

Well Name: MCKEE 12-21

| | | | | |
|---------------------|-------------------------------------|--------------------------------|-------------------------------|----------------------------|
| API 05-123-14667 | Original KB Elevation (ft) 4,765 | Ground Elevation (ft) 4,754 | Total Depth (ftKB) 7,113.0 | Current PBTD (mKB) |
| Section 21 | Township 6 | Range 64 | County/Parish WELD | State/Province COLORADO |

Casing Strings

| Csg Des | MD (ftKB) | Run Date | Prop Run? | Cut/Pull Date | Proposed Cut/Pull? | Depth Cut/Pull (ftKB) | OD (in) | ID (in) | Grade | Len (ft) |
|------------|-----------|----------|-----------|---------------|--------------------|-----------------------|---------|---------|-------|----------|
| Surface | 308.0 | | No | | No | | 8 5/8 | 8.10 | | 297.00 |
| PRODUCTION | 7,113.0 | | No | 12/28/2001 | No | 5,202.0 | 4 1/2 | 4.00 | | 7,102.00 |

Tubing Strings

| Des | Set Depth (ftKB) | Run Date | Prop Run? | String Location | Pull Date | Prop Pull? | Cut/Pull Date | Proposed Cut/Pull? | Depth Cut/Pull (ftKB) |
|-----|------------------|----------|-----------|-----------------|-----------|------------|---------------|--------------------|-----------------------|
| | | | | | | | | | |

Perforations

| Zone | Type | Date | Prop? | Top (ftKB) | Btm (ftKB) |
|-------------------------|------------|------------|-------|------------|------------|
| NIOBRARA, ORIGINAL HOLE | Perforated | 10/31/1995 | No | 6,794.00 | 6,804.00 |
| NIOBRARA, ORIGINAL HOLE | Perforated | 10/31/1995 | No | 6,934.00 | 6,980.00 |

Other In Hole

| Des | Run Date | Prop Run? | Prop Pull? | Top (ftKB) | Btm (ftKB) |
|-----|----------|-----------|------------|------------|------------|
| | | | | | |

Cement Stages

| Des | Type | Prop? | End Date | Top (ftKB) | Btm (ftKB) |
|--------------------------|--------|-------|------------|------------|------------|
| Cement Plug | Plug | Yes | | 11.0 | 800.0 |
| Surface Casing Cement | Casing | No | 8/11/1990 | 11.0 | 308.0 |
| Production Casing Cement | Casing | No | 8/14/1990 | 6,325.0 | 7,113.0 |
| Cement Plug | Plug | No | 12/28/2001 | 6,470.0 | 6,700.0 |
| Cement Plug | Plug | No | 12/28/2001 | 995.0 | 1,095.0 |
| Shoe Plug | Plug | No | 12/28/2001 | 155.0 | 375.0 |
| Cement Plug | Plug | No | 12/28/2001 | 11.0 | 68.0 |
| Stub Plug | Plug | Yes | | 4,950.0 | 5,202.0 |
| Cement Plug | Plug | Yes | | 2,750.0 | 3,000.0 |

P&A PROCESS

| | | | | |
|-----------------|-----------------|-------------------------|--------------------------|----------------------------|
| Type Abandon | Sub Type WBI | Start Date 5/12/2017 | Engineer David Hughes | Cell Phone 513-787-8747 |
|-----------------|-----------------|-------------------------|--------------------------|----------------------------|

