

HALLIBURTON

CONOCO/PHILLIPS COMPANY EBUSINESS

**Youngberg 10-11-1H
WILDCAT
Arapahoe County , Colorado**

Cement Intermediate Casing
19-Sep-2013

Job Site Documents

HALLIBURTON

Work Order Contract

Order Number

900749335

TO: HALLIBURTON ENERGY SERVICES, INC. - YOU ARE HEREBY REQUESTED TO FURNISH EQUIPMENT AND SERVICE PERSONNEL TO DELIVER AND OPERATE THE SAME AS AN INDEPENDENT CONTRACTOR TO CUSTOMER LISTED BELOW AND DELIVER AND SELL PRODUCTS, SUPPLIES AND MATERIALS FOR THE PURPOSE OF SERVICING:

| | | | | |
|---|----------------------------|--------------------|-------------------|---|
| Well No. 10-11-1H | Farm or Lease Youngberg | County Arapahoe | State Colorado | Well Permit Number TEMP801711023 |
| Customer CONOCO/PHILLIPS COMPANY EBUSINESS | | Well Owner | | Job Purpose Cement Intermediate Casing |

THIS WORK ORDER MUST BE SIGNED BEFORE WORK IS COMMENCED

A. **CUSTOMER REPRESENTATION** - Customer warrants that the well is in proper condition to receive the services, equipment, products, and materials to be supplied by Halliburton Energy Services, Inc. (hereinafter "Halliburton").

B. **PRICE AND PAYMENT** - The services, equipment, products, and/or materials to be supplied hereunder are priced in accordance with Halliburton's current price list. All prices of Halliburton are exclusive of any federal, state or municipal taxes which may be imposed on the sale or use of any materials, products or supplies furnished or services performed. Customer agrees to pay such taxes in addition to the prices in Halliburton's price list. If Customer does not have an approved open account with Halliburton, all sums due are payable in cash at the time of performance of services or delivery of equipment, products or materials. If Customer has an approved open account, invoices are payable on the twentieth day after the date of invoice. Customer agrees to pay interest on any unpaid balance from the date payable until paid at the highest lawful contract rate applicable, but never to exceed 18% per annum. In the event Halliburton employs an attorney for collection of any account, Customer agrees to pay attorney fees of 20% of the unpaid account, or Halliburton's actual attorney fees, whichever is greater, plus all collection and court costs. Customer agrees that the amount of attorney fees set out herein are reasonable and necessary.

C. **RELEASE AND INDEMNITY** - Customer agrees to **RELEASE** Halliburton Group from any and all liability for any and all damages whatsoever to property of any kind owned by, in the possession of, or leased by Customer and those persons and entities Customer has the ability to bind by contract or which are co-interest owners or joint ventures with Customer. Customer also agrees to **DEFEND, INDEMNIFY, AND HOLD** Halliburton Group **HARMLESS** from and against any and all liability, claims, costs, expenses, attorney fees and damages whatsoever for personal injury, illness, death, property damage and loss resulting from loss of well control, services to control a wild well whether underground or above the surface, reservoir or underground damage, including loss of oil, gas, other mineral substances or water, surface damage arising from underground damage, damage to or loss of the well bore, subsurface trespass or any action in the nature thereof, fire, explosion, subsurface pressure, radioactivity, and pollution and contamination and its cleanup and control.

CUSTOMER'S RELEASE, DEFENSE, INDEMNITY AND HOLD HARMLESS obligations will apply even if the liability and claims are caused by the sole, concurrent, active or passive negligence, fault, or strict liability of one or more members of the Halliburton Group, the unseaworthiness of any vessel or any defect in the data, products, supplies, materials or equipment furnished by any member or members of the Halliburton Group whether in the design, manufacture, maintenance or marketing thereof or from a failure to warn of such defect. "Halliburton Group" is defined as Halliburton Energy Services, Inc., its parent, subsidiary, and affiliated companies, insurers and subcontractors and all its officers, directors, employees, consultants and agents. **CUSTOMER'S RELEASE, DEFENSE, INDEMNITY AND HOLD HARMLESS** obligations apply whether the personal injury, illness, death, property damage or loss is suffered by one or more members of the Halliburton Group, Customer, or any other person or entity. Customer agrees to support such obligations assumed herein with liability insurance with limits of not less than \$500,000. Customer agrees to name Halliburton Group as named additional insured on all of its general liability policy(ies). Customer agrees that its liability under this Contract is not limited by the amounts of its insurance coverage, except where and as may be required by applicable local law for the provisions of this Contract to be enforceable.

