

DAKOTA RESOURCES, INC.  
**UNIVERSITY KATELYN #5**

1920' FEL & 660' FNL  
SEC. 6, BLK. 30  
CRANE CO., TX  
API #: 42-103-36403  
Proposed TD: 9500'  
AFE: \$1,704,475.00 PROP: 346-3  
PERMIT #: 789000

**5/21/14:** Luchini and Mertz Land Surveying Company staked location.

DC: \$3,250

TWC: \$3,250

**6/13/14:** Move in notice to the university lands.

**6/15/14-7/25/14:** Mark Hughes building location and reserve pit.

DC: \$40,000

TWC: \$43,250

**7/28/14:** 80' of 20" conductor set. Welded 2" tubing to conductor and pumped 10 yards of cement. Drilled mousehole at 3 degree angle and set 40' of 13 3/8" liner. Drilled rathole at 7 degree angle and set 40' of 13 3/8" liner.

DC: \$27,470

TWC: \$70,720

**7/31/14:** Savanna Rig #641 move in Monday August 4.

**8/1/14-8/4/14:** lined pit and hauled 10 loads water. Put 10 loads of water on location. Will rig up today and spud tomorrow.

DC: \$9,300

TWC: \$80,020

**8/5/14:** Move in and rig up Savanna Rig 641. Waiting on trucking company to obtain the permit to move sub structure to location. We will spud tomorrow.

DC: \$20,200

TWC: \$100,220

**8/6/14:** Had to re-drill rathole due to cave in. Continue rigging up Savanna 641.

DC: \$19,000

TWC: \$119,220

**8/7/14:** Finish rigging up Savanna 641, Weld on conductor and flow line, strap BHA, Mix Spud Mud, RU Back Yard, RU overflow lines and cuttings discharge to reserve.

DC: \$27,094

TWC: \$146,314

**8/8/14:** Depth: 696'. Present operation: drilling. Ftg & hrs drilled: 666'/14.5. drlg @ 41.8 ft/hr. Pick up: Bit, BS, SS, 8" DC. Tag fill in conductor. Wash fill from 40'-93'.

MW: 8.7 ppg; Vis.: 32; pH: 8.7

Survey: .8 @ 250'

.5 @ 525'

DC: \$51,448

TWC: \$197,762

**8/9/14:** Depth: 920'. Present Operation: Welding on Wellhead. Ftg & hrs drilled: 317'/6.5. drlg @ 48.3 ft/hr. Drill to Surface TD. Circ 50 bbl Hi vis sweep, WLS, Pump 50 bbl. Hi-vis sweep, TOH w/ Drill String, had tight hole/ 860' to 730' RU run 24 jts 13-3/8" J-55 54.5/61# LTC casing to 920', Circ while RD Casing, CMT w/ 350 sx 65:35 POZ, 325 sx C' full returns, final circ pressure 380 psi, bump plug 400 psi over, release pressure 1/4 bbl back float held 75 sx CMT to reserve, Cut off conductor.

Survey: 1.4 @ 876'

DC: \$75,466

TWC: \$273,228

**8/10/14:** Depth: 920'. Present Operation: drilling cement. Ftg & hrs drilled: 0'/0. Cut off conductor and 13-3/8" casing. Weld on well head and nipple up BOP & rotatinghead. Dress off flowline and weld on companion flange. Rig UP kill lines and choke manifold. Test blinds to 1500 psi. TIH test Pipe rams to 1500psi.

MW: 10 ppg; Vis.: 29; pH: 8.7

DC: \$48,479

TWC: \$321,707

**8/11/14:** Depth: 2698'. Present Operation: drilling salt and anhydrite. Ftg & hrs drilled: 1778'/20.5. drlg @ 86.7 ft/hr. Tag cement @ 884'. Drill cement and Plug F/ 884' to 918', Drill to 2698' w/ WLS.

MW: 10; Vis.: 28; pH: 10

Survey: .7 @ 1320'

.2 @ 1774'

1.4 @ 2207'

DC: \$37,845

TWC: \$359,552

**8/12/14:** Depth: 3745'. Present Operation: drilling. Drill from 2698' to 3745' w/ WLS & rig service. Had black water @ 3300'. Weight knocked from 10.1 ppg to 9.9 ppgg and pH f/10 to 9. Check for flow, none.

MW: 10 ppg; Vis.: 28; pH: 10

Survey: 2.2 @ 2653'

1.2 @ 2968'

0.5 @ 3317'

DC: \$26,900

TWC: \$386,452

**8/13/14:** Depth: 3802'. Present Operation: drilling cement. Ftg & hrs drilled: 57'/1.5. drlg @ 38 ft/hr. Drill from 3745' to 3802 w/ WLS & Rig Service. Circulate high vis sweep & 2 bottoms up. TOH laydown 8" collars and tools. RU Byrds and run 98 jts 8-5/8" 32# & 24# csg to 3802'. RD csg crew and circulate. RU Allied. Cement lead: 400 scks Class C 50:50 poz blend w/ 10% gel, 10 lb/sk salt, 2 lb/sk kol-seal, .25 lb/sk Flo-Seal, & .25 lb/sk Powdered Defoamer. Tail: 200 scks Premium Plus w/ 1% BWOW CaCl. Full returns, no cement to surface. Bumped plug w/ 1140 psi, float held 1 bbl back, RD cementers. Split stack. Lift BOP. Set slips w/ 95k. Cut casing. NU B section. Test to 1100 psi.

