



COGCC doc # 2597533

# Caerus

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## Surface Post Job Report

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**Puckett 34C-26-697 05-045-23412**

S:26 T:6S R:97W Garfield CO

Quote #:

I Execution #:



# Caerus

Attention: Mr. Steve Schmitz | (720) 880-6412 | [sschmitz@caerusoilandgas.com](mailto:sschmitz@caerusoilandgas.com)

Caerus | 1001 17th Street, Suite 1600 | Denver, CO 80202

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Dear Mr. Schmitz,

Thank you for the opportunity to provide cementing services on this well. BJ Services strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact BJ Services at any time.

Sincerely,

Zen Keith  
Field Engineer III | (307) 757-7178 | [Zen.Keith@BJServices.com](mailto:Zen.Keith@BJServices.com)

Field Office 28730 US-6, Rifle, CO 81650  
Phone: (970) 632-2412

Sales Office 999 18th St. Suite 1200 Denver, CO 80202  
Phone: (281) 408-2361

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# Cementing Treatment



|                          |                       |                            |                           |
|--------------------------|-----------------------|----------------------------|---------------------------|
| <b>Start Date</b>        | 6/27/2018             | <b>Field Ticket#</b>       | FT-08140-J0K9C10202-85428 |
| <b>End Date</b>          | 6/28/2018             | <b>Well</b>                | Puckett 34C-26-697        |
| <b>Client</b>            | CAERUS OPERATING, LLC | <b>API#</b>                | 05-045-23412              |
| <b>Client Field Rep.</b> | Clint McPhie          | <b>Well Classification</b> |                           |
| <b>Service Sup.</b>      | Hamza Busheri         | <b>County</b>              | GARFIELD                  |
| <b>District</b>          | Rifle, CO             | <b>State/Province</b>      | CO                        |
| <b>Type of Job</b>       | Surface               | <b>Formation</b>           |                           |
| <b>Execution ID</b>      | EXC-08140-J0K9C102    | <b>Rig</b>                 | H&P 330                   |
| <b>Project ID</b>        | PRJ1008084            |                            |                           |

## WELL GEOMETRY

| Type            | ID (in) | OD (in) | Wt. (lb/ft) | MD (ft)  | Excess(%) | Grade | Thread |
|-----------------|---------|---------|-------------|----------|-----------|-------|--------|
| Previous Casing | 19.50   | 20.00   | 52.73       | 130.00   |           |       |        |
| Open Hole       | 14.75   |         |             | 2,546.00 | 0.00      |       |        |
| Casing          | 8.92    | 9.63    | 36.00       | 2,526.00 |           |       |        |

**Shoe Length (ft):** 42

## HARDWARE

|                                  |        |   |              |
|----------------------------------|--------|---|--------------|
| <b>Bottom Plug Used?</b>         | No     | <b>Tool Type</b>                            | Float Collar |
| <b>Top Plug Used?</b>            | Yes    | <b>Tool Depth (ft)</b>                      | 2,484.00     |
| <b>Top Plug Provided By</b>      | Non BJ | <b>Max Casing Pressure - Rated (psi)</b>    | 2,816.00     |
| <b>Top Plug Size</b>             | 9.625  | <b>Max Casing Pressure - Operated (psi)</b> | 2,000.00     |
| <b>Centralizers Used</b>         | Yes    | <b>Pipe Movement</b>                        | None         |
| <b>Centralizers Quantity</b>     | 5.00   | <b>Job Pumped Through</b>                   | No Manifold  |
| <b>Centralizers Type</b>         | Bow    | <b>Top Connection Thread</b>                | 8 round      |
| <b>Landing Collar Depth (ft)</b> | 2,526  | <b>Top Connection Size</b>                  | 9.625        |

