



Well History

Well Name: Cockroft 33-11

API 05123226270000		Surface Legal Location NWSE 11 6N 64W		Field Name Wattenberg		State CO		Well Configuration Type Vertical					
Ground Elevation (ft) 4,710.00		Original KB Elevation (ft) 4,720.00		KB-Ground Distance (ft) 10.00		Spud Date 11/11/2005 00:00		Rig Release Date 11/15/2005 00:00		On Production Date 2/13/2006		Abandon Date	

Job

Drilling - original, 11/11/2005 00:00

Job Category Drilling	Primary Job Type Drilling - original	Start Date 11/11/2005	End Date 11/15/2005	Objective Drill and complete
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Daily Operations

Start Date	Summary	End Date
11/15/2005	MIRU Phoenix Surveys Inc. Ran Comp Density/Comp Neutron/Dual Induction log finding a LTD of 7074' KB, DTD of 7075'. RU casing crew and ran Weatherford Auto Fill Guide Shoe, 14.40' shoe joint, 164 joints of 10.5 #/ft, 8RD, M-65, 4 1/2" casing and 3 joints of 11.6 #/ft, M-80 on top of casing string for a total of 168 joints. Casing set @ 7066.36'. PBTD @ 7051.96'. Circulated hole once casing was set for 30 minutes prior to cementing. RU HES and pumped 20 bbls of clayfix water, 24 bbl mud flush, 20 bbls clayfix water and 6 bbls (20 sx) of 50/50 Poz, 290 sx (169 bbls) Halilite Cement, 170 sx 50/50 Poz (49 bbls), shut-down, wash up cement pump & lines to the pit, released wiper plug and displaced with 112.48 bbls treated water. Plug down OK @ 5:15 p.m. Bumped plug with 2500 psi @ 2.5 bpm, shut down - watched psi stabilize at 2500 psi, released psi to HES inventory tanks and tested plug. Released rig @ 6:15 p.m. Estimated TOC @ 3150', approximately 400' above top of Parkman Fm.	11/13/2005
11/21/2005	MIRU Nuex Wireline. Ran GR/VDL/CBL log finding PBTD @ 7031' and Cement Top @ 3230'. Good cement bond on tail slurry, marker slurry excellent bond, excellent bond on filler slurry. Perforated the Codell formation from 6877-6887' (3 spf, 11 gram charges, 0.34" entry holes, and 13.59" penetration), 30 holes total. Prepare well for Codell stimulation. Install frac valve & swage.	11/12/2005
11/23/2005	MIRU BJ Services. Performed a New Codell stimulation using 2579 bbls of Vistar 20# fluid system, 217360 lbs of 20/40 white sand and 8000 lbs of Super LC 20/40 resin coated proppant. Codell perms @ 6877-6887' (30 Shots). Pumped 1 - 4 ppg stages of 20/40 white sand, 4 ppg Super LC proppant, flush well to .5 bbl short of top Codell perforation (109.2 bbls), shut down, record ISDP = 3318 psi. RD BJ Services, turn well on to flowback. Transfer 20 bbls from hydration unit to flowback tank. MTP = 3742 psi, ATP = 3352 psi, AIR = 16.3 bpm. Pressure response was flat to slightly positive for the entire treatment. Operationally the treatment went well. Total fluid to Recover = 2688 bbls. Turn well on to flowback on a 20/64" choke until bottoms up then on a 12/64" for the remainder of flowback.	11/14/2005

Wireline, 11/21/2005 00:00

Job Category Other	Primary Job Type Wireline	Start Date 11/21/2005	End Date 11/23/2005	Objective Produce
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Daily Operations

Start Date	Summary	End Date

Refrac/Recomplete, 11/15/2012 00:00

Job Category Completion/Workover	Primary Job Type Refrac/Recomplete	Start Date 11/15/2012	End Date 11/17/2012	Objective Annular fill cement job, Refrac Codell, Recomplete Niobrara
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Daily Operations

Start Date	Summary	End Date
2/13/2013	STP 700 psi, SCP 600 psi, on blow down through production equipment, SSCP 0 psi, MIRU Bayou 008, blew well down to rig tank, control well w/40 bbls Claytreat/Biocide water, ND WH, NU BOP, PU tag jts, TIH w/ 4 jts, no tag EOT @ 6,986.21'w/4, LD tag jts, RU Pick Testers, POOH w/production tbg to derrick testing to 6000 psi, all jts tested good, RD tester, (POOH w/ 214 jts 2 3/8" J-55 EUE 8rd tbg, 1-10' and 1-4' subs, sn/nc, tbg was landed at 6,860.31' KB), PU RMOR's 3 7/8" blade git - 4 1/2" csg scraper, TIH w/production tbg, circulated down to 7,025.48' KB (PBTD) and tools w/220 jts, rolled hole clean, POOH w/tbg to derrick w/ 126 jts leaving EOT @ 2961.54', shut in and isolated well, drained lines, prepared for next day operations. SDFN	2/13/2013
2/14/2013	STP 100 psi, SCP 150 psi, SSCP 0 psi, blew well down to rig tank, control well w/20 bbls Claytreat/Biocide water, finished POOH w/tbg to derrick, LD tools, PU RMOR's 4 1/2" WLTC RBP, TIH w/production tbg, set RBP at 6,820.58' KB and tools w/213 jts, LD 1 jt, circulated oil and gas out, pressure tested csg/RBP to 2000 psi, test good, POOH w/20 jts to derrick, spotted 2 sks sand across RBP, finished TOOH w/ tubing, ND BOP, remove tbg head, install PDC's 4 1/2" 5K frac valve, pressured tested csg/RBP to 5000 psi using Pick Testers, held 20 minutes, test good, released tester, removed frac valve, un-pack csg head, un-land csg (90 K), NU annular flanges, TIH picking up tallying WS #316 1.660" 3.02# N-80 CSHD workstring, tagged original cmt top at 3,227.54' KB all the way in on jt 104, RU circulation equipment on jt 104, break circulation and conditioned hole for 2.5 hours @ 3,227.54' w/104 jts, LD 10 jts, isolate well, prepare for next days operations, SDFN.	2/14/2013
2/15/2013	0 psi at WH, open well, TIH w/10 jts 1.660" workstring to 3,227.54 w/104 jts, MIRU HES, held safety meeting, tested pump and lines to 3500 psi, pumped 10 bbls water ahead establishing circulation and rate, pumped 12 bbls Mud Flush, pumped 10 bbl water spacer, mixed and pumped 525 sks (204 bbls) Varicem slurry at 12.0 ppg, Disp. 1.5 bbl, Break HES off WH, POOH laying down 104 jts, circulated 13 bbls cmt to cmt tank spotting 12.0 ppg cmt, RDMO HES, ND annular flanges, re-land csg in WH at 60K, pack off csg head, install original tbg head, NU BOP, isolate well, prepare for next days operations, clean up location, SDFD. Note COGCC was advised prior to operation and was not present during operations.	2/15/2013
2/18/2013	0 psi at WH, open well, RU Superior Wireline, ran GR/CCL/CBL/VDL log from 3400' to surface, had acceptable bonding on 12.0 ppg Varicem cmt from original cmt top to surface, RD e-line, PU RMOR's retrieving head, TIH w/production tbg, tagged sand across RBP at 6,805' w/213 jts., KB and tools. RU circ. equip. to circulate sand off RBP, broke circulation, circulated down latching onto RBP at 6,820.58' w/same jt., KB and tools, rolled hole clean, released RBP, POOH laying down production tbg. Leaving 214 jts., and 2 subs on the ground. RU e-line, RIH w/3 1/8" slickgun, correlated cased/open logs getting on correct depth, re-perforated Codell 6,877'-6,885', 3 spf (24 new holes), 120 degree phasing, 19 gram charges, .41" entry holes w/21.28" penetration, all shots fired, RD e-line. ND BOP and well head, NU frac valve. Well is ready for Frac. SIFN. RDMO Bayou Rig #8.	2/18/2013



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Daily Operations

Start Date	Summary	End Date
2/21/2013	Codell ReFrac: MIRU HES. Well took 48 bbls to load. (Break 3,006 psi @ 5.5 BPM), Pumped 119 bbls of FE-1A pad, 595 bbls of 26# pHaser pad, 191 bbls of 1.0 ppg 20/40 slurry with 26# pHaser, 524 bbls of 2.0 ppg 20/40 slurry with 26# pHaser, 928 bbls of 3.0 ppg 20/40 slurry with 26# pHaser, 262 bbls of 4.0 ppg 20/40 slurry with 26# pHaser, 68 bbls of 4.0 ppg SB Excel slurry with 26# pHaser. Flushed well to top of the Codell perf (109.7 bbls) Shutdown (ISIP 3,405 psi) (FG .928) Fluid contained the following chemicals: , .30 gpt be-7, .6 gpt CL-23, .5 gpt BA-20, 1.5 gpt GasPerm 1100, .5 gpt Cla-web, 3.0 - 5.0 gpt Vicon NF, 0.25 - .75 gpt CAT 3, 6.0 gpt WG-18 @ 22 Ppt Losurf-100, FE-1A @ 20 gpt (217,220 lbs Ottawa 20/40) (8,110 lbs 20/40 SB Excel). RD HES. MTP = 3715 psi, ATP = 3434 psi, AIR = 17.2 bpm. Pressure response was slightly positive for entire treatment.	2/21/2013
2/21/2013	Niobrara Hybrid: RIH with PSI wireline using High pressure control unit and grease head. Set RMOR Cast Iron Flowthrou 10k frac plug @ 6,810' with a Baker #10. Duel fire 3 1/8" slick gun and EXT charges (22.7 gram, .42 entry hole, 35.1" penetration, 120 degree phasing). Niobrara "B" Bench @ 6,711'- 6,719' (3 SPF) Niobrara "A" Bench @ 6,593' - 6,595' (2 SPF) (28 New holes) POOH and RDMO PSI Wireline. MIRU HES. Well was loaded @ open. (Break 4490 psi @ 5.3 BPM) Pumped 119 bbl active pad, Pumped 1548 bbls of Slickwater pad, 144 bbls of 20# pHaser pad, 167 bbls of 1.0 ppg 20/40 slurry with 20# pHaser, 786 bbls of 2.0 ppg 20/40 slurry with 20# pHaser, 837 bbls of 3.0 ppg 20/40 slurry with 20# pHaser, 408 bbls of 4.0 ppg 20/40 slurry with 20# pHaser, 104 bbls of 4.0 ppg SB Excel 20/40 slurry with 20# pHaser. Flushed well to top of "B" bench (107.0 bbls) Shutdown (ISDP - 2,943 psi) (FG .879). Fluid contained the following chemicals: , .30 gpt be-7, .6 gpt CL-23, 1.0 gpt BA-20, 2.0 gpt GasPerm 1100, 1.25 gpt Clayfix III, 0.5 - 3.0 gpt Vicon NF, 0.15 - .75 gpt CAT 3, 2.0 gpt FR-66, 22 ppt WG-18 1.0 gpt Losurf-100 (238,080 lbs 20/40 Ottawa) (12,110 lbs 20/40 SB Excel. RD HES. MTP = 4,950 psi, ATP = 4,582 psi, AIR = 54.2 bpm. Pressure response was flat for entire treatment.	2/21/2013
3/25/2013	SCP 250 psi, open flowing to flow back tank, SSCP 0 psi, MIRU Basic 1548, 214 jts used tested 2 3/8" 4.7# J-55 EUE 8rd tbg layed down on location, blew well down to flow back tank, controlled well w 60 bbls Claytreat/ Biocide water, ND WH, remove 4 1/2" frac valve, install new 3K Well Head Inc mandrel style tbg head, NU BOP, PU RMOR's 3 7/8" x 6' waved bttm burn shoe, TIH picking up tallying production tbg, in hole w/ 192 jts well kicked off started flowing, flowing to rig tank, pressure down, controlled w/ 20 bbls, continued TIH tagging sand fill at 6,773.60 w/ 212jts, RU circulation equipment, broke circulation, circulated down, tagging plug at 6810.13' KB and tools w/214 jts, drilled up plug and chased to 6903.17' KB and tools w/ 216 jts tagging fill again, continue circulating down to 7,031.24' KB (PBDT) w/220 jts, rolled hole clean, LD 6 jts, POOH to derrick standing back w/114 jts,, leaving 100 jts @ 3197.79. SI and isolated well, drained lines, prepared for next days operations, SDFN.	3/25/2013
3/26/2013	SCP 0 psi, STP 0 psi, open well to rig tank, SSCP 0 psi, broke circulation, rolled hole clean, POOH to derrick standing back w/ remaining 100 jts, LD tools, PU new 2 3/8" standard sn/nc, TIH w/production tbg, ND BOP, land tbg in WH 6,864.77' (12.23' above the Codell) KB, NU WH, did not dropped new PCS full port standing valve and broached to seatnipple w/1.901" broach, isolate well, RU swab equipment. ITP-0 psi ICP-0 psi IFL-1500' FFL-5000' Swabed back 40 bbls water FTP-0 FCP-25 psi Made 6 swab runs RDMO. Tbg detail: 214 jts 2 3/8" 4.7# J-55 EUE 8rd 7.0' adj KB 7.0' 1-10 2 3/8" 4.7# J-55 EUE 8rd sub 6838.17' 6845.17' 1-10 2 3/8" 4.7# J-55 EUE 8rd sub 10.00 6855.17' 1-8 2 3/8" 4.7# J-55 EUE 8rd sub 8.00 6863.17' Seatnipple/notched collar 1.60' 6864.77' EOT	3/26/2013

Swab, 2/11/2019 06:00

Job Category LOE	Primary Job Type Swab	Start Date 2/11/2019	End Date 2/11/2019	Objective SWAB
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Daily Operations

Start Date	Summary	End Date
2/11/2019	ITP818/FTP200 IFL6000 ICP827/FCP261 FFL6700 4RUNS/7BBLS 7 OIL	2/11/2019

Wireline, 5/4/2019 11:15

Job Category Other	Primary Job Type Wireline	Start Date 5/4/2019	End Date 5/4/2019	Objective BROACHED WELL AND PULLED TOOLS
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