MW: 10 ppg; Vis.: 28; pH: 10

Survey: 0.6 @ 3728'

DC: \$108,464

TWC: \$494,916

**8/14/14:** Depth: 4176'. Present Operation: drilling. Ftg & hrs drilled: 431'/11.5. drlg @ 37.47 ft/hr. Test blinds to 1500 psi. Clear floor of all csg equip. PU bit, motor, survey sub, 2 IBS, 4X6-1/2" DC'. TIH w/ drillstring tag cement. RD elevators and bails. Hang block, slip & cut drilling line. Test pipe rams to 1500 psi. Drill cement and floats. Drill f/ 3802 to 4176' w/ surveys and rig service.

MW: 9.5 ppg; Vis.: 28; pH: 10

Survey: 0.2 @ 3846'

0.2 @ 3941'

DC: \$49,641

TWC: \$544,557

**8/15/14:** Depth: 5006'. Present Operation: Lost returns, pumping LCM sweeps. Ftg & hrs drilled: 809'/11.5. drlg @ 38.5 ft/hr. Drill f/ 4176' to 5006' w/ surveys and rig service. Lost full returns @ 5006'. Pump 100 bbl LCM sweep w/ 20 sx Ironwood. Pump 100 bbl LCM sweep w/ 40 sx Ironwood (at time of loss MW 9.3 in, 9.4 out).

MW: 9.5 ppg; Vis.: 28; pH: 10

Survey: 1.1 @ 4132'

0.8 @ 4258'

1.0 @ 4515'

0.8 @ 4796'

DC: \$24,188

TWC: \$568,745

**8/16/14:** Depth: 5019'. Present Operation: Pumping. Ftg & hrs drilled: 13'/11.5 hrs. Pull 10 stds DP to be above loss zone. Attempt to circulate, unable due to plugged bit. TOOH change out bit, motor, survey tool. TIH with Bit #4 Attempt to break circulation @ 4956. Pump 15# per bbl LCM sweep, Bit plugged, unplugged jets. Motor indicated sator failure, prepare to TOH. Well u-tubed through DP bringing Sulfur water.

MW: 9.8 ppg; Vis.: 28; pH: 10

DC: \$31,998

TWC: \$600,743

**8/17/14:** Depth: 5019'. Present Operation: Pumping. Ftg & hrs drilled: 0'/0 hrs. Wait on 10# brine. Slug DP with 10 # brine, TOOH. Backed off housing of mud motor left sator and bit in hole, wait on fishing tools. Laydown motor housing, DC, survey tool. Slip cut 50' drlg line. Pick up fishing assembly, TIH, well started flowing. Wait on 10# brine.

MW: 9.8 ppg; Vis.: 28; pH: 0

DC: \$27,718

TWC: \$628,461

**8/18/14:** Depth: 5019'. Present Operation: making up fishing assembly. Ftg & hrs drilled: 0'/0 hrs. Wait on 10# brine. Circulate out gas. Make up and TIH w/ fishing assembly. Tag TOF @ 4955'. RU and wash over fish, TOOH. Failed to catch fish. Wait on short guide to be fabricated. Make up fishing assembly, well started flowing, shut rams bullhead, 100 bbls 10 # brine.

MW: 9.8 ppg; Vis.: 28; pH: 0

DC: \$26,846

TWC: \$655,307

**8/19/14:** Depth: 5019'. Present Operation: TIH w/ fishing assembly. Wait on fishing tools make up and TIH w/ fishing tools. Attempt to wash over fish, gained 900 psi pump pressure, TOOH, no recovery. Wait on fishing tools. TIH with fishing assembly, run #3.

MW: 9.65 ppg; Vis.: 28; pH: 0

DC: \$30,830

TWC: \$686,137

**8/20/14:** Depth: 5019'. Present Operation: change out grapple, TIH. TIH with fishing assembly. Run #3. Tag fish @ 4958', attempt to latch on to fish, TOH no recovery. Wait on fishing tools, TIH w/ 4" grapple to catch stater. Tag fish at 4958'. Work grapple over stater. TOOH.

MW: 9.65 ppg; Vis.: 28; pH: 0

DC: \$43,125

TWC: \$729,262

**8/21/14:** Depth: 5019'. Present Operation: Circulate 9.2 Cut Brine f/ 3391. TOOH, dress out overshot with 3-7/8" grapple. TIH, fish, TOOH. Laydown fish and fishing assembly, 100% recovery. PU and TIH w/ conventional drilling assembly. Well started flowing. Pumped 25 bbls of 10 ppg brine. TIH. Circulate f/ 3391' with 9.2 ppg cut brine. Lost zone @ 4400'. Water flow estimated to be @ 5006' due to indication on drill string.

MW: 9.2 ppg; Vis.: 28; pH: 0

DC: \$52,925

TWC: \$782,187

**8/22/14:** Depth: 5312'. Present Operation: drilling. Circulate f/ 3391' with 9.2 ppg cut brine. Slip & cut 80' drilling line. Spot 10# brine cap, TIH. Establish circulation w/ 8.7 ppg MW. Drilling f/ 5019' to 5312'. Raising MW to 9.2 ppg & pumping LCM sweeps while drilling. Have small water flow @ 9.0 ppg MW. Have mud loss with MW greater than 9.0 ppg.

