



UHL 1

Plug and Abandon Operations Procedure

API # 051231965000

AFE #

WELL DATA

Surface Location: 1,980' FSL & 660' FWL of Sec 29, T10N, R58W, Weld County, CO

Elevations: Ground Level: 4,818 ft Kelly Bushing: 4,828.0 ft 10.0 ft (KB)

Depths: Total Depth: 6,722 ft KBMD Perforations: 6547-6551'

| <u>Casing</u> | <u>Depth</u> | <u>OD</u> | <u>Grade</u> | <u>Weight</u> | <u>ID</u> | <u>Drift</u> | <u>Cap</u> | <u>Collapse</u> | <u>Burst</u> | <u>Tensile</u> |
|---------------|--------------|-----------|--------------|---------------|-----------|--------------|---------------|-----------------|--------------|----------------|
| Surface | 285 ft | 8-5/8" | J-55 | 24.0 # | 8.097 in | 7.972 in | 0.0773 bbl/ft | 1,370 psi | 2,950 psi | 244,000 lbs. |
| Prod. | 6,722 ft | 4-1/2" | L-80 | 11.6 # | 4.000 in | 3.875 in | 0.0160 bbl/ft | 6,350 psi | 7,780 psi | 212,000 lbs. |

| <u>Tubing</u> | <u>Depth</u> | <u>OD</u> | <u>Grade</u> | <u>Weight</u> | <u>ID</u> | <u>Drift</u> | <u>Cap</u> | <u>Collapse</u> | <u>Burst</u> | <u>Tensile</u> |
|---------------|--------------|-----------|--------------|---------------|-----------|--------------|--------------|-----------------|--------------|----------------|
| 2.375" | 6,434 ft | 2.375 | J-55 | 4.7# | 1.995 in | 1.9" | .003 bbls/ft | 9,170 psi | 8,840 psi | 81,000 lbs |

Notes

Cement top on production casing 4950'

Surface casing/production casing void capacity about .044 bbls/ft

Production casing/drill hole annulus (below surface casing) .04 bbls/ft

OBJECTIVE

The following is a procedure to plug and abandon the UHL 1 well that is currently shut in.

Operations Procedure

1. Notify COGCC at least 48-hours prior to the start of operations using a Form 42. Verify with Drew Fish that this is completed prior to moving the rig in. 701-264-9004
2. Take GPS coordinates of exposed wellhead. Information is required for the Form 6 submittal when P&A work is complete.
3. MIRU plugging rig. Mob-in pump, tank, and all other necessary equipment. NU 7-1/16" 5K BOP w/ 2-3/8" pipe rams on top and blind rams on bottom, pressure test high and low, function test BOP. Have delivered clean 500-bbl upright tank and fill with fresh water. Heat as necessary. Fresh water to be used for cementing operation, circulating, and cement displacement.
4. Drop standing valve, (seating nipple located at 6,433') pressure test tbg to 1,000psi., retrieve standing valve on sand line. TOOH with 2-3/8" tbg, RIH with bit and scraper to 6500'. TOOH.
5. RU slick line with Gyro. Run survey on well from 6,646 (top of CIBP) to surface. Verify good data. RD Slickline
6. PU cement retainer for 4-1/2" 11.6 lb/ft csg, TIH on 2-3/8" tbg. Set retainer at 6,450' KB. Test injection, target 2 bpm injection rate (monitor back side for pressure). Record rate and pressure. Pass onto engineering and cement company.
7. MIRU cement crew. Pressure test surface lines to 2,000 psi. Unsting from retainer and fill hole with freshwater to surface. Mix 20 sks, Class G, 1.15 cu-ft/sk, 15.8 ppg cement (yield 4.1 bbls), spot to near EOT, sting back into retainer squeezing 3 bbls below cement retainer, sting out, spot 1 bbl cement on top of CR. TOOH w/ 4 stands, reverse clean with fresh water.
8. Move up hole placing EOT around 5700', Mix 20 sacks of Class G, 1.15 cu-ft/sk 15.8ppg cement. (Yield 4.1 bbls). Place balance plug from 5700' to 5444'. TOOH 4 stands and reverse clean with fresh water. Shut down for day.
9. RIH and tag top of cement noting depth. TOOH standing back tubing.
10. MIRU wireline lubricator. PU 1-ft perforating gun loaded w/ 4 spf, 90 degree phasing (0.50" EHD)RIH w/ gun and perforate @ 1500' KB. POOH spent gun, ND pack off, LD gun, and ensure all shots fired.
11. PU cement retainer for 4-1/2" 11.6 lb/ft csg, TIH on 2-3/8" tbg. Set retainer at 1450' KB. Open casing annulus, test injection, target 2 bpm injection rate directing returns to rig tank. Record rate and pressure. Pass onto engineering and cement company.

12. MIRU cement crew. Pressure test surface lines to 2,000 psi. Mix 50 sks, Class G, 1.15 cu-ft/sk, 15.8 ppg cement (yield 10.2 bbls) squeezing 9 bbls below cement retainer, sting out, spot remaining 1.2 bbl cement on top of CR. TOO H w/ 4 stands, reverse clean with fresh water.
13. TOO H laying down work string.
14. RD BOPs and remove wellhead. RD workover rig. Dig down below surface and cut off casing at least 5' from surface
15. Fill production casing with cement from 50' to surface (about 5 sacks or 1 bbl) . Fill back side with cement from 50' to surface. (about 12 sacks or 2.5 bbls)
- 16 Verify any existing flowlines are abandoned properly according to COGCC regulations. Flushed and capped on both ends.
- 17 Weld on cap with plugging information plate. (API # - 051231965000) (Well Name - UHL 1) (Legal location - 1,980' FSL & 660' FWL of Sec 29, T10N, R58W, Weld County, CO)
- 18 Back Fill Cellar
- 19 Reclaim disturbed surface.

SAFETY & ENVIRONMENTAL

****EMERGENCY CONTACTS BELOW****

Whiting Operating stresses safety and environmental stewardship in all operations. Safety tailgate meetings are encouraged prior to commencing with any major wellsite task. Spills of notable size should be reported and recorded. The proper personal protective equipment (PPE) should be worn at all times while on location. Should there be any questions regarding Whiting's safety/environmental policies, the Wellsite Supervisor will provide instruction.

EMERGENCY CONTACT INFORMATION

| Contacts | Phone Number & Description |
|--------------------------------------|--|
| EMERGENCY | 911 or (800) 472-2121 |
| Sheriff's Department (Sterling, CO) | (970) 522-3512 (Logan County) |
| New Raymer Fire Dept | (970) 437-5713 |
| After Hours Emergency (WOG) | 1-800-723-4608 |
| Primary Ops Engineer: Drew Fish | Cell: (701) 264-9004 |
| Secondary Ops Engineer: Adrian Reece | Cell: (720) 484-0777, Office: (303) 876-7076 |
| Frac Supervisor: Ed Moore | Cell: (970) 556-2144, Office: (970) 437-4113 |
| Rig Supervisor: Brent Brown | Cell: (701) 290-0123, Office: (970) 407-3009 |