



Bison Oil Well Cementing
1547 Gaylord Street
Denver, CO 80206

FIELD INVOICE #

55049

FIELD INVOICE

| WELL NO. AND FARM | | COUNTY | STATE | DATE | Contractor | |
|--------------------------------------|----------------------|-------------------------|----------|-------------|--------------|-----------|
| Anschutz Equus Farms 4-62-15 0659CH2 | | Weld | Colorado | 12/20/2014 | Major 43 | |
| CHARGE TO | | WELL LOCATION | | | | |
| Bill Barrett | | Section | TWP | RANGE | | |
| | | 15 | 4n | 62w | | |
| #N/A | | DELIVERED TO | | LOCATION 1 | CODE | |
| | | 40-49 | | shop | | |
| #N/A | | SHIPPED VIA | | LOCATION 2 | CODE | |
| | | 4028-3202 4032-3210 | | 40-49 | | |
| #N/A | | TYPE AND PURPOSE OF JOB | | LOCATION 3 | CODE | |
| | | SURFACE | | shop | | |
| | | | | WELL TYPE | CODE | |
| | | | | gas | | |
| ITEM | DESCRIPTION | UNITS | | UNIT PRICE | AMOUNT | |
| | | QTY. | MEAS. | | | |
| PUMP CHARGE | | | | | | |
| | SURFACE | Pump charge | 1 | \$ 1,400.00 | \$ 1,400.00 | |
| MILLEAGE CHARGE | | | | | | |
| | Pickup | \$1.50 per Mile | 104 | \$ 1.50 | \$ 156.00 | |
| | Truck/Equipment | \$4.00 per Mile | 104 | \$4.00 | \$ 416.00 | |
| | Truck/Equipment | \$4.00 per Mile | 104 | \$4.00 | \$ 416.00 | |
| CEMENT CHARGE: | | | | | | |
| | BFN III | cement | 320 | \$ 23.25 | \$ 7,440.00 | |
| ADDITIVES CHARGE: | | | | | | |
| | Red Dye | | 16 | \$ 15.00 | \$ 240.00 | |
| | KCL | | 2 | \$ 25.00 | \$ 50.00 | |
| | Sugar | | 100 | \$ 2.00 | \$ 200.00 | |
| FLOAT EQUIPMENT: | | | | | | |
| OTHER CHARGES: | | | | | | |
| | Wait Time | | 2 | hour | \$ 250.00 | \$ 500.00 |
| | DATA ACQUISITION FEE | | 1 | ea | \$ 225.00 | \$ 225.00 |
| | PSI Test | | 1 | ea | \$ 500.00 | \$ 500.00 |
| SUB TOTAL | | | | | \$ 11,543.00 | |
| TAX 2.90% | | | | | \$ 229.97 | |
| TOTAL | | | | | \$ 11,772.97 | |

If this account is not paid within 30 days of invoice date a FINANCE CHARGE will be made. Computed at a single monthly rate of 1 1/2% which is equal to an ANNUAL PERCENTAGE RATE OF 18%.

SUBJECT TO CORRECTION

Monte Bedasoy

Bison Oil Well Cementing, Inc. Representative

Customer or Agent

Customers hereby acknowledges and specifically agrees to the terms and conditions on this work order, including, without limitation, the provisions on the riverside hereof which include the release and indemnity.



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 12/20/2014

Invoice # 55049

API#

Foreman: monte

Customer: Bill Barrett

Well Name: Anschutz Equus Farms 4-62-15 0659CH2

County: Weld

State: Colorado

Sec: 15

Twp: 4n

Range: 62w

Consultant: Casey

Rig Name & Number: Major 43

Distance To Location: 51.7

Units On Location: 4028-3202 4032-3210

Time Requested: 1:30am

Time Arrived On Location: 1:00am

Time Left Location: 7:00

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 755
Total Depth (ft) : 800
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) :
Conductor ID : 15.6
Shoe Joint Length (ft) : 44
Landing Joint (ft) : 8