MW: 8.9 ppg; Vis.: 28; pH: 10

Survey: 0.8 @ 5,056'

0.6 @ 5,112'

0.6 @ 5,270'

DC: \$150,792

TWC: \$932,979

**8/23/14:** Depth: 5898'. Present Operation: drilling. Ftg & hrs drilled: 586'/23 hrs. Drlg f/ 5312' to 5898'. Pumping LCM sweeps while drilling. Have small water flow @ 8.9 ppg MW, have mud loss with MW greater than 9.0 ppg.

MW: 8.9 ppg; Vis.: 28; pH: 10

Survey: 0.4 @ 5,334'

0.6 @ 5,588'

0.5 @ 5,650'

0.3 @ 5,880'

DC: \$112,790

TWC: \$1,045,769

**8/24/14:** Depth: 6296'. Present Operation: Well shut in due to H2S alarm. Waiting on third party to clear. Ftg & hrs drilled: 398'/21.5 hrs. Drlg f/ 5898' to 6296'. Pumping LCM sweeps while drilling, Have water flow @ 8.9 ppg MW. Have mud loss with MW greater than 9.0 ppg. H2S alarms went off at shaker, shut well in, and waited for 3rd party to clear.

MW: 8.9 ppg; Vis.: 28; pH: 9.5

Survey: 0.7 @ 6,032'  
0.4 @ 6,160'

DC: \$38,496

TWC: \$1,084,265

**8/25/14:** Depth: 6716'. Present Operation: drilling. Ftg & hrs drilled: 420'/20 hrs. Circulate through chokes & bring MW to 9.0 ppg. Drilling f/ 6296' to 6716'. Pumping LCM sweeps while drilling. Have water flow @ 8.9 ppg MW. Have mud loss with MW greater than 9.0 ppg.

MW: 8.9 ppg; Vis.: 28; pH: 12

Survey: 0.4 @ 6,349'  
0.7 @ 6,500'  
0.6 @ 6,638'

DC: \$38,118

TWC: \$1,122,383

**8/26/14:** Depth: 7025'. Present Operation: TIH. Ftg & hrs drilled: 309'/15.5 hrs. Drilling f/ 6716' to 7025'. Pumping LCM sweeps while drilling. Have water flow @ 8.9 ppg MW. Have mud loss with MW greater than 9.0 ppg. Circulate bottoms up spot 25 bbl 10 ppg brine pill above 5000'. TOO. TIH w/ OEDP.

MW: 9.0 ppg; Vis.: 28; pH: 12

Survey: 0.6 @ 6,825'

DC: \$37,629

TWC: \$1,160,012

**8/27/14:** Depth: 7025'. Present Operation: WOC. TIH w/ OEDP, 12 STDS. RU Techwell and run elog surveys, determined thief zone at 4990' and flow from 4600' to 4850'. TIH w/ OEDP to 4824', spot 300 sx, 122 bbls econocem, 12.4 ppg, 2.29 yld, f/ 4824' to 2824'. DP was initially stuck, TOO, WOC.

MW: 9.0 ppg; Vis.: 28; pH: 12

DC: \$76,334

TWC: \$1,236,346

**8/28/14:** Depth: 7025'. Present Operation: drilling cement f/ 4429'. WOC, recommended wait: 24 hrs. Mix low water loss mud, slip & cut drilling line. TIH, started hitting cement stringers @ 2850', good cement @ 4429'. Drilling cement.

MW: 9.1 ppg; Vis.: 28; pH: 10

DC: \$28,568

TWC: \$1,264,914

**8/29/14:** Depth: 7025'. Present Operation: TIH w/ bit. Circulating bottoms up while drilling cement. Drilled cement f/ 4429' to 4915'. Cement job solved lost circulation issue.

MW: 9 ppg; Vis.: 28; pH: 12

DC: \$26,310

TWC: \$1,291,224

**8/30/14:** Depth: 7285'. Present Operation: drilling. Ftg & hrs drilled: 260'/7.5 hrs. TOO H. Stand down safety meeting. Finish TOO H. PU BHA & TIH To 6140'. PU drill pipe from V-Door. Ream last 3 jts to bottom. Drill from 7025' to 7285'.

MW: 9 ppg; Vis.: 34; pH: 10

Survey: 0.2 @ 7,030'  
0.3 @ 7,140'

DC: \$99,344

TWC: \$1,390,568

**8/31/14:** Depth: 7620'. Present Operation: circ. & condition mud. Ftg & hrs drilled: 335'/22.5 hrs. Drilling f/ 7285' to 7620'. Displaced w/ 800 bbls LCM mud. Did not return to surface, started losing mud in the hole. Build 200 bbls, clean sand trap and settling pit. Pumped 200 bbls to rig working mud pits. TOO H to lay down.

MW: 9 ppg; Vis.: 34; pH: 10

Survey: 0.2 @ 7,225'  
0.3 @ 7,435'

DC: \$83,633

TWC: \$1,474,201

**9/1/14:** Depth: 7620'. Present Operation: build mud volume. Trip to shoe @ 3808'. Build volume & condition 200 bbls. Try to fill hole. Pumped 200 bbls, TOO H, Lay down mud motor & bit. PU cone bit & bit sub, TIH to 4894', circ hole w/ 40 bbls. Fill hole and circ w/ no losses of mud. After 15 min. started losing 80 bbls fluid per hour.

