



Exploration and Production

Well P&A Procedure

COGCC Doc # 2597256

Wellname **DOE 1-W-28**
 Location **SWNE 28-6S-95W**
 Field **Parachute**
 County **Garfield, CO**
 API **05 045 06586**
 ELEV **5557'**
 Footages **1915' FNL, 1755' FEL**

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Revision Date:
 12/7/2016

| | | |
|------------------------|------------------------|------------------|
| Casing: | 13-3/8" 24# - 29' | |
| | 8-5/8" 24# - 315' | |
| | 4-1/2" 10.5# - 3,851' | 0.0159 bbls/LnFt |
| | 2-3/8" 4.60# - 2,201' | 0.0039 bbls/LnFt |
| | TBG in CSG volume | 0.0105 bbls/LnFt |
| Current Top of Cement: | 1,585' CBL (3-24-2010) | |
| Top of Wasatch: | 2,088' | |

Purpose: Plug to abandon well

Zone:

All Perforations

Existing

Perforations:

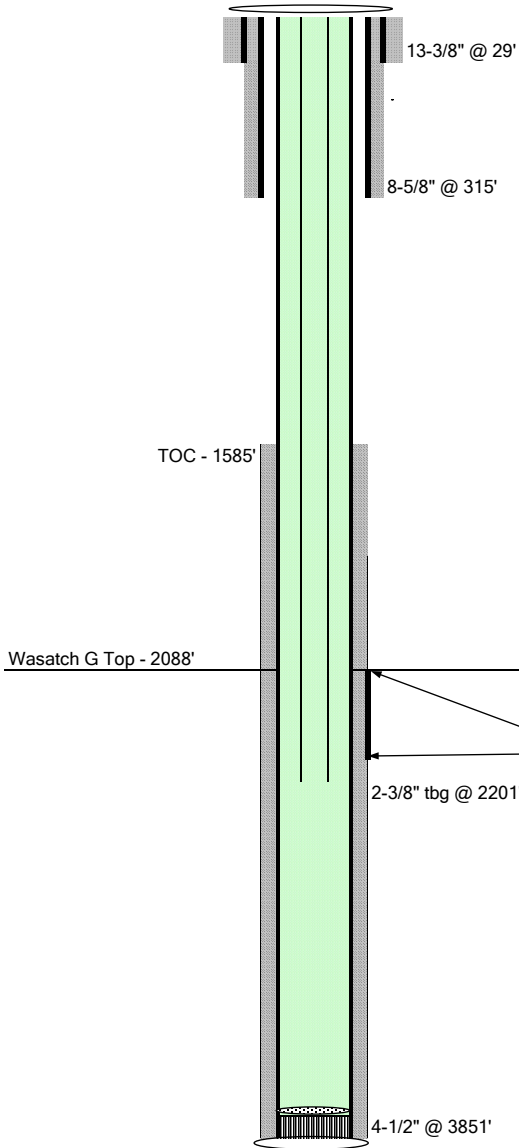
| | <u>Depth</u> | <u>PHZ</u> | <u>Holes</u> |
|---------|--------------|------------|--------------|
| Shallow | Deep | | |
| 2,088 | 2,117 | 1 SPF | 30 |
| 2,118 | 2,129 | 1 SPF | 12 |
| 2,130 | 2,140 | 1 SPF | 11 |
| 2,143 | 2,148 | 1 SPF | 6 |
| | | 59 | total |

Proposed Procedure

- 1 Notify COGCC & BLM Representative of start of activity
- 2 TIH w/2-3/8" TBG working tight spots down through perforations to 2,120'
- 3 Open backside to tank and establish circulation
- 4 Pump water spacer ahead of 8.27 bbls (TBG capacity @ 2,120')
- 5 Pump 11.68 sk 15.8 ppg cement down TBG w/backside open and displace to balance plug
- 6 POOH to 500'
- 7 Secure well for night and wait on cement
- 8 TIH and tag cement plug, if tag below upper perforation, repeat steps and pump extra job until coverage is at least 50' over top perf @ 2,088'
- 9 Shut well in and ensure no pressure builds on TBG or CSG
- 10 RU WL and TIH to 365' (50' deeper than surface CSG shoe)
- 11 Shoot 1' @ 4 SPF PHZ
- 12 POOH and RD WL
- 13 TIH w/2-3/8" TBG working tight spots down to 325'
- 14 Open backside to tank and establish circulation
- 15 Pump water spacer ahead of 1.42 bbls (TBG capacity @ 365')
- 16 Pump 42.63 sk 15.8 ppg cement surface plug down TBG w/backside open and displace as needed filling hole full of cement
- 17 POOH & secure well
- 19 Weld in place dryhole marker
- 20 Backfill cellar