# Cementing Treatment



## CIRCULATION PRIOR TO JOB

|                                      |        |                                      |       |
|--------------------------------------|--------|--------------------------------------|-------|
| Well Circulated By                   | Rig    | Solids Present at End of Circulation | No    |
| Circulation Prior to Job             | Yes    | 10 sec SGS                           | 7.00  |
| Circulation Time (min)               | 60.00  | 10 min SGS                           | 15.00 |
| Circulation Rate (bpm)               | 3.00   | 30 min SGS                           | 28.00 |
| Circulation Volume (bbls)            | 180.00 | Flare Prior to/during the Cement Job | No    |
| Lost Circulation Prior to Cement Job | No     | Gas Present                          | No    |
| Mud Density In (ppg)                 | 9.30   | Gas Units                            |       |
| PV Mud In                            | 19     |                                      |       |
| YP Mud In                            | 10     |                                      |       |

## TEMPERATURE

|                            |       |                                |       |
|----------------------------|-------|--------------------------------|-------|
| Ambient Temperature (°F)   | 75.00 | Slurry Cement Temperature (°F) | 67.00 |
| Mix Water Temperature (°F) | 65.00 | Flow Line Temperature (°F)     |       |

## BJ FLUID DETAILS

| Fluid Type                 | Fluid Name       | Density (ppg) | Yield (Cu Ft/sk) | H2O Req. (gals/sk) | Planned Top of Fluid (Ft) | Length (Ft) | Vol (sk) | Vol (Cu Ft) | Vol (bbls) |
|----------------------------|------------------|---------------|------------------|--------------------|---------------------------|-------------|----------|-------------|------------|
| Spacer / Pre Flush / Flush | Water 1          | 8.3300        |                  |                    | 0.00                      |             |          |             | 20.0000    |
| Spacer / Pre Flush / Flush | Sodium Silicate  | 10.0000       |                  |                    | 0.00                      |             |          |             | 20.0000    |
| Spacer / Pre Flush / Flush | Water 2          | 8.3300        |                  |                    | 0.00                      |             |          |             | 20.0000    |
| Lead Slurry                | BJCem S100.3.01D | 12.0000       | 2.5329           | 14.89              | 0.00                      | 2,000.00    | 573      | 1,451.0000  | 258.3000   |
| Tail Slurry                | BJCem S100.3.01D | 12.5000       | 2.2282           | 12.62              | 2,000.00                  | 500.00      | 161      | 358.0000    | 63.7000    |
| Displacement Final         | Displacement     | 8.3300        |                  |                    | 0.00                      |             |          | 0.0000      | 190.2000   |
| Top Out Slurry             | BJCem S100.3.01D | 12.5000       | 2.2282           | 12.62              | 0.00                      | 0.00        | 50       | 112.5000    | 20.0000    |

# Cementing Treatment



| Fluid Type                 | Fluid Name       | Component   | Concentration | UOM    |
|----------------------------|------------------|---|---------------|--------|
| Spacer / Pre Flush / Flush | Sodium Silicate  | SILICATE, SODIUM, A-3L                              | 21.0000       | GPB    |
| Lead Slurry                | BJCem S100.3.01D | CEMENT, ASTM TYPE III                               | 100.0000      | PCT    |
| Lead Slurry                | BJCem S100.3.01D | FOAM PREVENTER, FP-25                               | 0.3000        | BWOB   |
| Lead Slurry                | BJCem S100.3.01D | CEMENT EXTENDER, GYPSUM, A-10                       | 5.0000        | BWOB   |
| Lead Slurry                | BJCem S100.3.01D | IntegraSeal CELLO                                   | 0.1300        | LBS/SK |
| Lead Slurry                | BJCem S100.3.01D | Cement Additive, Sodium Metasilicate A-2            | 2.0000        | LBS/SK |
| Lead Slurry                | BJCem S100.3.01D | ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS | 2.0000        | LBS/SK |
| Tail Slurry                | BJCem S100.3.01D | CEMENT EXTENDER, GYPSUM, A-10                       | 5.0000        | BWOB   |
| Tail Slurry                | BJCem S100.3.01D | ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS | 2.0000        | LBS/SK |
| Tail Slurry                | BJCem S100.3.01D | FOAM PREVENTER, FP-25                               | 0.3000        | BWOB   |
| Tail Slurry                | BJCem S100.3.01D | IntegraSeal CELLO                                   | 0.1300        | LBS/SK |
| Tail Slurry                | BJCem S100.3.01D | CEMENT, ASTM TYPE III                               | 100.0000      | PCT    |
| Tail Slurry                | BJCem S100.3.01D | Cement Additive, Sodium Metasilicate A-2            | 2.0000        | LBS/SK |
| Top Out Slurry             | BJCem S100.3.01D | CEMENT EXTENDER, GYPSUM, A-10                       | 5.0000        | BWOB   |
| Top Out Slurry             | BJCem S100.3.01D | ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS | 2.0000        | LBS/SK |
| Top Out Slurry             | BJCem S100.3.01D | FOAM PREVENTER, FP-25                               | 0.3000        | BWOB   |
| Top Out Slurry             | BJCem S100.3.01D | IntegraSeal CELLO                                   | 0.1300        | LBS/SK |
| Top Out Slurry             | BJCem S100.3.01D | CEMENT, ASTM TYPE III                               | 100.0000      | PCT    |
| Top Out Slurry             | BJCem S100.3.01D | Cement Additive, Sodium Metasilicate A-2            | 2.0000        | LBS/SK |

