC FC, 31 jts 13-3/8" 54.50# J-55 BTC and land casing at 906'. Circulate hole clean & rig up OTEX cementing. Pump Lead-450 sx 12.9# 35:65:6 POZ C w/ ¼#/sk Cello Flake, 3% Salt & 0.004 gps CF-41L, Tail-325 sx 14.8# Class C w/ 2% CaCl<sub>2</sub> & 0.004 gps CF-41L. Displace w/ 136 bbl FW and bump plug to 900 psi circulating 265 sx to surface. Bleed back 1 bbl, floats held. WOC 4 hrs. Cut off Conductor and Surface casing. Weld on 13-3/8" Wellhead, NU BOP and rotating head.

DWC: \$51,685

CWC: \$238,250

**10/20/2015-Day 3**

Depth-2,000'

Test BOP to 250 psi low/1,000 psi high. TIH w/ 11" bit/BHA & tag cement at 879'. Drill out FC/FS.

Drill F/ 906' T/2,000' in 14 hrs.

ROP-78, MW-9.7, Visc-29, PH-10, Survey-1.0 deg @ 1,887'.

DWC: \$51,000

CWC: \$289,250

**10/21/2015-Day 4**

Depth-3,010'

Drill ahead F/2,000' T/3,010' (1,010' in 22.5 hrs), 44.9 ft/hr.

ROP-41.6, MW-10.1, Visc-29, PH-10, Survey 1.0 deg @ 2,927'.

DWC-\$1,950

CWC-\$291,200

**10/22/2015-Day 5**

Depth-3,750'

Drill ahead F/3,010' T/3,750' (740' in 14.5 hrs), 51.0 ft/hr. TD intermediate hole at 3,750', condition mud, circulate and pump 80 bbl sweep. TOH, LD 8" DC's, Reamers & Shock Sub. RIH w/ 8-5/8" FS, 1 jt. 8-5/8" 32# HCK-55 STC, 8-5/8" FC, 9 jts. 8-5/8" 32 # HCK-55 STC, 40 jts. 8-5/8" 32# J-55 STC, 40 jts. 8-5/8" 24# J-55 STC & set at 3,750'. Circulate hole clean. MIRU OTEX. Test lines to 2,500 psi. Pump 20 bbl FW spacer & Lead-665 sx 11.8# 50:50 POZ C w/ 10% gel, ¼#/sx Cello Flakes, 5% Salt, 0.004gps CF-41L. Tail-200 sx Class C, 2% CaCl<sub>2</sub>, 0.004 gps CF-41L. Displace w/ 230.5 bbl FW, bump plug to 1450 psi. Circulate 7 sx cement to surface. RDMO OTEX.

Survey-0.5 deg @ 3,715'

DWC: \$70,070

CWC: \$361,270

**10/23/2015-Day 6**

Depth-3,930'

ND BOP. Install and set slips on WH. Cutoff casing, NU "B" section & BOP. Test BOP to 250 psi/L and 1,000 psi/H. MU 7-7/8" bit, BHA and RIH to 3,652'. WOC 4 hrs. Test casing to 600 psi. Drill out FC & FS. Drill F/3,750 T/3,930' (180' in 7.5 hrs), 24 ft/hr. ROP-22.5, MW-9.2, Visc-28, PH-12, Survey-N/A

DWC: \$3,000

CWC: \$364,270

**10/24/2015-Day 7**

Depth-4,480'

Drill ahead F/3,930 T/4,480' (550' in 24 hrs), 22.9 ft/hr. ROP-18, MW-9.2, Visc-28, PH-10, Survey-0.75 deg @ 4,212'

DWC: \$1,000

CWC: \$365,270

**10/25/2015-Day 8**

Depth-5,013'

Drill ahead F/4,480 T/4,508'. ROP dropped below 10 ft/hr for 4 hrs. TOH & replace bit. TIH & resume drilling F/4,508 T/4,759'. Down 1.5 hrs due to miss runs on directional survey before getting good shot. Drill F/4,759 T/5013' (533' in 14 hrs), 38 ft/hr. Lost full returns at 4,990'. Mix and pump LCM pills and regain full returns.