D. **EQUIPMENT LIABILITY** - Customer shall at its risk and expense attempt to recover any Halliburton Group equipment lost or lodged in the well. If the equipment is recovered and repairable, Customer shall pay the repair costs, unless caused by Halliburton's sole negligence. If the equipment is not recovered or is irreparable, Customer shall pay the current published replacement rate, unless caused by Halliburton's sole negligence. If a radioactive source becomes lost or lodged in the well, Customer shall meet all requirements of Section 39.15(a) of the Nuclear Regulatory Commission regulations and any other applicable laws or regulations concerning retrieval or abandonment and shall permit Halliburton to monitor the recovery or abandonment efforts all at no risk or liability to Halliburton Group. Customer shall be responsible for damage to or loss of Halliburton group equipment, products, and materials while in transit aboard Customer-supplied transportation, even if such is arranged by Halliburton at Customer's request, and during loading and unloading from such transport. Customer will also pay for the repair or replacement of Halliburton group equipment damaged by corrosion or abrasion due to well effluents.

E. **LIMITED WARRANTY** - Halliburton warrants only title to the equipment, products, and materials supplied under this Contract and that same are free from defects in workmanship and materials for thirty (30) days from the date of delivery. **THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE.** Halliburton's sole liability and Customer's exclusive remedy in any cause of action (whether in contract, tort, breach of warranty or otherwise) arising out of the sale, lease or use of any equipment, products, or materials is expressly limited to the replacement of such on their return to Halliburton or, at Halliburton's option, to the allowance to Customer of credit for the cost of such items. In no event shall Halliburton be liable for special, incidental, indirect, consequential, or punitive damages. Because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others, **HALLIBURTON IS UNABLE TO GUARANTEE THE EFFECTIVENESS OF THE EQUIPMENT, MATERIALS, OR SERVICE, NOR THE ACCURACY OF ANY CHART INTERPRETATION, RESEARCH ANALYSIS, JOB RECOMMENDATION OR OTHER DATA FURNISHED BY HALLIBURTON GROUP.** Halliburton personnel will use their best efforts in gathering such information and their best judgment in interpreting it, but Customer agrees that Halliburton Group shall not be liable for and **CUSTOMER SHALL INDEMNIFY HALLIBURTON GROUP AGAINST ANY DAMAGES ARISING FROM THE USE OF SUCH INFORMATION, even if such is contributed to or caused by the active or passive negligence, fault or strict liability of any member or members of Halliburton Group.** Halliburton also does not warrant the accuracy of data transmitted by electronic process, and Halliburton will not be responsible for accidental or intentional interception of such data by third parties.

F. **GOVERNING LAW** - The validity, interpretation and construction of this Contract shall be determined by the laws of the jurisdiction where the services are performed or the equipment or materials are delivered.

G. **DISPUTE RESOLUTION** Except for Halliburton's statutory rights with regard to collection of past due invoices for services or materials, including the Contractor's statutory rights for perfection and enforcement of mechanics' and materialmen's' liens, Customer and Halliburton agree that any dispute that may arise out of the performance of this Contract shall be resolved by binding arbitration by a panel of three arbitrators under the rules of the American Arbitration Association. The arbitration will take place in Houston, TX.

