

	HydraShock Coiled Tubing		Treatment Date
			December 4, 2016
HYDRASHOCK™	Run-in-place CT Case History		Pages
			1/1
Document Number	Approver Position	HydraShock CT Product Line Manager	
RIPCT-000001	Approver Name	Lauren Mendenhall	

Day(s) stuck before called: 1 ΔnBalls. The maximum negative weight indicator reading was -10,000lbs. The string life was at 45%, so the choice to use the HydraShock was swift.  
Location: Karnes / TX  
Formation: Eagleford

**Scope of Work:**

Assist in removing a coiled tubing milling string and BHA utilizing the HydraShock Coiled Tubing sub

**Treatment:**

The HydraShock specialist was called at 1:00am on 12/5/16 and the process of freeing the coiled tubing began. Due to the co-mingling of nitrogen and fluid on the annulus, a "Blue" ball was dropped as a control, to which no event occurred. It was then suggested to drop a three ball cluster of "Blue" balls, to which none pressured up. This was due in part to a large annular differential, as well as higher wellbore temperatures. The next balls dropped were two "Yellow" balls, one of which fired at 7400psi, an expected pressure. The next three balls dropped were "White," going at 9,000psi, 9,700psi, and 10,000psi, respectively. As the nitrogen was circulated out, the "White" ball pressures became more consistent with their design of 10,000psi-10,800psi. The next step was to let the well settle out for 4 hour intervals dropping two balls after each period. Two "White" balls were dropped, firing at 10,000psi and 9,700psi, and 10' down movement was made. After the next 4 hour interval, two more "White" balls were dropped, extruding at 10,500psi and 10,700psi. It was decided after 6 more hours to drop one more "White" ball, with the string in tension at 15,000lbs over, which extruded at 10,700psi, and freed the coiled tubing.

**Background:**

Workstring: 2.375" CT / 0.203" Wall thickness  
 HydraShock: 500 Series HydraShock CT Sub  
 Immediate Concerns: high bottom hole temp. | 45% CT fatigue @ stuck time  
 SICP: 2500psi  
 Completion Specifics:
 

- 5.5" 20lb Casing
- 90° - 10,741'
- PBTD - 15,177'
- Stuck Depth Counter Reading - 13,580'
- BHT - 325°F
- Plugs - Obsidian

The operating company had rigged up a 2.375" coiled tubing unit with a standard milling BHA to drill out composite frac plugs and clean the well out to TD. Upon beginning a short trip, the coiled tubing became stuck at 13,580' at the reel counter. A number of gel sweeps, coiled tubing cycles, and annular surges were utilized to attempt to free the CT. The maximum weight pulled at surface was 15,000lbs over string weight before deploying the