ROP-48, MW-9.2, Visc-28, PH-10, Survey-0.5 deg @ 4,712'

DWC: \$2,200

CWC: \$367,470

**10/26/2015-Day 9**

Depth-5,959'

Drill ahead F/5,013 T/5,959' (946' in 23 hrs), 41.1 ft/hr. Con't pumping LCM pills/sweeps for minor seepage of approximately 15 bbl/hr.

ROP-48, MW-9.2, Visc-28, PH-10, Chlor-69,000, Survey-1.0 deg @ 5,695'

DWC: \$154,000

CWC: \$521,470

**10/27/2015-Day 10**

Depth-6,729'

Drill ahead F/5,959' T/6,729' (770' in 21.5 hrs), 35.8 ft/hr. Lost circulation at 8 bbl/hr or less, con't pumping LCM pills. Last survey at 6,639' at 4.0 deg, will TOH to run motor and directional tools.

ROP-8, MW-9.2, Visc-28, PH-10, Chlor-69,000, Surveys-0.75 deg @ 6,139', 4.0 deg @ 6,639'

DWC- \$2,410

CWC- \$523,880

**10/28/2015-Day 11**

Depth-6,985'

Drill ahead F/6,729' T/6,756'. Spot 80 bbl LCM pill to 4,100'. TOH & LD bit and BHA. PU & RIH w/ bit, motor and MWD tools. Check survey w/ MWD as follows:

6,050'-1.9 deg

6,146'-2.3 deg

6,177'-2.5 deg

6,272'-2.8 deg

6,367'-3.0 deg

6,462'-3.0 deg

6,557'-3.5 deg

6,652'-3.7 deg

6,683'-3.7 deg

Slide drill 6,756-6,765', Rotate drill 6,765-6,827', 4.2 deg @ 6,766'. Slide drill 6,827-6,837', Rotate drill 6,837-6,953', 1.9 deg @ 6,903'. Slide drill 6,953-6,958', Rotate drill 6,958-6,985' (256' in 11.5 hrs), 22.2 ft/hr.

ROP-42, MW-9.2, Visc-29, PH-10, Chlor-69,000, Survey-1.9 deg @ 6,903'

DWC: \$3,550

CWC: \$527,430

**10/29/2015-Day 12**

Depth-7,194'

Rotate drill 6,985-7,017'. Slide drill 7,017-7,024', Rotate drill 7,024-7,049. Survey-0.9 deg @ 7,030'. Circulate bottoms up w/ full returns. TOH & LD directional tools/motor. PU & RIH w/ bit, motor, teledrift. Pump high visc sweep and ream 6,784-7,149'. Mud up & Drill actual 7,149-7,194' (209' in 7.5 hrs), 27.9 ft/hr.

ROP-22, MW-9.2, Visc-39, PH-9, Chlor-69,000, Survey-0.7 deg @ 7,093'.

DWC: \$2,500

CWC: \$529,930

**10/30/2015-Day 13**

Depth-7,689'

Drill F/7,194 T/7,689' (495' in 23.5 hrs), 21.0 ft/hr.

ROP-34, MW-9.5, Visc-35, PH-10, Chlor-106,500, WL-6, Survey-0.7 deg @ 7,591'.

DWC: \$3,800

CWC: \$533,730

**10/31/2015-Day 14**

Depth-8,008'

Drill F/7,689 T/8,008' (319' in 14.5 hrs), 22 ft/hr. TOH to replace bit due to low ROP. TIH w/ bit #7, filling up every 30 jts. Begin mudlogging at 7,800'.

ROP-N/A, MW-9.6, Visc-37, PH-10, Chlor-102,000, WL-5, Survey-1.1 deg @ 7,937.