MW: 9 ppg; Vis.: 32; pH: 11

DC: \$81,473

TWC: \$1,555,674

**9/2/14:** Depth: 7620'. Present Operation: WOC. Condition & circ. mud and build volume. TOO H to shoe, shut in well and monitor pressure of water flow. Displace hole w/ 9.2 ppg brine and clean system. TOO H. PU retainer and TIH w/ drillable retainer and 4.5" drill pipe to 3680'. Rig up Halliburton cementers and cement w/ 300 sks Econocem 12.9 ppg into loss circ. zone at 4990'. Clean drill pipe of cement and TOO H w/ stinger. WOC.

DC: \$94,004

TWC: \$1,649,678

**9/3/14:** Depth: 7620'. Present Operation: RIH w/ mill. WOC RIH w/ bit, junk basket, bit sub, DCs and tag cement. PU Kelly, cement still green. Trying to unstick pipe, pullback out of hole, pick up mill and RIH. Break circ. every 20 stds.

DC: \$26,310

TWC: \$1,675,988

**9/4/14:** Depth: 7620'. Present Operation: POH. RIH w/ mill, mill on retainer, didn't make any hole. POH, PU tri cone bit, RIH. Drilling retainer to 3800', circ. bottoms up. POH.

DC: \$26,310

TWC: \$1,702,298

**9/5/14:** Depth: 7620'. Present Operation: drilling cement. Continue POH. PU RR bit. RIH, drill cement f/ 3802' to 4510'.

DC: \$42,856

TWC: \$1,745,154

**9/6/14:** Depth: 7620'. Present Operation: squeeze LCM pill. Drilling cement f/ 4510' to 5100', still had lost circ. Build drilling chem LCM pill. Pump same. POH 35 stds, took 132 bbls displacement WOP.

MW: 9.3 ppg; Vis.: 28; pH: 10

DC: \$93,547

TWC: \$1,838,701

**9/7/14:** Depth: 7620'. Presetn Operation: RIH. Lost pump press, POH, PU bit, motor, inspect DCs, RIH.

DC: \$31,291

TWC: \$1,869,992

**9/8/14:** Depth: 7781'. Present Operation: drilling. RIH. Ftg & hrs drilled: 161'/6 hrs. Circ. & cond. mud, wash & ream to bottom. Drilling new hole while cond. mud. Pump LCM sweeps, still have some lost circ.

MW: 9.1 ppg; Vis.: 28; pH: 10

Survey: 0.3 @ 7,695'

DC: \$34,975

TWC: \$1,904,967

**9/9/14:** Depth: 8465'. Present Operation: drilling f/ 7781' to 8465'. Ftg & hrs drilled: 684'/23 hrs. Drilling f/7781' to 8465'. Pump LCM sweeps every 60ft. Loss estimated to be 50 to 80 bbls/hr.

MW: 9.1 ppg; Vis.: 28; pH: 10

Survey: 0.3 @ 8,151'

0.4 @ 8,278'

0.4 @ 8,372'

0.8 @ 8,465'

DC: \$44,928

TWC: \$1,949,895

**9/10/14:** Depth: 8465'. Present Operation: fill pipe and break circulation. Circulate and condition for open hole logs. Pumped 100 bbls high vis. mud to pump sweep. Before sweep could make it to surface, lost full returns. Pumped on hole and attempted to establish circ. - could not. Attempt TOOH- excessive drag, attempted to establish circ. - could not. Wash and reamed 8 stands, could not establish returns. Possibly have heavy mud acting like a plug on top of loss zone. TOOH, break circ. @ 5000' - no returns. TOOH, break circ. @ 4400' - no returns. TOOH and lay down BHA, lay down motor, break out bit, lay down IBS, PU bit and bit sub w/ float. TIH to 3800', break circulation every 20 stands. Slip and Cut 60' (12 wraps) drill line. Fill pipe and break circulation.

MW: 8.9 ppg; Vis.: 28; pH: 7

DC: \$47,183

TWC: \$1,997,078

**9/11/14:** Depth: 8465'. Present Operation: TOOH, lay down 4 ½" drill pipe. Circ. and condition, TIH 8 stds, well flowing. Pumped 70 bbls of 9.6 ppg brine. Circ. bottoms up @ 7,702'. Rig service-check drive line bolts and grease drive line. Wash and ream F/ 7,702'-8,038', experience excessive torque and drag, the decision was made to pump out of the hole. Pumped out of the hole 12 jts and H2S alarm system sounded. Well was shut in, rig evacuated until Ener-Safe H2S hand arrived and gave the all clear. Pumped out of the hole F/ 8,022' - 7,700'. Spot high vis pill w/ water loss 140 bbls. TIH 7 stds, circ btms up, maintained partial returns. TIH 15 stds, circ btms up, maintained partial returns. TIH 17 stds, circ btms up, maintained partial returns. TIH 12 stds, stacked 15k on the bit, PU Kelly & begin washing and reaming down.

MW: 9.1 ppg; Vis.: 28; pH: 10.5

DC: \$87,428

TWC: \$2,084,506

**9/12/14:** Depth: 8465'. Present Operation: RIH w/ 7" flush joint casing. TOOH. Lay down 4 ½" DP and BHA. Received 7" flush joint casing, cleaned threads, drifted and tallied casing. Moved 4 ½" DP off location to the Katelyn #4 for CAT 4 inspection. Rig Service- grease drive line, check drive line bolts. RU Butch's casing crew, had trouble with the pipe spinners/power pack, remedied the issue and prepared rig floor for running casing. MU/PU 2 joint shoe track, Baker locked both shoe and float. RIH F/ surface to 7,400'.