PROCESS STEPS

| Type | Comment | | | | | | | | | | | | | | |
|----------------|---|----------------|-----------------------------------|---------------------------|-----------------------------------|---------------------------|-----------------------------|--------------|------|------|-----|--------|-----|------|----|
| 1) | Survey and locate abandoned well, mark with stake and take location photos | | | | | | | | | | | | | | |
| 2) | Excavate to expose top of surface casing | | | | | | | | | | | | | | |
| 3) | Weld 2" collar to top of 8 5/8" surface casing cap. Make up to collar, pneumatic drill with non-sparking bit. Drill out cap venting possible trapped gas. | | | | | | | | | | | | | | |
| 4) | Once verified that no gas exists beneath top of surface casing plate, cut off surface casing below plate with torch, dress up smooth. | | | | | | | | | | | | | | |
| 5) | Butt weld 8 5/8" casing to dressed cut, bringing threaded end of casing to ground level. | | | | | | | | | | | | | | |
| 6) | Make up to 8 5/8" casing, one 8 5/8" collar and 8 5/8" starter well head | | | | | | | | | | | | | | |
| 7) | NU flange adaptor and 5K BOP, test BOP. | | | | | | | | | | | | | | |
| 8) | NU and RIH with 6 1/8" cone bit, PU 2 7/8" drill collars, 2 7/8" 6.5# tubing, and TIW valve | | | | | | | | | | | | | | |
| 9) | Drill out first cement plug inside surface casing (TOC @ surface) and second plug down to 258', roll hole clean. | | | | | | | | | | | | | | |
| 10) | Pressure test surface casing to 200 psi. If pressure bleeds off, set RBP and test again. **If test fails, contact office.** | | | | | | | | | | | | | | |
| 11) | After pressure test of surface casing, continue to drill out second cement plug | | | | | | | | | | | | | | |
| 12) | Assume pressure under surface casing shoe, roll hole with kill fluid until well dead, or blow down. | | | | | | | | | | | | | | |
| 13) | Continue RIH, cleaning out with drilling mud or water to 995' | | | | | | | | | | | | | | |
| 14) | Drill out third cement plug from 995' to 1095' | | | | | | | | | | | | | | |
| 15) | Assume pressure under plug, roll hole with kill fluid until well dead, or blow down. | | | | | | | | | | | | | | |
| 16) | Continue RIH, cleaning out with drilling mud or water to 5202' (top of production casing) | | | | | | | | | | | | | | |
| 17) | TOOH with cone bit, drill collars, and 2 7/8" tubing. | | | | | | | | | | | | | | |
| 18) | PU and RIH with mule shoe and 2 7/8" tubing to 5202' | | | | | | | | | | | | | | |
| 19) | RU cement crew and pump 100 sxs of 15.8ppg Class G "neat" cement stub plug to 4950' | | | | | | | | | | | | | | |
| | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Interval Start</th> <th>Interval End</th> <th>Length (ft)</th> <th>Vol. Factor (ft³/ft)</th> <th>Volume (ft³)</th> <th>Yield (ft³/sk)</th> <th>Cement (sxs)</th> </tr> <tr> <td>5202</td> <td>4950</td> <td>252</td> <td>0.4418</td> <td>111</td> <td>1.15</td> <td>97</td> </tr> </table> | Interval Start | Interval End | Length (ft) | Vol. Factor (ft ³ /ft) | Volume (ft ³) | Yield (ft ³ /sk) | Cement (sxs) | 5202 | 4950 | 252 | 0.4418 | 111 | 1.15 | 97 |
| Interval Start | Interval End | Length (ft) | Vol. Factor (ft ³ /ft) | Volume (ft ³) | Yield (ft ³ /sk) | Cement (sxs) | | | | | | | | | |
| 5202 | 4950 | 252 | 0.4418 | 111 | 1.15 | 97 | | | | | | | | | |
| 20) | Pump 100 sxs of 15.8ppg Class G "neat" cement courtesy plug from 3000' to 2750' | | | | | | | | | | | | | | |
| | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Interval Start</th> <th>Interval End</th> <th>Length (ft)</th> <th>Vol. Factor (ft³/ft)</th> <th>Volume (ft³)</th> <th>Yield (ft³/sk)</th> <th>Cement (sxs)</th> </tr> <tr> <td>3000</td> <td>2750</td> <td>250</td> <td>0.4418</td> <td>110</td> <td>1.15</td> <td>96</td> </tr> </table> | Interval Start | Interval End | Length (ft) | Vol. Factor (ft ³ /ft) | Volume (ft ³) | Yield (ft ³ /sk) | Cement (sxs) | 3000 | 2750 | 250 | 0.4418 | 110 | 1.15 | 96 |
| Interval Start | Interval End | Length (ft) | Vol. Factor (ft ³ /ft) | Volume (ft ³) | Yield (ft ³ /sk) | Cement (sxs) | | | | | | | | | |
| 3000 | 2750 | 250 | 0.4418 | 110 | 1.15 | 96 | | | | | | | | | |
| 21) | POOH with 2 7/8" tubing. Wait 4 hrs, and tag TOC. | | | | | | | | | | | | | | |

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| PROCESS STEPS | | | | | | | |
|---------------|---|--------------|-------------|-----------------------------------|---------------------------|-----------------------------|--------------|
| Type | Comment | | | | | | |
| 22) | Pump 210 sxs of 15.8ppg Class G "neat" cement from 800' to 250' | | | | | | |
| | Interval Start | Interval End | Length (ft) | Vol. Factor (ft ³ /ft) | Volume (ft ³) | Yield (ft ³ /sk) | Cement (sxs) |
| | 800 | 308 | 492 | 0.4418 | 217 | 1.15 | 189 |
| | 308 | 250 | 58 | 0.3576 | 21 | 1.15 | 18 |
| | | | | | | | 207 |
| 23) | POOH with 2 7/8" tubing. Wait 4 hrs, and tag TOC. | | | | | | |
| 24) | Pump 75 sxs of 15.8ppg Class G "neat" cement from 250' to surface | | | | | | |
| | Interval Start | Interval End | Length (ft) | Vol. Factor (ft ³ /ft) | Volume (ft ³) | Yield (ft ³ /sk) | Cement (sxs) |
| | 250 | 0 | 250 | 0.3576 | 89 | 1.15 | 78 |
| 25) | POOH with 2 7/8" tubing. Wait 4 hrs, and tag TOC. If cement has fallen, top off back to surface | | | | | | |
| 26) | Let cement set over night, verify cement has not settled and is still at surface. RDMO | | | | | | |
| 27) | Excavate around wellhead to 8' below grade, cut off 8 5/8" casing, weld on cap | | | | | | |
| 28) | Backfill hole and reclaim surface to original conditions | | | | | | |
| Type | Sub Type | Start Date | Engineer | Cell Phone | | | |
| PROCESS STEPS | | | | | | | |
| Type | Comment | | | | | | |
| | | | | | | | |