DWC: \$6,100

CWC: \$539,830

**11/1/2015-Day 15**

Depth-8,358'

FIH & Drill F/ 8,008 T/8,013'. Motor failure, TOH to replace motor. PU new motor, TIH & drill 8,013-8,358' (350' in 11 hrs), 31.8 ft/hr.

ROP-46, MW-9.9, Visc-36, PH-10, Chlor-115,000, WL-4, Survey-0.3 deg @ 8,358'

DWC: \$2,050

CWC: \$541,880

**11/2/2015-Day 16**

Depth-8,579'

Drill F/8,358 T/8,486'. ROP dropped to 5-7 ft/hr. Attempted to clear bit for 4 hrs. TOH, bit balled w/ shale. RIH w/ bit #8, drill F/8,486 T/8,579' (128' in 14.5 hrs), 8.8 ft/hr.

ROP-22, MW-9.8, Visc-33, PH-10, Chlor-115,000, WL-4, Survey-1.0 deg @ 8,503'

DWC: \$3,800

CWC: \$545,680

**11/3/2015-Day 17**

Depth-8,899'

Drill F/8,579 T/8,899' (413' in 23.5 hrs) 17.6 ft/hr.

ROP-9, MW-9.8, Visc-34, PH-10, Chlor-107,500, WL-4, Survey-2.4 deg @ 8,850'

DWC: \$6,800

CWC: \$552,480

**11/4/2015-Day 18**

Depth-9,087'

Drill F/8,889 T/9,087' (188' in 15.5 hrs), 12.1 ft/hr. Top of Devonain at 9,084' from mud logger sample.

Circulate hole clean, TOH to replace bit. PU & RIH w/ bit #9.

ROP-N/A, MW-9.8, Visc-38, PH-10, Chlor-115,000, WL-2, Survey-2.5 deg @ 9,040'

DWC: \$2,800

CWC: \$555,280

**11/5/2015-Day 19**

Depth-9,235'

Drill F/9,087 T/9,235' (148' in 19.5 hrs), 7.6 ft/hr.

ROP-8, MW-9.8, Visc-37, PH-10, Chlor-108,000, WL-4, Survey-2.9 deg @ 9,167'

DWC: \$3,800

CWC: \$559,080

**11/6/2015-Day 20**

Depth-9,302' TD

Drill F/9,235 T/9,302' (67' in 7 hrs), 9.5 ft/hr. Circulate hole clean. Short trip 6,600' to TD. Tag 8' fill, wash down to 9,302'. Mix and pump 60 bbl sweep and spot 50 bbl 51 visc pill. TOH & LD BHA. MIRU Schlumberger WL & RIH w/ Platform Express SGR/CNL/DLL from 9,302-7,800'. POOH.

**DWC: \$27,100**

**CWC: \$586,180**

**11/7/2015-Day 21**

Depth-9,302' TD

RDMO Schlumberger wireline. TIH to lay down drill pipe and collars. Bit plugged at 4,500'. TOH and clean out bit. RIH to 9,299' and wash 3' to TD at 9,302'. POOH laying down drill pipe and collars.

DWC: \$2,750

CWC: \$588,390

**11/8/2015-Day 22**

Depth-9,302' TD

MIRU casing crew & run 206 jts 5.5" 20# L-80 to 9,302'. FS-9,300', FC-9,253', DV tool-7,351'. Circulate hole. MIRU OTEX. Test lines to 5,000 psi and pump Stage 1- 24 bbl mudwash spacer & Tail-350 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/ 206 bbl FW, plug did not bump. Bleed back 0.5 bbl, floats held. Drop bomb and open DV at 1424 psi. Circulate 4 hours. Pump Stage 2- 20 bbl FW spacer & Lead- 430 sx 50:50 POZ H w/ 10% gel, 0.1% C-20, 5% salt & ¼#/sx Cello flakes, 0.004 gps CF-41L, Tail-110 sx Class H w/ 0.1% O-TX20, 0.004 gps CF-41L. Drop plug and displace w/ 164 bbl FW. Land plug at 1,830 psi & test up to 3,000 psi. Bled back 2 bbl, floats held. RDMO OTEX. ND BOP and set slips. Make final cut and install tubing head. Test WH to 3,000 psi. RD O'Ryan #8.