Max Rate: 5

Max Pressure: 2000

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 15.2
Cement Yield (cuft) : 1.27
Gallons Per Sack: 5.89
% Excess: 5%
Displacement Fluid lb/gal: 8.6
BBL to Pit:
Fluid Ahead (bbls): 20.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

10 dye 10 fresh

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.10 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 0.00 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 387.44 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 406.54 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 72.40 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 320 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 44.89 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 55.58 bbls

(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 596.15 PSI

Pressure of the fluids inside casing

Displacement: 317.67 psi**Shoe Joint:** 34.74 psi**Total** 352.42 psi**Differential Pressure:** 243.73 psi**Collapse PSI:** 2020.00 psi**Burst PSI:** 3520.00 psi**Total Water Needed:** 140.48 bbls

X

Authorization To Proceed

Customers hereby acknowledges and specifically agrees to the terms and condition on this work order, including, without limitation, the provisions on this work order.



**Bison Oil Well Cementing
Single Cement Surface Pipe**

Customer
Well Name

Bill Barrett
nschutz Equus Farms 4-62-15 0659CH

INVOICE #
LOCATION
FOREMAN
Date

55049
Weld
monte
12/20/2014

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

| | | Displace 1 | | | Displace 2 | | | Displace 3 | | | Displace 4 | | | Displace 5 | | |
|----------------|-------|------------|------|-----|------------|------|-----|------------|------|-----|------------|------|-----|------------|------|-----|
| Safety Meeting | 4:05 | BBLS | Time | PSI | BBLS | Time | PSI | BBLS | Time | PSI | BBLS | Time | PSI | BBLS | Time | PSI |
| MIRU | 3:30 | | | | | | | | | | | | | | | |
| CIRCULATE | 4:35 | 0 | 4:57 | 0 | 0 | | | 0 | | | 0 | | | 0 | | |
| Drop Plug | | 10 | 5:03 | -10 | 10 | | | 10 | | | 10 | | | 10 | | |
| 4:57 | | 20 | 5:05 | 20 | 20 | | | 20 | | | 20 | | | 20 | | |
| | | 30 | 5:07 | 170 | 30 | | | 30 | | | 30 | | | 30 | | |
| | | 40 | 5:09 | 220 | 40 | | | 40 | | | 40 | | | 40 | | |
| M & P | | 50 | 5:12 | 260 | 50 | | | 50 | | | 50 | | | 50 | | |
| Time | Sacks | 60 | 5:15 | 640 | 60 | | | 60 | | | 60 | | | 60 | | |
| 4:39-4:55 | 320 | 70 | | | 70 | | | 70 | | | 70 | | | 70 | | |
| | | 80 | | | 80 | | | 80 | | | 80 | | | 80 | | |
| | | 90 | | | 90 | | | 90 | | | 90 | | | 90 | | |
| | | 100 | | | 100 | | | 100 | | | 100 | | | 100 | | |
| | | 110 | | | 110 | | | 110 | | | 110 | | | 110 | | |
| % Excess | 5% | 120 | | | 120 | | | 120 | | | 120 | | | 120 | | |
| Mixed bbls | 44.89 | 130 | | | 130 | | | 130 | | | 130 | | | 130 | | |
| Total Sacks | 320 | 140 | | | 140 | | | 140 | | | 140 | | | 140 | | |
| bbl Returns | 22 | 150 | | | 150 | | | 150 | | | 150 | | | 150 | | |
| Water Temp | 43 | | | | | | | | | | | | | | | |

Notes:

Safety Meeting, miru, pressure test per company man circulate 20 bbls ahead with dye in last 10, mix and pump 320 sks, drop plug and displace 55.58 bbls h2o
bump plug at 515 am at 640 psi, release pressure

X

Work Preformed

Casey Jan

X

Title

Coman

X

Date



Bison Oil Well Cementing Single Cement Surface Pipe

Cementing Customer Satisfaction Survey

Service Date 12/20/2014
Well Name nschutz Equus Farms 4-62-15 0659CH
County Weld
State Colorado
SEC 15
TWP 4n
RNG 62w

Invoice Number 55049
API # 0
Job Type Single Cement Surface Pipe
Company Name Bill Barrett

Customer Representative Casey

Supervisor Name Monte Bedeaux

Employee Name (Including Supervisor)
MONTE B
Billy J.
Matt.T

Exposure Hours (Per Employee)
6
6
6
18

Total Exposure Hours

Did we encounter any problems on this job?