H. **SEVERABILITY** - If any provision or part thereof of this Contract shall be held to be invalid, void, or of no effect for any reason, such holding shall not be deemed to affect the validity of the remaining provisions of this Contract which can be given effect, without the invalid provision or part thereof, and to this end, the provisions of this Contract are declared to be severable. Customer and Halliburton agree that any provision of this Contract that is unenforceable or void under applicable law will be modified to achieve the intent of the parties hereunder to the greatest extent allowed by applicable law.

I. **MODIFICATIONS** - Customer agrees that Halliburton shall not be bound by any modifications to this Contract, except where such modification is made in writing by a duly authorized executive officer of Halliburton. Requests for modifications should be directed to the Vice President - Legal, 10200 Bellaire Blvd, Houston, TX 77072-5299.

I HAVE READ AND UNDERSTAND THIS WORK ORDER CONTRACT WHICH CONTAINS RELEASE AND INDEMNITY LANGUAGE WHICH CUSTOMER ACKNOWLEDGES IS CONSPICUOUS AND AFFORDS FAIR AND ADEQUATE NOTICE AND I REPRESENT THAT I AM AUTHORIZED TO SIGN THE SAME AS CUSTOMER'S AGENT. I AM SIGNING THIS WORK ORDER CONTRACT WITH THE UNDERSTANDING THAT ITS TERMS AND CONDITIONS WILL NOT APPLY TO THE EXTENT THEY CONFLICT WITH TERMS AND CONDITIONS OF A SIGNED MASTER SERVICE CONTRACT BETWEEN THE PARTIES.

Customer Acceptance of Terms and Conditions, Materials and Services

CUSTOMER Authorized Signatory

Date

The Road to Excellence Starts with Safety

| | | | |
|---|---------------------|--|--------------------------|
| Sold To #: 352431 | Ship To #: 3096269 | Quote #: | Sales Order #: 900749335 |
| Customer: CONOCO/PHILLIPS COMPANY EBUSINESS | | Customer Rep: Evans, Wes | |
| Well Name: Youngberg | | Well #: 10-11-1H | API/UWI #: 05-005-07211 |
| Field: WILDCAT | City (SAP): BENNETT | County/Parish: Arapahoe | State: Colorado |
| Legal Description: Section 11 Township 4S Range 64W | | | |
| Lat: N 39.713 deg. OR N 39 deg. 42 min. 46.98 secs. | | Long: W 104.509 deg. OR W -105 deg. 29 min. 27.6 secs. | |
| Contractor: H&P | | Rig/Platform Name/Num: H&P 280 | |
| Job Purpose: Cement Intermediate Casing | | | |
| Well Type: Development Well | | Job Type: Cement Intermediate Casing | |
| Sales Person: GROFF, THEODORE | | Srvc Supervisor: BULINSKI, MATTHEW | MBU ID Emp #: 483865 |

Job Personnel

| HES Emp Name | Exp Hrs | Emp # | HES Emp Name | Exp Hrs | Emp # | HES Emp Name | Exp Hrs | Emp # |
|------------------|---------|---------|----------------------|---------|--------|--------------------------|---------|--------|
| Barrera, Jorge | 10.5 | 1234567 | BULINSKI, MATTHEW J | 10.5 | 483865 | CARPENTER, JACOB P | 10.5 | 499500 |
| Kadir, Zam | 10.5 | 1234568 | NESBITT, ROY Iverson | 10.5 | 537416 | TRANCOSO, JEFFREY Donald | 10.5 | 550472 |
| VIATOR, JASON R. | 10.5 | 550394 | | | | | | |

Equipment

| HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way | HES Unit # | Distance-1 way |
|------------|----------------|------------|----------------|------------|----------------|------------|----------------|
| 10248062 C | 40 mile | 10982754 C | 40 mile | 11398319 | 40 mile | 11527037 | 40 mile |
| 11542577 | 40 mile | 11562546 C | 40 mile | 11562570C | 40 mile | 11605598 | 40 mile |
| 11812069 C | 40 mile | | | | | | |

