

DRILLING REPORT

BANEY STATE 16-2

NW¼NE¼ Section 16-T8N-R53W

Logan County, Colorado

OPERATOR: KN Production Company
CONTRACTOR: Gear Drilling Co., Rig #3
ELEVATIONS: 4164' GL, 4175' KB
PROJECTED TD: 5000'
WI: 100%

DRILLING REPORTS WILL BE AS OF 7:00AM AND FOR THE PREVIOUS 24HRS.

09-24-92 500', Drlg, Ftg: 500'. MIRU, spudded well at 15:00 on 9-23-92. Drilled 12 1/4" hole to 90' and stuck pipe. Ran 2" pipe alongside drill pipe and washed hole clean and POH.
DWC \$6,229 TWC \$6,229

09-25-92 1450', Drlg, Ftg: 950'. Ran 8-5/8" csg to 525' KB, cmt w/300 sx, good returns. RUBOPE, test to 500# for 5 min, held pressure. Drlg 7-7/8" hole w/native mud.
DWC \$7,620 TWC \$13,509

09-26-92 4815', Drlg, Ftg: '. Tripped for new bit.
DWC \$5,360 TWC \$43,728

09-29-92 5000', Circ, Ftg: '. Drld to 5000' TD, circ 1 hr made short trip to top of Niobrara. TIH to bottom. Conditioning mud for logs.
DWC \$27,645 TWC \$71,373

09-30-92 5000' TD. Ran DIL/CNL-FDC logs. TIH w/bit conditioned mud for csg. POH. Ran 114 jts 5-1/2" 15.5# csg to 4995' KB w/guide shoe, 10' shoe jt, insert float, 6 full jts, 20' maker jt, then full jts to surface. Centralized every other jt off bottom for 6 total centralizers. Western CO cmtd w/75 sx 50-50 pozmix plus 125 sx Class "G". Displaced w/119 BW. BP w/1500# and held ok. Set slips w/40k. Released rig 09:30 9-30-92.
DWC \$10,988 TWC \$82,361

10-07-92 Swabbed csg dn to 3500' from surface. Perforated "D-1" sd 4765'-70' w/4 spf (20-3/4" holes). PU Model R packer w/2 jts tbg below and SN above, TIH w/2-7/8" tbg. Set packer @ 4668' (tail @ 4733'). Ran in w/swab and tagged FL @ 3500' swabbed to SN then made 2 trips/hr recovery as follows:

Time	BBS	Oil cut	
11-12	1.5	40%	+ 100' gas
12-1	1.7	50%	+ 2000' gas
1-2	1.7	60%	lt gas blow
2-3	2.0	100%	lt gas blow
3-4	2.0	100%	lt gas blow
4-5	2.0	100%	lt gas blow
5-6	2.0	100%	lt gas blow

SDFN.
DCC \$18,728 TCC \$18,728

10-08-92 SITP 5#. Ran swab. 700' of fillup overnight, 100% oil. Swabbed 2 bbls oil per hr for 7 hrs. Acidized w/1000 gal 7-1/2% HCl w/clay stabilizers. No surface pressure @ 5 BPM until the last 4 bbls of displacement. MTP 400# ISIP Vacuum. 52 bbls load to recovery. RU swab IFL @ 700' from surface. Swabbed 11 bbls wtr then recovered 10 bbls live acid last hour rec 1 bbl 100% oil. SDFN.
DCC \$4,032 TCC \$22,760

10-09-92 Tbg open. 13 hr fillup 1000'. Swabbed out 5 bbls 80% oil. Next hr swabbed 1 bbl same cut. Released pkr and swabbed out annular fluid, found that acid had U tubed into annulus. POH w/pkr. TIH w/redressed pkr and set @ 4642' w/tail to 4708'. Swabbed out 600' 80% oil (5.7 bbls). Filled annulus w/2% KCl wtr. SDFN.
DCC \$2,206 TCC \$24,966

10-10-92 13 hr fillup 3 bbls (80% oil). Acidized w/1000 gal 7-1/2% HCl containing clay stabilizers and flushed w/2% KCL wtr. ATP 1050# @ 3.6 bpm. ISIP 800#, zero in 1-1/2 min. 55 bbls load to recover. Swabbed out load plus 69 bbls recovering an average of 12 bbls/hr the last 3 hrs. 2% oil + 1000' of gas on last few runs. SDFN.
DCC \$8,014 TCC \$32,980