☐ Yes

☒ No

To Be Completed By Customer

Rating/Description

- 5 - Superior Performance (Established new quality/performance standards)
 - 4 - Exceeded Expectation (Provided more than what was required/expected)
 - 3 - Met Expectations (Did what was expected)
 - 2 - Below Expectations (Job problems/failures occurred - *Recovery made)
 - 1 - Poor Performance (Job problems/failures occurred - *Some recovery made)
- *Recovery: resolved issue(s) on jobsite in a timely and professional manner

RATING CATEGORY

Personnel -
Equipment -
Job Design -
Product/Material -
Health & Safety -
Environmental -
Timeliness -
Condition/Appearance -
Communication -

CUSTOMER SATISFACTION RATING

Did our personnel perform to your satisfaction?
Did our equipment perform to your satisfaction?
Did we perform the job to the agreed upon design?
Did our products and materials perform as you expected?
Did we perform in a safe and careful manner (Pre/post mtgs, PPE, TSMR, etc..)?
Did we perform in an environmentally sound manner (spills, leaks, cleanup, etc..)?
Was job performed as scheduled (On time to site, accessible to customers, completed when expected)?
Did the equipment condition and appearance meet your expectations?
How well did our personnel communicate during mobilization, rig up and job execution?

Please Circle:

Yes No Did an accident or injury occur?
Yes No Did an injury requiring medical treatment occur?
Yes No Did a first-aid injury occur?
Yes No Did a vehicle accident occur?
Yes No Was a post-job safety meeting held?

Please Circle:

Yes No Was a pre-job safety meeting held?
Yes No Was a job safety analysis completed?
Yes No Were emergency services discussed?
Yes No Did environmental incident occur?
Yes No Did any near misses occur?

Additional Comments:

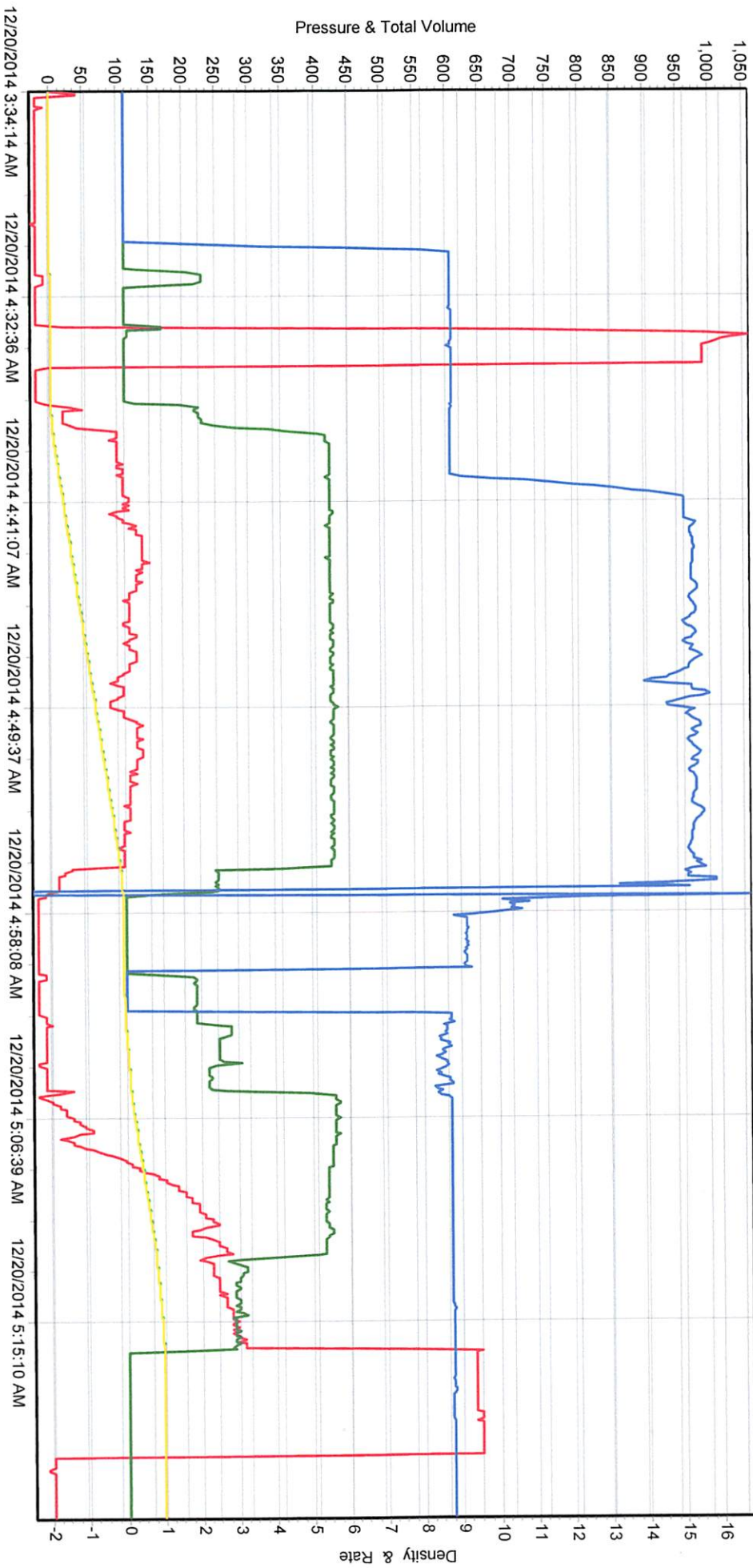
THE INFORMATION HEREIN IS CORRECT -

X 
Customer Representative's Signature

DATE: _____

Any additional Customer Comments or HSE concerns should be described on the back of this form

