



# Well History

Well Name: Hop F 13-25

API 05123306180000		Surface Legal Location SWSW 13 5N 65W		Field Name Wattenberg		State CO		Well Configuration Type Vertical	
Ground Elevation (ft) 4,635.00	Original KB Elevation (ft) 4,648.00	KB-Ground Distance (ft) 13.00	Spud Date 11/20/2009 20:00	Rig Release Date 11/24/2009 07:15	On Production Date 1/9/2010	Abandon Date			

**Job**  
**DRILLING/COMPLETION - ORIGINAL, 11/20/2009 08:00**

Job Category DRILLING/COMPLETION	Primary Job Type DRILLING/COMPLETION - ORIGINAL	Start Date 11/20/2009	End Date 1/9/2010	Objective DRILL & COMPLETE CDL/NIO COMBO
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**Daily Operations**

Start Date	Summary	End Date
11/20/2009	MOVE RIG, RIG UP, SPUD @ 20:00 11/20/09, DRILL TO 511' WIPER TRIP, CIR, TOOH, RUN CSG	11/21/2009
11/21/2009	CMT SURFACE, NIPPLE UP BOPs & TESTED, DRILLED SHOE TRACK, DRILLED TO 3523'	11/22/2009
11/22/2009	DRILLED & SURVEYED TO 6915'	11/23/2009
11/23/2009	DRILLED & SURVEYED TO TD 7084' @ 07:15 ON 11/23/2009, WIPER TRIP, OPEN HOLE LOGS, RUN CSG & CEMENT	11/24/2009
11/24/2009	PUMP PRODUCTION CEMENT, SET SIPS, NIPPLE DOWN & RELEASE RIG @ 07:15 ON 11/24/2009	11/24/2009
12/3/2009	12/3/09. MOVED IN & RIGGED UP SUPERIOR WIRELINE. IWP- CSG 0# / SURF CSG 0# RUN CBL,VDL CCL,GR LOG FROM 7023' - SURFACE.. FOUND GOOD 13.5 PPG CMT FROM 7023' - 5806'. FOUND GOOD TO SPORADIC 12.5 PPG CMT FROM 5806' AND TOC @ APPROX 1209'. POOH WITH LOGGING TOOLS & RIGGED DOWN.  12/5/09. MOVED IN & RIGGED UP H-S HYDROTTESTER. PSI TESTED 4 1/2" 11.6# M-80 PRODUCTION CSG TO 5000#. IT HELD SOLID FOR 15 MINS. CSG TEST GOOD. RIGGED HYDROTTESTER DN.  12/18/09. MIRU SUPERIOR WIRELINE. RIH & PERFORATED CODELL FORMATION AS FOLLOWS: CORRELATING WITH SPECTRAL DENSITY, DUEL SPACED NEUTRON ARRAY COMPENSATED TRUE RESISTIVITY LOG DATED 11/23/09 AND CBL LOG DATED 12/3/09, USING 3 1/8" SLICK GUN WITH 19 GRAM CHARGES, .41" EH, 21.12" PEN, 60 DEG PHASING 4/SPF, FROM 6946' - 6960' - 14' - 56 HOLES. POOH WITH SPENT GUN, ALL SHOTS FIRED!	12/18/2009
1/6/2010	(CODELL): PRE-JOB ISDP 2685, PRE-JOB 5 MIN 1633. INCREASED LOADED TO GET 30 CPS AND RATE TO 25 BPM. ELECTRONIC PROBLEMS WITH QC VAN. WAS NOT ABLE MONITOR VISC, PH, TEMP DURING ENTIRE TREATMENT, HAD TO HAVE FLUID TECH MANUALLY CHECK DURING JOB.  (NIOBRARA C): DURING END OF 2 PSA STAGE INTO START OF 3 PSA VISCOSITY DROPPED TO +/- 4 CPS BECAUSE GEL HOPPER ON PRE-GEL. CROSSLINK SAMPLE LOOKED VERY POOR. WAS NOT ABLE TO SEE VISCOSITY DROP BECAUSE INLINE VISCOSITY,PH,TEMP NOT WORKING. ALSO HAD PROBLEMS WITH BLENDER GETTING TO THE DESIRED DENISTY ON EACH SAND STAGE. TOTALIZED +5% SHORT ON SAND.  (NIOBRARA B): ELECTRONIC PROBLEMS WITH QC VAN. WAS NOT ABLE MONITOR VISC, PH, TEMP DURING ENTIRE TREATMENT, HAD TO HAVE FLUID TECH MANUALLY CHECK DURING JOB.  (NIOBRARA A): ELECTRONIC PROBLEMS WITH QC VAN. WAS NOT ABLE MONITOR VISC, PH, TEMP DURING ENTIRE TREATMENT, HAD TO HAVE FLUID TECH MANUALLY CHECK DURING JOB.	1/6/2010
2/19/2010	CREW TRAVEL TO RIG. RIG DOWN AND ROAD TO LOCATION. SPOT IN EQUIPMENT AND BASE BEAM. SPOT IN RIG AND RIG UP. IWP 70#. SPOT IN TUBING TRAILOR. BLOW WELL DOWN. CONTROL WITH 50 BBLS 2% KCL WITH BIOCID. NIPPLE DOWN FRAC VALVE NAD 4 1/2 COLLAR. NIPPLE UP NEW WMR WELLHEAD BOWL COMPLETE WITH 3,000# BAYLONS. NIPPLE UP WORK FLANGE AND BOP. TIH WITH 3 7/8" BLADE BIT WITH CUTRITE WELDED TO COLLAR, 2 3/8" SEATING NIPPLE, 219 JTS NEW 2 3/8" TUBING. TAG PLUG WITH JT 219 12' IN. LAY DOWN 3 JTS. NIPPLE UP JU HEAD. SWI. SDFN. CREW TRAVEL TO YARD.	2/19/2010
2/20/2010	CREW TRAVEL TO LOCATION. BLOW DOWN TUBING TO WORK TANK. PICK UP 2 JTS. PICK UP POWER SWIVEL AND JT 219. LOAD HOLE WITH 2% KCL WITH BIOCID AND ESTABLISH CIRCULATION. DRILL UP 1st PLUGS IN 45 MINUTES. CHASED TO 6,757' WITH JT 221 6' IN. DRILL UP REMAINDER OF PLUG AND C/O SAND TO NEXT PLUG. TAGGED AT 6,835'. DRILL UP 2ND PLUG AND CHASE TO 6,865'. DRILLED HERE FOR 3 HOURS BEFORE GETTING REMAINDER OF 2 ND PLUG DRILLED UP. C/O TO 3RD PLUG AND DRILLED UP. C/O TO 7,029' WITH JT 229 ALL IN. ROLL HOLE CLEAN. LAY DOWN POWER SWIVEL. NIPPLE DOWN JU HEAD. LAY DOWN 4 JTS ON TRAILOR. TOOH TO DERRICK WITH 150 JTS. SWI. LOCKED BOP. SDFW. CREW TRAVEL TO YARD.	2/20/2010
2/22/2010	CREW TRAVEL TO LOCATION. IWP 350/350. BLOW WELL DOWN TO WORK TANK. CONTINUE TOOH WITH REMAINDER OF STRING. RIG UP TEST TRUCK. TIH WITH 2 3/8" NCSN, 225 JTS AND 2-10' 2 3/8" 4.7# J-55 8RD. RIG DOWN TEST TRUCK. NIPPLE UP MANDRIL AND LAND IN WELLHEAD THRU BOP. NIPPLE DOWN BOP AND WORK FLANGE. SECURE WELLHEAD. NIPPLE UP NEW 2 3/8" TUBING NIPPLE AND ARRAY MASTER VALVE. SWI. RDMO.  TUBING DETAILS:2 3/8" NCSN (1.65'), 225 JTS 2 3/8" 4.7# J-55 8RD (6,896.62') + 2-10' SUBS +12' KB LANDS TUBING AT 6,930.27'. THIS IS 15.73' ABOVE CODELL PERS.	2/22/2010
2/25/2010	SWAB WELL AND RECOVER 70 BBLS, PUT TO SALES.	2/25/2010

**Wellbore Integrity, 11/29/2016 06:00**

Job Category Completion/Workover	Primary Job Type Wellbore Integrity	Start Date 11/29/2016	End Date 11/30/2016	Objective TEST TUBING, SET RBP ON CASING, TEST CASING AND INSTALL 5K WELL HEAD ON CASING FOR WBI.
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Daily Operations		
Start Date	Summary	End Date
11/29/2016	ITP 500 PSI, ICP 500 PSI, ISCP 0 PSI, WELL WAS SHUT IN, MIRU BAYOU RIG 23, BLEW DOWN WELL TO RIG TANK, FUNCTION TESTED BOP, CONTROLLED WELL WITH 50 BBL OF CLAYTREAT/BIOCIDE WATER, ND PRODUCTION TREE, NU BOP WITH ADAPTOR FLANGE, PICKED UP TAG JTS, TAGGED WITH 3 JTS 85', LD TAG JTS, TALLY OUT OF THE HOLE WITH 2 3/8 J-55 4.7 PRODUCTION PIPE TO DERRICK, TUBING WAS LANDED AT 6926.24 KB WITH 225 JTS 2-10' SUBS AND NC/SN, MIRU PICK TESTERS, PU STS'S 3 7/8 BLADE BIT AND 4 1/2 SCRAPER DRESSED FOR 11.6 CASING, TESTED IN THE HOLE DOWN TO 6910' WITH 225 JTS, RD HYDRO TESTER, FOUND 3 JTS WITH HOLES, THE REST TESTED GOOD, LAY DOWN 10 JTS ON THE GROUND, DRAIN PUMP AND LINES, SI AND SECURE WELL FOR THE NIGHT, SD.	11/29/2016
11/30/2016	ITP 90 PSI, ICP 70 PSI, ISCP 0 PSI, BLEW DOWN WELL TO RIG TANK, POOH WITH PRODUCTION PIPE TO DERRICK, LD BIT AND SCRAPER, PU STS'S 4 1/2 RBP DRESSED FOR 11.6 CASING, SET RBP AT 6598.77' WITH 215 JTS, LD 1 JT, RU CIRCULATING EQUIPMENT, CIRCULATED OIL AND GAS OUT, PRESSURE TESTED CASING AND PLUG UP TO 2000 PSI, HELD GOOD FOR 15 MINUTES, LD 4 JTS, SPOTTED 2 SACKS OF SAND ON TOP OF THE PLUG, LD 5 MORE JTS ON THE GROUND, LANDED WELL AT 6302.65 KB WITH 205 JTS, SEAT NIPPLE AND RETRIEVING HEAD, (296.12' ABOVE THE PLUG), ND BOP AND 3K WELL HEAD, INSTALLED 5K WELL HEAD ON CASING, CLOSE WELL, RACK PUMP AND LINES, RDMOL.  SENT 17 GOOD JTS AND 3 BAD JTS OF 2 3/8 J-55 4.7 TO ATP'S YARD TO PDC'S INVENTORY.  TUBING DETAILS KB 11.00 205 JTS 2 3/8 J-55 4.7 6888.45 SEAT NIPPLE 1.20 RETRIEVING HEAD 2.00 TOTAL 6302.65	11/30/2016

WBI - Plug Set PDC, 1/8/2018 06:00						
Job Category Completion/Workover		Primary Job Type WBI - Plug Set PDC		Start Date 1/8/2018	End Date 1/9/2018	Objective REMOVE RBP, SET CIBP AND RUN P/O BIT SUB AHEAD OF HORIZONTAL FRACS

Daily Operations		
Start Date	Summary	End Date
1/8/2018	CREW TO LOCATION. HELD SAFETY MEETING. MIRU ENSIGN RIG 354. 0 PRESSURES ON WELL. ND 5K TOP FLANGE. FUNCTION TEST AND NU BOP. PU 10 JNTS OF 2-3/8" TBNG, RIH AND TAGGED SAND AT 6583'. RU TBNG SWIVEL. CIRCULATE SAND DOWN TO RBP AT 6598.77' KB. DROPPED STANDING VALVE AND TEST TBNG TO 1500 PSI. HELD GOOD. BLED OFF PRESSURE. RU LUBRICATOR. RIH TO FISH STANDING VALVE. SHEARED PIN IN FISHING TOOL. POOH. SWABBED TBNG DOWN TO RIG TANK. RD LUBRICATOR, LD 1 JNT. POOH TO DERRICK WITH 214 JNTS. REMOVED SV FROM SN. RIH WITH RETRIEVING HEAD, SN AND 214 JNTS. SECURED WELL. SDFD CREW TO YARD.	1/8/2018
1/9/2018	CREW TO LOCATION. HELD SAFETY MEETING. 0 PRESSURES ON WELL. PU 1 JNT OF TBNG WITH TBNG SWIVEL, LATCHED ONTO RBP AND RELEASED PLUG. WELL ON VAC. LD 3 JNTS. POOH TO DERRICK WITH 212 JNTS. LD RBP AND RETRIEVING HEAD. MIRU C&J WIRELINE. RIH WITH STS/WYOMING COMPLETIONS 4.5" 10K CIBP. CORRELATED WITH LOGS, GOT ON DEPTH AND SET PLUG AT 6596'. (53' ABOVE TOP NIOBRARA PERF) POOH. RIH WITH DUMP BAILER AND SPOT 2 SKS OF CEMENT ON TOP OF PLUG. POOH. RDMO WIRELINE. LOAD CASING AND TEST TO 2050 PSI. HELD GOOD. BLED OFF PRESSURE. RIH WITH STS 3-7/8" CONE BIT, P/O BIT SUB, SN AND 212 JNTS OF 2-3/8" 4.7# J-55 8RD EUE TBNG. LD 7 JNTS. LAND TBNG IN WELLHEAD AT 6302.55' KB WITH 205 JNTS. RU LUBRICATOR AND BROACHED TBNG TO SN WITH 1.901" BROACH. RD LUBRICATOR AND BOPS. NU 5K TOP FLANGE. INSTALLED NEW 5K VALVES ON WELLHEAD. SECURED WELL. RDMO. CREW TO YARD.  11.00' KB 6288.45' W/205 JNTS 1.10' SEAT NIPPLE 2.00' 3-7/8" CONE BIT, P/O BIT SUB W/FLOAT 6302.55' KB	1/9/2018