Job Hours

| Date | On Location Hours | Operating Hours | Date | On Location Hours | Operating Hours | Date | On Location Hours | Operating Hours |
|---------|-------------------|-----------------|------|-------------------|-----------------|------|-------------------|-----------------|
| 9-18-13 | 10.5 | 2.5 | | | | | | |

TOTAL Total is the sum of each column separately

| Job | | | | Job Times | | | |
|------------------------|----------|-------------------|--|---------------|-----------------|-----------|-----|
| Formation Name | | | | Date | Time | Time Zone | |
| Formation Depth (MD) | Top | Bottom | | Called Out | 18 - Sep - 2013 | 04:00 | MST |
| Form Type | | BHST | | On Location | 18 - Sep - 2013 | 09:00 | MST |
| Job depth MD | 7806. ft | Job Depth TVD | | Job Started | 18 - Sep - 2013 | 15:42 | MST |
| Water Depth | | Wk Ht Above Floor | | Job Completed | 19 - Sep - 2013 | 18:15 | MST |
| Perforation Depth (MD) | From | To | | Departed Loc | 18 - Sep - 2013 | 19:30 | MST |

Well Data

| Description | New / Used | Max pressure psig | Size in | ID in | Weight lbm/ft | Thread | Grade | Top MD ft | Bottom MD ft | Top TVD ft | Bottom TVD ft |
|------------------|------------|-------------------|---------|-------|---------------|--------|-------|-----------|--------------|------------|---------------|
| 8-3/4" Open Hole | | | | 8.75 | | | | 1945. | 7816. | | |
| 7" Casing | Unknown | | 7. | 6.094 | 32. | BTC | P-110 | . | 7806. | | |
| 9-5/8" Casing | Unknown | | 9.625 | 8.921 | 36. | STC | J-55 | . | 1958. | | |

Sales/Rental/3rd Party (HES)

| Description | Qty | Qty uom | Depth | Supplier |
|-----------------------------------|-----|---------|-------|----------|
| CMT CASING EQUIPMENT BOM | 0 | JOB | | |
| SHOE,FLT,7 8RD,2-3/4 SS II VLV | 1 | EA | | |
| CLR,FLT,7 LG 8RD 23-26PPF,2-3/4 | 1 | EA | | |
| CENTRALISER SLIDER II,#0700-0834S | 80 | EA | | |
| Description | Qty | Qty uom | Depth | Supplier |

| | | | | |
|--------------------------------------|-----|----|--|--|
| CLAMP - LIMIT - 7 - HINGED - | 1 | EA | | |
| KIT,HALL WELD-A | 1 | EA | | |
| MILEAGE FOR CEMENTING CREW,ZI | 100 | MI | | |
| ZI FUEL SURCHG-CARS/PICKUPS<1 1/2TON | 100 | MI | | |

Tools and Accessories

| Type | Size | Qty | Make | Depth | Type | Size | Qty | Make | Depth | Type | Size | Qty | Make |
|--------------|------|-----|------|-------|-------------|------|-----|------|-------|----------------|------|-----|------|
| Guide Shoe | | | | | Packer | | | | | Top Plug | | | |
| Float Shoe | | | | | Bridge Plug | | | | | Bottom Plug | | | |
| Float Collar | | | | 7724 | Retainer | | | | | SSR plug set | | | |
| Insert Float | | | | | | | | | | Plug Container | | | |
| Stage Tool | | | | | | | | | | Centralizers | | | |

Miscellaneous Materials

| | | | | | | | | | | | | | |
|---------------|--|------|--|------------|--|------|--|-----------|--|------|--|------|---|
| Gelling Agt | | Conc | | Surfactant | | Conc | | Acid Type | | Qty | | Conc | % |
| Treatment Fld | | Conc | | Inhibitor | | Conc | | Sand Type | | Size | | Qty | |