SERIES 2000





BISON OILWELL CEMENTING JOB SAFETY ANALYSIS WORKSHEET

| ASK: SURFACE CASING CEMENTING | | CEMENTER/SUPERVISOR: monte bedeaux | | PAGE 1 | OF 3 |
|--|--|---|--|-----------------|----------------|
| NAME: Anschutz Equus Farms 4-62-15 0659CH2 | | RIG # Major 43 | LOCATION: 65-87 | | DATE: 12-20-14 |
| ATOR: Bill Barrett | | CONSULTANT: Casey | | INVOICE # 55049 | |
| EQUIRED: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Hard Hat <input type="checkbox"/> Safety Glasses <input type="checkbox"/> Steel Toe Boots <input type="checkbox"/> Impact Gloves </div> <div style="width: 45%;"> <input type="checkbox"/> FR Coveralls <input type="checkbox"/> Reflective Vest </div> </div> ADDITIONAL PPE (based on job specific hazards) <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input type="checkbox"/> Goggles <input type="checkbox"/> Faceshield <input type="checkbox"/> Chemical Resistant Gloves <input type="checkbox"/> Chemical Resistant Clothing </div> <div style="width: 45%;"> <input type="checkbox"/> Air Purifying Respirator <input type="checkbox"/> Supplied Air Respirator <input type="checkbox"/> Personal H2S Monitor <input type="checkbox"/> Personal Methane Monitor </div> </div> | | | | | |
| JOB STEPS | POTENTIAL HAZARDS | RECOMMENDED ACTION OR PROCEDURE | REVIEWED BY | | |
| Review JSA | Misunderstanding | Clarify job and associated hazards and safety concerns | mb | | |
| Induct pre job safety meeting | Misunderstanding | -Hold safety meeting with all personnel on location, ensure everyone pays attention to ensure they understand their role and responsibility during the job -Review treatment report with consultant and attain signature for authorization to proceed -Identify and address short service employees (SSE) who are on location | mb | | |
| Drive trucks in and rig up equipment | Other traffic on location, overhead lines, pinch points, heavy lifting, slips/falls | -Coordinate with well site supervisor for directions on where and when to park the equipment -All Bison crew members walk the location prior to driving in to access specific hazards -Utilize spotters when trucks are in motion -Establish buffer zone around equipment utilizing cones and caution tape -Cementer follows up to ensure connections are secure -Lift with your legs and use teamwork when rigging up -Utilize reflective vests and wands to increase visibility at night -Deploy spill berms and buckets | mb | | |
| Connect cement head and hoses to rig floor | Overhead work, improper hookup/load not properly secured, poor communication between ground personnel and crane/tugger operator | -Inspect slings, chains and hooks prior to lift -Ensure line of sight with crane/tugger operator is maintained throughout the lift and hand signals are understood -Ensure no personnel are under suspended equipment -Utilize a tag line to control the load | mb | | |
| Inspect Cement head/swage/pin, chickens and hammers. | Working in a congested area, pinch points, swinging hammers, slippery rig floor | -Only Bison personnel install the cement head and hoses -Maintain line of sight and communication with crane/tugger operator -Remove non-essential personnel from rig floor, wait until other activity is done -Rig crew does not install chains until head and hoses are installed -Ensure a clear path when swinging a hammer -Ensure all fittings and hoses have proper pressure rating for the job and fall within the parameters of the <i>Bison Oilwell Iron Inspection Program</i> | mb | | |
| Pressure test lines | Test to: PSI- 1000 Maximum pressure allowed for job: PSI- 2000 | Equipment failing under high pressures -Ensure rig floor is clear and personnel are away from hoses prior to test -Establish buffer area around high pressure hoses -Lines are checked from a distance and using pressure gauges -Cementer ensures pressure gauges are functioning properly | Pressure relief valve set to: PSI- 2000 Max. pump pressure: PSI- 2000 | mb | |
| Run Spacer (dye marker)/Mix and Pump cement | Serious injury from high pressure line failure or catastrophic equipment failure. Casing hydraulicing from hole, causing injury. Burns or skin irritation from splashing cement, uncontrolled spills | -Pressure test prior to job, utilize heavy duty hose hobbles and pressure relief valve -Keep rig floor and buffer area clear while pumping -Utilize proper PPE -Have access to water to rinse affected skin -Deploy spill berms and buckets | mb | | |



BISON OILWELL CEMENTING JOB SAFETY ANALYSIS WORKSHEET

| | | | | |
|--|----------------------------------|---|--|----|
| p plug | | Slips, trips, falls. Miscommunication between pump operator and cementer, pressure against a closed stop | -Utilize 3 points of contact while descending/climbing ladder and stairs -Have visual contact between cementer and pump operator before pump is engaged | mb |
| placement | | Unexpected pressure associated with resuming of pumping, casing hydraulicizing from hole, serious injury from high pressure line failure or catastrophic equipment failure. | -Ensure rig floor remains clear and non-essential personnel stay clear from buffer area -Pump operator monitors pump pressure constantly -Utilize proper PPE | mb |
| pump plug-Test float and release pressure | | Pressure jumps before expected (calculated) displacement. Pressure jumps rapidly and higher than expected. | -Pump operator slows rate to 2BPM when 5 bbls from calculated displacement and down to 1 bpm within 2 bbls of calculated displacement -Pump operator monitors pressure constantly -Pressure relief valve installed on pump | mb |
| pressure test casing required) | Test to: PSI- FOR:MIN- | Serious injury from high pressure line or catastrophic equipment failure | -Ensure rig floor remains clear and non-essential personnel stay clear from the buffer area | mb |
| lash up / rig down | | Splashing cement slurry, heavy lifting, pinch points, unsecured hoses | -Utilize stakes or portable tank manifold to secure hoses -Use proper lifting technique (2 man lift, lift with legs, plan your route) | mb |
| part location | | Other traffic and personnel and location, overhead lines | -All Bison crew member walk the planned exit route to access possible obstacles and hazards -Utilize spotters while backing | mb |
| General Precautions/Stop Work - If you see a leaking connection, notify the cementer. Do not attempt to hammer up a leaking connection as there may be pressure on the lines. -Any person on location, regardless of their position or experience level has the authority and responsibility to stop the job if they witness an unsafe act or condition. | | | | mb |
| OTHER HAZARDS SPECIFIC TO LOCATION OR COMMENT NOT ADDRESSED ABOVE: | | | | mb |
| NATED EMERGENCY MUSTER AREA: rd COUNT-- | | | NEAREST EMERGENCY MEDICAL FACILITY (OTHER THAN 911): Greeley | |