DC: \$29,544

TWC: \$2,114,050

**9/13/14:** Depth: 8465'. Present Operation: waiting on 3 ½" pipe rams. RIH F/ 7,400' – 7,771'. Jet the pits, clean out sand trap, repair kelly spinner, prep rig floor for trip. ND BOP's, set casing slips, cut casing, stab 7" casing spool, and NU BOP's. LD kelly, PU new kelly, put on new bushings. PJSM w/ Monahans NU hands and Rig crew. Run temperature survey. PJSM w/ Halliburton cementers and rig crew, RU and pressure tested hard lines. Pumped 150 sacks of 14.2 ppg class H cement w/ 4% bentonite, 0.10% HR- 601, 0.1250 lbm Poly E-Flake, 0.30% CFR-3 w/o defoamer, dropped plug and displaced w/ 285 bbls fresh water. RU for top job, pumped 250 sacks of 14.2 ppg class H cement w/ 4% bentonite, 0.10% HR- 601, 0.1250 lbm Poly E-Flake, 0.30% CFR-3 w/o defoamer. Wash up stack and RD.

DC: \$306,439

TWC: \$2,420,489

**9/14/14:** Depth: 8465'. Present Operation: TIH @ 4,547'. Weld on flowline, load, inspect and strap BHA and DC's. Change out bottom pipe rams- 3 ½". PU/MU BHA and 22 jts of 4 ¾", 47# DC's. TIH F/ 698' - 4,547', filling the pipe every 20- 30 stands. Pressure test BOP's and casing.

MW: 9.15 ppg; Vis.: 28; pH: 7.5

DC: \$61,549

TWC: \$2,482,038

**9/15/14:** Depth: 8465'. Present Operation: washing and reaming @ 8407'. Continue TIH F/ 4,547' - 7,680'. Drill out cement and float equipment F/ 7,680' - 7,800'. Circulate bottoms up, displacing the hole w/ low water loss WBM. Wash and ream F/ 7,800' - 8,407', circulating bottoms up every other jt.

MW: 9.4 ppg; Vis.: 65; pH: 10

DC: \$32,345

TWC: \$2,514,383



**9/16/14:** Depth: 8540'. Present Operation: rig service. Continue washing and reaming F/ 8,407' - 8,467'. Circulate btms up, spot high vis pill on bottom. Rack back kelly/RU bails and elevators, and TOOH. PU BHA, TIH F/ 7,736'. Slip and cut 60', 12 wraps. TIH F/ 7,736' - 8,439', set back kelly back. Drill F/ 8,467' - 8,540', 73', avg. 36.5'/hr. Rig service.

MW: 9.4 ppg; Vis.: 65; pH: 10

Survey: 1.1 @ 8,491'

DC: \$32,345

TWC: \$2,546,728

**9/17/14:** Depth: 8959'. Present Operation: drilling. Drill F/ 8,540' - 8,750', 210', avg. 26.25'/hr. Circulate btms up. Drill F/ 8,750' - 8,850', 100', avg. 40'/hr. Rig service. Drill F/ 8,850' - 8,864', 14', avg. 7'/hr. Circulate btms up. Drill F/ 8,864' - 8,891', 27', avg. 13.5'/hr. Rig Service. Drill F/8891'-8959'

MW: 9.55 ppg; Vis.: 73; pH: 10

DC: \$42,869

TWC: \$2,589,597

**9/18/14:** Depth: 9249' Present Operation: Tripping out of hole Drill F/8959' T/9249', 290' at 22.5 hrs Avg 13'/hr. Circ. Bottoms up T.O.H. for bit change.

MW: 9.6 ppg; Vis.: 86; pH 10 W.L. 6

DC: \$40,882

TWC: \$2,630,479

**9/19/14:** Depth: 9266' Present Operation: POH. Started out of hole yesterday had some drag off bottom so made short trip. Ream and wash to bottom. Drilled 17' in 2 hours. POH.

MW: 9.6 ppg; Vis.: 71; pH 9.5 W.L. 4

DC: \$34,577

TWC: \$2,665,056

**9/20/14:** Depth: 9266' Present Operation: Circulate and condition mud. Last 24 hrs. T.O.H. for bit change, laydown motor. T.I.H. to 7595'. Circulate and condition mud to get water loss down.

MW: 9.8 ppg; Vis.: 57; pH 10 W.L. 18

DC: \$35,214

TWC: \$2,700,270

**9/21/14:** Depth: 9266' Present Operation: T.I.H. with new survey tool. Circulate and condition mud. Check survey tool, not working. P.O.H. change out survey tool. Check @ 2000' going in hole, 2<sup>nd</sup> survey tool not working. P.O.H. change out survey tool. Check 3 times going in hole, good test. Continue R.I.H.

MW: 9.8 ppg; Vis.: 57; pH 11 W.L. 7 going in 18 returns

DC: \$46,567

TWC: \$2,746,837

**9/22/14:** Depth: 9266' Present Operation: Wash and ream to bottom. Last 24 hrs.: circulate and condition mud to get 6 water loss at 7" shoe. R.I.H. tag tight spot @ 8,249'. Wash and ream from 8249' to 8857'.

MW: 9.8 ppg; Vis.: 57; pH 11 W.L. 7

DC: \$27,804

TWC: \$2,774,641

**9/23/14:** Depth: 9324' Present Operation: Drilling. Last 24 hrs.: Wash and ream from 8,857' to 9,260'. Drill new 6.125" hole from 9,260' to 9,324'.