Fluid Data

Stage/Plug #: 1

| Fluid # | Stage Type | Fluid Name | Qty | Qty uom | Mixing Density lbm/gal | Yield ft3/sk | Mix Fluid Gal/sk | Rate bbl/min | Total Mix Fluid Gal/sk |
|---------|------------------|------------------------------------|-------|---------|------------------------|--------------|------------------|--------------|------------------------|
| 1 | Clean Spacer III | | 40.00 | bbl | 10.5 | 3.86 | 24.21 | .0 | |
| | 0.5 gal/bbl | SEM-7, 5 GAL PAIL (100003860) | | | | | | | |
| | 0.5 gal/bbl | MUSOL(R) A, 5 GAL PAIL (100064220) | | | | | | | |
| 2 | ExtendaCem B1 | EXTENDACEM (TM) SYSTEM (452981) | 450.0 | sacks | 12. | 1.99 | 10.64 | | 10.64 |
| | 0.2 % | SUPER CBL, 50 LB PAIL (100003668) | | | | | | | |
| | 3 % | SALT, BULK (100003695) | | | | | | | |
| | 10.64 Gal | FRESH WATER | | | | | | | |
| 3 | HalCem | HALCEM (TM) SYSTEM (452986) | 135.0 | sacks | 15.8 | 1.52 | 6.19 | | 6.19 |
| | 0.25 % | HR-5, 50 LB SK (100005050) | | | | | | | |
| | 6.19 Gal | FRESH WATER | | | | | | | |

Calculated Values

Pressures

Volumes

| | | | | | | | | | |
|---------------|---------|------------------|--|----------------|----|---------------------|-----|-----------|-----|
| Displacement | 278 | Shut In: Instant | | Lost Returns | 0 | Cement Slurry | 196 | Pad | |
| Top Of Cement | 729.045 | 5 Min | | Cement Returns | 0 | Actual Displacement | 278 | Treatment | |
| Frac Gradient | | 15 Min | | Spacers | 40 | Load and Breakdown | | Total Job | 524 |

Rates

| | | | | | | | |
|---------------------|--------|-----------------|--------|-----------------|----|-----------------|----|
| Circulating | 6 | Mixing | 6 | Displacement | 8 | Avg. Job | 7 |
| Cement Left In Pipe | Amount | 80 ft | Reason | Shoe Joint | | | |
| Frac Ring # 1 @ | ID | Frac ring # 2 @ | ID | Frac Ring # 3 @ | ID | Frac Ring # 4 @ | ID |

The Information Stated Herein Is Correct

Customer Representative Signature

The Road to Excellence Starts with Safety

| | | | | | | | |
|---|--|---------------------|--------------------------------------|--|--|--------------------------|-----------------|
| Sold To #: 352431 | | Ship To #: 3096269 | | Quote #: | | Sales Order #: 900749335 | |
| Customer: CONOCO/PHILLIPS COMPANY EBUSINESS | | | | Customer Rep: Evans, Wes | | | |
| Well Name: Youngberg | | | Well #: 10-11-1H | | | API/UWI #: 05-005-07211 | |
| Field: WILDCAT | | City (SAP): BENNETT | | County/Parish: Arapahoe | | | State: Colorado |
| Legal Description: Section 11 Township 4S Range 64W | | | | | | | |
| Lat: N 39.713 deg. OR N 39 deg. 42 min. 46.98 secs. | | | | Long: W 104.509 deg. OR W -105 deg. 29 min. 27.6 secs. | | | |
| Contractor: H&P | | | Rig/Platform Name/Num: H&P 280 | | | | |
| Job Purpose: Cement Intermediate Casing | | | | | | Ticket Amount: | |
| Well Type: Development Well | | | Job Type: Cement Intermediate Casing | | | | |
| Sales Person: GROFF, THEODORE | | | Srv Supervisor: BULINSKI, MATTHEW | | | MBU ID Emp #: 483865 | |