DWC: \$374,750

CWC: \$963,680

**Completion Report****12/15/2015**

Carry forward costs for anchors, electrical installation, location maintenance, etc.

DWC: \$20,300

CWC: \$983,980

**12/16/2015**

MIRU Pulling Unit. ND WH, NU BOP. Unload and tally 287 jts. 2-3/8" 4.7# L-80 tbg. MIRU Reverse Unit. PU & RIH 4-5/8" bit, BS, 4 DC's, X-Over and 222 jts 2-3/8" 4.7# L-80. Tag at 7,350' KB. Lay down 1 joint, rig up swivel. SDFN.

DWC: \$38,910

CWC: \$1,022,890

**12/17/2015**

PU 1 jt., break circulation & drill out 2' cement & DV tool in 1 hr. Test DV tool to 1,100 psi for 15 min. Con't RIH and tag w/ jt. 279 at 9,241', drill out 12' cement and FC at 9,253'. Con't in hole drilling cement to 9,290'. Circulate hole clean. Displace hole w/ 200 bbl 2% KCl and biocide FW. RD Swivel, Release Reverse Unit & POOH laying down 95 jts. 2-3/8" tbg. SDFN.

DWC: \$7,750

CWC: \$1,030,640

**12/18/2015**

Finish POOH laying down 287 total jts. 2-3/8" tbg, X-Over, DC's, BS & bit. Load hole w/ 16.5 bbl 2% KCl. MIRU SLB WLU. RIH w/ GR/CBL/VDL and tag PBTD at 9,289' (WL Depth). Log OOH to 2,800' holding 1,000 psi on casing, TOC at 3,090'. FOOH. RDMO WL, RDMO PU.

DWC: \$11,260

CWC: \$1,041,900

**02/12/2016**

Set 11 frac tanks and begin filling.

DWC: \$1,450

CWC: \$1,043,350

**2/13/2016**

ND 3k tubing head. NU 10k frac stack. Pressure test casing and frac stack to 5,000 psi, bleed off pressure. MIRU Dynasty WLU. RIH w/ Titan EXP-3319-323T (0.38 eh) charges and perforate Devonian as follows:

9,232-9,236' (24)

9,179-9,182' (18)

9,149-9,151' (12) 54 total perfs. POOH.

RIH & dump bail 15 gal 15% HCl at 9,232'. POOH w/ bailer, RDMO Dynasty. Breakdown perfs at 1,900 psi, EIR of 1.1 bpm at 1,500 psi, pump 5 bbl FW. SWI.

DWC: \$10,150

CWC: \$1,053,500

**2/16/2016**

MIRU Universal Frac Crew. Test lines to 7,200 psi. Frac Devonian Perfs 9,149-9,236'w/ 2,500 gal 15% HCl, 841 bbl 12# XL Pad, 3,022 bbl proppant laden 12# XL (0.5-4.0 ppg) & 212 bbl 12# linear. Proppant details-21,000 lbs 40/70 White, 150,980# 30/50 White & 75,940# 30/50 SDC (total prop-247,920#). Max Rate-92 bpm, Avg Rate-79 bpm, Max TP-6,467 psi, Avg TP-5,604 psi. ISIP-6,300 psi, 5 min-5,816 psi, 10 min-5,491 psi, 15 min-5,098 psi. TLTR-4,132 bbls.

DWC: \$87,600

CWC: \$1,141,100

**2/17/2016**

SICP-1,800 psi. Hook up wellhead to flowback. Open well at 8:30 am on 9/64" choke at rate of 21 BFPH and 1,750 psi FCP. Open choke to 10/64" at rate of 25 BFPH and 1,700 psi. Rec. 575 bbl load water. TLR-575 bbl, TLLTR-3557 bbl, 14% LR. FCP at time of report-1250 psi, Flow Rate 25-28 BFPH.