## TREATMENT SUMMARY

| Time              | Fluid            | Rate (bpm) | Fluid Vol. (bbls) | Pipe Pressure (psi) | Annulus Pressure (psi) | Comments     |
|-------------------|------------------|------------|-------------------|---------------------|------------------------|--------------|
| 6/28/2018 2:51 AM | Water 1          | 2.50       | 20.00             | 360.00              |                        |              |
| 6/28/2018 3:04 AM | Sodium Silicate  | 4.00       | 20.00             | 360.00              |                        |              |
| 6/28/2018 3:06 AM | Water 2          | 5.00       | 20.00             | 300.00              |                        |              |
| 6/28/2018 3:12 AM | BJCem S100.3.01D | 6.00       | 235.00            | 248.00              |                        |              |
| 6/28/2018 3:56 AM | BJCem S100.3.01D | 4.00       | 63.70             | 111.00              |                        |              |
| 6/28/2018 4:11 AM | Displacement     | 8.00       | 192.00            | 1,215.00            |                        |              |
| 6/28/2018 9:39 AM | BJCem S100.3.01D | 3.00       | 20.00             | 87.00               |                        | 50sks Topout |

# Cementing Treatment



|                | Min   | Max      | Avg    |
|----------------|-------|----------|--------|
| Pressure (psi) | 87.00 | 1,215.00 | 383.00 |
| Rate (bpm)     | 2.50  | 8.00     | 4.64   |

## DISPLACEMENT AND END OF JOB SUMMARY

|                                       |          |                                    |        |
|---------------------------------------|----------|------------------------------------|--------|
| Displaced By                          | BJ       | Amount of Cement Returned/Reversed | 1.00   |
| Calculated Displacement Volume (bbls) | 192.00   | Method Used to Verify Returns      | Visual |
| Actual Displacement Volume (bbls)     | 192.00   | Amount of Spacer to Surface        | 0.00   |
| Did Float Hold?                       | Yes      | Pressure Left on Casing (psi)      | 0.00   |
| Bump Plug                             | Yes      | Amount Bled Back After Job         | 0.50   |
| Bump Plug Pressure (psi)              | 1,215.00 | Total Volume Pumped (bbls)         | 192.00 |
| Were Returns Planned at Surface       | No       | Top Out Cement Spotted             | No     |
| Cement returns During Job             | Partial  | Lost Circulation During Cement Job | Yes    |

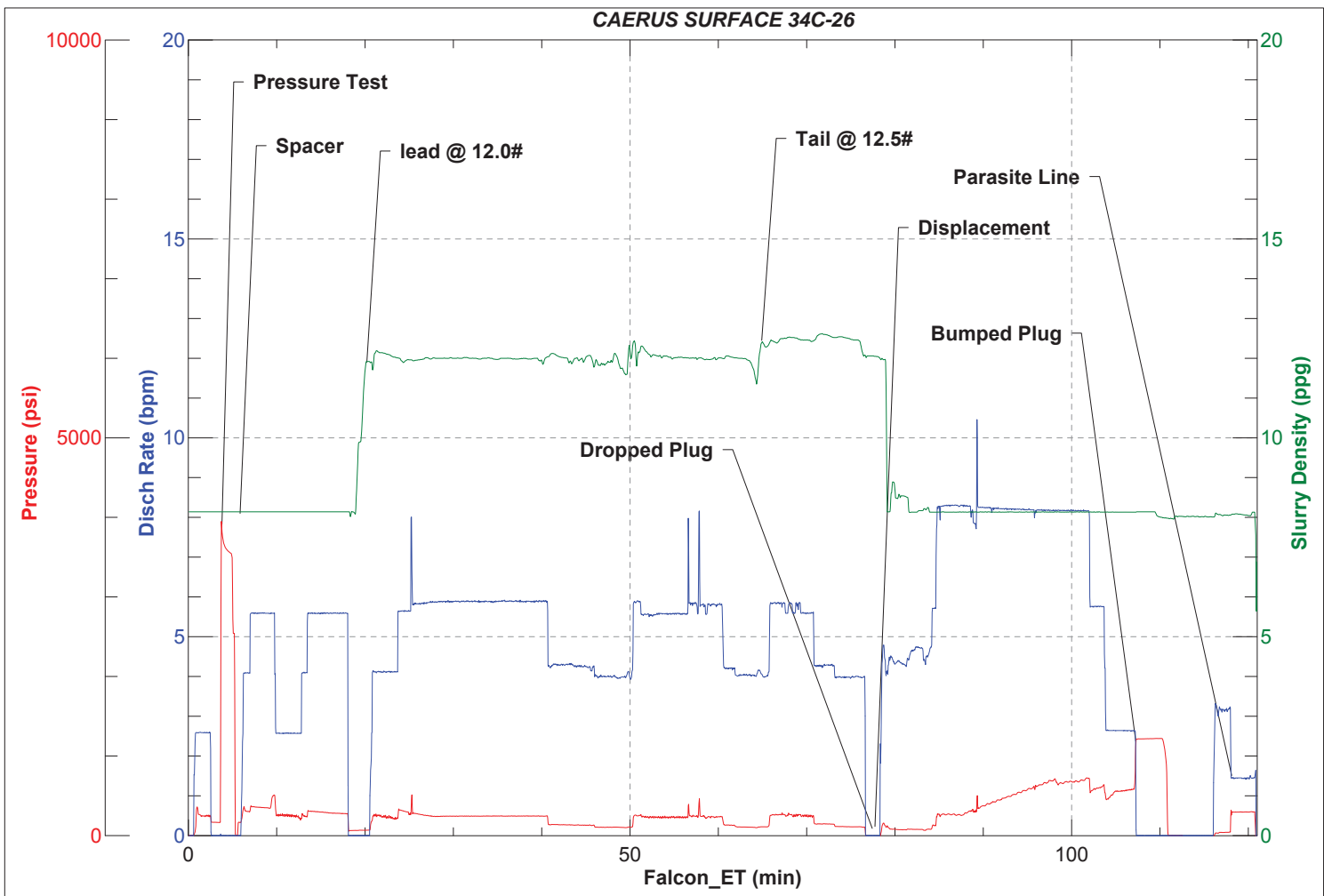
Customer Name CAERUS 330 District Rifle  
 Well Name PUCKETT 34C-26 Supervisor ZEKE BUSERI  
 Job Type Surface Engineer GAGE PUTNAM



| Seq No. | Start Date | Start Time | Event             | Equipment | Density (lb/gal) | Pump Rate (bpm) | Pump Vol (bbls) | Pipe Pressure (psi) | Comments   |
|---------|------------|------------|-------------------|-----------|------------------|-----------------|-----------------|---------------------|--|
| 1       | 6/27/2018  | 16:00      | CALLOUT           |           |                  |                 |                 |                     | BJ CREW CALLED OUT WITH AN RTS OF 23:00  |
| 2       | 6/27/2018  | 19:07      | STEACS/ JOURNEY   |           |                  |                 |                 |                     | STEACS/ JOURNEY WITH BJ CREW ON CONVOY TO LOCATION   |
| 3       | 6/27/2018  | 19:15      | DEPART YARD       |           |                  |                 |                 |                     | BJ CREW DEPARTS YARD   |
| 4       | 6/27/2018  | 20:30      | ON LOCATION       |           |                  |                 |                 |                     | BJ CREW ARRIVES ON LOCATION, SPOT EQUIPMENT  |
| 5       | 6/27/2018  | 20:40      | STEACS/ RIG UP    |           |                  |                 |                 |                     | STEACS/ RIG UP WITH BJ CREW AS WELL AS JOB OPERATIONS  |
| 6       | 6/27/2018  | 20:45      | RIG UP EQUIPMENT  |           |                  |                 |                 |                     | BJ CREW RIGS UP EQUIPMENT FOR SURFACE JOB  |
| 7       | 6/27/2018  | 21:30      | STANDBY           |           |                  |                 |                 |                     | BJ CREW ON STANDBY, RIG RUNNING CASING   |
| 8       | 6/28/2018  | 2:10       | SAFETY MEETING    |           |                  |                 |                 |                     | SAFETY MEETING WITH RIG CREW ON CEMENT JOB OPERATIONS  |
| 9       | 6/28/2018  | 2:45       | STAB HEAD         |           |                  |                 |                 |                     | BJ CREW STABS HEAD TO WELL   |
| 10      | 6/28/2018  | 2:51       | FILL LINES        |           | 8.33             |                 | 5               | 360                 | FILL LINES 5 BBLs FRESH WATER  |
| 11      | 6/28/2018  | 2:55       | TEST LINES        |           |                  |                 |                 | 3000                | TEST LINES AT 3000 PSI   |
| 12      | 6/28/2018  | 2:57       | SPACER            |           | 8.33             | 4               | 15              | 360                 | 15 BBLs FRESH WATER SPACER   |
| 13      | 6/28/2018  | 3:01       | SODIUM SILICATE   |           | 10.4             | 4               | 20              | 234                 | 20 BBLs SODIUM SILICATE SPACER   |
| 14      | 6/28/2018  | 3:06       | SPACER            |           | 8.33             | 5               | 20              | 300                 | 20 BBLs FRESH WATER SPACER   |
| 15      | 6/28/2018  | 3:12       | LEAD DOWN HOLE    |           | 12               | 4               |                 | 250                 | LEAD CEMENT DOWN HOLE AT 12.0 PPG  |
| 16      | 6/28/2018  | 3:22       | 50 BBLs GONE      |           | 12               | 6               | 50              | 245                 | 50 BBLs GONE LEAD CEMENT   |
| 17      | 6/28/2018  | 3:31       | 100 BBLs GONE     |           | 12               | 6               | 100             | 248                 | 100 BBLs GONE LEAD CEMENT  |
| 18      | 6/28/2018  | 3:42       | 150 BBLs GONE     |           | 12               | 5               | 150             | 205                 | 150 BBLs GONE LEAD CEMENT  |
| 19      | 6/28/2018  | 3:51       | 200 BBLs GONE     |           | 12               | 6               | 200             | 235                 | 200 BBLs GONE LEAD CEMENT / 235 BBLs Lead Pumped   |
| 22      | 6/28/2018  | 3:56       | TAIL DOWN HOLE    |           | 12.5             | 4               |                 | 110                 | TAIL CEMENT DOWN HOLE AT 12.5 PPG  |
| 23      | 6/28/2018  | 4:06       | 50 BBLs GONE      |           | 12.5             | 4               | 50              | 111                 | 50 BBLs GONE TAIL CEMENT   |
| 24      | 6/28/2018  | 4:09       | SHUT DOWN         |           |                  |                 |                 |                     | DROP TOP PLUG, START DISPLACEMENT  |
| 25      | 6/28/2018  | 4:11       | DISPLACEMENT      |           | 8.33             | 4               | 4               | 180                 | KICK OUT PLUG, START DISPLACEMENT  |
| 26      | 6/28/2018  | 4:24       | 50 BBLs GONE      |           | 8.33             | 8               | 50              | 282                 | 50 BBLs GONE DISPLACEMENT  |
| 27      | 6/28/2018  | 4:30       | 100 BBLs GONE     |           | 8.33             | 8               | 100             | 520                 | 100 BBLs GONE DISPLACEMENT   |
| 28      | 6/28/2018  | 4:36       | 150 BBLs GONE     |           | 8.33             | 8               | 150             | 688                 | 150 BBLs GONE DISPLACEMENT   |
| 29      | 6/28/2018  | 4:43       | BUMP PLUG         |           | 8.33             | 2.5             | 191             | 575                 | BUMP PLUG FCP- 575 PSI TOOK TO 1215 PSI HELD FOR 2 MINS  |
| 30      | 6/28/2018  | 4:45       | CHECK FLOATS      |           |                  |                 |                 |                     | FLOATS HELD 0.5 BBLs BACK  |
| 31      | 6/28/2018  | 4:48       | PARASITE LINE     |           | 8.4              | 3               | 10              | 370                 | PUMPED 10 BBLs SUGAR WATER, BREAKOVER PRESSURE WAS 370 PSI   |
| 32      | 6/28/2018  | 5:15       | STANDBY           |           |                  |                 |                 |                     | BJ CREW ON STANDBY FOR 4 HRS FOR TOPOUT JOB  |
| 33      | 6/28/2018  | 9:00       | STEACS/ TOPOUT    |           |                  |                 |                 |                     | STEACS/ TOPOUT WITH BJ CREW, BJ CREW RIGS UP FOR TOPOUT JOB  |
| 34      | 6/28/2018  | 9:30       | SPACER            |           | 9                | 4               | 2               | 79                  | PUMPED 2 BBLs OF CALCIUM CHLORIDE, WHILE PUMPING SODIUM SILICATE   |
| 35      | 6/28/2018  | 9:45       | CEMENT            |           | 12.5             | 4               | 21              | 87                  | PUMPED 20 BBLs OF TOPOUT CEMENT/ 50 SKS TOTAL  |
| 36      | 6/28/2018  | 9:51       | CEMENT TO SURFACE |           |                  |                 |                 |                     | CEMENT TO SURFACE, JOB COMPLETE  |
| 37      | 6/28/2018  | 10:00      | STEACS/ RIG DOWN  |           |                  |                 |                 |                     | STEACS/ RIG DOWN WITH BJ CREW  |
| 38      | 6/28/2018  | 10:45      | RIG DOWN          |           |                  |                 |                 |                     | BJ CREW RIGS DOWN EQUIPMENT  |
| 39      | 6/28/2018  | 11:15      | STEACS/ JOURNEY   |           |                  |                 |                 |                     | STEACS/ JOURNEY WITH BJ CREW ON CONVOY BACK TO DISTRICT  |
| 40      | 6/28/2018  | 12:00      | DEPART LOCATION   |           |                  |                 |                 |                     | BJ CREW DEPARTS LOCATION   |
| 41      | 6/28/2018  |            | ***MISC***        |           |                  |                 |                 |                     | BUMP PLUG FCP- 575 PSI TOOK TO 1215 PSI HELD FOR 2 MINS, FLOATS HELD 0.5 BBLs BACK, PARASITE LINE BREAKOVER PRESSURE WAS 130 PSI, TOPOUT WAS 50 SKS/ 20 BBLs TOTAL, NO ISSUES DURING JOB, Top Of tail @ 2057.5, top of lead @ 0, Height of lead @ 2126, Height of tail 469 |



JobMaster Program Version 4.02C1  
Job Number: 6726  
Customer: Caerus  
Well Name: Puckett 34C-26







JobMaster Program Version 4.02C1

Job Number: 6726

Customer: Caerus

Well Name: Puckett 34C-26