| Activity Description | Date/Time | Cht # | Rate bbl/min | Volume bbl | | Pressure psig | | Comments |
|--|------------------|-------|--------------|------------|-------|---------------|--------|---|
| | | | | Stage | Total | Tubing | Casing | |
| Arrive at Location from Service Center | 09/18/2013 09:00 | | | | | | | Arrived 30mins Early and Rig Still has Alot of csg to run |
| Assessment Of Location Safety Meeting | 09/18/2013 12:00 | | | | | | | Hazard hunt on Location before spotting in trucks |
| Safety Meeting - Pre Rig-Up | 09/18/2013 12:15 | | | | | | | JSA on Rigging up Bulk trucks and Iron to Rig |
| Rig-Up Equipment | 09/18/2013 12:25 | | | | | | | |
| Rig-Up Completed | 09/18/2013 13:15 | | | | | | | |
| Safety Meeting - Pre Job | 09/18/2013 15:00 | | | | | | | JSA with Company Man, Rig Hands, and HES hands on Pump schedule |
| Start Job | 09/18/2013 15:42 | | | | | | | |
| Test Lines | 09/18/2013 15:45 | | | | | | | 4000psi Pressure Test Lines To Rig Floor |
| Pump Spacer 1 | 09/18/2013 15:49 | | 5 | 40 | | | 320.0 | 40bbls Clean Spacer III, 10.5ppg, 3.86yield, 24.21gal/sk, Mixed with rig water, Musol, Sem 7, and D-air on Batch Mixer and # verify by pressurized mud scales.... Good returns throughout.. |
| Drop Bottom Plug | 09/18/2013 16:01 | | | | | | | Pre-Loaded |
| Activity Description | Date/Time | Cht # | Rate bbl/min | Volume bbl | | Pressure psig | | Comments |
| | | | | Stage | Total | Tubing | Casing | |

| | | | | | | | | |
|--|---------------------|--|-----|-------|-------|--|------------|---|
| Pump Lead Cement | 09/18/2013 16:01 | | 6.5 | 159.5 | 199.5 | | 180.0 | 450sks ExtendaCem B2, 12ppg, 1.99yield, 10.64gal/sk, Mixed with rig water on Pump Truck and # verify by pressurized mud scales... Good returns throughout... |
| Pump Tail Cement | 09/18/2013 16:34 | | 6.5 | 36.5 | 236 | | 120.0 | 135sks Halcem B1, 15.8ppg, 1.52yield, 6.19gal/sk, Mixed with rig water on Pump Truck and # verify by pressurized mud scales... Good returns throughout.... |
| Shutdown | 09/18/2013 16:44 | | | | | | | |
| Clean Lines | 09/18/2013 16:44 | | 3 | 10 | 246 | | | Wash Lines |
| Drop Top Plug | 09/18/2013 16:52 | | | | | | | Pre-Loaded |
| Pump Displacement | 09/18/2013 16:53 | | 8 | 278 | 524 | | 1950. 0 | H2O Displacement... Good Returns Throughout.... Spacer to Surface at 260bbbls Away giving 18bbbls back to surface |
| Bump Plug | 09/18/2013 17:31 | | 3 | | | | 2350. 0 | Slowed down last 20bbbls to 3bbl/min to Bump.. Plug Landed at 2350psi and brought to 2896psi for 3mins |
| Check Floats | 09/18/2013 17:34 | | | | | | | |
| Other | 09/18/2013 17:36 | | | | | | | 1500psi for 30mins Csg Test... |
| Safety Meeting - Pre Rig- Down | 09/18/2013 18:06 | | | | | | | JSA with Rig hands, and HES hands on rigging down Bulk trucks and Iron from rig... |
| Rig-Down Equipment | 09/18/2013 18:15 | | | | | | | |
| End Job | 09/18/2013 18:15 | | | | | | | |
| Rig-Down Completed | 09/18/2013 19:00 | | | | | | | |
| Safety Meeting - Departing Location | 09/18/2013 19:30 | | | | | | | JSA with HES hands on Pre-tripping trucks and Driving back to Brighton Yard.. |

Material Roll Up

Sales Order #: 900749335

AFE #:

WO #:

PO #:

Crew: RED CREW

Requested Job Start Date: 9-18-13

Colorado Oil and Gas Commission Wellsite Form

Customer: Coroco/Phillips
UWI / API Number: 05-005-07211

Well Name: Youngberg

Well No: 10-11-1H

Stage / Zone:

Formation:

Field: Wildcat

County/Parish:

State: Colorado

Latitude:

Longitude:

Sect / Twn / Rng: / /

Job Type: Intermediate

Service Supervisor:

M. Bolinski

Cust Rep Name: Evans, Wes

Cust Rep Phone #:

Do Not leave the yard without the proper MSDS documentation for All chemicals.