DWC: \$1,850

CWC: \$1,142,950

**2/18/2016**

FCP-1250 psi. Con't flowing well on 10/64" choke FCP until 3:30 PM, FCP-1100 psi. Shut well in overnight, will run production packer in AM. Lay flowline to battery. Rec. 195 bbl load water. TLR-770 bbl, TLLTR-3362 bbl, 19% LR.

DWC: \$16,550

CWC: \$1,159,500

**2/19/2016**

SICP-1,300 psi. MIRU Renegade WLU. MU & RIH w/ 4.625" GR/JB, CCL not reading. POOH and MU new CCL, still not reading collars. POOH and found short in wireline, strip line and re-head. RIH w/ 4.625" GR/JB and tag at 7,354' (DV tool). POOH w/ GR/JB. MU & RIH w/ Gamma Ray/Temp tools for post frac log. RIH through DV tool w/ 3-1/8" tools, can't in hole & tag up at 9,179', unable to work through bridge covering perfs 9,179-9,236'. Log GR/Temp 8,900-9,179', POOH. MU & RIH w/ 4.5" GR/JB to 9,179', POOH. RDMO Renegade WL. Coil tubing scheduled to clean out fill to TD in AM.

DWC: \$9,250

CWC: \$1,168,750

**2/20/2016**

SICP-1,300 psi. MI Red Back CTU. Test BOP's, leaking. Work on BOP's, begin rigging coiled tubing unit. Main bearing on unit shattered, would take several days to repair. RDMO Red Back.

DWC: \$2,050

CWC: \$1,170,800

**2/21/2016**

SICP-1,300 psi. MIRU C&J 2-3/8" CTU. Test lines & BOP to 5,000 psi. MU & RIH w/ 4.625" JZ Bit, X-Over, 2.875" HP/HF Motor, Disconnect & BPV pumping 1 BPM to 9,000'. Increase pump rate to 2.5 BPM, wash sand from 9,185-9,280'. Pump pressure 2,500-2,725 psi, Circulating pressure 1,350-1,550 psi, 2.5 BPM in & 3.0 BPM out. Pump 10 bbl sweep, circulate 75 bbl & POOH at 45-50 ft/min, 2.5 BPM in & 2.5 BPM out. LD tools. RDMO C&J CTU. SICP-1,350 psi.

DWC: \$17,250

CWC: \$1,188,050

**2/22/2016**

SICP-1,350 psi. MIRU Dynasty WLU. Ring gasket on top of frac valve leaking, ND goat head & replace gasket. MU & RIH w/ 4.625" GR/JB, set down at 7,356', POOH. RIH w/ 4.5" GR/JB to 9,110', POOH. RIH w/ 4.5" AS-1X Packer w/ 1.781" F Nipple & 2,500 psi PO plug. Set packer at 9,090', POOH and bleed casing pressure to 0 psi. RDMO Dynasty WLU. MIRU Lucky Well Services. ND Frac Stack, NU 3k tubing head, NU BOP. MU On/Off Tool. Close BOP. SDON due to heavy lightning.

DWC: \$9,750

CWC: \$1,197,800

**2/23/2016**

SICP-0 psi. RIH w/ 4-1/2" On/Off tool, 2-7/8"x2-3/8" X-Over & 278 jts. 2-3/8" L-80 tubing. Circulate 190 bbls packer fluid. Latch on packer at 9,090' & space out. ND BOP, put 15 pts compression on packer and set slips. Pump out plug w/ 3,300 psi. Plumb in wellhead and open well on 10/64" choke w/ 1,250 psi FTP and 0 psi SCIP. FTP at time of report-1,100 psi. Rec. 295 bbl load water. TLR-1065 bbl, 3067 bbl TLLTR, 26% LR.

DWC: \$9,200

CWC: \$1,207,000



