



Well History

Well Name: Miller #32-1

API/UWI 05123118640000	Surface Legal Location NENW 32-5N-67W	Field Name Wattenberg	State/Prov CO	Well Configuration Type Vertical
Ground Elevation (ft) 4,791.00	Original KB Elevation (ft) 4,802.00	KB-Ground Distance (ft) 11.00	Spud Date 7/12/1984 00:00	Rig Release Date 7/23/1984 00:00
On Production Date 8/10/1984 00:00				

Daily Operations

Start Date	Summary	End Date
5/9/2008	450#s both tbq/csg, 0#s surface csg, MIRU SOS rig #13, blew well down, control well w/60 bbls, ND WH, was not able to get stripping rubber out well head, flanged well head back up, circulated gas and oil out, unflange head, pumped down csg pumping out rubber, NU BOPs, POOH to derrick tallying, (POOH w/228 jts 2 3/8" 4.7# J-55 EUE 8rd tbq, sn/nc, tbq was landed at 6961.28' KB), RU H-S Testing, PU STS oil Tools 3 7/8" blade bit/4 1/2" csg scraper, TIH w/production tbq testing to 6000 psi, (all jts tested good), RD tester, PU tag jts, tagged fill at 6985' KB and tools w/229 jts, LD tag jts, POOH above open perforations, isolate well, SDFN.	5/9/2008
5/12/2008	0#s tbq/csg/surface csg, PU tags and re-tag at 6986' KB and tools w/229 jts, RU to clean out, cleaned out hard sand fill to 7023' KB and tools w/230 jts and was not able to make more hole, rolled hole clean, LD tag jts, POOH to derrick, LD tools, PU STS Oil Tools 4 1/2" WLTC RBP, TIH w/production tbq, set RBP at 6899' KB and tools w/226 jts, LD 1 jt, pressure tested csg/RBP to 1500 psi, held 15 minutes, test good, LD 20 jts, spotted 2 sks sand across RBP, POOH laying down remaing production tbq, isolate well, SDFN.	5/12/2008
5/13/2008	0#s production/surface csg's, RU Nue X Wireline, RIH w/3 1/8" slickgun, select fired perforating Niobrara "B" 6780-6784' 3spf, Niobrara "A" 6680-6684' 3spf and Niobrara "A" 6662-6670' 3spf, (48 holes total), 120 deg phasing, 21 gram Hero charges, .36" entry holes w/42.5" penetration, (wireline tag 6881'), RD e-line, RU H-S Testing, PU STS Oil Tools 4 1/2" AS1X PKR, TIH picking up tallying 2 7/8" workstring testing to 8000 psi, (all jts tested good), RD tester, ND BOPs, set PKR and land in well head at 6466.28' KB and tools w/198 jts 2 7/8" 6.5# N-80 EUE 8rd tbq, NU WH for stimulation, load and pressure test csg/PKR to 1200 psi, held 15 minutes, good test, load and pump down tbq at 2000 psi, had no communication on backside, isolate well, RDMO.	5/13/2008
5/16/2008	Niobrara Hybrid Recomplete: Halliburton performed a Niobrara stimulation. Took bbl to load hole. (Break 4810 @ 4.5 BPM). Pumped 1000 gals of 15% HCl, 1669 bbls Slickwater pad, 144 bbls of SilverStim 22# X-Linked pad, 166 bbls of 1.0 ppg 30/50 slurry with 22# SilverStim, 786 bbls of 2.0 ppg 30/50 slurry with 22# SilverStim, 836 bbls of 3.0 ppg 30/50 slurry with 22# SilverStim, 348 bbls of 4.0 ppg 30/50 slurry with 22# SilverStim, 70 bbls of 4.0 ppg 12/20 SB Excel slurry with 22# SilverStim. Flushed well 40.5 bbls to top perf. (49.1 bbls) Shutdown (ISDP 4733 psi) (FG 1.12). 30/50 white sand (238060 lbs) 12/20 SB Excel proppant (12000 lbs). Fluid contained the flowing chemicals: 1.0 gpt Clayfix II, 6.5 gpt LGC-6, 0.5 gpt CL-37, 0.3 gpt CL-23, 0.5 - 1.0 gpt BA-40, 1.5 gpt GasPerm 1000, 3.0 gpt Vicon NF, 0.25 - 0.5 gpt CAT-3, 0.1, 0.25, 0.5 gpt CAT-4, 1.0 - 2.0 gpt FR-56. MTP = 7727 psi, ATP = 7008 psi, AIR = 29.5 bpm. Pressure response was fslightly positive for most of job. Pumped treatment through 2 7/8" Tubing with Packer set @ 6466'. RD Halliburton, turned well on to flowback on a 14/64" choke. Treatment went good. Well flowed back strong.	5/16/2008