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Spud 8/31/1989

| | | |
|--------|--------------------|---------------------|
| Casing | 29' | 13-3/8" 24# |
| Cement | Redimix to surface | |
| Casing | 315' | 8-5/8" 24# |
| Cement | 100 sx | 50/50 Poz |
| | 50 sx | Class G |
| Casing | 3851' | 4-1/2" 10.5# |
| Cement | 610 sx | 50/50 Poz |

Tubing **2,201** **2-3/8"**

Formation Tops

Wasatch **2088'**

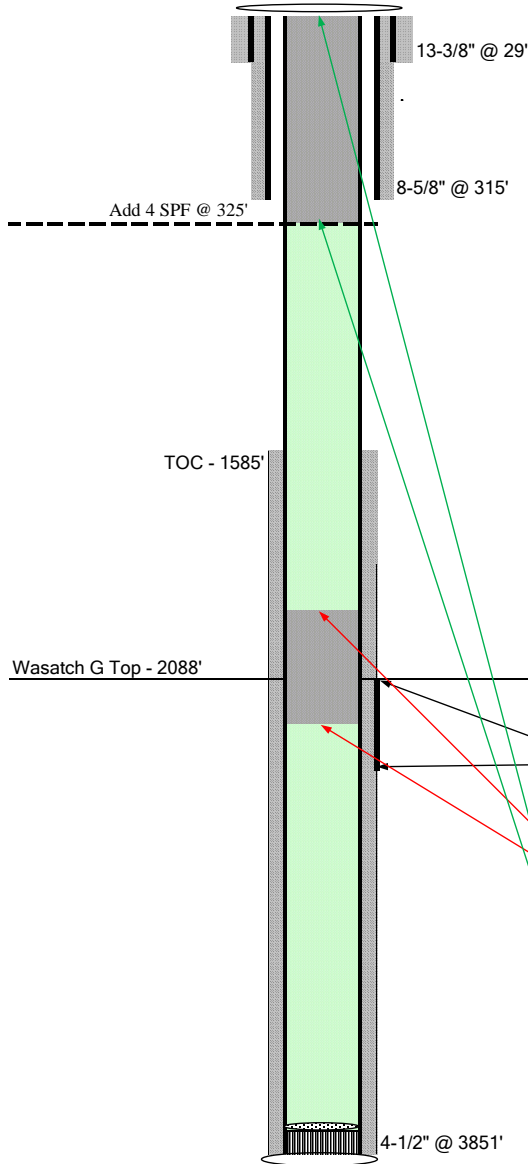
TOC - Bond Log **1585'**

Completed Intervals

| | <u>Depth</u> | <u># Holes</u> |
|------------------|---------------|----------------|
| <u>Wasatch G</u> | 2088' - 2148' | 59 |

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|--------|--------------------|--------------|-------------------------------|
| Casing | 29' | 13-3/8" 24# | |
| Cement | Redimix to surface | | |
| Casing | 315' | 8-5/8" 24# | |
| Cement | 100 sx | 50/50 Poz | |
| | 50 sx | Class G | |
| Casing | 3851' | 4-1/2" 10.5# | 0.08955 ft ³ /Lnft |
| Cement | 610 sx | 50/50 Poz | |

Tubing 0' 2-3/8"

Formation Tops

Wasatch 2088'

TOC - Bond Log 1585'

Completed Intervals

| | <u>Depth</u> | <u># Holes</u> |
|------------------|---------------|----------------|
| Wasatch G | 2088' - 2148' | 59 |

P&A Calculations

| | Shallow | Deep |
|---|-----------------------------|--------|
| Primary cement, balanced plug from | 2,020' | 2,120' |
| 8.955 ft ³ | between desired plug depths | |
| 1.15 ft ³ /sk yield | 15.8 lb/gal cmt | |
| 7.79 sx for 100' plug in 4.5" 10.5# CSG | | |
| 150% excess | | |
| 11.68 sx Total | | |
| Secondary cement, plug from | 0' | 365' |
| 32.68575 ft ³ | between desired plug depths | |
| 1.15 ft ³ /sk yield | 15.8 lb/gal cmt | |
| 28.42 sx for 325' plug in 4.5" 10.5# CSG | | |
| 150% excess | | |
| 42.63 sx Total | | |