

FINAL - RE-ENTRY END OF WELL SCHEMATIC 2010

Well Name: MC #5 Re-Entry Start Date: 8/3/2010
 API #: 05-083-6438
 Section 31 Township 37N Range 17W
 Surface Hole: 1380' FSL, 1929' FWL Section 31, T37N R1W NMPM Elevation 6765'
 Planned BHL: 2501' FNL, 1971' FEL Section 31, T37N R17W NMPM 45 deg azimuth from SHL (2000' max lateral)

Date TD of lateral reached: 10/7/2010
 Rig Release Date: 10/19/2010
 Completion Date: 10/19/2010

Lateral

Conductor Casing

Size 16.0 in
 Set at 109 ft
 Wt. 65 ppf
 Hole Size 20 in
 Conductor @ 109 ft
 Grade K-55

Surface Casing

Size 10-3/4 in
 Set at 2851 ft
 Wt. 40.5 ppf Grade K-55 surface to 2851 ft
 Hole Size 14-3/4 in
 Est. T.O.C. surface ft
 Csg Shoe @ 2851 ft

Production Casing

Size 7-5/8 in
 Wt. 26 ppf Grade K-55 from 180 to 3867 ft
 Wt. 29 ppf Grade L-80 from 3867 to 5929 ft
 Wt. 33 ppf Grade SS-95 from 5929 to 7560 ft
 Wt. 33 ppf Grade CR 13 from 7560 to 8044 ft
 Hole Size 9-1/2 in
 Est. T.O.C. surface ft
 Float Shoe 8044'
 Float Collar 7965'
 DV Tool 7535'

Tubing

Size 4-1/2 in
 Wt. 12.75 ppf
 Connection: NK3SB
 Grade 13CR from surface to 7813 ft

Production BHA

KB 26.00
 1 - 9" TBG HANGER W/ 4 1/2" MAC TOP 4 1/2" NK3SB BTM 1.90
 1 - JT 4 1/2" 12.75# NK3SB 13 CHROME TUBING 31.58 Csg Shoe 8047 ft
 1 - 4 1/2" 12.75# NK3SB 13 CHROME TUBING SUB 6.00
 244JTS - 4 1/2" 12.75# NK3SB 13 CHROME TUBING 7709.34
 1 - 3 1/2" ON OFF TOOL W/ 2.81 PLUG IN PROFILE NIPPLE 1.70 TOP SET @ 7774.91'
 1 - 7 5/8" ARROW SET PACKER TYPE 1-X CHROME 4.80
 1 - 3 1/2" EUE CHROME TUBING SUB 3.65
 1 - 3 1/2" EUE 2.75 "F" NIPPLE 1.10
 1 - 3 1/2" EUE CHROME SLOTTED TUBING JT. 9.65
 1 - 3 1/2" EUE CHROME SLICK JT. 9.65
 1 - 3 1/2" EUE 2.56 "R" NIPPLE W/ WL REENTRY GUIDE 2.08
TOTAL END OF TUBING 7813'

2010 Re-Entry Pilot Hole & Lateral

Pilot Hole Size 6-1/2 in
 Pilot Hole Lateral 8052 ft to 8277
 Pilot Hole Cement up inside 7-5/8" & then Dressed off to KOP at 8052'

Lateral Hole Size 4.75 in
 Lateral Hole KOP 8052 ft (MD) 8052 ft (TVD)
 Lateral Hole Top of Production 8047 ft (MD) 8047 ft (TVD)
 Lateral Hole TD 9409 ft (MD) 8198 ft (TVD)

Ran Pilot hole logs: Baker Atlas ZDL/CN/GR/CCL/RTEX 8-12-10
Loggers TD 8277'

Conductor Cement

cement with ready-mix to surface
40 sxs cement to surface

Surface Cement

Date Cemented: 6/7/1985
 Lead : 1550 sxs Lite
 Yield 1.84
 Tail : 285 sxs, Class C at 15.6 lb/gal
 Yield 1.18
 Note : cmt to surf, bumped plug, floats held.

Prod Cement

Date cmt'd: 6/21/1985
 1st Stage 225 sxs
 2nd Stage 1865 sxs 50/50 Poz
 + 100 sxs Reg H
 Note : Displace 1st stage with 367 bbls mud

Pilot Hole Cement

Date cmt'd: 8/13/2010
 Lead : 135 sxs of Class "G" cement w/
3% KCl + 0.6% HR-5 + 0.15% HR-25
 Note : Plug back pilot hole with cement from 8047' - 8277'
drill cement out to KOP at 8052'

LATERAL Cement Plugs due to Water Flow

Lateral Open Hole Cement Retainer 9355' MD
Lateral Cmt Plug 1 - pumped 100 sxs Class G
 Cement Plug from 9355' MD to 9473' MD
 Lateral Open Hole Cement Retainer 9260' MD
Lateral Cmt Plug 2 - pumped 25 sxs Class G
 Cement Plug from 9260' MD to 9355' MD

Lateral KOP 8052'

Lateral Hole TD 9409' MD/ 8198' TVD AZ 42.14 deg

Completion: Ran 4-1/2" 12.75# NK3SB tubing
 Acid Job Pumped: +/- 12,000 gals 28% HCL

6-1/2" Pilot Hole TD = 8277'