MW: 10.1 ppg; Vis.: 85; pH 10 W.L. 4

DC: \$63,200

TWC: \$2,837,841

**9/24/14:** Depth: 9341' Present Operation: Picking up new BHA. Last 24 hrs.: Drill new 6.125" hole from 9,324' to 9,341'. Circulate and condition entire mud system. Pumped out of hole and laid down 25 jts. Prepare to trip for new bit. TOOH and lay down IBS, inspect survey tool, PU new bit and BHA.

MW: 10.2 ppg; Vis.: 120; pH 10 W.L. 4

DC: \$71,532

TWC: \$2,909,373

**9/25/14:** Depth: 9341' Present Operation: Washing and Reaming @ 8,850'. Last 24 hrs.: Lay down IBS, inspect survey tool, PU new bit and roller reamers. TIH from surface to 7,585'. Slip and cut drill line, cut 15 wraps-75'. TIH from 7,585'-8,534'. PU Kelly and began washing and reaming from 8,534-8,850'.

MW: 10.3 ppg; Vis.: 220; pH 10 W.L. 4

DC: \$51,788

TWC: \$2,961,161

**9/26/14:** Depth: 9341' Present Operation: Washing and Reaming @ 8,945'. Last 24 hrs: Wash and ream from 8,850'-8,893'. Pump pressure spiked due to hole pack off, pumped 3 jts out of the hole, and resume washing and reaming. Wash and ream from 8,830' – 9,103'. Mix 4 ppb Soltex to active mud system. Pump pressure spiked due to hole pack off, pumped 11 jts out of hole. Wash and ream from 8,767'-8,945'.

MW: 10.3 ppg; Vis.: 258; pH 10 W.L. 5.5

DC: \$49,381

TWC: \$3,010,542

**9/27/14:** Depth: 9341'. Present Operation: TIH. Wash and ream F/ 8,943' - 9,057'. Hole began packing off, PU and LD 3 jts and resume reaming. Wash and ream F/ 8,925' - 8,950'. Pump out of the hole F/ 8,950' - 8,344'. Trip out of the hole to surface. Clean rig floor, wait on new float valve. Trip in Hole F/ Surface to 8,400'.

MW: 10.3 ppg; Vis.: 258; pH: 10; W.L.: 5.5

DC: \$43,823

TWC: \$3,054,365

**9/28/14:** Depth: 9341'. Present Operation: Washing and reaming @ 8,928'. Continue TIH and tagged up @ 8,766. LD 3 jts and begin washing and reaming. Wash and ream F/ 8,541' - 8,928'.

MW: 10.3 ppg; Vis.: 186; pH: 10; W.L.: 7

DC: \$34,703

TWC: \$3,089,068

**9/29/14:** Depth: 9341'. Present Operation: Washing and reaming @ 9,229'. Wash and ream F/ 8,949'– 9,079'. Rig service. Wash and ream F/ 9,079'– 9,142'. Rig service. Wash and ream F/ 9,142'– 9,229'.

MW: 10.5 ppg; Vis.: 119; pH: 10; W.L.: 4

DC: \$45,148

TWC: \$3,134,216

**9/30/14:** Depth: 9,412'. Present Operation: Drilling. Wash and Ream 9,229'– 9,345'. Drilling F/ 9,345'– 9,412', 67', avg. 4.0'/ hour.

MW: 10.8 ppg; Vis.: 150; pH: 9.5; W.L.: 6

Survey: 6.2 @ 9,342'

DC: \$38,730

TWC: \$3,172,946

**10/1/14:** Depth: 9,428'. TD hole @ 9,428'. Present Operation: TOOH. Drill F/ 9,412'–9,428'. Pumped a series hi- vis sweeps to clean up the hole. TOOH 6 single joints and 3 stands for a total of 12 jts. Stand back Kelly. Encountered tight hole, PU Kelly, pump out of the hole to 8,657'. Stand back Kelly, TOOH F/ 8,657'– 6,481'.

MW: 10.8 ppg; Vis.: 125; pH: 9.5; W.L.: 6.5

DC: \$29,655

TWC: \$3,202,601

**10/2/14:** Depth: 9,428'. Present Operation: TIH. TOOH, Strap pipe to confirm pipe tally, LD 11- 4 ½" DC. Rig Service TIH F/ surface to 7,771', break circulation. TIH F/ 7,771'– 8,229', noticed pump pressure abnormally high, pump hi vis sweep to clean the hole- little to no cuttings back on bottoms up. Circulate and condition. TIH F/ 8,229'– 8,600', again pump pressure abnormally high, circulate bottoms up, little to no cuttings over the shaker, LD 4 joints, observe pump pressure. Circulate and condition, discussed possible causes for abnormally high pump pressure- packing off, clogged bit nozzles, packed off string mill, shale swelling. LD 5 jts of DP, pulled slick/ no drag, stood back the Kelly- RU bales/ elevators. Pump pressure still 3-400 psi higher than normal, the decision was made to TOOH to investigate the issue(s) causing elevated pump pressure. TOOH F/ 8,450'– 2,150'.

MW: 10.8 ppg; Vis.: 176; pH: 8.5; W.L.: 4

DC: \$41,651

TWC: \$3,244,252

**10/3/14:** Depth: 9,428'. Present Operation: Wash & ream. RIH to shoe to circulate and condition mud. Start wash and ream F/ 7,771' to 8,200'.

MW: 10.8; Vis.: 12.4; pH: 8.5; W.L.: 5

DC: \$31,577

TWC: \$3,275,829

**10/4/14:** Depth: 9,428'. Present Operation: Wash & ream F/8200' to 8797'. Wash & Ream F/ 8200' to 8797', had lots of shale trapped around shoe and down. Maybe from old 7 7/8' rat hole.

MW: 10.8 ppg; Vis.: 176; pH: 8.5; W.L.: 4

DC: \$54,241

TWC: \$3,330,070

**10/5/14:** Depth: 9,428'. Present Operation: Wash & ream to bottom w/ Thru bit. Wash & ream F/ 8797' to 8841'. Could not make connections. Kelly bushings would not work back down to rotary table. TOH , cut drilling line, TIH w/ 6 1/8" Thru bit and drill pipe (No drill collars). Rabbit all drill pipe when TIH. Will attempt to wash down to Devonian formation and run open hole logs through bit.

MW: 11.3 ppg; Vis.: 150; pH: 10; W.L.: 3

DC: \$25,765

TWC: \$3,355,835

**10/6/14:** Depth: 9,428'. Present Operation: Wash & ream to bottom w/ Thru bit @ 8705'. Wash & ream 22.5 hrs F/ 7794' to 8705' w/ 6 1/8" Thru bit to accommodate open hole logging tool. 1/2 hr c/c, 1 hr rig service.

MW: 11.3 ppg; Vis.: 134; pH: 9.5; W.L.: 4

DC: \$29,228

TWC: \$3,385,063

**10/7/14:** Depth: 9,428'. Present Operation: Build LCM plug. Wash & ream 18 hrs. Trips 4 hrs. C/C 1 hr. Rig service 1 hr. Try wash bottom, couldn't get past 8720'. Pump out hole to shoe, get pump press right. RIH to 8170', wash to 8408', lost circ. POH to shoe and mix LCM pill. Will attempt to regain circulation before setting 50 sack cement plug at 8700'.

MW: 11.3 ppg; Vis.: 134; pH: 9.5; W.L.: 4

DC: \$26,812

TWC: \$3,411,875

**10/8/14:** Depth: 9,428'. Present Operation: Lay down 3 1/2" DP. Mix LCM pill @ shoe, pump same, got returns back. Lower mud weight to 11. Call Halliburton to set cement plug. Call RRC. TIH, wash & ream to 8700', short trip, set cement plug 8700'. Pull 10 stds, circ. out DP, POH, lay down DP.

MW: 11 ppg; Vis.: 249; pH: 9.5; W.L.: 4

DC: \$81,263

TWC: \$3,493,138

**10/9/14:** Depth: 9,428'. Present Operation: Nippling down. Lay down 3 1/2" DP, drill collars, kelly, and change out all 3rd party tools. Start nipple down stack, change out 3 1/2" rams, and start cleaning pits.

DC: \$52,730

TWC: \$3,545,868

**12/2/14:** MIRU Lucky Well Service.

DC: \$2,010

TWC: \$3,547,878

**12/3/14:** Nipple down 7" well head spool. Nipple up tubing head spool. Nipple up BOP. Set pipe racks, catwalk and unload 2 7/8" tubing and tally. RU reverse unit. Start picking up 2 7/8" tubing. RIH to 2,000', break circulation, and circulate mud to reserve pit. Continue RIH to 4,000' and circulate mud out until brine returns.

DC: \$48,987

TWC: \$3,596,865

**12/4/14:** Continue PU 2 7/8" tubing. RIH to 6,000', break circulation, and circulate bottoms up. RIH to 7,819' and circulate until brine returns. Mix 400 bbls fresh water with double inhibited biocide. Start displacing hole with fresh water. Lay down 10 joints 2 7/8" tubing. SDON.

DC: \$11,210

TWC: \$3,608,075

**12/5/14:** Check well to see if there was any lost or gained fluid overnight. Lay down 2 7/8" tubing. Close BOP's. Move 2 7/8" tubing to pipe racks. Move pipe racks and catwalk. Release Lucky rig, reverse unit, and all rentals

DC: \$8,565

TWC: \$3,616,640

**12/8/14:** RU Schlumberger Wireline. RIH CNL, Spectral GR-CCL from 7,885' to 200'. Ran CBL from 7,760 to 200'. Ran Litho Density from 7,750' to 6,750'. Set CIBP at 7,750'. Pressure up casing to 1,500 psi and ran CBL under pressure.

DC: \$61,740

TWC: \$3,678,380

**12/18/14:** Rig up Lucky Well Service to take off BOP and install well head. Flange with 2" valve. Release BOP and move to Katelyn #4.

DC: \$600

TWC: \$3,678,980

**2/17/15:** MIRU Capitan Wireline. RIH with dump bailer and dump 3.5 sacks cement on top of CIBP at 7,750'.

DC: \$2,513

TWC: \$3,681,493

**3/2/15:** Move in and rig up Lucky pulling unit.

DC: \$1,000

TWC: \$3,682,493

**3/3/15:** Fork lift set pipe racks and loaded 2 7/8" tubing on racks. Nipple up BOP. Pick up bit, BS, casing scraper, and tubing. Run in hole to 7,648'. Pump 1,000 gallons 15% HCl with inhibitor to pickle tubing. Circulate out acid to reserve to clean tubing. Pump 500 gallons 10% MSA at 7,648'. Pull out of hole with tubing. SDON.

DC: \$11,779

TWC: \$3,694,272

**3/4/15:** Pull out of hole with 2 7/8" tubing. Lay down C.S. & B.S. Rig up Halliburton wire line to run in hole with Strimgun & perforating gun. Perforate 7" casing across 7630-7640 at 6 spf. Pick up packer and run in hole to 7400'. Test tubing and set packer. Close tubing rams and pressure test packer to 450 psi. Tie on tubing and attempt to put acid away with H.O. truck. Pressured up to 1800 psi, would not move very fast. SDON.

DC: \$31,112

TWC: \$3,725,384

**3/5/15:** MIRU Basic acid trucks and 2 water trucks, well head froze up, Broke loose while Basic rigging up. Tried to break perf's with water first, pressured up to 3500 psi didn't break. Pump 2000 gals 15% HCL acid displace with 53 bbls water. ISIP was 3416 waited 1 hour. Dropped to 2438 psi. Started injecting 3.46 bpm @3500 psi finish job. Start swabbing well till dark.

DC: \$11,338

TWC: \$3,736,722

**3/6/15:** Bleed off well SITP 380 psi. Made 26 swab runs. First run Fluid level was 1200' pulled down to S. N. then would wait 20 mins to get 400' in tubing was swabbing 100% oil from S.N.

DC: \$4,960

TWC: \$3,741,682

**3/7/15:** SITP 100 psi Made first swab run tag fluid at 6200' 2<sup>nd</sup> @ 6800' 3<sup>rd</sup> @ SN make run after that every 30 min would fill tubing 400' ft./30 min. First runs where water last runs 70% oil.

**DC:** \$3,596

**TWC:** \$3,745,278

**3/9/15:** SITP 100 psi Made first swab run tag F/L @ 6200 2<sup>nd</sup> 6800' and 3<sup>rd</sup> S/N swab well all water trace oil

**DC:** \$4,776

**TWC:** \$3,750,054

**3/10/15:** SITP 120 psi 1<sup>st</sup> swab run tag F/L 6200' all WTR 2<sup>nd</sup> F/L @ 6800' 3<sup>rd</sup> S.N. all water SD.

**DC:** \$2,616

**TWC:** \$3,752,670

**3/11/15:** Well vacuum, test packer didn't hold, TOH w/ tubing change out packer. TIH w/new packer, set packer. Start swabbing tag F/L @ 1200 took 10 runs to S/N. SDN

**DC:** \$5,409

**TWC:** \$3,758,079

**3/12/15:** SITP O first swab run tag F/L at 6600' made 1 run an hr last. 3 runs had 300' fluid made 8 runs total. SDN

**DC:** \$3,841

**TWC:** \$3,761,920

**3/13/15:** SITP 200 psi RIH w/ Swab tagged fluid level @ 7000' Swab well 1 run an hour.

**DC:** \$4,612

**TWC:** \$3,766,532

**3/16/15:** Release Rig to Katelyn #6

**DC:** \$1,116

**TWC:** \$3,767,648

**3/23/15:** MIRU 4 J swab unit. SITP 0 psi. Made 20 swab runs. Recovered approx 110 bbls of 90% water. F/L @ 3000' Recovered 99 bbls water 11 bbls oil.

**DC:** \$3,605

**TWC:** \$3,771,253

**3/24/15:** Tubing on vacuum. F/L 4800' made 20 swab runs, swab 80 bbls 100% water SDN.

**DC:** \$3,665

**TWC:** \$3,774,918

**3/25/15:** Tubing on vacuum F/L 5000' made 6 swab runs from S/N. Recovered 80 bbls of water. Tubing still on vacuum left well shut in. SDN.

**DC:** \$3,665

**TWC:** \$3,778,583

**3/26/15:** Tubing still on vacuum made 8 runs from S.N. Recovered 15 bbls. 100% water stayed on vacuum shut well in. Rig Down.

**DC:** \$2,620

**TWC:** \$3,781,203

**5/29/2015**

Move Lufkin 228-213-86 C Pumping Unit from Katelyn #2 to Katelyn #5.

DWC: \$5,000

CWC: \$5,000

**6/1/2015**

Set Pole and Panel for electricity. Set Generator. MIRU Lucky Well Service PU.

DWC: \$3,000

CWC: \$8,000

**6/2/2015**

PU following and RIH w/ pump and rods:

| Description                  | Length |
|------------------------------|--------|
| 1-26' x 1-1/2" PR            | 22     |
| 1-6' 0.98" FG Pony           | 6.0    |
| 1- 18' 0.98" FG Pony         | 18.0   |
| 58- 1.2" FG Flexrod          | 2175.0 |
| 116- 7/8" WFD S-67           | 2900.0 |
| 83- 3/4" WFD S-67            | 2075.0 |
| 17- 1.5" Sinker Bars         | 425.0  |
| 1- 21k shear tool            | 0.5    |
| 1- 1.5" Sinker Bar           | 25.0   |
| 1- 2.5x1.25xRHBCx20x6x4 Pump | 24.0   |

Space out rods 36". Load and test tubing to 500 psi w/ 25 bbl. Finish building wellhead hookup. RD PU. Begin pumping well to frac tank.

DWC: \$38,200

CWC: \$46,200

**6/3/2015**

TP-100 psi. CP-0 psi. 7 BO, 35 BW. Oil cut was 40% in AM, 90% by end of day.

**6/4/2015**

TP-75 psi. CP-0 psi. 26 BO, 10 BW. Final Report.