10-11-92 SITP 0#. Ran swab & found FL @ 2300' (calculates to 1068# bhp). Rec 10' oil + 22 bbls wtr. Swabbing down to SN. Swabbed 4 hrs recovering an average of 13 bbls/hr, 2% oil & 98% wtr. Released packer and dropped dn to 4800' and reset. Swabbed tbg dry and proved no csg leaks below "D-1" perfs. PU pkr to 4615' and reset (tail @ 4679'). Prep to cmt sqz.
DCC \$1,260 TCC \$34,240

10-12-92 SD for Sunday.

10-13-92 Loaded csg w/clay treatment wtr. FL 2300', swabbed off 100', no oil. RU Dowell Schlumberger, pressured backside to 500#. Hookup tbg, pump rate 3 bpm @ 375#, mixed 50 sx Class "G" cmt. Slowed rate to 1/4 bpm w/cmt at perfs, no pressure, dropped rate to 1/10 bpm, 3 bbls in pressure 300#, pressure increased to 1480#. SD, pumped wtr at 1/4 bpm, pressure 1530#. SD, rev out, 4 bbls in perfs, 2 bbls in csg. POOH w/tbg, LD tbg, SD. Rw 1.13 @ 56° 7300 ppm. (Wtr from 10-11-92).
DCC \$3,378 TCC \$37,618

10-14-92 TIH w/bit & scraper, tagged cmt @ 4658'. RU pwr swivel, drld out 110' good hard cmt. Cleanout to btm. Pressure test to 800#, held ok. POH. Swabbed csg do to perfs, dumped 18 bbls 2% KCl wtr down csg. SDFN.
DCC \$2,450 TCC \$40,068

10-15-92 IFL @ 4200'. Re-perforated D-1 sd, 4766'-71', 4 spf 0.75" holes. Swabbed dn @ 9:30AM, 10:00AM 10' wtr + tr gas, 11:00AM 30' wtr + 40' gas. TIH w/tbg, w/1 jt below, set pkr 4708' (tail @ 4740'). Mixed 2% clay fix wtr, pump into perfs w/15 bbls. Reset pkr tail to 4774'. 69 bbls load to recover. Swabbed 50 bbls back. SDFN
DCC \$3,690 TCC \$43,758

10-16-92 13 hr fillup, 300'. Swabbed out 5 BW then swabbed from SN as follows: 8-9 2bw, 9-10 1bw, 10-11 1bw, 11-12 3/4bw, 12-1 3/4bw. SD, prepare to acidize.
DCC \$1,260 TCC \$45,018

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10-17-92 15 hr fillup 700' dark wtr. Swabbed out. Acidized w/250 gal 7-1/2% HCl followed by treated wtr. ATP 60#, ISIP 20#. RU to swab. FL @ 2500', swabbed as follows:

Time	Rec
8:30-9:30	27BW
9:30-10:30	5BW
10:30-11:30	2BW
11:30-12:30	1½BW
12:30-1:30	½BW
1:30-2:30	½BW

Total 36½bw (2½bw over load)

SD, LD tbq on float. RDMO.

DCC \$3,612 TCC \$48,630

10-27-92 MIRU Baney Well Service. TIH w/csg swab. IFL @ 3400'. Swab to 4770' rec 24 BO + 3 BW. Make 1 swab trip per hr w/following results:

Time	Rec (bbl)	Comments
8-9	0.5	100% oil + 300' gas
9-10	0.4	30% oil 40% mix 30% wtr
10-11	0.5	30% oil 40% mix 30% wtr
12-1	0.5	60% oil 40% wtr
1-2	0.25	85% oil 15% wtr
2-3	0.25	100% oil
3-4	0.25	100% oil

SDFN.