BISON OILWELL CEMENTING JOB SAFETY ANALYSIS WORKSHEET

Signature and Company

| | | | |
|-------------------|-------|-----------|-----|
| Monte Becerra | Bison | Casey Jan | BBC |
| James Potts | Major | | |
| Hermilo Contreras | major | | |
| M. Boff | BOS | | |
| Ric Se | BOS | | |
| Lenny Hamilton | Major | | |
| Willie Small | Bison | | |
| Matte R | BISON | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



BISON
Oil Well Cementing Inc.

PRE TRIP CEMENT CALL OUT SHEET

INVOICE # 55049 DATE/TIME 12-20-14
WELL NAME Anschutz Egnas Farms 4-62-15 0689CH2 OPERATOR monte
CUSTOMER Bill Barnett
LOCATION/RIG major 43
DELIVERED TO 65-87

PRE CHECK CALL OUT

| CHECK ITEMS | Supervisor Initials | Other Initials | BULK TRUCK DRIVER | Supervisor Initials | Other Initials |
|---|------------------------|----------------|--|------------------------|----------------|
| DRY SAMPLE # | | | VACUUM BREAKER PORT CLEANED & INSPECTED & SPARE ON TRUCK | MB | |
| REQUIRED CEMENT CONNECTIONS | MB | | WATER JET AT MIX HEAD REMOVED, INSPECTED & CLEANED | MB | |
| TYPE OF CEMENT | MB | | CEMENTING HEAD INSPECTED & CLEANED | MB | |
| # OF LBS/SACKS | MB | | MIX TUB INSPECTED & CLEANED | MB | |
| FLOAT EQUIPMENT | MB | | CENTRIFUGALS GREASED, TIGHTENED & INSPECTED | MB | |
| BEGINNING FUEL | MB | | DECK MOTORS STARTED | MB | |
| STARTING MILEAGE | 71643 | | VERIFY ALL AIR VALVES ARE FUNCTIONAL | MB | |
| PERSONAL PROTECTIVE EQUIPMENT | MB | | VERIFY ALL VALVES ARE FUNCTIONAL ON BULK TRUCK | MB | |
| DRIVING DIRECTIONS | MB | | VERIFY BERMS ARE ON BULK TRUCK | MB | |
| DRIVERS LOGS UPDATED PRIOR TO LEAVING YARD | MB | | VERIFY SPARE CEMENT HEAD IS ON BULK TRUCK | | |
| TRUCK PRE TRIP COMPLETED | MB | | VERIFY 1" TUBING IS ON BULK TRUCK AND ADEQUATELY SECURED | MB | |
| ROCK CATCHERS REMOVED & CLEANED | MB | | CHECK FOR ADEQUATE SUPPLY OF KCL, DYE AND DEFOAMER | MB | |
| VACUUM BREAKER REMOVED & CLEANED | MB | | TOP OFF FUEL IN TRUCKS POST TRIP | MB | |
| VERIFY CORRECT POP OFF PIN IN PLACE | MB | | VERIFY PARKING METER GAUGE IS ON TRUCK | MB | |
| VERIFY PRESSURE TRANSDUCERS ARE CLEAN OF CEMENT | MB | | DRAIN AIR TANKS | MB | |
| CLEAN TRUCKS | MB | | | | |
| TIGHTEN PACKING NUTS ON PLUNGERS | MB | | | | |

CEMENT HEAD CHECK LIST

| | Supervisor Initials | Other Initials |
|---------|------------------------|----------------|
| THREADS | MB | |
| VALVES | MB | |
| PIN | MB | |

COMMENTS: