HydraShock	HydraShock Coiled Tubing	Revision Date: December 9, 2016
	Rescue CT Case History	Pages: 1/1
Document Number: ResCT-000002	Approver Position: HydraShock CT Product Line Manager	
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Date: 11/29/16
Location: Desoto Parish / LA
Formation: Haynesville

Scope of Work:

Assist in removing a coiled tubing string stuck during a short trip on a plug milling job.

Background:

Workstring: 2.375" CT / 0.175"- 0.250" HT125
HydraShock: 500 Series HydraShock CT Rescue
Immediate Concerns: High BHP | high CP

SICP: 5000psi
Completion Specifics:

- 5.5" 23lb / 5.0" 18#XO Casing
- 90° - 12,624'
- PBTD - 19,724'
- Stuck Depth Counter Reading - 16,001'
- BHT - 285°F
- Plugs - Downhole Technology

The operating company rigged up a 2.375" CTU to mill out Downhole Technoloy plugs after a fracturing operation. Circulating pressure for the job was around 8,500psi at 3.0bbls/min, with 6,400psi wellhead pressure. The treating fluid was 10.2lb brine. At the time of becoming stuck, the CT crew was short tripping off plug #31. The top of the liner is at 10,682' and the well goes 90° at 12,624'. After becoming stuck, the coiled tubing was pulled to 90,000lbs twice, and 95,000lbs three times as per the load cell display. 220bbls of fluid was bullheaded down the annulus at 2.0bbls/min, creating 7,700psi on the annulus. The only progress before disconnecting was making it 10' in hole. The BHA was disconnected at 00:45 11/30/16.

Treatment:

The HydraShock rescue personnel arrived on location at 18:50 on 11/29/16. After the disconnect sheared, the CT was manipulated, as was the fluid rate to attempt to get the tubing free. Exhausting the available options, the HydraShock CT Rescue tool was circulated through the CT. The tool was circulated to the connector at 4.0bbls/min, and seated at 2.0bbl/min. At 89bbls away, the control ball extruded at 7,400psi(Green). The next three bals pumped were "Blue" and all extruded at 8,700psi. The next 5 balls dropped were "Red" and fired at 8,900|8,900|8,750|8,750|8,750 psi. The next 5 balls dropped were "Black" and went at 9,500|9,600|9,200|9,038|9,700 psi. During this time, 6,000lbs was gained back in weight, and the annulus pressure was manipulated at surface. The next 3 "Black" balls were dropped with the CT at -10,000lbs load cell, and fired at 9,200|9,600|9,600 psi. Next, a "Yellow" ball was fired at 11,450psi. Two more "Black" balls were dropped at 9,500|10,068 psi, then the CT was pulled to 10,000lbs over neutral weight. Next, 8 "Yellow" balls were dropped, at 11,988|12,120|11,629|11,989|11,200|11,100| 10,900|11,419 psi. During this time balls were extruded under the following conditions: the string was pulled to a max of 50,000lbs over, the string was neutral, 20,000lbs overpull applied. We have found that applying flow and pressure to debris on the annulus is detrimental to the function of the HydraShock and must not be done.