DCC \$1,715 TCC \$52,288

10-28-92 IFL 4400'. Swabbed out 7 bbls 90% oil, 10% wtr. Dumped 10 BO in csg. Perforated D-3 sd 4783'-89'w/4 spf 3/4" holes (cement bond log depths). FL @ 4250' before and after perforating. Swabbed out oil load then swabbed from 4750' as follows:

Time	Rec (bbl)	Comments
9-10	20	4% oil on last run
10-11	14	7-8% oil on last run
11-12	10	8% oil on last run
12-1	12	8% oil on last run
1-2	10	8% oil on last run
2-3	10	10% oil on last run
3-4	10	10% oil on last run
4-5	10	10% oil on last run, w/good gas blow after swab.

Total rec for today 105 bbls.

DCC \$2,943 TCC \$53,045

10-29-92 Rw=1.3 @ 55°F (wtr from 2:30 Swab yesterday). Left well open to tank overnight, no recovery. This AM fair gas blow at wellhead but not enough pressure to kick wtr out of standpipe on tank. TIH w/swab. IFL @ 2600' (BHP=940#). Top 20' is oil. Swabbed as follows:

Time	Rec (bbl)	Comments
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8	55	No oil
9	13	No oil
10	10	No oil
11	10	No oil
12	10	No oil
1	10	No oil
2	7	No oil, tr gas
3	8	No oil, no gas
4	8	No oil, no gas

Total recovery for today 136 bbls (100% wtr: Rw=1.3 @ 55°F). SDFN.

DCC \$1,565

TCC \$56,458

10-30-92

Left well open to tank overnight, no recovery. TIH w/swab. IFL @ 2500', no oil or gas. Swabbed as follows:

Time	Rec (bbl)	Comments
-----	-----	-----
8	56	100% wtr
9	7	100% wtr
10		
11		
12	8	
1	7	
2	8	
3	10	
4	SIFN	

Rw=1.2 @ 62°F 0.6% solid (FeS).

DCC \$1,150

TCC \$57,608

10-31-92

RU Brand X and RIH to set Baker. Circ @ 4780'. POOH and RD Brand-X. PU stinger and hdrotest in hole to 7000 psi w/150 jts 2-7/8" tbg. Split was detected 68th and 69th jts. Sting into retainer and shot-in.

DCC \$3,998

TCC \$61,600

11-01-92

Shut-in

11-02-92

RU Dowell to squeeze D-3 perms. Sting out of Retainer and pump 40# gel and disp w/29 BW, Sting into retainer. Mix 25 sx Class "G" and pump @ 1100 psi, pressuring up to 1900 psi when cmt hit perms. Stopped 1-1/2 bbl short. Shut-down 2 min and pumped 1/4 bbl to 2040 psi. SI. Load backside. Sting out and rev circ cmt and gel w/30 bbls. RD Dowell and POOH w/tbg. RIH w/csg swab.

Time	Rec (bbl)	Comments
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2:15		Start swabbing
2:30		No Entry
3:30		No Entry

SIFN.

DCC \$3,767

TCC \$65,373

11-03-92

15 hr fillup: 5 bbls wtr w/tr oil. Swabbed for 7 hrs recovering 1/4 b;h. Tr oil + 100' gas abobe swab the last few pulls. SD prep to conduct scour frac.

DCC \$1,240

TCC \$66,613

11-04-92 100' fillup overnight. 70' oil + 30' wtr. TIH w/tail jt, model R packer and 2-7/8" tbg. Set packer w/tail @ 7624'. Loaded backside w/2% KCl wtr, pressure to 500#. Frac D-1 sd down tbg using 30# gel + 5520# 20/40 sd MTP 2000#, ATP 1800# 8 BPM. ISIP 1500#, 3 min 1000#, 5 min 400#, 8 min 0# SITP. TLTR 215 bbls. SDFN.

DCC \$8,041 TCC \$74,654

11-05-92 FL @ 800'. Released pkr & swabbed on load + tubular volumes. (Total fluid to recover now=300 bbls.) Swabbed out 140 bbls in 9 hrs. SDFN.

DCC \$1,565 TCC \$76,219

11-06-92 FL @ 3500'. Swabbed out 19 bbls then hourly as follows:

Time	Rec (bbl)	Comments
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9	7	tr oil
10	12	2% oil
11	7	2-3% oil
12	3	2-3% oil
1	0	(swab trouble)
2	10	15% oil+1% BS only tr gas
3	5	20% oil+1% BS only tr gas
3:30	2	20% oil+1% BS

Daily recovery 65 bbls. Total now recovered 205 bbls. BLWTR 95 bbls. SDFN.

DCC \$1,590 TCC \$77,809

11-07-92 FL @ 3500'. 30 psi gas pressure on annulus. Top 500' is oil Swabbed out 19 bbls to top perf then recovered as follows:

Time	Rec (bbl)	Comments
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9	7	60% oil+1% BS
10	5	60% oil+3/4% BS
11	5	60% oil+3/4% BS

5500 ppm chlorides in wtr sample (treatment wtr). POH w/pkr and TIH w/pumping assembly. 29.2' Gas Anchor w/tapped bull plug on btm. 18-3/8"x1-1/4" slots below collar. SN @ 4744' KB. Baker AC @ 4616' KB. Landed tbg w/26" stretch on AC. Total 148 jts 2-7/8" tbg 1-8' sub & 2-6' subs.

DCC \$1,985 TCC \$79,790

11-17-92 FL 3500'. Ran 19' gas anchor, 1-1/2x16x2-1/2 bottom hold down pump, Martin ring plunger. Ran 63 3/4" rods from KN Energy, 74 3/4" rods from WB Supply, 51 7/8" rods from KNE, 1-6'x7/8" sub, 1-2'x7/8" sub, 22' polished rod. Spaced 22" off btm.

DCC \$1,200 TCC \$80,369

11-18-92 Hauled pumping unit and engine to location.

DCC \$1,676 TCC \$82,045

11-19-92 WO parts & supplies.

11-20-92 Set pumping equipment and started well pumping to rental tank @ 3:30 PM 11-19-92, 10 spm. Oil to surface at 6:00 PM. Pumped 53 bbls (85% oil) in 15-1/2 hrs.

DCC \$3,076 TCC \$85,121

11-21-92 Pumped 24 hrs. Made 74 bbls, est 50% oil. Running on gas from annulus.

11-22-92 Well down w/frozen flowline. Made 27 bbls in ? hrs. No cut.

11-23-92 Well not pumping. Made 24 bbls in ? hrs. No cut.

11-24-92 Pumped 22 hrs. Made 57 bbls, est 92% oil. 9 spm on pump.

11-25-92 Pumped 24 hrs. Made 95 bbls, est 50% oil.

11-26-92 Pumped 15 hrs. Made 30 bbls.

11-27-92 Pumped 24 hrs. Made 65 bbls.

11-28-92 Pumped 14 hrs. Made 35 bbls.
11-29-92 Pumped 14 hrs. Made 40 bbls. SWI due to lack of tank room in temporary tanks. Wellhead cut over the last 4 days varies from 80% to 100% oil. Tank battery construction in progress.
12-12-92 Finished tank battery and began pumping @ 4:00 PM, 12-11-92. Filled treater w/+/-40 bbls oil and produced 2 BO + 30 BW in 18 hrs into tanks.
12-13-92 Pumped 7 BO + 20 BW in ? hrs. Pump gas locked this AM.
12-14-92 Pumped 24 hrs, 52 BO + 20 BW. Not enough gas to run treater yet. 7 psi on annulus.
12-15-92 Pumped ? hrs 3 BO + no wtr. Pump gas locked. Lowered rols 2" and had good pump action.
12-16-92 Pumped 24 hrs 37 BO + ? wtr. Hauled water off skim tank so no good water guage possible.
12-17-92 Pumped 24 hrs 50 BO + 20 BW.
12-18-92 Pumped 24 hrs 47 BO + 15 BW. Sold 187.5 BO.
12-19-92 Pumped 24 hrs 48 BO + ? BW. Hauled wtr from tank. Enough gas now to run engine & treater.
12-20-92 Pumped 24 hrs 45 BO + 18 BW.
12-21-92 Pumped 24 hrs 45 BO + 8 BW.
12-22-92 Pumped 24 hrs 51 BO + 8 BW. Enough gas now to run engine & treater.
01-01-93 6 day average since 12-27-92, 49.3 BO & 9.16 BW.

FINAL REPORT