5/27/2008	50#s tbq open flowing to FBT, 0#s production/surface csg's, MIRU SOS rig #13, pulled choke, blew well down, controlled well w/25 bbls 2% KCL, ND flowback and WH, NU BOPs, release PKR, POOH laying down 2 7/8" workstring and tools, chg over to 2 3/8" handling tools, PU STS Oil Tools retrieving head, TIH picking up tallying previously tested production tbq, tagged sand fill at 6790'KB w/223 jts and tools, RU to clean out to RBP, circulated down latching onto RBP at 6880' KB and tools w/226 jts, rolled hole clean, released RBP, POOH to derrick, LD tools, isolate well, SDFN.	5/27/2008
5/28/2008	100#s csg, blew well down, control well w/20 bbls 2% KCL, PU sn/nc, TIH w/production tbq, tagged at 7023' KB w/230 jts, LD 2 jts, ND BOPs, land tbq at 6972' KB w/4' sub, 228 jts 2 3/8" 4.7# J-55 EUE 8rd tbq, sn/nc, NU WH, dropped PCS full port standing valve and chased to seatnipple w/1.901" broach, isolate well, RDMO.	5/28/2008
11/8/2012	> Move in and spot in Bayou Well Service rig # 4. Shut down for the evening.	11/8/2012
11/9/2012	> Rig in Bayou Well Service rig # 4. check wellhead pressures. Production casing - 800 psig. Production tubing - 850 psig. Surface casing - 0 psig. Pump via the casing. Caught pressure right away - obstruction. Check all lines. 2 plugged hoses. Pump 50 bbl of treated water { bio-cide, clay treat } via the casing. Pump 30 bbl via the tubing. Nipple down the wellhead, Nipple up the bope. Trip in the well with tag joints. Tag fill at 7,032'. Trip tubing out of the well. Make up RMOR retrievable bridge plug. Trip plug in the well hydrotesting tubing and set at 6,601'. Trip 4 stands out of the well. Secure well, shut down for the evening.	11/9/2012
11/10/2012	> Check wellhead pressures. Production casing - 0 psig. Roll hole. pressure test the casing to 550 psig. good test. Trip tubing out of the well. Prep wellhead and rig for digging and casing cut.	11/10/2012
11/12/2012	ICP-0 psi, ISCP-0 psi, start and warm up equipment. ND BOP and tubing head, PU casing spear w/4.010" graphel, pull casing slips out @75 K lbs, stack casing out. ATP dug out around WH, hold JSA and fire watch procedures sith all personel on location, Running Iron Welding cut off casing head and welded on 8 5/8" J-55 slip collar, let weld cool down. Install new 8 5/8" x 4 1/2" 3 M casing head, reland casing in slips, pack casing head off and weld on 4 1/2" N-80 bell nipple, let weld cool down. RU and nipple up annular flanges, change over to 1 1/4" equipment. RI hole tallying and PU 1 1/4" 3.02 lb/ft CSHD work string. Ran 100 jts to 3113.75', RU circulation equipment and break circulation @ 2 bpm @1700 psi, C&C hole for 3 hours. Operations continued to 11/13/12.	11/12/2012



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Daily Operations

Start Date	Summary	End Date
11/13/2012	<p>Report carried over from 11/12/12, Continue TIH w/1 1/4" to 4689.80' w/150 jts. Break circulation, C&C hole for 3 Hrs @2 bpm @ 1700 psi, RD circulation equipment and continue TIH, tagged TOC @ 6230' w/200 jts. Lay down 1 jt and break circulation w/199 jts @6221.92', circulate @ 2 bpm @1900 psi, C&C hole from 03:00-11:00. MI&RU Baker Hughes cement trucks, test results from lab showed cement pump time @ 2 hrs, call and wait on R-3 retarter, hold JSA and procedure meeting with all personnel on location.</p> <p>15:30 hrs Pressure test lines to 4000 psi</p> <p>1st stage:EOT set @6,207.02' w/199 jts, batch and pump 410 sks of PL + 3% GEL +.8%R3 13.4# 1.55 yield (113 bbls) displace 2.5 bbls Est. TOC @4709', lay down 42 jts</p> <p>2nd stage:EOT set @ 4894.49' w/157 jts, batch and pump 416 sks of PL + 3% GEL +.5%R3 13.4# 1.55 yield (115 bbls) displace 2.5 bbls Est. TOC @3211', lay down48 jts</p> <p>3rd stage:EOT set @ 3,394.58' w/109 jts, batch and pump 181 sks of PL + 3% GEL +.5%R3 13.4# 1.55 yield (50 bbls) (20:20-22:00hrs Pump truck ran out of fuel-wait on fuel to be dilevered-pull EOT above Est. cement top-prime and start truck-trip tubing back to 3394.58' pipe started stacking out while recipacating)displace 2.5 bbls Est. TOC @2566', lay down 44 jts</p> <p>4th stage:EOT set @ 2019' w/65 jts, batch and pump 231 sks of PL + 3% GEL 13.4# 1.55 yield (64 bbls) (pipe started stacking out while recipacating-started getting back heavy dehydrated mud and schale)displace 1.0 bbls Est. TOC @1180', TOOH laying down</p> <p>Note:open hole calculations were figured @ 10" open hole w/ 4 1/2" casing f/6230'-322' Surface casing-8 5/8" 24# w/ 4 1/2" suraface casing @322' RD and release Baker Hughes, unflange annular flanges and reland casing in slips @ 75K lbs, pack casing head off, NU 4 1/2" 3K mandrell style tubing head, NU BOP, SI well and secure, SDFN.</p>	11/13/2012
11/14/2012	> Check wellhead pressures. Casing - 0 psig. Move in and rig in Superior Well Sevice loggers. Make up logging tool. Trip in the well and log from 6,300' - surface. Cement into the surface pipe. Trip wireline out of the well. Pressure test the 4 1/2" bell nipple. Trip in the well with 212 joints of 2 3/8" tubing. Landing at 6,484'. 117' above the retrievable bridge plug. Nipple down the bope. Nipple up the wellhead. Rig out and move.	11/15/2012
1/14/2013	> Move in and rig in Bayou well service rig # 4. Check wellhead pressures. Production casing - 0 psig. Production tubing - 0 psig. Surface casing - 0 psig. Pick up tag joints and tag fill at +/- 6,595'. Plug is at 6,601'. Rig in circulating iron. Break circulation for 40 plus minutes. Release retrievable bridge plug. Trip tubing out of the well. Tally and inspect. Tubing and plug out of the well. Secure well, shut down for the evening.	1/14/2013
1/15/2013	> Check wellhead pressures. Prooduction casing - 100 psig. Surface casing - 0 psig. Move in and rig in Pick Testers to hydrotest the tubing. Hydrotest to 6,000 psig. Pick up tag joints and tag fill at - 7,018. Rig out Pick Testers. Lay down 2 joints. Pick up 1 ea - 10' pup joint. Land tubing at 6,974.24'. Broach tubing. Swab tubing. Made 5 runs and made 25 bbl. Rig out and move.	1/15/2013
	<p>kb - 8.00'. 1 ea - pup joint - 10.00'. 228 joints of 2 3/8" { 4.7 lb/ft, j-55 } - 6,956.24'. seat nipple - 1.20'. notched collar - .40'. total landing depth - 6,974.24'.</p>	

CEMENT JOB REPORT



CUSTOMER PETROLEUM DEVELOPMENT		DATE 13-NOV-12		F.R. # 1001947530		SERV. SUPV. JASON L SJOBERG	
LEASE & WELL NAME MILLER #32-1 - API 05123118640000		LOCATION 32-5N-67W		COUNTY-PARISH-BLOCK Weld Colorado			
DISTRICT Brighton		DRILLING CONTRACTOR RIG # W/O		TYPE OF JOB Squeeze-Top			
SIZE & TYPE OF PLUGS		LIST-CSG-HARDWARE		MECHANICAL BARRIERS		MD TVD HANGER TYPES MD TVD	
		No Shoe		None		0 0 None 0 0	
PHYSICAL SLURRY PROPERTIES							
MATERIALS FURNISHED BY BJ		LAB REPORT NO.		SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT³	WATER GPS PUMP TIME HR:MIN
Mud Clean II		0		0	8.34	0	0 00:00
PL+3% GEL+.8%R3		290		13.4	1.55	7.87	80.11 54.31
ClayCare water		0		8.3	0	0 00:00	10
PL+3%GEL+.5%R3		1,460		13.4	1.55	7.87	402.82 273.75
FRESH WATER		0		8.34	0	0 00:00	9.88
Available Mix Water 450 Bbl.		Available Displ. Fluid 450 Bbl.		TOTAL		512.81 328.06	
HOLE		TBG-CSG-D.P.				COLLAR DEPTHS	
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD TVD GRADE
10	0	6230	4	4.5	11.6	CSG	6230 6230 J-55
LAST CASING		PKR-CMT RET-BR PL-LINER		PERF. DEPTH		TOP CONN	
ID	OD	WGT	TYPE	MD	TVD	BRAND & TYPE	DEPTH TOP BTM
8.1	8.63	24	CSG	322	322	No Packer	0 0 0
DISPL. VOLUME		DISPL. FLUID		CAL. PSI		CAL. MAX PSI	
VOLUME	UOM	TYPE	WGT.	BUMP PLUG	TO REV.	SQ. PSI	RATED
9.9	BBLs	FRESH WATER	8.34	0	0	0	8856
MAX TBG PSI		MAX CSG PSI		MIX WATER			
1000		0		Rig			
Circulation Prior to Job							
Circulated Well: Rig <input checked="" type="checkbox"/> BJ <input type="checkbox"/>				Circulation Time: 2		Circulation Rate: 1.75 BPM	
Mud Density In: 8.4 LBS/GAL Mud Density Out: 8.4 LBS/GAL				PV & YP Mud In: 0		PV & YP Mud Out: 0	
Gas Present: NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> Units:				Solids Present at End of Circulation: NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>			
Displacement And Mud Removal							
Displaced By: Rig <input type="checkbox"/> BJ <input checked="" type="checkbox"/>				Amount Bled Back After Job: 0 BBLs			
Returns During Job: <input type="checkbox"/> NONE <input type="checkbox"/> PARTIAL <input checked="" type="checkbox"/> FULL				Method Used to Verify Returns: Visual			
Cement Returns at Surface: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				Were Returns Planned at Surface: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES			
Pipe Movement: <input type="checkbox"/> ROTATION <input checked="" type="checkbox"/> RECIPROICATION <input type="checkbox"/> NONE				UNABLE DUE TO STUCK PIPE			
Centralizers: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				Quantity: Type: <input type="checkbox"/> BOW <input type="checkbox"/> RIGID			
Job Pumped Through: <input type="checkbox"/> CHOKE MANIFOLD <input type="checkbox"/> SQUEEZE MANIFOLD <input type="checkbox"/> MANIFOLD <input checked="" type="checkbox"/> NO MANIFOLD							
Plugs							
Number of Attempts by BJ: 2				Competition: 2		Wiper Balls Used: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	
Plug Catcher Used: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				Parabow Used: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES		Quantity:	
Was There a Bottom: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				Top of Plug: 2619 FT		Bottom of Plug: 6207 FT	
Squeezes (Update Original Treatment Report for Primary Job)							
BLOCK SQUEEZE <input type="checkbox"/>		SHOE SQUEEZE <input type="checkbox"/>		TOP OF LINER SQUEEZE <input type="checkbox"/>		PLANNED <input type="checkbox"/> UNPLANNED <input type="checkbox"/>	
Liner Packer: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES		Bond Log: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES		PSI Applied: 0		Fluid Weight: 0 LBS/GAL	
Casing Test (Update Original Treatment Report for Primary Job)							
Casing Test Pressure: 0 PSI				With 0 LBS/GAL Mud		Time Held: 00 Hours 00 Minutes	
EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING: None							
PRESSURE/RATE DETAIL				EXPLANATION			

CEMENT JOB REPORT



Shoe Test (Update Original Treatment Report for Primary Job)

Depth Drilled out of Shoe: 0 FT Target EMW: 0 LBS/GAL Actual EMW: 0 LBS/GAL
 Number of Times Tests Conducted: 0 Mud Weight When Test was Conducted: 0 LBS/GAL

Problems Before Job (I.E. Running Casing, Circulating Well, ETC)

Cement tested with too short of a set up time. Samples weren't tested at the right temperature (tested at 145 degrees, needed to be tested to 220 for Bottom hole temp). Customer requested more R-3 additive in the lead slurry + .5% and more R-3 additive in the tail slurry +.5% to cover the 1st 3 stages of cement.

Problems During Job (I.E. Lost Returns, Equipment Failure, Bulk Delivery, Foaming, ETC)

Pump ran out of fuel on 3rd stage while pumping cement. Rig ran out of fuel on 3rd stage while tripping pipe out. Rig tripped out pipe on 3rd stage due to pressure. Cement top estimated at 2619' 10" OH 4.5" CSG @ 278 BBLs pumped. Rig pulled tubing to 1925' for last stage and pumped 65 BBLs of cement, Rig pulled out of hole, top of cement estimated at 1086'.

Problems After Job (I.E. Gas at Surface, Float Equipment Failed, ETC)

None

PRESSURE/RATE DETAIL

EXPLANATION

TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>	
	PIPE	ANNULUS				TEST LINES	5472 PS
						CIRCULATING WELL - RIG	<input checked="" type="checkbox"/> BJ
09:00	0	0	0	0	N/A	Leave Yard	
10:00	0	0	0	0	N/A	Arrive on Location	
10:20	0	0	0	0	N/A	Spot Trucks	
11:00	0	0	0	0	N/A	Pre Rig-up Safety Meeting	
12:23	0	0	0	0	N/A	Waiting on lab results and R-3 to get to location	
15:00	0	0	0	0	N/A	Safety Meeting	
15:09	5472	0	0	0	H2O	Pressure Test Pump and Lines	
15:11	1800	0	1.3	5	H2O	Preflush Fresh Water	
15:15	1670	0	1.3	10	H2O	Preflush Mud Clean II	
15:35	2016	0	1.4	35	CMT	Batch, Weigh, Pump 13.4# PL+3% GEL+.5%R3	
16:05	1727	0	1.3	78	CMT	Batch, Weigh, Pump 13.4# PL+3% GEL+.8%R3	
17:01	1716	0	1.3	2.5	H2O	Displacement	
17:13	0	0	0	0	N/A	Rig Pull Tubing	
17:40	1545	0	1.3	115	CMT	Batch and Pump 13.4# PL+3% GEL+ .5%R3	
19:14	1640	0	1.3	2.5	H2O	Displacement	
19:17	0	0	0	0	N/A	Rig Pull Tubing	
20:05	2166	0	1.6	27	CMT	Batch and Pump 13.4# PL+3% GEL+.5%R3	
20:27	0	0	0	0	N/A	Pump Ran out of Diesel	
20:28	0	0	0	0	N/A	Rig Pulling Pipe out of hole	
21:43	0	0	0	0	N/A	Put Fuel in Truck and started truck	
21:44	0	0	0	0	N/A	Rig Tripped Pipe back in hole	
22:11	2060	0	1.3	50	CMT	Batch and Pump 13.4# PL+3% GEL+ .5%R3	
22:28	1820	0	1.3	1.5	H2O	Displacement	
22:31	0	0	0	0	N/A	Shut down for rig to trip out pipe to 1925'	
22:40	0	0	0	0	N/A	Rig ran out of fuel	
22:55	0	0	0	0	N/A	Rig Continued to trip pipe out of hole	
23:20	1421	0	1.3	64	CMT	Batch and Pump 13.4# PL+3% GEL	
00:20	0	0	0	0	N/A	Shut down so rig can reciprocate pipe back in hole	
00:24	1670	0	1.3	1	CMT	Continue pumping 13.4# Cement	
00:32	1534	0	1.3	1	H2O	Displacement	
00:45	0	0	0	0	N/A	Post Job Safety Meeting	

BUMPED PLUG ☐ Y ☒ N 0 PSI TO BUMP PLUG TEST FLOAT EQUIP. ☐ Y ☒ N 0 BBL.CMT RETURNS/ REVERSED 358 TOTAL BBL. PUMPED 0 PSI LEFT ON CSG 0 SPOT TOP OUT CEMENT ☐ Y ☒ N Service Supervisor Signature:

