

KINAL OMT JOB
TICKET

HALLIBURTON

iCem[®] Service

KGH OPERATING CO

For: TOM

Date: Sunday, September 13, 2015

BLANCO

CAPSTAR 314

KGH INTERMEDIATE 3-4

Job Date: Sunday, September 13, 2015

Sincerely,

JASON ERTL

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services for this cementing services job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

Halliburton, Rock Springs

Job Times

| | Date | Time | Time Zone |
|-------------------|------------|------|-----------|
| Called Out | 09/13/2015 | 0130 | MST |
| On Location | 09/13/2015 | 0900 | MST |
| Job Started | 09/13/2015 | 1800 | MST |
| Job Completed | 09/13/2015 | 2100 | MST |
| Departed Location | 09/13/2015 | 2200 | MST |

1.2 Job Overview

| | | Units | Description |
|----|--|---------|-------------|
| 1 | Surface temperature at time of job | °F | 92 |
| 2 | Mud type (OBM, WBM, SBM, Water, Brine) | lb/gal | WBM |
| 3 | Actual mud density | lb/gal | 10.7 |
| 4 | Time circulated before job | HH:MM | 45 MIN |
| 5 | Mud volume circulated | Bbls | 180BBLS |
| 6 | Rate at which well was circulated | Bpm | 4 |
| 7 | Pipe movement during hole circulation | Y/N | N |
| 8 | Rlg pressure while circulating | Psi | 432 |
| 9 | Time from end mud circulation to start of job | HH:MM | 10MIN |
| 10 | Pipe movement during cementing | Y/N | N |
| 11 | Calculated displacement | Bbls | 88.08 |
| 12 | Job displaced by | Rlg/HES | HES |
| 13 | Annular before job)? | Y/N | N |
| 14 | Annular flow after job | Y/N | N |
| 15 | Length of rat hole | Ft | 14 |
| 16 | Units of gas detected while circulating | Units | 0 |
| 17 | Was lost circulation experienced at any time ? | Y/N | NO |

Lost Circulation Details

1.3 Squeeze Job Information

| | | Units | Description |
|---|--|---------|-------------|
| 1 | Was the well full prior to cementing? | Y/N | |
| 2 | Injection Rate #1 & Pressure | psi/bpm | |
| 3 | Injection Rate #2 & Pressure | psi/bpm | |
| 4 | Injection Rate #3 & Pressure | psi/bpm | |
| 5 | Initial ISIP | psi | |
| 6 | Density of fluid used for Initial ISIP | lb/gal | |
| 7 | Final ISIP | psi | |
| 8 | Density of displacement fluid | lb/gal | |

1.4 Plug Job Information

| | | Units | Description |
|---|---|----------|-------------|
| 1 | Density of well fluid exiting well prior to job | lb/gal | |
| 2 | Density of well fluid entering well prior to job | lb/gal | |
| 3 | Was the well full prior to cementing? | Y/N | |
| 4 | How many joints of workstring pulled wet? | # Joints | |
| 5 | Depth of workstring for circulation after the plug? | ft | |
| 6 | Calculated Plug Height (workstring out) | ft | |

iCem Service

(v. 4.1.107)

Created: Sunday, September 13, 2015

CEMENT MIX WATER REQUIREMENTS

| Item | Recorded Test Value | Units | Max. Acceptable Limit | Potential Problems in Exceeding Limit |
|------------------|---------------------|-------|-----------------------|---|
| pH | 7 | — | 6.0 - 8.0 | Chemicals in the water can cause severe retardation |
| Chlorides | 0 | ppm | 3000 ppm | Can shorten thickening time of cement |
| Sulfates | <200 | ppm | 1500 ppm | Will greatly decrease the strength of cement |
| Total Hardness | 25 | ppm | 500 mg/L | High concentrations will accelerate the set of the cement |
| Calcium | 0 | ppm | 500 ppm | High concentrations will accelerate the set of the cement |
| Total Alkalinity | 120 | ppm | 1000 ppm | Cement is greatly retarded to the point where it may not set up at all (typically occurs @ pH ≥ 8.3). |
| Potassium | 0 | ppm | 5000 ppm | High concentrations will shorten the pump time of cement (indicates the presence of chlorides, therefore if Potassium levels are measured as high, so should the chlorides) |
| Iron | 0 | ppm | 300 ppm | High concentrations will accelerate the set of the cement |
| Temperature | 79 | °F | 50-80 °F | High temps will accelerate; Low temps may risk freezing in cold weather |
| Magnesium | 25 | ppm | 300 ppm | High concentrations will accelerate the set of the cement Calculation Method: Subtract tested "Calcium" value from "Total Hardness" value. |

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Customer: KGH OPERATING CO

Job: 902745335

Case: KGH CAPSTAR 314 INTERMEDIATE | SO#: 902745335

2.0 Real-Time Job Summary

2.1 Job Event Log

| Event | Seq. No. | Activity | Graph Label | Date | Time | Source | Pump Rates | | | Comments |
|----------|----------|---|---|-----------|----------|--------|-------------------------------|------------------------|-----------------------------|--|
| | | | | | | | Driv-Side Pump Pressure (ppg) | Downhole Density (ppg) | Combined Pump Rate (bb/min) | |
| Event 1 | | Call Out | Call Out | 9/13/2015 | 01:30:00 | USER | | | | HES CREW CALLED OUT AT 0130 ON 09/13/2015, REQUESTED ON LOCATION AT 0830 ON 09/13/2015 |
| Event 2 | | Depart Yard Safety Meeting | Depart Yard Safety Meeting | 9/13/2015 | 02:30:00 | USER | | | | HES CREW DISCUSSED THE HAZARDS OF DRIVING TO LOCATION |
| Event 3 | | Depart from Service Center or Other Site | Depart from Service Center or Other Site | 9/13/2015 | 02:45:00 | USER | | | | HES CREW DEPART FOR LOCATION |
| Event 4 | | Arrive At Loc | Arrive At Loc | 9/13/2015 | 09:00:00 | USER | | | | HES CREW ARRIVES AT LOCATION |
| Event 5 | | Assessment Of Location Safety Meeting | Assessment Of Location Safety Meeting | 9/13/2015 | 09:15:00 | USER | | | | HES CREW DISCUSSED THE HAZARDS OF SPOTTING EQUIPMENT |
| Event 6 | | Pre-Rig Up Safety Meeting | Pre-Rig Up Safety Meeting | 9/13/2015 | 09:20:00 | USER | | | | HES CREW DISCUSSED THE HAZARDS OF RIGGING UP ALL LINES AND EQUIPMENT |
| Event 7 | | Rig-Up Equipment | Rig-Up Equipment | 9/13/2015 | 09:30:00 | USER | | | | RIG UP EQUIPMENT |
| Event 8 | | Wait on Customer or Contractor Equip - Start Time | Wait on Customer or Contractor Equip - Start Time | 9/13/2015 | 09:45:00 | USER | | | | WAIT FOR CUSTOMER TO FINISH RUNNING CASING |
| Event 9 | | Wait on Customer or Contractor Equip - End Time | Wait on Customer or Contractor Equip - End Time | 9/13/2015 | 18:00:00 | USER | 11.00 | 8.50 | 0.00 | CASING ON BOTTOM AT 1730. RIG CURCULATED AT 4 88LS/MIN FOR |
| Event 10 | | Pre-Job Safety Meeting | Pre-Job Safety Meeting | 9/13/2015 | 18:15:00 | USER | 3.00 | 8.48 | 0.00 | HES AND RIG CREW DISCUSSED THE HAZARDS |

ICent Service

(v. 4.1.107)

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Customer: KGH OPERATING CO

Job: 902745335
Case: KGH CAPSTAR 314 INTERMEDIATE | SO#: 902745335

OF RIGGING UP THE RIG
FLOOR AND BRINGING
EQUIPMENT UP TO FLOOR
AS WELL AS PUMPING THE
JOB

| Event | Description | Date | Time | User | Volume | Pressure | Flow | Notes |
|----------|-------------------|-----------|----------|------|---------|----------|------|--|
| Event 11 | Rig-Up Completed | 9/13/2015 | 18:30:00 | USER | 5.00 | 8.43 | 0.00 | RIG UP COMPLETE |
| Event 12 | Pump Water | 9/13/2015 | 18:44:44 | USER | 414.00 | 8.18 | 2.00 | PUMP 5 BBLs OF H2O TO FILL PUMPS AND LINES |
| Event 13 | Shutdown | 9/13/2015 | 18:46:46 | USER | 338.00 | 8.16 | 0.00 | SHUTDOWN |
| Event 14 | Pressure Test | 9/13/2015 | 18:48:13 | USER | 783.00 | 8.20 | 0.00 | 500 PSI LOW PRESSURE KICKOUT TEST |
| Event 15 | Pressure Test | 9/13/2015 | 18:50:45 | USER | 6046.00 | 8.94 | 0.00 | PRESSURE TEST HES IRON TO 5000 PSI |
| Event 16 | Pump Spacer | 9/13/2015 | 18:57:32 | USER | 543.00 | 11.06 | 4.10 | PUMP 30 BBLs OF TUNED SPACER III AT 11.0 LB/GAL |
| Event 17 | Pump Lead Cement | 9/13/2015 | 19:10:00 | USER | 523.00 | 11.16 | 4.00 | PUMP 185 SKS OF ECONOCEM -LEAD 1 AT 11.0 LB/GAL, 3.51 CUFT/SK, 21.14 GAL/SK AT 6 BPM |
| Event 18 | Pump Tail Cement | 9/13/2015 | 19:38:52 | USER | 355.00 | 14.05 | 4.00 | PUMP 105 SKS OF EXPANDCEM -TAIL AT 14.0 LB/GAL, 1.35 CUFT/SK, 5.32 GAL/SK AT 6 BPM |
| Event 19 | Shutdown | 9/13/2015 | 19:45:19 | USER | 131.00 | 14.08 | 0.00 | SHUTDOWN/COMPANY MAN WITNESSED HES PLUG DROP |
| Event 20 | Pump Displacement | 9/13/2015 | 19:46:56 | USER | 56.00 | 13.68 | 3.90 | PUMP 38.08 BBLs OF DISPLACEMENT FIRST 10 WATER, 58.08 W/UD AND LAST 20 BBLs WATER |
| Event 21 | Slow Rate | 9/13/2015 | 20:10:00 | USER | 561.00 | 8.87 | 2.00 | SLOW RATE TO 2 BPM LAST 20 BBLs |
| Event 22 | Bump Plug | 9/13/2015 | 20:13:42 | USER | 759.00 | 8.55 | 2.00 | BUMP PLUG AND BRING |

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HALLIBURTON

Customer: KGH OPERATING CO
 Job: 902745335
 Case: KGH CAPSTAR 314 INTERMEDIATE | SO#: 902745335

PRESSURE 500 PSI OVER
 F.C.P

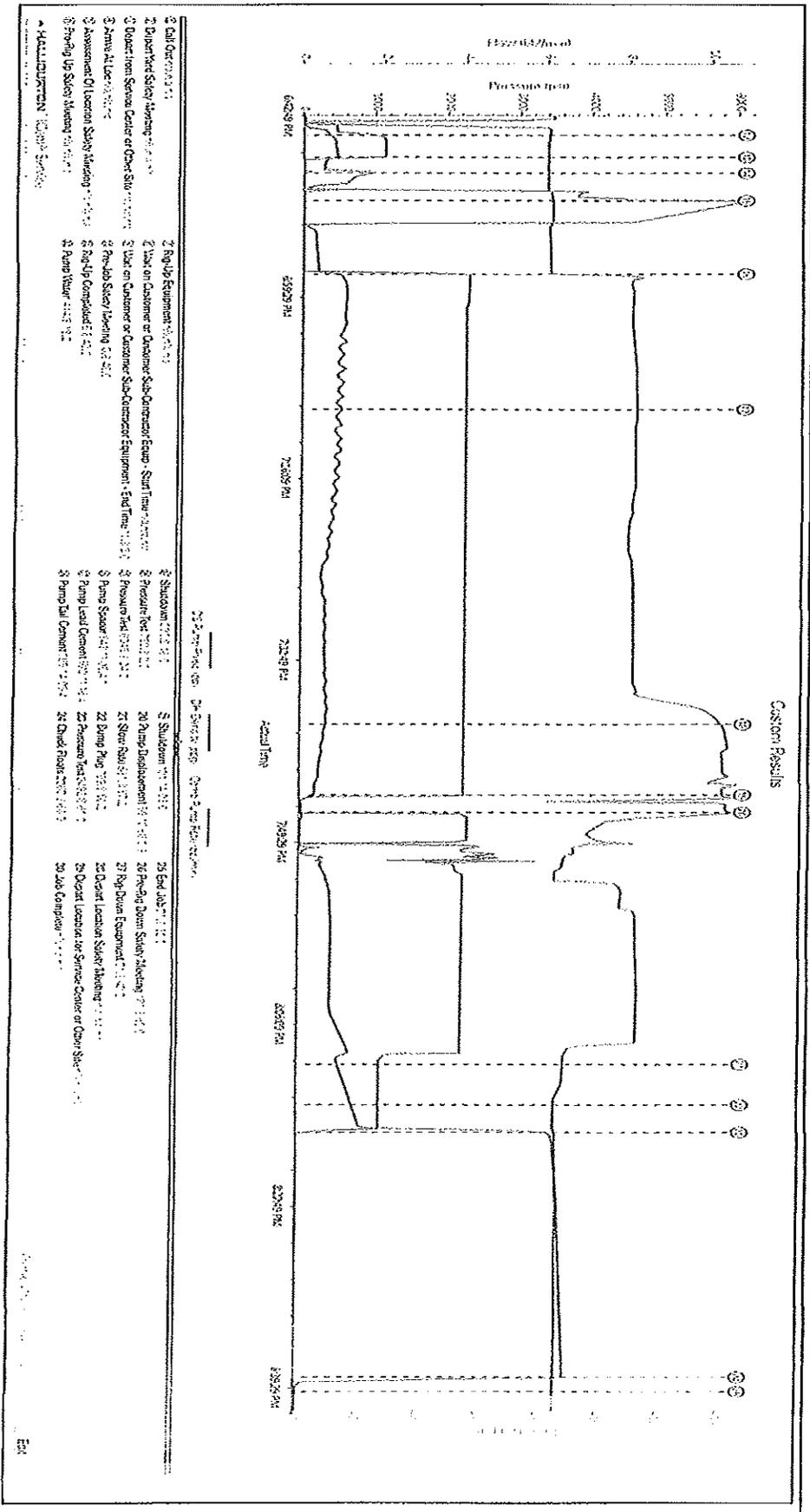
| Event | Description | Date | Time | User | Amount | Rate | Balance | Notes |
|----------|--|-----------|----------|-------|---------|------|---------|--|
| Event 25 | Pressure Test | 9/13/2015 | 20:16:13 | USER | 3492.00 | 8.61 | 0.00 | PRESSURE TEST CASING TO 3200 FO 30 MIN |
| Event 24 | Check Floats | 9/13/2015 | 20:39:40 | USER | 2260.00 | 8.66 | 0.00 | FLOATS HEUD WITH 1 BBLS BACK TO HES CEMENT PUMP |
| Event 25 | End Job | 9/13/2015 | 20:40:00 | COM10 | 21.00 | 8.62 | 0.00 | END JOB |
| Event 26 | Pre-Rig Down Safety Meeting | 9/13/2015 | 20:49:41 | USER | 181.00 | 8.63 | 0.00 | HES AND RIG CREW DISCUSS THE HAZARDS OF RIGGING DOWN EQUIPMENT AND BRINGING EQUIPMENT DOWN FROM RIG FLOOR AS WELL AS LOADING IT INTO THE BACK OF THE TRUCK |
| Event 27 | Rig-Down Equipment | 9/13/2015 | 20:52:28 | USER | 21.00 | 8.43 | 2.00 | RIG DOWN EQUIPMENT |
| Event 28 | Depart Location Safety Meeting | 9/13/2015 | 21:32:55 | USER | | | | HES CREW DISCUSSED THE HAZARDS OF DRIVING |
| Event 29 | Depart Location for Service Center or Other Site | 9/13/2015 | 21:40:15 | USER | | | | HES DEPARTS LOCATION |
| Event 30 | Job Complete | 9/13/2015 | 21:45:46 | USER | | | | JOB COMPLETE, 35 BBLS OF LEAD BACK TO SURFACE, EST. TOP OF TAIL AT 4260 FT, THANKS FROM HALLIBURTON |

HALLIBURTON

Customer: KGH OPERATING CO
 Job#: 902745335
 Case#: KGH CAPSTAR 314 INTERMEDIATE | SO#: 902745335

3.0 Attachments

3.1 KGH CAPSTAR 314 INTERMEDIATE- WITH EVENTS.png



- 1. Disruptive Safety Warning
- 2. Operation Service Center or Open Site
- 3. Arrive At Location
- 4. Assessment Of Location Safety Working
- 5. Pre-Run Safety Meeting
- 6. Halliburton Safety Meeting
- 7. Rig Up Equipment
- 8. Use on Customer or Customer Sub-Licensee Equip. Start Time
- 9. Use on Customer or Customer Sub-Licensee Equipment - End Time
- 10. Pre-Run Safety Meeting
- 11. Rig Up Completed
- 12. Pump Start
- 13. Shutdown
- 14. Pressure Test
- 15. Pump Stop
- 16. Pump Start
- 17. Pump Stop
- 18. Pump Start
- 19. Pump Stop
- 20. Pump Start
- 21. Pump Stop
- 22. Pump Start
- 23. Pump Stop
- 24. Pump Start
- 25. Pump Stop
- 26. Pump Start
- 27. Pump Stop
- 28. Pump Start
- 29. Pump Stop

The Road to Excellence Starts with Safety

| | | | |
|---|---------------------|------------------------------------|----------------------------|
| Sold To #: 303302 | Ship To #: 3660009 | Quote #: 0022101480 | Sales Order #: 0902745335 |
| Customer: KGH OPERATING CO | | Customer Rep: TOM | |
| Well Name: MEAGHER | | Well #: 3-4 | API/UWI #: 05-103-12265-00 |
| Field: BLANCO | City (SAP): RANGELY | County/Parish: RIO BLANCO | State: COLORADO |
| Legal Description: 3-1S-104W-3082FNL-730FEL | | | |
| Contractor: CAPSTAR DRLG | | Rig/Platform Name/Num: CAPSTAR 314 | |
| Job BOM: 7521 | | | |
| Well Type: VERTICAL GAS | | | |
| Sales Person: HALAMERICA\HB72042 | | Srvc Supervisor: Jason Ertl | |
| Job | | | |

| | | | |
|------------------------|--------|--|---------------------|
| Formation Name | | | |
| Formation Depth (MD) | Top | | Bottom |
| Form Type | | | BHST |
| Job depth MD | 5725ft | | Job Depth TVD |
| Water Depth | | | Wk Ht Above Floor 4 |
| Perforation Depth (MD) | From | | To |

Well Data

| Description | New / Used | Size In | ID In | Weight lbm/ft | Thread | Grade | Top MD ft | Bottom MD ft | Top TVD ft | Bottom TVD ft |
|-------------------|------------|---------|-------|---------------|--------|-------|-----------|--------------|------------|---------------|
| Casing | | 7 | 6.366 | 23 | | | 0 | 1009 | | |
| Casing | | 4.5 | 4 | 11.6 | | | 0 | 5725 | 0 | |
| Open Hole Section | | | 6.125 | | | | 1009 | 5739 | | |

Tools and Accessories

| Type | Size In | Qty | Make | Depth ft | Type | Size In | Qty | Make |
|--------------|---------|-----|------|----------|----------------|---------|-----|------|
| Guide Shoe | 4.5 | | | 5725 | Top Plug | 4.5 | 1 | HES |
| Float Shoe | 4.5 | | | | Bottom Plug | 4.5 | | HES |
| Float Collar | 4.5 | | | | SSR plug set | 4.5 | | HES |
| Insert Float | 4.5 | | | | Plug Contalner | 4.5 | 1 | HES |
| Stage Tool | 4.5 | | | | Centralizers | 4.5 | | HES |

Fluid Data

Stage/Plug #: 1

| Fluid # | Stage Type | Fluid Name | Qty | Qty UoM | Mixing Density lbm/gal | Yield ft ³ /sack | Mix Fluid Gal | Rate bbl/min | Total Mix Fluid Gal |
|----------------|----------------------------|-------------------------------|-----|---------|------------------------|-----------------------------|---------------|--------------|---------------------|
| 1 | 11 lb/gal Tuned Spacer III | Tuned Spacer III | 30 | bbl | 11 | 4.69 | | 4 | |
| 37 gal/bbl | | FRESH WATER | | | | | | | |
| 119.62 lbm/bbl | | BARITE, 100 LB SK (100003680) | | | | | | | |
| Fluid # | Stage Type | Fluid Name | Qty | Qty UoM | Mixing Density lbm/gal | Yield ft ³ /sack | Mix Fluid Gal | Rate bbl/min | Total Mix Fluid Gal |

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Cementing Job Summary

| 2 | EconoCem | ECONOCEM (TM) SYSTEM | 185 | sack | 11 | 3.51 | | 4 | 21.14 | |
|---------------------|--------------------|---|---------|---------|---------------------------|--------------------------------|------------------|---------------------|---------------------------|--|
| 5 lbm | | KOL-SEAL, 50 LB BAG (100064232) | | | | | | | | |
| 0.25 lbm | | POLY-E-FLAKE (101216940) | | | | | | | | |
| 1 lbm | | GRANULITE TR 1/4, 50 LB SK (100064073) | | | | | | | | |
| 21.14 Gal | | FRESH WATER | | | | | | | | |
| Fluid # | Stage Type | Fluid Name | Qty | Qty UoM | Mixing Density lbm/gal | Yield ft ³ /sack | Mix Fluid Gal | Rate bbl/mi n | Total Mix Fluid Gal | |
| 3 | ExpandaCem | EXPANDACEM (TM) SYSTEM | 105 | sack | 14 | 1.35 | | 4 | 5.82 | |
| 1 lbm | | GRANULITE TR 1/4, 50 LB SK (100064073) | | | | | | | | |
| 47 lbm | | CEMENT STANDARD TYPE II/V, BULK (101809640) | | | | | | | | |
| 5.82 Gal | | FRESH WATER | | | | | | | | |
| 2 lbm | | KOL-SEAL, 50 LB BAG (100064232) | | | | | | | | |
| 0.25 lbm | | POLY-E-FLAKE (101216940) | | | | | | | | |
| Fluid # | Stage Type | Fluid Name | Qty | Qty UoM | Mixing Density lbm/gal | Yield ft ³ /sack | Mix Fluid Gal | Rate bbl/mi n | Total Mix Fluid Gal | |
| 4 | Displacement Water | Displacement Water | 10 | bbl | 8.34 | | | 4 | | |
| Fluid # | Stage Type | Fluid Name | Qty | Qty UoM | Mixing Density lbm/gal | Yield ft ³ /sack | Mix Fluid Gal | Rate bbl/mi n | Total Mix Fluid Gal | |
| 5 | WBM Displacement | | 58.08 | bbl | 10 | | | 4 | | |
| Fluid # | Stage Type | Fluid Name | Qty | Qty UoM | Mixing Density lbm/gal | Yield ft ³ /sack | Mix Fluid Gal | Rate bbl/mi n | Total Mix Fluid Gal | |
| 6 | Displacement Water | Displacement Water | 20 | bbl | 8.34 | | | 4 | | |
| Cement Left In Pipe | | Amount | 42.21ft | | Reason | | | Shoe Joint | | |

Summary Report



Crew: _____
 Job Start Date: 9/13/2015

Sales Order #: 0902745335
 WO #: 0902745335
 PO #: NA
 AFE #:

| | | | | | |
|-------------------|------------------|------------------|-------------|---------------------|------------------------|
| Customer: | KGH OPERATING CO | Field: | BLANCO | Job Type: | CMT SURFACE CASING BOM |
| UWI / API Number: | 05-103-12265-00 | County/Parish: | RIO BLANCO | Service Supervisor: | Jason Erl |
| Well Name: | MEAGHER | State: | COLORADO | | |
| Well No: | 3-4 | Latitude: | 39.998960 | Cust Rep Name: | TOM |
| | | Longitude: | -109.048193 | Cust Rep Phone#: | |
| | | Sec / Twn / Rng: | 31/104 | | |

| | | |
|---|--------------------------------------|------|
| Remarks: | | |
| <i>The Information Stated Herein Is Correct</i> | Customer Representative Signature | Date |
| | Customer Representative Printed Name | |