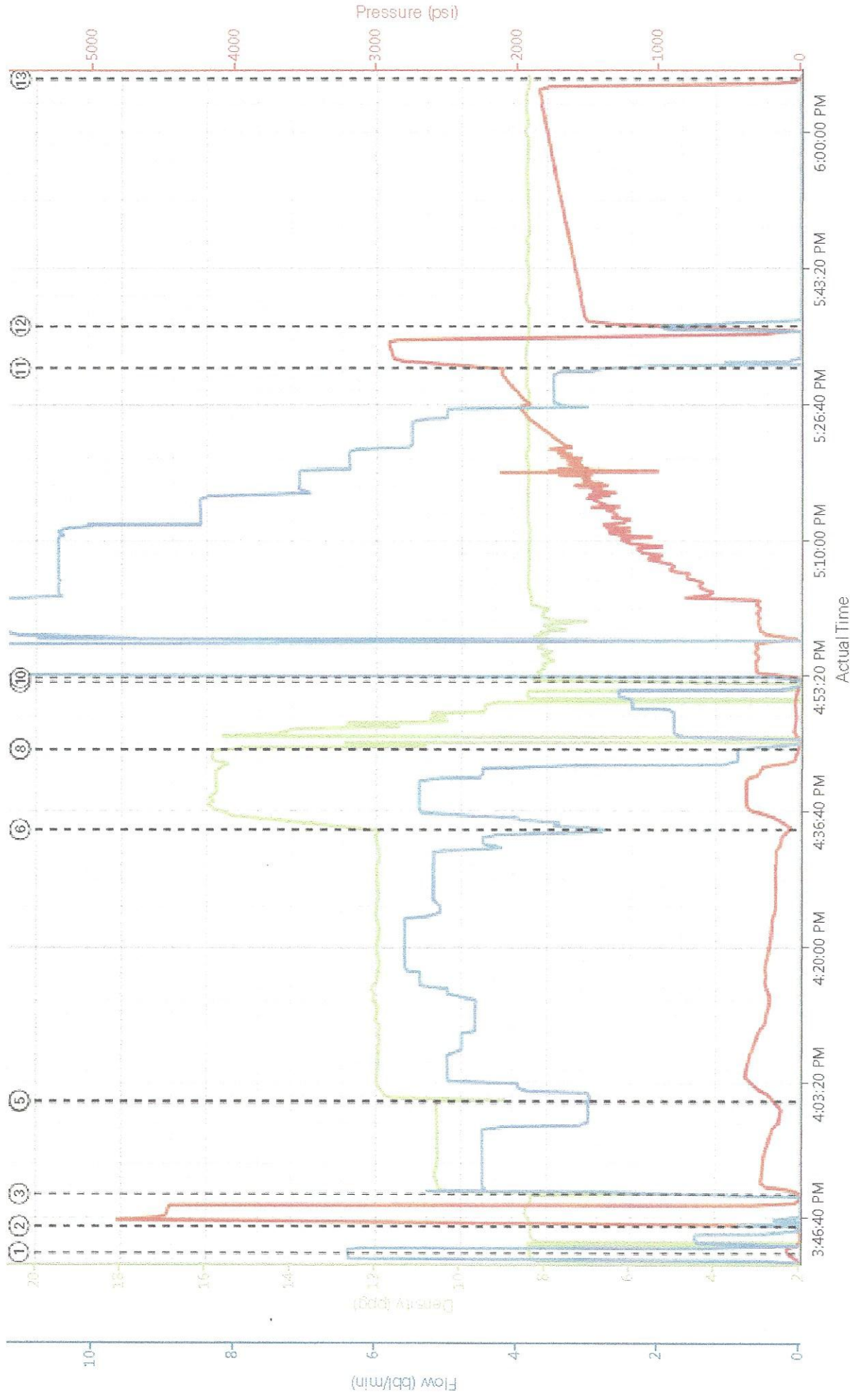
| Colorado Oil and Gas Commission | | | | | |
|---------------------------------|-----------------------|-----|------------------|--------------|---------------|
| Material | Delivered to Location | UOM | Specific Gravity | Weight (lbs) | Comment |
| 40001 Clean Space III | 9-18-13 | LB | | 5879.3 | Dry Bulk cont |
| 45001s Extended Cem B2 | 9-18-13 | LB | | 40581 | Dry Bulk cont |
| 135001s Halcon B1 | 9-18-13 | LB | | 17237 | Dry Bulk cont |
| | | LB | | | |
| | | LB | | | |
| | | Gal | | | |
| | | Gal | | | |

☒

Operator provided all Material Safety Data Sheets (MSDS) related to material listed above.
Operator representative will check box to designate he/she has received all MSDS documentation.

Operator Representative Signature

Conoco 9-18-13 Intermediate Youngberg 10-11-1H



DH Density (ppg) PS Pump Press (psi) Comb Pump Rate (bbl/min)

- ① Start Job
- ② Test Lines
- ③ Pump Spacer 1
- ④ Drop Bottom Plug
- ⑤ Pump Lead Cement
- ⑥ Pump Tail Cement
- ⑦ Shutdown
- ⑧ Clean Lines
- ⑨ Drop Top Plug
- ⑩ Pump Displacement
- ⑪ End Job
- ⑫ Bump Plug
- ⑬ Other

3.5 Job Event Log

| Time | Description | Graph Label | Downhole Density (ppg) | Pass-Side Pump Pressure (psi) | Combined Pump Rate (bbl/min) | Comment |
|----------|-------------------|-------------------|------------------------|-------------------------------|------------------------------|----------------------------------|
| 03:42:35 | Start Job | Start Job | 8.39 | 100.00 | 6.40 | |
| 03:45:52 | Test Lines | Test Lines | 8.36 | 1194.00 | 0.00 | 4000psi Pressure Test Lines |
| 03:49:48 | Pump Spacer 1 | Pump Spacer 1 | 8.58 | 15.00 | 2.20 | 40bbl Clean Spacer III |
| 04:01:13 | Drop Bottom Plug | Drop Bottom Plug | 9.00 | 195.00 | 3.00 | Pre-Loaded |
| 04:01:21 | Pump Lead Cement | Pump Lead Cement | 9.96 | 205.00 | 3.00 | 450skts Extendacem, 12ppg |
| 04:34:37 | Pump Tail Cement | Pump Tail Cement | 12.26 | 64.00 | 2.80 | 135skts Halocem, 15.8 |
| 04:44:35 | Shutdown | Shutdown | 15.17 | 29.00 | 0.00 | |
| 04:44:36 | Clean Lines | Clean Lines | 12.81 | 27.00 | 0.00 | Clean Lines |
| 04:52:49 | Drop Top Plug | Drop Top Plug | 8.43 | -2.00 | 0.00 | Pre-Loaded |
| 04:53:20 | Pump Displacement | Pump Displacement | 8.39 | 129.00 | 8.40 | 278bbls H2O Displacement |
| 05:31:22 | Bump Plug | Bump Plug | 8.48 | 2286.00 | 2.80 | 2350psi Brought to 2896psi 3mins |
| 05:36:30 | Other | Other | 8.42 | 1349.00 | 2.00 | 1500psi 30min Csg Test |
| 06:06:35 | End Job | End Job | 8.47 | -3.00 | 0.00 | |