



AUTHORIZATION TO PURCHASE AND TRANSPORT OIL FROM LEASE - FORM 8

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 5698 (03-2000)

RECEIVED

JAN 28 2020

Well File No.
23368

ND OIL & GAS DIVISION

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL.

| | | | | | |
|---|---|---------------------|--------------------------|--------------------------|---------------------------|
| Well Name and Number Atlanta Federal 5-6H | Qtr-Qtr NNNW | Section 6 | Township 153 N | Range 101 W | County Williams |
| Operator Continental Resources, Inc. | Telephone Number 405-234-9000 | | Field Baker | | |
| Address P.O. Box 268870 | City Oklahoma City | | State OK | Zip Code 73126 | |

| | | | |
|---|---|-----------------------------|--|
| Name of First Purchaser Continental Resources, Inc. | Telephone Number 405-234-9000 | % Purchased 100 | Date Effective March 3, 2014 |
| Principal Place of Business 20 N. Broadway | City Oklahoma City | State OK | Zip Code 73102 |
| Field Address | City | | State Zip Code |
| Name of Transporter Hiland Crude | Telephone Number 580-616-2050 | % Transported 100 | Date Effective March 3, 2014 |
| Address 8811 S. Yale, Ste. 200 | City Tulsa | State OK | Zip Code 74137 |

The above named producer authorizes the above named purchaser to purchase the percentage of oil stated above which is produced from the lease designated above until further notice. The oil will be transported by the above named transporter.

| | | |
|---|---------------|----------------|
| Other First Purchasers Purchasing From This Lease | % Purchased | Date Effective |
| Other First Purchasers Purchasing From This Lease | % Purchased | Date Effective |
| Other Transporters Transporting From This Lease | % Transported | Date Effective |
| Other Transporters Transporting From This Lease | % Transported | Date Effective |
| Comments | | |

I hereby swear or affirm that all transporters of Bakken Petroleum System oil listed above implement or adhere to a tariff specification as stringent as the Commissions VPCR₄ requirement 13.7 psi VPCR₄ Tariff Specification Hiland Crude Tariff Authority

| | | |
|--|---------------------------------------|--|
| I hereby swear or affirm that the information provided is true, complete and correct as determined from all available records. | Date January 20, 2020 | |
| Signature | Printed Name Terry L. Olson | Title Regulatory Compliance Specialist |

Above Signature Witnessed By

| | | |
|-----------------------|---|--|
| Witness Signature | Witness Printed Name Christi Scritchfield | Witness Title Regulatory Compliance Specialist |
|-----------------------|---|--|

FOR STATE USE ONLY

| | |
|-------------------------------------|--|
| Date Approved JAN 29 2020 | NDIC CTB NO 223372 |
| By | Title Oil & Gas Production Analyst |



SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 5749 (09-2006)

Well File No.
23368

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.
PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

| | | | |
|---|--|---|--|
| <input type="checkbox"/> Notice of Intent | Approximate Start Date | <input type="checkbox"/> Drilling Progress | <input type="checkbox"/> Spill Report |
| <input checked="" type="checkbox"/> Report of Work Done | Date Work Completed June 4, 2014 | <input type="checkbox"/> Redrilling or Repair | <input type="checkbox"/> Shooting |
| <input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03. | Approximate Start Date | <input type="checkbox"/> Casing or Liner | <input type="checkbox"/> Acidizing |
| | | <input type="checkbox"/> Plug Well | <input type="checkbox"/> Fracture Treatment |
| | | <input type="checkbox"/> Supplemental History | <input checked="" type="checkbox"/> Change Production Method |
| | | <input type="checkbox"/> Temporarily Abandon | <input type="checkbox"/> Reclamation |
| | | <input type="checkbox"/> Other | |



Well Name and Number
Atlanta Federal 6-6H

| Footages | Qtr-Qtr | Section | Township | Range |
|-----------------------|-----------------------|---------------------------|----------|-------------|
| 495 F N L | 880 F W L | NWNW | 6 | 153 N 101 W |
| Field Baker | Pool Bakken | County Williams | | |

24-HOUR PRODUCTION RATE

| | Before | After |
|-------|----------|----------------|
| Oil | 70 Bbls | Oil 56 Bbls |
| Water | 287 Bbls | Water 221 Bbls |
| Gas | 54 MCF | Gas 64 MCF |

Name of Contractor(s)

Address

City

State

Zip Code

DETAILS OF WORK

Continental Resources would like to request a change in production method on the Atlanta Federal 6-6H. The well went from flowing to pumping on 6/4/2014.

| | | |
|--|---|--------------------------|
| Company Continental Resources | Telephone Number (405) 234-9000 | |
| Address P.O. Box 268870 | | |
| City Oklahoma City | State OK | Zip Code 73126 |
| Signature | Printed Name Zach Green | |
| Title Regulatory Compliance Specialist | Date July 18, 2014 | |
| Email Address Zach.Green@clr.com | | |

FOR STATE USE ONLY

| | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Received | <input type="checkbox"/> Approved |
| Date | |
| By | |
| Title | |

**AUTHORIZATION TO PURCHASE AND TRANSPORT OIL FROM LEASE - FORM 8**

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFSN 5698 (03-2000)



| | |
|---------------|--------|
| Well File No. | 23368 |
| NDIC CTB No. | 223372 |

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND FOUR COPIES.

| | | | | | |
|---|---|-----------------------|--------------------------|-----------------------|---------------------------|
| Well Name and Number Atlanta Federal 5-6H | Qtr-Qtr NWNW | Section 6 | Township 153 N | Range 101 W | County Williams |
| Operator Continental Resources, Inc. | Telephone Number 405-234-9000 | Field Baker | | | |
| Address P.O. Box 268870 | City Oklahoma City | State OK | Zip Code 73126 | | |

| | | | |
|---|---|---------------------------|--|
| Name of First Purchaser Continental Resources, Inc. | Telephone Number 405-234-9000 | % Purchased 100 | Date Effective March 3, 2014 |
| Principal Place of Business 20 N. Broadway | City Oklahoma City | State OK | Zip Code 73102 |
| Field Address | City | State | Zip Code |
| Name of Transporter Hiland Crude (West Camp Creek Pipe) | Telephone Number | % Transported | Date Effective March 3, 2014 |
| Address P.O. Box 3886 | City Enid | State OK | Zip Code 73702 |

The above named producer authorizes the above named purchaser to purchase the percentage of oil stated above which is produced from the lease designated above until further notice. The oil will be transported by the above named transporter.

| | | |
|---|---------------|----------------|
| Other First Purchasers Purchasing From This Lease | % Purchased | Date Effective |
| Other First Purchasers Purchasing From This Lease | % Purchased | Date Effective |
| Other Transporters Transporting From This Lease | % Transported | Date Effective |
| Other Transporters Transporting From This Lease | % Transported | Date Effective |
| Comments | | |

| | | |
|--|---------------------------------------|--|
| I hereby swear or affirm that the information provided is true, complete and correct as determined from all available records. | Date March 10, 2014 | |
| Signature | Printed Name Terry L. Olson | Title Regulatory Compliance Specialist |

| | | |
|------------------------------|---|--|
| Above Signature Witnessed By | | |
| Witness Signature | Witness Printed Name Christi Scritchfield | Witness Title Regulatory Compliance Specialist |

FOR STATE USE ONLY

| | |
|-------------------------------------|--|
| Date Approved APR 09 2014 | |
| By | |
| Title Eric Polson | |
| Oil & Gas Production Analyst | |



WELL COMPLETION OR RECOMPLETION REPORT - FORM 6

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SEN 2468 (04-2010)

Well File No.
23368

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

| | | | | | | | |
|---|-----------------------------------|--|--|---|--|---|------------------------------------|
| Designate Type of Completion | | | | | | | |
| <input checked="" type="checkbox"/> Oil Well | <input type="checkbox"/> EOR Well | <input type="checkbox"/> Recompletion | <input type="checkbox"/> Deepened Well | <input checked="" type="checkbox"/> Added Horizontal Leg | <input type="checkbox"/> Extended Horizontal Leg | | |
| <input type="checkbox"/> Gas Well | <input type="checkbox"/> SWD Well | <input type="checkbox"/> Water Supply Well | <input type="checkbox"/> Other: | | | | |
| Well Name and Number Atlanta Federal 5-6H | | | | Spacing Unit Description Sec 5, 6, 7, & 8 T153N R101@ | | | |
| Operator Continental Resources, Inc. | | Telephone Number 405-234-9000 | | Field Baker | | | |
| Address P.O. Box 268870 | | | | Pool Bakken | | | |
| City Oklahoma City | State OK | Zip Code 73126 | | Permit Type | <input type="checkbox"/> Wildcat | <input checked="" type="checkbox"/> Development | <input type="checkbox"/> Extension |

LOCATION OF WELL

| At Surface | | Qtr-Qtr | Section | Township | Range | County |
|------------|-----------------|------------------------------------|---------|-------------------|-----------------------|----------|
| 495 F N L | | NWNW | 6 | 151 N | 101 W | Williams |
| Spud Date | Date TD Reached | Drilling Contractor and Rig Number | | KB Elevation (Ft) | Graded Elevation (Ft) | |
| 5/15/2013 | 6/12/2013 | Cyclone 2 | | 1967 | 1945 | |

Type of Electric and Other Logs Run (See Instructions)

CBL/GR/MAC/mud

CASING & TUBULARS RECORD (Report all strings set in well)

| Well Bore | String | | Top Set (MD Ft) | Depth Set (MD Ft) | Hole Size (Inch) | Weight (Lbs/Ft) | Anchor Set (MD Ft) | Packer Set (MD Ft) | Sacks Cement | Top of Cement |
|-----------|--------------|-------------|--------------------|----------------------|---------------------|--------------------|-----------------------|-----------------------|-----------------|------------------|
| | Type | Size (Inch) | | | | | | | | |
| Lateral1 | Conductor | 16 | | 102 | 20 | 133 | | | | 0 |
| | Surface | 13 3/8 | | 525 | 20 | 48 | | | 627 | 0 |
| | Surface | 9 5/8 | | 2014 | 13 1/2 | 36 | | | 640 | 0 |
| | Liner | 4 1/2 | | 9992 | 8 3/4 | 11.6 | | | | |
| | Intermediate | 7 | | 10858 | 8 3/4 | 26-32 | | | 993 | 1600 |
| | Liner | 4 1/2 | 9992 | 21015 | 6 | 11.6 | | 9992 | | |

PERFORATION & OPEN HOLE INTERVALS

PRODUCTION

| | | | | | | | | |
|--|---------------------------|---|---------------------|-----------------------------|--------------------------|----------------------------|--|-----------------------------------|
| Current Producing Open Hole or Perforated Interval(s), This Completion, Top and Bottom, (MD Ft) Bakken 10,858' - 21,165' | | | | | | | Name of Zone (If Different from Pool Name) Middle Bakken | |
| Date Well Completed (SEE INSTRUCTIONS) 3/3/2014 | | Producing Method Flowing | | Pumping-Size & Type of Pump | | | Well Status (Producing or Shut-In) Producing | |
| Date of Test 3/7/2014 | Hours Tested 24 | Choke Size 12 /64 | Production for Test | Oil (Bbls) 441 | Gas (MCF) 230 | Water (Bbls) 363 | Oil Gravity-API (Corr.) 39.6 ° | Disposition of Gas Sold |
| Flowing Tubing Pressure (PSI) 2200 | | Flowing Casing Pressure (PSI) 0 | | Calculated 24-Hour Rate | Oil (Bbls) 441 | Gas (MCF) 230 | Water (Bbls) 363 | Gas-Oil Ratio 522 |

GEOLOGICAL MARKERS

PLUG BACK INFORMATION

CORES CUT

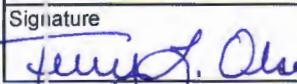
| Top (Ft) | Bottom (Ft) | Formation | Top (Ft) | Bottom (Ft) | Formation |
|----------|-------------|-----------|----------|-------------|-----------|
| | | | | | |
| | | | | | |
| | | | | | |

Drill Stem Test

Well Specific Stimulation

| | | | | | | | |
|---|----------------------------|-------------------------|--|----------------------|--------------------------|---|-------------------------|
| Date Stimulated 11/19/2013 | Stimulated Formation MB | | Top (Ft) 10858 | Bottom (Ft) 21165 | Stimulation Stages 31 | Volume 71324 | Volume Units Barrels |
| Type Treatment Sand Frac | Acid % | Lbs Proppant 3651745 | Maximum Treatment Pressure (PSI) 7993 | | | Maximum Treatment Rate (BBLS/Min) 31.0 | |
| Details Pumped 2523043# 20/40 sand and 1128702# 20/40 ceramic. | | | | | | | |
| Date Stimulated | Stimulated Formation | | Top (Ft) | Bottom (Ft) | Stimulation Stages | Volume | Volume Units |
| Type Treatment | Acid % | Lbs Proppant | Maximum Treatment Pressure (PSI) | | | Maximum Treatment Rate (BBLS/Min) | |
| Details | | | | | | | |
| Date Stimulated | Stimulated Formation | | Top (Ft) | Bottom (Ft) | Stimulation Stages | Volume | Volume Units |
| Type Treatment | Acid % | Lbs Proppant | Maximum Treatment Pressure (PSI) | | | Maximum Treatment Rate (BBLS/Min) | |
| Details | | | | | | | |
| Date Stimulated | Stimulated Formation | | Top (Ft) | Bottom (Ft) | Stimulation Stages | Volume | Volume Units |
| Type Treatment | Acid % | Lbs Proppant | Maximum Treatment Pressure (PSI) | | | Maximum Treatment Rate (BBLS/Min) | |
| Details | | | | | | | |
| Date Stimulated | Stimulated Formation | | Top (Ft) | Bottom (Ft) | Stimulation Stages | Volume | Volume Units |
| Type Treatment | Acid % | Lbs Proppant | Maximum Treatment Pressure (PSI) | | | Maximum Treatment Rate (BBLS/Min) | |
| Details | | | | | | | |

ADDITIONAL INFORMATION AND/OR LIST OF ATTACHMENTS

| | | |
|--|--------------------------------------|---|
| I hereby swear or affirm that the information provided is true, complete and correct as determined from all available records. | Email Address Terry.Olson@clr.com | Date 3/19/2014 |
| Signature  | Printed Name Terry L. Olson | Title Regulatory Compliance Specialist |

Continental Resources Inc.

**Atlanta Federal 5-6H – Cyclone 2
Atlanta 14 Well Eco Pad
NWNW Sec 6 – SWSW Sec 8
Sec 6, 7 & 8 - T153N-R100W
Williams & McKenzie Co., North Dakota
API# 33-105-02728**

**By: Adam Swoboda & Jed Nelson
Geo-Link Inc.**

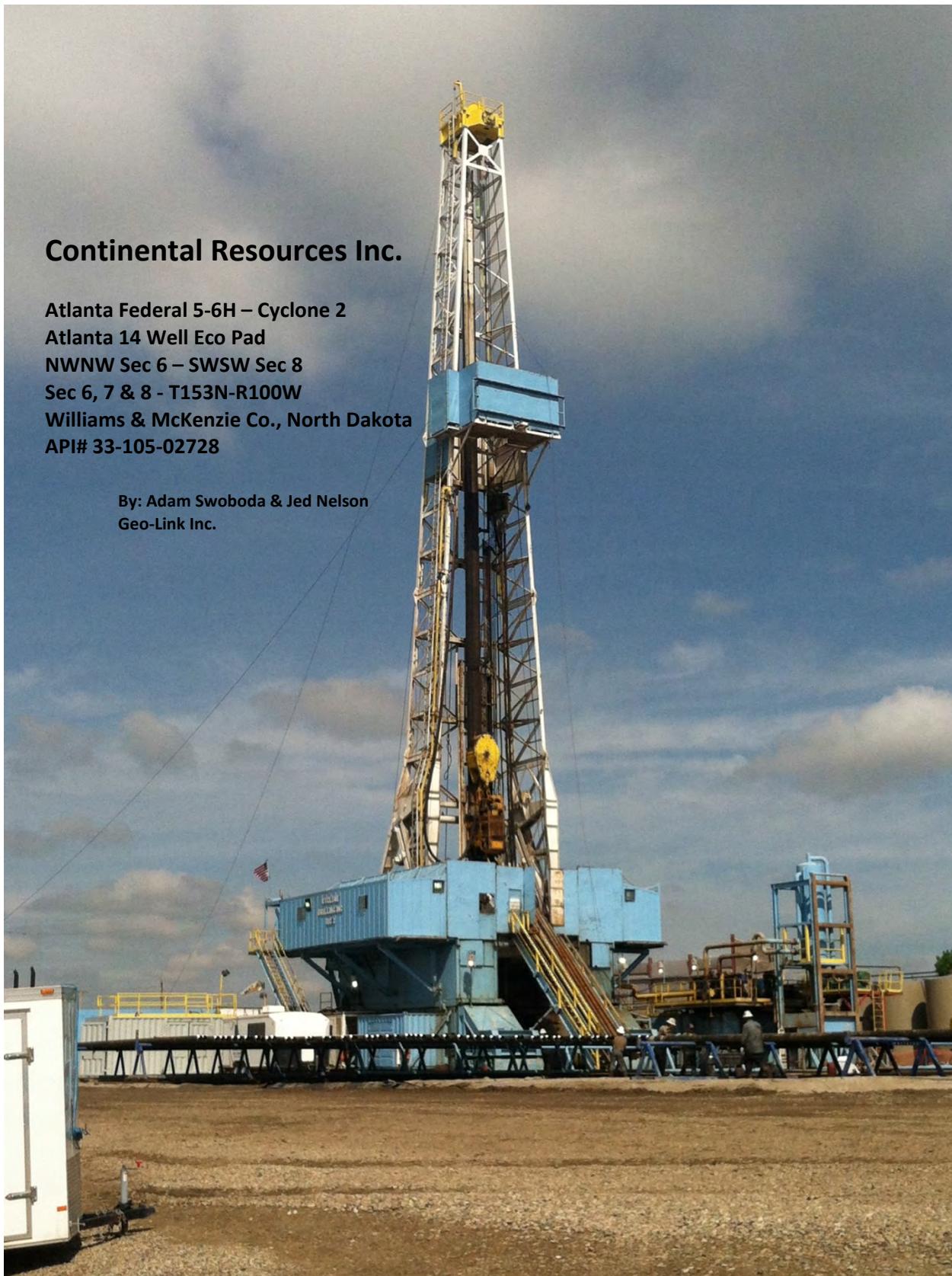




Table of Contents

Well Information

Cross Section

Well Synopsis

Drilling Activity

Chronological Gas / Sample Show

Gamma Ray, Avg. ROP, 24 Hr Progress, Gas, Mud Weight, Oil Show Plot

Formation Tops, Critical Points, Lateral Summary

Formation Structure

Atlanta Eco Pad - Bakken Structure Map

Atlanta 5-6H Well Plat

Atlanta Eco Pad Plat

MWD Surveys

TVD Log



Well Information

WELL NAME: Atlanta Federal 5-6H
Atlanta 14 Well Eco Pad

OPERATOR: Continental Resources, Inc.
P.O. Box 269000
Oklahoma City, Ok 73126

SURFACE LOCATION: 495 †FNL & 835 †FWL
NWNW Section 6: T153N, R101W

CASING: 7 1/2" Intermediate casing set at 10872 †MD, 10521.2 †TVD
999 †FNL & 1084 †FWL
NWNW Section 6: T153N, R101W

BOTTOM HOLE LOCATION: Projection to Bit: 21165 †MD, 10517 †TVD
236 †FSL & 590 †FWL
SWSW Section 8, T153N, R101W

FIELD/AREA: Williston

COUNTY: Williams & McKenzie

STATE: North Dakota

API#: 33-105-02728

ELEVATION: GL: 1945 † KB: 1967 †

SPUD: May 27th, 2013
DRILLED OUT OF CASING (Lateral): June 4th, 2013

TOTAL DEPTH/DATE: 21165 †MD on June 12th, 2013
Total Days: 16

BOTTOM HOLE DATA:
Kick-off Point: 10045 †MD; 10044 †TVD
Vertical Section: 10850.02
Drift of Azimuth: 152.81
Average Inclination (lateral): 89.98°
Lateral footage: 10293 †

WELL STATUS: To be completed as a Middle Bakken oil well

MWD REP: MS Energy

DIRECTIONAL REP: MS Energy



Well Information

MUD LOGGING SERVICE: Geo-Link Inc.

GEOLOGICAL CONSULTANT: Adam Swoboda & Jed Nelson
SECOND HAND: Joe Dunn & RC Whitmore

GAS EQUIPMENT: M-Logger / M-Control SN ML-197
Spare SN ML-145

SAMPLE PROGRAM:
30 Samples lagged and caught by mud loggers 8600 #0850
Logging: Charles Salt, BLS, Mission Canyon, Lodgepole, Upper Bakken Shale, Middle Bakken Member

100 Samples lagged and caught by mud loggers 10900 #21165
Logging: Middle Bakken Member
One set sent to NDGS Core Library (Grand Forks)

DISTRIBUTION LIST:

Continental Resources, Inc.
Land Department

Memo

To: Archie Taylor, Brian A. Moss, David McMahan, Doug Pollitt, Gerry Allen, Gil Smith, Gina Callaway, Greg Blocker, Jack Stark, Jaclyn Jantz, Jeanette McDonald, Josh Byler, Marjorie McKenzie, Matt Liter, Michael Kyle, Paula Fast, Renee Sanders, Rob Hersom, Robert Sandbo, Sally Messenger, Shamika Morrison, Shawn Roche and Shelly Ramirez

From: **Casey Holder**

CC: Rick Muncrief and Heath Hibbard

Date: May 9, 2013

RE: **Atlanta Federal 5-6H**
Sections 5, 6, 7 & 8-153N-101W



Well Information

Williams & McKenzie Counties, North Dakota

Regarding the referenced well, the following parties are entitled to receive the indicated information and be contacted for elections as shown.

"Standard Information" means the following:

DURING DRILLING OPERATIONS:

E-mail the following
during drilling and completion operations:

- 1) Daily Drilling Report
- 2) Mud Log
- 3) Lateral Profile
- 4) Gamma Ray, MD & TVD Logs
- 5) Directional Surveys

POST DRILL:

Mail the following items after
drilling is completed:

- 1) Complete Electric Log
- 2) Complete Mud Log
- 3) Complete DST report
- 4) Core Analyses
- 5) Complete Directional Surveys
- 6) Complete Lateral Profile
- 7) Water, Oil & Gas Analysis
- 8) Cement Bond Log
- 9) Final complete drilling report

| Owner | Information | Casing Point Election | Dry Hole Takeover Election |
|--|--|-----------------------|----------------------------|
| NDIC Oil and Gas Division Email: digitallogs@nd.gov | Open Hole Logs/Cased Hole Logs/Mudlogs (email TIFF & LAS) Final Geological Report (email PDF) ***NO PAPER COPIES*** | | No |
| Continental Resources, Inc. Attn: Robert Sandbo PO Box 26900 OKC, OK 73126 Email: isologs@clr.com | Standard Information Open Hole Logs/Cased Hole Logs (5 hard copies, email TIFF & | No | No |



Well Information

| | LAS) Mudlogs (5 hard copies, email TIFF, LAS & raw log file) 5 copies of Final Geological Report (email PDF & raw file) | | |
|--|--|----|-----|
| Albert G. Metcalfe, III 550 West Texas, Suite 640 Midland, TX 79701-4241 Email: albertgmetcalfe@gmail.com Phone: 432.684.4910 (Office) Phone: 432.528.2581 Fax: 432.684.0853 (Send Well Information daily, via email) | Standard Well Information | No | Yes |
| Black Stone Energy Company, LLC c/o Mark Connally 1001 Fannin, Suite 2020 Houston, TX 77002 Phone: 713.658.0647 (Office) Phone: 713.827.8629 (Home) Fax: 713.658.0943 Email: kdolfi@blackstoneminerals.com , mconnally@blackstoneminerals.com (Send Well Information daily, via email) | See Attached Requirements | No | Yes |
| Boedecker Resources Attn: Brett Boedecker 151 O'Brien Ln Moore, MT 59464 Phone: 406.374.2270 E-Mail: brettboedecker@hotmail.com (Send Well Info Daily, via E-Mail) | Standard Well Information | No | Yes |
| Dale Lease Acquisitions 2011-B, L.P. Attn: John D. Crocker, Jr. 2100 Ross Avenue, Suite 1870 Dallas, TX 75201 Phone: 214.979.9010, Ext. 16 Fax: 214.969.9394 | See Attached Requirements | No | Yes |



Well Information

| | | | |
|--|---------------------------|----|-----|
| Email: reports@dale-energy.com (Send Well Information daily, via email) | | | |
| Golden Eye Resources, LLC 5460 South Quebec Street, Suite 335 Greenwood Village, CO 80111 Phone: 303.832.1994 Fax: 303.832.5118 Email: reports@goldeneyerесources.com (Send Well Information daily, via email) | See Attached Requirements | No | Yes |
| Helm Energy, LLC c/o Joe Brinkman 5251 DTC Parkway, Suite 425 Greenwood Village, CO 80111 Email: jbrinkman@helmenergy.com (Send Well Information daily, via email) | See Attached Requirements | No | Yes |
| Intervention Energy, LLC Attn: John Zimmerman P.O. Box 1028 Minot, ND 58702-1028 Email: john@interventionenergy.com (Send Well Information daily, via email) | Standard Well Information | No | Yes |
| JAMEX Royalty Company Attn: Well Data P.O. Box 16336 Oklahoma City, OK 73113 Phone: (405) 413-5331 Email: minerals@jamexroyalty.com (Send Well Information daily, via email) | See Attached Requirements | No | Yes |
| John H. Holt Oil Properties, Inc. Attn: John H. Holt P.O. Box 24 Williston, ND 58802 Phone: 701.774.1200 Fax: 701.572.8499 Email: john@jhhop.com (Send Well Information daily, via email) | Standard Well Information | No | Yes |
| Lario Oil & Gas Company P.O. Box 29 Denver, CO 80201-0029 Fax: 303.595.4849 Email: reportsdenver@lario.net (Send Well Information daily, via email) | See Attached Requirements | No | Yes |



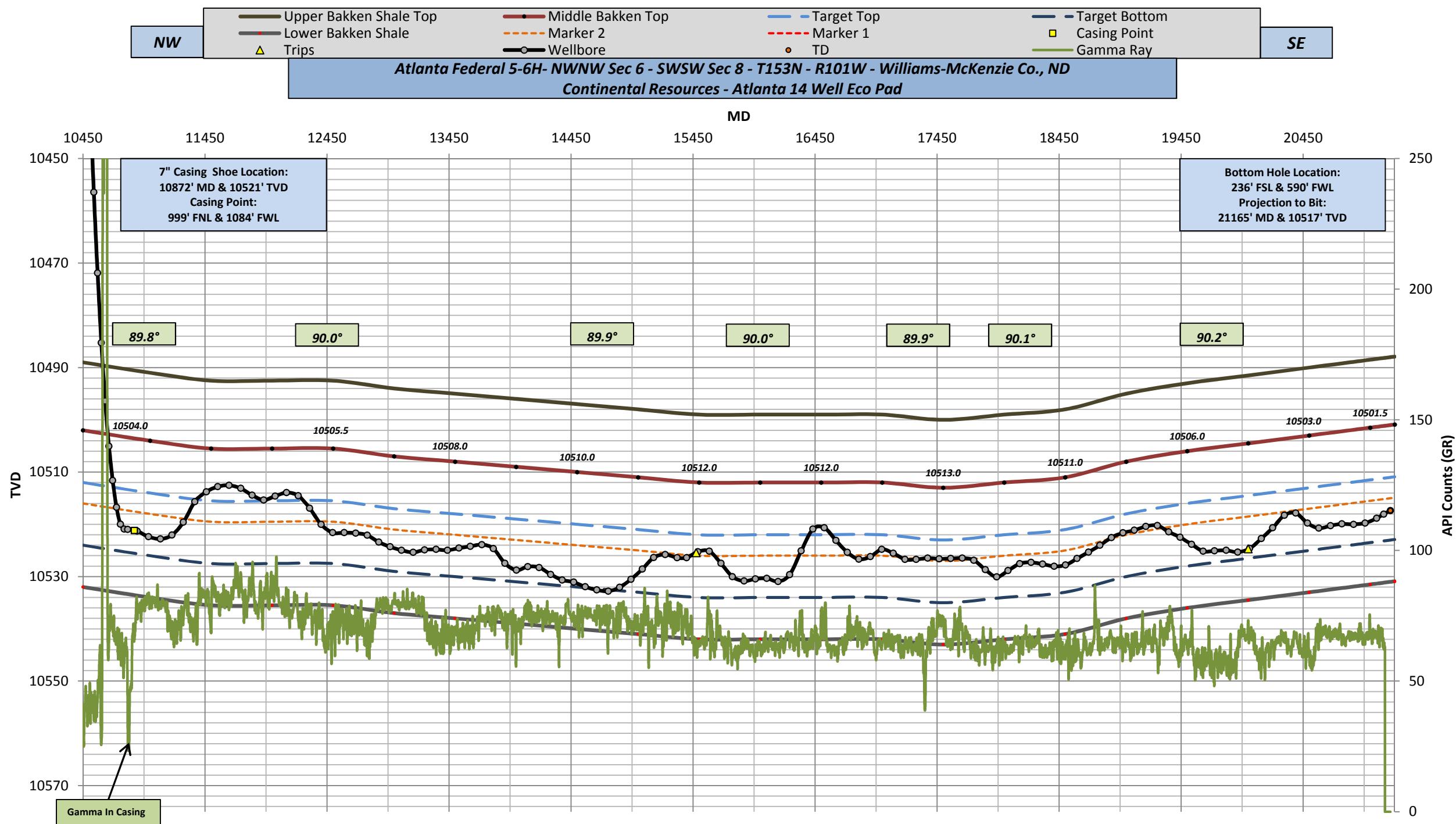
Well Information

| | | | |
|---|--|----|-----|
| Liberty Resources, LLC Attn: Reports 1200 17 th Street, Suite 2050 Denver, CO 80202 Email: reports@libertyresourcesllc.com (Send Well Information daily, via email) | See Attached Requirements | No | Yes |
| MHM Resources, LP Attn: Julie Larson P.O. Box 51570 Midland, TX 79710 Phone: 432.685.6045 Fax: 432.685.9081 Email: drlreports@mhmresourceslp.com , jlarson@mhmresourceslp.com (Send Well Information daily, via email) | See Attached Requirements | No | Yes |
| Michael Harrison Moore, Trustee of the Michael Harrison Moore 2006 Trust Attn: Julie Larson P.O. Box 51570 Midland, TX 79710 Phone: 432.685.6045 Fax: 432.685.9081 Email: drlreports@mhmresourceslp.com , jlarson@mhmresourceslp.com (Send Well Information daily, via email) | See Attached Requirements | No | Yes |
| Richard J. Rigo 709 Glen Ct., Unit 10 Grand Junction, CO 81506-8232 Phone: 970.257.9465 E-Mail: dickjanrigo@gmail.com (Send Well Information daily, via email) | Standard Well Information; Final copy of logs/reports on disc | No | Yes |
| Statoil Oil & Gas LP 6300 Bridge Point Parkway Building 2, Suite 500 Austin, TX 78730 Phone: 512.427.3300 Fax: 512.427.3400 E-Mail: reports@bexp3d.com (Send Well Information daily, via email) | See Attached Requirements | No | Yes |
| The Steven H. Harris Family Limited Partnership P.O. Box 2323 Bismarck, ND 58502 Phone: 701.223.4866 | Standard Well Information | No | Yes |



Well Information

| | | | |
|--|---------------------------|----|-----|
| Fax: 701.223.2556 E-Mail: w2harris@aol.com (Send Well Information daily, via email) | | | |
| William R. Weyman 1670 Ceylon Street Aurora, CO 80011 Phone: 303.344.4485 Email: bill@weyman.com (Send Well Information daily, via email) | Standard Well Information | No | Yes |
| XTO Energy, Inc. Attn: Randy Hosey 810 Houston Street Fort Worth, TX 76102 Phone: 817.885.2398 Fax: 817.885.2698 Email: randy_hosey@xtoenergy.com , non-op_reports@xtoenergy.com , rose_holman@xtoenergy.com (Send Well Information daily, via email) | See Attached Requirements | No | Yes |





WELL SYNOPSIS

Well Plan: *The Atlanta Federal 5-6H was spud on May 27th, 2013 with a surface location of 495' FNL and 835' FWL, NWNW Section 6 - Township 153 North and Range 101 West in Williams Co., North Dakota. This well was operated by Continental Resources Incorporated with the objective target of the late Devonian to early Mississippian Middle Bakken Dolomite. The plan showed a build section with a kickoff point of 9957' MD in the Mississippian Lodgepole with a 10'/100' build rate to the landing point of 10855' MD; 10530' TVD, 20' into the Middle Bakken Dolomite. The actual KOP was 10045' MD and actual casing point is 10872' MD; 10521' TVD. The target zone for this Middle Bakken Dolomite well started approximately 10' below the Upper Bakken Shale and ended 6' above the Lower Bakken Shale. The plan was to drill lateral for an estimated 10301' to the hardline in the SWSW of section 8 - Township 153 North and Range 101 West following the estimated dip of 90.0° and following an azimuth of 152.81°.*

The offsets provided were wells drilled on the Atlanta 14 Well Eco Pad. These include the Atlanta 1-4-6H & Atlanta 11-14-6H. Drilled in Section 5, 6 & 7 – T153N & 101W, Williams-McKenzie Co., operated by Continental Resources.

Gas logged in the vertical and lateral sections were monitored using Mud Logging Systems – Logger & Control. (Primary Logger: ML-197 – Spare Logger ML-077) M-Logger CC & TC filaments calibrated with 1% and 100% test gas – Chromatograph calibrated with 1% test gas (gas-units).

Build Section: *The build section of the well was kicked off at 10045' MD on June 1st, 2013. The up hole markers logged were the Base of the Last Salt 9015' TVD, Mission Canyon 9232' TVD, and the Lodgepole 9781' TVD. The down hole markers below kick off point consisted of the False Bakken 10482' TVD, Upper Bakken Shale 10489' TVD and the Middle Bakken Member 10502' TVD. These markers, along with the up hole markers, all came in plus or minus five to eight feet from the prognosis. The landing for 7" intermediate casing was completed June 2nd, 2013 at 12:02 hours, 17' TVD into the Middle Bakken Dolomite with a landing at 10872' MD and 10521' TVD, with a location; NWNW Sec 6 – T153N – R101W -- 999' FNL & 1084' FWL. (See Atlanta Federal 5-6H Build and TVD logs for any additional information)*

Gas observed in the build section, which showed gas averaging 156 units through the Lodgepole formation, with a max trip gas of 5636 and with no background sample shows and oil shows. There was an increase in the gas going through the Upper Bakken Shale and landing in the Middle Bakken Dolomite gas was averaging 387-590u of background, or average gas.

Lateral Leg: *Casing operations were completed and penetration of the lateral section started, on June 4th, 2013 at 12:40 hours with a depth of 10872' MD and 10521' TVD. The plan was to drill in the target zone and follow the 12' zone of interest. The lateral section was drilled from 10872' MD to 21159' MD for a lateral length of 10287' MD. The section was drilled entirely in the Middle Bakken. There were two complete trips in the lateral section, both to change out the BHA. The lateral section was completed on June 12th, 2013 – 21165' MD and 10517' TVD, with a bottom hole location of: SWSW Sec 8: 236' FSL & 590' FWL.*



WELL SYNOPSIS

Oil observed in the possum during the lateral section, ranged from 5-20% oil with a presence of light – dark brown to yellow - green oil accumulating in the corners of the possum belly. Staining and fluorescence with an immediate bright light blue to bright yellow - green cut were observed in the cuttings throughout the lateral section. There was a steady increase in the staining and fluorescence through the lateral, and stayed very bright and even. While in the upper and middle target zone, the inter-crystalline porosity considered was fair to good. Samples collected were primarily light–medium tan/brown, light-dark gray, microcrystalline-cryptocrystalline, slight-moderately firm, moderately – to very calcareous and displayed moderately bright to very bright yellow-green fluorescence with immediate streaming/diffuse cloudy blue/white cut. Samples appeared to be more medium-dark gray when drilling lower target zone and light to medium-dark tan/brown when drilling the upper zone (For more detailed sample descriptions see Atlanta 13-6H horizontal mud log)

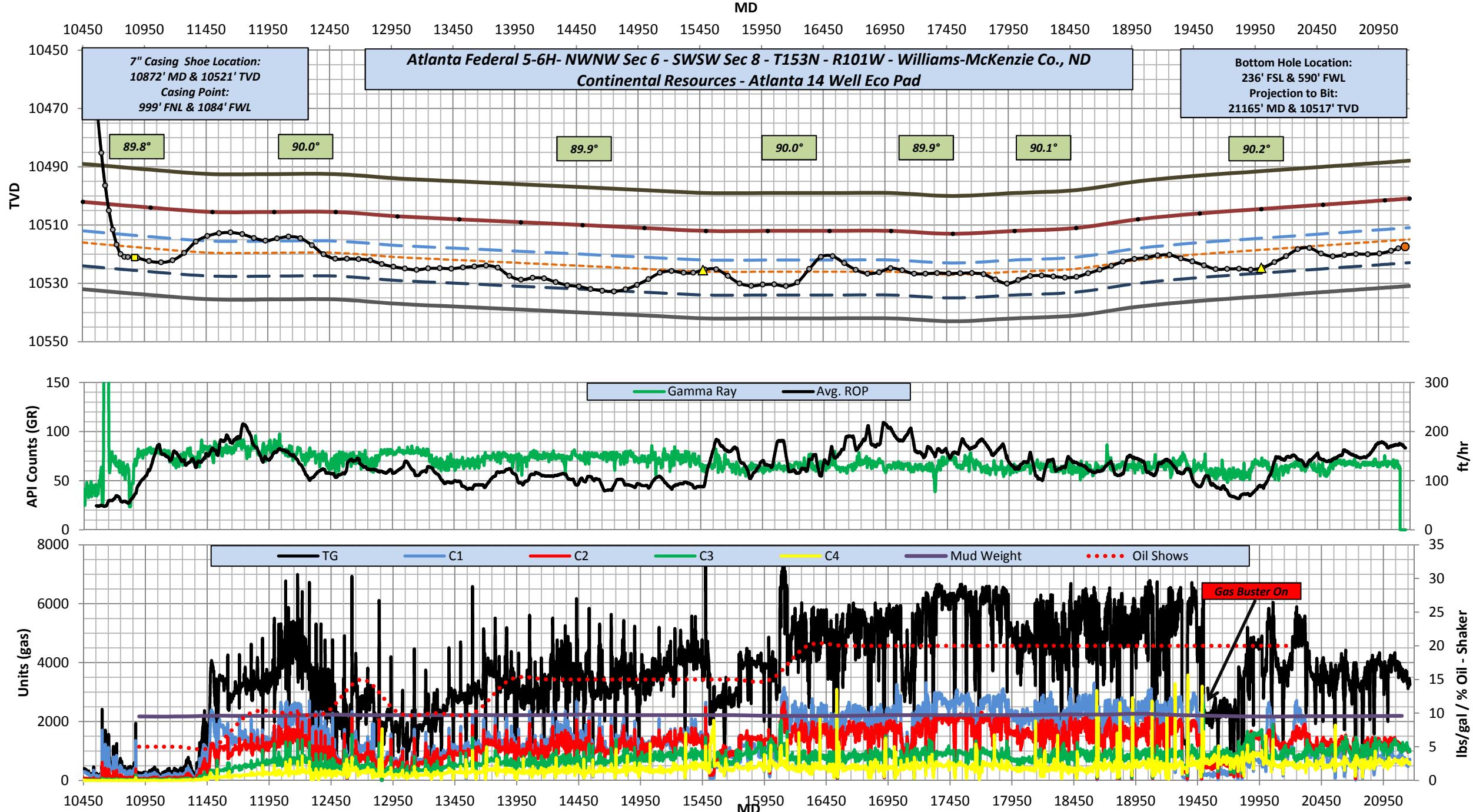
Gas observed in the lateral section displayed an average of 3680u, ranging from 27u to 7660u. Connection gasses were ranging from 160u to 5992u and trip gas maxed out at 7047 units with the gas buster on. Once total depth was reached, a short trip to the shoe and back to bottom resulted in 5252u of gas after circulating.

Using the hotter and more consistent gamma counts in the upper section of the target zone it was possible to identify formation dip changes during the lateral section. The marker 1 line illustrates warmer more ratty gamma that is consistent with the upper 12-15' of the target zone. Gamma counts in the middle of the target zone were cooler and corresponded with the tan/brown dolomite we were seeing near our upper hard streak. The hotter gamma counts along with lower gamma counts were more present in the upper section. Drilling the lower target zone displayed consistent gamma readings giving us good indicators we were in the bottom of the target zone. The lateral section averaged a dip of 89.98°; the formation came up roughly 1' from casing point to TD.

| Drilling Activity | | | | | | | | | | | | | |
|----------------------|-------------|-------------------|----------------|------------|------------|---------------|------------|------------|------------|-----------|------------|---|--|
| ATLANTA Federal 5-6H | | | | | | | | | | | | | |
| <u>Day</u> | <u>Date</u> | <u>Depth</u> | <u>Footage</u> | <u>WOB</u> | <u>RPM</u> | <u>Diff P</u> | <u>ROP</u> | <u>SPP</u> | <u>SPM</u> | <u>WT</u> | <u>VIS</u> | <u>ACTIVITY</u> | |
| 3 | 5/30/2013 | 9039 | 1496 | 37.1 | 52 | 522.9 | 48.3 | 3450 | 107 | 10.3 | 50 | Drilling Vertical Section: Drill, Slide, Survey, Rig Service | |
| 4 | 5/31/2013 | 9618 | 579 | 26.2 | 50 | 301.4 | 21.3 | 3211 | 101 | 10.2 | 56 | Drilling Vertical Section: Drill, Slide, Survey, Rig Service, TIH w/ new vert. assembly TOOH for BHA @ 9095' MD | |
| 5 | 6/1/2013 | 10045 | 427 | 30.3 | 51 | 742.4 | 122.5 | 3837 | 100 | 10.3 | 68 | Drilling Vertical Section: TIH w/ Build Assembly, TOOH for Build Assembly @ 10045' MD, Drill, Slide, Survey, Rig Service, TIH w/ new Vertical Assembly, TOOH for Bit @ 9651' MD | |
| 6 | 6/2/2013 | 10589 | 544 | 28.1 | 0 | 357.4 | 29.9 | 3397 | 97 | 10.55 | 59 | Drilling Build Section: Drill, Slide, Survey, Rig Service, TIH w/ Build Assembly | |
| 7 | 6/3/2013 | 10872 | 283 | 30.7 | 36 | 283 | 77.3 | 3497 | 98 | 10.5 | 60 | Drilling Buld Section: TD Atlanta Federal 5-6H Build Section @ 10872' MD, Drill, slide, Survey, Rig Service | |
| 8 | 6/4/2013 | Casing Operations | | | | | | | | | | | |
| 9 | 6/5/2013 | 12280 | 1408 | 25.9 | 69 | 529.9 | 105 | 2513 | 100 | 9.7 | 27 | TIH, Drilling Lateral Section: Drill, Survey, Slide, Rig Service | |
| 10 | 6/6/2013 | 13733 | 1453 | 15.8 | 54 | 640.7 | 123.9 | 2559 | 99 | 9.7 | 26 | Drilling Lateral Section: Drill, Survey, Slide, Rig Service | |
| 11 | 6/7/2013 | 15235 | 1502 | 16 | 52 | 693.7 | 117.4 | 2769 | 100 | 9.7 | 27 | Drilling Lateral Section: Drill, Survey, Slide, Rig Service | |
| 12 | 6/8/2013 | 15971 | 736 | 13 | 70 | 478 | 70 | 3195 | 100 | 9.6 | 26 | Drilling Lateral Section: Drill, Survey, Slide, Rig Service, TOOH for BHA, TIH | |
| 13 | 6/9/2013 | 17955 | 1984 | 18.7 | 72 | 723.9 | 122.4 | 3578 | 100 | 9.7 | 27 | Drilling Lateral Section: Drill, Survey, Slide, Rig Service | |
| 14 | 6/10/2013 | 19403 | 1448 | 17.9 | 51 | 627.2 | 80 | 3367 | 100 | 9.7 | 27 | Drilling Lateral Section: Drill, Survey, Slide, Rig Service | |
| 15 | 6/11/2013 | 20000 | 597 | na | na | na | na | na | na | na | na | Drilling Lateral Section: Drill, Survey, Slide, Rig Service, TOOH for BHA, TIH | |
| 16 | 6/12/2013 | 20850 | 850 | 21.3 | 52 | 701.12 | 207.4 | 3806 | 98 | 9.6 | 27 | TIH, Drilling Lateral Section: Drill, Survey, Slide, Rig Service | |
| 17 | 6/13/2013 | 21165 | na | na | na | na | na | na | na | na | na | TD"D Lateral Section | |

| Chronological Gas/Sample/Oil | | | | | | | |
|------------------------------|-------------------|------------|------------|-------------|-------------|----------|---|
| Atlanta Federal 5-6H | | | | | | | |
| Date | Depth 0500hrs | Max Gas(u) | Avg Gas(u) | Conn Gas(u) | Trip Gas(u) | Oil Show | Sample Show |
| 5/30/2013 | 9039 | 39 | 24 | 25-32 | na | na | no shows |
| 5/31/2013 | 9618 | 76 | 36 | 51-76 | na | na | no shows |
| 6/1/2013 | 10045 | 121 | 65 | 42-68 | 53-121 | na | no shows |
| 6/2/2013 | 10589 | 5636 | 320 | 51-77 | 62-80 | na | no shows |
| 6/3/2013 | 10872 | 2347 | 563 | 461-1705 | 4000-5000 | na | DULL INVERT FLOR, G IMMED STREAMING WHT POS IVERT CUT |
| 6/4/2013 | Casing Operations | | | | | | |
| 6/5/2013 | 12280 | 6982 | 2169 | 160-5739 | 1936 | 5% | G BRI-SCAT DULL YL-GRN FLOR, LT BLU-WHT STRMNG/DIFF C |
| 6/6/2013 | 13733 | 6905 | 2340 | 993-3926 | na | 10% | G BRI-SCAT DULL YL-GRN FLOR, LT BLU-WHT STRMNG/DIFF C |
| 6/7/2013 | 15285 | 6114 | 3440 | 2121-3343 | na | 15% | G EVN BRI YEL-GRN FLOR, LT BLU-WHT STRMNG/DIFF C |
| 6/8/2013 | 15971 | 7662 | 3537 | 2239-3922 | 7662 | 15% | G BRI-SCAT DULL YL-GRN FLOR, LT BLU-WHT STRMNG/DIFF C |
| 6/9/2013 | 17955 | 7058 | 5014 | 2768-5992 | na | 20% | G EVN BRI YEL-GRN FLOR, LT BLU-WHT STRMNG/DIFF C |
| 6/10/2013 | 19403 | 6788 | 4957 | 3177-5977 | na | 20% | G EVN BRI YEL-GRN FLOR, LT BLU-WHT STRMNG/DIFF C |
| 6/11/2013 | 20000 | 6714 | 2265 | 2257-4357 | na | 20% | G EVN BRI YEL-GRN FLOR, LT BLU-WHT STRMNG/DIFF C |
| 6/12/2013 | 20850 | 6046 | 3895 | 2948-3753 | 7047 | 20% | G EVN BRI YEL-GRN FLOR, LT BLU-WHT STRMNG/DIFF C |
| 6/13/2013 | 21165 | 4336 | 3725 | 2102-3187 | na | 20% | G EVN BRI YEL-GRN FLOR, LT BLU-WHT STRMNG/DIFF C |

— Upper Bakken Shale Top — Middle Bakken Top — Target Top — Target Bottom — Lower Bakken Shale — Marker 2 — Marker 1 — Casing Point — Trips — Wellbore — TD



| Formation Tops | | | | | | |
|---------------------------|-------------------|----------|---|----------------|-------------------|------------|
| Atlanta Federal 5-6H | | | | | | |
| VERTICAL & BUILD SECTIONS | | | | | | |
| FORMATION TOPS | Ground Elevation: | | 1945 | Kelly Bushing: | | 1967 |
| Formation | MD (ft) | TVD (ft) | VS (ft) | SS (ft) | Prognosed SS (ft) | Difference |
| Pierre Shale | | 1867 | | | 100 | |
| Greenhorn | | 4549 | | | -2582 | |
| Dakota Grp. (fka Mowry) | | 4925 | | | -2958 | |
| Base of Dakota Sand | | 5624 | | | -3657 | |
| Dunham Salt Top | | | | | | |
| Dunham Salt Base | | | | | | |
| Pine Salt Top | | 7156 | | | -5189 | |
| Pine Salt Base | | 7183 | | | -5216 | |
| Minnekahta | | 7202 | | | -5235 | |
| Opeche Salt Top | | | | | | |
| Opeche Salt Base | | | | | | |
| Minnelusa Grp. | | 7431 | | | -5464 | |
| Tyler | | 7617 | | | -5650 | |
| Kibbey | | 8153 | | | -6186 | |
| Charles | | 8300 | | | -6333 | |
| BLS | 9016 | 9015 | 11.36 | -7048 | -7044 | 4 |
| Mission Canyon | 9233 | 9232 | 10.9 | -7265 | -7267 | -2 |
| Lodgepole | 9782 | 9781 | 9.48 | -7814 | -7820 | -6 |
| False Bakken | 10594 | 10482 | 289.63 | -8515 | NP | NA |
| Upper Bakken Shale | 10612 | 10489 | 306.19 | -8522 | -8529 | -7 |
| Middle Bakken | 10653 | 10502 | 344.99 | -8535 | -8543 | -8 |
| | | | Projected Tops | | | |
| | | | Not Projected | | | |
| | | | Sub Sea (ft) | | | |
| | | | Actual Tops Picked | | | |
| | | | Tops picked by Drilling breaks (Rop & Differential), Samples, and Gamma | | | |

| <u>Critical Points</u> | <u>MD</u> | <u>TVD</u> | <u>SUBSEA</u> | <u>V/S</u> |
|---------------------------------|---|--------------|---------------|-----------------|
| Middle Bakken Member | 10653 | 10502 | -8535 | 344.99 |
| Surface Hole location | NWNW Sec 6: 495' FNL & 835' FWL | | | |
| KOP | 10045 | 10044 | -8077 | 8.9 |
| Casing Point | 10872 | 10521 | -8554 | 562.2 |
| Casing Location | NWNW Sec 6: 999' FNL & 1084' FWL | | | |
| Total Depth (projection to Bit) | 21165 | 10517 | -8550 | 10850.02 |
| Bottom Hole Location | SWSW Sec 8: 236' FSL & 590' FWL | | | |

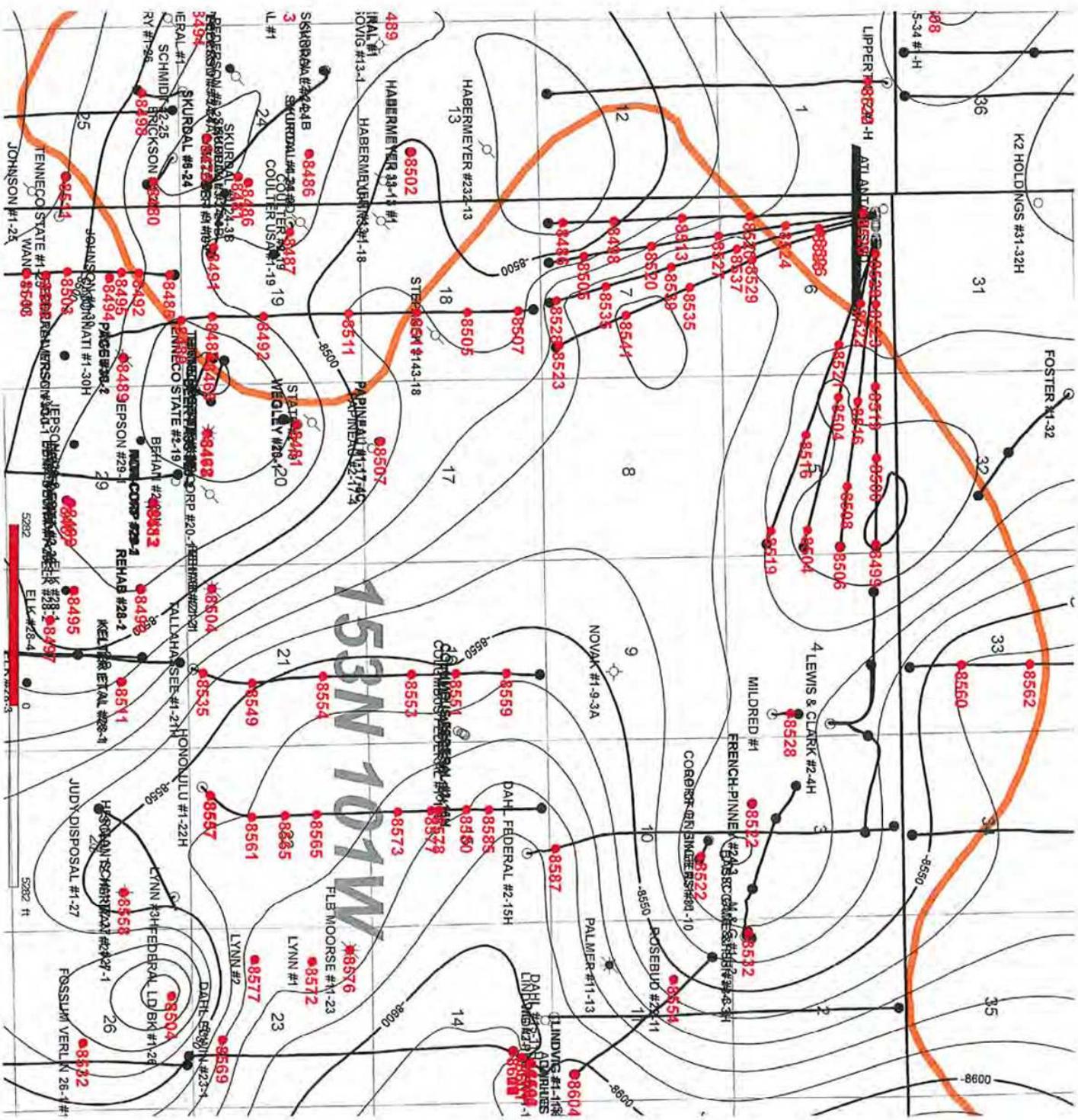
| <u>Lateral Trips</u> | <u>MD</u> | <u>TVD</u> | <u>Vertical & Build Trips</u> | <u>MD</u> | <u>TVD</u> |
|----------------------|--------------|----------------|-----------------------------------|--------------|--------------|
| BHA | 15475 | 10525.4 | TOOH for BHA (Slow ROP) | 9095 | 9094 |
| BHA | 20000 | 10524.7 | TOOH for Bit (Slow ROP) | 9651 | 9650 |
| | | | TOOH for Build Assembly (KOP) | 10045 | 10044 |
| | | | | | |

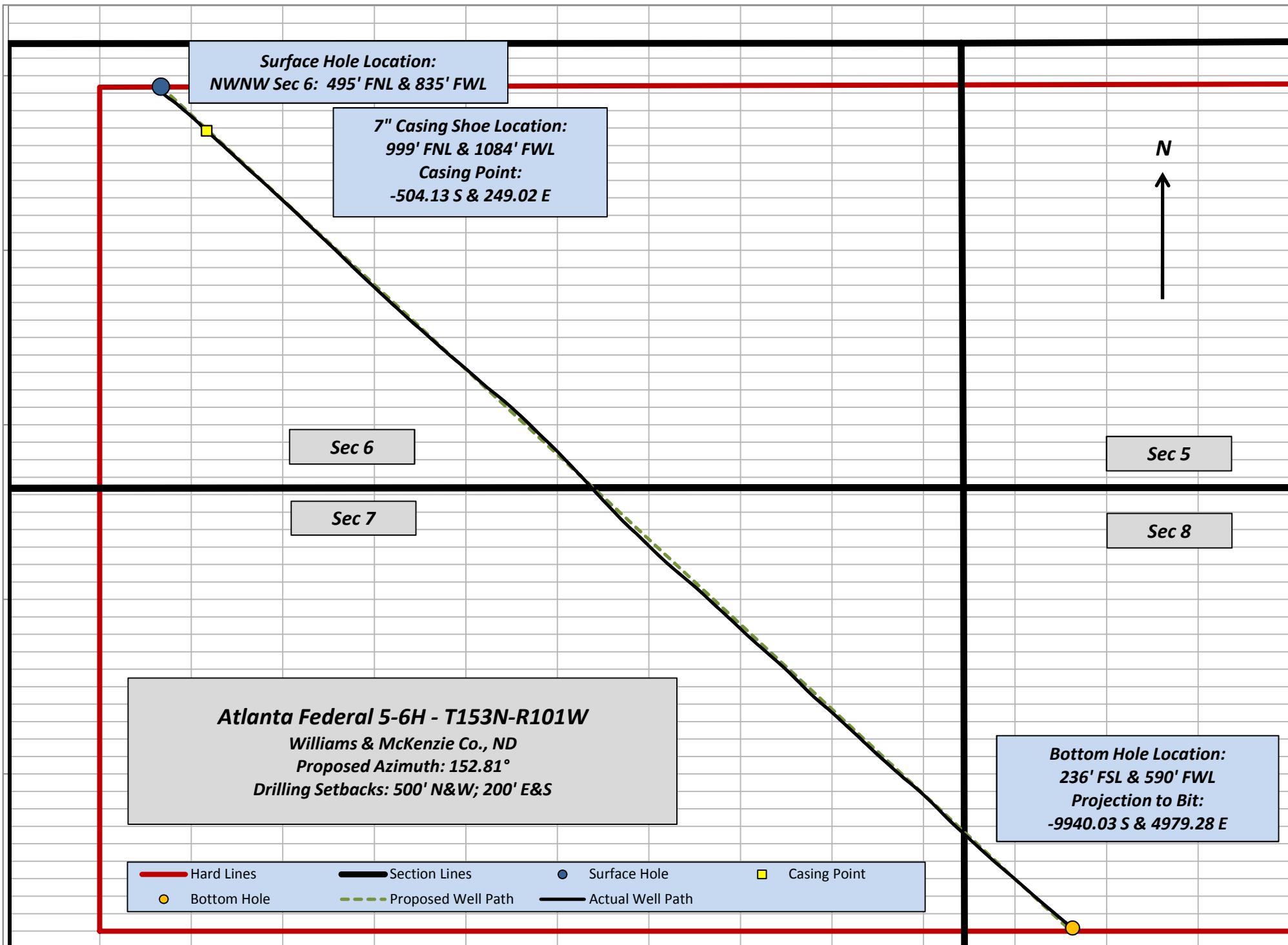
LATERAL SUMMARY

| | | | |
|-----------------------|--------------|--------|---------------------------|
| Total Lateral Footage | 10293 | % | |
| Middle Bakken | 10293 | 100.0% | <i>Target Zone</i> |
| | | 0.0% | <i>Out of Target Zone</i> |
| | | 100.0% | |

| Atlanta Federal 5-6H STRUCTURE (MD - TVD) | | | | | | | | | |
|---|------------------------|-------------------|-----------------|--------------------|--------------------|----------|----------|-------------|-------------------|
| MD (ft) | Upper Bakken Shale Top | Middle Bakken Top | Target Zone Top | Target Zone Bottom | Lower Bakken Shale | Marker 2 | Marker 1 | Dip (angle) | Dip Rate (ft/100) |
| 10450.0 | 10489.0 | 10502.0 | 10512.0 | 10524.0 | 10532.0 | 10516.0 | | | |
| 11000.0 | 10491.0 | 10504.0 | 10514.0 | 10526.0 | 10534.0 | 10518.0 | | 89.79 | 0.36 |
| 11500.0 | 10492.5 | 10505.5 | 10515.5 | 10527.5 | 10535.5 | 10519.5 | | 89.83 | 0.30 |
| 12000.0 | 10492.5 | 10505.5 | 10515.5 | 10527.5 | 10535.5 | 10519.5 | | #DIV/0! | 0.00 |
| 12500.0 | 10492.5 | 10505.5 | 10515.5 | 10527.5 | 10535.5 | 10519.5 | | #DIV/0! | 0.00 |
| 13000.0 | 10494.0 | 10507.0 | 10517.0 | 10529.0 | 10537.0 | 10521.0 | | 89.83 | 0.30 |
| 13500.0 | 10495.0 | 10508.0 | 10518.0 | 10530.0 | 10538.0 | 10522.0 | | 89.89 | 0.20 |
| 14000.0 | 10496.0 | 10509.0 | 10519.0 | 10531.0 | 10539.0 | 10523.0 | | 89.89 | 0.20 |
| 14500.0 | 10497.0 | 10510.0 | 10520.0 | 10532.0 | 10540.0 | 10524.0 | | 89.89 | 0.20 |
| 15000.0 | 10498.0 | 10511.0 | 10521.0 | 10533.0 | 10541.0 | 10525.0 | | 89.89 | 0.20 |
| 15500.0 | 10499.0 | 10512.0 | 10522.0 | 10534.0 | 10542.0 | 10526.0 | | 89.89 | 0.20 |
| 16000.0 | 10499.0 | 10512.0 | 10522.0 | 10534.0 | 10542.0 | 10526.0 | | #DIV/0! | 0.00 |
| 16500.0 | 10499.0 | 10512.0 | 10522.0 | 10534.0 | 10542.0 | 10526.0 | | #DIV/0! | 0.00 |
| 17000.0 | 10499.0 | 10512.0 | 10522.0 | 10534.0 | 10542.0 | 10526.0 | | #DIV/0! | 0.00 |
| 17500.0 | 10500.0 | 10513.0 | 10523.0 | 10535.0 | 10543.0 | 10527.0 | | 89.89 | 0.20 |
| 18000.0 | 10499.0 | 10512.0 | 10522.0 | 10534.0 | 10542.0 | 10526.0 | | 90.11 | -0.20 |
| 18500.0 | 10498.0 | 10511.0 | 10521.0 | 10533.0 | 10541.0 | 10525.0 | | 90.11 | -0.20 |
| 19000.0 | 10495.0 | 10508.0 | 10518.0 | 10530.0 | 10538.0 | 10522.0 | | 90.34 | -0.60 |
| 19500.0 | 10493.0 | 10506.0 | 10516.0 | 10528.0 | 10536.0 | 10520.0 | | 90.23 | -0.40 |
| 20000.0 | 10491.5 | 10504.5 | 10514.5 | 10526.5 | 10534.5 | 10518.5 | | 90.17 | -0.30 |
| 20500.0 | 10490.0 | 10503.0 | 10513.0 | 10525.0 | 10533.0 | 10517.0 | | 90.17 | -0.30 |
| 21000.0 | 10488.5 | 10501.5 | 10511.5 | 10523.5 | 10531.5 | 10515.5 | | 90.17 | -0.30 |
| 21200.0 | 10487.9 | 10500.9 | 10510.9 | 10522.9 | 10530.9 | 10514.9 | | 90.17 | -0.30 |

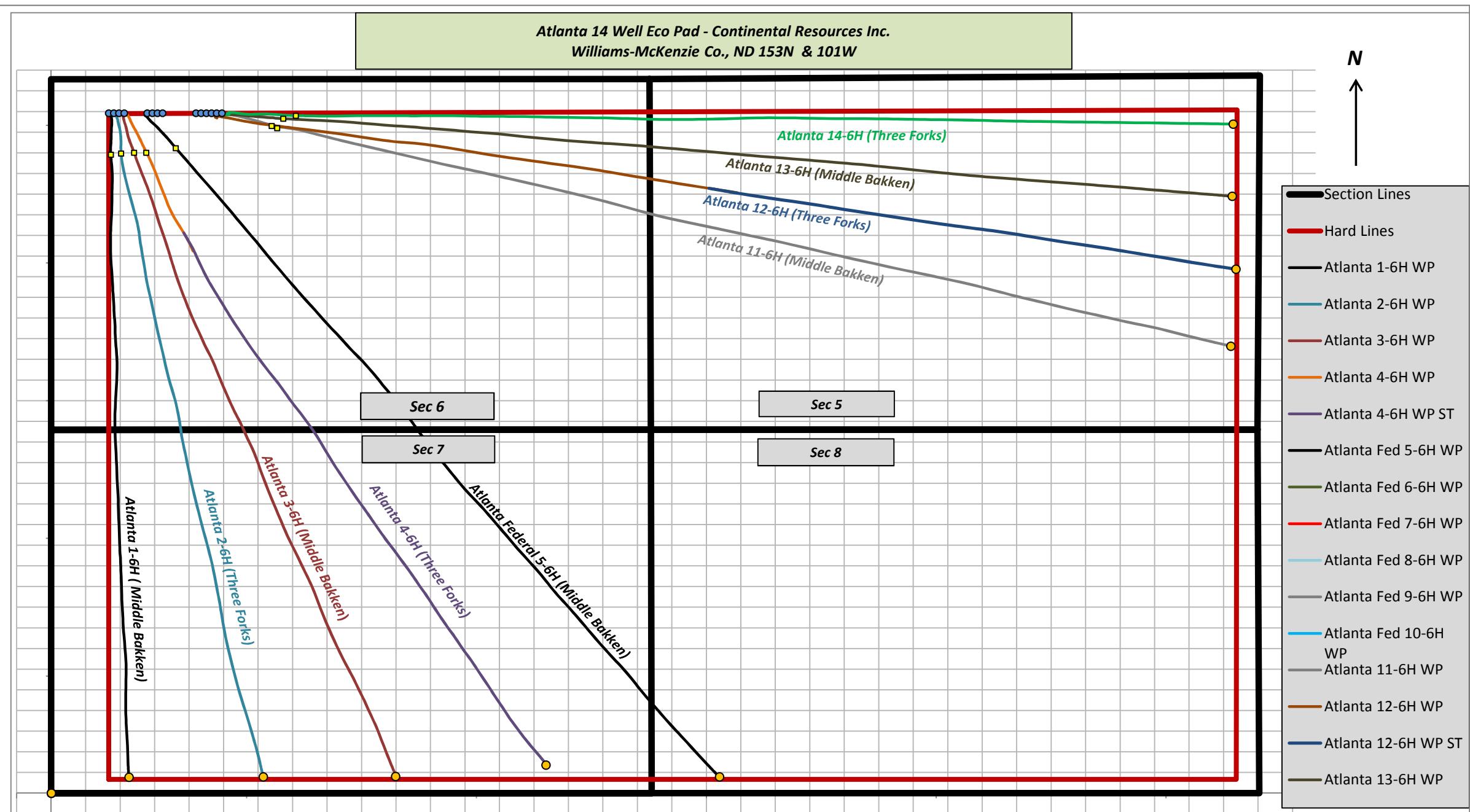
Bakken Structure Map C.I. 10'





Atlanta 14 Well Eco Pad - Continental Resources Inc.
Williams-McKenzie Co., ND 153N & 101W

N



| Ver 1.0 | SURVEY CALCULATION PROGRAM  | | | | | | | | | | | | ctrl-shift-I = Insert Survey | | | | |
|--------------------|--|-----------------------|--------|-------------------------|--------|---------|--------|--|-----------|----------|--------|--------------------------------------|------------------------------|---------------------|------------|-----------|--|
| | | | | | | | | | | | | | ctrl-shift-D = Delete Survey | | | | |
| Minimum Curviture | | | | | | | | | | | | | | File: | | | |
| OIL & GAS CO.: | | Continental Resources | | | | | | Target Information | | | | VS Referenced to Offset from Surface | | | | | |
| WELL: | | Atlanta 5-6H | | | | | | TARGET TVD: | | 10530.00 | | NORTH/SOUTH: | | 0.00 | | | |
| COUNTY / STATE: | | Williams Co. | | STATE: | ND | | | TARGET INCL: | | 90.00 | | EAST/WEST: | | 0.00 | | | |
| RIG: | | Cyclone 2 | | | | | | TARGET AZM: | | 152.76 | | (Enter 0' N and 0' E for Surface) | | | | | |
| JOB NUMBER: | | DDMT-130371 | | | | | | | | | | | | | | | |
| SURVEY COMPANY: | | | | DIRECTIONAL COMPANY: | | | | PROPOSED DIRECTION: | | | | 152.81 | MAG-DEC. / TOTAL CORR.(+/-): | | 8.53 | | |
| MS Energy | | | | MS Energy | | | | | | | | | REFERENCED TO: | | True North | | |
| MWD SPECIALIST(S): | | | | DIRECTIONAL DRILLER(S): | | | | COMMENTS: | | | | | | | | | |
| Tim Coleman | | | | Kurt Wortley | | | | Tie-in provided by Newsco; Final survey PBHL | | | | | | | | | |
| Kevin Krenz | | | | Justin Klauzer | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | Target Calculations | | | |
| SVY | MD | INC | TRUE | TEMP | Course | | | Surface | CLOSURE | | DLS/ | BUR/ | TVD AT 0' | RIGHT(+) | ABOVE (+) | | |
| | | | AZM | °F | Length | TVD | N-S | E-W | Vert Sect | DIST | DIR | 100 | 100' | V. SEC. | LEFT(-) | BELOW (-) | |
| Tie In | 1967 | 1.30 | 214.20 | | | 1966.93 | -3.91 | -6.99 | 0.28 | 8.01 | 240.78 | | | 1966.93 | 8.00 | 8563.07 | |
| 1 | 2048 | 1.40 | 211.21 | 86.6 | 81 | 2047.91 | -5.52 | -8.02 | 1.24 | 9.73 | 235.48 | 0.15 | 0.12 | 2047.91 | 9.65 | 8482.09 | |
| 2 | 2070 | 1.50 | 210.90 | 86.6 | 22 | 2069.90 | -5.99 | -8.31 | 1.54 | 10.24 | 234.19 | 0.46 | 0.45 | 2069.90 | 10.13 | 8460.10 | |
| 3 | 2164 | 1.70 | 199.60 | 92.0 | 94 | 2163.86 | -8.36 | -9.41 | 3.14 | 12.59 | 228.36 | 0.40 | 0.21 | 2163.86 | 12.19 | 8366.14 | |
| 4 | 2257 | 1.10 | 219.60 | 96.5 | 93 | 2256.84 | -10.35 | -10.44 | 4.44 | 14.70 | 225.24 | 0.82 | -0.65 | 2256.84 | 14.02 | 8273.16 | |
| 5 | 2351 | 1.40 | 220.70 | 99.2 | 94 | 2350.81 | -11.92 | -11.76 | 5.22 | 16.74 | 224.63 | 0.32 | 0.32 | 2350.81 | 15.91 | 8179.19 | |
| 6 | 2445 | 2.10 | 209.20 | 101.9 | 94 | 2444.77 | -14.29 | -13.35 | 6.61 | 19.56 | 223.05 | 0.83 | 0.74 | 2444.77 | 18.41 | 8085.23 | |
| 7 | 2538 | 0.90 | 229.60 | 106.4 | 93 | 2537.74 | -16.25 | -14.74 | 7.72 | 21.94 | 222.21 | 1.39 | -1.29 | 2537.74 | 20.54 | 7992.26 | |
| 8 | 2631 | 0.40 | 319.00 | 109.1 | 93 | 2630.73 | -16.48 | -15.51 | 7.57 | 22.63 | 223.26 | 1.05 | -0.54 | 2630.73 | 21.33 | 7899.27 | |
| 9 | 2725 | 0.60 | 18.60 | 111.8 | 94 | 2724.73 | -15.76 | -15.57 | 6.91 | 22.15 | 224.64 | 0.56 | 0.21 | 2724.73 | 21.06 | 7805.27 | |
| 10 | 2818 | 0.70 | 43.20 | 112.7 | 93 | 2817.72 | -14.89 | -15.02 | 6.38 | 21.15 | 225.25 | 0.32 | 0.11 | 2817.72 | 20.17 | 7712.28 | |
| 11 | 2912 | 0.60 | 36.00 | 115.4 | 94 | 2911.72 | -14.07 | -14.34 | 5.97 | 20.09 | 225.54 | 0.14 | -0.11 | 2911.72 | 19.19 | 7618.28 | |
| 12 | 3006 | 0.50 | 53.80 | 117.2 | 94 | 3005.71 | -13.43 | -13.72 | 5.68 | 19.20 | 225.61 | 0.21 | -0.11 | 3005.71 | 18.35 | 7524.29 | |
| 13 | 3099 | 0.90 | 49.70 | 119.0 | 93 | 3098.71 | -12.72 | -12.83 | 5.45 | 18.07 | 225.26 | 0.43 | 0.43 | 3098.71 | 17.23 | 7431.29 | |
| 14 | 3193 | 0.80 | 36.30 | 120.7 | 94 | 3192.70 | -11.71 | -11.88 | 4.99 | 16.69 | 225.41 | 0.24 | -0.11 | 3192.70 | 15.93 | 7337.30 | |
| 15 | 3286 | 0.50 | 48.70 | 122.5 | 93 | 3285.69 | -10.92 | -11.19 | 4.60 | 15.64 | 225.70 | 0.35 | -0.32 | 3285.69 | 14.95 | 7244.31 | |
| 16 | 3380 | 0.50 | 55.40 | 126.1 | 94 | 3379.69 | -10.42 | -10.55 | 4.45 | 14.83 | 225.35 | 0.06 | 0.00 | 3379.69 | 14.15 | 7150.31 | |
| 17 | 3473 | 0.20 | 77.80 | 125.2 | 93 | 3472.68 | -10.15 | -10.06 | 4.44 | 14.29 | 224.72 | 0.35 | -0.32 | 3472.68 | 13.59 | 7057.32 | |
| 18 | 3567 | 0.30 | 7.50 | 124.3 | 94 | 3566.68 | -9.88 | -9.86 | 4.28 | 13.96 | 224.96 | 0.32 | 0.11 | 3566.68 | 13.29 | 6963.32 | |
| 19 | 3660 | 0.50 | 30.50 | 126.1 | 93 | 3659.68 | -9.28 | -9.63 | 3.86 | 13.37 | 226.03 | 0.27 | 0.22 | 3659.68 | 12.81 | 6870.32 | |
| 20 | 3753 | 0.10 | 253.30 | 127.9 | 93 | 3752.68 | -8.96 | -9.50 | 3.63 | 13.06 | 226.67 | 0.62 | -0.43 | 3752.68 | 12.54 | 6777.32 | |
| 21 | 3847 | 0.30 | 306.70 | 128.8 | 94 | 3846.68 | -8.83 | -9.77 | 3.39 | 13.17 | 227.89 | 0.27 | 0.21 | 3846.68 | 12.73 | 6683.32 | |
| 22 | 3941 | 0.20 | 347.50 | 130.6 | 94 | 3940.68 | -8.53 | -10.01 | 3.01 | 13.15 | 229.56 | 0.21 | -0.11 | 3940.68 | 12.80 | 6589.32 | |

| | | | | | | | | Target Calculations | | | | | | | | |
|-----|------|------|--------|-------|--------|---------|--------|---------------------|-----------|-------|--------|------|-----------|----------|-----------|-----------|
| | | | TRUE | TEMP | Course | | | Surface | CLOSURE | | DLS/ | BUR/ | TVD AT 0' | RIGHT(+) | ABOVE (+) | |
| SVY | MD | INC | AZM | °F | Length | TVD | N-S | E-W | Vert Sect | DIST | DIR | 100 | 100' | V. SEC. | LEFT(-) | BELOW (-) |
| 23 | 4034 | 0.10 | 2.70 | 132.4 | 93 | 4033.68 | -8.29 | -10.04 | 2.79 | 13.02 | 230.45 | 0.11 | -0.11 | 4033.68 | 12.72 | 6496.32 |
| 24 | 4128 | 0.10 | 1.20 | 133.3 | 94 | 4127.68 | -8.12 | -10.03 | 2.64 | 12.91 | 231.00 | 0.00 | 0.00 | 4127.68 | 12.64 | 6402.32 |
| 25 | 4221 | 0.20 | 152.70 | 135.1 | 93 | 4220.68 | -8.19 | -9.96 | 2.73 | 12.89 | 230.57 | 0.31 | 0.11 | 4220.68 | 12.60 | 6309.32 |
| 26 | 4315 | 0.10 | 91.10 | 136.0 | 94 | 4314.68 | -8.33 | -9.80 | 2.94 | 12.86 | 229.61 | 0.19 | -0.11 | 4314.68 | 12.53 | 6215.32 |
| 27 | 4410 | 0.20 | 112.90 | 136.9 | 95 | 4409.68 | -8.40 | -9.56 | 3.10 | 12.73 | 228.70 | 0.12 | 0.11 | 4409.68 | 12.35 | 6120.32 |
| 28 | 4504 | 0.20 | 112.30 | 134.2 | 94 | 4503.68 | -8.53 | -9.26 | 3.35 | 12.59 | 227.36 | 0.00 | 0.00 | 4503.68 | 12.14 | 6026.32 |
| 29 | 4598 | 0.40 | 103.50 | 135.1 | 94 | 4597.68 | -8.67 | -8.79 | 3.69 | 12.34 | 225.40 | 0.22 | 0.21 | 4597.68 | 11.78 | 5932.32 |
| 30 | 4689 | 0.50 | 119.60 | 137.8 | 91 | 4688.67 | -8.94 | -8.13 | 4.23 | 12.08 | 222.31 | 0.18 | 0.11 | 4688.67 | 11.32 | 5841.33 |
| 31 | 4783 | 0.70 | 118.50 | 138.7 | 94 | 4782.67 | -9.41 | -7.27 | 5.05 | 11.89 | 217.69 | 0.21 | 0.21 | 4782.67 | 10.77 | 5747.33 |
| 32 | 4877 | 0.80 | 98.00 | 139.6 | 94 | 4876.66 | -9.78 | -6.12 | 5.90 | 11.53 | 212.04 | 0.30 | 0.11 | 4876.66 | 9.92 | 5653.34 |
| 33 | 4970 | 0.90 | 71.80 | 140.5 | 93 | 4969.65 | -9.64 | -4.78 | 6.39 | 10.76 | 206.38 | 0.43 | 0.11 | 4969.65 | 8.66 | 5560.35 |
| 34 | 5062 | 0.70 | 171.50 | 140.5 | 92 | 5061.64 | -9.97 | -4.01 | 7.03 | 10.75 | 201.92 | 1.34 | -0.22 | 5061.64 | 8.13 | 5468.36 |
| 35 | 5156 | 1.70 | 182.80 | 143.2 | 94 | 5155.62 | -11.93 | -4.00 | 8.79 | 12.58 | 198.52 | 1.09 | 1.06 | 5155.62 | 9.01 | 5374.38 |
| 36 | 5248 | 1.90 | 174.20 | 145.0 | 92 | 5247.58 | -14.81 | -3.91 | 11.39 | 15.32 | 194.78 | 0.36 | 0.22 | 5247.58 | 10.25 | 5282.42 |
| 37 | 5342 | 1.40 | 204.90 | 147.7 | 94 | 5341.54 | -17.40 | -4.23 | 13.55 | 17.91 | 193.67 | 1.06 | -0.53 | 5341.54 | 11.73 | 5188.46 |
| 38 | 5436 | 1.10 | 256.40 | 149.5 | 94 | 5435.52 | -18.66 | -5.59 | 14.04 | 19.48 | 196.69 | 1.19 | -0.32 | 5435.52 | 13.51 | 5094.48 |
| 39 | 5529 | 1.40 | 251.50 | 152.2 | 93 | 5528.50 | -19.23 | -7.54 | 13.66 | 20.65 | 201.41 | 0.34 | 0.32 | 5528.50 | 15.50 | 5001.50 |
| 40 | 5623 | 1.20 | 249.10 | 152.2 | 94 | 5622.47 | -19.94 | -9.55 | 13.38 | 22.11 | 205.58 | 0.22 | -0.21 | 5622.47 | 17.62 | 4907.53 |
| 41 | 5716 | 1.10 | 287.60 | 153.1 | 93 | 5715.46 | -20.02 | -11.31 | 12.64 | 22.99 | 209.46 | 0.82 | -0.11 | 5715.46 | 19.22 | 4814.54 |
| 42 | 5810 | 0.80 | 283.60 | 154.9 | 94 | 5809.44 | -19.59 | -12.81 | 11.58 | 23.41 | 213.17 | 0.33 | -0.32 | 5809.44 | 20.35 | 4720.56 |
| 43 | 5904 | 0.30 | 189.30 | 155.8 | 94 | 5903.44 | -19.68 | -13.48 | 11.34 | 23.86 | 214.42 | 0.93 | -0.53 | 5903.44 | 21.00 | 4626.56 |
| 44 | 5997 | 0.90 | 165.50 | 156.7 | 93 | 5996.43 | -20.63 | -13.34 | 12.25 | 24.57 | 212.89 | 0.69 | 0.65 | 5996.43 | 21.30 | 4533.57 |
| 45 | 6091 | 1.60 | 206.40 | 153.1 | 94 | 6090.41 | -22.52 | -13.74 | 13.75 | 26.38 | 211.39 | 1.16 | 0.74 | 6090.41 | 22.52 | 4439.59 |
| 46 | 6184 | 1.90 | 195.60 | 153.1 | 93 | 6183.37 | -25.17 | -14.73 | 15.65 | 29.16 | 210.34 | 0.48 | 0.32 | 6183.37 | 24.62 | 4346.63 |
| 47 | 6278 | 1.10 | 240.60 | 156.7 | 94 | 6277.34 | -27.11 | -15.94 | 16.83 | 31.45 | 210.45 | 1.45 | -0.85 | 6277.34 | 26.58 | 4252.66 |
| 48 | 6371 | 0.70 | 201.40 | 158.5 | 93 | 6370.33 | -28.08 | -16.92 | 17.24 | 32.78 | 211.08 | 0.77 | -0.43 | 6370.33 | 27.90 | 4159.67 |
| 49 | 6465 | 1.20 | 160.80 | 161.2 | 94 | 6464.32 | -29.54 | -16.81 | 18.60 | 33.99 | 209.64 | 0.86 | 0.53 | 6464.32 | 28.47 | 4065.68 |
| 50 | 6558 | 1.80 | 145.00 | 163.0 | 93 | 6557.28 | -31.66 | -15.65 | 21.01 | 35.32 | 206.30 | 0.78 | 0.65 | 6557.28 | 28.40 | 3972.72 |
| 51 | 6652 | 1.60 | 142.70 | 165.7 | 94 | 6651.24 | -33.91 | -14.01 | 23.76 | 36.69 | 202.44 | 0.22 | -0.21 | 6651.24 | 27.98 | 3878.76 |
| 52 | 6746 | 0.70 | 204.30 | 162.1 | 94 | 6745.23 | -35.48 | -13.45 | 25.41 | 37.94 | 200.76 | 1.50 | -0.96 | 6745.23 | 28.20 | 3784.77 |
| 53 | 6838 | 1.90 | 304.30 | 168.4 | 92 | 6837.21 | -35.13 | -14.94 | 24.42 | 38.18 | 203.04 | 2.32 | 1.30 | 6837.21 | 29.36 | 3692.79 |
| 54 | 6932 | 0.60 | 19.20 | 171.1 | 94 | 6931.19 | -33.79 | -16.07 | 22.71 | 37.41 | 205.43 | 1.95 | -1.38 | 6931.19 | 29.75 | 3598.81 |
| 55 | 7026 | 0.70 | 42.70 | 171.9 | 94 | 7025.18 | -32.90 | -15.51 | 22.18 | 36.38 | 205.25 | 0.30 | 0.11 | 7025.18 | 28.85 | 3504.82 |
| 56 | 7120 | 0.70 | 57.00 | 171.9 | 94 | 7119.18 | -32.17 | -14.64 | 21.92 | 35.34 | 204.48 | 0.19 | 0.00 | 7119.18 | 27.74 | 3410.82 |
| 57 | 7213 | 0.90 | 61.20 | 171.9 | 93 | 7212.17 | -31.51 | -13.53 | 21.84 | 34.29 | 203.24 | 0.22 | 0.22 | 7212.17 | 26.45 | 3317.83 |
| 58 | 7307 | 1.10 | 42.50 | 172.8 | 94 | 7306.15 | -30.48 | -12.27 | 21.51 | 32.86 | 201.92 | 0.40 | 0.21 | 7306.15 | 24.86 | 3223.85 |
| 59 | 7400 | 1.00 | 52.20 | 173.7 | 93 | 7399.14 | -29.33 | -11.03 | 21.05 | 31.33 | 200.60 | 0.22 | -0.11 | 7399.14 | 23.23 | 3130.86 |

| | | | | | | | | | | Target Calculations | | | | | | |
|-----|-------|-------|--------|-------|--------|----------|--------|--------|-----------|---------------------|--------|-------|-------|-----------|----------|-----------|
| | | | TRUE | TEMP | Course | | | | Surface | CLOSURE | | DLS/ | BUR/ | TVD AT 0' | RIGHT(+) | ABOVE (+) |
| SVY | MD | INC | AZM | °F | Length | TVD | N-S | E-W | Vert Sect | DIST | DIR | 100 | 100' | V. SEC. | LEFT(-) | BELOW (-) |
| 60 | 7494 | 1.00 | 53.80 | 171.1 | 94 | 7493.12 | -28.34 | -9.72 | 20.77 | 29.96 | 198.92 | 0.03 | 0.00 | 7493.12 | 21.61 | 3036.88 |
| 61 | 7588 | 0.80 | 53.40 | 173.7 | 94 | 7587.11 | -27.47 | -8.53 | 20.53 | 28.76 | 197.25 | 0.21 | -0.21 | 7587.11 | 20.15 | 2942.89 |
| 62 | 7681 | 0.80 | 37.60 | 176.4 | 93 | 7680.10 | -26.56 | -7.61 | 20.15 | 27.63 | 195.98 | 0.24 | 0.00 | 7680.10 | 18.92 | 2849.90 |
| 63 | 7775 | 0.60 | 29.50 | 178.2 | 94 | 7774.09 | -25.62 | -6.97 | 19.60 | 26.55 | 195.21 | 0.24 | -0.21 | 7774.09 | 17.92 | 2755.91 |
| 64 | 7869 | 0.40 | 31.40 | 179.1 | 94 | 7868.09 | -24.91 | -6.55 | 19.16 | 25.76 | 194.74 | 0.21 | -0.21 | 7868.09 | 17.23 | 2661.91 |
| 65 | 7963 | 0.50 | 21.00 | 181.8 | 94 | 7962.09 | -24.25 | -6.24 | 18.72 | 25.03 | 194.42 | 0.14 | 0.11 | 7962.09 | 16.64 | 2567.91 |
| 66 | 8057 | 0.40 | 357.30 | 185.4 | 94 | 8056.08 | -23.53 | -6.10 | 18.14 | 24.31 | 194.54 | 0.22 | -0.11 | 8056.08 | 16.20 | 2473.92 |
| 67 | 8150 | 0.40 | 346.60 | 182.7 | 93 | 8149.08 | -22.89 | -6.19 | 17.53 | 23.72 | 195.14 | 0.08 | 0.00 | 8149.08 | 15.99 | 2380.92 |
| 68 | 8244 | 0.30 | 357.40 | 184.5 | 94 | 8243.08 | -22.33 | -6.28 | 16.99 | 23.20 | 195.71 | 0.13 | -0.11 | 8243.08 | 15.81 | 2286.92 |
| 69 | 8337 | 0.50 | 337.30 | 185.4 | 93 | 8336.08 | -21.71 | -6.45 | 16.37 | 22.65 | 196.54 | 0.26 | 0.22 | 8336.08 | 15.67 | 2193.92 |
| 70 | 8431 | 0.40 | 322.60 | 184.5 | 94 | 8430.08 | -21.07 | -6.81 | 15.63 | 22.15 | 197.90 | 0.16 | -0.11 | 8430.08 | 15.70 | 2099.92 |
| 71 | 8524 | 0.50 | 331.90 | 184.5 | 93 | 8523.07 | -20.46 | -7.20 | 14.91 | 21.69 | 199.38 | 0.13 | 0.11 | 8523.07 | 15.76 | 2006.93 |
| 72 | 8618 | 0.60 | 313.30 | 185.4 | 94 | 8617.07 | -19.76 | -7.75 | 14.03 | 21.22 | 201.41 | 0.22 | 0.11 | 8617.07 | 15.93 | 1912.93 |
| 73 | 8711 | 0.70 | 292.20 | 187.2 | 93 | 8710.06 | -19.21 | -8.63 | 13.14 | 21.06 | 204.19 | 0.28 | 0.11 | 8710.06 | 16.46 | 1819.94 |
| 74 | 8805 | 0.70 | 285.40 | 189.0 | 94 | 8804.06 | -18.84 | -9.71 | 12.32 | 21.20 | 207.27 | 0.09 | 0.00 | 8804.06 | 17.26 | 1725.94 |
| 75 | 8898 | 0.50 | 275.50 | 191.7 | 93 | 8897.05 | -18.65 | -10.66 | 11.72 | 21.48 | 209.76 | 0.24 | -0.22 | 8897.05 | 18.02 | 1632.95 |
| 76 | 8992 | 0.60 | 262.20 | 191.7 | 94 | 8991.05 | -18.68 | -11.56 | 11.33 | 21.97 | 211.75 | 0.17 | 0.11 | 8991.05 | 18.83 | 1538.95 |
| 77 | 9085 | 0.40 | 256.70 | 168.4 | 93 | 9084.04 | -18.82 | -12.36 | 11.09 | 22.51 | 213.29 | 0.22 | -0.22 | 9084.04 | 19.60 | 1445.96 |
| 78 | 9177 | 0.50 | 254.50 | 170.2 | 92 | 9176.04 | -19.00 | -13.06 | 10.93 | 23.05 | 214.50 | 0.11 | 0.11 | 9176.04 | 20.31 | 1353.96 |
| 79 | 9270 | 0.40 | 262.70 | 174.6 | 93 | 9269.04 | -19.15 | -13.77 | 10.74 | 23.59 | 215.72 | 0.13 | -0.11 | 9269.04 | 21.01 | 1260.96 |
| 80 | 9363 | 0.40 | 261.00 | 179.1 | 93 | 9362.03 | -19.24 | -14.41 | 10.53 | 24.04 | 216.84 | 0.01 | 0.00 | 9362.03 | 21.62 | 1167.97 |
| 81 | 9456 | 0.30 | 276.30 | 181.8 | 93 | 9455.03 | -19.27 | -14.98 | 10.29 | 24.40 | 217.86 | 0.15 | -0.11 | 9455.03 | 22.13 | 1074.97 |
| 82 | 9548 | 0.30 | 270.50 | 179.1 | 92 | 9547.03 | -19.24 | -15.46 | 10.05 | 24.68 | 218.78 | 0.03 | 0.00 | 9547.03 | 22.55 | 982.97 |
| 83 | 9641 | 0.30 | 277.50 | 170.2 | 93 | 9640.03 | -19.20 | -15.94 | 9.80 | 24.96 | 219.70 | 0.04 | 0.00 | 9640.03 | 22.96 | 889.97 |
| 84 | 9734 | 0.40 | 267.50 | 174.6 | 93 | 9733.03 | -19.19 | -16.51 | 9.52 | 25.31 | 220.71 | 0.13 | 0.11 | 9733.03 | 23.46 | 796.97 |
| 85 | 9827 | 0.30 | 265.60 | 179.1 | 93 | 9826.03 | -19.22 | -17.07 | 9.29 | 25.71 | 221.62 | 0.11 | -0.11 | 9826.03 | 23.98 | 703.97 |
| 86 | 9920 | 0.30 | 284.10 | 182.7 | 93 | 9919.03 | -19.18 | -17.55 | 9.04 | 26.00 | 222.47 | 0.10 | 0.00 | 9919.03 | 24.38 | 610.97 |
| 87 | 9995 | 0.20 | 313.60 | 184.5 | 75 | 9994.03 | -19.04 | -17.84 | 8.78 | 26.09 | 223.13 | 0.21 | -0.13 | 9994.03 | 24.57 | 535.97 |
| 88 | 10041 | 0.10 | 248.40 | 173.7 | 46 | 10040.02 | -19.00 | -17.93 | 8.70 | 26.13 | 223.35 | 0.40 | -0.22 | 10040.02 | 24.64 | 489.98 |
| 89 | 10072 | 3.10 | 154.30 | 176.4 | 31 | 10071.01 | -19.76 | -17.59 | 9.54 | 26.46 | 221.68 | 10.03 | 9.68 | 10071.01 | 24.69 | 458.99 |
| 90 | 10103 | 7.60 | 154.60 | 179.1 | 31 | 10101.87 | -22.37 | -16.35 | 12.43 | 27.71 | 216.16 | 14.52 | 14.52 | 10101.87 | 24.78 | 428.13 |
| 91 | 10135 | 10.90 | 157.40 | 180.9 | 32 | 10133.45 | -27.08 | -14.28 | 17.56 | 30.61 | 207.81 | 10.40 | 10.31 | 10133.45 | 25.09 | 396.55 |
| 92 | 10166 | 14.40 | 155.40 | 182.7 | 31 | 10163.69 | -33.29 | -11.55 | 24.34 | 35.24 | 199.13 | 11.38 | 11.29 | 10163.69 | 25.51 | 366.31 |
| 93 | 10197 | 18.00 | 153.60 | 183.6 | 31 | 10193.45 | -41.09 | -7.81 | 32.98 | 41.83 | 190.77 | 11.72 | 11.61 | 10193.45 | 25.75 | 336.55 |
| 94 | 10228 | 22.20 | 151.70 | 183.6 | 31 | 10222.56 | -50.54 | -2.90 | 43.63 | 50.62 | 183.29 | 13.71 | 13.55 | 10222.56 | 25.72 | 307.44 |
| 95 | 10258 | 26.30 | 151.40 | 183.6 | 30 | 10249.91 | -61.37 | 2.97 | 55.94 | 61.44 | 177.23 | 13.67 | 13.67 | 10249.91 | 25.45 | 280.09 |

| | | | | | | | | | | Target Calculations | | | | | | |
|-----|-------|-------|--------|-------|--------|----------|----------|--------|-----------|---------------------|--------|-------|-------|-----------|----------|-----------|
| | | | TRUE | TEMP | Course | | | | Surface | CLOSURE | | DLS/ | BUR/ | TVD AT 0' | RIGHT(+) | ABOVE (+) |
| SVY | MD | INC | AZM | °F | Length | TVD | N-S | E-W | Vert Sect | DIST | DIR | 100 | 100' | V. SEC. | LEFT(-) | BELOW (-) |
| 96 | 10289 | 30.30 | 152.40 | 184.5 | 31 | 10277.20 | -74.34 | 9.88 | 70.64 | 74.99 | 172.43 | 12.99 | 12.90 | 10277.20 | 25.24 | 252.80 |
| 97 | 10321 | 34.40 | 152.20 | 187.2 | 32 | 10304.22 | -89.49 | 17.84 | 87.75 | 91.25 | 168.73 | 12.82 | 12.81 | 10304.22 | 25.10 | 225.78 |
| 98 | 10352 | 36.80 | 151.10 | 187.2 | 31 | 10329.43 | -105.37 | 26.41 | 105.79 | 108.63 | 165.93 | 8.01 | 7.74 | 10329.43 | 24.75 | 200.57 |
| 99 | 10383 | 40.00 | 147.70 | 188.1 | 31 | 10353.72 | -121.93 | 36.23 | 125.01 | 127.19 | 163.45 | 12.36 | 10.32 | 10353.72 | 23.60 | 176.28 |
| 100 | 10414 | 43.20 | 145.30 | 189.9 | 31 | 10376.90 | -139.08 | 47.59 | 145.46 | 146.99 | 161.11 | 11.53 | 10.32 | 10376.90 | 21.34 | 153.10 |
| 101 | 10445 | 47.00 | 145.90 | 190.8 | 31 | 10398.78 | -157.19 | 59.99 | 167.24 | 168.25 | 159.11 | 12.33 | 12.26 | 10398.78 | 18.61 | 131.22 |
| 102 | 10476 | 49.70 | 148.00 | 190.8 | 31 | 10419.38 | -176.61 | 72.62 | 190.28 | 190.96 | 157.65 | 10.07 | 8.71 | 10419.38 | 16.27 | 110.62 |
| 103 | 10508 | 54.10 | 149.70 | 191.7 | 32 | 10439.12 | -198.16 | 85.63 | 215.39 | 215.87 | 156.63 | 14.37 | 13.75 | 10439.12 | 14.57 | 90.88 |
| 104 | 10539 | 57.90 | 151.00 | 191.7 | 31 | 10456.46 | -220.49 | 98.34 | 241.06 | 241.43 | 155.96 | 12.74 | 12.26 | 10456.46 | 13.49 | 73.54 |
| 105 | 10570 | 62.30 | 150.90 | 191.7 | 31 | 10471.90 | -243.98 | 111.38 | 267.91 | 268.20 | 155.46 | 14.20 | 14.19 | 10471.90 | 12.64 | 58.10 |
| 106 | 10601 | 66.60 | 150.40 | 192.6 | 31 | 10485.27 | -268.35 | 125.09 | 295.86 | 296.07 | 155.01 | 13.95 | 13.87 | 10485.27 | 11.61 | 44.73 |
| 107 | 10632 | 71.30 | 151.10 | 192.6 | 31 | 10496.40 | -293.59 | 139.22 | 324.76 | 324.92 | 154.63 | 15.31 | 15.16 | 10496.40 | 10.60 | 33.60 |
| 108 | 10663 | 76.30 | 151.00 | 195.3 | 31 | 10505.05 | -319.63 | 153.62 | 354.51 | 354.63 | 154.33 | 16.13 | 16.13 | 10505.05 | 9.71 | 24.95 |
| 109 | 10694 | 79.20 | 150.80 | 194.4 | 31 | 10511.63 | -346.10 | 168.36 | 384.78 | 384.87 | 154.06 | 9.38 | 9.35 | 10511.63 | 8.73 | 18.37 |
| 110 | 10725 | 81.80 | 151.90 | 193.5 | 31 | 10516.74 | -372.93 | 183.01 | 415.34 | 415.41 | 153.86 | 9.09 | 8.39 | 10516.74 | 7.98 | 13.26 |
| 111 | 10757 | 86.60 | 153.50 | 196.2 | 32 | 10519.98 | -401.21 | 197.61 | 447.17 | 447.23 | 153.78 | 15.80 | 15.00 | 10519.98 | 7.95 | 10.02 |
| 112 | 10788 | 90.00 | 153.40 | 197.1 | 31 | 10520.90 | -428.92 | 211.46 | 478.15 | 478.21 | 153.76 | 10.97 | 10.97 | 10520.90 | 8.32 | 9.10 |
| 113 | 10817 | 89.70 | 154.20 | 197.1 | 29 | 10520.97 | -454.94 | 224.26 | 507.14 | 507.21 | 153.76 | 2.95 | -1.03 | 10520.97 | 8.85 | 9.03 |
| 114 | 10894 | 89.80 | 152.10 | 222.3 | 77 | 10521.31 | -523.64 | 259.04 | 584.14 | 584.20 | 153.68 | 2.73 | 0.13 | 10521.31 | 9.37 | 8.69 |
| 115 | 10988 | 88.90 | 152.20 | 222.3 | 94 | 10522.37 | -606.74 | 302.94 | 678.12 | 678.17 | 153.47 | 0.96 | -0.96 | 10522.37 | 8.37 | 7.63 |
| 116 | 11085 | 90.60 | 152.70 | 220.5 | 97 | 10522.80 | -692.74 | 347.81 | 775.12 | 775.15 | 153.34 | 1.83 | 1.75 | 10522.80 | 7.85 | 7.20 |
| 117 | 11179 | 90.30 | 152.70 | 222.3 | 94 | 10522.06 | -776.27 | 390.92 | 869.11 | 869.14 | 153.27 | 0.32 | -0.32 | 10522.06 | 7.75 | 7.94 |
| 118 | 11273 | 92.70 | 152.80 | 222.3 | 94 | 10519.60 | -859.80 | 433.94 | 963.07 | 963.10 | 153.22 | 2.56 | 2.55 | 10519.60 | 7.73 | 10.40 |
| 119 | 11367 | 92.10 | 152.30 | 221.4 | 94 | 10515.66 | -943.14 | 477.23 | 1056.99 | 1057.01 | 153.16 | 0.83 | -0.64 | 10515.66 | 7.39 | 14.34 |
| 120 | 11461 | 90.20 | 151.80 | 222.3 | 94 | 10513.78 | -1026.16 | 521.28 | 1150.96 | 1150.97 | 153.07 | 2.09 | -2.02 | 10513.78 | 6.22 | 16.22 |
| 121 | 11555 | 91.00 | 152.30 | 222.3 | 94 | 10512.79 | -1109.19 | 565.34 | 1244.94 | 1244.95 | 152.99 | 1.00 | 0.85 | 10512.79 | 5.06 | 17.21 |
| 122 | 11648 | 89.30 | 152.90 | 223.1 | 93 | 10512.55 | -1191.75 | 608.13 | 1337.94 | 1337.94 | 152.97 | 1.94 | -1.83 | 10512.55 | 4.80 | 17.45 |
| 123 | 11743 | 90.00 | 152.90 | 224.9 | 95 | 10513.13 | -1276.32 | 651.41 | 1432.94 | 1432.94 | 152.96 | 0.74 | 0.74 | 10513.13 | 5.03 | 16.87 |
| 124 | 11837 | 88.40 | 152.30 | 225.8 | 94 | 10514.44 | -1359.76 | 694.66 | 1526.92 | 1526.93 | 152.94 | 1.82 | -1.70 | 10514.44 | 4.77 | 15.56 |
| 125 | 11931 | 90.50 | 153.40 | 227.6 | 94 | 10515.34 | -1443.39 | 737.55 | 1620.91 | 1620.92 | 152.93 | 2.52 | 2.23 | 10515.34 | 4.91 | 14.66 |
| 126 | 12025 | 90.40 | 153.80 | 228.5 | 94 | 10514.60 | -1527.59 | 779.35 | 1714.90 | 1714.91 | 152.97 | 0.44 | -0.11 | 10514.60 | 6.29 | 15.40 |
| 127 | 12119 | 90.40 | 153.20 | 229.4 | 94 | 10513.95 | -1611.71 | 821.29 | 1808.89 | 1808.90 | 153.00 | 0.64 | 0.00 | 10513.95 | 7.51 | 16.05 |
| 128 | 12214 | 88.90 | 153.20 | 230.3 | 95 | 10514.53 | -1696.50 | 864.12 | 1903.88 | 1903.90 | 153.01 | 1.58 | -1.58 | 10514.53 | 8.24 | 15.47 |
| 129 | 12308 | 88.20 | 152.90 | 232.1 | 94 | 10516.91 | -1780.27 | 906.71 | 1997.85 | 1997.86 | 153.01 | 0.81 | -0.74 | 10516.91 | 8.71 | 13.09 |
| 130 | 12402 | 88.00 | 152.90 | 232.1 | 94 | 10520.02 | -1863.90 | 949.50 | 2091.80 | 2091.81 | 153.00 | 0.21 | -0.21 | 10520.02 | 8.94 | 9.98 |
| 131 | 12497 | 90.10 | 154.50 | 232.1 | 95 | 10521.60 | -1949.05 | 991.59 | 2186.77 | 2186.78 | 153.04 | 2.78 | 2.21 | 10521.60 | 10.50 | 8.40 |

| | | | | | | | | | | Target Calculations | | | | | | |
|-----|-------|-------|--------|-------|--------|----------|----------|---------|-----------|---------------------|--------|------|-------|-----------|----------|-----------|
| | | | TRUE | TEMP | Course | | | | Surface | CLOSURE | | DLS/ | BUR/ | TVD AT 0' | RIGHT(+) | ABOVE (+) |
| SVY | MD | INC | AZM | °F | Length | TVD | N-S | E-W | Vert Sect | DIST | DIR | 100 | 100' | V. SEC. | LEFT(-) | BELOW (-) |
| 132 | 12591 | 89.90 | 154.20 | 229.4 | 94 | 10521.60 | -2033.78 | 1032.28 | 2280.73 | 2280.76 | 153.09 | 0.38 | -0.21 | 10521.60 | 13.11 | 8.40 |
| 133 | 12686 | 90.00 | 153.40 | 233.0 | 95 | 10521.68 | -2119.02 | 1074.22 | 2375.72 | 2375.75 | 153.12 | 0.85 | 0.11 | 10521.68 | 14.83 | 8.32 |
| 134 | 12780 | 89.50 | 152.90 | 233.9 | 94 | 10522.09 | -2202.89 | 1116.67 | 2469.72 | 2469.75 | 153.12 | 0.75 | -0.53 | 10522.09 | 15.47 | 7.91 |
| 135 | 12874 | 88.90 | 152.90 | 235.7 | 94 | 10523.40 | -2286.56 | 1159.49 | 2563.71 | 2563.74 | 153.11 | 0.64 | -0.64 | 10523.40 | 15.70 | 6.60 |
| 136 | 12968 | 90.00 | 153.00 | 236.6 | 94 | 10524.31 | -2370.27 | 1202.24 | 2657.70 | 2657.73 | 153.11 | 1.18 | 1.17 | 10524.31 | 16.01 | 5.69 |
| 137 | 13061 | 89.20 | 152.20 | 237.5 | 93 | 10524.96 | -2452.83 | 1245.03 | 2750.70 | 2750.73 | 153.09 | 1.22 | -0.86 | 10524.96 | 15.75 | 5.04 |
| 138 | 13156 | 90.30 | 153.20 | 237.5 | 95 | 10525.37 | -2537.25 | 1288.60 | 2845.69 | 2845.72 | 153.08 | 1.56 | 1.16 | 10525.37 | 15.65 | 4.63 |
| 139 | 13249 | 90.30 | 152.10 | 238.4 | 93 | 10524.88 | -2619.85 | 1331.33 | 2938.69 | 2938.72 | 153.06 | 1.18 | 0.00 | 10524.88 | 15.48 | 5.12 |
| 140 | 13344 | 89.80 | 151.80 | 239.3 | 95 | 10524.80 | -2703.69 | 1376.00 | 3033.68 | 3033.70 | 153.03 | 0.61 | -0.53 | 10524.80 | 14.13 | 5.20 |
| 141 | 13437 | 90.00 | 150.90 | 239.3 | 93 | 10524.96 | -2785.31 | 1420.59 | 3126.65 | 3126.66 | 152.98 | 0.99 | 0.22 | 10524.96 | 11.84 | 5.04 |
| 142 | 13531 | 90.50 | 152.30 | 238.4 | 94 | 10524.55 | -2867.99 | 1465.30 | 3220.62 | 3220.63 | 152.94 | 1.58 | 0.53 | 10524.55 | 9.94 | 5.45 |
| 143 | 13625 | 89.90 | 152.00 | 240.2 | 94 | 10524.22 | -2951.10 | 1509.21 | 3314.61 | 3314.62 | 152.91 | 0.71 | -0.64 | 10524.22 | 8.94 | 5.78 |
| 144 | 13719 | 90.50 | 151.90 | 240.2 | 94 | 10523.90 | -3034.06 | 1553.41 | 3408.60 | 3408.61 | 152.89 | 0.65 | 0.64 | 10523.90 | 7.61 | 6.10 |
| 145 | 13813 | 88.60 | 149.90 | 242.0 | 94 | 10524.63 | -3116.18 | 1599.12 | 3502.54 | 3502.54 | 152.83 | 2.93 | -2.02 | 10524.63 | 4.56 | 5.37 |
| 146 | 13908 | 88.00 | 149.90 | 238.4 | 95 | 10527.45 | -3198.33 | 1646.74 | 3597.37 | 3597.38 | 152.76 | 0.63 | -0.63 | 10527.45 | -0.18 | 2.55 |
| 147 | 14002 | 90.40 | 152.00 | 241.1 | 94 | 10528.77 | -3280.49 | 1692.38 | 3691.30 | 3691.31 | 152.71 | 3.39 | 2.55 | 10528.77 | -3.14 | 1.23 |
| 148 | 14096 | 90.40 | 152.00 | 242.9 | 94 | 10528.11 | -3363.49 | 1736.51 | 3785.29 | 3785.30 | 152.69 | 0.00 | 0.00 | 10528.11 | -4.39 | 1.89 |
| 149 | 14189 | 89.40 | 149.90 | 243.8 | 93 | 10528.27 | -3444.78 | 1781.66 | 3878.24 | 3878.25 | 152.65 | 2.50 | -1.08 | 10528.27 | -7.33 | 1.73 |
| 150 | 14283 | 89.00 | 148.60 | 244.7 | 94 | 10529.58 | -3525.56 | 1829.72 | 3972.04 | 3972.08 | 152.57 | 1.45 | -0.43 | 10529.58 | -13.08 | 0.42 |
| 151 | 14377 | 89.70 | 150.70 | 240.2 | 94 | 10530.65 | -3606.66 | 1877.21 | 4065.89 | 4065.95 | 152.50 | 2.35 | 0.74 | 10530.65 | -18.18 | -0.65 |
| 152 | 14472 | 89.80 | 152.50 | 242.0 | 95 | 10531.06 | -3690.23 | 1922.39 | 4160.86 | 4160.93 | 152.48 | 1.90 | 0.11 | 10531.06 | -20.10 | -1.06 |
| 153 | 14566 | 89.10 | 152.10 | 243.8 | 94 | 10531.97 | -3773.45 | 1966.08 | 4254.85 | 4254.92 | 152.48 | 0.86 | -0.74 | 10531.97 | -20.86 | -1.97 |
| 154 | 14661 | 90.20 | 155.40 | 242.9 | 95 | 10532.55 | -3858.64 | 2008.09 | 4349.82 | 4349.89 | 152.51 | 3.66 | 1.16 | 10532.55 | -19.22 | -2.55 |
| 155 | 14755 | 89.50 | 153.60 | 245.6 | 94 | 10532.79 | -3943.47 | 2048.56 | 4443.78 | 4443.82 | 152.55 | 2.05 | -0.74 | 10532.79 | -16.36 | -2.79 |
| 156 | 14848 | 91.40 | 153.30 | 245.6 | 93 | 10532.06 | -4026.66 | 2090.12 | 4536.77 | 4536.81 | 152.57 | 2.07 | 2.04 | 10532.06 | -15.24 | -2.06 |
| 157 | 14941 | 90.50 | 153.00 | 246.5 | 93 | 10530.52 | -4109.62 | 2132.12 | 4629.75 | 4629.79 | 152.58 | 1.02 | -0.97 | 10530.52 | -14.61 | -0.52 |
| 158 | 15035 | 91.90 | 156.30 | 246.5 | 94 | 10528.55 | -4194.54 | 2172.35 | 4723.67 | 4723.69 | 152.62 | 3.81 | 1.49 | 10528.55 | -11.51 | 1.45 |
| 159 | 15128 | 90.80 | 155.00 | 246.5 | 93 | 10526.36 | -4279.24 | 2210.68 | 4816.52 | 4816.53 | 152.68 | 1.83 | -1.18 | 10526.36 | -6.83 | 3.64 |
| 160 | 15222 | 89.90 | 155.70 | 247.5 | 94 | 10525.79 | -4364.67 | 2249.89 | 4910.43 | 4910.43 | 152.73 | 1.21 | -0.96 | 10525.79 | -2.58 | 4.21 |
| 161 | 15319 | 89.40 | 155.10 | 247.5 | 97 | 10526.38 | -4452.86 | 2290.27 | 5007.32 | 5007.33 | 152.78 | 0.81 | -0.52 | 10526.38 | 1.89 | 3.62 |
| 162 | 15397 | 90.60 | 156.70 | 240.2 | 78 | 10526.38 | -4524.06 | 2322.11 | 5085.21 | 5085.21 | 152.83 | 2.56 | 1.54 | 10526.38 | 6.16 | 3.62 |
| 163 | 15490 | 90.80 | 157.20 | 245.6 | 93 | 10525.24 | -4609.63 | 2358.52 | 5177.96 | 5177.96 | 152.90 | 0.58 | 0.22 | 10525.24 | 12.96 | 4.76 |
| 164 | 15584 | 89.30 | 155.80 | 248.3 | 94 | 10525.16 | -4695.83 | 2396.00 | 5271.76 | 5271.78 | 152.97 | 2.18 | -1.60 | 10525.16 | 19.09 | 4.84 |
| 165 | 15679 | 87.90 | 155.60 | 249.2 | 95 | 10527.48 | -4782.38 | 2435.09 | 5366.61 | 5366.64 | 153.02 | 1.49 | -1.47 | 10527.48 | 23.96 | 2.52 |
| 166 | 15773 | 89.00 | 155.70 | 247.4 | 94 | 10530.03 | -4867.99 | 2473.83 | 5460.45 | 5460.51 | 153.06 | 1.18 | 1.17 | 10530.03 | 28.70 | -0.03 |
| 167 | 15868 | 90.00 | 155.50 | 247.4 | 95 | 10530.85 | -4954.50 | 2513.07 | 5555.34 | 5555.41 | 153.10 | 1.07 | 1.05 | 10530.85 | 33.40 | -0.85 |

| | | | | | | | | | | Target Calculations | | | | | | |
|-----|-------|-------|--------|-------|--------|----------|----------|---------|-----------|---------------------|--------|------|-------|-----------|----------|-----------|
| | | | TRUE | TEMP | Course | | | | Surface | CLOSURE | | DLS/ | BUR/ | TVD AT 0' | RIGHT(+) | ABOVE (+) |
| SVY | MD | INC | AZM | °F | Length | TVD | N-S | E-W | Vert Sect | DIST | DIR | 100 | 100' | V. SEC. | LEFT(-) | BELOW (-) |
| 168 | 15961 | 90.50 | 152.60 | 246.5 | 93 | 10530.45 | -5038.11 | 2553.76 | 5648.30 | 5648.39 | 153.12 | 3.16 | 0.54 | 10530.45 | 35.50 | -0.45 |
| 169 | 16054 | 89.60 | 152.30 | 248.3 | 93 | 10530.37 | -5120.57 | 2596.78 | 5741.30 | 5741.38 | 153.11 | 1.02 | -0.97 | 10530.37 | 34.99 | -0.37 |
| 170 | 16148 | 89.70 | 155.00 | 246.5 | 94 | 10530.94 | -5204.79 | 2638.49 | 5835.28 | 5835.37 | 153.12 | 2.87 | 0.11 | 10530.94 | 36.45 | -0.94 |
| 171 | 16242 | 91.90 | 154.10 | 246.5 | 94 | 10529.63 | -5289.65 | 2678.88 | 5929.22 | 5929.32 | 153.14 | 2.53 | 2.34 | 10529.63 | 39.39 | 0.37 |
| 172 | 16337 | 93.60 | 153.30 | 244.7 | 95 | 10525.07 | -5374.72 | 2720.92 | 6024.10 | 6024.20 | 153.15 | 1.98 | 1.79 | 10525.07 | 40.95 | 4.93 |
| 173 | 16432 | 91.40 | 152.00 | 247.4 | 95 | 10520.93 | -5459.01 | 2764.52 | 6119.00 | 6119.10 | 153.14 | 2.69 | -2.32 | 10520.93 | 40.76 | 9.07 |
| 174 | 16526 | 88.90 | 150.10 | 247.4 | 94 | 10520.68 | -5541.25 | 2810.02 | 6212.94 | 6213.03 | 153.11 | 3.34 | -2.66 | 10520.68 | 37.96 | 9.32 |
| 175 | 16621 | 88.20 | 150.20 | 249.2 | 95 | 10523.09 | -5623.62 | 2857.29 | 6307.81 | 6307.87 | 153.07 | 0.74 | -0.74 | 10523.09 | 33.63 | 6.91 |
| 176 | 16714 | 89.00 | 150.60 | 248.3 | 93 | 10525.36 | -5704.46 | 2903.21 | 6400.70 | 6400.74 | 153.03 | 0.96 | 0.86 | 10525.36 | 29.81 | 4.64 |
| 177 | 16809 | 89.40 | 152.30 | 247.4 | 95 | 10526.68 | -5787.90 | 2948.60 | 6495.66 | 6495.69 | 153.00 | 1.84 | 0.42 | 10526.68 | 27.63 | 3.32 |
| 178 | 16903 | 91.20 | 153.30 | 250.1 | 94 | 10526.19 | -5871.50 | 2991.57 | 6589.65 | 6589.69 | 153.00 | 2.19 | 1.91 | 10526.19 | 27.70 | 3.81 |
| 179 | 16997 | 90.50 | 152.70 | 251.0 | 94 | 10524.80 | -5955.24 | 3034.24 | 6683.64 | 6683.68 | 153.00 | 0.98 | -0.74 | 10524.80 | 28.09 | 5.20 |
| 180 | 17091 | 88.60 | 152.20 | 251.9 | 94 | 10525.54 | -6038.58 | 3077.71 | 6777.63 | 6777.66 | 152.99 | 2.09 | -2.02 | 10525.54 | 27.58 | 4.46 |
| 181 | 17185 | 90.00 | 153.10 | 250.1 | 94 | 10526.68 | -6122.06 | 3120.89 | 6871.62 | 6871.65 | 152.99 | 1.77 | 1.49 | 10526.68 | 27.40 | 3.32 |
| 182 | 17279 | 90.00 | 153.10 | 250.1 | 94 | 10526.68 | -6205.89 | 3163.42 | 6965.62 | 6965.65 | 152.99 | 0.00 | 0.00 | 10526.68 | 27.96 | 3.32 |
| 183 | 17373 | 90.30 | 153.60 | 251.9 | 94 | 10526.44 | -6289.90 | 3205.59 | 7059.61 | 7059.65 | 152.99 | 0.62 | 0.32 | 10526.44 | 28.93 | 3.56 |
| 184 | 17468 | 89.50 | 150.60 | 251.0 | 95 | 10526.60 | -6373.85 | 3250.03 | 7154.59 | 7154.63 | 152.98 | 3.27 | -0.84 | 10526.60 | 27.84 | 3.40 |
| 185 | 17562 | 90.60 | 151.40 | 252.8 | 94 | 10526.52 | -6456.06 | 3295.60 | 7248.55 | 7248.57 | 152.96 | 1.45 | 1.17 | 10526.52 | 24.95 | 3.48 |
| 186 | 17656 | 89.50 | 151.60 | 252.8 | 94 | 10526.44 | -6538.67 | 3340.46 | 7342.52 | 7342.54 | 152.94 | 1.19 | -1.17 | 10526.44 | 22.88 | 3.56 |
| 187 | 17751 | 90.00 | 152.20 | 254.6 | 95 | 10526.85 | -6622.47 | 3385.20 | 7437.51 | 7437.52 | 152.93 | 0.82 | 0.53 | 10526.85 | 21.46 | 3.15 |
| 188 | 17845 | 87.80 | 153.10 | 252.8 | 94 | 10528.66 | -6705.94 | 3428.38 | 7531.48 | 7531.50 | 152.92 | 2.53 | -2.34 | 10528.66 | 21.28 | 1.34 |
| 189 | 17939 | 90.50 | 154.90 | 251.9 | 94 | 10530.05 | -6790.41 | 3469.57 | 7625.44 | 7625.46 | 152.94 | 3.45 | 2.87 | 10530.05 | 23.31 | -0.05 |
| 190 | 18032 | 91.00 | 154.60 | 251.9 | 93 | 10528.84 | -6874.51 | 3509.24 | 7718.38 | 7718.40 | 152.96 | 0.63 | 0.54 | 10528.84 | 26.54 | 1.16 |
| 191 | 18127 | 90.60 | 153.30 | 251.0 | 95 | 10527.51 | -6959.85 | 3550.96 | 7813.35 | 7813.38 | 152.97 | 1.43 | -0.42 | 10527.51 | 28.51 | 2.49 |
| 192 | 18220 | 89.70 | 150.80 | 252.8 | 93 | 10527.27 | -7042.00 | 3594.54 | 7906.33 | 7906.36 | 152.96 | 2.86 | -0.97 | 10527.27 | 27.36 | 2.73 |
| 193 | 18315 | 89.90 | 150.30 | 251.0 | 95 | 10527.60 | -7124.72 | 3641.25 | 8001.25 | 8001.27 | 152.93 | 0.57 | 0.21 | 10527.60 | 23.70 | 2.40 |
| 194 | 18409 | 89.60 | 152.90 | 253.7 | 94 | 10528.01 | -7207.40 | 3685.95 | 8095.22 | 8095.24 | 152.91 | 2.78 | -0.32 | 10528.01 | 21.79 | 1.99 |
| 195 | 18503 | 90.70 | 152.90 | 253.7 | 94 | 10527.76 | -7291.08 | 3728.77 | 8189.22 | 8189.24 | 152.91 | 1.17 | 1.17 | 10527.76 | 22.02 | 2.24 |
| 196 | 18597 | 90.80 | 151.90 | 254.6 | 94 | 10526.53 | -7374.37 | 3772.32 | 8283.21 | 8283.22 | 152.91 | 1.07 | 0.11 | 10526.53 | 21.43 | 3.47 |
| 197 | 18691 | 90.70 | 153.80 | 256.4 | 94 | 10525.30 | -7458.01 | 3815.21 | 8377.20 | 8377.21 | 152.91 | 2.02 | -0.11 | 10525.30 | 21.58 | 4.70 |
| 198 | 18785 | 90.90 | 153.30 | 251.9 | 94 | 10523.99 | -7542.16 | 3857.07 | 8471.18 | 8471.19 | 152.91 | 0.57 | 0.21 | 10523.99 | 22.88 | 6.01 |
| 199 | 18879 | 90.90 | 152.20 | 251.9 | 94 | 10522.51 | -7625.71 | 3900.11 | 8565.17 | 8565.18 | 152.91 | 1.17 | 0.00 | 10522.51 | 22.86 | 7.49 |
| 200 | 18973 | 90.20 | 152.10 | 255.5 | 94 | 10521.61 | -7708.82 | 3944.02 | 8659.16 | 8659.17 | 152.90 | 0.75 | -0.74 | 10521.61 | 21.86 | 8.39 |
| 201 | 19067 | 90.40 | 151.70 | 249.2 | 94 | 10521.12 | -7791.74 | 3988.29 | 8753.14 | 8753.15 | 152.89 | 0.48 | 0.21 | 10521.12 | 20.45 | 8.88 |
| 202 | 19161 | 90.50 | 151.70 | 250.1 | 94 | 10520.38 | -7874.50 | 4032.85 | 8847.12 | 8847.13 | 152.88 | 0.11 | 0.11 | 10520.38 | 18.71 | 9.62 |
| 203 | 19256 | 89.70 | 149.70 | 250.1 | 95 | 10520.21 | -7957.34 | 4079.34 | 8942.05 | 8942.06 | 152.86 | 2.27 | -0.84 | 10520.21 | 15.29 | 9.79 |



Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: Atlanta Federal 5-6H (Atlanta 14 Well Eco Pad)
Location: NWNW Sec 6 - T153N - R101W - Williams Co., ND
License Number: 33-105-02728 Region: Williston
Spud Date: 5/27/13 Drilling Completed: 6/2/13
Surface Coordinates: NWNW Sec 6 - T153N - R101W - Williams Co., ND
495' FNL & 835' FWL
Bottom Hole Coordinates: NWNW Sec 6 - T153N - R101W - Williams Co., ND
CP 10872' MD; 10521' TVD, 999' FNL & 1084' FWL
Ground Elevation (ft): 1945' K.B. Elevation (ft): 1967'
Logged Interval (ft): 9740' To: 10521' Total Depth (ft): 781'
Formation: MCyn, Lodgepole, UBkkn Shale, Middle Bakken Dolomite
Type of Drilling Fluid: Invert

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

CORE

Contractor:
Core #:
Formation:
Core Interval: From: Cut:
To: Recovered:
Bit type:
Size:
Coring Time:

OPERATOR

Company: Continental Resources, Inc.
Address: 20 N. Broadway
P.O. Box 269000
Oklahoma City, Ok 73126

GEOLOGIST

Name: Adam Swoboda
Company: Geo-Link Inc
Address: PO Box 1764
Red Lodge, MT 59068

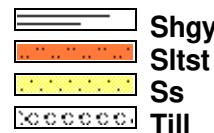
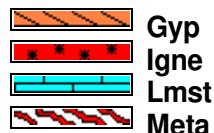
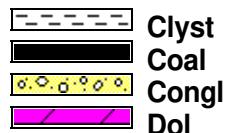
Directional

MS Energy

Second Hand

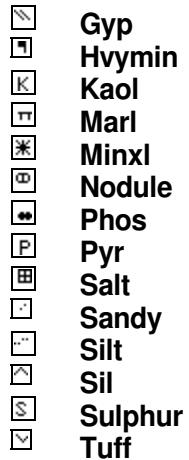
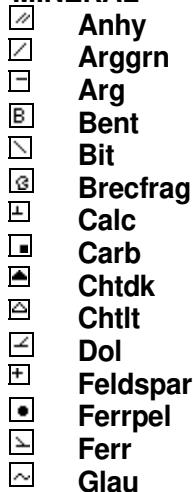
Joe Dunn

ROCK TYPES

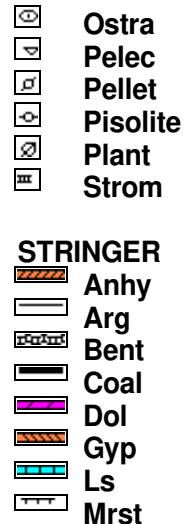
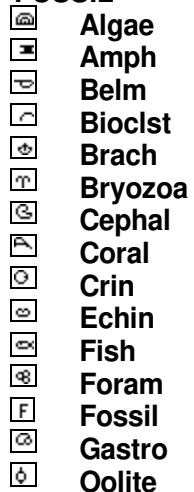


ACCESSORIES

MINERAL

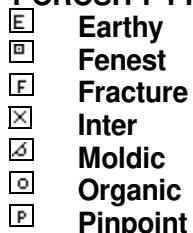


FOSSIL

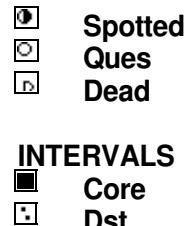
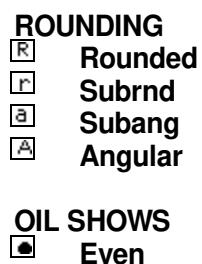


| | |
|----------------|----------|
| | Sltstrg |
| | Ssstrg |
| TEXTURE | |
| | Boundst |
| | Chalky |
| | Cryxln |
| | Earthy |
| | Finexln |
| | Grainst |
| | Lithogr |
| | Microxln |
| | Mudst |
| | Packst |
| | Wackest |

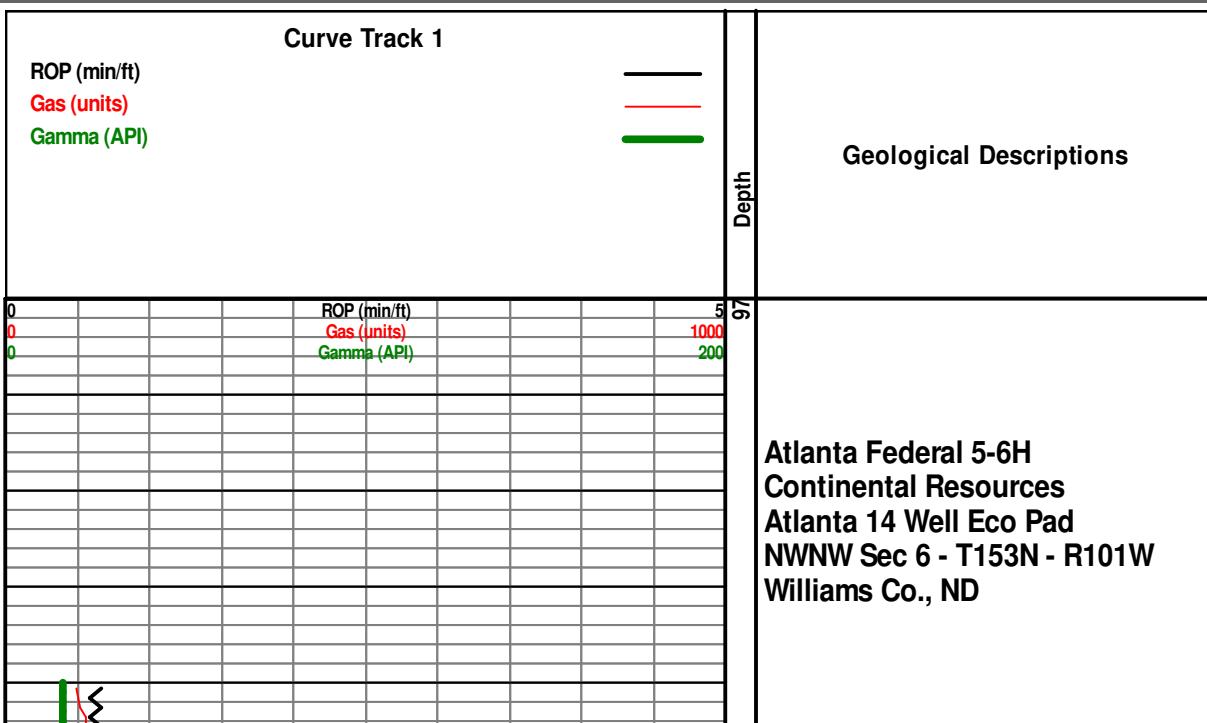
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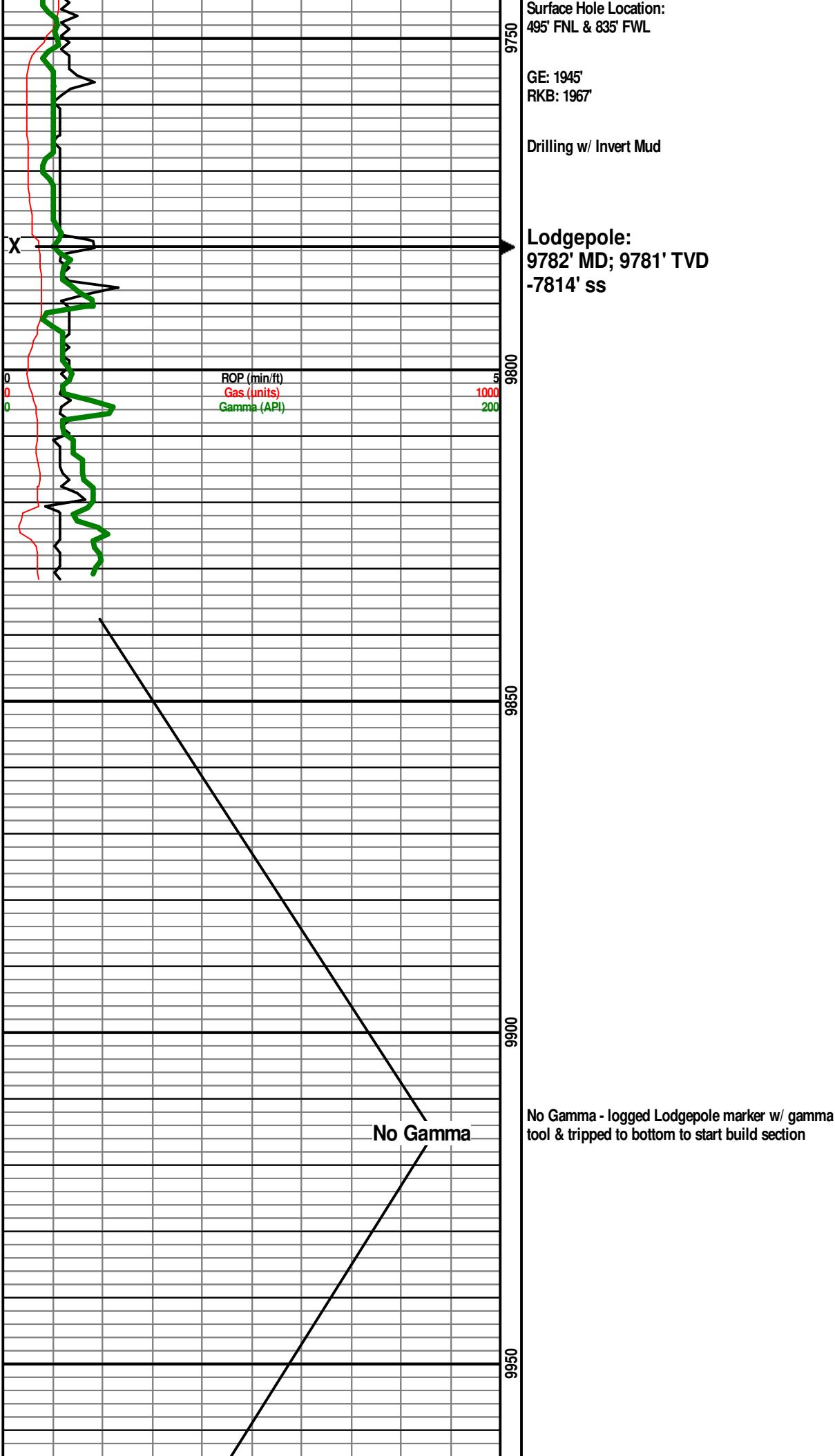


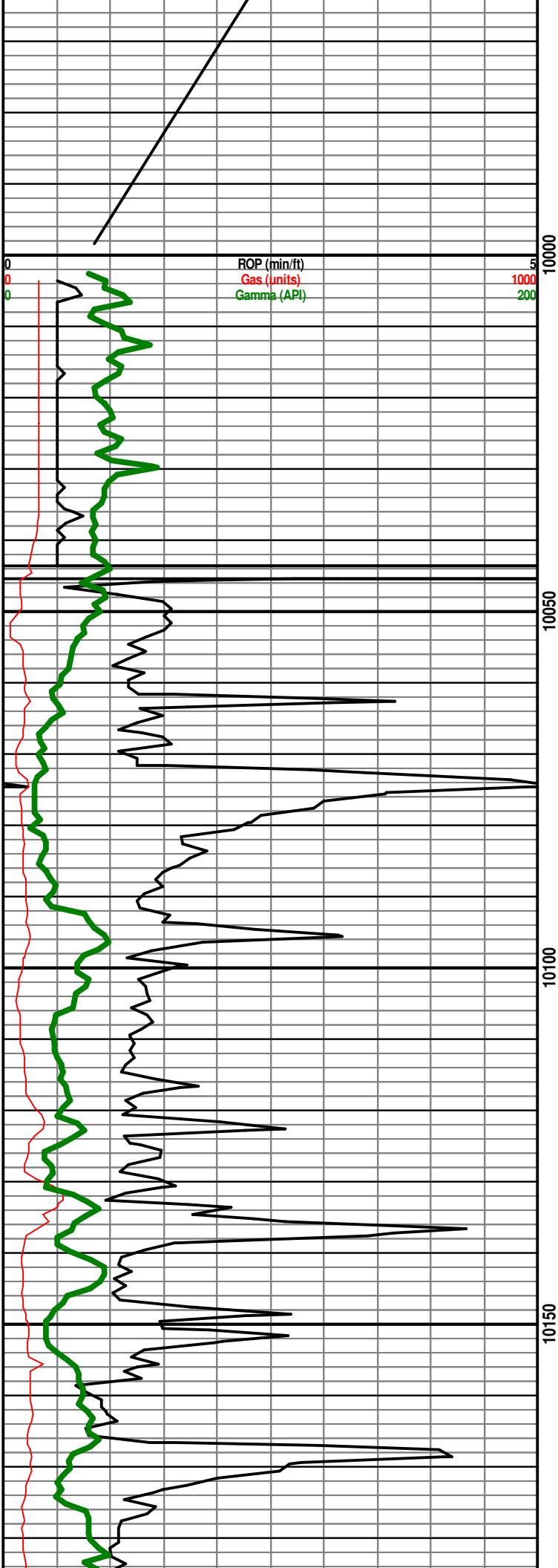
OTHER SYMBOLS



EVENTS

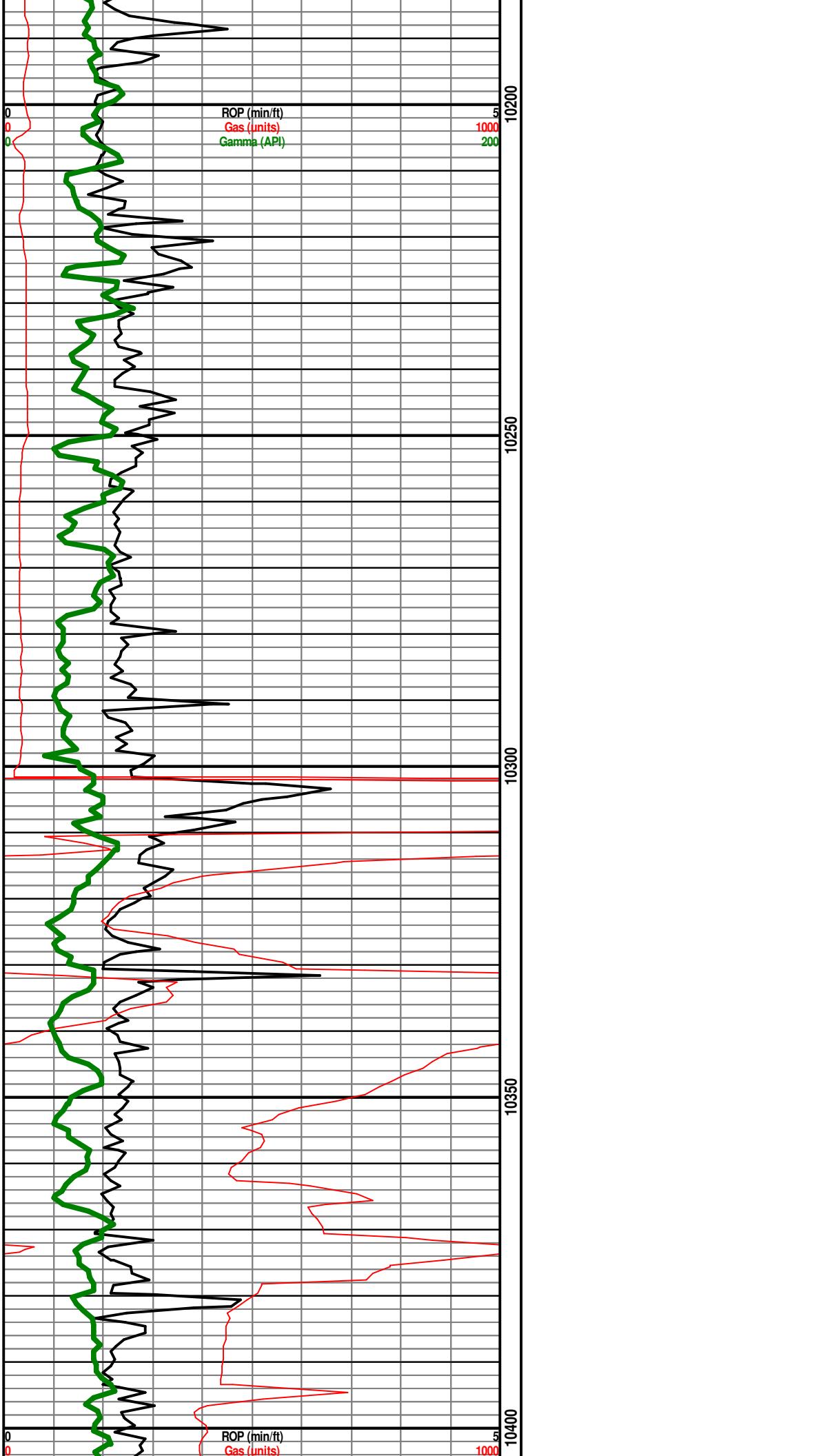


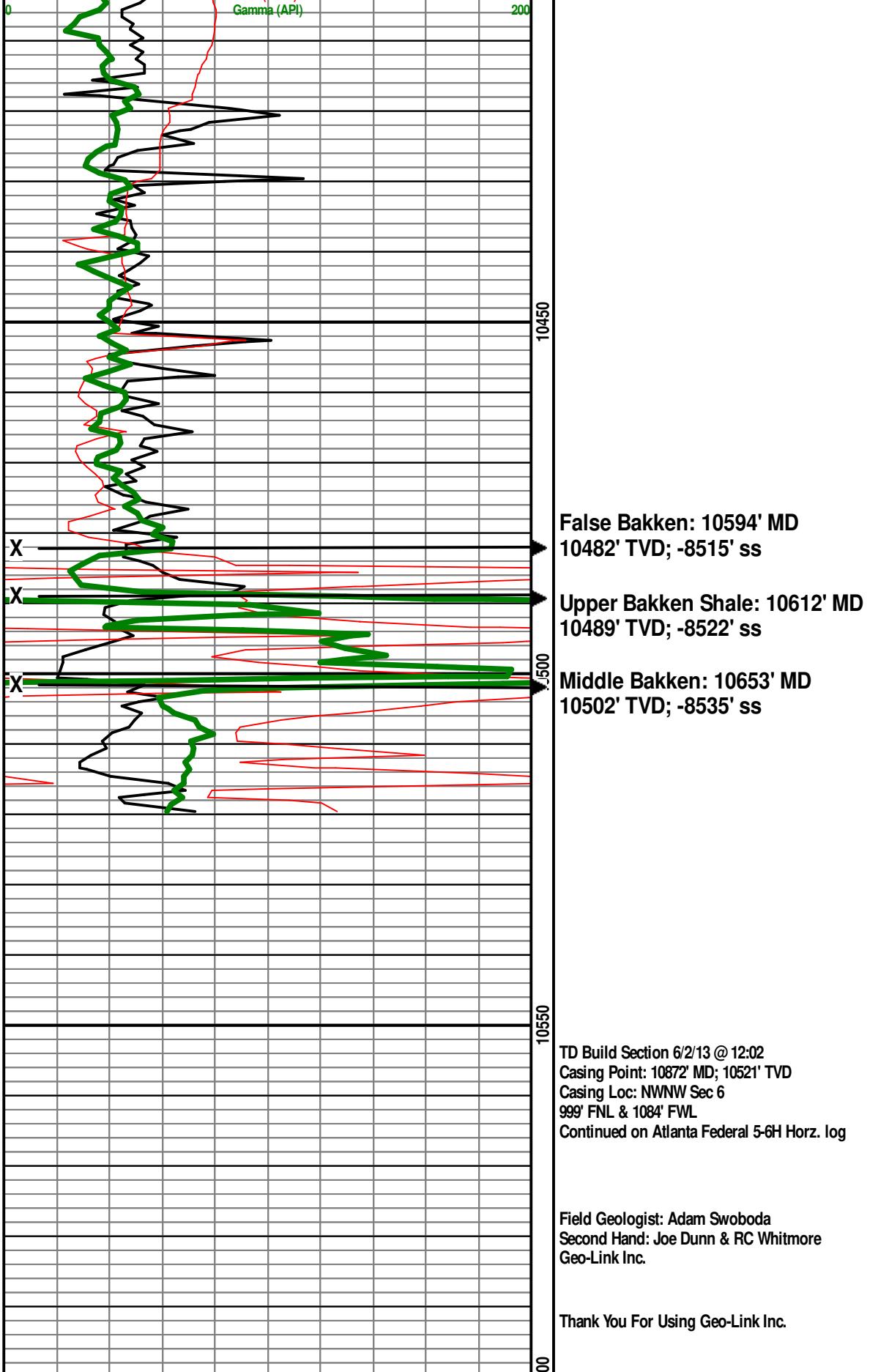




KOP:
10045' MD; 10044' TVD
-8077' ss

TOOH for Build Assembly
@ 10045' MD - 5/31/13 - 23:50
Resume Drilling - 6/01/13 - 11:18





NEWSCO

International Energy Services Inc.

Continental Resources
Company

33214
Job Number

5/17/2013
Date

AES 4
Rig

Atlanta Federal 5-6H
Well Name

Williams Co., ND
County & State

Surveyed from depth of: Surface to 1945'

GL to KB: 6'

Type of Survey: Nvader

True North

Directional Supervisor/Surveyor: David Hopper

The data and calculations for this survey have been checked by me and conform to the standards and procedures set forth by Newsco International Energy Services Inc. This report represents a true and correct directional survey of this well based on the original data obtained at the well site. Wellbore

Certified by:



Joshua Mahoney

NEWSCO

Directional Services U.S.A.

CLIENT: Continental
DATE: 5/17/2013
STATE: North Dakota
FIELD: Baker

NEWSCO JOB #33214

WELL NAME: Atlanta Federal 5-6H

AES 4

Williams

TIE-ON DATA

| | | |
|------------------|--------|------|
| C/L (10,30,100): | 100.00 | Feet |
| MEASURED DEPTH: | 0.00 | Feet |
| TVD: | 0.00 | Feet |
| INCLINATION: | 0.00 | Deg. |
| AZIMUTH: | 0.00 | Deg. |
| N(+) S(-): | 0.00 | Feet |
| E(+) W(-): | 0.00 | Feet |
| VSECTION PLANE: | 0.00 | Deg. |
| VSECTION : | 0.00 | Feet |

TARGET DATA

SENSOR TO BIT: 47.00
KB TO GL: 6.00

All data are measured from ground level

Depth is the survey depth at ground level. To match bottom hole location w/ tool sensor only add the big rigs KB to the given depth.



7821 Will Rogers Blvd.
Fort Worth, Texas 76140

817.568.1038 (office)
817.568.1499 (fax)
www.msenergyservices.com

June 14, 2013

North Dakota Mineral Resources
Survey Certification Sheet

Company: Continental Resources, Inc.

Lease: Atlanta Federal 5

Well Number: 6H

Location: Williams County, ND

Job Number: DDMT-130371

Well API# 33-105-02728

Attached please find the original surveys performed on the above referenced well by MS Energy Services. The data is true, correct, complete and within the limitations of the tool as set forth by MS Energy Services. I am authorized and qualified to make this report and it conforms to the principles and procedures as set forth by MS Energy Services. The surveys were performed as listed below.

| Name of Surveyor | Drain hole No. | Surveyed Depths | Dates Performed | Survey |
|-------------------------|-----------------------|------------------------|--------------------------|---------------|
| Tim Coleman | Original Wellbore | 2,048' – 21,110' MD | 05/26/2013 to 06/13/2013 | MWD |

If any other information is required, please contact the undersigned at the letterhead address and telephone number.

Sincerely,

Amber Greer
MWD Operations Office Administrator

Attachments



SURVEY CALCULATION PROGRAM

6/14/13 8:46

| Company: | Continental Resources, Inc. | | | | | | | | | |
|----------------------------|-----------------------------|----------------|----------------------------|-------------|-------------|-------------|---------------------|---------------------|-------------|--------------|
| Well Name: | Atlanta Federal 5-6H | | | | | | | | | |
| Location: | Williams County, ND | | | | | | | | | |
| Rig: | Cyclone #2 | | | | | | | | | |
| Job Number: | DDMT-130371 | | | | | | | | | |
| API #: | 33-105-02728 | | | | | | | | | |
| Vertical Section Azimuth: | 152.81 | | Proposed Direction: 152.81 | | | | | | | |
| Survey Calculation Method: | Minimum Curvature | | | | | | | | | |
| PTB: | MD | INC | AZM | TVD | N/S | E/W | VS | | | |
| | 21,165 | 90.70 | 149.70 | 10517.35 | -9640.03 | 4979.29 | 10850.02 | | | |
| # | Depth Feet | Inc Degrees | Azm Degrees | TVD Feet | N/S Feet | E/W Feet | Surface Vert Sec | Closure Distance | DLS/ 100 | BUR/ 100' |
| TIE IN | 1,967 | 1.30 | 214.20 | 1966.93 | -3.91 | -6.99 | 0.28 | 8.01 | 240.78 | |
| 1 | 2048 | 1.40 | 211.21 | 2047.91 | -5.52 | -8.02 | 1.24 | 9.73 | 235.48 | 0.15 |
| 2 | 2070 | 1.50 | 210.90 | 2069.90 | -5.99 | -8.31 | 1.54 | 10.24 | 234.19 | 0.46 |
| 3 | 2164 | 1.70 | 199.60 | 2163.86 | -8.36 | -9.41 | 3.14 | 12.59 | 228.36 | 0.40 |
| 4 | 2257 | 1.10 | 219.60 | 2256.84 | -10.35 | -10.44 | 4.44 | 14.70 | 225.24 | 0.82 |
| 5 | 2351 | 1.40 | 220.70 | 2350.81 | -11.92 | -11.76 | 5.22 | 16.74 | 224.63 | 0.32 |
| 6 | 2445 | 2.10 | 209.20 | 2444.77 | -14.29 | -13.35 | 6.61 | 19.56 | 223.05 | 0.83 |
| 7 | 2538 | 0.90 | 229.60 | 2537.74 | -16.25 | -14.74 | 7.72 | 21.94 | 222.21 | 1.39 |
| 8 | 2631 | 0.40 | 319.00 | 2630.73 | -16.48 | -15.51 | 7.57 | 22.63 | 223.26 | 1.05 |
| 9 | 2725 | 0.60 | 18.60 | 2724.73 | -15.76 | -15.57 | 6.91 | 22.15 | 224.64 | 0.56 |
| 10 | 2818 | 0.70 | 43.20 | 2817.72 | -14.89 | -15.02 | 6.38 | 21.15 | 225.25 | 0.32 |
| 11 | 2912 | 0.60 | 36.00 | 2911.72 | -14.07 | -14.34 | 5.97 | 20.09 | 225.54 | 0.14 |
| 12 | 3006 | 0.50 | 53.80 | 3005.71 | -13.43 | -13.72 | 5.68 | 19.20 | 225.61 | 0.21 |
| 13 | 3099 | 0.90 | 49.70 | 3098.71 | -12.72 | -12.83 | 5.45 | 18.07 | 225.26 | 0.43 |
| 14 | 3193 | 0.80 | 36.30 | 3192.70 | -11.71 | -11.88 | 4.99 | 16.69 | 225.41 | 0.24 |
| 15 | 3286 | 0.50 | 48.70 | 3285.69 | -10.92 | -11.19 | 4.60 | 15.64 | 225.70 | 0.35 |
| 16 | 3380 | 0.50 | 55.40 | 3379.69 | -10.42 | -10.55 | 4.45 | 14.83 | 225.35 | 0.06 |
| 17 | 3473 | 0.20 | 77.80 | 3472.68 | -10.15 | -10.06 | 4.44 | 14.29 | 224.72 | 0.35 |
| 18 | 3567 | 0.30 | 7.50 | 3566.68 | -9.88 | -9.86 | 4.28 | 13.96 | 224.96 | 0.32 |
| 19 | 3660 | 0.50 | 30.50 | 3659.68 | -9.28 | -9.63 | 3.86 | 13.37 | 226.03 | 0.27 |
| 20 | 3753 | 0.10 | 253.30 | 3752.68 | -8.96 | -9.50 | 3.63 | 13.06 | 226.67 | 0.62 |
| 21 | 3847 | 0.30 | 306.70 | 3846.68 | -8.83 | -9.77 | 3.39 | 13.17 | 227.89 | 0.27 |
| 22 | 3941 | 0.20 | 347.50 | 3940.68 | -8.53 | -10.01 | 3.01 | 13.15 | 229.56 | 0.21 |
| 23 | 4034 | 0.10 | 2.70 | 4033.68 | -8.29 | -10.04 | 2.79 | 13.02 | 230.45 | 0.11 |
| 24 | 4128 | 0.10 | 1.20 | 4127.68 | -8.12 | -10.03 | 2.64 | 12.91 | 231.00 | 0.00 |
| 25 | 4221 | 0.20 | 152.70 | 4220.68 | -8.19 | -9.96 | 2.73 | 12.89 | 230.57 | 0.31 |
| 26 | 4315 | 0.10 | 91.10 | 4314.68 | -8.33 | -9.80 | 2.94 | 12.86 | 229.61 | 0.19 |
| 27 | 4410 | 0.20 | 112.90 | 4409.68 | -8.40 | -9.56 | 3.10 | 12.73 | 228.70 | 0.12 |
| 28 | 4504 | 0.20 | 112.30 | 4503.68 | -8.53 | -9.26 | 3.35 | 12.59 | 227.36 | 0.00 |



SURVEY CALCULATION PROGRAM

6/14/13 8:46

| | |
|-------------|-----------------------------|
| Company: | Continental Resources, Inc. |
| Well Name: | Atlanta Federal 5-6H |
| Location: | Williams County, ND |
| Rig: | Cyclone #2 |
| Job Number: | DDMT-130371 |
| API #: | 33-105-02728 |

Magnetic Declination: 8.53 REFERENCED TO TRUE NORTH ▼

| | | | |
|---------------------------|--------|---------------------|--------|
| Vertical Section Azimuth: | 152.81 | Proposed Direction: | 152.81 |
|---------------------------|--------|---------------------|--------|

| | |
|----------------------------|-------------------|
| Survey Calculation Method: | Minimum Curvature |
|----------------------------|-------------------|

| PTB: | MD | INC | AZM | TVD | N/S | E/W | VS |
|------|--------|-------|--------|----------|----------|---------|----------|
| | 21,165 | 90.70 | 149.70 | 10517.35 | -9640.03 | 4979.29 | 10850.02 |

| # | Depth Feet | Inc Degrees | Azm Degrees | TVD Feet | N/S Feet | E/W Feet | Surface Vert Sec | Closure Distance | DLS/ 100 | BUR/ 100' | |
|----|---------------|----------------|----------------|-------------|-------------|-------------|---------------------|---------------------|-------------|--------------|-------|
| 29 | 4598 | 0.40 | 103.50 | 4597.68 | -8.67 | -8.79 | 3.69 | 12.34 | 225.40 | 0.22 | 0.21 |
| 30 | 4689 | 0.50 | 119.60 | 4688.67 | -8.94 | -8.13 | 4.23 | 12.08 | 222.31 | 0.18 | 0.11 |
| 31 | 4,783 | 0.70 | 118.50 | 4782.67 | -9.41 | -7.27 | 5.05 | 11.89 | 217.69 | 0.21 | 0.21 |
| 32 | 4,877 | 0.80 | 98.00 | 4876.66 | -9.78 | -6.12 | 5.90 | 11.53 | 212.04 | 0.30 | 0.11 |
| 33 | 4,970 | 0.90 | 71.80 | 4969.65 | -9.64 | -4.78 | 6.39 | 10.76 | 206.38 | 0.43 | 0.11 |
| 34 | 5,062 | 0.70 | 171.50 | 5061.64 | -9.97 | -4.01 | 7.03 | 10.75 | 201.92 | 1.34 | -0.22 |
| 35 | 5,156 | 1.70 | 182.80 | 5155.62 | -11.93 | -4.00 | 8.79 | 12.58 | 198.52 | 1.09 | 1.06 |
| 36 | 5,248 | 1.90 | 174.20 | 5247.58 | -14.81 | -3.91 | 11.39 | 15.32 | 194.78 | 0.36 | 0.22 |
| 37 | 5,342 | 1.40 | 204.90 | 5341.54 | -17.40 | -4.23 | 13.55 | 17.91 | 193.67 | 1.06 | -0.53 |
| 38 | 5,436 | 1.10 | 256.40 | 5435.52 | -18.66 | -5.59 | 14.04 | 19.48 | 196.69 | 1.19 | -0.32 |
| 39 | 5,529 | 1.40 | 251.50 | 5528.50 | -19.23 | -7.54 | 13.66 | 20.65 | 201.41 | 0.34 | 0.32 |
| 40 | 5,623 | 1.20 | 249.10 | 5622.47 | -19.94 | -9.55 | 13.38 | 22.11 | 205.58 | 0.22 | -0.21 |
| 41 | 5,716 | 1.10 | 287.60 | 5715.46 | -20.02 | -11.31 | 12.64 | 22.99 | 209.46 | 0.82 | -0.11 |
| 42 | 5,810 | 0.80 | 283.60 | 5809.44 | -19.59 | -12.81 | 11.58 | 23.41 | 213.17 | 0.33 | -0.32 |
| 43 | 5,904 | 0.30 | 189.30 | 5903.44 | -19.68 | -13.48 | 11.34 | 23.86 | 214.42 | 0.93 | -0.53 |
| 44 | 5,997 | 0.90 | 165.50 | 5996.43 | -20.63 | -13.34 | 12.25 | 24.57 | 212.89 | 0.69 | 0.65 |
| 45 | 6,091 | 1.60 | 206.40 | 6090.41 | -22.52 | -13.74 | 13.75 | 26.38 | 211.39 | 1.16 | 0.74 |
| 46 | 6,184 | 1.90 | 195.60 | 6183.37 | -25.17 | -14.73 | 15.65 | 29.16 | 210.34 | 0.48 | 0.32 |
| 47 | 6,278 | 1.10 | 240.60 | 6277.34 | -27.11 | -15.94 | 16.83 | 31.45 | 210.45 | 1.45 | -0.85 |
| 48 | 6,371 | 0.70 | 201.40 | 6370.33 | -28.08 | -16.92 | 17.24 | 32.78 | 211.08 | 0.77 | -0.43 |
| 49 | 6,465 | 1.20 | 160.80 | 6464.32 | -29.54 | -16.81 | 18.60 | 33.99 | 209.64 | 0.86 | 0.53 |
| 50 | 6,558 | 1.80 | 145.00 | 6557.28 | -31.66 | -15.65 | 21.01 | 35.32 | 206.30 | 0.78 | 0.65 |
| 51 | 6,652 | 1.60 | 142.70 | 6651.24 | -33.91 | -14.01 | 23.76 | 36.69 | 202.44 | 0.22 | -0.21 |
| 52 | 6,746 | 0.70 | 204.30 | 6745.23 | -35.48 | -13.45 | 25.41 | 37.94 | 200.76 | 1.50 | -0.96 |
| 53 | 6,838 | 1.90 | 304.30 | 6837.21 | -35.13 | -14.94 | 24.42 | 38.18 | 203.04 | 2.32 | 1.30 |
| 54 | 6,932 | 0.60 | 19.20 | 6931.19 | -33.79 | -16.07 | 22.71 | 37.41 | 205.43 | 1.95 | -1.38 |
| 55 | 7,026 | 0.70 | 42.70 | 7025.18 | -32.90 | -15.51 | 22.18 | 36.38 | 205.25 | 0.30 | 0.11 |
| 56 | 7,120 | 0.70 | 57.00 | 7119.18 | -32.17 | -14.64 | 21.92 | 35.34 | 204.48 | 0.19 | 0.00 |
| 57 | 7,213 | 0.90 | 61.20 | 7212.17 | -31.51 | -13.53 | 21.84 | 34.29 | 203.24 | 0.22 | 0.22 |
| 58 | 7,307 | 1.10 | 42.50 | 7306.15 | -30.48 | -12.27 | 21.51 | 32.86 | 201.92 | 0.40 | 0.21 |



SURVEY CALCULATION PROGRAM

6/14/13 8:46

| Company: | Continental Resources, Inc. | | | | | | | | | | |
|----------------------------|-----------------------------|----------------|----------------------------|-------------|-------------|-------------|---------------------|---------------------|-------------|--------------|-------|
| Well Name: | Atlanta Federal 5-6H | | | | | | | | | | |
| Location: | Williams County, ND | | | | | | | | | | |
| Rig: | Cyclone #2 | | | | | | | | | | |
| Job Number: | DDMT-130371 | | | | | | | | | | |
| API #: | 33-105-02728 | | | | | | | | | | |
| Vertical Section Azimuth: | 152.81 | | Proposed Direction: 152.81 | | | | | | | | |
| Survey Calculation Method: | Minimum Curvature | | | | | | | | | | |
| PTB: | MD | INC | AZM | TVD | N/S | E/W | VS | | | | |
| | 21,165 | 90.70 | 149.70 | 10517.35 | -9640.03 | 4979.29 | 10850.02 | | | | |
| # | Depth Feet | Inc Degrees | Azm Degrees | TVD Feet | N/S Feet | E/W Feet | Surface Vert Sec | Closure Distance | DLS/ 100 | BUR/ 100' | |
| 59 | 7,400 | 1.00 | 52.20 | 7399.14 | -29.33 | -11.03 | 21.05 | 31.33 | 200.60 | 0.22 | -0.11 |
| 60 | 7,494 | 1.00 | 53.80 | 7493.12 | -28.34 | -9.72 | 20.77 | 29.96 | 198.92 | 0.03 | 0.00 |
| 61 | 7,588 | 0.80 | 53.40 | 7587.11 | -27.47 | -8.53 | 20.53 | 28.76 | 197.25 | 0.21 | -0.21 |
| 62 | 7,681 | 0.80 | 37.60 | 7680.10 | -26.56 | -7.61 | 20.15 | 27.63 | 195.98 | 0.24 | 0.00 |
| 63 | 7,775 | 0.60 | 29.50 | 7774.09 | -25.62 | -6.97 | 19.60 | 26.55 | 195.21 | 0.24 | -0.21 |
| 64 | 7,869 | 0.40 | 31.40 | 7868.09 | -24.91 | -6.55 | 19.16 | 25.76 | 194.74 | 0.21 | -0.21 |
| 65 | 7,963 | 0.50 | 21.00 | 7962.09 | -24.25 | -6.24 | 18.72 | 25.03 | 194.42 | 0.14 | 0.11 |
| 66 | 8,057 | 0.40 | 357.30 | 8056.08 | -23.53 | -6.10 | 18.14 | 24.31 | 194.54 | 0.22 | -0.11 |
| 67 | 8,150 | 0.40 | 346.60 | 8149.08 | -22.89 | -6.19 | 17.53 | 23.72 | 195.14 | 0.08 | 0.00 |
| 68 | 8,244 | 0.30 | 357.40 | 8243.08 | -22.33 | -6.28 | 16.99 | 23.20 | 195.71 | 0.13 | -0.11 |
| 69 | 8,337 | 0.50 | 337.30 | 8336.08 | -21.71 | -6.45 | 16.37 | 22.65 | 196.54 | 0.26 | 0.22 |
| 70 | 8,431 | 0.40 | 322.60 | 8430.08 | -21.07 | -6.81 | 15.63 | 22.15 | 197.90 | 0.16 | -0.11 |
| 71 | 8,524 | 0.50 | 331.90 | 8523.07 | -20.46 | -7.20 | 14.91 | 21.69 | 199.38 | 0.13 | 0.11 |
| 72 | 8,618 | 0.60 | 313.30 | 8617.07 | -19.76 | -7.75 | 14.03 | 21.22 | 201.41 | 0.22 | 0.11 |
| 73 | 8,711 | 0.70 | 292.20 | 8710.06 | -19.21 | -8.63 | 13.14 | 21.06 | 204.19 | 0.28 | 0.11 |
| 74 | 8,805 | 0.70 | 285.40 | 8804.06 | -18.84 | -9.71 | 12.32 | 21.20 | 207.27 | 0.09 | 0.00 |
| 75 | 8,898 | 0.50 | 275.50 | 8897.05 | -18.65 | -10.66 | 11.72 | 21.48 | 209.76 | 0.24 | -0.22 |
| 76 | 8,992 | 0.60 | 262.20 | 8991.05 | -18.68 | -11.56 | 11.33 | 21.97 | 211.75 | 0.17 | 0.11 |
| 77 | 9,085 | 0.40 | 256.70 | 9084.04 | -18.82 | -12.36 | 11.09 | 22.51 | 213.29 | 0.22 | -0.22 |
| 78 | 9,177 | 0.50 | 254.50 | 9176.04 | -19.00 | -13.06 | 10.93 | 23.05 | 214.50 | 0.11 | 0.11 |
| 79 | 9,270 | 0.40 | 262.70 | 9269.04 | -19.15 | -13.77 | 10.74 | 23.59 | 215.72 | 0.13 | -0.11 |
| 80 | 9,363 | 0.40 | 261.00 | 9362.03 | -19.24 | -14.41 | 10.53 | 24.04 | 216.84 | 0.01 | 0.00 |
| 81 | 9,456 | 0.30 | 276.30 | 9455.03 | -19.27 | -14.98 | 10.29 | 24.40 | 217.86 | 0.15 | -0.11 |
| 82 | 9,548 | 0.30 | 270.50 | 9547.03 | -19.24 | -15.46 | 10.05 | 24.68 | 218.78 | 0.03 | 0.00 |
| 83 | 9,641 | 0.30 | 277.50 | 9640.03 | -19.20 | -15.94 | 9.80 | 24.96 | 219.70 | 0.04 | 0.00 |
| 84 | 9,734 | 0.40 | 267.50 | 9733.03 | -19.19 | -16.51 | 9.52 | 25.31 | 220.71 | 0.13 | 0.11 |
| 85 | 9,827 | 0.30 | 265.60 | 9826.03 | -19.22 | -17.07 | 9.29 | 25.71 | 221.62 | 0.11 | -0.11 |
| 86 | 9,920 | 0.30 | 284.10 | 9919.03 | -19.18 | -17.55 | 9.04 | 26.00 | 222.47 | 0.10 | 0.00 |
| 87 | 9,995 | 0.20 | 313.60 | 9994.03 | -19.04 | -17.84 | 8.78 | 26.09 | 223.13 | 0.21 | -0.13 |



SURVEY CALCULATION PROGRAM

6/14/13 8:46

| Company: | Continental Resources, Inc. | | | | | | | | | | |
|----------------------------|-----------------------------|----------------|----------------------------|-------------|-------------|-------------|---------------------|---------------------|-------------|--------------|-------|
| Well Name: | Atlanta Federal 5-6H | | | | | | | | | | |
| Location: | Williams County, ND | | | | | | | | | | |
| Rig: | Cyclone #2 | | | | | | | | | | |
| Job Number: | DDMT-130371 | | | | | | | | | | |
| API #: | 33-105-02728 | | | | | | | | | | |
| Vertical Section Azimuth: | 152.81 | | Proposed Direction: 152.81 | | | | | | | | |
| Survey Calculation Method: | Minimum Curvature | | | | | | | | | | |
| PTB: | MD | INC | AZM | TVD | N/S | E/W | VS | | | | |
| | 21,165 | 90.70 | 149.70 | 10517.35 | -9640.03 | 4979.29 | 10850.02 | | | | |
| # | Depth Feet | Inc Degrees | Azm Degrees | TVD Feet | N/S Feet | E/W Feet | Surface Vert Sec | Closure Distance | DLS/ 100 | BUR/ 100' | |
| 88 | 10,041 | 0.10 | 248.40 | 10040.02 | -19.00 | -17.93 | 8.70 | 26.13 | 223.35 | 0.40 | -0.22 |
| 89 | 10,072 | 3.10 | 154.30 | 10071.01 | -19.76 | -17.59 | 9.54 | 26.46 | 221.68 | 10.03 | 9.68 |
| 90 | 10,103 | 7.60 | 154.60 | 10101.87 | -22.37 | -16.35 | 12.43 | 27.71 | 216.16 | 14.52 | 14.52 |
| 91 | 10,135 | 10.90 | 157.40 | 10133.45 | -27.08 | -14.28 | 17.56 | 30.61 | 207.81 | 10.40 | 10.31 |
| 92 | 10,166 | 14.40 | 155.40 | 10163.69 | -33.29 | -11.55 | 24.34 | 35.24 | 199.13 | 11.38 | 11.29 |
| 93 | 10,197 | 18.00 | 153.60 | 10193.45 | -41.09 | -7.81 | 32.98 | 41.83 | 190.77 | 11.72 | 11.61 |
| 94 | 10,228 | 22.20 | 151.70 | 10222.56 | -50.54 | -2.90 | 43.63 | 50.62 | 183.29 | 13.71 | 13.55 |
| 95 | 10,258 | 26.30 | 151.40 | 10249.91 | -61.37 | 2.97 | 55.94 | 61.44 | 177.23 | 13.67 | 13.67 |
| 96 | 10,289 | 30.30 | 152.40 | 10277.20 | -74.34 | 9.88 | 70.64 | 74.99 | 172.43 | 12.99 | 12.90 |
| 97 | 10,321 | 34.40 | 152.20 | 10304.22 | -89.49 | 17.84 | 87.75 | 91.25 | 168.73 | 12.82 | 12.81 |
| 98 | 10,352 | 36.80 | 151.10 | 10329.43 | -105.37 | 26.41 | 105.79 | 108.63 | 165.93 | 8.01 | 7.74 |
| 99 | 10,383 | 40.00 | 147.70 | 10353.72 | -121.93 | 36.23 | 125.01 | 127.19 | 163.45 | 12.36 | 10.32 |
| 100 | 10,414 | 43.20 | 145.30 | 10376.90 | -139.08 | 47.59 | 145.46 | 146.99 | 161.11 | 11.53 | 10.32 |
| 101 | 10,445 | 47.00 | 145.90 | 10398.78 | -157.19 | 59.99 | 167.24 | 168.25 | 159.11 | 12.33 | 12.26 |
| 102 | 10,476 | 49.70 | 148.00 | 10419.38 | -176.61 | 72.62 | 190.28 | 190.96 | 157.65 | 10.07 | 8.71 |
| 103 | 10,508 | 54.10 | 149.70 | 10439.12 | -198.16 | 85.63 | 215.39 | 215.87 | 156.63 | 14.37 | 13.75 |
| 104 | 10,539 | 57.90 | 151.00 | 10456.46 | -220.49 | 98.34 | 241.06 | 241.43 | 155.96 | 12.74 | 12.26 |
| 105 | 10,570 | 62.30 | 150.90 | 10471.90 | -243.98 | 111.38 | 267.91 | 268.20 | 155.46 | 14.20 | 14.19 |
| 106 | 10,601 | 66.60 | 150.40 | 10485.27 | -268.35 | 125.09 | 295.86 | 296.07 | 155.01 | 13.95 | 13.87 |
| 107 | 10,632 | 71.30 | 151.10 | 10496.40 | -293.59 | 139.22 | 324.76 | 324.92 | 154.63 | 15.31 | 15.16 |
| 108 | 10,663 | 76.30 | 151.00 | 10505.05 | -319.63 | 153.62 | 354.51 | 354.63 | 154.33 | 16.13 | 16.13 |
| 109 | 10,694 | 79.20 | 150.80 | 10511.63 | -346.10 | 168.36 | 384.78 | 384.87 | 154.06 | 9.38 | 9.35 |
| 110 | 10,725 | 81.80 | 151.90 | 10516.74 | -372.93 | 183.01 | 415.34 | 415.41 | 153.86 | 9.09 | 8.39 |
| 111 | 10,757 | 86.60 | 153.50 | 10519.98 | -401.21 | 197.61 | 447.17 | 447.23 | 153.78 | 15.80 | 15.00 |
| 112 | 10,788 | 90.00 | 153.40 | 10520.90 | -428.92 | 211.46 | 478.15 | 478.21 | 153.76 | 10.97 | 10.97 |
| 113 | 10,817 | 89.70 | 154.20 | 10520.97 | -454.94 | 224.26 | 507.14 | 507.21 | 153.76 | 2.95 | -1.03 |
| 114 | 10,894 | 89.80 | 152.10 | 10521.31 | -523.64 | 259.04 | 584.14 | 584.20 | 153.68 | 2.73 | 0.13 |
| 115 | 10,988 | 88.90 | 152.20 | 10522.37 | -606.74 | 302.94 | 678.12 | 678.17 | 153.47 | 0.96 | -0.96 |
| 116 | 11,085 | 90.60 | 152.70 | 10522.80 | -692.74 | 347.81 | 775.12 | 775.15 | 153.34 | 1.83 | 1.75 |



SURVEY CALCULATION PROGRAM

6/14/13 8:46

| Company: | Continental Resources, Inc. | | | | | | | | | | |
|----------------------------|-----------------------------|----------------|----------------------------|-------------|-------------|-------------|---------------------|---------------------|-------------|--------------|-------|
| Well Name: | Atlanta Federal 5-6H | | | | | | | | | | |
| Location: | Williams County, ND | | | | | | | | | | |
| Rig: | Cyclone #2 | | | | | | | | | | |
| Job Number: | DDMT-130371 | | | | | | | | | | |
| API #: | 33-105-02728 | | | | | | | | | | |
| Vertical Section Azimuth: | 152.81 | | Proposed Direction: 152.81 | | | | | | | | |
| Survey Calculation Method: | Minimum Curvature | | | | | | | | | | |
| PTB: | MD | INC | AZM | TVD | N/S | E/W | VS | | | | |
| | 21,165 | 90.70 | 149.70 | 10517.35 | -9640.03 | 4979.29 | 10850.02 | | | | |
| # | Depth Feet | Inc Degrees | Azm Degrees | TVD Feet | N/S Feet | E/W Feet | Surface Vert Sec | Closure Distance | DLS/ 100 | BUR/ 100' | |
| 117 | 11,179 | 90.30 | 152.70 | 10522.06 | -776.27 | 390.92 | 869.11 | 869.14 | 153.27 | 0.32 | -0.32 |
| 118 | 11,273 | 92.70 | 152.80 | 10519.60 | -859.80 | 433.94 | 963.07 | 963.10 | 153.22 | 2.56 | 2.55 |
| 119 | 11,367 | 92.10 | 152.30 | 10515.66 | -943.14 | 477.23 | 1056.99 | 1057.01 | 153.16 | 0.83 | -0.64 |
| 120 | 11,461 | 90.20 | 151.80 | 10513.78 | -1026.16 | 521.28 | 1150.96 | 1150.97 | 153.07 | 2.09 | -2.02 |
| 121 | 11,555 | 91.00 | 152.30 | 10512.79 | -1109.19 | 565.34 | 1244.94 | 1244.95 | 152.99 | 1.00 | 0.85 |
| 122 | 11,648 | 89.30 | 152.90 | 10512.55 | -1191.75 | 608.13 | 1337.94 | 1337.94 | 152.97 | 1.94 | -1.83 |
| 123 | 11,743 | 90.00 | 152.90 | 10513.13 | -1276.32 | 651.41 | 1432.94 | 1432.94 | 152.96 | 0.74 | 0.74 |
| 124 | 11,837 | 88.40 | 152.30 | 10514.44 | -1359.76 | 694.66 | 1526.92 | 1526.93 | 152.94 | 1.82 | -1.70 |
| 125 | 11,931 | 90.50 | 153.40 | 10515.34 | -1443.39 | 737.55 | 1620.91 | 1620.92 | 152.93 | 2.52 | 2.23 |
| 126 | 12,025 | 90.40 | 153.80 | 10514.60 | -1527.59 | 779.35 | 1714.90 | 1714.91 | 152.97 | 0.44 | -0.11 |
| 127 | 12,119 | 90.40 | 153.20 | 10513.95 | -1611.71 | 821.29 | 1808.89 | 1808.90 | 153.00 | 0.64 | 0.00 |
| 128 | 12,214 | 88.90 | 153.20 | 10514.53 | -1696.50 | 864.12 | 1903.88 | 1903.90 | 153.01 | 1.58 | -1.58 |
| 129 | 12,308 | 88.20 | 152.90 | 10516.91 | -1780.27 | 906.71 | 1997.85 | 1997.86 | 153.01 | 0.81 | -0.74 |
| 130 | 12,402 | 88.00 | 152.90 | 10520.02 | -1863.90 | 949.50 | 2091.80 | 2091.81 | 153.00 | 0.21 | -0.21 |
| 131 | 12,497 | 90.10 | 154.50 | 10521.60 | -1949.05 | 991.59 | 2186.77 | 2186.78 | 153.04 | 2.78 | 2.21 |
| 132 | 12,591 | 89.90 | 154.20 | 10521.60 | -2033.78 | 1032.28 | 2280.73 | 2280.76 | 153.09 | 0.38 | -0.21 |
| 133 | 12,686 | 90.00 | 153.40 | 10521.68 | -2119.02 | 1074.22 | 2375.72 | 2375.75 | 153.12 | 0.85 | 0.11 |
| 134 | 12,780 | 89.50 | 152.90 | 10522.09 | -2202.89 | 1116.67 | 2469.72 | 2469.75 | 153.12 | 0.75 | -0.53 |
| 135 | 12,874 | 88.90 | 152.90 | 10523.40 | -2286.56 | 1159.49 | 2563.71 | 2563.74 | 153.11 | 0.64 | -0.64 |
| 136 | 12,968 | 90.00 | 153.00 | 10524.31 | -2370.27 | 1202.24 | 2657.70 | 2657.73 | 153.11 | 1.18 | 1.17 |
| 137 | 13,061 | 89.20 | 152.20 | 10524.96 | -2452.83 | 1245.03 | 2750.70 | 2750.73 | 153.09 | 1.22 | -0.86 |
| 138 | 13,156 | 90.30 | 153.20 | 10525.37 | -2537.25 | 1288.60 | 2845.69 | 2845.72 | 153.08 | 1.56 | 1.16 |
| 139 | 13,249 | 90.30 | 152.10 | 10524.88 | -2619.85 | 1331.33 | 2938.69 | 2938.72 | 153.06 | 1.18 | 0.00 |
| 140 | 13,344 | 89.80 | 151.80 | 10524.80 | -2703.69 | 1376.00 | 3033.68 | 3033.70 | 153.03 | 0.61 | -0.53 |
| 141 | 13,437 | 90.00 | 150.90 | 10524.96 | -2785.31 | 1420.59 | 3126.65 | 3126.66 | 152.98 | 0.99 | 0.22 |
| 142 | 13,531 | 90.50 | 152.30 | 10524.55 | -2867.99 | 1465.30 | 3220.62 | 3220.63 | 152.94 | 1.58 | 0.53 |
| 143 | 13,625 | 89.90 | 152.00 | 10524.22 | -2951.10 | 1509.21 | 3314.61 | 3314.62 | 152.91 | 0.71 | -0.64 |
| 144 | 13,719 | 90.50 | 151.90 | 10523.90 | -3034.06 | 1553.41 | 3408.60 | 3408.61 | 152.89 | 0.65 | 0.64 |
| 145 | 13,813 | 88.60 | 149.90 | 10524.63 | -3116.18 | 1599.12 | 3502.54 | 3502.54 | 152.83 | 2.93 | -2.02 |



SURVEY CALCULATION PROGRAM

6/14/13 8:46

| Company: | Continental Resources, Inc. | | | | | | | | | | |
|----------------------------|-----------------------------|----------------|----------------------------|-------------|-------------|-------------|---------------------|---------------------|-------------|--------------|-------|
| Well Name: | Atlanta Federal 5-6H | | | | | | | | | | |
| Location: | Williams County, ND | | | | | | | | | | |
| Rig: | Cyclone #2 | | | | | | | | | | |
| Job Number: | DDMT-130371 | | | | | | | | | | |
| API #: | 33-105-02728 | | | | | | | | | | |
| Vertical Section Azimuth: | 152.81 | | Proposed Direction: 152.81 | | | | | | | | |
| Survey Calculation Method: | Minimum Curvature | | | | | | | | | | |
| PTB: | MD | INC | AZM | TVD | N/S | E/W | VS | | | | |
| | 21,165 | 90.70 | 149.70 | 10517.35 | -9640.03 | 4979.29 | 10850.02 | | | | |
| # | Depth Feet | Inc Degrees | Azm Degrees | TVD Feet | N/S Feet | E/W Feet | Surface Vert Sec | Closure Distance | DLS/ 100 | BUR/ 100' | |
| 146 | 13,908 | 88.00 | 149.90 | 10527.45 | -3198.33 | 1646.74 | 3597.37 | 3597.38 | 152.76 | 0.63 | -0.63 |
| 147 | 14,002 | 90.40 | 152.00 | 10528.77 | -3280.49 | 1692.38 | 3691.30 | 3691.31 | 152.71 | 3.39 | 2.55 |
| 148 | 14,096 | 90.40 | 152.00 | 10528.11 | -3363.49 | 1736.51 | 3785.29 | 3785.30 | 152.69 | 0.00 | 0.00 |
| 149 | 14,189 | 89.40 | 149.90 | 10528.27 | -3444.78 | 1781.66 | 3878.24 | 3878.25 | 152.65 | 2.50 | -1.08 |
| 150 | 14,283 | 89.00 | 148.60 | 10529.58 | -3525.56 | 1829.72 | 3972.04 | 3972.08 | 152.57 | 1.45 | -0.43 |
| 151 | 14,377 | 89.70 | 150.70 | 10530.65 | -3606.66 | 1877.21 | 4065.89 | 4065.95 | 152.50 | 2.35 | 0.74 |
| 152 | 14,472 | 89.80 | 152.50 | 10531.06 | -3690.23 | 1922.39 | 4160.86 | 4160.93 | 152.48 | 1.90 | 0.11 |
| 153 | 14,566 | 89.10 | 152.10 | 10531.97 | -3773.45 | 1966.08 | 4254.85 | 4254.92 | 152.48 | 0.86 | -0.74 |
| 154 | 14,661 | 90.20 | 155.40 | 10532.55 | -3858.64 | 2008.09 | 4349.82 | 4349.89 | 152.51 | 3.66 | 1.16 |
| 155 | 14,755 | 89.50 | 153.60 | 10532.79 | -3943.47 | 2048.56 | 4443.78 | 4443.82 | 152.55 | 2.05 | -0.74 |
| 156 | 14,848 | 91.40 | 153.30 | 10532.06 | -4026.66 | 2090.12 | 4536.77 | 4536.81 | 152.57 | 2.07 | 2.04 |
| 157 | 14,941 | 90.50 | 153.00 | 10530.52 | -4109.62 | 2132.12 | 4629.75 | 4629.79 | 152.58 | 1.02 | -0.97 |
| 158 | 15,035 | 91.90 | 156.30 | 10528.55 | -4194.54 | 2172.35 | 4723.67 | 4723.69 | 152.62 | 3.81 | 1.49 |
| 159 | 15,128 | 90.80 | 155.00 | 10526.36 | -4279.24 | 2210.68 | 4816.52 | 4816.53 | 152.68 | 1.83 | -1.18 |
| 160 | 15,222 | 89.90 | 155.70 | 10525.79 | -4364.67 | 2249.89 | 4910.43 | 4910.43 | 152.73 | 1.21 | -0.96 |
| 161 | 15,319 | 89.40 | 155.10 | 10526.38 | -4452.86 | 2290.27 | 5007.32 | 5007.33 | 152.78 | 0.81 | -0.52 |
| 162 | 15,397 | 90.60 | 156.70 | 10526.38 | -4524.06 | 2322.11 | 5085.21 | 5085.21 | 152.83 | 2.56 | 1.54 |
| 163 | 15,490 | 90.80 | 157.20 | 10525.24 | -4609.63 | 2358.52 | 5177.96 | 5177.96 | 152.90 | 0.58 | 0.22 |
| 164 | 15,584 | 89.30 | 155.80 | 10525.16 | -4695.83 | 2396.00 | 5271.76 | 5271.78 | 152.97 | 2.18 | -1.60 |
| 165 | 15,679 | 87.90 | 155.60 | 10527.48 | -4782.38 | 2435.09 | 5366.61 | 5366.64 | 153.02 | 1.49 | -1.47 |
| 166 | 15,773 | 89.00 | 155.70 | 10530.03 | -4867.99 | 2473.83 | 5460.45 | 5460.51 | 153.06 | 1.18 | 1.17 |
| 167 | 15,868 | 90.00 | 155.50 | 10530.85 | -4954.50 | 2513.07 | 5555.34 | 5555.41 | 153.10 | 1.07 | 1.05 |
| 168 | 15,961 | 90.50 | 152.60 | 10530.45 | -5038.11 | 2553.76 | 5648.30 | 5648.39 | 153.12 | 3.16 | 0.54 |
| 169 | 16,054 | 89.60 | 152.30 | 10530.37 | -5120.57 | 2596.78 | 5741.30 | 5741.38 | 153.11 | 1.02 | -0.97 |
| 170 | 16,148 | 89.70 | 155.00 | 10530.94 | -5204.79 | 2638.49 | 5835.28 | 5835.37 | 153.12 | 2.87 | 0.11 |
| 171 | 16,242 | 91.90 | 154.10 | 10529.63 | -5289.65 | 2678.88 | 5929.22 | 5929.32 | 153.14 | 2.53 | 2.34 |
| 172 | 16,337 | 93.60 | 153.30 | 10525.07 | -5374.72 | 2720.92 | 6024.10 | 6024.20 | 153.15 | 1.98 | 1.79 |
| 173 | 16,432 | 91.40 | 152.00 | 10520.93 | -5459.01 | 2764.52 | 6119.00 | 6119.10 | 153.14 | 2.69 | -2.32 |
| 174 | 16,526 | 88.90 | 150.10 | 10520.68 | -5541.25 | 2810.02 | 6212.94 | 6213.03 | 153.11 | 3.34 | -2.66 |



SURVEY CALCULATION PROGRAM

6/14/13 8:46

| Company: | Continental Resources, Inc. | | | | | | | | | | |
|----------------------------|-----------------------------|----------------|----------------------------|-------------|-------------|-------------|---------------------|---------------------|-------------|--------------|-------|
| Well Name: | Atlanta Federal 5-6H | | | | | | | | | | |
| Location: | Williams County, ND | | | | | | | | | | |
| Rig: | Cyclone #2 | | | | | | | | | | |
| Job Number: | DDMT-130371 | | | | | | | | | | |
| API #: | 33-105-02728 | | | | | | | | | | |
| Vertical Section Azimuth: | 152.81 | | Proposed Direction: 152.81 | | | | | | | | |
| Survey Calculation Method: | Minimum Curvature | | | | | | | | | | |
| PTB: | MD | INC | AZM | TVD | N/S | E/W | VS | | | | |
| | 21,165 | 90.70 | 149.70 | 10517.35 | -9640.03 | 4979.29 | 10850.02 | | | | |
| # | Depth Feet | Inc Degrees | Azm Degrees | TVD Feet | N/S Feet | E/W Feet | Surface Vert Sec | Closure Distance | DLS/ 100 | BUR/ 100' | |
| 175 | 16,621 | 88.20 | 150.20 | 10523.09 | -5623.62 | 2857.29 | 6307.81 | 6307.87 | 153.07 | 0.74 | -0.74 |
| 176 | 16,714 | 89.00 | 150.60 | 10525.36 | -5704.46 | 2903.21 | 6400.70 | 6400.74 | 153.03 | 0.96 | 0.86 |
| 177 | 16,809 | 89.40 | 152.30 | 10526.68 | -5787.90 | 2948.60 | 6495.66 | 6495.69 | 153.00 | 1.84 | 0.42 |
| 178 | 16,903 | 91.20 | 153.30 | 10526.19 | -5871.50 | 2991.57 | 6589.65 | 6589.69 | 153.00 | 2.19 | 1.91 |
| 179 | 16,997 | 90.50 | 152.70 | 10524.80 | -5955.24 | 3034.24 | 6683.64 | 6683.68 | 153.00 | 0.98 | -0.74 |
| 180 | 17,091 | 88.60 | 152.20 | 10525.54 | -6038.58 | 3077.71 | 6777.63 | 6777.66 | 152.99 | 2.09 | -2.02 |
| 181 | 17,185 | 90.00 | 153.10 | 10526.68 | -6122.06 | 3120.89 | 6871.62 | 6871.65 | 152.99 | 1.77 | 1.49 |
| 182 | 17,279 | 90.00 | 153.10 | 10526.68 | -6205.89 | 3163.42 | 6965.62 | 6965.65 | 152.99 | 0.00 | 0.00 |
| 183 | 17,373 | 90.30 | 153.60 | 10526.44 | -6289.90 | 3205.59 | 7059.61 | 7059.65 | 152.99 | 0.62 | 0.32 |
| 184 | 17,468 | 89.50 | 150.60 | 10526.60 | -6373.85 | 3250.03 | 7154.59 | 7154.63 | 152.98 | 3.27 | -0.84 |
| 185 | 17,562 | 90.60 | 151.40 | 10526.52 | -6456.06 | 3295.60 | 7248.55 | 7248.57 | 152.96 | 1.45 | 1.17 |
| 186 | 17,656 | 89.50 | 151.60 | 10526.44 | -6538.67 | 3340.46 | 7342.52 | 7342.54 | 152.94 | 1.19 | -1.17 |
| 187 | 17,751 | 90.00 | 152.20 | 10526.85 | -6622.47 | 3385.20 | 7437.51 | 7437.52 | 152.93 | 0.82 | 0.53 |
| 188 | 17,845 | 87.80 | 153.10 | 10528.66 | -6705.94 | 3428.38 | 7531.48 | 7531.50 | 152.92 | 2.53 | -2.34 |
| 189 | 17,939 | 90.50 | 154.90 | 10530.05 | -6790.41 | 3469.57 | 7625.44 | 7625.46 | 152.94 | 3.45 | 2.87 |
| 190 | 18,032 | 91.00 | 154.60 | 10528.84 | -6874.51 | 3509.24 | 7718.38 | 7718.40 | 152.96 | 0.63 | 0.54 |
| 191 | 18,127 | 90.60 | 153.30 | 10527.51 | -6959.85 | 3550.96 | 7813.35 | 7813.38 | 152.97 | 1.43 | -0.42 |
| 192 | 18,220 | 89.70 | 150.80 | 10527.27 | -7042.00 | 3594.54 | 7906.33 | 7906.36 | 152.96 | 2.86 | -0.97 |
| 193 | 18,315 | 89.90 | 150.30 | 10527.60 | -7124.72 | 3641.25 | 8001.25 | 8001.27 | 152.93 | 0.57 | 0.21 |
| 194 | 18,409 | 89.60 | 152.90 | 10528.01 | -7207.40 | 3685.95 | 8095.22 | 8095.24 | 152.91 | 2.78 | -0.32 |
| 195 | 18,503 | 90.70 | 152.90 | 10527.76 | -7291.08 | 3728.77 | 8189.22 | 8189.24 | 152.91 | 1.17 | 1.17 |
| 196 | 18,597 | 90.80 | 151.90 | 10526.53 | -7374.37 | 3772.32 | 8283.21 | 8283.22 | 152.91 | 1.07 | 0.11 |
| 197 | 18,691 | 90.70 | 153.80 | 10525.30 | -7458.01 | 3815.21 | 8377.20 | 8377.21 | 152.91 | 2.02 | -0.11 |
| 198 | 18,785 | 90.90 | 153.30 | 10523.99 | -7542.16 | 3857.07 | 8471.18 | 8471.19 | 152.91 | 0.57 | 0.21 |
| 199 | 18,879 | 90.90 | 152.20 | 10522.51 | -7625.71 | 3900.11 | 8565.17 | 8565.18 | 152.91 | 1.17 | 0.00 |
| 200 | 18,973 | 90.20 | 152.10 | 10521.61 | -7708.82 | 3944.02 | 8659.16 | 8659.17 | 152.90 | 0.75 | -0.74 |
| 201 | 19,067 | 90.40 | 151.70 | 10521.12 | -7791.74 | 3988.29 | 8753.14 | 8753.15 | 152.89 | 0.48 | 0.21 |
| 202 | 19,161 | 90.50 | 151.70 | 10520.38 | -7874.50 | 4032.85 | 8847.12 | 8847.13 | 152.88 | 0.11 | 0.11 |
| 203 | 19,256 | 89.70 | 149.70 | 10520.21 | -7957.34 | 4079.34 | 8942.05 | 8942.06 | 152.86 | 2.27 | -0.84 |



SURVEY CALCULATION PROGRAM

6/14/13 8:46

| | |
|-------------|-----------------------------|
| Company: | Continental Resources, Inc. |
| Well Name: | Atlanta Federal 5-6H |
| Location: | Williams County, ND |
| Rig: | Cyclone #2 |
| Job Number: | DDMT-130371 |
| API #: | 33-105-02728 |

| | | |
|-----------------------|------|--------------------------|
| Magnetic Declination: | 8.53 | REFERENCED TO TRUE NORTH |
|-----------------------|------|--------------------------|

| | | | |
|---------------------------|--------|---------------------|--------|
| Vertical Section Azimuth: | 152.81 | Proposed Direction: | 152.81 |
|---------------------------|--------|---------------------|--------|

| | |
|----------------------------|-------------------|
| Survey Calculation Method: | Minimum Curvature |
|----------------------------|-------------------|

| PTB: | MD | INC | AZM | TVD | N/S | E/W | VS |
|------|--------|-------|--------|----------|----------|---------|----------|
| | 21,165 | 90.70 | 149.70 | 10517.35 | -9640.03 | 4979.29 | 10850.02 |

| # | Depth Feet | Inc Degrees | Azm Degrees | TVD Feet | N/S Feet | E/W Feet | Surface Vert Sec | Closure Distance | DLS/ 100 | BUR/ 100' | |
|-----|---------------|----------------|----------------|-------------|-------------|-------------|---------------------|---------------------|-------------|--------------|-------|
| 204 | 19,348 | 88.80 | 150.70 | 10521.42 | -8037.17 | 4125.06 | 9033.95 | 9033.95 | 152.83 | 1.46 | -0.98 |
| 205 | 19,441 | 89.90 | 153.10 | 10522.47 | -8119.20 | 4168.86 | 9126.92 | 9126.92 | 152.82 | 2.84 | 1.18 |
| 206 | 19,536 | 88.50 | 153.80 | 10523.80 | -8204.17 | 4211.31 | 9221.90 | 9221.90 | 152.83 | 1.65 | -1.47 |
| 207 | 19,631 | 89.90 | 155.10 | 10525.13 | -8289.86 | 4252.28 | 9316.85 | 9316.85 | 152.84 | 2.01 | 1.47 |
| 208 | 19,724 | 90.20 | 154.60 | 10525.04 | -8374.05 | 4291.81 | 9409.79 | 9409.80 | 152.86 | 0.63 | 0.32 |
| 209 | 19,819 | 89.90 | 152.70 | 10524.96 | -8459.17 | 4333.97 | 9504.78 | 9504.78 | 152.87 | 2.02 | -0.32 |
| 210 | 19,914 | 89.70 | 152.10 | 10525.29 | -8543.36 | 4377.98 | 9599.77 | 9599.78 | 152.87 | 0.67 | -0.21 |
| 211 | 20,012 | 91.10 | 153.30 | 10524.61 | -8630.44 | 4422.93 | 9697.77 | 9697.77 | 152.87 | 1.88 | 1.43 |
| 212 | 20,107 | 91.20 | 152.50 | 10522.70 | -8714.99 | 4466.19 | 9792.75 | 9792.75 | 152.87 | 0.85 | 0.11 |
| 213 | 20,201 | 91.30 | 151.90 | 10520.65 | -8798.12 | 4510.02 | 9886.72 | 9886.72 | 152.86 | 0.65 | 0.11 |
| 214 | 20,296 | 91.60 | 151.70 | 10518.25 | -8881.82 | 4554.90 | 9981.67 | 9981.67 | 152.85 | 0.38 | 0.32 |
| 215 | 20,390 | 88.90 | 150.10 | 10517.84 | -8963.94 | 4600.61 | 10075.61 | 10075.61 | 152.83 | 3.34 | -2.87 |
| 216 | 20,485 | 88.80 | 150.90 | 10519.74 | -9046.61 | 4647.38 | 10170.51 | 10170.51 | 152.81 | 0.85 | -0.11 |
| 217 | 20,579 | 90.00 | 151.40 | 10520.73 | -9128.94 | 4692.73 | 10264.46 | 10264.46 | 152.79 | 1.38 | 1.28 |
| 218 | 20,674 | 90.60 | 151.70 | 10520.23 | -9212.46 | 4737.99 | 10359.44 | 10359.44 | 152.78 | 0.71 | 0.63 |
| 219 | 20,768 | 89.80 | 151.20 | 10519.90 | -9295.03 | 4782.92 | 10453.41 | 10453.41 | 152.77 | 1.00 | -0.85 |
| 220 | 20,863 | 90.10 | 150.40 | 10519.99 | -9377.96 | 4829.26 | 10548.35 | 10548.36 | 152.75 | 0.90 | 0.32 |
| 221 | 20,958 | 90.20 | 150.50 | 10519.74 | -9460.60 | 4876.11 | 10643.27 | 10643.28 | 152.73 | 0.15 | 0.11 |
| 222 | 21,052 | 90.90 | 150.30 | 10518.83 | -9542.33 | 4922.54 | 10737.18 | 10737.20 | 152.71 | 0.77 | 0.74 |
| 223 | 21,110 | 90.70 | 149.70 | 10518.02 | -9592.55 | 4951.54 | 10795.11 | 10795.13 | 152.70 | 1.09 | -0.34 |



SUNDRY NOTICES AND REPORTS ON WELLS FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFSN 5749 (09-2006)



Well File No.
23368

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.
PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

| | | | |
|---|---|---|---|
| <input checked="" type="checkbox"/> Notice of Intent | Approximate Start Date May 14, 2013 | <input type="checkbox"/> Drilling Prognosis | <input type="checkbox"/> Spill Report |
| <input type="checkbox"/> Report of Work Done | Date Work Completed | <input type="checkbox"/> Redrilling or Repair | <input type="checkbox"/> Shooting |
| <input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03. | | <input type="checkbox"/> Casing or Liner | <input type="checkbox"/> Acidizing |
| Approximate Start Date | | <input type="checkbox"/> Plug Well | <input type="checkbox"/> Fracture Treatment |
| | | <input type="checkbox"/> Supplemental History | <input type="checkbox"/> Change Production Method |
| | | <input type="checkbox"/> Temporarily Abandon | <input type="checkbox"/> Reclamation |
| | | <input checked="" type="checkbox"/> Other | Suspension of Drilling |

Well Name and Number
Atlanta Federal 5-6H

| | | | | |
|---------------------------------------|------------------------|---------------------------|--------------------------|-----------------------|
| Footages 495 F N L 835 F WL | Qtr-Qtr NWNW | Section 6 | Township 153 N | Range 101 W |
| Field Baker | Pool Bakken | County Williams | | |

| 24-HOUR PRODUCTION RATE | | | |
|-------------------------|-------|-------|------|
| Before | After | Oil | Bbls |
| Oil | Bbls | Oil | Bbls |
| Water | Bbls | Water | Bbls |
| Gas | MCF | Gas | MCF |

Name of Contractor(s)
Advanced Energy Services

| | | | |
|-------------------------------|----------------------------|--------------------|----------|
| Address P.O. Box 85 | City S. Boardman | State MI | Zip Code |
|-------------------------------|----------------------------|--------------------|----------|

DETAILS OF WORK

Continental Resources, Inc. (CRI) requests permission for suspension of drilling for up to 90 days for the referenced well under NDAC 43-02-03-55. CRI intends to drill the surface hole with freshwater based drilling mud and set surface casing with a small drilling rig and move off within 3 to 5 days. The casing will be set at a depth pre-approved by the NDIC per the Application for Permit to Drill NDAC 43-02-03-21. No saltwater will be used in the drilling and cementing operations of the surface casing. Once the surface casing is cemented, a plug or mechanical seal will be placed at the top of the casing to prevent any foreign matter from getting into the well. A rig capable of drilling to TD will move onto the location within the 90 days previously outlined to complete the drilling and casing plan as per the APD. The undersigned states that this request for suspension of drilling operations in accordance with the Subsection 4 of Section 43-02-03-55 of the NDAC, is being requested to take advantage of the cost savings and time savings of using an initial rig that is smaller than the rig necessary to drill a well to total depth but is not intended to alter or extend the terms and conditions of, or suspend any obligation under, any oil and gas lease with acreage in or under the spacing or drilling unit for the above-referenced well. CRI understands NDAC 43-02-03-31 requirements regarding confidentiality pertaining to this permit. The drilling pit will be fenced immediately after construction if the well pad is located in a pasture (NDAC 43-02-03-19 & 19.1). CRI will plug and abandon the well and reclaim the well site if the well is not drilled by the larger rotary rig within 90 days after spudding the well with the smaller drilling rig.

Notify NDIR Inspector Jessica Gilkey 701-770-7340 with Spud + TD Info

| | | |
|--|---|--------------------------|
| Company Continental Resources, Inc. | Telephone Number (405) 234-9000 | |
| Address P.O. Box 268870 | | |
| City Oklahoma City | State OK | Zip Code 73126 |
| Signature <i>Terry L. Olson</i> | Printed Name Terry L. Olson | |
| Title Regulatory Compliance Specialist | Date May 13, 2013 | |
| Email Address Terry.Olson@clr.com | | |

FOR STATE USE ONLY

| | |
|--|--|
| <input type="checkbox"/> Received | <input checked="" type="checkbox"/> Approved |
| Date 5-13-2013 | |
| By <i>David P. B.</i> | |
| Title Engineering Technician | |



SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 5749 (03-2004)

Well File No.

23368



PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.
PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

| | | | |
|---|---|---|---|
| <input checked="" type="checkbox"/> Notice of Intent | Approximate Start Date January 29, 2013 | <input type="checkbox"/> Drilling Prognosis | Spill Report |
| <input type="checkbox"/> Report of Work Done | Date Work Completed | <input type="checkbox"/> Redrilling or Repair | <input type="checkbox"/> Shooting |
| <input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03. | Approximate Start Date | <input type="checkbox"/> Casing or Liner | <input type="checkbox"/> Acidizing |
| | | <input type="checkbox"/> Plug Well | <input type="checkbox"/> Fracture Treatment |
| | | <input type="checkbox"/> Supplemental History | <input type="checkbox"/> Change Production Method |
| | | <input type="checkbox"/> Temporarily Abandon | <input type="checkbox"/> Reclamation |
| | | <input checked="" type="checkbox"/> Other | Flow back exemption |

| | | | | | |
|---|-----------------------|---------|---------------------------|-------|-------|
| Well Name and Number Atlanta Federal 5-6H | | | | | |
| Footages | Qtr-Qtr | Section | Township | Range | |
| 495 F N L | 835 F W L | NWNW | 6 | 153 N | 101 W |
| Field Baker | Pool Bakken | | County Williams | | |

| 24-HOUR PRODUCTION RATE | | | |
|-------------------------|------|-------|------|
| Before | | After | |
| Oil | Bbls | Oil | Bbls |
| Water | Bbls | Water | Bbls |
| Gas | MCF | Gas | MCF |

| | | | |
|-----------------------|------|-------|----------|
| Name of Contractor(s) | | | |
| Address | City | State | Zip Code |

DETAILS OF WORK

Continental Resources, Inc. requests a waiver from the tubing/pkr requirement included in NDIC 43-02-03-21: Casing, Tubing, and Cementing Requirements during the completion period immediately following the upcoming fracture stimulation. The following assurances apply:

- 1) The well is equipped with 26#/ft P-110 7" casing at surface with an API burst rating of 9960 psig for the 26 #/ft casing.
- 2) The frac design will use a safety factor of 0.85 * API burst rating to determine the max pressure.
- 3) Damage to the casing during the frac would be detected immediately by monitoring equipment.
- 4) The casing is exposed to significantly lower rates and pressures during flow back than during the frac job.
- 5) The frac fluid and formation fluids have very low corrosion and erosion rates
- 6) Production equipment will be installed as soon as possible after the well ceases flowing.
- 7) A 300# gauge will be installed on surface casing during flowback period.

| | | |
|---|---|--------------------------|
| Company Continental Resources, Inc. | Telephone Number 405-234-9000 | |
| Address P.O. Box 269000 | | |
| City Oklahoma City | State OK | Zip Code 73126 |
| Signature | Printed Name Jim Landrigan | |
| Title Completion Engineer | Date December 3, 2012 | |

| | |
|------------------------------------|--|
| FOR STATE USE ONLY | |
| <input type="checkbox"/> Received | <input checked="" type="checkbox"/> Approved |
| Date <i>December 14, 2012</i> | |
| By <i>D. J. M. L.</i> | |
| Title PETROLEUM ENGINEER | |

**AMERICAN
TECHNICAL
SERVICES, INC.**

8105 Black Hawk Rd • PQ Box 558 • Black Hawk, SD 57718-0558 • Phone (605) 787-9303 • FAX (605) 787-9515
140 Pine Needle Drive • Spearfish, SD 57783 • Phone (605) 642-2742 • Mobile 390-3768

CONTINENTAL RESOURCES, INC.

C/O Brosz Engineering
P.O. Box 357
Bowman, North Dakota 58623

June 12, 2012

Attn: Jade Hedge

Subj: Report of Geotechnical Engineering Analysis
Atlanta Drill Pad
Continental Resources
Near Williston, North Dakota

ATS No. 12-12165

We have completed the geotechnical engineering analysis of the soils at the proposed Atlanta Drill Pad site located approximately 5 miles southwest of Williston, North Dakota. This analysis was authorized by Jade Hedge of Brosz Engineering on behalf of Continental Resources. Our soil design and construction recommendations are attached.

Geologic Profile:

Based on our analysis, we have determined the soil profile at the proposed Atlanta Drill Pad site consists of variable depths of sand and clay glacial deposits overlying fat clay glacial till and Pierre Shale. The sand and clay glacial deposits have variable amounts of clay, sand, gravel and traces of coal. The sands are of low plasticity and the fat clay glacial till is highly plastic and expansive.

Global Slope Stability:

The Owner elected not to conduct a slope stability analysis at this site. Thus, our recommendations are given with no acceptance or assumption of the global stability of the slopes at this site. Global stability issues may be present and may create land shifting or sliding in the future.

Geotechnical Summary:

The Atlanta Drill Pad will be constructed on a site with ridge and swale topography on the breaks of the Missouri River near Williston. We understand the Atlanta Drill pad will be created with massive cut and fill earthwork techniques. Cut depths on the order of 20 to 25 feet and fill depths up to 50 feet are planned for the construction of the drill pad.

We are providing drill pad construction earthwork recommendations given the soil profile and knowing the earthwork required to create the drill pad. We offer the following:

Cut Sections:

We recommend that any structure, drill rig, or other more permanent elements which are intolerant to differential movement be placed on the cut areas of the site.

Based on our drill program, we know that variable depths of sand mixtures overlie fat clay glacial till in the cut areas of the site. We recommend the fill pad finished elevation be established at the fat clay till contact or the sands be totally removed to the glacial till contact and then replaced with compacted clays. It is desired to not have layers of sand over clays as instability can result with moisture accumulation below sands and atop clays.

Fill Sections:

We recommend that no structure, drill rig, or other more permanent elements which are intolerant to differential movement be placed over fill areas. If it is desired or necessary to occupy fill areas, we recommend placement of such elements not be conducted until the fill sections have been allowed to consolidate for a minimum of one (1) year. We recommend the fill sections be monitored for vertical and horizontal movement upon completion in order to determine the stability of the sections.

We recommend the swales (valleys) which will be filled have underdrains installed prior to placing fill. We recommend pairs (set of 2 pipes) of 6" flexible PVC drain tile materials be installed along the toes of the existing swales prior to placing fill. The underdrain pipes should be sloped to daylight and must be kept unobstructed.

Fill placed on the existing toes of slopes must be keyed in a minimum depth of five (5) feet prior to placing fill. Fill must also be horizontally benched into existing slopes as fill is placed. We recommend benches be a minimum of 8 feet wide and be installed every two (2) feet vertically.

Drainage Considerations:

We recommend an intercepting drainage trench be excavated atop the cut to divert surface runoff away from the site. We also recommend the final drill pad be sloped to drain at a minimum rate of 5%.

We recommend the drill pad finished surface consist of compacted clays (either exposed native soils or placed clay soils) to minimize subsurface infiltration. Service gravel with separation fabric should be used in traffic areas to allow for access over clay surfaces.

Earthwork Considerations:

All fill soils must be moisture conditioned to +/-3% of optimum moisture content and be compacted to a minimum of 95% of ASTM D 698 standard proctor value.

Loose lifts of fill must not exceed 8" and may be increased to 12" if proper compaction equipment is used and density is verified. Cut/fill earthwork operations in freezing weather must be monitored for frost intrusion and frost lensing. Cut/fill earthwork in winter months is not recommended for this site due to the depths of fill planned.

**CONTINENTAL RESOURCES, INC.
Report of Geotechnical Engineering Analysis
Atlanta Drill Pad**

**June 12, 2012
ATS No. 12-12165
Near Williston, ND**

Closure:

Critical specific recommendations are presented in the report. Reference the site plan in the Appendix for boring locations.

We are available to give further design or consultation if necessary. We should be retained to observe, test, and approve the soils at the time of construction.

We look forward to working with you on future projects.

Sincerely,
American Technical Services, Inc.



Dave G. Bressler, P.E.
Director of Engineering

Copies to: Addressee (4)

INTRODUCTION

This report presents the results of our geotechnical engineering analysis of the soils at the proposed Atlanta Drill Pad site located approximately 5 miles southwest of Williston, North Dakota. This analysis was authorized by Jade Hedge of Brosz Engineering on behalf of Continental Resources.

Our services included laboratory testing of provided samples, performing engineering analysis, providing recommendations for use in drill pad design and construction. Results of the laboratory tests are presented in the report.

Our professional services were performed using the degree of care and skill ordinarily exercised, under similar circumstances, by geotechnical engineers practicing in this or similar localities. No other warranty, express or implied, is made. This report is not a bidding document. Any contractor reviewing this report must draw his own conclusions regarding site conditions and specific construction techniques to be used on this project.

PROJECT INFORMATION

Project information supplied by Brosz Engineering indicates Continental Resources intends to construct a drill pad near Williston, North Dakota. It is our understanding the site will be leveled by massive cut/fill construction. Based on our review of the provided site plans, some fill sections will be upwards of 50 feet in depth. Based on the request for proposal from Brosz Engineering, we are to provide a geotechnical evaluation of the site, provide recommendations for benching and side slopes, and provide slope construction guidelines.

We previously submitted (March, 2012) a proposal for the work at this site which included a slope stability analysis. We understand the Owner elected not to conduct the slope stability analysis.

SUBSURFACE EXPLORATION & TESTING PROGRAMS

We conducted ten (10) explorations to depths of 21 to 61 feet below existing site grades at the Atlanta Drill pad site. The explorations were at the approximate location shown on the attached site plan.

The Unified Soil Classification System was used to classify the soils encountered. Laboratory analyses were performed on representative soil samples to aid in material classification and to estimate pertinent engineering properties of the on-site soils. Testing was performed in accordance with applicable ASTM specifications.

The scope of our services did not include any environmental assessment or investigation for the presence or absence of hazardous or toxic materials in the soil, surface water, groundwater or air, on or below this site. All conditions noted or observed are strictly for the information of our client. If environmental information is required, we recommend an environmental assessment be conducted which addresses environmental concerns.

SITE CONDITIONS

Surface:

The Atlanta Drill Pad site is located approximately 5 miles southwest of Williston, North Dakota. The site lies on the breaks of the Missouri River. The surface at the pad site consists of ridge and swale topography with well defined drainage swales present. The surface is primarily grass and weed covered with overall drainage trending to the south.

Subsurface:

Detailed soil profiles are presented in the boring logs in the Appendix. Based on our analysis, we have determined the soil profile at the proposed Atlanta Drill Pad site consists of variable depths of sand and clay glacial deposits overlying fat clay glacial till and Pierre Shale. The sand and clay glacial deposits have variable amounts of clay, sand, gravel and traces of coal. The sands are of low plasticity and the fat clay glacial till is highly plastic and expansive.

Groundwater Conditions:

Groundwater was encountered at our Boring 1 (57' below existing site grades) location, and at approximately 15 to 18 feet below existing site grades at our boring 8, 9, and 10 locations (lower area of site). Fluctuations in the groundwater table may occur for various reasons, i.e., variations in precipitation, evaporation, surface runoff, groundwater withdrawal and recharge. A more accurate evaluation of the water table would require installing and monitoring piezometers over an extended time period.

Laboratory Analyses:

In-situ moisture contents and dry densities of representative samples from the borings are presented on the boring logs in the Appendix.

CONCLUSIONS AND RECOMMENDATIONS

GENERAL

Our recommendations are based on the assumption that the soil conditions are similar to those disclosed by the provided samples. If variations are noted during construction or if changes are made in the site plan, structural loading, or foundation type, we should be notified so we can supplement our recommendations, as applicable. This report does not encompass the effects, if any, of underlying geologic hazards or regional groundwater withdrawal and expresses no opinion regarding their effects on surface movement.

Global Slope Stability:

The Owner elected not to conduct a slope stability analysis at this site. Thus, our recommendations are given with no acceptance or assumption of the global stability of the slopes at this site. Global stability issues may be present and may create land shifting or sliding in the future.

Geotechnical Summary:

The Atlanta Drill Pad will be constructed on a site with ridge and swale topography on the breaks of the Missouri River near Williston. We understand the Atlanta Drill pad will be created with massive cut and fill earthwork techniques. Cut depths on the order of 20 to 25 feet and fill depths up to 50 feet are planned for the construction of the drill pad.

We recommend an intercepting drainage trench be excavated atop the cut to divert surface runoff away from the site. We also recommend the final drill pad be sloped to drain at a minimum rate of 5%.

We recommend the drill pad finished surface consist of compacted clays (either exposed native soils or placed clay soils) to minimize subsurface infiltration. Service gravel with separation fabric should be used in traffic areas to allow for access over clay surfaces.

We are providing drill pad construction earthwork recommendations given the soil profile and knowing the earthwork required to create the drill pad.

DRILL PAD CUT SECTIONS:

We recommend that any structure, drill rig, or other more permanent elements which are intolerant to differential movement be placed on the cut areas of the site.

Based on our drill program, we know that variable depths of sand mixtures overlie fat clay glacial till in the cut areas of the site. We recommend the fill pad finished elevation be established at the fat clay till contact or the sands be totally removed to the glacial till contact and then replaced with compacted clays. It is desired to not have layers of sand over clays as instability can result with moisture accumulation below sands and atop clays.

For grading cut slope design purposes and due to the presence of sandy soils, we recommend cut slopes be designed to slope at a rate of no steeper than 3:1 (horizontal to vertical). Said slopes will allow for maintenance and repair as necessary and will minimize erosion after vegetation is established. We offer the following grading guidelines for construction of surfacing or elements (excluding permanent structures) over cut sections:

- 1) We recommend a minimum of 8 inches of the on-site surficial soils and topsoil be removed, as applicable.
- 2) We recommend the soils exposed in the cut area be scarified a minimum of 8 inches, and be moisture conditioned to +/-3% of optimum moisture content.
- 3) We recommend the soils be compacted to a minimum of 95% of ASTM 698 standard proctor value. Compaction equipment must be sufficient to gain the desired results and will depend on the soils placed. The geotechnical engineer should observe, classify, and test the soils during the fill placement to assure proper techniques are employed.

- 4) After subgrade preparation and compaction, we recommend gravel base course or desired surfacing be placed. We recommend stabilization/separation fabric such as Mirafi HP370 be placed between the soil subgrade and surfacing material. Oversized rock may be required high traffic or soft soil areas.

DRILL PAD FILL SECTIONS:

We recommend that no structure, drill rig, or other more permanent elements which are intolerant to differential movement be placed over fill areas.

If it is desired or necessary to occupy fill areas, we recommend placement of such elements not be conducted until the fill sections have been allowed to consolidate for a minimum of one (1) year. We recommend the fill sections be monitored for vertical and horizontal movement upon completion in order to determine the stability of the sections.

We recommend the final slopes be no steeper than 3:1 (horizontal to vertical).

Underdrains:

We recommend the swales (valleys) which will be filled have underdrains installed prior to placing fill. We recommend pairs (set of 2 pipes) be installed along the toes of the existing swales prior to placing fill. We recommend the underdrains consist of 6" diameter fabric wrapped flexible perforated drain pipe. We recommend the drain pipe be bedded with a minimum of 12 inches of 1" clean rock bedding for the entire pipe length at the specified locations. The underdrain pipes should be sloped to daylight and must be kept unobstructed.

Keyways:

At the toes of the existing slopes, we recommend the native soils have a keyway cut to aid in supporting slope fill retention. We recommend the slope keyway consist of a five (5) foot minimum vertical cut in the native approved soils along the east side toe. Keyway areas over daylight pipe areas may be modified depending on depth. We recommend the keyway be a minimum of 10 feet in width. Additional underdrains may be required for the system if water is encountered within keyways.

Fill Construction:

We understand the fill for the pad will come from on-site as the grading is conducted. With the aforementioned grading plan in mind and our analysis of the soils present, we offer the following grading recommendations:

- 1) We recommend the fill areas be stripped to receive new fill. Stripping should clear all vegetation, topsoil and debris. The depth of such materials and horizontal extent of the fill/cut slopes will vary along the proposed toe slopes.
- 2) We recommend a minimum of 8 inches of the soils at the base of fill sections be removed (includes topsoil).

- 3) We recommend the soils present at the bottom of the aforementioned stripping depth be proofrolled in the presence of the geotechnical engineer. Soft or debris laden soil areas may require removal or stabilization with oversized rock prior to placing fill.
- 4) It is critical that newly placed embankment fill be benched into the existing side slopes as the fill is raised. We recommend a minimum bench width of eight (8) feet or one (1) scraper width per every two (2) feet of fill placed.
- 5) The soils placed must be placed in an engineered manner. The soils should be moisture conditioned to within 3% of optimum moisture content and be compacted to a minimum of 95% of ASTM D 698 standard proctor value. Compaction equipment must be sufficient to gain the desired results and will depend on the soils placed. The geotechnical engineer should observe, classify, and test the soils during the fill placement to assure proper techniques are employed.
- 6) Loose lifts of fill must not exceed 8" and may be increased to 12" if proper compaction equipment is used and density is verified. Cut/fill earthwork operations in freezing weather must be monitored for frost intrusion and frost lensing. Cut/fill earthwork in winter months is not recommended for this site due to the depths of fill planned.
- 7) We recommend that all finished fill slopes for the roadways be covered with topsoil and/or be hydro-seeded as soon as possible after the slopes have been finished to avoid excessive moisture intrusion and erosion. Seeding and erosion control measures should then follow as dictated by progress.
- 8) Erosion control measures must be implemented during and after construction to avoid loss of soil structure and sedimentation due to surface water infiltration and erosion. Erosion control techniques and materials should be upgraded or repaired as necessary during the course of construction. We recommend final slopes be no steeper than 3:1 (horizontal to vertical) to reduce erosion and facilitate mowing, etc. Steeper slopes can be used, however, maintenance during and after construction must be provided.
- 9) We estimate a shrinkage of soil from cut to fill of 25%.

Buried Debris, Large Cobbles, Boulders & Lignite Coal Lenses:

Buried debris may be present at any location at this site. Traces of lignite coal was encountered during our drilling and sampling program at this site. Cobbles were also encountered in the mixed glacial deposit areas.

We recommend buried debris pockets and lignite coal lenses, if exposed, be observed by the geotechnical engineer to determine the affects of the soils with respect to the drill pad. Removal and replacement of said materials may be required.

Large cobbles or boulders encountered may be placed at the bottom of fill areas as long as large particles are not allowed to "nest". Such particles should be isolated and surrounded by compacted fill.

Frost Depth Considerations

A minimum frost depth of 5 feet (60 inches) should be used for pertinent element design.

DRAINAGE AND MOISTURE PROTECTION

It is extremely important that the site soils not be allowed to become saturated during or after construction. Sump pumps should be present during construction to facilitate water removal after inclement weather.

Surface drainage is critical to assure long tank pad life. Grades should be such that drainage is away from all structures. Utility line excavations should be properly backfilled to avoid possible sources for subsurface saturation. The finished exterior grades of the pad must be sloped a minimum of 5% to promote positive drainage. Respective structure or well pads should be elevated relative to the surrounding finished grades to aid in promoting positive drainage.

We recommend the surface across the pad consist of native or placed compacted clay. We recommend any clay cap material be moisture conditioned to +/-3% of optimum moisture content and be compacted to a minimum of 95% of ASTM D 698 standard proctor value.

OSHA SLOPE STABILITY

GENERAL

The owner and contractor should make themselves aware of and become familiar with applicable local, state, and federal safety regulations, including the current OSHA Excavation and Trench Safety Standards. Construction site safety generally is the sole responsibility of the Contractor, who shall also be solely responsible for the means, methods, and sequencing of construction operations. We are providing this information solely as a service to our client. Under no circumstances should the information provided below be interpreted to mean that American Technical Services, Inc., is assuming responsibility for construction site safety or the Contractor's activities; such responsibility is not being implied and should not be inferred.

EXCAVATIONS AND SLOPES

The Contractor should be aware that slope height, slope inclination, or excavation depths (including utility trench excavations) should in no case exceed those specified in local, state, or federal safety regulations, e.g., OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations, such regulations are strictly enforced and, if they are not followed, the Owner, Contractor, and/or earthwork and utility subcontractors could be liable for substantial penalties.

For this site, the overburden soil encountered in our exploratory investigation is primarily a sand. This is considered to be a type B soil when applying the OSHA regulations. OSHA recommends a maximum slope inclination of 1:1 - (horizontal/vertical) for type B soils. As a safety measure, it is recommended that all vehicles and soil piles be kept a minimum lateral distance from the crest of the slope equal to no less than the slope height. Also, the exposed slope face should be protected against the elements.

We recommend that you retain us to monitor the soils exposed in all excavations and provide engineering services for such slopes. This will provide an opportunity to monitor the soil types encountered and to modify the excavation slope as necessary. It also offers an opportunity to verify the soil type and bearing capacity of the exposed soils.

EARTHWORK

GENERAL

1. The conclusions in this report are contingent upon compliance with recommendations in this section.
2. Due to the possible presence of buried debris, lignite coal, and groundwater impacted soils, we recommend the geotechnical engineer or his representative observe the soils exposed at bottom of slope keyway elevations and along underdrain areas prior to placing fill. Additional overexcavation and replacement may be required.

SITE CLEARING

Strip and remove existing debris, soft or loose soil and any other deleterious materials from the building and parking areas and at least 5 feet beyond. All exposed surfaces should be free of mounds and depressions which could prevent uniform compaction.

EXCAVATION

1. Standard excavation equipment should be sufficient for excavations at this site. Buried debris or large cobble to boulder sized materials may be encountered which are difficult to handle.
2. On-site soils may pump if allowed to become saturated. Scarification and drying, replacement with granular materials, use of special equipment or stabilization may be required to minimize subgrade pumping.

CONSTRUCTION OVER CUT OR FILL AREAS

1. Drain, prepare and construct cut or fill areas as presented in the respective sections of this report. Fill section consolidation period with monitoring is recommended prior to construction of elements.
2. Drainage of cut and fill slope surfaces is critical to prevent erosion and slope movement. Drill pad surface cross-slopes must be maintained at a minimum of 5% to promote surface drainage.

3. Respective subgrade preparation area to be accomplished in a manner which will result in uniform water contents and densities after compaction.
4. Soft, wet or debris laden soil lenses may require additional removal and replacement with oversized rock to stabilize.

MATERIALS

1. Granular engineered fill for structures should consist of on-site or imported sand or gravel. Structure placement recommendations is beyond the scope of this report.
2. Frozen soils should not be used as fill or backfill.
3. Gravel surfacing materials should conform to the following:
 - o Gradation (ASTM C136):

| Sieve Size | Percent Finer By Weight |
|---------------|-------------------------|
| 3" | 100 |
| No. 4 Sieve | 40-100 |
| No. 200 Sieve | 15 (max) |
| Liquid Limit | 25 (max) |
 - o Maximum expansive potential(%) *0.2

*Measured on a sample compacted to approximately 95 percent of the ASTM D698 maximum dry density at about 3 percent below optimum water content. The sample is confined under a 100 psf surcharge and submerged.

4. Acceptance of use of on-site materials shall be at the direction of the geotechnical engineer. The on-site soils shall be placed in an engineered manner. Moisture and density conditioning of the soil is critical.

PLACEMENT AND COMPACTION

1. Place and compact fill in horizontal lifts using equipment and procedures that will produce recommended water contents and densities throughout the lift.
2. No fill should be placed over frozen ground.
3. Materials should be compacted to the following:

| Soil Placement | Minimum Percent Compaction (ASTM D698) |
|----------------|--|
|----------------|--|

Miscellaneous fill ----- 95

4. On -site and imported soils should be compacted at or near optimum moisture conditions.

COMPLIANCE

Structure foundation and slab support is beyond the scope of this report. Structures supported on cut surfaces or compacted fills are dependent upon compliance to respective cut and fill construction recommendations. To assess compliance with these recommendations, observation and testing should be performed under the direction of a geotechnical engineer.

CLOSURE

Our conclusions and recommendations are predicated on observation and testing of the earthwork preparations directed by a geotechnical engineer. Responsibility for any design or construction work or for our conclusions, recommendations, opinions or interpretations, either oral or written, cannot be accepted unless we perform the plan and specification review and construction monitoring to determine whether or not the work performed is in substantial compliance with our conclusions, recommendations, opinions or interpretations, and whether changed soil conditions have occurred.

Deviations from our recommendations by the plans, written specifications, or field applications shall relieve us of responsibility unless our written concurrence with such deviations has been obtained.

APPENDIX

PROJECT LOCATION MAP

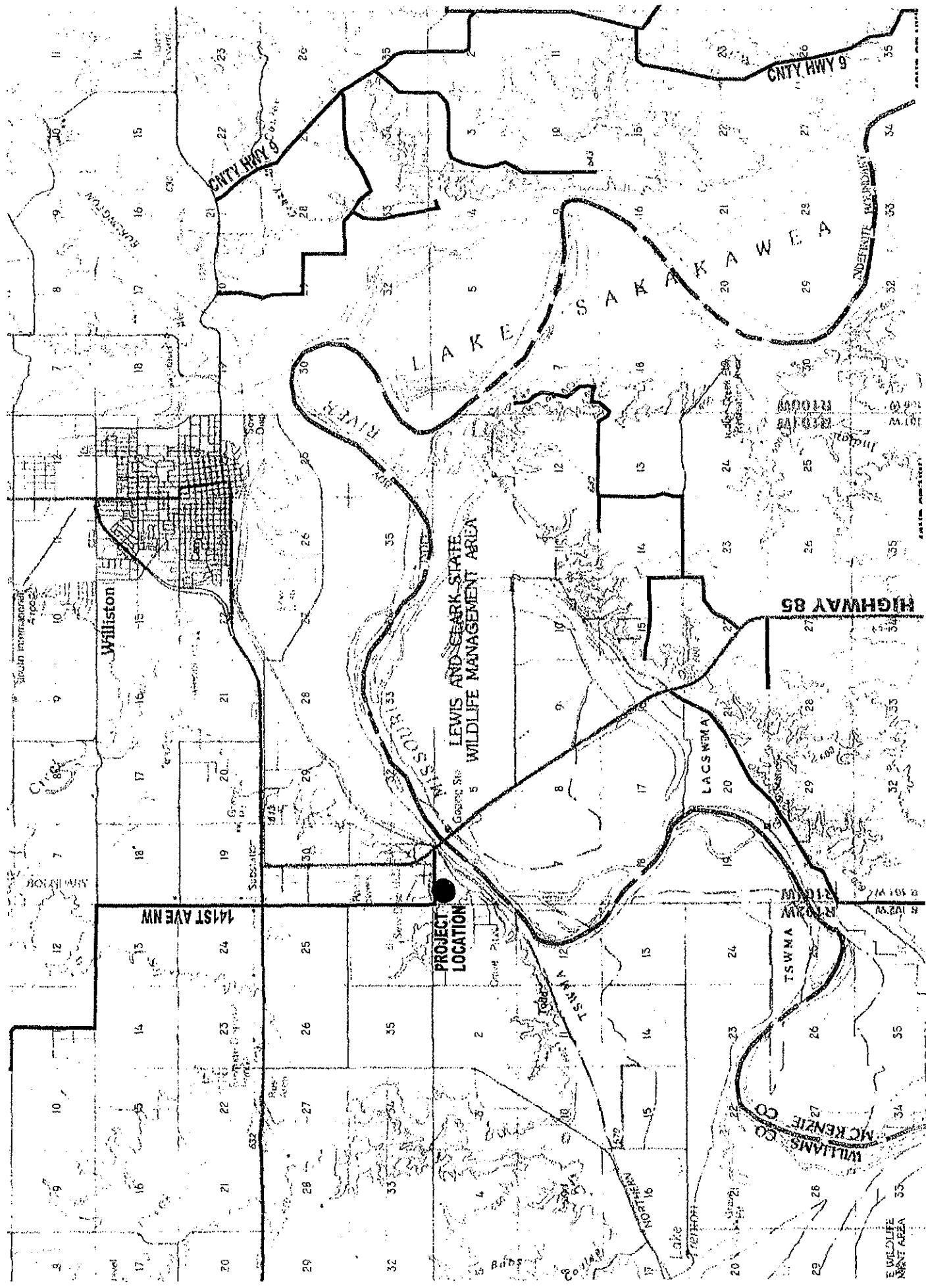
SITE PLAN WITH BORING LOCATIONS

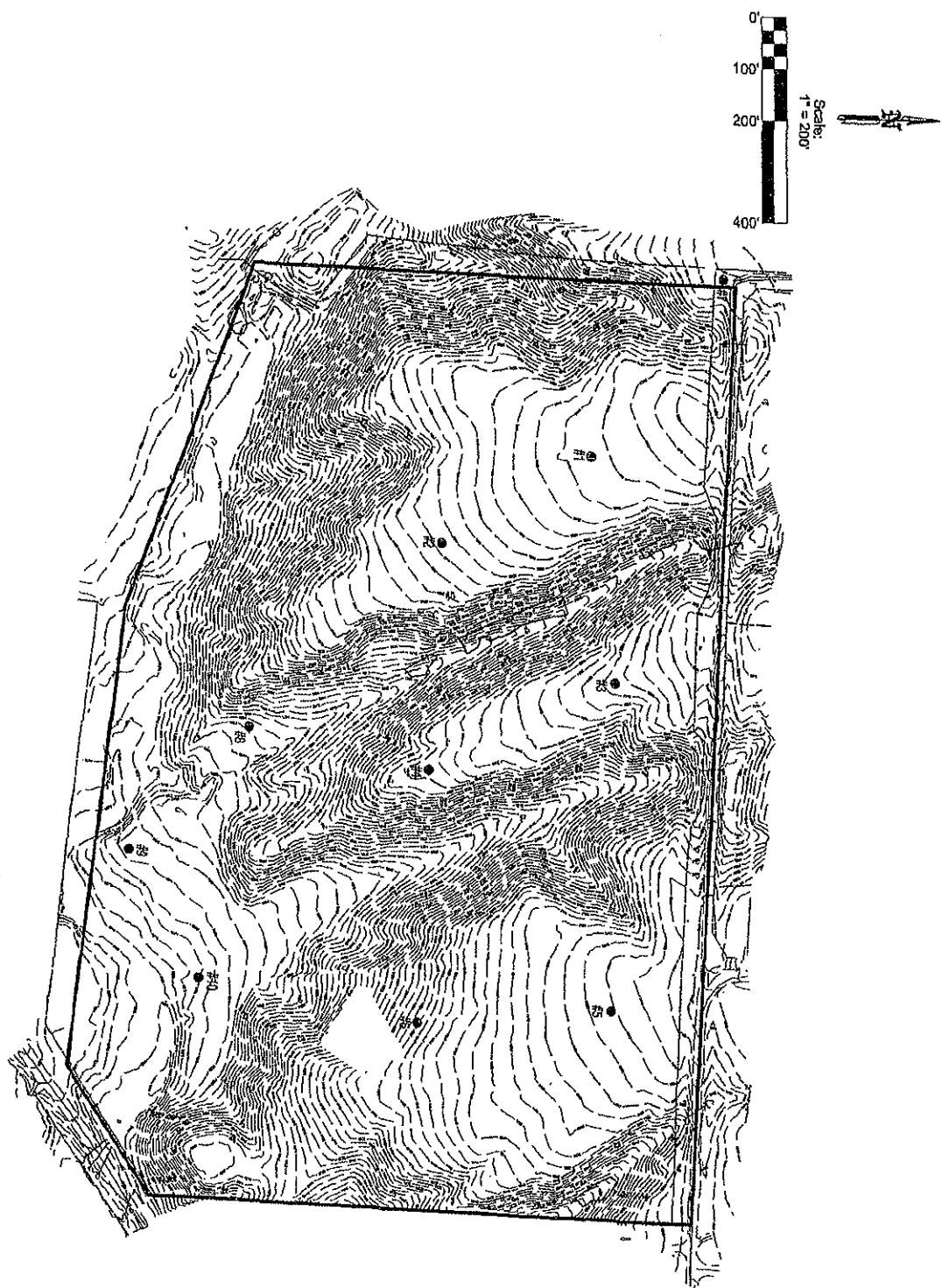
BORING LOGS

BORING LOG GENERAL NOTES

CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES

MOISTURE-DENSITY CURVES





| SHEET DESCRIPTION: Site Layout | | REVISION | DATE | DESIGNED BY: | O OF |
|---|----------------------------|----------|----------|---------------|------|
| BROSZ ENGINNEERING, INC. ARCHITECTURE ENGINEERING SURVEYING | PROJECT NAME: Atlanta Site | 1 | xx/xx/xx | DRAWN BY: JBE | |
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TEST BORING LOG

PROJECT TITLE: Continental Atlanta Drill Pad, Near Williston, ND

PROJECT NUMBER: 12-12165

BORING NO: 1

| DEPTH IN FEET | Approximate Surface Elevation = 1969.2' Description of Materials | GEOLOGIC ORIGIN | SAMPLE DATA | | | | LABORATORY TESTS | | | |
|---------------------|---|--------------------|-------------------------------|----|----|------|------------------|-----|----------|-----|
| | | | WL | N | NO | TYPE | W | D | LL PL | QU |
| 0.0' | Grass/weed cover | | | | | | | | | |
| 2.5' | Sand w/clay: Brown, dry, loose (SC) | Alluvium | | | | | | | | |
| 5.0' | Sand: Brown, sl. moist, loose, m. grained, poorly graded, gravel present (SP) | Glacial Deposit | | 7 | 1 | SB | 4 | FR | NP | |
| 9.0' | | | | | | | | | | |
| 10.0' | | | | | | | | | | |
| 12.0' | Sandy Clay w/gravel: Brown, sl. Moist v. stiff, cobble present, variable gravel and sand content (CL w/sand and gravel) | | | 15 | 2 | SB | 9 | 118 | | |
| 15.0' | cobble absent, less gravel | | | | 12 | 3 | SB | 17 | 110 | |
| 17.5' | | | | | | | | | | |
| 20.0' | Fat Clay w/sand: Brown, moist, stiff, gravel present (CH w/sand) traces of gravel, variable sand content | Glacial Till | | 14 | 4 | SB | 16 | 108 | | |
| 24.0' | | | | | | | | | | |
| 25.0' | | | | 14 | 5 | SB | | | | |
| 30.0' | | | | | 12 | 6 | SB | 18 | 108 | |
| 35.0' | | | | | | | NSR | | | |
| 36.0' | | | | | | | | | | |
| 40.0' | | | | | | | 13 | 7 | SB | 111 |
| 45.0' | | | | | | | NSR | | | |
| 48.0' | | | | | | | | | | |
| 50.0' | Dk gray | | | | 14 | 8 | SB | | | |
| 55.0' | | | | | | | | | | |
| 57.0' | | | | | | | | | | |
| 58.0' | | | | | | | V | | | |
| 60.0' | Shale: Dk. Gray, wet, m. stiff (CH) | Pierre Shale | | | 9 | 9 | SB | 30 | 95 | |
| 61.0' | End of Boring | | | | | | | | | |
| DATE: | WATER TABLE MEASUREMENTS | | DATE: 6/5/12 | | | | | | | |
| 6/5/12 | Encountered at 57' | | METHOD OF DRILLING: 2.25" HSA | | | | | | | |
| | Borehole caved to 40' | | CREW CHIEF: MS | | | | | | | |

AMERICAN TECHNICAL SERVICES, INC. (605) 787-9303

TEST BORING LOG

PROJECT TITLE: Continental Atlanta Drill Pad, Near Williston, ND

PROJECT NUMBER: 12-12165

BORING NO: 2

| DEPTH IN FEET | Approximate Surface Elevation = 1955.0' Description of Materials | GEOLOGIC ORIGIN | SAMPLE DATA | | | | LABORATORY TESTS | | | |
|---------------------|---|-------------------------------|-------------|----|----|------|------------------|-----|----|----|
| | | | WL | N | NO | TYPE | W | D | LL | QU |
| | | | | | | | | | | PL |
| 0.0' | Grass/weed cover | Glacial Deposit | | | | | | | | |
| 2.5' | Sand w/clay: Brown, dry, loose variable clay content (SC) | | | | | | | | | |
| 5.0' | Clayey Sand: Brown, sl. Moist, m. dense, variable sand content, trace of gravel (SC) | | | 16 | 1 | SB | 8 | 117 | | |
| 8.0' | | Glacial Till | | | | | | | | |
| 10.0' | Fat Clay w/sand: Brown, moist, v. stiff, traces of gravel, variable sand content (CH) | | | 16 | 2 | SB | 16 | 105 | 64 | 28 |
| 15.0' | stiff | | | 13 | 3 | SB | 17 | 111 | | |
| 16.0' | | | | | | | | | | |
| 20.0' | v. stiff | | | 21 | 4 | SB | 18 | 102 | | |
| 24.0' | | | | | | | | | | |
| 25.0' | | | | 21 | 5 | SB | 19 | 107 | | |
| 30.0' | | | | | | NSR | | | | |
| 32.0' | | | | | | | | | | |
| 35.0' | | | | 15 | 6 | SB | | | | |
| 40.0' | | | | | | | | | | |
| 41.0' | End of Boring | | | 14 | 7 | SB | | | | |
| DATE: | WATER TABLE MEASUREMENTS | DATE: 6/5/12 | | | | | | | | |
| 6/5/12 | Not Encountered | METHOD OF DRILLING: 2.25" HSA | | | | | | | | |
| | Borehole caved to 25' | CREW CHIEF: MS | | | | | | | | |

AMERICAN TECHNICAL SERVICES, INC. (605) 787-9303

TEST BORING LOG

PROJECT TITLE: Continental Atlanta Drill Pad, Near Williston, ND
 PROJECT NUMBER: 12-12165

BORING NO: 3

| DEPTH IN FEET | Approximate Surface Elevation = 1958.9' Description of Materials | GEOLOGIC ORIGIN | SAMPLE DATA | | | | LABORATORY TESTS | | | |
|---------------------|--|--------------------|---|----|----|------|------------------|-----|----|----|
| | | | WL | N | NO | TYPE | W | D | LL | QU |
| | | | | | | | PL | | | |
| 0.0' | Grass/weed cover | | | | | | | | | |
| 1.5' | Sand w/clay: Brown, dry, loose (SC) | Glacial Deposit | | | | | | | | |
| | Sand w/clay: Brown, dry, m. dense m. grained, poorly graded (SP) variable clay content | | | | | | | | | |
| 5.0' | | | | 18 | 1 | SB | 4 | FR | NP | |
| 8.0' | | | | | | | | | | |
| 10.0' | | | | 11 | 2 | SB | | | | |
| 13.0' | Sandy Clay: Brown, moist, stiff, gravel present, variable sand content (CL) | | | | | | | | | |
| 15.0' | Fat Clay w/sand: Brown, moist, stiff, traces of gravel variable sand content (CH) | Glacial Till | | 11 | 3 | SB | 17 | 110 | | |
| 16.0' | | | | | | | | | | |
| 20.0' | | | | 12 | 4 | SB | | | | |
| 24.0' | | | | | | | | | | |
| 25.0' | | | | | | NSR | | | | |
| 30.0' | dk. Gray | | | 13 | 5 | SB | 15 | 107 | | |
| 32.0' | | | | | | | | | | |
| 35.0' | | | | | | NSR | | | | |
| 40.0' | less stiff | | | | | | | | | |
| 41.0' | End of Boring | | | | | | | | | |
| DATE: 6/5/12 | WATER TABLE MEASUREMENTS Not Encountered Borehole caved to 25' | DATE: 6/5/12 | METHOD OF DRILLING: 2.25" HSA CREW CHIEF: MS | | | | | | | |

AMERICAN TECHNICAL SERVICES, INC. (605) 787-9303

TEST BORING LOG

PROJECT TITLE: Continental Atlanta Drill Pad, Near Williston, ND

PROJECT NUMBER: 12-12165

BORING NO: 4

| DEPTH IN FEET | Approximate Surface Elevation = 1941.2' Description of Materials | GEOLOGIC ORIGIN | SAMPLE DATA | | | | LABORATORY TESTS | | | |
|---------------------|---|--------------------|-------------------------------|---|----|------|------------------|----|----|----|
| | | | WL | N | NO | TYPE | W | D | LL | QU |
| | | | | | | | PL | | | |
| 0.0' | Grass/weed cover | | | | | | | | | |
| 1.5' | Sand w/clay: Brown, dry, loose, gravel and cobble present (SC) | Glacial Deposit | | | | | | | | |
| 3.0' | | | | | | | | | | |
| 4.5' | Sand: Tan, dry, loose (SP) | | | | | | | | | |
| 5.0' | Sandy Clay: Brown, moist, stiff, trace of gravel, variable sand content (CL) | | | | | | | | | |
| 8.0' | | | | | | | | | | |
| 9.0' | | | | | | | | | | |
| 10.0' | Fat Clay w/sand: Brown, moist stiff, traces of gravel, variable sand content (CH) | Glacial Till | 14 | 2 | SB | 11 | FR | 36 | | |
| 15.0' | | | 14 | 3 | SB | | | | | |
| 16.0' | | | | | | | | | | |
| 20.0' | | | 14 | 4 | SB | | | | | |
| 24.0' | | | | | | | | | | |
| 25.0' | | | | | | NSR | | | | |
| 30.0' | | | | | | | | | | |
| 31.0' | | | | | | | | | | |
| 32.0' | End of Boring | | 9 | 5 | SB | | | | | |
| 40.0' | | | | | | | | | | |
| DATE: 6/6/12 | WATER TABLE MEASUREMENTS Not Encountered | DATE: 6/6/12 | METHOD OF DRILLING: 2.25" HSA | | | | | | | |
| | Borehole caved to 24' | | CREW CHIEF: MS | | | | | | | |

AMERICAN TECHNICAL SERVICES, INC. (605) 787-9303

TEST BORING LOG

PROJECT TITLE: Continental Atlanta Drill Pad, Near Williston, ND

PROJECT NUMBER: 12-12165

BORING NO: 5

| DEPTH IN FEET | Approximate Surface Elevation = 1963.6' Description of Materials | GEOLOGIC ORIGIN | SAMPLE DATA | | | | LABORATORY TESTS | | | |
|---------------------|---|--------------------|---|----|----|------|------------------|-----|----------|----|
| | | | WL | N | NO | TYPE | W | D | LL PL | QU |
| 0.0' | Grass/weed cover | | | | | | | | | |
| 1.0' | Sand w/clay: Brown, dry, loose (SC) | Alluvium | | | | | | | | |
| 5.0' | Sand w/clay: Brown, sl. moist, m. dense, m. grained, poorly graded, gravel present (SP) | Glacial Deposit | | 13 | 1 | SB | 5 | FR | | |
| 10.0' | | | | | | | | | | |
| 12.0' | Fat Clay w/sand: Brown, moist, stiff, gravel present, (CH w/sand) | Glacial Till | | 11 | 2 | SB | 15 | 112 | | |
| 15.0' | | | | | | | | | | |
| 20.0' | | | | | | | | | | |
| 24.0' | | | | | | | | | | |
| 25.0' | | | | | | | | | | |
| 30.0' | | | | | | | | | | |
| 35.0' | | | | | | | | | | |
| 36.0' | | | | | | | | | | |
| 40.0' | dk. Gray | | | | | | | | | |
| 45.0' | | | | | | | | | | |
| 48.0' | | | | | | | | | | |
| 50.0' | v. stiff | | | | | | | | | |
| 51.0' | End of Boring | | | | | | | | | |
| 60.0' | | | | | | | | | | |
| DATE: 6/6/12 | WATER TABLE MEASUREMENTS Not Encountered Borehole caved to 32' | DATE: 6/6/12 | METHOD OF DRILLING: 2.25" HSA CREW CHIEF: MS | | | | | | | |

AMERICAN TECHNICAL SERVICES, INC. (605) 787-9303

TEST BORING LOG

PROJECT TITLE: Continental Atlanta Drill Pad, Near Williston, ND

PROJECT NUMBER: 12-12165

BORING NO: 6

| DEPTH IN FEET | Approximate Surface Elevation = 1921.5' Description of Materials | GEOLOGIC ORIGIN | SAMPLE DATA | | | | LABORATORY TESTS | | | |
|---------------------|--|-------------------------------|-------------|----|----|------|------------------|-----|-----|----|
| | | | WL | N | NO | TYPE | W | D | LL | QU |
| | | | | | | | | | | |
| 0.0' | Grass/weed cover | | | | | | | | | |
| | Clayey Sand/Sandy Clay: Brown, dry, stiff/m. dense, variable clay & sand content (SC-CL) | Glacial Deposit | | | | | | | | |
| 4.5' | | | | | | | | | | |
| 5.0' | Fat Clay w/sand: Brown, moist, v. stiff, traces of gravel, variable sand content (CH) | Glacial Till | | 19 | 1 | SB | 11 | 114 | | |
| 10.0' | less stiff | | | | 8 | 2 | SB | 11 | 118 | |
| 15.0' | | | | | 11 | 3 | SB | 15 | 116 | |
| 17.0' | | | | | | | | | | |
| | Shale: Gray & brown, moist, stiff, sand present (CH) | Pierre Shale | | | | | | | | |
| 20.0' | | | | | 10 | 4 | SB | 34 | 88 | |
| 25.0' | | | | | | | | | | |
| 26.0' | End of Boring | | | | 11 | 5 | SB | | | |
| DATE: | WATER TABLE MEASUREMENTS | DATE: 6/6/12 | | | | | | | | |
| 6/6/12 | Not Encountered | METHOD OF DRILLING: 2.25" HSA | | | | | | | | |
| | Borehole caved to 24' | CREW CHIEF: MS | | | | | | | | |

AMERICAN TECHNICAL SERVICES, INC. (605) 787-9303

TEST BORING LOG

PROJECT TITLE: Continental Atlanta Drill Pad, Near Williston, ND

PROJECT NUMBER: 12-12165

BORING NO: 7

| DEPTH IN FEET | Approximate Surface Elevation = 1977.1' Description of Materials | GEOLOGIC ORIGIN | SAMPLE DATA | | | | LABORATORY TESTS | | | |
|---------------------|---|--------------------|-------------------------------|----|----|------|------------------|-----|----|----|
| | | | WL | N | NO | TYPE | W | O | LL | QU |
| | | | | | | | | | | PL |
| 0.0' | Grass/weed cover | | | | | | | | | |
| 2.0' | Sand w/clay: Brown, dry, loose (SC) | Alluvium | | | | | | | | |
| 5.0' | Sand: Brown, sl. moist, loose, m. grained, poorly graded, gravel present (SP) | Glacial Deposit | | 9 | 1 | SB | 6 | FR | | |
| 10.0' | Fat Clay w/sand: Brown, moist, stiff, gravel present, (CH w/sand) variable sand content | Glacial Till | | 10 | 2 | SB | 16 | 109 | | |
| 12.0' | | | | | | | | | | |
| 15.0' | | | | 8 | 3 | SB | | | | |
| 20.0' | | | | 9 | 4 | SB | 16 | 111 | | |
| 24.0' | | | | | | | | | | |
| 25.0' | | | | 10 | 5 | SB | | | | |
| 30.0' | | | | | | NSR | | | | |
| 35.0' | | | | 9 | 6 | SB | | | | |
| 36.0' | | | | | | | | | | |
| 40.0' | | | | | | NSR | | | | |
| 45.0' | Dk. Gray | | | 10 | 7 | SB | | | | |
| 48.0' | | | | | | | | | | |
| 50.0' | | | | | | NSR | | | | |
| 55.0' | | | | 9 | 8 | SB | | | | |
| 60.0' | | | | | | | | | | |
| 61.0' | End of Boring | | | 8 | 9 | SB | | | | |
| DATE: 6/6/12 | WATER TABLE MEASUREMENTS Not Encountered | DATE: 6/6/12 | METHOD OF DRILLING: 2.25" HSA | | | | | | | |
| | Borehole caved to 43' | CREW CHIEF: MS | | | | | | | | |

AMERICAN TECHNICAL SERVICES, INC. (605) 787-9303

TEST BORING LOG

PROJECT TITLE: Continental Atlanta Drill Pad, Near Williston, ND

PROJECT NUMBER: 12-12165

BORING NO: 8

| DEPTH IN FEET | Approximate Surface Elevation = 1892.3' Description of Materials | GEOLOGIC ORIGIN | SAMPLE DATA | | | | LABORATORY TESTS | | | |
|---------------------|---|--------------------|-------------------------------|----|----|------|------------------|-----|----|----|
| | | | WL | N | NO | TYPE | W | D | LL | QU |
| 0.0' | Grass/weed cover | Alluvium | | | | | | | | |
| | Clay w/sand: Gray, moist, stiff, sand present (CL) | | | | | | | | | |
| 5.0' | | | | 8 | 1 | SB | 21 | 97 | | |
| 10.0' | | | | 10 | 2 | SB | 19 | 107 | | |
| 15.0' | Fat Clay w/sand: Brown, moist, stiff, variable sand content (CH) | Pierre Shale | | 9 | 3 | SB | 22 | 97 | | |
| 18.0' | | | V | | | | | | | |
| 20.0' | | | | 10 | 4 | SB | 33 | 91 | | |
| 21.0' | | | | | | | | | | |
| 25.0' | End of Boring | | | | | | | | | |
| DATE: 6/7/12 | WATER TABLE MEASUREMENTS Encountered at 18' Borehole caved to 14' | DATE: 6/7/12 | METHOD OF DRILLING: 2.25" HSA | | | | | | | |
| | | | CREW CHIEF: MS | | | | | | | |

AMERICAN TECHNICAL SERVICES, INC. (605) 787-9303

TEST BORING LOG

PROJECT TITLE: Continental Atlanta Drill Pad, Near Williston, ND

PROJECT NUMBER: 12-12165

BORING NO: 9

| DEPTH IN FEET | Approximate Surface Elevation = 1878.6' Description of Materials | GEOLOGIC ORIGIN | SAMPLE DATA | | | | LABORATORY TESTS | | | |
|---------------------|--|-------------------------------|-------------|---|----|------|------------------|---|----|----|
| | | | WL | N | NO | TYPE | W | D | LL | QU |
| | | | | | | | PL | | | |
| 0.0' | Grass/weed cover | Alluvium | | | | | | | | |
| | Sand w/clay: Brown, moist, loose, variable clay content (SC), traces of gravel present | | | | | | | | | |
| 5.0' | | | | | | | | | | |
| 10.0' | Gravelly Sand: Brown, moist, dense, variable sand content (SW) | | | | | | | | | |
| 15.0' | obstructed sampler | | | | | | | | | |
| 18.0' | less dense, wet, less gravel | | | | | | | | | |
| 20.0' | | | | | | | | | | |
| 21.0' | End of Boring | | | | | | | | | |
| 25.0' | | | | | | | | | | |
| DATE: | WATER TABLE MEASUREMENTS | DATE: 6/7/12 | | | | | | | | |
| 6/7/12 | Encountered at 18' | METHOD OF DRILLING: 2.25" HSA | | | | | | | | |
| | Borehole caved to 13' | CREW CHIEF: MS | | | | | | | | |

AMERICAN TECHNICAL SERVICES, INC. (605) 787-9303

TEST BORING LOG

PROJECT TITLE: Continental Atlanta Drill Pad, Near Williston, ND

PROJECT NUMBER: 12-12165

BORING NO: 10

| DEPTH IN FEET | Approximate Surface Elevation = 1874.4' Description of Materials | GEOLOGIC ORIGIN | SAMPLE DATA | | | | LABORATORY TESTS | | | |
|---------------------|--|--------------------|-------------------------------|---|----|------|------------------|-----|----|----|
| | | | WL | N | NO | TYPE | W | D | LL | QU |
| | | | | | | | PL | | | |
| 0.0' | Grass/weed cover | | | | | | | | | |
| | Sandy Clay/Clayey Sand: Brown, moist, m. stiff/loose, variable sand & clay content (CL-SC) | Alluvium | | | | | | | | |
| 5.0' | traces of gravel present | | | 6 | 1 | SB | 11 | 111 | | |
| 10.0' | soft/v. loose | | | 4 | 2 | SB | 19 | 105 | | |
| 15.0' | wet, softer/looser | | V | 2 | 3 | SB | 25 | FR | | |
| 19.0' | | | | | | | | | | |
| 20.0' | Sand: Brown, poorly graded wet, v. loose (SP) | | | | | | NSR | | | |
| 22.0' | Gravel & cobble present | | | | | | | | | |
| 25.0' | | | | | | | NSR | | | |
| 26.0' | End of Boring | | | | | | | | | |
| DATE: | WATER TABLE MEASUREMENTS | | DATE: 6/7/12 | | | | | | | |
| 6/7/12 | Encountered at 15' | | METHOD OF DRILLING: 2.25" HSA | | | | | | | |
| | Borehole caved to 13' | | CREW CHIEF: MS | | | | | | | |

AMERICAN TECHNICAL SERVICES, INC. (605) 787-9303

GENERAL NOTES

| DESCRIPTIVE TERMINOLOGY | | RELATIVE SIZES | |
|-----------------------------|--|----------------|------------|
| Density Term | "N" Value | Boulder | > 12" |
| Very Loose | 0 - 4 | Cobble | 3" - 12" |
| Loose | 4 - 10 | Gravel | 3/4" - 3" |
| Medium Dense | 10 - 16 | Coarse | #4 - 3/4" |
| Dense | 16 - 30 | Fine | #4 - #10 |
| Very Dense | > 30 | Sand | #10 - #40 |
| | | Coarse | #40 - #200 |
| | | Medium | #200 (PI) |
| | | Fine | <#200 (PI) |
| | | Silt & Clay | |
| Consistency Term | "N" Value | Term | Range |
| Very Soft | 0 - 2 | Trace | 0 - 5% |
| Soft | 2 - 4 | A Little | 5 - 15% |
| Medium stiff | 4 - 8 | Some | 15 - 30% |
| Stiff | 8 - 15 | With | 30 - 50% |
| Very stiff | 15 - 30 | | |
| Hard | < 30 | | |
| BORING AND SAMPLING SYMBOLS | | | |
| SYMBOL | DEFINITION | | |
| HSA | Hollow Stem Auger - 3 1/4" ID & 4 1/4" ID | | |
| FA | Flight Auger - 4" OD | | |
| HA | Hand Auger - 1 1/2" OD | | |
| DC | Drive Casing | | |
| PD | Pipe Drill or Clean Out Tube | | |
| CS | Continuous Split Barrel Sampling | | |
| DM | Drilling Mud | | |
| JW | Jetting Water | | |
| SB | Split Barrel Sampler | | |
| TW | Thin Wall Tube Sampler | | |
| LS | Split Barrel Liner Sample | | |
| W | Wash Sample | | |
| B | Bag Sample | | |
| NSR | No Sample Retrieved | | |
| NMR | No Water Level Measurement Recorded | | |
| WL | Water Level | | |
| N | Standard Penetration Value | | |
| | Water Level Symbol | | |
| LABORATORY TEST SYMBOLS | | | |
| SYMBOL | DEFINITION | | |
| W | Moisture Content-Percent of Dry Weight ASTM D2216 | | |
| D | Dry Density-Pound Per Cubic Foot | | |
| LL & PL | Liquid Limit and Plastic Limit ASTM D4318 | | |
| Qu | Unconfined Compressive Strength Pounds Per Square Foot ASTM D2166 | | |

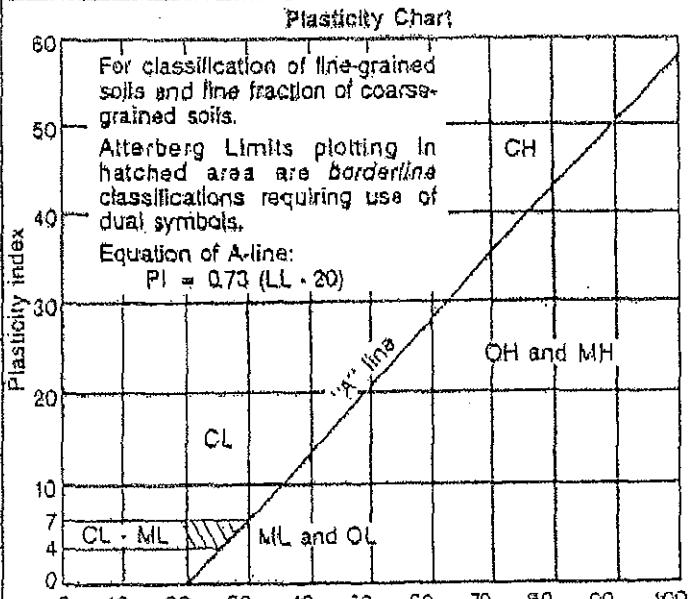
CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES

ASTM Designation: D 2487 — 69 AND D 2488 — 69

(Unified Soil Classification System)

| Major divisions | | Group symbols | Typical Names | | Classification Criteria | | | | | |
|--|---|--|---|---|---|----------------------------------|--|--|--|--|
| Coarse-grained soils More than 50% retained on No. 200 sieve* | Sands More than 50% of coarse fraction passes No. 4 sieve | GW | Well-graded gravels and gravel-sand mixtures, little or no fines | Gravels 50% or more of coarse fraction retained on No. 4 sieve | $C_u = \frac{D_{50}}{D_{10}}$ greater than 4; $C_z = \frac{(D_{50})^2}{D_{10} \times D_{50}}$ between 1 and 3 | | | | | |
| | | | | | | Not meeting both criteria for GW | | | | |
| | | GP | Poorly graded gravels and gravel-sand mixtures, little or no fines | Clean gravels | | | | | | |
| | | | | | | | | | | |
| | | GM | Silty gravels, gravel-sand-silt mixtures | Gravels with fines | Alterberg limits below "A" line or PI. less than 4 | | | | | |
| | | | | | | | | | | |
| | | GC | Clayey gravels, gravel-sand-clay mixtures | Clean sands | Alterberg limits above "A" line with PI. greater than 7 | | | | | |
| | | | | | | | | | | |
| | | SW | Well-graded sands and gravelly sands, little or no fines | Sands | $C_u = \frac{D_{50}}{D_{10}}$ greater than 6; $C_z = \frac{(D_{50})^2}{D_{10} \times D_{50}}$ between 1 and 3 | | | | | |
| | | | | | | Not meeting both criteria for SW | | | | |
| Fine-grained soils 50% or more passes No. 200 sieve* | Sands with fines | SP | Poorly graded sands and gravelly sands, little or no fines | Sands with fines | Alterberg limits below "A" line or PI. less than 4 | | | | | |
| | | | | | | | | | | |
| | | SN | Silty sands, sand-silt mixtures | | | | | | | |
| | | | | | | | | | | |
| | | SC | Clayey sands, sand-clay mixtures | Sands and clays Liquid limit 50% or less | Alterberg limits above "A" line with PI. greater than 7 | | | | | |
| | | | | | | | | | | |
| | | Sils and clays Liquid limit 50% or less | ML | Inorganic silts, very fine sands, rock flour, silty or clayey fine sands | Classification on basis of percentage of fines Less than 5% pass No. 200 sieve GW, GP, SW, SP More than 12% pass No. 200 sieve GM, GC, SM, SC 5 to 12% pass No. 200 sieve Borderline classifications requiring use of dual symbols | | | | | |
| | | | | | | | | | | |
| | | | CL | Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays | | | | | | |
| | | | | | | | | | | |
| | | | OL | Organic silts and organic silty clays of low plasticity | | | | | | |
| | | | | | | | | | | |
| | | MH | Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts | Plasticity Chart For classification of fine-grained soils and fine fraction of coarse-grained soils. Alterberg Limits plotting in hatched area are borderline classifications requiring use of dual symbols. Equation of A-line: $PI = 0.73(LL - 20)$ | CH CL ML and OL MH and OH | | | | | |
| | | | | | | | | | | |
| | | CH | Inorganic clays of high plasticity, fat clays | | | | | | | |
| | | | | | | | | | | |
| | | OH | Organic clays of medium to high plasticity | | | | | | | |
| | | | | | | | | | | |
| | | Highly organic soils | Peat, muck and other highly organic soils | | | | | | | |
| | | | | | | | | | | |

* Based on the material passing the 3 in. (75 mm) sieve.





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140 Pine Needle Drive • Spearfish, SD 57783 • Phone (605) 642-2742 • Mobile 390-3768

PROCTOR TEST

MOISTURE DENSITY RELATION

BROSZ ENGINEERING

Proctor#: 1 Date:06/11/12

ASTM: 698 Method:A

Attn: Jade

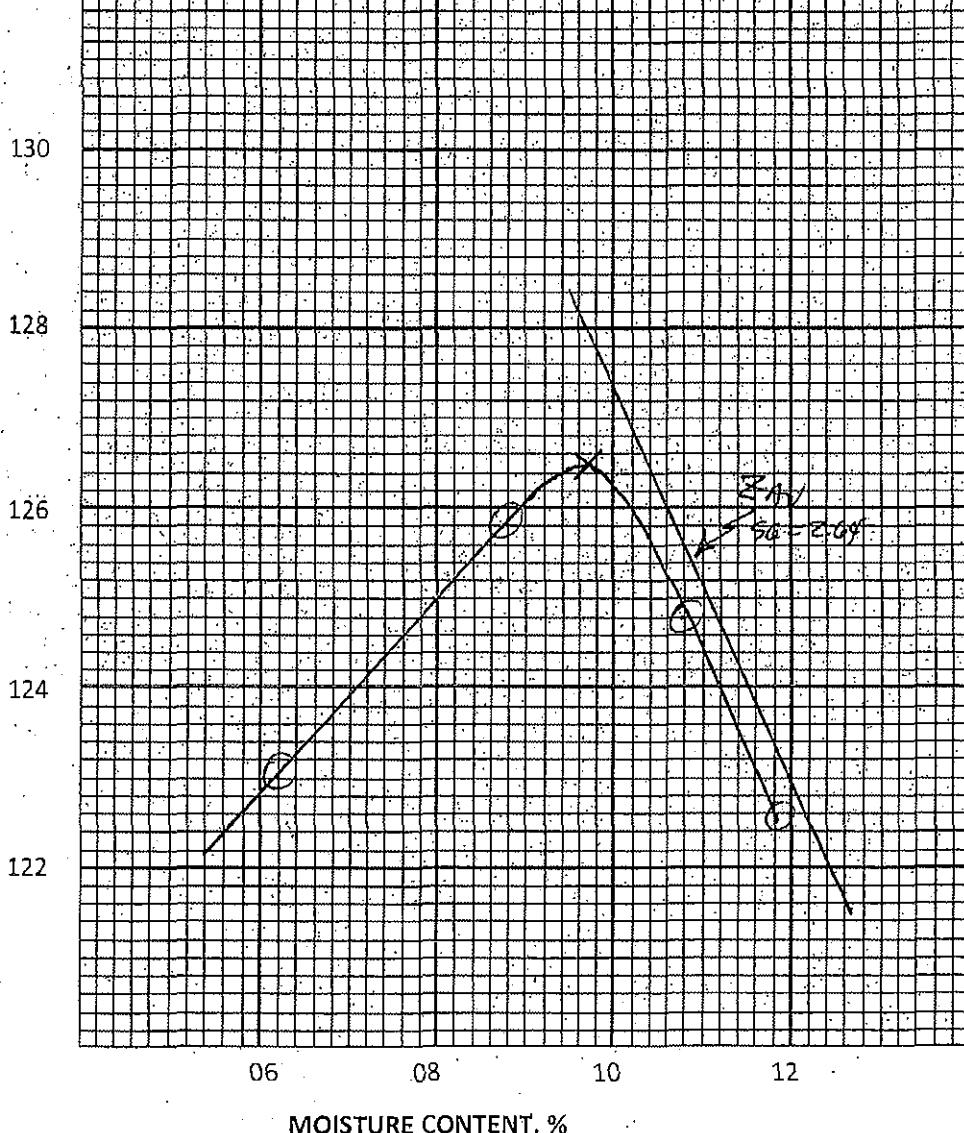
Soil Classification: (SC-CL) Clayey
Sand/Sandy Clay

Project: Continental Atlanta Pad, Near
Williston, North Dakota

Project Number: 12-12165

MAXIMUM DENSITY: 126.5 pdf

OPTIMUM MOISTURE CONTENT: 9.7%



DRY DENSITY. pdf

Cc:

SIOUX FALLS • BLACK HAWK • SPEARFISH

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140 Pine Needle Drive • Spearfish, SD 57783 • Phone (605) 642-2742 • Mobile 390-3768

PROCTOR TEST

MOISTURE DENSITY RELATION

BROSZ ENGINEERING

Proctor#: 2 Date: 06/11/12

ASTM: 698 Method: A

Attn: Jade

Soil Classification: (SP) Sand w/ Gravel,
B15-0'-10'

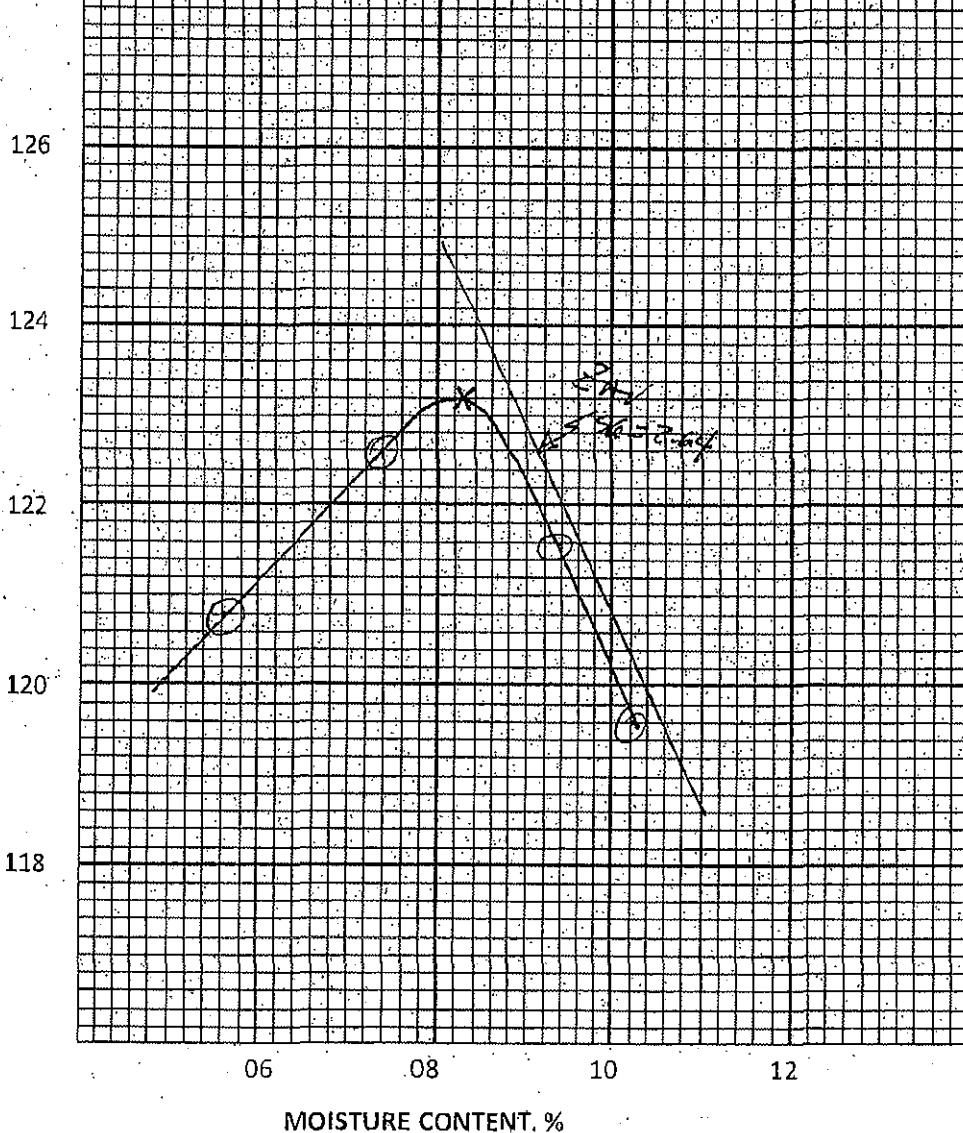
Project: Continental Atlanta Pad, Near
Williston, North Dakota

Project Number: 12-12165

MAXIMUM DENSITY: 123.2 pcf

OPTIMUM MOISTURE CONTENT: 8.3%

DRY DENSITY, pcf



Cc:

SIOUX FALLS • BLACK HAWK • SPEARFISH

PERMEABILITY TEST REPORT

TEST DATA:

Specimen Height (cm): 7.50
 Specimen Diameter (cm): 7.07
 Dry Unit Weight (pcf): 110.8
 Moisture Before Test (%): 13.8
 Moisture After Test (%): 0.0
 Run Number: 1 • 2 ▲
 Cell Pressure (psi): 65.0
 Test Pressure(psi): 60.0
 Back Pressure(psi): 57.9
 Diff. Head (psi): 2.1
 Flow Rate (cc/sec): 6.93×10^{-3}
 Perm. (cm/sec): 9.08×10^{-6}

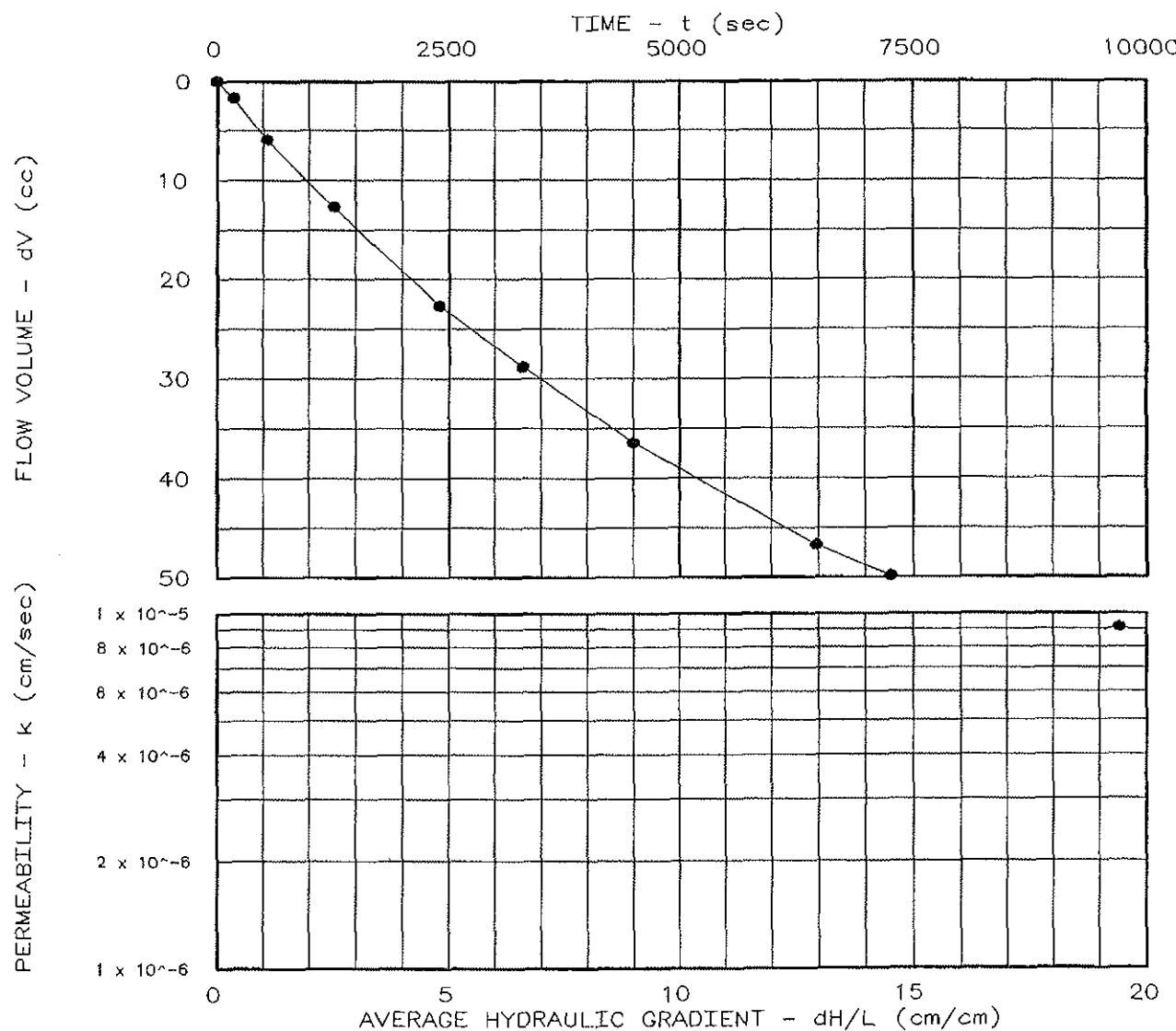
SAMPLE DATA:

Sample Identification: Fill No.3

Visual Description:

Remarks:

Maximum Dry Density (pcf): 116.6
 Optimum Moisture Content (%): 13.8
 ASTM(D698)
 Percent Compaction: 95.0%
 Permeameter type: Flexwett
 Sample type: Remolded



Project: Atlanta Site

Location:

Date: 9/10/2012

Project No.: 114-551057

File No.: 258

Lab No.:

Tested by:

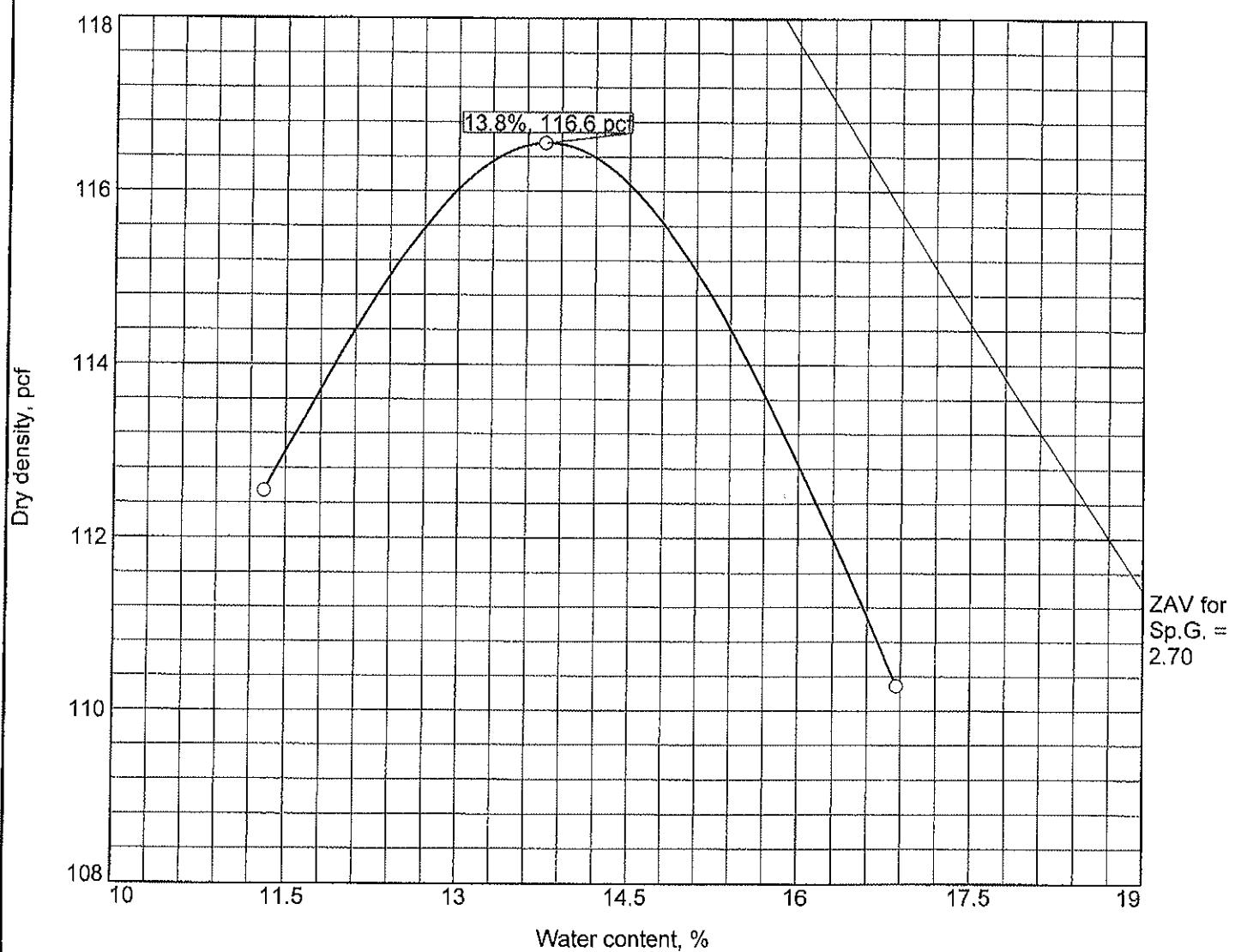
Checked by:

Test: CH - Constant head

PERMEABILITY TEST REPORT

TETRA TECH

Moisture Density Relationship



Test specification: ASTM D 698-00a Method A Standard

| Elev/ Depth | Classification | | Nat. Moist. | Sp.G. | LL | PI | % > #4 | % < No.200 |
|----------------|----------------|--------|----------------|-------|----|----|-----------|---------------|
| | USCS | AASHTO | | | | | | |
| | | | | 2.70 | | | | |

| TEST RESULTS | | MATERIAL DESCRIPTION |
|---|--|----------------------|
| Maximum dry density = 116.6 pcf | | |
| Optimum moisture = 13.8 % | | |
| Project No. 114-551057 Client: Continental Resources Project: Atlanta Site | | Remarks: |
| Source of Sample: Fill No. 3 | | |
| Tetra Tech, Inc. | | |
| Billings, MT | | Figure |

PERMEABILITY TEST REPORT

TEST DATA:

Specimen Height (cm): 7.50
 Specimen Diameter (cm): 7.07
 Dry Unit Weight (pcf): 112.3
 Moisture Before Test (%): 13.1
 Moisture After Test (%): 0.0
 Run Number: 1 • 2 ▲
 Cell Pressure (psi): 65.0
 Test Pressure(psi): 60.0
 Back Pressure(psi): 57.9
 Diff. Head (psi): 2.1
 Flow Rate (cc/sec): 1.90×10^{-2}
 Perm. (cm/sec): 2.49×10^{-5}

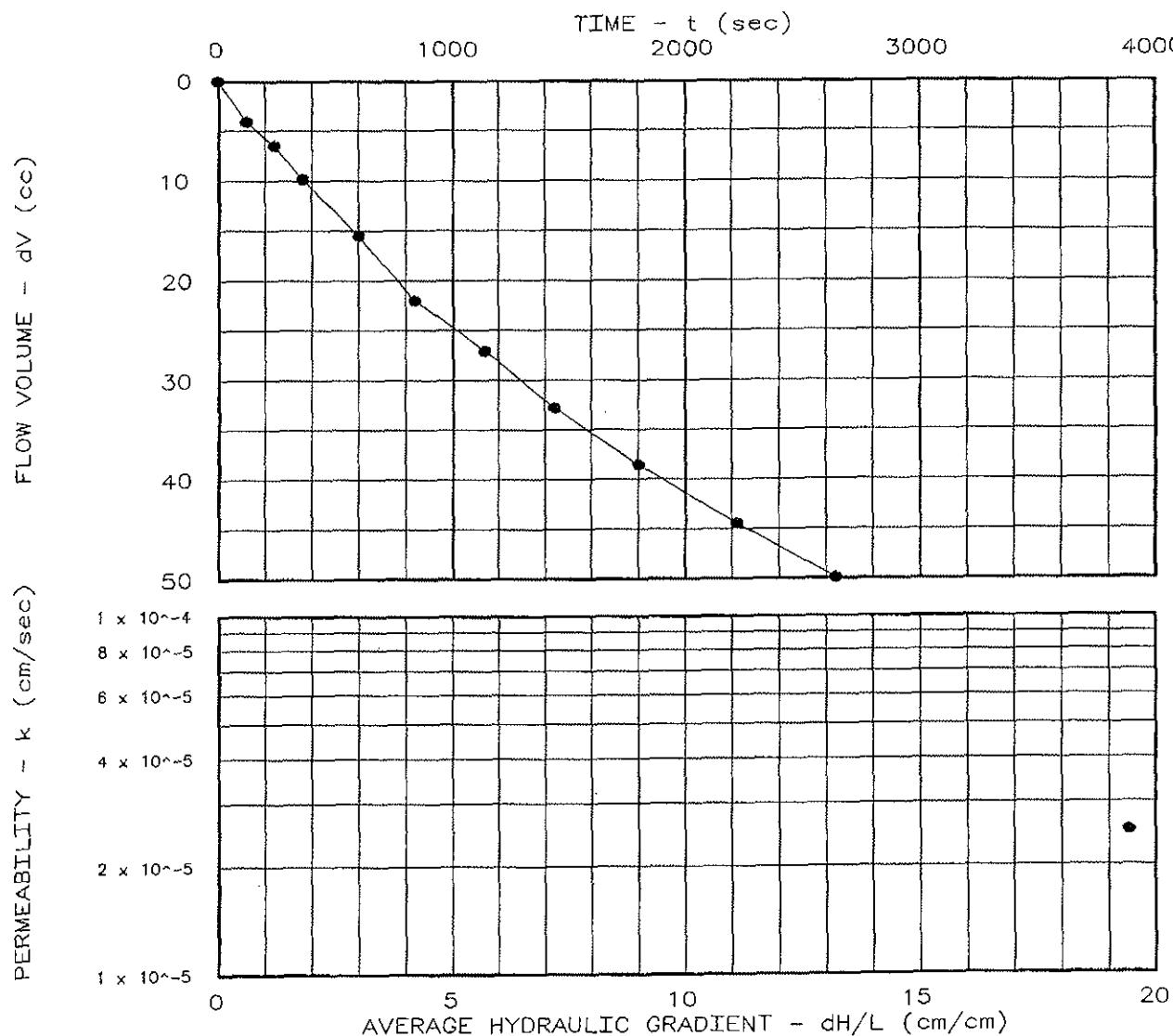
SAMPLE DATA:

Sample Identification: Fill No.1

Visual Description:

Remarks:

Maximum Dry Density (pcf): 118.2
 Optimum Moisture Content (%): 12.1
 ASTM(D698)
 Percent Compaction: 95.0%
 Permeameter type: Flexwall
 Sample type: Remolded



Project: Atlanta Site

Location:

Date: 9/10/2012

Project No.: 114-551057

File No.: 259

Lab No.:

Tested by:

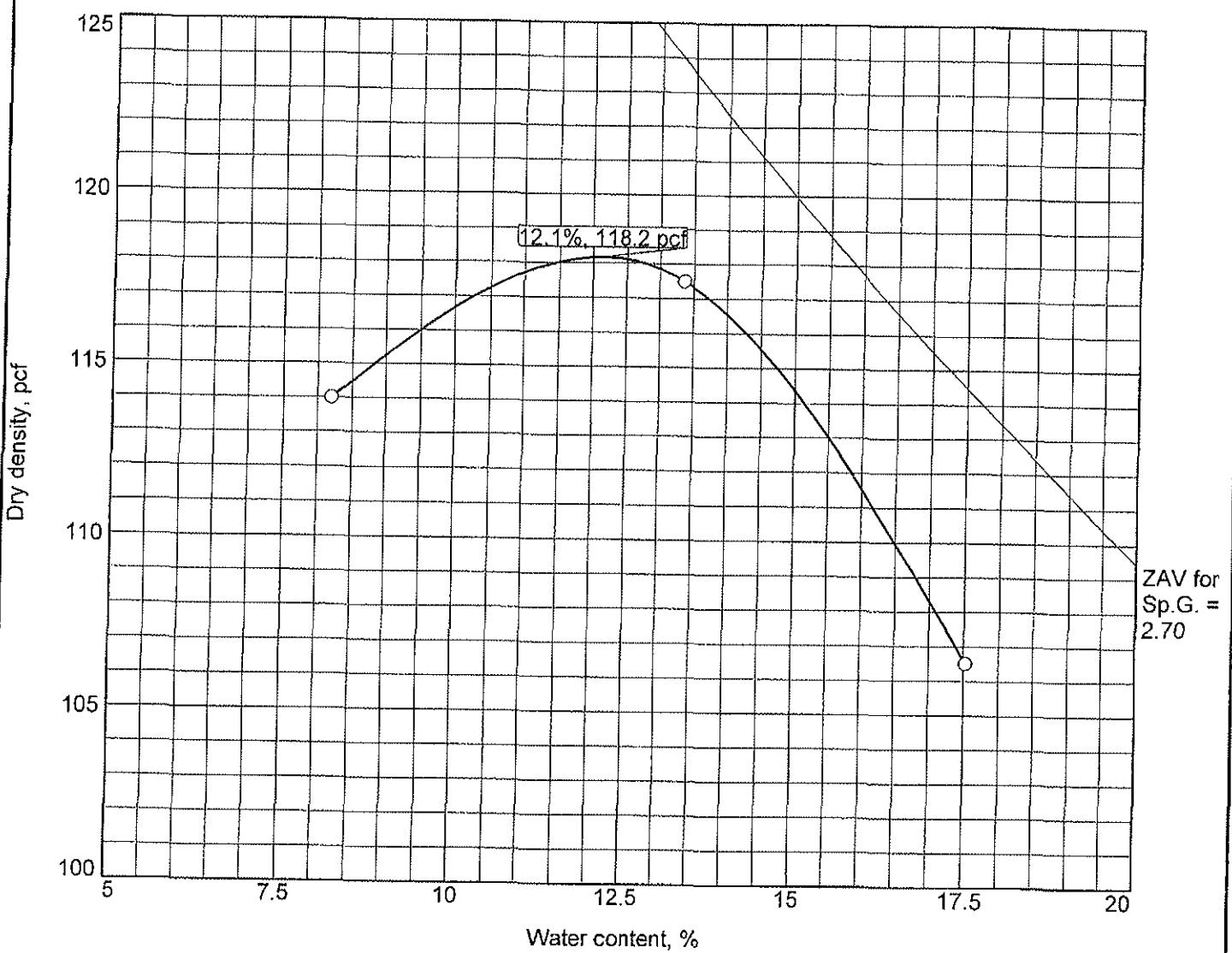
Checked by:

Test: CH - Constant head

PERMEABILITY TEST REPORT

TETRA TECH

Moisture Density Relationship



Test specification: ASTM D 698-00a Method A Standard

| Elev/ Depth | Classification | | Nat. Moist. | Sp.G. | LL | PI | % > #4 | % < No.200 |
|---|----------------|--------|----------------|-------|----|----|-----------------------------|---------------|
| | USCS | AASHTO | | | | | | |
| | | | | 2.70 | | | | |
| TEST RESULTS | | | | | | | MATERIAL DESCRIPTION | |
| Maximum dry density = 118.2 pcf | | | | | | | | |
| Optimum moisture = 12.1 % | | | | | | | | |
| Project No. 114-551057 Client: Continental Resources Project: Atlanta Site | | | | | | | Remarks: | |
| <input checked="" type="checkbox"/> Source of Sample: Fill No.1 | | | | | | | | |
| Tetra Tech, Inc. | | | | | | | | |
| Billings, MT | | | | | | | Figure | |

PERMEABILITY TEST REPORT

TEST DATA:

Specimen Height (cm): 7.50
 Specimen Diameter (cm): 7.07
 Dry Unit Weight (pcf): 112.1
 Moisture Before Test (%): 12.6
 Moisture After Test (%): 0.0
 Run Number: 1 • 2 ▲
 Cell Pressure (psi): 65.0
 Test Pressure(psi): 60.0
 Back Pressure(psi): 57.9
 Diff. Head (psi): 2.1
 Flow Rate (cc/sec): 2.63×10^{-2}
 Perm. (cm/sec): 1.97×10^{-5}

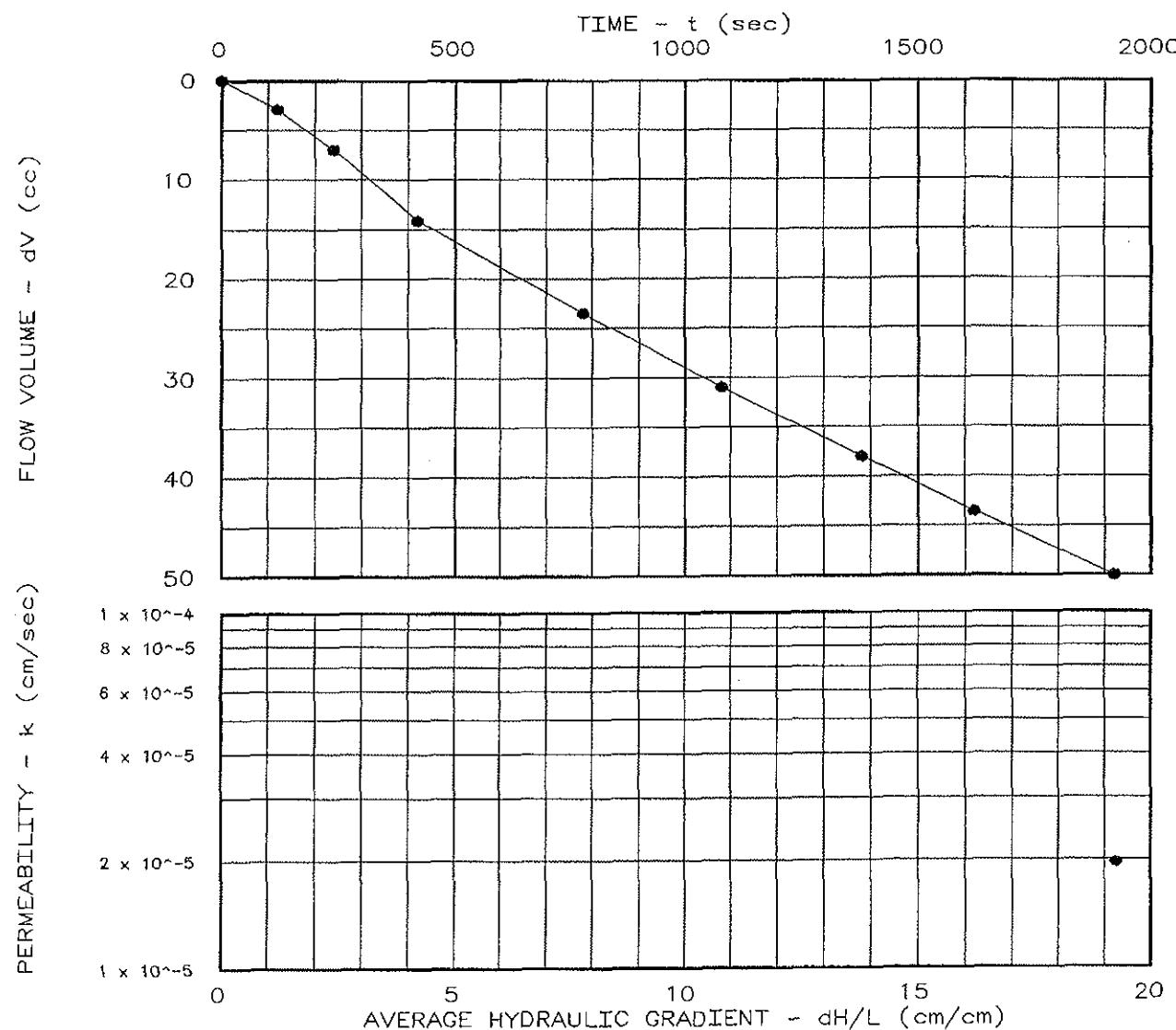
SAMPLE DATA:

Sample Identification: Fill No.2

Visual Description:

Remarks:

Maximum Dry Density (pcf): 118.0
 Optimum Moisture Content (%): 12.6
 ASTM(D698)
 Percent Compaction: 95.0%
 Permeameter type: Flexwall
 Sample type: Remolded



Project: Atlanta Site

Location:

Date: 9/10/2012

Project No.: 114-551057

File No.: 260

Lab No.:

Tested by:

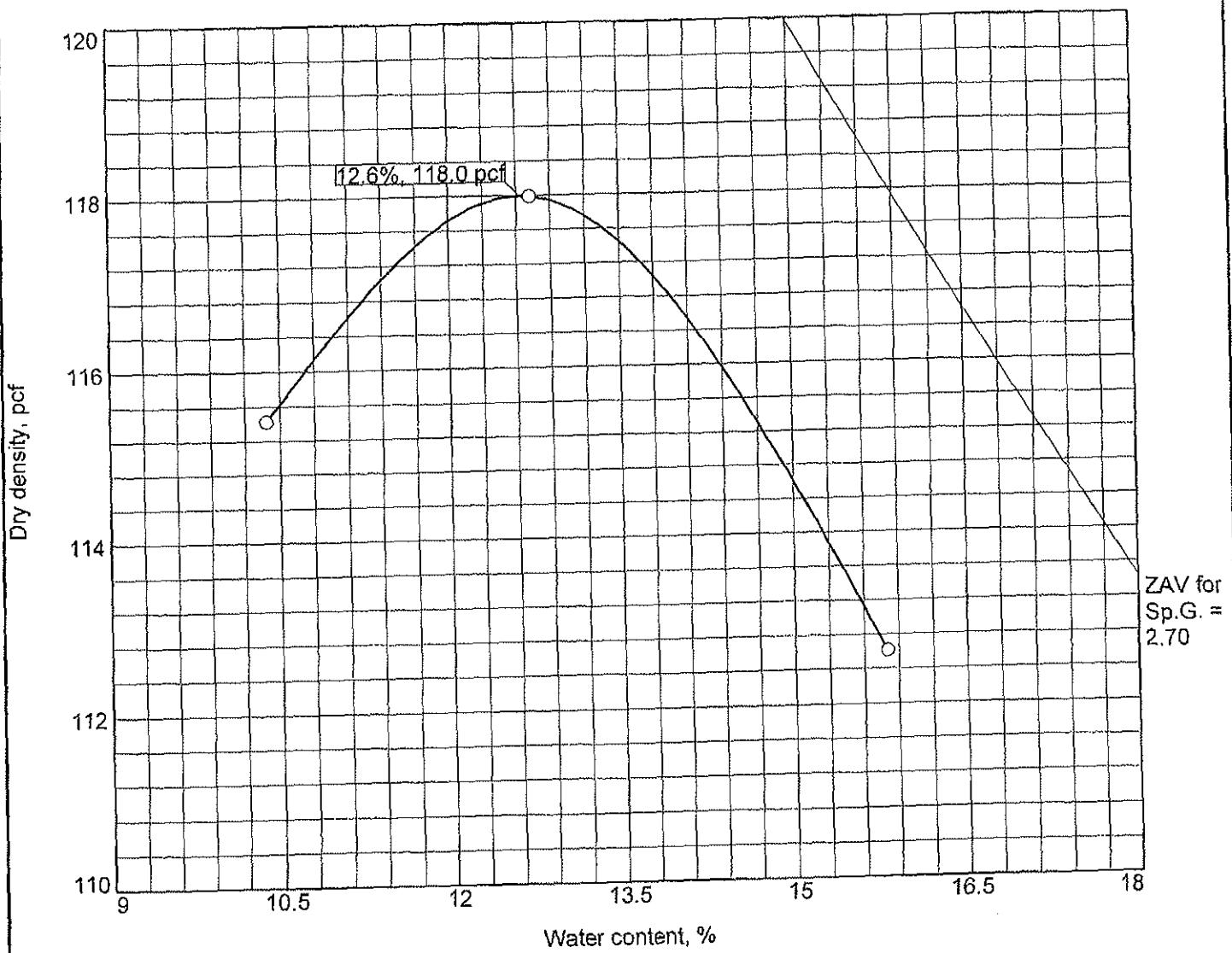
Checked by:

Test: CH - Constant head

PERMEABILITY TEST REPORT

TETRA TECH

Moisture Density Relationship



Test specification: ASTM D 698-00a Method A Standard

| Elev/ Depth | Classification | | Nat. Moist. | Sp.G. | LL | PI | % > #4 | % < No.200 |
|----------------|----------------|--------|----------------|-------|----|----|-----------|---------------|
| | USCS | AASHTO | | | | | | |
| | | | | 2.70 | | | | |

| TEST RESULTS | | MATERIAL DESCRIPTION |
|--|-------------------------------|----------------------|
| Maximum dry density = 118.0 pcf | | |
| Optimum moisture = 12.6 % | | |
| Project No. 114-551057 | Client: Continental Resources | Remarks: |
| Project: Atlanta Site | | |
| <input checked="" type="checkbox"/> Source of Sample: Fill No. 2 | | |
| Tetra Tech, Inc. | | |
| Billings, MT | | Figure |

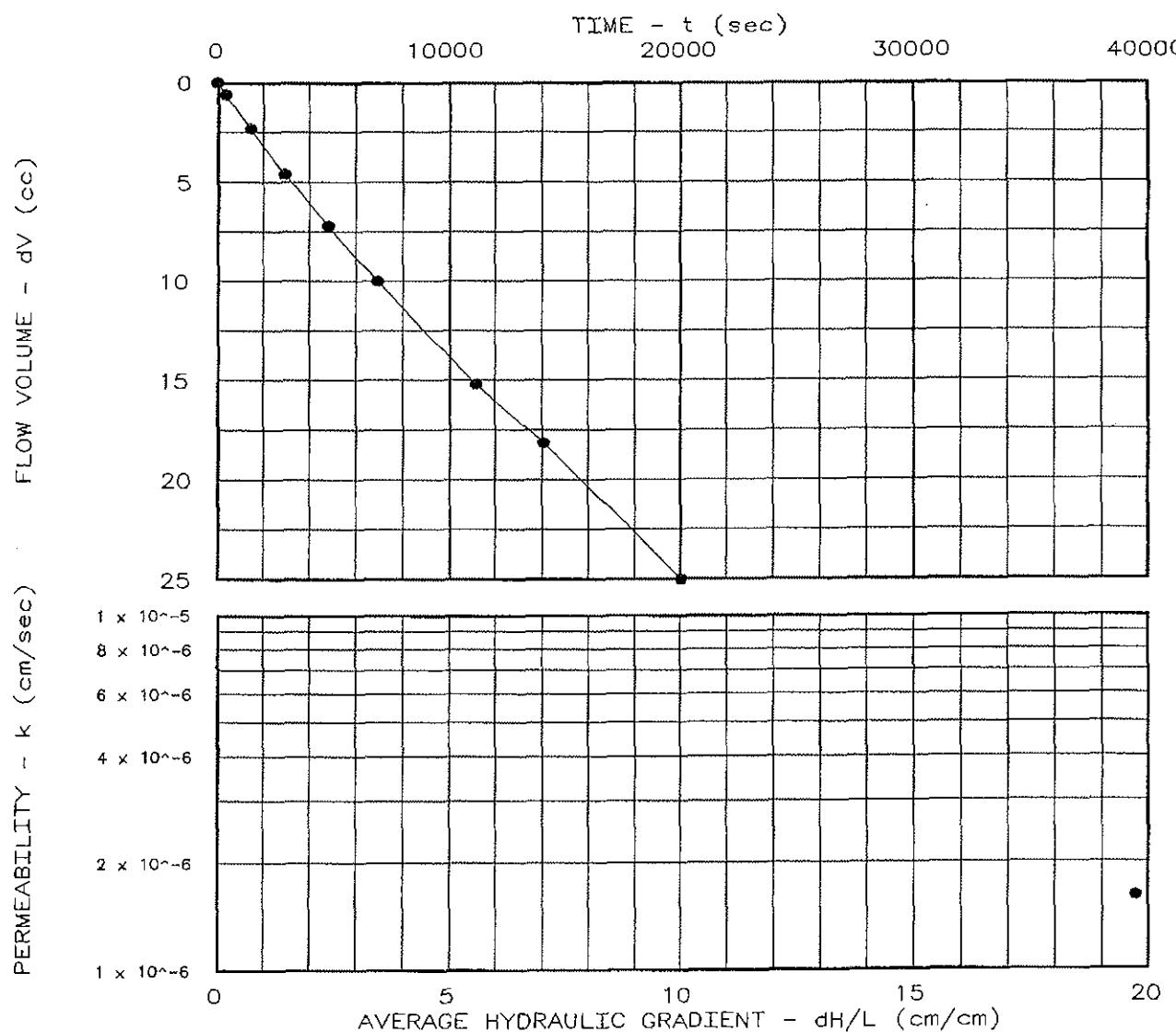
PERMEABILITY TEST REPORT

TEST DATA:

Specimen Height (cm): 7.50
 Specimen Diameter (cm): 7.07
 Dry Unit Weight (pcf): 98.6
 Moisture Before Test (%): 19.0
 Moisture After Test (%): 0.0
 Run Number: 1 • 2 A
 Cell Pressure (psi): 65.0
 Test Pressure(psi): 60.0
 Back Pressure(psi): 57.9
 Diff. Head (psi): 2.1
 Flow Rate (cc/sec): 1.25×10^{-3}
 Perm. (cm/sec): 1.61×10^{-6}

SAMPLE DATA:

Sample Identification: Cement No.1
 Visual Description:
 Remarks:
 Maximum Dry Density (pcf): 103.7
 Optimum Moisture Content (%): 18.9
 ASTM(D698)
 Percent Compaction: 95.0%
 Permeameter type: Flexwall
 Sample type: Remolded



Project: Atlanta Site

Location:

Date: 9/12/2012

Project No.: 114-551057

File No.: 261

Lab No.:

Tested by:

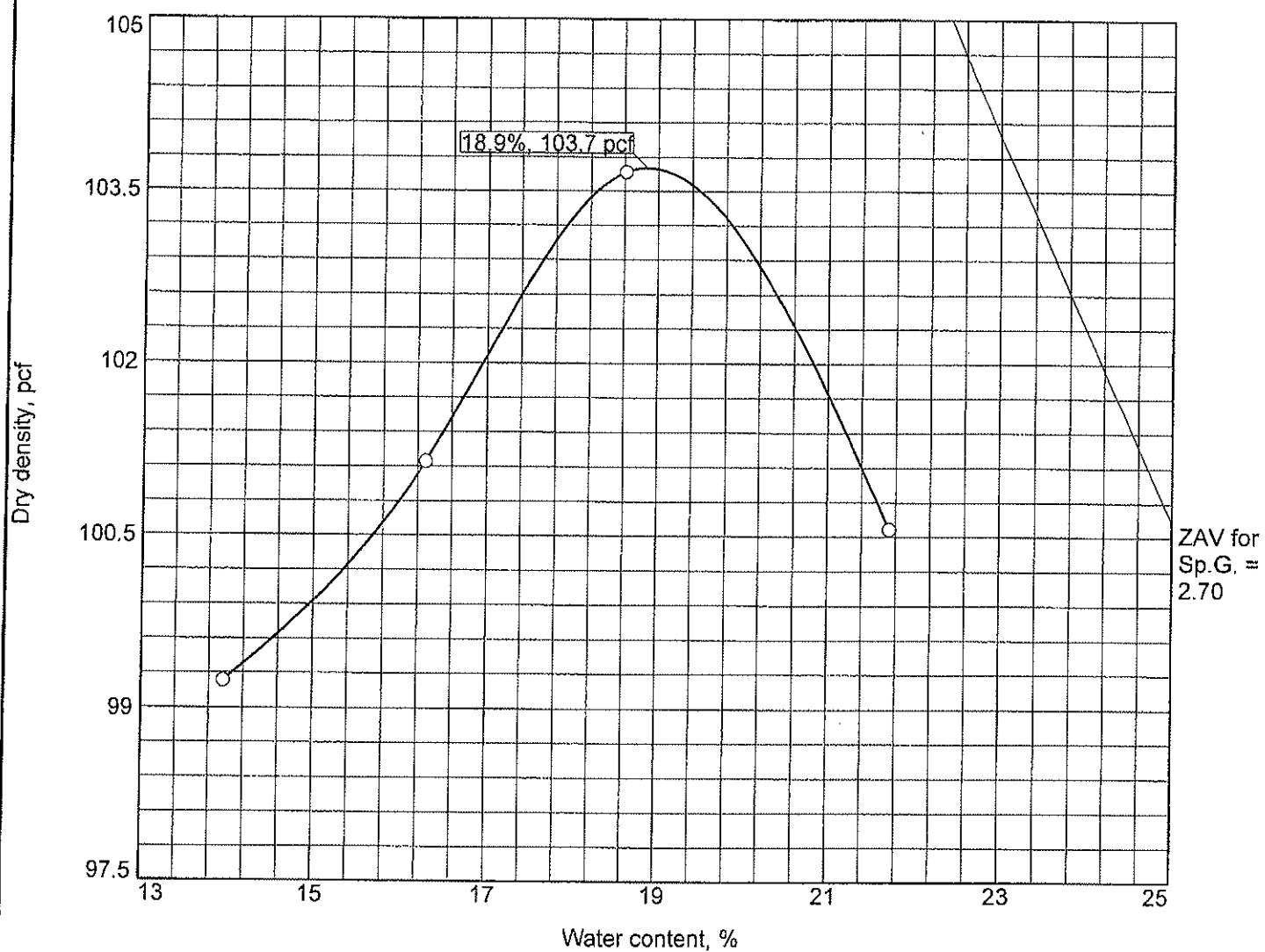
Checked by:

Test: CH - Constant head

PERMEABILITY TEST REPORT

TETRA TECH

Moisture Density Relationship



Test specification: ASTM D 698-00a Method A Standard

| Elev/ Depth | Classification | | Nat. Moist. | Sp.G. | LL | PI | % > #4 | % < No.200 |
|----------------|----------------|--------|----------------|-------|----|----|-----------|---------------|
| | USCS | AASHTO | | | | | | |
| | | | | 2.70 | | | | |

TEST RESULTS

MATERIAL DESCRIPTION

Maximum dry density = 103.7 pcf

Optimum moisture = 18.9 %

Project No. 114-551057 Client: Continental Resources
Project: Atlanta Site

Remarks:

○ Source of Sample: Cement No.1

Tetra Tech, Inc.

Billings, MT

Figure

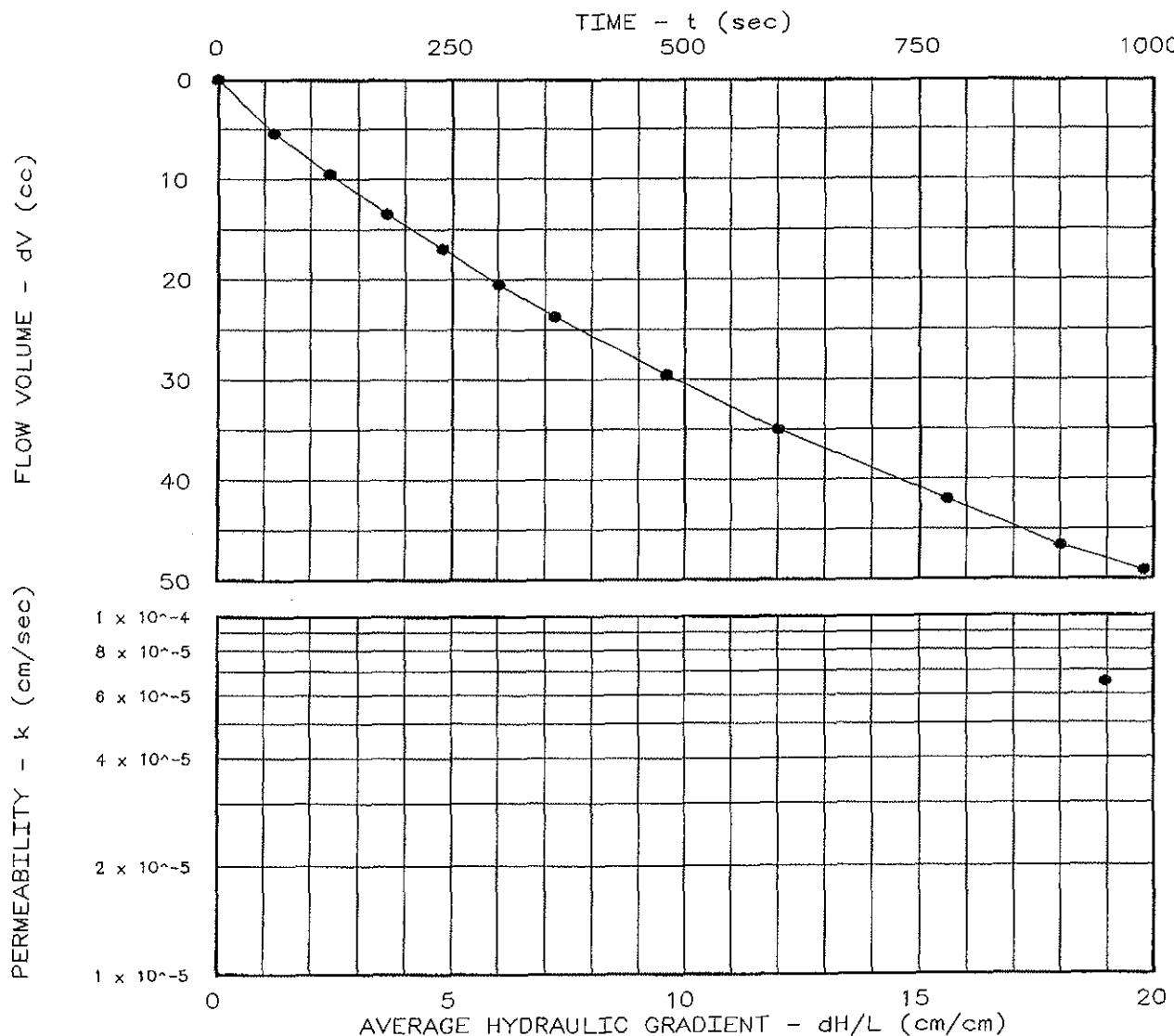
PERMEABILITY TEST REPORT

TEST DATA:

Specimen Height (cm): 7.50
 Specimen Diameter (cm): 7.07
 Dry Unit Weight (pcf): 97.9
 Moisture Before Test (%): 19.0
 Moisture After Test (%): 0.0
 Run Number: 1 2
 Cell Pressure (psi): 65.0
 Test Pressure(psi): 60.0
 Back Pressure(psi): 58.0
 Diff. Head (psi): 2.0
 Flow Rate (cc/sec): 4.84×10^{-2}
 Perm. (cm/sec): 6.51×10^{-5}

SAMPLE DATA:

Sample Identification: Cement No.3
 Visual Description:
 Remarks:
 Maximum Dry Density (pcf): 103.0
 Optimum Moisture Content (%): 19.0
 ASTM(D698)
 Percent Compaction: 95.0%
 Permeameter type: Flexwall
 Sample type: Remolded



Project: Atlanta Site

Location:

Date: 9/12/12

Project No.: 114-551057

File No.: 262

Lab No.:

Tested by:

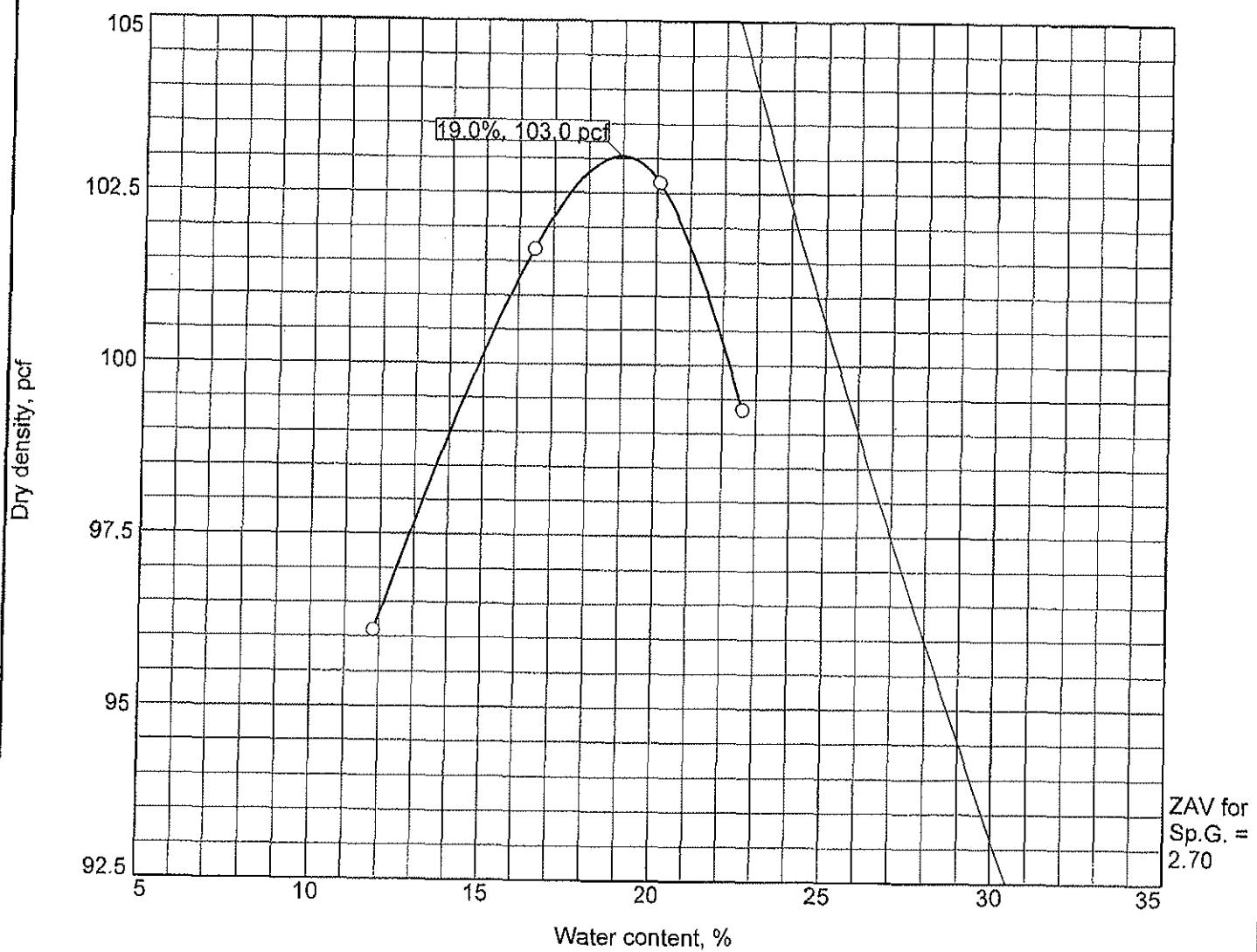
Checked by:

Test: CH - Constant head

PERMEABILITY TEST REPORT

TETRA TECH

Moisture Density Relationship



Test specification: ASTM D 698-00a Method A Standard

| Elev/ Depth | Classification | | Nat. Moist. | Sp.G. | LL | PI | % > #4 | % < No.200 |
|----------------|----------------|--------|----------------|-------|----|----|-----------|---------------|
| | USCS | AASHTO | | | | | | |
| | | | | 2.70 | | | | |

| TEST RESULTS | | MATERIAL DESCRIPTION |
|---|--|----------------------|
| Maximum dry density = 103.0 pcf | | |
| Optimum moisture = 19.0 % | | |
| Project No. 114-551057 Client: Continental Resources Project: Atlanta Site | | Remarks: |
| <input checked="" type="checkbox"/> Source of Sample: Cement No. 3 | | |
| Tetra Tech, Inc. | | |
| Billings, MT | | Figure |

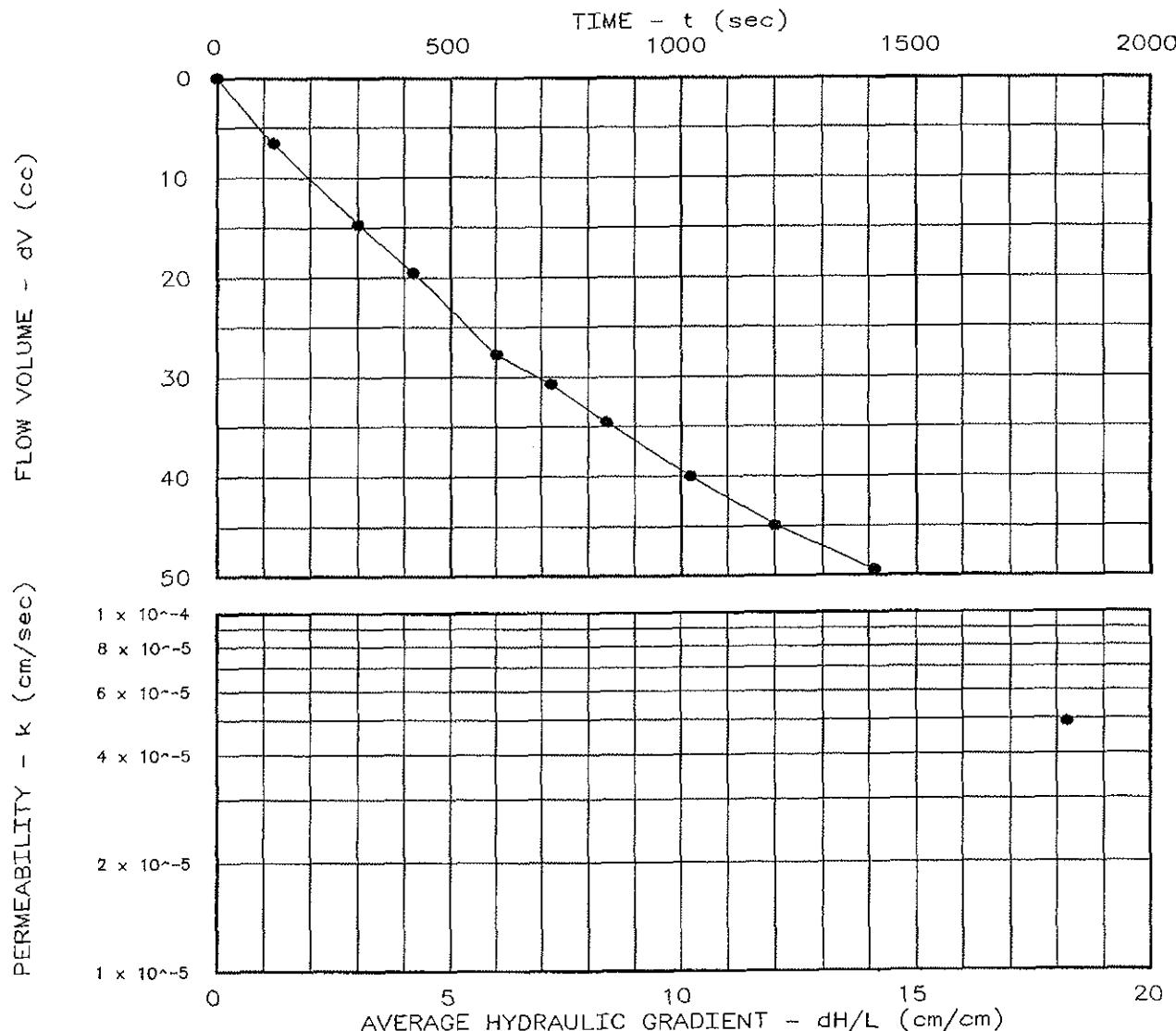
PERMEABILITY TEST REPORT

TEST DATA:

Specimen Height (cm): 7.50
 Specimen Diameter (cm): 7.07
 Dry Unit Weight (pcf): 102.4
 Moisture Before Test (%): 16.7
 Moisture After Test (%): 0.0
 Run Number: 1 • 2 A
 Cell Pressure (psi): 65.0
 Test Pressure(psi): 60.0
 Back Pressure(psi): 58.1
 Diff. Head (psi): 1.9
 Flow Rate (cc/sec): 3.50×10^{-2}
 Perm. (cm/sec): 4.90×10^{-5}

SAMPLE DATA:

Sample Identification: Cement No.2
 Visual Description:
 Remarks:
 Maximum Dry Density (pcf): 107.7
 Optimum Moisture Content (%): 16.7
 ASTM(D698)
 Percent Compaction: 95.0%
 Permeometer type: Flexwall
 Sample type: Remolded



Project: Atlanta Site

Location:

Date: 9/12/12

Project No.: 114-551057

File No.: 263

Lab No.:

Tested by:

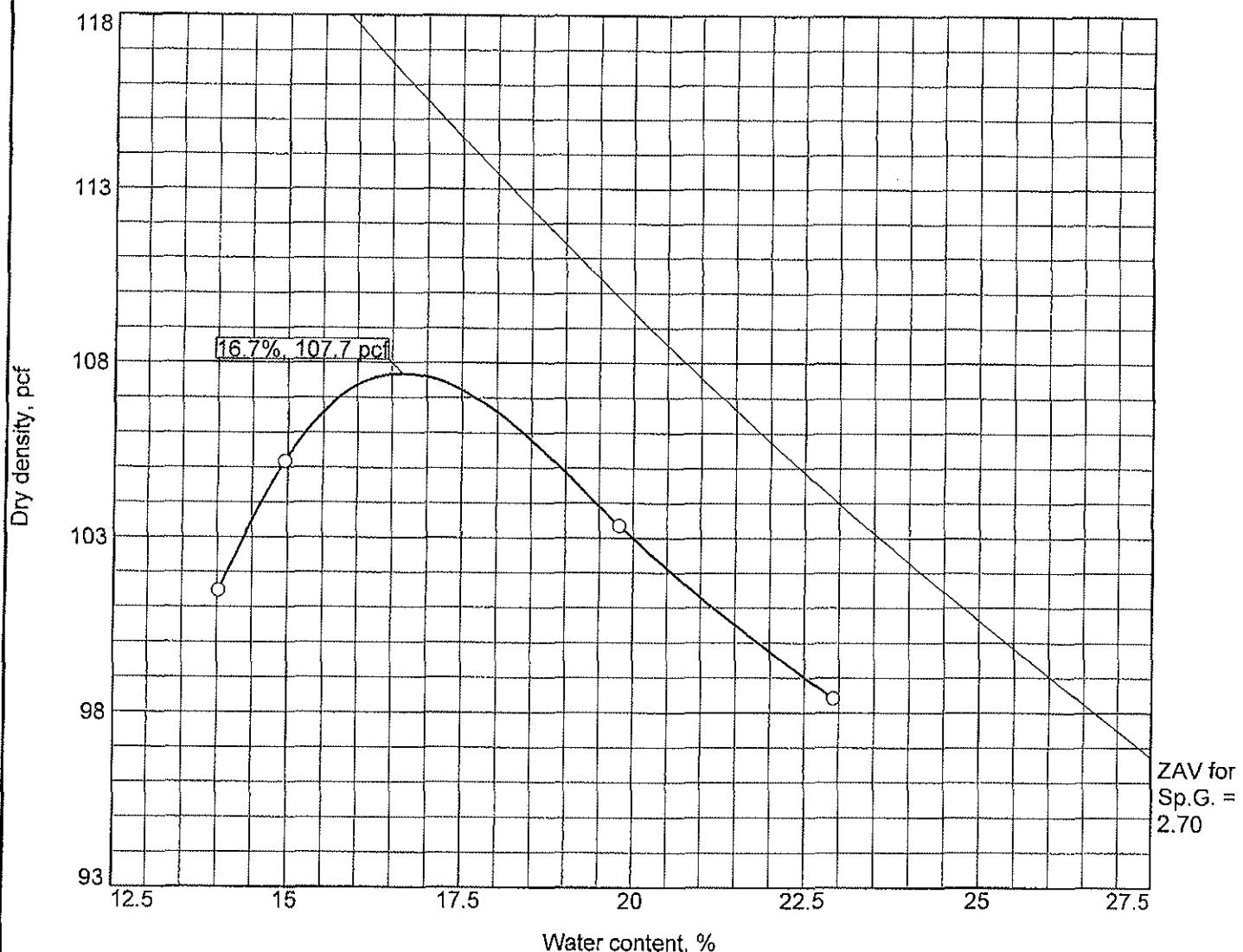
Checked by:

Test: CH - Constant head

PERMEABILITY TEST REPORT

TETRA TECH

Moisture Density Relationship



Test specification: ASTM D 698-00a Method A Standard

| Elev/ Depth | Classification | | Nat. Moist. | Sp.G. | LL | PI | % > #4 | % < No.200 |
|----------------|----------------|--------|----------------|-------|----|----|-----------|---------------|
| | USCS | AASHTO | | | | | | |
| | | | | 2.70 | | | | |

| TEST RESULTS | | MATERIAL DESCRIPTION |
|---|--|----------------------|
| Maximum dry density = 107.7 pcf | | |
| Optimum moisture = 16.7 % | | |
| Project No. 114-551057 Client: Continental Resources Project: Atlanta Site | | Remarks: |
| <input type="checkbox"/> Source of Sample: Cement No. 2 Tetra Tech, Inc. | | Billings, MT |
| | | Figure |

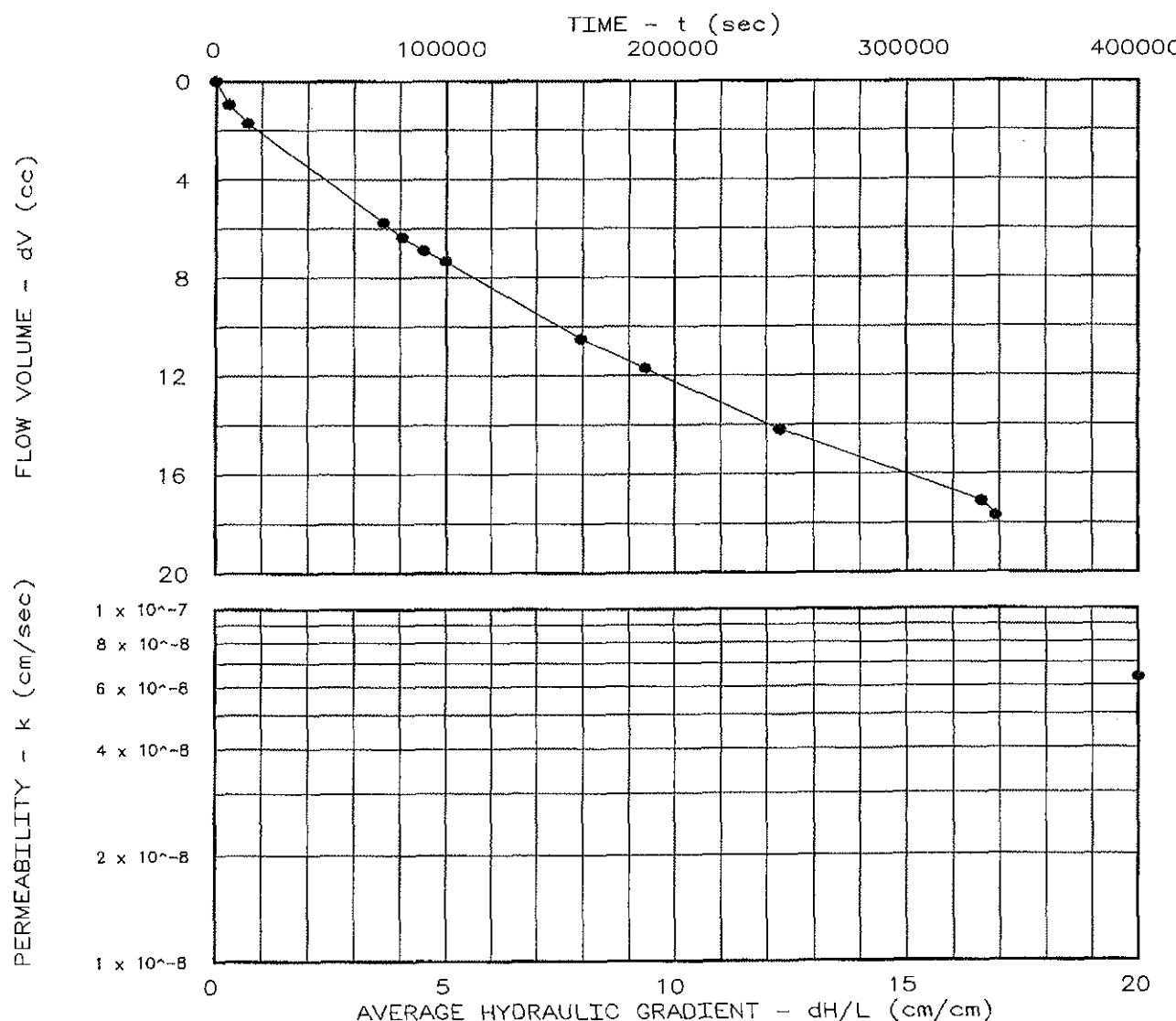
PERMEABILITY TEST REPORT

TEST DATA:

Specimen Height (cm): 7.50
 Specimen Diameter (cm): 7.07
 Dry Unit Weight (pcf): 103.7
 Moisture Before Test (%): 17.2
 Moisture After Test (%): 0.0
 Run Number: 1 • 2 ▲
 Cell Pressure (psi): 65.0
 Test Pressure(psi): 60.0
 Back Pressure(psi): 57.9
 Diff. Head (psi): 2.1
 Flow Rate (cc/sec): 4.99×10^{-5}
 Perm. (cm/sec): 6.35×10^{-8}

SAMPLE DATA:

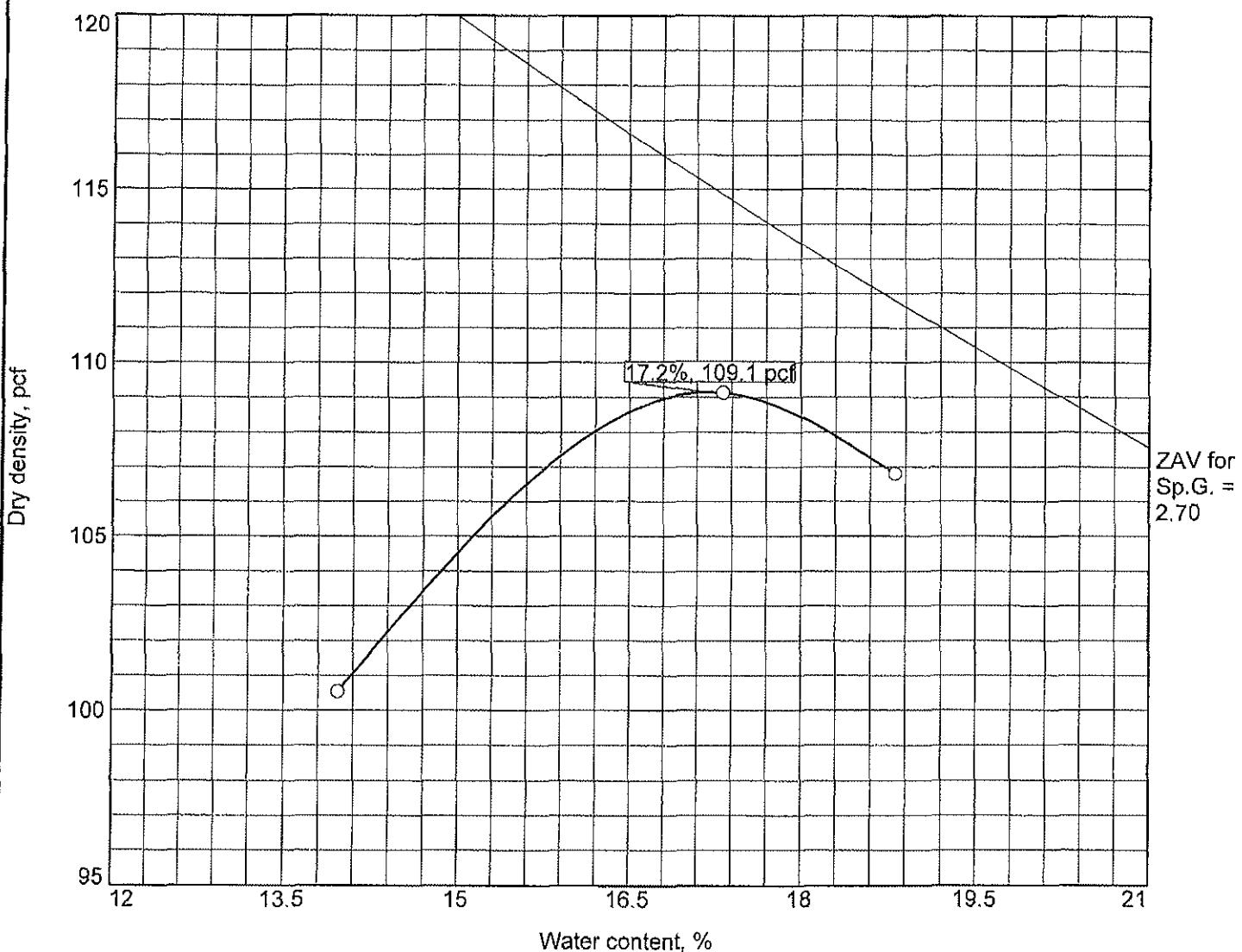
Sample Identification: Fill No. 4
 Visual Description:
 Remarks:
 Maximum Dry Density (pcf): 109.1
 Optimum Moisture Content (%): 17.2
 ASTM(D698)
 Percent Compaction: 95.0%
 Permeameter type: Flexwall
 Sample type: Remolded



Project: Atlanta Site
 Location:
 Date: 9/14/2012

Project No.: 114-551057
 File No.: 264
 Lab No.:
 Tested by:
 Checked by:
 Test: CH - Constant head

Moisture Density Relationship



Test specification: ASTM D 698-00a Method A Standard

| Elev/ Depth | Classification | | Nat. Moist. | Sp.G. | LL | PI | % > #4 | % < No.200 |
|----------------|----------------|--------|----------------|-------|----|----|-----------|---------------|
| | USCS | AASHTO | | | | | | |
| | | | | 2.70 | | | | |

| TEST RESULTS | | MATERIAL DESCRIPTION |
|---------------------------------|--|----------------------|
| Maximum dry density = 109.1 pcf | | |
| Optimum moisture = 17.2 % | | |

| | |
|---|----------|
| Project No. 114-551057 Client: Continental Resources Project: Atlanta Site | Remarks: |
| ○ Source of Sample: Fill No. 4 | |
| Tetra Tech, Inc. | |
| Billings, MT | Figure |



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Gillette, WY 800-606-7175 • Rapid City, SD 800-672-1229 • College Station, TX 800-690-2218

ANALYTICAL SUMMARY REPORT

September 06, 2012

Continental Resources
PO Box 268870
Oklahoma City, OK 73126-8870

Workorder No.: B12082786

Project Name: Atlanta Site

Energy Laboratories Inc Billings MT received the following 4 samples for Continental Resources on 8/30/2012 for analysis.

| Sample ID | Client Sample ID | Collect Date | Receive Date | Matrix | Test |
|---------------|--|----------------|--------------|--------|---|
| B12082786-001 | Original Material, From Cut 08/29/12 19:00 | 08/30/12 | | Soil | Cation Exchange Capacity Cations, Saturated Paste Conductivity pH, Saturated Paste NH4AC Soil Extraction for CEC Saturated Paste Extraction Sodium Adsorption Ratio |
| B12082786-002 | Fill #1 | 08/29/12 19:00 | 08/30/12 | Soil | Same As Above |
| B12082786-003 | Fill #2 | 08/29/12 19:00 | 08/30/12 | Soil | Same As Above |
| B12082786-004 | Fill #3 | 08/29/12 19:00 | 08/30/12 | Soil | Same As Above |

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

Sonye Mallott



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Continental Resources

Project: Atlanta Site

Client Sample ID: Original Material, From Cut

Location: E-1180177.20, N-421287.75, Elv. 1940.40

Lab ID: B12082786-001

Report Date: 09/06/12

Collection Date: 08/29/12 19:00

Date Received: 08/30/12

Sampled By: Spencer Ingalls

Analyses

Result Units Qualifier Method Analysis Date / By

SATURATED PASTE

| | | | |
|-------------------------------|---------------|-----------|----------------------------------|
| pH, sat. paste | 7.8 s.u. | ASAM10-3. | 09/06/12 16:30 / srm |
| Conductivity, sat. paste | 4.8 mmhos/cm | ASA10-3 | 09/06/12 16:30 / srm |
| Calcium, sat. paste | 24.4 meq/l. | SW6010B | 09/05/12 13:07 / rh |
| Magnesium, sat. paste | 29.5 meq/L | SW6010B | 09/05/12 13:07 / rh |
| Sodium, sat. paste | 18.7 meq/L | D | SW6010B 09/05/12 13:07 / rh |
| Sodium Adsorption Ratio (SAR) | 3.60 unitless | | Calculation 09/06/12 16:30 / srm |

CHEMICAL CHARACTERISTICS

| | | | | |
|--------------------------|---------------|---|---------|---------------------|
| Cation Exchange Capacity | 19.8 meq/100g | D | SW6010B | 09/06/12 15:11 / rh |
|--------------------------|---------------|---|---------|---------------------|

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Continental Resources
Project: Atlanta Site
Client Sample ID: Fill #1
Location: E-1179926.05, N-421267.60, Elv. 1937.65
Lab ID: B12082786-002

Report Date: 09/06/12
Collection Date: 09/29/12 19:00
Date Received: 08/30/12
Sampled By: Spencer Ingalls

| Analytes | Result | Units | Qualifier | Method | Analysis Date / By |
|---------------------------------|--------|----------|-----------|-------------|---------------------|
| SATURATED PASTE | | | | | |
| pH, sat. paste | 7.7 | s.u. | | ASAM10-3 | 09/06/12 16:30 / sm |
| Conductivity, sat. paste | 2.8 | mmhos/cm | | ASA10-3 | 09/06/12 16:30 / sm |
| Calcium, sat. paste | 14.2 | meq/L | | SW6010B | 09/05/12 13:14 / rh |
| Magnesium, sat. paste | 20.1 | meq/L | | SW6010B | 09/05/12 13:14 / rh |
| Sodium, sat. paste | 5.61 | meq/L | D | SW6010B | 09/05/12 13:14 / rh |
| Sodium Adsorption Ratio (SAR) | 1.35 | unitless | | Calculation | 09/06/12 16:30 / sm |
| CHEMICAL CHARACTERISTICS | | | | | |
| Cation Exchange Capacity | 15.1 | meq/100g | D | SW6010B | 09/06/12 15:15 / rh |

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Continental Resources
Project: Atlanta Site
Client Sample ID: Fill #2
Location: E-1179924.40, N-421196.70, Elv. 1937.95
Lab ID: B12002786-003

Report Date: 09/06/12
Collection Date: 08/29/12 19:00
Date Received: 08/30/12
Sampled By: Spencer Ingalls

| Analyses | Result | Units | Qualifier | Method | Analysis Date / By |
|---------------------------------|--------|----------|-----------|-------------|----------------------|
| SATURATED PASTE | | | | | |
| pH, sat. paste | 8.1 | s.u. | | ASAm10-3, | 09/06/12 16:30 / srm |
| Conductivity, sat. paste | 1.2 | mmhos/cm | | ASA10-3 | 09/06/12 16:30 / srm |
| Calcium, sat. paste | 2.59 | meq/L | | SW6010B | 09/05/12 13:28 / rh |
| Magnesium, sat. paste | 8.07 | meq/L | | SW6010B | 09/05/12 13:28 / rh |
| Sodium, sat. paste | 3.40 | meq/L | | SW6010B | 09/05/12 13:28 / rh |
| Sodium Adsorption Ratio (SAR) | 1.47 | unitless | | Calculation | 09/06/12 16:30 / srm |
| CHEMICAL CHARACTERISTICS | | | | | |
| Cation Exchange Capacity | 12.3 | meq/100g | D | SW6010B | 09/06/12 15:22 / rh |

Report: RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Continental Resources

Project: Atlanta Site

Client Sample ID: Fill #3

Location: E-1179963.65, N-421120.95, Elv. 1937.90

Lab ID: B120827B6-004

Report Date: 09/06/12

Collection Date: 08/29/12 19:00

Date Received: 08/30/12

Sampled By: Spencer Ingalls

Analytes

Result Units Qualifier Method Analysis Date / By

SATURATED PASTE

| | | | |
|-------------------------------|---------------|----------|----------------------------------|
| pH, sat. paste | 7.9 s.u. | ASAM10-3 | 09/06/12 16:30 / srn |
| Conductivity, sat. paste | 4.5 mmhos/cm | ASA10-3 | 09/06/12 16:30 / srn |
| Calcium, sat. paste | 25.1 meq/L | SW6010B | 09/05/12 13:32 / rh |
| Magnesium, sat. paste | 36.7 meq/L | SW6010B | 09/05/12 13:32 / rh |
| Sodium, sat. paste | 11.5 meq/L | D | SW6010B 09/05/12 13:32 / rh |
| Sodium Adsorption Ratio (SAR) | 2.07 unitless | | Calculation 09/06/12 16:30 / srn |

CHEMICAL CHARACTERISTICS

| | | | | |
|--------------------------|---------------|---|---------|---------------------|
| Cation Exchange Capacity | 16.4 meq/100g | D | SW6010B | 09/06/12 15:29 / rh |
|--------------------------|---------------|---|---------|---------------------|

Report: RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Continental Resources

Report Date: 09/06/12

Project: Atlanta Site

Work Order: B12082786

| Analyte | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-------------------------------|---------------------------|----------|------|------|-----------|------------|-----|----------|----------------|
| Method: ASA10-3 | | | | | | | | | Batch: R191314 |
| Sample ID: B12082786-001A DUP | Sample Duplicate | | | | | | | | 09/06/12 16:30 |
| Conductivity, sat. paste | 4.86 | mmhos/cm | 0.10 | | | | 1.2 | | 30 |
| Sample ID: LCS-1209061630 | Laboratory Control Sample | | | | | | | | 09/06/12 16:30 |
| Conductivity, sat. paste | 7.54 | mmhos/cm | 0.10 | 97 | 50 | 150 | | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Continental Resources

Report Date: 09/06/12

Project: Atlanta Site

Work Order: B12082786

| Analyte | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---|-----------------------------------|-------|------|------|------------------------|------------|-----|----------|----------------|
| Method: ASAM10-9.2 | | | | | | | | | |
| Sample ID: B12082786-001A DUP pH, sat. paste | Sample Duplicate 7.60 | s.u. | 0.10 | | Run: MISC-SOIL_120906B | | 2.6 | 10 | 09/06/12 16:30 |
| Sample ID: LCS-1209061630 pH, sat. paste | Laboratory Control Sample 7.00 | s.u. | 0.10 | 99 | 90 | 110 | | | 09/06/12 16:30 |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Continental Resources

Report Date: 09/06/12

Project: Atlanta Site

Work Order: B12082786

| Analyte | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-------------------------------|---------------------------|----------|-------|------|------------------------|------------|-----|----------|----------------|
| Method: Calculation | Batch: R191314 | | | | | | | | |
| Sample ID: B12082786-001A DUP | Sample Duplicate | | | | Run: MISC-SOIL_120906B | | | | 09/06/12 16:30 |
| Sodium Adsorption Ratio (SAR) | 3.86 | unitless | 0.010 | | | | 6.7 | | 30 |
| Sample ID: LCS-1209061630 | Laboratory Control Sample | | | | Run: MISC-SOIL_120906B | | | | 09/06/12 16:30 |
| Sodium Adsorption Ratio (SAR) | 5.11 | unitless | 0.010 | 83 | 50 | 150 | | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Continental Resources

Report Date: 09/06/12

Project: Atlanta Site

Work Order: B12082786

| Analyte | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|-------------------------------|---------------------------|----------|-------|------|-----------------------|------------|-----|----------|----------------|
| Method: SW6010B | | | | | | | | | Batch: 65170 |
| Sample ID: LCS-65170 | Laboratory Control Sample | | | | Run: ICP201-B_120905A | | | | 09/05/12 13:03 |
| Calcium, sat. paste | 46.4 | meq/L | 0.050 | 88 | 50 | 150 | | | |
| Magnesium, sat. paste | 29.0 | meq/L | 0.082 | 86 | 50 | 150 | | | |
| Sodium, sat. paste | 32.0 | meq/L | 0.16 | 77 | 50 | 150 | | | |
| Sample ID: B12082786-001A DUP | Sample Duplicate | | | | Run: ICP201-B_120905A | | | | 09/05/12 13:10 |
| Calcium, sat. paste | 25.2 | meq/L | 0.050 | | | | 3.1 | | 30 |
| Magnesium, sat. paste | 31.0 | meq/L | 0.082 | | | | 4.8 | | 30 |
| Sodium, sat. paste | 20.4 | meq/L | 0.081 | | | | 8.7 | | 30 |
| Sample ID: B12082786-002AMS2 | Sample Matrix Spike | | | | Run: ICP201-B_120905A | | | | 09/05/12 13:25 |
| Calcium, sat. paste | 26.8 | meq/L | 0.050 | 101 | 50 | 150 | | | |
| Magnesium, sat. paste | 39.5 | meq/L | 0.082 | 94 | 50 | 150 | | | |
| Sodium, sat. paste | 16.1 | meq/L | 0.084 | 96 | 50 | 150 | | | |
| Method: SW6010B | | | | | | | | | Batch: 65201 |
| Sample ID: LCS-65201 | Laboratory Control Sample | | | | Run: ICP201-B_120905B | | | | 09/06/12 15:08 |
| Cation Exchange Capacity | 22.4 | meq/100g | 0.16 | 90 | 60 | 140 | | | |
| Sample ID: B12082786-002A DUP | Sample Duplicate | | | | Run: ICP201-B_120905B | | | | 09/06/12 15:18 |
| Cation Exchange Capacity | 13.8 | meq/100g | 0.16 | | | | 8.8 | | 50 |
| Sample ID: B12082786-003AMS2 | Sample Matrix Spike | | | | Run: ICP201-B_120905B | | | | 09/06/12 15:25 |
| Cation Exchange Capacity | 33.6 | meq/100g | 0.17 | 98 | 50 | 150 | | | |

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Standard Reporting Procedures

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as -dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Workorder Receipt Checklist

Continental Resources

B12082786

Login completed by: Randa Nees

Date Received: 8/30/2012

Reviewed by: BL2000\kmcdonald

Received by: jrz

Reviewed Date: 8/30/2012

Carrier Hand Del
name:

| | | | |
|--|---|--|--|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Temp Blank received? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | Not Applicable <input type="checkbox"/> |
| Container/Temp Blank temperature: | 24.6°C No Ice | | |
| Water + VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | No VOA vials submitted <input checked="" type="checkbox"/> |
| Water + pH acceptable upon receipt? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |

Contact and Corrective Action Comments:

Perc analysis not done at Energy Laboratories. These samples were taken to another laboratory by Mick Albright of Continental Resources.



Chain of Custody and Analytical Request Record

PLEASE PRINT- Provide as much information as possible.

Page 1 of 1

| | | | | | |
|--|--|---|--|---|--|
| Company Name: Continental Resources | | Project Name, PWS, Permit, Etc. Atlanta Site | | Sample Origin State: ND | EPA/State Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Report Mail Address: PO Box 268870 73126 Oklahoma City, OK | | Contact Name: Chad Newby Phone/Fax: 405-574-2172 Email: chad.newby@clr.com | | Purchase Order: Spencer Ingalls | Sampler, (Please Print) Chad Newby |
| Invoice Address: PO Box 268870 73126 Oklahoma City, OK | | Invoice Contact & Phone: Chad Newby 405-574-2172 | | Quote/Bottle Order: Unknown | Shipment Hand Cedar (R40): |
| Special Report/Formats - ELI must be notified prior to sample submittal for the following: | | ANALYSIS REQUESTED | | Comments: E-1180177.20 N-421287.75 ELU 1940.40 | Receipt Temp 24.6 °C |
| <input type="checkbox"/> DW <input type="checkbox"/> GSA <input type="checkbox"/> POTW/MMWTP <input type="checkbox"/> Format: _____ <input type="checkbox"/> State: _____ <input type="checkbox"/> Other: _____ | | <input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT(Electronic Data) <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC | | Number of Containers Sample Type: A/W/S/V/R/D Soil/Solids Air/Water/Bioassay Other | Normal Turnaround (TAT) 24 hrs |
| SAMPLE IDENTIFICATION (Name, Location, Interval, etc.) | | Collection Date 8-29-12 | Collection Time 7:00pm | MATRIX I-S | SEE ATTACHED X |
| Original Material (<input checked="" type="checkbox"/>) 2 3 4 5 6 7 8 9 10 11 12 | | | | | |
| CUSTODY RECORD MUST be Signed | | Received by (print): Mick Albright | Date/Time: 8-30-12 9:00 AM | Received by (print): Mick Albright | Date/Time: 8-30-12 9:00 AM |
| | | Received by (print): Mick Albright | Date/Time: 8-30-12 3:05 PM | Received by (print): Mick Albright | Date/Time: 8-30-12 3:05 PM |
| Sample Disposal: Return to Client | | Lab Disposal: X | LABORATORY USE ONLY 8-30-12 3:05 PM | | |

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This serves as notice of this possibility. All sub-contract data will be clearly noted on your analytical report.
Visit our web site at www.enerylab.com for additional information, downloadable fee schedule, forms, and links.



Chain of Custody and Analytical Request Record

PLEASE PRINT- Provide as much information as possible.

Page 1 of 1

| | | | | | | | | | | |
|---|--|---|---|----------------------|------------------------------------|--------------------------------------|--|--|---|--|
| Company Name: Continental Resources | | Project Name, PWS, Permit, Etc. Atlanta Site | | | | Sample Origin State: ND | EPA/State Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| Report Mail Address: PO Box 268870 73126 | | Contact Name: Phone/Fax: Chad Newby 405-574-2172 chad.newby@cir.com | | | | Email: Spencer Ingalls | Sampler: (Please Print) | | | |
| Invoice Address: PO Box 268870 73126 | | Invoice Contact & Phone: Chad Newby 405-574-2172 | | | | Purchase Order: Chad Newby | Quote/Bottle Order: Unknown | | | |
| Special Report/Formats - ELI must be notified prior to sample submittal for the following: | | Number of Containers Sample Type: A/W/S/V/B/O Air/Water/Solids/Solvent Vegetation/Other | ANALYSIS REQUESTED | | | | Shipped by: Chad Carrier ID(s): | | | |
| <input type="checkbox"/> DW <input type="checkbox"/> GSA <input type="checkbox"/> POTW/WWTP <input type="checkbox"/> State: _____ <input type="checkbox"/> Other: _____ | | <input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT(Electronic Data) Format: _____ | <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC | EC | SAR | CEC | PH | Per | R | Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page |
| SAMPLE IDENTIFICATION (Name, Location, Interval, etc.) | | Collection Date 8-29-12 | Collection Time 7:00PM | MATRIX | SEE ATTACHED | Normal Turnaround (TAT) | Comments: E-1179926.05 | Receipt Temp 24.5°C | | |
| 1 Fill #1 | | | | | | | N-421267.60 | On Ice: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | |
| 2 | | | | | | | E.U. 1937.65 | Custody Seal Y <input type="checkbox"/> Intact Y <input type="checkbox"/> Signature Y <input type="checkbox"/> Match Y <input type="checkbox"/> | | |
| 3 | | | | | | | | 8/20/2012-002 | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| Custody Record MUST be Signed | Relinquished by (print): Mark Albright | Date/Time: 8-30-12 9:00AM | Signature: Mark Albright | Received by (print): | Date/Time: | Signature: | | | | |
| | Relinquished by (print): Mark Albright | Date/Time: 8-30-12 3:05 | Signature: Mark Albright | Received by (print): | Date/Time: | Signature: | | | | |
| | Sample Disposal: Return to Client | Lab Disposal: <input checked="" type="checkbox"/> | Received by Laboratory: SP2000NER 8/30/12 3:05pm | Date/Time: | Signature: Mark Albright | | | | | |

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This serves as notice of this possibility. All sub-contract data will be clearly noted on your analytical report.
Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.



Chain of Custody and Analytical Request Record

PLEASE PRINT. Provide as much information as possible.

Page 1 of 1

| Company Name: Continental Resources | | Project Name, PWS, Permit, Etc. Atlanta Site | | | Sample Origin State: ND | EPA/State Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|------------------------------------|--------------------------------|---|--|--|--|----------------------|--------------------------|-------------------------|---------------------------|-----------------------------|-------------------------------|--------------------------------|-------------------------------|------------------------------|--|--------------------------------|----------------------------|------------------------------------|---|-----------------------------|----------------------------|---------------------------------------|--------------------------------|------------------------------|----------------------------|---------------------------------------|--|------------------------------|----------------------------|--|---|
| Report Mail Address: PO Box 268870 73126 | | Contact Name: Chad Newby Phone/Fax: 405-574-2172 Email: chad.newby@okc.com | | | Purchase Order: Spencer Ingalls | Sampler: (Please Print) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Invoice Address: PO Box 268870 73126 | | Invoice Contact & Phone: Chad Newby 405-574-2172 | | | Quote/Bottle Order: Chad Newby Unknown | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Special Report/Formats – ELI must be notified prior to sample submittal for the following: | | <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="4">ANALYSIS REQUESTED</th> </tr> <tr> <th>Number of Containers</th> <th>Sample Type: A/W/S/V/B/O</th> <th>Air/Water/Solids/Solids</th> <th>Vegetation/Holassay/Other</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> DW</td> <td><input type="checkbox"/> A2LA</td> <td><input type="checkbox"/> S/A/R</td> <td><input type="checkbox"/> Per.</td> </tr> <tr> <td><input type="checkbox"/> GSA</td> <td><input type="checkbox"/> EDD/EDT (Electronic Data)</td> <td><input type="checkbox"/> C/E/C</td> <td><input type="checkbox"/> H</td> </tr> <tr> <td><input type="checkbox"/> POTWWWWTP</td> <td>Format: <input type="checkbox"/> LEVEL IV</td> <td><input type="checkbox"/> PH</td> <td><input type="checkbox"/> S</td> </tr> <tr> <td><input type="checkbox"/> State: _____</td> <td><input type="checkbox"/> NELAC</td> <td><input type="checkbox"/> E/C</td> <td><input type="checkbox"/> U</td> </tr> <tr> <td><input type="checkbox"/> Other: _____</td> <td></td> <td><input type="checkbox"/> T/R</td> <td><input type="checkbox"/> R</td> </tr> </tbody> </table> | | | ANALYSIS REQUESTED | | | | Number of Containers | Sample Type: A/W/S/V/B/O | Air/Water/Solids/Solids | Vegetation/Holassay/Other | <input type="checkbox"/> DW | <input type="checkbox"/> A2LA | <input type="checkbox"/> S/A/R | <input type="checkbox"/> Per. | <input type="checkbox"/> GSA | <input type="checkbox"/> EDD/EDT (Electronic Data) | <input type="checkbox"/> C/E/C | <input type="checkbox"/> H | <input type="checkbox"/> POTWWWWTP | Format: <input type="checkbox"/> LEVEL IV | <input type="checkbox"/> PH | <input type="checkbox"/> S | <input type="checkbox"/> State: _____ | <input type="checkbox"/> NELAC | <input type="checkbox"/> E/C | <input type="checkbox"/> U | <input type="checkbox"/> Other: _____ | | <input type="checkbox"/> T/R | <input type="checkbox"/> R | Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page | Shipped by: Spencer Ingalls Carrier/Date: 24.6°C |
| ANALYSIS REQUESTED | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Containers | Sample Type: A/W/S/V/B/O | Air/Water/Solids/Solids | Vegetation/Holassay/Other | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> DW | <input type="checkbox"/> A2LA | <input type="checkbox"/> S/A/R | <input type="checkbox"/> Per. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> GSA | <input type="checkbox"/> EDD/EDT (Electronic Data) | <input type="checkbox"/> C/E/C | <input type="checkbox"/> H | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> POTWWWWTP | Format: <input type="checkbox"/> LEVEL IV | <input type="checkbox"/> PH | <input type="checkbox"/> S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> State: _____ | <input type="checkbox"/> NELAC | <input type="checkbox"/> E/C | <input type="checkbox"/> U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> Other: _____ | | <input type="checkbox"/> T/R | <input type="checkbox"/> R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> DW <input type="checkbox"/> GSA <input type="checkbox"/> POTWWWWTP <input type="checkbox"/> State: _____ <input type="checkbox"/> Other: _____ | | | | | Comments: E-1179924-V0 N-421196-70 Etu. 1937.95 | Receipt Temp: 24.6°C Color: Yes <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SAMPLE IDENTIFICATION (Name, Location, Interval, etc.) Fill # 2 | | Collection Date 8/29/12 | Collection Time 7:00pm | MATRIX I-S d d a d K | SEE ATTACHED | Custody Seal: Y N Initial: Y N Signature Match: Y N | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | 20098-03 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | LABORATORY USE ONLY | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Custody Record MUST be Signed | Released by (print): Mark Albright | Date/Time: 8-30-12 9:00 AM | Signature: Mark Albright | Received by (print): | Date/Time: | Signature: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Released by (print): Mark Albright | Date/Time: 8-30-12 3:05 PM | Signature: Mark Albright | Received by (print): | Date/Time: | Signature: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sample Disposal: Return to Client: | | Lab Disposal: K | | Received by Laboratory: | Date/Time: | Signature: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly noted on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, terms, and links. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



Chain of Custody and Analytical Request Record

Page 1 of 1

| PLEASE PRINT - Provide as much information as possible. | | | |
|---|--|---|--|
| Company Name: Continental Resources | | Project Name, PMS, Permit, Etc. Atlanta Site | |
| Report Mail Address: PO Box 2168870 73126 Oklahoma City, OK | | Sample Origin State: ND | |
| Invoice Address: PO Box 2168870 73126 Oklahoma City, OK | | EPA/State Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| Special Report/Formats - ELI must be notified prior to sample submittal for the following: | | Sampler, (Please Print) Spencer Ingalls | |
| <input type="checkbox"/> DW <input type="checkbox"/> GSA <input type="checkbox"/> PCTWAWWTP <input type="checkbox"/> State: _____ <input type="checkbox"/> Other: _____ | | <input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT (Electronic Data) Format <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC | |
| SAMPLE IDENTIFICATION (Name, Location, Interval, etc.) | | Collection Date | Collection Time |
| Fill #3 | | 8-29-12 | 7:00pm |
| | | 1-3 | d d d d d |
| | | MATRIX | SEE ATTACHED |
| | | CC | Normal Turnaround (TAT) |
| | | SAR | R |
| | | CEC | U |
| | | P/H | G |
| | | Perch | H |
| | | 45 | Comments: E-1179963.65 N-421120.95 EL-1937.90 |
| | | LABORATORY USE ONLY | Received Temp 24.5 °C |
| | | | On Site: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| | | | Custody Seal Y |
| | | | In tact Y |
| | | | Signature Match Y |
| Custody Record MUST be Signed | | Received by (print): Mick Albright | Date/Time: 8-30-12 9:00AM |
| | | Signature: Mick Albright | Received by (print): |
| | | Received by (print): Mick Albright | Date/Time: 8-30-12 3:05 PM |
| | | Received by (print): Mick Albright | Signature: Mick Albright |
| Sample Disposal: Return to Client: | | Lab Disposal: | Received by Laboratory: Spencer Ingalls |
| | | Date/Time: 8-30-12 3:05 PM | Signature: Spencer Ingalls |

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.

This serves as notice of this possibility. All sub-contract data will be clearly noted on your analytical report.
Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

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140 Pine Needle Drive • Spearfish, SD 57783 • Phone (605) 642-2742 • Mobile 390-3768

PROCTOR TEST

MOISTURE DENSITY RELATION

CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
Attn: Project Manager

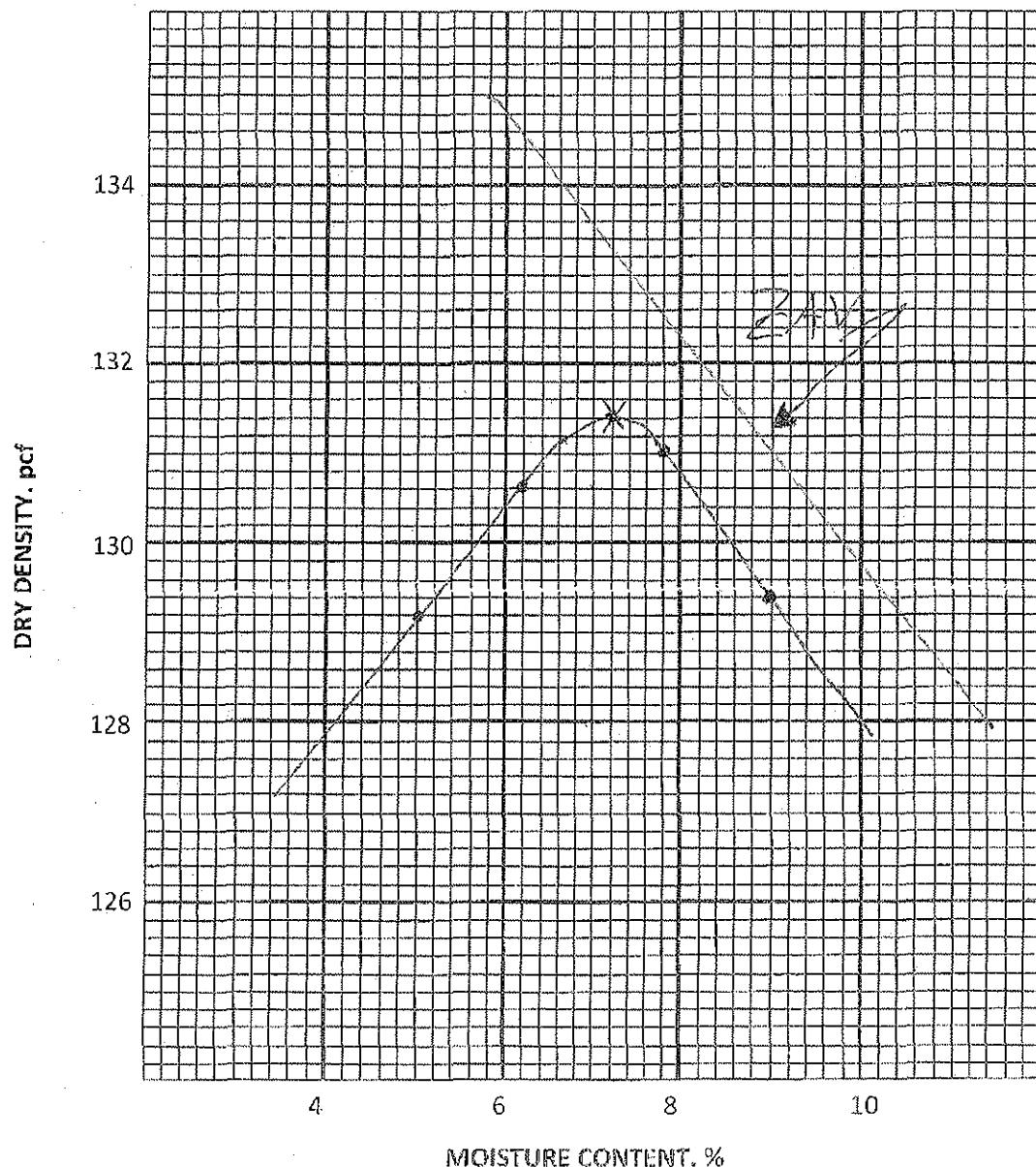
Proctor#: Date: 08/21/12
ASTM: 698 Method: C
Soil Classification: Brown Gravelly
Sand

Project: Atlanta Drill Pad, Williston,
North Dakota

Project Number: 12-12165

MAXIMUM DENSITY: 131.4 pcf

OPTIMUM MOISTURE CONTENT: 7.2%



Cc:

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140 Pine Needle Drive • Spearfish, SD 57783 • Phone (605) 642-2742 • Mobile 390-3788

PROCTOR TEST

MOISTURE DENSITY RELATION

CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
Attn: Project Manager

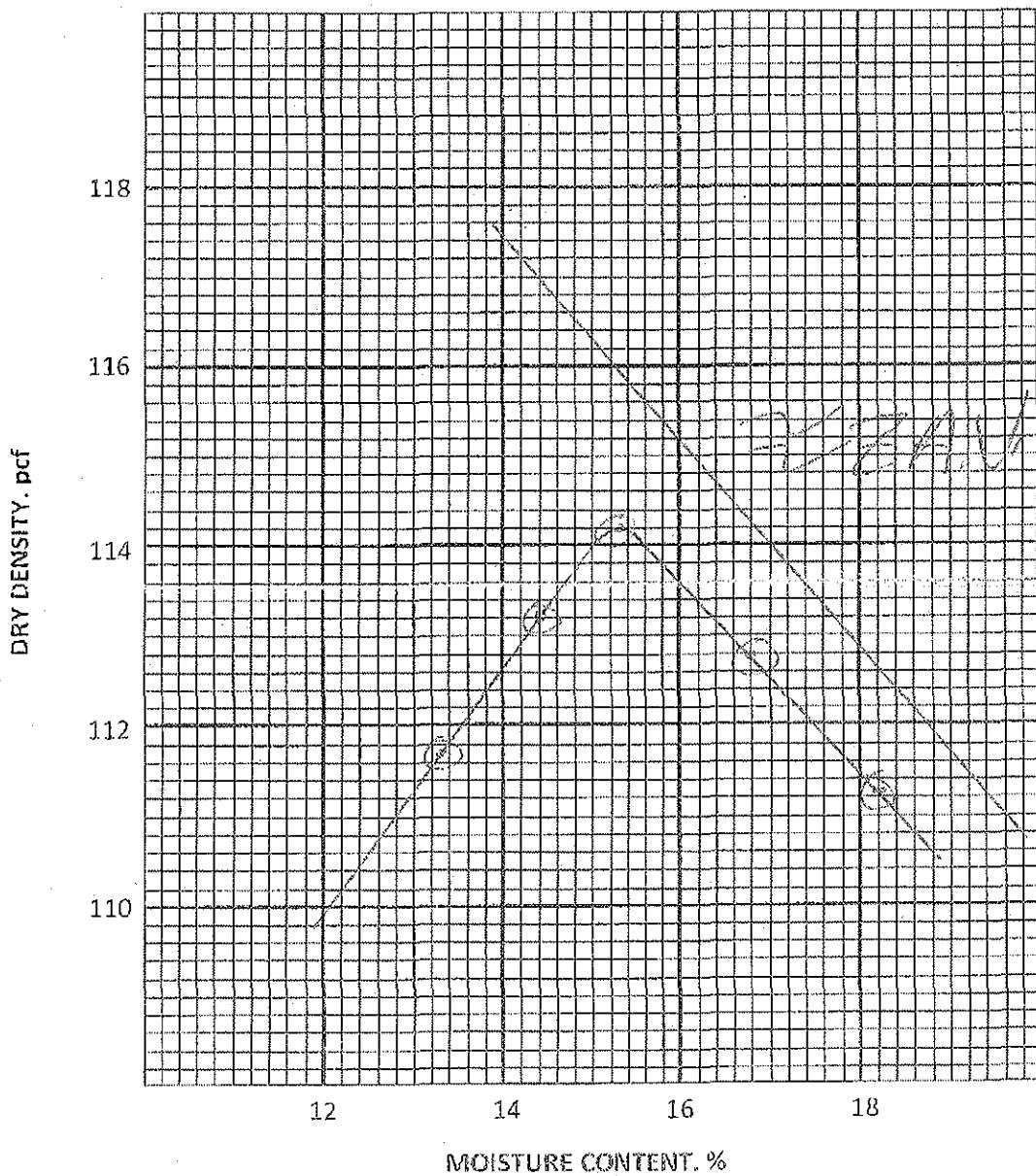
Proctor#: Date: 07/31/12
ASTM: 698 Method:
Soil Classification: CL

Project: Atlanta Drill Pad, Williston,
North Dakota

Project Number: 12-12165

MAXIMUM DENSITY: 114.2pcf

OPTIMUM MOISTURE CONTENT: 15.3%



Cc:

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REPORT OF EXCAVATION OBSERVATIONS

CONTINENTAL RESOURCES
P.O. Box 268836
Oklahoma City, OK 73126

September 7, 2012

Attn: Project Manager

Subj: Report of Excavation Observations
Drill Pad Spillage Line Construction
Atlanta Drill Pad
Williston, North Dakota

ATS No. 12-12165

INTRODUCTION

Our presence on the above referenced project was requested by Continental Resources of Oklahoma City, Oklahoma.

We were to observe and test the overexcavation and fill placement over the spillage liner placed below the Atlanta Drill Pad being constructed in Williston, North Dakota.

EXCAVATION OBSERVATIONS

Pad Spillage Liner Excavation & Subgrade Preparation:

We observed the overexcavation of the spillage liner on August 12, 2012. We observed that the bottom of the overexcavation was taken to 5 feet below finished grades in the spillage liner site. The bottom of the overexcavation was recompacted and smoothed prior to synthetic liner installation.

The synthetic liner material was delivered in rolls and placed over the prepared subgrade soils. We observed that the liner laps were welded as the liner materials were pulled into place.

Liner Area Backfill:

On August 14, 2012, we observed on-site soil placement over the synthetic liner. A cushion layer was compacted in place then material was placed via scrapers. Water was added and dozers mixed the soils prior to compaction in lifts. All compaction tests taken indicate the backfill material was placed in an engineered manner.

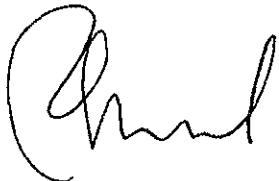
CONCLUSIONS AND RECOMMENDATIONS

Based on our observations and tests, it is our opinion that the liner subgrade was prepared and the backfill placed in an engineered manner.

CLOSURE

If you have questions or comments about this report, please contact us and we will be glad to respond.

Sincerely,
AMERICAN TECHNICAL SERVICES, INC.



Dave G. Bressler, P.E.
Geotechnical Consultant

cc: File

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager

PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 07/30/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | PASS |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | |
| 1 | 07/25/12 | #1 | 9.7 | 126.5 | 7.7 | 128.2 | 101 | +/-2% | 95 | PASS |
| 2 | 07/25/12 | #1 | 9.7 | 126.5 | 8.7 | 120.2 | 95 | +/-2% | 95 | PASS |
| 3 | 07/25/12 | #1 | 9.7 | 126.5 | 8.8 | 125.8 | 99 | +/-2% | 95 | PASS |
| 4 | 07/25/12 | #1 | 9.7 | 126.5 | 9.9 | 126.8 | 100 | +/-2% | 95 | PASS |
| 5 | 07/25/12 | #1 | 9.7 | 126.5 | 9.1 | 120.4 | 95 | +/-2% | 95 | PASS |
| 6 | 07/25/12 | #1 | 9.7 | 126.5 | 7.8 | 121.0 | 96 | +/-2% | 95 | PASS |
| 7 | | | | | | | #DIV/0! | | | |
| 8 | | | | | | | #DIV/0! | | | |
| 9 | | | | | | | #DIV/0! | | | |
| 10 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|----------------------------------|-----------|
| 1 | North 421071.00, East 117953.00 | 1913.95 |
| 2 | North 421274.95, East 1179466.60 | 1924.65 |
| 3 | North 421032.65, East 1179535.15 | 1911.2 |
| 4 | North 421208.75, East 1179464.72 | 1922.6 |
| 5 | North 421225.55, East 1179501.00 | 1923.1 |
| 6 | North 420954.70, East 1179641.10 | 1905.35 |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |

NOTES: All Test in West Valley Fill

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AMERICAN TECHNICAL SERVICES, INC.



REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

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Black Hawk, SD 57718-0558

| | |
|------------|-----------------------------|
| CLIENT: | CONTINENTAL RESOURCES, INC. |
| | PO Box 268836 |
| | Oklahoma City, OK 73126 |
| ATTENTION: | Project Manager |
| PROJECT: | Atlanta Drill Site |

ATS #: 12-12165
DATE: 07/30/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 7 | 07/26/12 | #1 | 9.7 | 126.5 | 8.1 | 126.2 | 100 | +/-2% | 95 | PASS |
| 8 | 07/26/12 | #1 | 9.7 | 126.5 | 7.8 | 128.4 | 102 | +/-2% | 95 | PASS |
| 9 | 07/26/12 | #1 | 9.7 | 126.5 | 7.9 | 126.1 | 100 | +/-2% | 95 | PASS |
| 10 | 07/26/12 | #1 | 9.7 | 126.5 | 7.7 | 120.2 | 95 | +/-2% | 95 | PASS |
| 11 | 07/26/12 | #1 | 9.7 | 126.5 | 8.0 | 124.7 | 99 | +/-2% | 95 | PASS |
| 12 | 07/26/12 | #1 | 9.7 | 126.5 | 8.1 | 123.7 | 98 | +/-2% | 95 | PASS |
| 13 | | | | | | | #DIV/0! | | | |
| 14 | | | | | | | #DIV/0! | | | |
| 15 | | | | | | | #DIV/0! | | | |
| 16 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|-----------------------------------|-----------|
| 7 | North 420733.85, East 1179715.80 | 1889.35 |
| 8 | North 421024.65, East 1179590.75 | 1911.8 |
| 9 | North 4211162.20, East 1179535.00 | 1920.75 |
| 10 | North 420989.90, East 1179617.40 | 1910.3 |
| 11 | North 421163.80, East 1179533.60 | 1921.65 |
| 12 | North 420730.65, East 1179774.25 | 1887.9 |
| 13 | | |
| 14 | | |
| 15 | | |
| 16 | | |

NOTES: *See also* *Notes* to *Table 1*.

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 07/30/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | PASS |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | |
| 13 | 07/27/12 | #1 | 9.7 | 126.5 | 8.2 | 128.8 | 102 | +/-2% | 95 | PASS |
| 14 | 07/27/12 | #1 | 9.7 | 126.5 | 7.8 | 125.7 | 99 | +/-2% | 95 | PASS |
| 15 | 07/27/12 | #1 | 9.7 | 126.5 | 8.0 | 126.2 | 100 | +/-2% | 95 | PASS |
| 16 | 07/27/12 | #1 | 9.7 | 126.5 | 7.9 | 126.7 | 100 | +/-2% | 95 | PASS |
| 17 | 07/27/12 | #1 | 9.7 | 126.5 | 8.3 | 121.5 | 96 | +/-2% | 95 | PASS |
| 18 | 07/27/12 | #1 | 9.7 | 126.5 | 8.0 | 120.7 | 95 | +/-2% | 95 | PASS |
| 19 | 07/27/12 | #1 | 9.7 | 126.5 | 10.4 | 124.3 | 98 | +/-2% | 95 | PASS |
| 20 | 07/27/12 | #1 | 9.7 | 126.5 | 8.3 | 121.5 | 96 | +/-2% | 95 | PASS |
| 21 | 07/27/12 | #1 | 9.7 | 126.5 | 8.7 | 123.2 | 97 | +/-2% | 95 | PASS |
| 22 | 07/27/12 | #1 | 9.7 | 126.5 | 10.1 | 121.2 | 96 | +/-2% | 95 | PASS |

| TEST # | LOCATION | ELEVATION |
|--------|----------------------------------|-----------|
| 13 | North 420922.45, East 1179615.55 | 1907.5 |
| 14 | North 421133.55, East 1179531.25 | 1920.75 |
| 15 | North 421328.60, East 1179449.60 | 1930 |
| 16 | North 420734.90, East 1179720.10 | 1891.95 |
| 17 | North 421331.0, East 1179468.55 | 1930.25 |
| 18 | North 421115.0, East 1179565.80 | 1920.35 |
| 19 | North 421129.55, East 1179544.70 | 1921.55 |
| 20 | North 420997.45, East 1179569.10 | 1913.85 |
| 21 | North 421218.20, East 1179468.55 | 1927.65 |
| 22 | North 421036.70, East 1179556.20 | 1916.5 |

NOTES

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 07/30/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 23 | 07/28/12 | #1 | 9.7 | 126.5 | 7.7 | 121.3 | 96 | +/-2% | 95 | PASS |
| 24 | 07/28/12 | #1 | 9.7 | 126.5 | 8.6 | 122.3 | 97 | +/-2% | 95 | PASS |
| 25 | 07/28/12 | #1 | 9.7 | 126.5 | 9.8 | 121.4 | 96 | +/-2% | 95 | PASS |
| 26 | 07/28/12 | #1 | 9.7 | 126.5 | 10.3 | 120.4 | 95 | +/-2% | 95 | PASS |
| 27 | 07/28/12 | #1 | 9.7 | 126.5 | 8.8 | 123.1 | 97 | +/-2% | 95 | PASS |
| 28 | 07/28/12 | #1 | 9.7 | 126.5 | 10.2 | 121.1 | 96 | +/-2% | 95 | PASS |
| 29 | 07/28/12 | #1 | 9.7 | 126.5 | 9.5 | 121.7 | 96 | +/-2% | 95 | PASS |
| 30 | 07/28/12 | #1 | 9.7 | 126.5 | 8.9 | 121.6 | 96 | +/-2% | 95 | PASS |
| 31 | | | | | | | #DIV/0! | | | |
| 32 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|----------------------------------|-----------|
| 23 | North 421030.00, East 1179567.90 | 1917.25 |
| 24 | North 421168.40, East 1179502.30 | 1925.8 |
| 25 | North 420941.60, East 1179621.90 | 1910.9 |
| 26 | North 420775.75, East 1179540.35 | 1915 |
| 27 | North 420747.80, East 1179641.35 | 1901.75 |
| 28 | North 421160.85, East 1179530.85 | 1925 |
| 29 | North 421021.90, East 117618.15 | 1915.65 |
| 30 | North 420886.85, East 1179717.40 | 1904.9 |
| 31 | | |
| 32 | | |

NOTES:

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REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager

PROJECT: Atlanta Drill Site

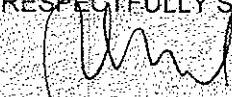
ATS #: 12-12165
DATE: 07/30/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 31 | 07/29/12 | #1 | 9.7 | 126.5 | 10.2 | 120.4 | 95 | +/-2% | 95 | PASS |
| 32 | 07/29/12 | #1 | 9.7 | 126.5 | 10.1 | 121.2 | 96 | +/-2% | 95 | PASS |
| 33 | 07/29/12 | #1 | 9.7 | 126.5 | 8.2 | 121.7 | 96 | +/-2% | 95 | PASS |
| 34 | 07/29/12 | #1 | 9.7 | 126.5 | 9.2 | 121.7 | 96 | +/-2% | 95 | PASS |
| 35 | 07/29/12 | #1 | 9.7 | 126.5 | 9.9 | 120.4 | 95 | +/-2% | 95 | PASS |
| 36 | 07/29/12 | #1 | 9.7 | 126.5 | 9.4 | 120.8 | 95 | +/-2% | 95 | PASS |
| 37 | | | | | | | #DIV/0! | | | |
| 38 | | | | | | | #DIV/0! | | | |
| 39 | | | | | | | #DIV/0! | | | |
| 40 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|----------------------------------|-----------|
| 31 | North 421067.10, East 1179554.40 | 1920.8 |
| 32 | North 420928.65, East 1179636.40 | 1911.25 |
| 33 | North 420835.80, East 1179608.55 | 1912.35 |
| 34 | North 421077.20, East 1179797.50 | 1922.35 |
| 35 | North 420932.15, East 1179576.05 | 1914.35 |
| 36 | North 420901.40, East 1179652.05 | 1909.95 |
| 37 | | |
| 38 | | |
| 39 | | |
| 40 | | |

NOTES:

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Black Hawk SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

| | | | |
|------------|---|-----------|-----------------|
| CLIENT | CONTINENTAL RESOURCES, INC. PO Box 268836 Oklahoma City, OK 73126 | ATS # | 12-12165 |
| ATTENTION: | Project Manager | DATE | 08/01/12 |
| PROJECT | Atlanta Drill Site | ATS TECH | Russell Harwood |
| | | GAGE # | 2 |
| | | BENCHMARK | |

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | PASS |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | |
| 37 | 07/30/12 | #3 | 15.3 | 114.2 | 14.2 | 108.7 | 95 | +/-2% | 95 | PASS |
| 38 | 07/30/12 | #3 | 15.3 | 114.2 | 13.7 | 109.1 | 96 | +/-2% | 95 | PASS |
| 39 | 07/30/12 | #3 | 15.3 | 114.2 | 13.6 | 110.4 | 97 | +/-2% | 95 | PASS |
| 40 | 07/30/12 | #3 | 15.3 | 114.2 | 14.1 | 109.2 | 96 | +/-2% | 95 | PASS |
| 41 | 07/30/12 | #3 | 15.3 | 114.2 | 13.8 | 110.0 | 96 | +/-2% | 95 | PASS |
| 42 | 07/30/12 | #3 | 15.3 | 114.2 | 14.0 | 112.6 | 99 | +/-2% | 95 | PASS |
| 43 | | | | | | | #DIV/0! | | | |
| 44 | | | | | | | #DIV/0! | | | |
| 45 | | | | | | | #DIV/0! | | | |
| 46 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 37 | North 420807.75 East 1179702.80 | 1909.05 |
| 38 | North 420783.10 East 1179629.25 | 1916.6 |
| 39 | North 421008.30 East 1179597.45 | 1916.65 |
| 40 | North 420912.45 East 1179672.00 | 1910.05 |
| 41 | North 420800.0 East 1179606.85 | 1922.55 |
| 42 | North 420784.65 East 1179714.00 | 1911.75 |
| 43 | | |
| 44 | | |
| 45 | | |
| 46 | | |

NOTES:

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CC:


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SERVICES, INC.**

ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
8105 Black Hawk Rd. • P.O. Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/01/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 43 | 07/31/12 | #3 | 15.3 | 114.2 | 13.4 | 108.9 | 95 | +/-2% | 95 | PASS |
| 44 | 07/31/12 | #3 | 15.3 | 114.2 | 14.1 | 113.3 | 99 | +/-2% | 95 | PASS |
| 45 | 07/31/12 | #3 | 15.3 | 114.2 | 13.3 | 109.5 | 96 | +/-2% | 95 | PASS |
| 46 | 07/31/12 | #3 | 15.3 | 114.2 | 13.5 | 115.0 | 101 | +/-2% | 95 | PASS |
| 47 | 07/31/12 | #1 | 9.7 | 126.5 | 8.9 | 124.7 | 99 | +/-2% | 95 | PASS |
| 48 | | | | | | | #DIV/0! | | | |
| 49 | | | | | | | #DIV/0! | | | |
| 50 | | | | | | | #DIV/0! | | | |
| 51 | | | | | | | #DIV/0! | | | |
| 52 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|----------------------------------|-----------|
| 43 | North 421075.80, East 1179492.75 | 1925.45 |
| 44 | North 420939.60, East 1179667.90 | 1915.7 |
| 45 | North 421024.15, East 1179494.95 | 1926.15 |
| 46 | North 420978.15, East 1179573.50 | 1923.35 |
| 47 | North 420958.05, East 1179629.60 | 1919.6 |
| 48 | | |
| 49 | | |
| 50 | | |
| 51 | | |
| 52 | | |

NOTES: _____

CC: _____

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REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

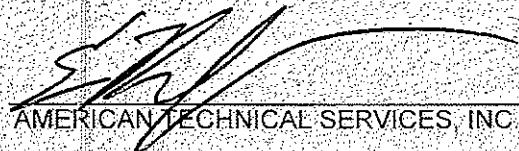
| | | | |
|------------|---|-----------|-----------------|
| CLIENT | CONTINENTAL RESOURCES, INC. PO Box 268836 Oklahoma City, OK 73126 | ATS # | 12-12165 |
| ATTENTION: | Project Manager | DATE | 08/03/12 |
| PROJECT: | Atlanta Drill Site | ATS TECH | Russell Harwood |
| | | GAGE # | 2 |
| | | BENCHMARK | |

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | PASS |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | |
| 48 | 08/01/12 | #3 | 15.3 | 114.2 | 13.7 | 113.9 | 100 | +/-2% | 95 | PASS |
| 49 | 08/01/12 | #3 | 15.3 | 114.2 | 13.4 | 112.6 | 99 | +/-2% | 95 | PASS |
| 50 | 08/01/12 | #3 | 15.3 | 114.2 | 13.5 | 108.9 | 95 | +/-2% | 95 | PASS |
| 51 | 08/01/12 | #3 | 15.3 | 114.2 | 14.2 | 110.0 | 96 | +/-2% | 95 | PASS |
| 52 | 08/01/12 | #3 | 15.3 | 114.2 | 13.3 | 113.5 | 99 | +/-2% | 95 | PASS |
| 53 | | | | | | | #DIV/0! | | | |
| 54 | | | | | | | #DIV/0! | | | |
| 55 | | | | | | | #DIV/0! | | | |
| 56 | | | | | | | #DIV/0! | | | |
| 57 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---|-----------|
| 48 | 78' North of South End of West Valley- Middle | |
| 49 | 25' North of South End of West Valley-Middle | |
| 50 | 225' North of South End of West Valley-Middle | |
| 51 | North 42 1100.20 East 1179617.10 | 1924.9 |
| 52 | North 420962.20 East 1179574.20 | 1928.75 |
| 53 | | |
| 54 | | |
| 55 | | |
| 56 | | |
| 57 | | |

NOTES: Not Able to Get GPS Readings System Down

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REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/03/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 53 | 08/02/12 | #3 | 15.3 | 114.2 | 13.5 | 114.9 | 101 | +/-2% | 95 | PASS |
| 54 | 08/02/12 | #3 | 15.3 | 114.2 | 13.7 | 112.9 | 99 | +/-2% | 95 | PASS |
| 55 | 08/02/12 | #3 | 15.3 | 114.2 | 13.5 | 110.2 | 96 | +/-2% | 95 | PASS |
| 56 | 08/02/12 | #3 | 15.3 | 114.2 | 13.6 | 114.0 | 100 | +/-2% | 95 | PASS |
| 57 | 08/02/12 | #3 | 15.3 | 114.2 | 13.6 | 113.9 | 100 | +/-2% | 95 | PASS |
| 58 | 08/02/12 | #3 | 15.3 | 114.2 | 13.8 | 115.5 | 101 | +/-2% | 95 | PASS |
| 59 | 08/02/12 | #3 | 15.3 | 114.2 | 13.4 | 109.7 | 96 | +/-2% | 95 | PASS |
| 60 | | | | | | | #DIV/0! | | | |
| 61 | | | | | | | #DIV/0! | | | |
| 62 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 53 | North 420981.65 East 1179560.25 | 1930.75 |
| 54 | North 420989.70 East 1179597.65 | 1928.25 |
| 55 | North 420091.15 East 1179511.90 | 1933.95 |
| 56 | North 421074.40 East 1179515.05 | 1933.45 |
| 57 | North 421145.45 East 1179458.95 | 1932.75 |
| 58 | North 421084.85 East 1179531.55 | 1934.45 |
| 59 | North 421196.80 East 1179508.90 | 1934.35 |
| 60 | | |
| 61 | | |
| 62 | | |

NOTES:

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REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
P.O. Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/07/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 60 | 08/04/12 | #3 | 15.3 | 114.2 | 13.9 | 112.2 | 98 | +/-2% | 95 | PASS |
| 61 | 08/04/12 | #1 | 9.7 | 126.5 | 8.9 | 120.6 | 95 | +/-2% | 95 | PASS |
| 62 | 08/04/12 | #3 | 15.3 | 114.2 | 14.1 | 113.9 | 100 | +/-2% | 95 | PASS |
| 63 | 08/04/12 | #3 | 15.3 | 114.2 | 13.4 | 113.3 | 99 | +/-2% | 95 | PASS |
| 64 | | | | | | | #DIV/0! | | | |
| 65 | | | | | | | #DIV/0! | | | |
| 66 | | | | | | | #DIV/0! | | | |
| 67 | | | | | | | #DIV/0! | | | |
| 68 | | | | | | | #DIV/0! | | | |
| 69 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--|---------------|
| 60 | 300' North of South Slope, East 1/3 of West Valley | 4 to 5' Below |
| 61 | 100' North of South Slope, East 1/3 of West Valley | 4 to 5' Below |
| 62 | North 421154.15, East 1179488.85 | 1930.7 |
| 63 | North 421086.15, East 1179544.25 | 1937.05 |
| 64 | | |
| 65 | | |
| 66 | | |
| 67 | | |
| 68 | | |
| 69 | | |

NOTES: No GPS for Location

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REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/07/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | PASS |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | |
| 64 | 08/05/12 | #1 | 9.7 | 126.5 | 10.1 | 124.9 | 99 | +/-2% | 95 | PASS |
| 65 | 08/05/12 | #3 | 15.3 | 114.2 | 13.4 | 112.2 | 98 | +/-2% | 95 | PASS |
| 66 | 08/05/12 | #1 | 9.7 | 126.5 | 8.3 | 128.5 | 102 | +/-2% | 95 | PASS |
| 67 | 08/05/12 | #1 | 9.7 | 126.5 | 9.1 | 121.8 | 96 | +/-2% | 95 | PASS |
| 68 | | | | | | | #DIV/0! | | | |
| 69 | | | | | | | #DIV/0! | | | |
| 70 | | | | | | | #DIV/0! | | | |
| 71 | | | | | | | #DIV/0! | | | |
| 72 | | | | | | | #DIV/0! | | | |
| 73 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 64 | North 421047 10 East 1179483.90 | 1939 |
| 65 | North 421236 15 East 1179463.75 | 1938.55 |
| 66 | North 421344 40 East 1179447.75 | 1940.25 |
| 67 | North 421219 15 East 1179501.00 | 1940.4 |
| 68 | | |
| 69 | | |
| 70 | | |
| 71 | | |
| 72 | | |
| 73 | | |

NOTES

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/09/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 68 | 08/07/12 | #1 | 9.7 | 126.5 | 7.8 | 122.6 | 97 | +/-2% | 95 | PASS |
| 69 | 08/07/12 | #2 | 8.3 | 123.2 | 7.5 | 118.7 | 96 | +/-2% | 95 | PASS |
| 70 | 08/07/12 | #1 | 9.7 | 126.5 | 8.7 | 126.3 | 100 | +/-2% | 95 | PASS |
| 71 | 08/07/12 | #1 | 9.7 | 126.5 | 7.8 | 123.8 | 98 | +/-2% | 95 | PASS |
| 72 | | | | | | | #DIV/0! | | | |
| 73 | | | | | | | #DIV/0! | | | |
| 74 | | | | | | | #DIV/0! | | | |
| 75 | | | | | | | #DIV/0! | | | |
| 76 | | | | | | | #DIV/0! | | | |
| 77 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 68 | North 420982.95 East 1179952.45 | 1895.45 |
| 69 | North 421008.10 East 1179936.05 | 1896.5 |
| 70 | North 421099.00 East 1179911.80 | 1898.75 |
| 71 | North 421191.80 East 1179859.30 | 1904.05 |
| 72 | | |
| 73 | | |
| 74 | | |
| 75 | | |
| 76 | | |
| 77 | | |

NOTES

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Black Hawk, SD 57718-0556

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/09/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 72 | 08/08/12 | #1 | 9.7 | 126.5 | 8.6 | 124.9 | 99 | +/-2% | 95 | PASS |
| 73 | 08/08/12 | #1 | 9.7 | 123.2 | 7.7 | 128.6 | 104 | +/-2% | 95 | PASS |
| 74 | 08/08/12 | #2 | 8.3 | 123.2 | 8.4 | 117.5 | 95 | +/-2% | 95 | PASS |
| 75 | 08/08/12 | #1 | 9.7 | 126.5 | 7.9 | 128.5 | 102 | +/-2% | 95 | PASS |
| 76 | | | | | | | #DIV/0! | | | |
| 77 | | | | | | | #DIV/0! | | | |
| 78 | | | | | | | #DIV/0! | | | |
| 79 | | | | | | | #DIV/0! | | | |
| 80 | | | | | | | #DIV/0! | | | |
| 81 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 72 | North 421032.80 East 1179904.95 | 1907.4 |
| 73 | North 421121.00 East 1179879.00 | 1909.35 |
| 74 | North 421046.25 East 1179873.80 | 1911.65 |
| 75 | North 421154.10 East 1179910.70 | 1913.7 |
| 76 | | |
| 77 | | |
| 78 | | |
| 79 | | |
| 80 | | |
| 81 | | |

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/15/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | PASS |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|---------------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | % SPEC COMPACTATION | |
| 76 | 08/09/12 | #1 | 9.7 | 126.5 | 8.0 | 120.4 | 95 | +/-2% | 95 | PASS |
| 77 | 08/09/12 | #2 | 8.3 | 123.2 | 8.1 | 120.3 | 98 | +/-2% | 95 | PASS |
| 78 | | | | | | | #DIV/0! | | | |
| 79 | | | | | | | #DIV/0! | | | |
| 80 | | | | | | | #DIV/0! | | | |
| 81 | | | | | | | #DIV/0! | | | |
| 82 | | | | | | | #DIV/0! | | | |
| 83 | | | | | | | #DIV/0! | | | |
| 84 | | | | | | | #DIV/0! | | | |
| 85 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 76 | North 421078.95 East 1179862.60 | 1914.45 |
| 77 | North 421199.70 East 1179870.90 | 1915.05 |
| 78 | | |
| 79 | | |
| 80 | | |
| 81 | | |
| 82 | | |
| 83 | | |
| 84 | | |
| 85 | | |

NOTES:

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REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/15/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 82 | 08/12/12 | #1 | 9.7 | 126.5 | 10.0 | 124.2 | 98 | +/-2% | 95 | PASS |
| 83 | 08/12/12 | #1 | 9.7 | 126.5 | 10.3 | 120.7 | 95 | +/-2% | 95 | PASS |
| 84 | 08/12/12 | #1 | 9.7 | 126.5 | 10.1 | 122.8 | 97 | +/-2% | 95 | PASS |
| 85 | 08/12/12 | #3 | 15.3 | 114.2 | 13.4 | 115.5 | 101 | +/-2% | 95 | PASS |
| 86 | 08/12/12 | #3 | 15.3 | 114.2 | 14.0 | 116.6 | 102 | +/-2% | 95 | PASS |
| 87 | 08/12/12 | #3 | 15.3 | 114.2 | 13.9 | 114.9 | 101 | +/-2% | 95 | PASS |
| 88 | | | | | | #DIV/0! | | | | |
| 89 | | | | | | #DIV/0! | | | | |
| 90 | | | | | | #DIV/0! | | | | |
| 91 | | | | | | #DIV/0! | | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 82 | North 421169.15 East 1179661.00 | 1934.25 |
| 83 | North 421281.75 East 1179530.30 | 1935.9 |
| 84 | North 421187.85 East 1179466.20 | 1935.2 |
| 85 | North 421265.35 East 1179372.75 | 1936.3 |
| 86 | North 421179.15 East 1179257.80 | 1935.9 |
| 87 | North 421253.65 East 1179177.25 | 1937.1 |
| 88 | | |
| 89 | | |
| 90 | | |
| 91 | | |

NOTES: All Test in Overex on West 1/2 Subgrade Before Liner Installation

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CC:


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CLIENT: **CONTINENTAL RESOURCES, INC.**
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ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/15/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | PASS |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | |
| 78 | 08/12/12 | #3 | 15.3 | 114.2 | 13.5 | 113.9 | 100 | +/-2% | 95 | PASS |
| 79 | 08/12/12 | #3 | 15.3 | 114.2 | 13.7 | 115.1 | 101 | +/-2% | 95 | PASS |
| 80 | 08/12/12 | #3 | 15.3 | 114.2 | 13.4 | 114.9 | 101 | +/-2% | 95 | PASS |
| 81 | 08/12/12 | #3 | 15.3 | 114.2 | 13.3 | 113.3 | 99 | +/-2% | 95 | PASS |
| 82 | | | | | | | #DIV/0! | | | |
| 83 | | | | | | | #DIV/0! | | | |
| 84 | | | | | | | #DIV/0! | | | |
| 85 | | | | | | | #DIV/0! | | | |
| 86 | | | | | | | #DIV/0! | | | |
| 87 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 78 | North 421150.90 East 1179896.40 | 1917 |
| 79 | North 421240.60 East 1179845.60 | 1917.8 |
| 80 | North 421006.70 East 1179882.55 | 1922.3 |
| 81 | North 420992.55 East 1179992.15 | 1919.75 |
| 82 | | |
| 83 | | |
| 84 | | |
| 85 | | |
| 86 | | |
| 87 | | |

NOTES: _____
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REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD
ASTM D6938

CLIENT: CONTINENTAL RESOURCES INC
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/15/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | PASS |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | |
| 88 | 08/13/12 | #3 | 15.3 | 114.2 | 13.6 | 113.7 | 100 | +/-2% | 95 | PASS |
| 89 | 08/13/12 | #3 | 15.3 | 114.2 | 13.8 | 113.3 | 99 | +/-2% | 95 | PASS |
| 90 | 08/13/12 | #3 | 15.3 | 114.2 | 13.4 | 115.5 | 101 | +/-2% | 95 | PASS |
| 91 | 08/13/12 | #2 | 8.3 | 123.2 | 8.8 | 118.9 | 97 | +/-2% | 95 | PASS |
| 92 | 08/13/12 | #1 | 9.7 | 126.5 | 8.9 | 126.1 | 100 | +/-2% | 95 | PASS |
| 93 | | | | | | | #DIV/0! | | | |
| 94 | | | | | | | #DIV/0! | | | |
| 95 | | | | | | | #DIV/0! | | | |
| 96 | | | | | | | #DIV/0! | | | |
| 97 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 88 | North 421063.70 East 1179944.20 | 1918.35 |
| 89 | North 421008.35 East 1179861.05 | 1927.7 |
| 90 | North 421038.50 East 1179985.85 | 1920.7 |
| 91 | North 421044.50 East 1179840.40 | 1927.5 |
| 92 | North 421017.25 East 1179950.30 | 1925.65 |
| 93 | | |
| 94 | | |
| 95 | | |
| 96 | | |
| 97 | | |

NOTES:

RESPECTFULLY SUBMITTED

CC:

AMERICAN TECHNICAL SERVICES, INC.

**A
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ECHNICAL
S
ERVICES, INC.**

ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
8105 Black Hawk Rd. • PO Box 558
Black Hawk, SD 57713-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD
ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/15/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 98 | 08/14/12 | #1 | 9.7 | 126.5 | 10.2 | 120.9 | 96 | +/-2% | 95 | PASS |
| 99 | 08/14/12 | #1 | 9.7 | 126.5 | 10.3 | 121.3 | 96 | +/-2% | 95 | PASS |
| 100 | 08/14/12 | #1 | 9.7 | 126.5 | 10.1 | 121.9 | 96 | +/-2% | 95 | PASS |
| 101 | 08/14/12 | #3 | 15.3 | 114.2 | 13.3 | 114.5 | 100 | +/-2% | 95 | PASS |
| 102 | 08/14/12 | #1 | 9.7 | 126.5 | 10.1 | 123.5 | 98 | +/-2% | 95 | PASS |
| 103 | 08/14/12 | #1 | 9.7 | 126.5 | 10.2 | 121.2 | 96 | +/-2% | 95 | PASS |
| 104 | 08/14/12 | #3 | 15.3 | 114.2 | 13.4 | 115.6 | 101 | +/-2% | 95 | PASS |
| 105 | | | | | | | #DIV/0! | | | |
| 106 | | | | | | | #DIV/0! | | | |
| 107 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 98 | North 421249.95 East 1179384.30 | 1937.55 |
| 99 | North 421288.40 East 1179300.25 | 1938.65 |
| 100 | North 421171.30 East 1179237.30 | 1937.9 |
| 101 | North 421272.15 East 1179362.50 | 1938.75 |
| 102 | North 421267.10 East 1179238.35 | 1939.7 |
| 103 | North 421229.90 East 1179254.90 | 1939.2 |
| 104 | North 421203.80 East 1179320.25 | 1938.65 |
| 105 | | |
| 106 | | |
| 107 | | |

NOTES: Drill Pad Area on Liner Fill

RESPECTFULLY SUBMITTED

CC:

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SERVICES, INC.**

ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
3105 Black Hawk Rd. • PO Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD
ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/15/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-------------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTATION | PASS |
| 93 | 08/14/12 | #3 | 15.3 | 114.2 | 13.6 | 114.5 | 100 | +/-2% | 95 | PASS |
| 94 | 08/14/12 | #3 | 15.3 | 114.2 | 13.7 | 114.7 | 100 | +/-2% | 95 | PASS |
| 95 | 08/14/12 | #1 | 9.7 | 126.5 | 10.4 | 122.5 | 97 | +/-2% | 95 | PASS |
| 96 | 08/14/12 | #1 | 9.7 | 126.5 | 8.7 | 124.0 | 98 | +/-2% | 95 | PASS |
| 97 | 08/14/12 | #1 | 9.7 | 126.5 | 9.3 | 121.3 | 96 | +/-2% | 95 | PASS |
| 98 | | | | | | #DIV/0! | | | | |
| 99 | | | | | | #DIV/0! | | | | |
| 100 | | | | | | #DIV/0! | | | | |
| 101 | | | | | | #DIV/0! | | | | |
| 102 | | | | | | #DIV/0! | | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 93 | North 421035.45 East 1179873.40 | 1927.55 |
| 94 | North 421012.25 East 1179971.80 | 1925.7 |
| 95 | North 421091.95 East 1179838.70 | 1927.15 |
| 96 | North 421038.25 East 1179899.75 | 1928.35 |
| 97 | North 420986.05 East 1170007.50 | 1925.5 |
| 98 | | |
| 99 | | |
| 100 | | |
| 101 | | |
| 102 | | |

NOTES:

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SERVICES, INC.**

ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
8105 Black Hawk Rd. • PO Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD
ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/17/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 111 | 08/15/12 | #1 | 9.7 | 126.5 | 10.4 | 120.1 | 95 | +/-2% | 95 | PASS |
| 112 | 08/15/12 | #3 | 15.3 | 114.2 | 13.7 | 113.9 | 100 | +/-2% | 95 | PASS |
| 113 | | | | | | | #DIV/0! | | | |
| 114 | | | | | | | #DIV/0! | | | |
| 115 | | | | | | | #DIV/0! | | | |
| 116 | | | | | | | #DIV/0! | | | |
| 117 | | | | | | | #DIV/0! | | | |
| 118 | | | | | | | #DIV/0! | | | |
| 119 | | | | | | | #DIV/0! | | | |
| 120 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 111 | North 421056 40 East 1179836.10 | 1931.4 |
| 112 | North 421052.05 East 1179918.50 | 1927.8 |
| 113 | | |
| 114 | | |
| 115 | | |
| 116 | | |
| 117 | | |
| 118 | | |
| 119 | | |
| 120 | | |

NOTES:

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/17/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| | | | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-------------------|------|
| TEST # | DATE | PROCTOR # / CLASSIFICATION | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | % SPEC COMPACTION | PASS |
| 105 | 08/15/12 | #3 | 15.3 | 114.2 | 13.6 | 118.0 | 103 | +/-2% | 95 | PASS |
| 106 | 08/15/12 | #2 | 8.3 | 123.2 | 8.9 | 119.5 | 97 | +/-2% | 95 | PASS |
| 107 | 08/15/12 | #3 | 15.3 | 114.2 | 13.7 | 115.6 | 101 | +/-2% | 95 | PASS |
| 108 | 08/15/12 | #1 | 9.7 | 126.5 | 10.6 | 123.6 | 98 | +/-2% | 95 | PASS |
| 109 | 08/15/12 | #3 | 15.3 | 114.2 | 13.4 | 116.1 | 102 | +/-2% | 95 | PASS |
| 110 | 08/15/12 | #3 | 15.3 | 114.2 | 13.7 | 114.7 | 100 | +/-2% | 95 | PASS |
| 111 | | | | | | | #DIV/0! | | | |
| 112 | | | | | | | #DIV/0! | | | |
| 113 | | | | | | | #DIV/0! | | | |
| 114 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 105 | North 421228.10 East 1179216.50 | 1941.2 |
| 106 | North 421250.80 East 1179341.55 | 1940.4 |
| 107 | North 421159.45 East 1179335.60 | 1939.75 |
| 108 | North 421292.70 East 1179491.85 | 1939.45 |
| 109 | North 421261.20 East 1179545.20 | 1938.45 |
| 110 | North 421175.25 East 1179545.40 | 1937.05 |
| 111 | | |
| 112 | | |
| 113 | | |
| 114 | | |

NOTES: Drill Pad Back Fill

RESPECTFULLY SUBMITTED,

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SERVICES, INC.**

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/17/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK: _____

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 119 | 08/16/12 | #1 | 15.3 | 114.2 | 13.7 | 110.0 | 96 | +/-2% | 95 | PASS |
| 120 | 08/16/12 | #1 | 15.3 | 114.2 | 13.9 | 112.0 | 98 | +/-2% | 95 | PASS |
| 121 | 08/16/12 | #1 | 15.3 | 114.2 | 13.6 | 112.4 | 98 | +/-2% | 95 | PASS |
| 122 | 08/16/12 | #1 | 15.3 | 114.2 | 13.4 | 112.6 | 99 | +/-2% | 95 | PASS |
| 123 | 08/16/12 | #1 | 15.3 | 114.2 | 13.6 | 114.0 | 100 | +/-2% | 95 | PASS |
| 124 | 08/16/12 | #1 | 15.3 | 114.2 | 13.9 | 115.2 | 101 | +/-2% | 95 | PASS |
| 125 | | | | | | | #DIV/0! | | | |
| 126 | | | | | | | #DIV/0! | | | |
| 127 | | | | | | | #DIV/0! | | | |
| 128 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------------------|
| 119 | 120' East of West Outlet | 6' Above Top of Pipe |
| 120 | 110' East of West Outlet | 8' Above Top of Pipe |
| 121 | 100' East of West Outlet | 10' Above Top of Pipe |
| 122 | STA 2 + 80 | 6' Above Top of Pipe |
| 123 | STA 2 + 70 | 8' Above Top of Pipe |
| 124 | STA 2 + 60 | 10' Above Top of Pipe |
| 125 | | |
| 126 | | |
| 127 | | |
| 128 | | |

NOTES: Northwest Storm Sewer Trench Back Fill

RESPECTFULLY SUBMITTED

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/17/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | PASS |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | |
| 116 | 08/16/12 | #3 | 15.3 | 114.2 | 13.6 | 115.5 | 101 | +/-2% | 95 | PASS |
| 117 | 08/16/12 | #3 | 15.3 | 114.2 | 13.3 | 111.5 | 98 | +/-2% | 95 | PASS |
| 118 | 08/16/12 | #3 | 15.3 | 114.2 | 13.8 | 111.3 | 97 | +/-2% | 95 | PASS |
| 119 | | | | | | | #DIV/0! | | | |
| 120 | | | | | | | #DIV/0! | | | |
| 121 | | | | | | | #DIV/0! | | | |
| 122 | | | | | | | #DIV/0! | | | |
| 123 | | | | | | | #DIV/0! | | | |
| 124 | | | | | | | #DIV/0! | | | |
| 125 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 116 | North 421295.55 East 1179462.65 | 1941.3 |
| 117 | North 421250.20 East 1179528.35 | 1939.95 |
| 118 | North 421191.60 East 1179541.70 | 1939.5 |
| 119 | | |
| 120 | | |
| 121 | | |
| 122 | | |
| 123 | | |
| 124 | | |
| 125 | | |

NOTES: Drill Pad Area

RESPECTFULLY SUBMITTED



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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD
ASTM D6938

CLIENT CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT Atlanta Drill Site

ATS # 12-12165
DATE: 08/17/12
ATS TECH: Russell Harwood
GAGE # 2
BENCHMARK

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST. | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 113 | 08/16/12 | #3 | 15.3 | 114.2 | 14.5 | 116.3 | 102 | +/-2% | 95 | PASS |
| 114 | 08/16/12 | #2 | 8.3 | 123.2 | 9.4 | 119.5 | 97 | +/-2% | 95 | PASS |
| 115 | 08/16/12 | #3 | 15.3 | 114.2 | 13.4 | 114.0 | 100 | +/-2% | 95 | PASS |
| 116 | | | | | | | #DIV/0! | | | |
| 117 | | | | | | | #DIV/0! | | | |
| 118 | | | | | | | #DIV/0! | | | |
| 119 | | | | | | | #DIV/0! | | | |
| 120 | | | | | | | #DIV/0! | | | |
| 121 | | | | | | | #DIV/0! | | | |
| 122 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---------------------------------|-----------|
| 113 | North 421004.30 East 1180053.35 | 1925.95 |
| 114 | North 421047.15 East 1179917.95 | 1929.8 |
| 115 | North 421131.15 East 1179860.70 | 1923.2 |
| 116 | | |
| 117 | | |
| 118 | | |
| 119 | | |
| 120 | | |
| 121 | | |
| 122 | | |

NOTES: East Valley Fill

RESPECTFULLY SUBMITTED

AMERICAN TECHNICAL SERVICES, INC.

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/20/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK: _____

| TEST # | DATE | PROCTOR#/CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | PASS |
|--------|----------|-------------------------|------------|-------------|------------|-------------|----------------|---------------|-------------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE | % SPEC COMPACTION | |
| 125 | 08/17/12 | #3 | 15.3 | 114.2 | 13.3 | 110.1 | 96 | +/-2% | 95 | PASS |
| 126 | 08/17/12 | #1 | 9.7 | 126.5 | 10.4 | 122.2 | 97 | +/-2% | 95 | PASS |
| 127 | 08/17/12 | #3 | 15.3 | 114.2 | 13.4 | 116.7 | 102 | +/-2% | 95 | PASS |
| 128 | | | | | | | #DIV/0! | | | |
| 129 | | | | | | | #DIV/0! | | | |
| 130 | | | | | | | #DIV/0! | | | |
| 131 | | | | | | | #DIV/0! | | | |
| 132 | | | | | | | #DIV/0! | | | |
| 133 | | | | | | | #DIV/0! | | | |
| 134 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | | ELEVATION |
|--------|-----------|------------|-----------|
| 125 | 421406.45 | 1178944.55 | 1951.4 |
| 126 | 421405.80 | 1179870.85 | 1952.55 |
| 127 | 421474.75 | 1179005.90 | 1952.45 |
| 128 | | | |
| 129 | | | |
| 130 | | | |
| 131 | | | |
| 132 | | | |
| 133 | | | |
| 134 | | | |

NOTES: Road Rebuild Going North & South Along West Side

RESPECTFULLY SUBMITTED

CC:

AMERICAN TECHNICAL SERVICES, INC.



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TECHNICAL
SERVICES, INC.**

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8105 Black Hawk Rd • PO Box 558
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REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/20/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION |
| 128 | 08/17/12 | #1 | 9.7 | 126.5 | 10.3 | 126.5 | 100 | +/-2% | 95 |
| 129 | 08/17/12 | #1 | 9.7 | 126.5 | 9.3 | 124.1 | 98 | +/-2% | 95 |
| 130 | 08/17/12 | #1 | 9.7 | 126.5 | 10.2 | 124.2 | 98 | +/-2% | 95 |
| 131 | | | | | | | #DIV/0! | | |
| 132 | | | | | | | #DIV/0! | | |
| 133 | | | | | | | #DIV/0! | | |
| 134 | | | | | | | #DIV/0! | | |
| 135 | | | | | | | #DIV/0! | | |
| 136 | | | | | | | #DIV/0! | | |
| 137 | | | | | | | #DIV/0! | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 128 | N 421184.10 E 117937.90 | 1943.55 |
| 129 | N 421234.95 E 1179377.35 | 1943.6 |
| 130 | N 421205.50 E 1179455.95 | 1943.55 |
| 131 | | |
| 132 | | |
| 133 | | |
| 134 | | |
| 135 | | |
| 136 | | |
| 137 | | |

NOTES: Drill Pad Area

RESPECTFULLY SUBMITTED

CC:

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TECHNICAL
SERVICES, INC.**

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/20/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|---------------|-------------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE | % SPEC COMPACTION | PASS |
| 131 | 08/18/12 | #2 | 8.3 | 123.2 | 9.0 | 118.4 | 96 | +/-2% | 95 | PASS |
| 132 | 08/18/12 | #3 | 15.3 | 114.2 | 13.8 | 113.9 | 100 | +/-2% | 95 | PASS |
| 133 | 08/18/12 | #3 | 15.3 | 114.2 | 13.6 | 113.3 | 99 | +/-2% | 95 | PASS |
| 134 | 08/18/12 | #3 | 15.3 | 114.2 | 13.4 | 116.1 | 102 | +/-2% | 95 | PASS |
| 135 | 08/18/12 | #2 | 8.3 | 123.2 | 9.1 | 118.5 | 96 | +/-2% | 95 | PASS |
| 136 | 08/18/12 | #2 | 8.3 | 123.2 | 9.2 | 117.5 | 95 | +/-2% | 95 | PASS |
| 137 | | | | | | | #DIV/0! | | | |
| 138 | | | | | | | #DIV/0! | | | |
| 139 | | | | | | | #DIV/0! | | | |
| 140 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 131 | N 421121.60 E 1179889.35 | 1925.65 |
| 132 | N 421052.95 E 1179930.80 | 1929.35 |
| 133 | N 421037.40 E 1179997.15 | 1929.1 |
| 134 | N 421186.90 E 1179885.25 | 1919.9 |
| 135 | N 421258.50 E 1179843.35 | 1920 |
| 136 | N 421339.55 E 1179823.35 | 1921.65 |
| 137 | | |
| 138 | | |
| 139 | | |
| 140 | | |

NOTES: All Test in East Valley.

RESPECTFULLY SUBMITTED

CC:

AMERICAN TECHNICAL SERVICES, INC.

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ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
8105 Black Hawk Rd. • PO Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/20/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 137 | 08/19/12 | #3 | 15.3 | 114.2 | 13.3 | 114.1 | 100 | +/-2% | 95 | PASS |
| 138 | 08/19/12 | #3 | 15.3 | 114.2 | 14.2 | 113.5 | 99 | +/-2% | 95 | PASS |
| 139 | 08/19/12 | #3 | 15.3 | 114.2 | 13.7 | 110.3 | 97 | +/-2% | 95 | PASS |
| 140 | 08/19/12 | #3 | 15.3 | 114.2 | 13.5 | 115.5 | 101 | +/-2% | 95 | PASS |
| 141 | | | | | | | #DIV/0! | | | |
| 142 | | | | | | | #DIV/0! | | | |
| 143 | | | | | | | #DIV/0! | | | |
| 144 | | | | | | | #DIV/0! | | | |
| 145 | | | | | | | #DIV/0! | | | |
| 146 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 137 | N 421079.05 E 1180014.40 | 1927.3 |
| 138 | N 421111.75 E 1179924.40 | 1928.6 |
| 139 | N 421192.30 E 1179886.40 | 1920.7 |
| 140 | N 421263.65 E 1179839.65 | 1922.1 |
| 141 | | |
| 142 | | |
| 143 | | |
| 144 | | |
| 145 | | |
| 146 | | |

NOTES: East Valley

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8105 Black Hawk Rd. • PO Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/20/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|---------------|-------------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE | % SPEC COMPACTION | PASS |
| 141 | 08/19/12 | #2 | 8.3 | 123.2 | 8.8 | 121.8 | 99 | +/-2% | 95 | PASS |
| 142 | 08/19/12 | #2 | 8.3 | 123.2 | 7.2 | 122.1 | 99 | +/-2% | 95 | PASS |
| 143 | 08/19/12 | #2 | 8.3 | 123.2 | 7.1 | 120.4 | 98 | +/-2% | 95 | PASS |
| 144 | 08/19/12 | #1 | 9.7 | 126.5 | 9.6 | 123.8 | 98 | +/-2% | 95 | PASS |
| 145 | | | | | | | #DIV/0! | | | |
| 146 | | | | | | | #DIV/0! | | | |
| 147 | | | | | | | #DIV/0! | | | |
| 148 | | | | | | | #DIV/0! | | | |
| 149 | | | | | | | #DIV/0! | | | |
| 150 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 141 | N 421638.85 E 1178871.85 | 1963.85 |
| 142 | N 421644.55 E 1178852.40 | 1964 |
| 143 | N 421637.05 E 1178851.85 | 1967.65 |
| 144 | N 421669.20 E 1178823.50 | 1969.9 |
| 145 | | |
| 146 | | |
| 147 | | |
| 148 | | |
| 149 | | |
| 150 | | |

NOTES: Over Culvert North Road

CC:

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

| | | | |
|------------|---|------------|-----------------|
| CLIENT: | CONTINENTAL RESOURCES, INC. PO Box 268836 Oklahoma City, OK 73126 | ATS #: | 12-12165 |
| ATTENTION: | Project Manager | DATE: | 08/23/12 |
| PROJECT: | Atlanta Drill Site | ATS TECH: | Russell Harwood |
| | | GAGE #: | 2 |
| | | BENCHMARK: | |

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 145 | 08/20/12 | #3 | 15.3 | 114.2 | 13.4 | 115.6 | 101 | +/-2% | 95 | PASS |
| 146 | 08/20/12 | #2 | 8.3 | 123.2 | 7.2 | 121.5 | 99 | +/-2% | 95 | PASS |
| 147 | 08/20/12 | #3 | 15.3 | 114.2 | 13.8 | 115.9 | 101 | +/-2% | 95 | PASS |
| 148 | 08/20/12 | #3 | 15.3 | 114.2 | 14.2 | 111.6 | 98 | +/-2% | 95 | PASS |
| 149 | | | | | | | #DIV/0! | | | |
| 150 | | | | | | | #DIV/0! | | | |
| 151 | | | | | | | #DIV/0! | | | |
| 152 | | | | | | | #DIV/0! | | | |
| 153 | | | | | | | #DIV/0! | | | |
| 154 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 145 | N 421166.85 E 1179865.40 | 1922.8 |
| 146 | N 421256.90 E 1179836.55 | 1923.95 |
| 147 | N 420996.10 E 1180218.95 | 1928.9 |
| 148 | N 421096.00 E 1180016.65 | 1927.85 |
| 149 | | |
| 150 | | |
| 151 | | |
| 152 | | |
| 153 | | |
| 154 | | |

NOTES: East Valley Fill

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/23/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR#/ CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | PASS |
|--------|----------|--------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | |
| 149 | 08/21/12 | #3 | 15.3 | 114.2 | 15.2 | 111.7 | 98 | +/-2% | 95 | PASS |
| 150 | 08/21/12 | #3 | 15.3 | 114.2 | 15.1 | 113.9 | 100 | +/-2% | 95 | PASS |
| 151 | 08/21/12 | #3 | 15.3 | 114.2 | 15.8 | 109.2 | 96 | +/-2% | 95 | PASS |
| 152 | 08/21/12 | #3 | 15.3 | 114.2 | 13.4 | 112.2 | 98 | +/-2% | 95 | PASS |
| 153 | 08/21/12 | #1 | 9.7 | 126.5 | 9.8 | 122.0 | 96 | +/-2% | 95 | PASS |
| 154 | | | | | | | #DIV/0! | | | |
| 155 | | | | | | | #DIV/0! | | | |
| 156 | | | | | | | #DIV/0! | | | |
| 157 | | | | | | | #DIV/0! | | | |
| 158 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 149 | N 421037.20 E 1180130.55 | 1932.6 |
| 150 | N 421061.85 E 1179979.85 | 1933.1 |
| 151 | N 421067.40 E 1180184.00 | 1936.15 |
| 152 | N 421064.45 E 1180152.60 | 1937.45 |
| 153 | N 421025.40 E 1180078.60 | 1935.85 |
| 154 | | |
| 155 | | |
| 156 | | |
| 157 | | |
| 158 | | |

NOTES: East Valley Fill

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Black Hawk, SD 57713-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/23/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | | SPECIFICATIONS | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|--------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 154 | 08/22/12 | #3 | 15.3 | 114.2 | 14.7 | 108.8 | 95 | +/-2% | 95 | PASS |
| 155 | 08/22/12 | #3 | 15.3 | 114.2 | 14.3 | 110.2 | 96 | +/-2% | 95 | PASS |
| 156 | 08/22/12 | #3 | 15.3 | 114.2 | 14.4 | 109.7 | 96 | +/-2% | 95 | PASS |
| 157 | 08/22/12 | #3 | 15.3 | 114.2 | 13.8 | 110.5 | 97 | +/-2% | 95 | PASS |
| 158 | 08/22/12 | #3 | 15.3 | 114.2 | 13.5 | 113.9 | 100 | +/-2% | 95 | PASS |
| 159 | 08/22/12 | #3 | 15.3 | 114.2 | 13.3 | 110.0 | 96 | +/-2% | 95 | PASS |
| 160 | | | | | | | #DIV/0! | | | |
| 161 | | | | | | | #DIV/0! | | | |
| 162 | | | | | | | #DIV/0! | | | |
| 163 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 154 | N 421280.95 E 1178919.20 | 1926.3 |
| 155 | N 421212.65 E 1179814.85 | 1925.7 |
| 156 | N 421284.60 E 1179834.35 | 1926.75 |
| 157 | N 421178.25 E 1179842.25 | 1929.45 |
| 158 | N 421253.35 E 1179825.80 | 1928.9 |
| 159 | N 421234.00 E 1179906.10 | 1928.15 |
| 160 | | |
| 161 | | |
| 162 | | |
| 163 | | |

NOTES: _____

CC: _____

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

| | | | |
|------------|---|-----------|-----------------|
| CLIENT | CONTINENTAL RESOURCES, INC. PO Box 268836 Oklahoma City, OK 73126 | ATS # | 12-12165 |
| ATTENTION: | Project Manager | DATE | 08/28/12 |
| PROJECT: | Atlanta Drill Site | ATS TECH | Russell Harwood |
| | | GAGE # | 2 |
| | | BENCHMARK | |

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|---------------|-------------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE | % SPEC COMPACTION | PASS |
| 160 | 08/23/12 | #3 | 15.3 | 114.2 | 13.3 | 111.8 | 98 | +/-2% | 95 | PASS |
| 161 | 08/23/12 | #2 | 8.3 | 123.2 | 9.3 | 118.7 | 96 | +/-2% | 95 | PASS |
| 162 | 08/23/12 | #3 | 15.3 | 114.2 | 13.7 | 115.4 | 101 | +/-2% | 95 | PASS |
| 163 | 08/23/12 | #3 | 15.3 | 114.2 | 13.4 | 109.7 | 96 | +/-2% | 95 | PASS |
| 164 | 08/23/12 | #3 | 15.3 | 114.2 | 13.6 | 109.3 | 96 | +/-2% | 95 | PASS |
| 165 | 08/23/12 | #3 | 15.3 | 114.2 | 13.4 | 115.6 | 101 | +/-2% | 95 | PASS |
| 166 | 08/23/12 | #3 | 15.3 | 114.2 | 13.5 | 113.9 | 100 | +/-2% | 95 | PASS |
| 167 | | | | | | | #DIV/0! | | | |
| 168 | | | | | | | #DIV/0! | | | |
| 169 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 160 | N 421096.35 E 1179858.25 | 1934.6 |
| 161 | N 421213.05 E 1179810.50 | 1932.55 |
| 162 | N 421263.40 E 1179882.15 | 1930.9 |
| 163 | N 421144.40 E 1179949.80 | 1931.65 |
| 164 | N 421153.10 E 1179905.35 | 1933.6 |
| 165 | N 421225.20 E 1179886.80 | 1933.15 |
| 166 | N 421206.55 E 1179945.15 | 1932.5 |
| 167 | | |
| 168 | | |
| 169 | | |

NOTES: _____

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

| | |
|------------|----------------------------|
| CLIENT: | CONTINENTAL RESOURCES, INC |
| | PO Box 268836 |
| | Oklahoma City, OK 73126 |
| ATTENTION: | Project Manager |
| PROJECT: | Atlanta Drill Site |

| | |
|------------|-----------------|
| ATS #: | 12-12165 |
| DATE: | 08/28/12 |
| ATS TECH: | Russell Harwood |
| GAGE #: | 2 |
| BENCHMARK: | |

| TEST # | DATE | PROCTOR #/CLASSIFICATION | LABORATORY | | FIELD | | | SPECIFICATIONS | | |
|--------|----------|--------------------------|------------|-------------|------------|-------------|--------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 167 | 08/24/12 | #3 | 15.3 | 114.2 | 14.3 | 112.8 | 99 | +/-2% | 95 | PASS |
| 168 | 08/24/12 | #2 | 8.3 | 123.2 | 9.2 | 119.9 | 97 | +/-2% | 95 | PASS |
| 169 | 08/24/12 | #2 | 8.3 | 123.2 | 9.4 | 118.5 | 96 | +/-2% | 95 | PASS |
| 170 | | | | | | | #DIV/0! | | | |
| 171 | | | | | | | #DIV/0! | | | |
| 172 | | | | | | | #DIV/0! | | | |
| 173 | | | | | | | #DIV/0! | | | |
| 174 | | | | | | | #DIV/0! | | | |
| 175 | | | | | | | #DIV/0! | | | |
| 176 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 167 | N 421222.70 E 1179902.60 | 1934.85 |
| 168 | N 421303.55 E 1179866.40 | 1934.45 |
| 169 | N 421401.35 E 1179821.85 | 1933.25 |
| 170 | | |
| 171 | | |
| 172 | | |
| 173 | | |
| 174 | | |
| 175 | | |
| 176 | | |

NOTES: _____

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/28/12
ATS TECH: Evan Schultze
GAGE #: 2
BENCHMARK: East Valley Fill

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | PASS |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|---------------|-------------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE | % SPEC COMPACTION | |
| 170 | 08/24/12 | #3 | 15.3 | 114.2 | 14.6 | 113.5 | 99 | +/-2% | 95 | PASS |
| 171 | 08/24/12 | #3 | 15.3 | 114.2 | 14.4 | 111.8 | 98 | +/-2% | 95 | PASS |
| 172 | 08/24/12 | #3 | 15.3 | 114.2 | 14.9 | 112.3 | 98 | +/-2% | 95 | PASS |
| 173 | | | | | | | #DIV/0! | | | |
| 174 | | | | | | | #DIV/0! | | | |
| 175 | | | | | | | #DIV/0! | | | |
| 176 | | | | | | | #DIV/0! | | | |
| 177 | | | | | | | #DIV/0! | | | |
| 178 | | | | | | | #DIV/0! | | | |
| 179 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 170 | N 421153.30 E 1179861.65 | 1936.7 |
| 171 | N 421252.75 E 1179826.85 | 1936.5 |
| 172 | N 421346.00 E 1179790.95 | 1936.6 |
| 173 | | |
| 174 | | |
| 175 | | |
| 176 | | |
| 177 | | |
| 178 | | |
| 179 | | |

NOTES:

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Black Hawk, SD 57719-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/28/12
ATS TECH: Evan Schultze
GAGE #: 2
BENCHMARK: South Road Culvert Back Fill

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | | SPECIFICATIONS | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|--------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 191 | 08/25/12 | #3 | 15.3 | 114.2 | 14.0 | 110.5 | 97 | +/-2% | 95 | PASS |
| 192 | | | | | | | #DIV/0! | | | |
| 193 | | | | | | | #DIV/0! | | | |
| 194 | | | | | | | #DIV/0! | | | |
| 195 | | | | | | | #DIV/0! | | | |
| 196 | | | | | | | #DIV/0! | | | |
| 197 | | | | | | | #DIV/0! | | | |
| 198 | | | | | | | #DIV/0! | | | |
| 199 | | | | | | | #DIV/0! | | | |
| 200 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---|---------------|
| 191 | 3' East of Center of Pipe-77' South of Type 2 Inlet at STA 545 + 70 | 5' Above Pipe |
| 192 | | |
| 193 | | |
| 194 | | |
| 195 | | |
| 196 | | |
| 197 | | |
| 198 | | |
| 199 | | |
| 200 | | |

NOTES: _____

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD
ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/28/12
ATS TECH: Evan Schultze
GAGE #: 2
BENCHMARK: East Valley Fill

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 173 | 08/25/12 | #1 | 9.7 | 126.5 | 10.1 | 121.4 | 96 | +/-2% | 95 | PASS |
| 174 | 08/25/12 | #1 | 9.7 | 126.5 | 9.4 | 121.7 | 96 | +/-2% | 95 | PASS |
| 175 | 08/25/12 | #2 | 8.3 | 123.2 | 7.8 | 119.7 | 97 | +/-2% | 95 | PASS |
| 176 | | | | | | | #DIV/0! | | | |
| 177 | | | | | | | #DIV/0! | | | |
| 178 | | | | | | | #DIV/0! | | | |
| 179 | | | | | | | #DIV/0! | | | |
| 180 | | | | | | | #DIV/0! | | | |
| 181 | | | | | | | #DIV/0! | | | |
| 182 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 173 | N 421098.70 E 1179890.60 | 1936.15 |
| 174 | N 421274.30 E 1179841.15 | 1936.7 |
| 175 | N 421152.42 E 1179836.80 | 1937.7 |
| 176 | | |
| 177 | | |
| 178 | | |
| 179 | | |
| 180 | | |
| 181 | | |
| 182 | | |

NOTES: _____

CC: _____

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/28/12
ATS TECH: Evan Schultze
GAGE #: 2
BENCHMARK: East Valley Fill

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 176 | 08/26/12 | #1 | 9.7 | 126.5 | 9.5 | 123.2 | 97 | +/-2% | 95 | PASS |
| 177 | 08/26/12 | #3 | 15.3 | 114.2 | 14.8 | 114.0 | 100 | +/-2% | 95 | PASS |
| 178 | 08/26/12 | #2 | 8.3 | 123.2 | 8.6 | 121.6 | 99 | +/-2% | 95 | PASS |
| 179 | 08/26/12 | #2 | 8.3 | 123.2 | 8.4 | 119.5 | 97 | +/-2% | 95 | PASS |
| 180 | 08/26/12 | #1 | 9.7 | 126.5 | 8.9 | 126.3 | 100 | +/-2% | 95 | PASS |
| 181 | | | | | | | #DIV/0! | | | |
| 182 | | | | | | | #DIV/0! | | | |
| 183 | | | | | | | #DIV/0! | | | |
| 184 | | | | | | | #DIV/0! | | | |
| 185 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 176 | N 421289.45 E 1179811.95 | 1937.6 |
| 177 | N 421261.50 E 1179823.70 | 1936.9 |
| 178 | N 421129.50 E 1179936.90 | 1938.3 |
| 179 | N 421407.25 E 1179820.20 | 1937.4 |
| 180 | N 421405.25 E 1179828.90 | 1937.25 |
| 181 | | |
| 182 | | |
| 183 | | |
| 184 | | |
| 185 | | |

NOTES:

RESPECTFULLY SUBMITTED

AMERICAN TECHNICAL SERVICES, INC.

CC:

**AMERICAN
TECHNICAL
SERVICES, INC.**

BURNDLEY • ENVIRONMENTAL • DRILLING • MATERIALS
8105 Black Hawk Rd • PO Box 558
Black Hawk, SD 57713-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/28/12
ATS TECH: Evan Schultze
GAGE #: 2
BENCHMARK: South Road Culvert Back Fill

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 192 | 08/26/12 | #3 | 15.3 | 114.2 | 15.7 | 112.8 | 99 | +/-2% | 95 | PASS |
| 193 | 08/26/12 | #3 | 15.3 | 114.2 | 14.2 | 114.1 | 100 | +/-2% | 95 | PASS |
| 194 | 08/26/12 | #3 | 15.3 | 114.2 | 13.9 | 113.7 | 100 | +/-2% | 95 | PASS |
| 195 | 08/26/12 | #3 | 15.3 | 114.2 | 15.1 | 113.9 | 100 | +/-2% | 95 | PASS |
| 196 | | | | | | | #DIV/0! | | | |
| 197 | | | | | | | #DIV/0! | | | |
| 198 | | | | | | | #DIV/0! | | | |
| 199 | | | | | | | #DIV/0! | | | |
| 200 | | | | | | | #DIV/0! | | | |
| 201 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---|----------------|
| 192 | 3' West of Center Pipe-60' South of Type 2 Inlet at STA 545 + 71 | 4' Above Pipe |
| 193 | Center of Pipe-65' South of Type 2 Inlet at STA 545 + 72 | 7' Above Pipe |
| 194 | 2' East of Center of Pipe-55' South of Type 2 Inlet at STA 545 + 73 | 10' Above Pipe |
| 195 | 2' West of Center of Pipe-50' South of type 2 Inlet at STA 545 + 74 | 12' Above Pipe |
| 196 | | |
| 197 | | |
| 198 | | |
| 199 | | |
| 200 | | |
| 201 | | |

NOTES: _____

CC: _____

RESPECTFULLY SUBMITTED

AMERICAN TECHNICAL SERVICES, INC.

AMERICAN
TECHNICAL
SERVICES, INC.

Engineering • Environmental • Drilling • Mapping
8105 Black Hawk Rd • PO Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/28/12
ATS TECH: Evan Schultze
GAGE #: 2
BENCHMARK: East Valley Fill

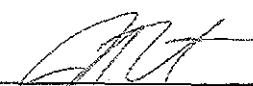
| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | | SPECIFICATIONS | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|--------------|-----------------|-----------------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION |
| 181 | 08/27/12 | #1 | 9.7 | 126.5 | 9.9 | 120.5 | 95 | +/-2% | 95 |
| 182 | 08/27/12 | #3 | 15.3 | 114.2 | 13.9 | 111.8 | 98 | +/-2% | 95 |
| 183 | 08/27/12 | #2 | 8.3 | 123.2 | 8.1 | 120.1 | 97 | +/-2% | 95 |
| 184 | 08/27/12 | #3 | 15.3 | 114.2 | 15.0 | 113.8 | 100 | +/-2% | 95 |
| 185 | 08/27/12 | #3 | 15.3 | 114.2 | 14.8 | 111.3 | 97 | +/-2% | 95 |
| 186 | 08/27/12 | #3 | 15.3 | 114.2 | 14.2 | 112.7 | 99 | +/-2% | 95 |
| 187 | 08/27/12 | #3 | 15.3 | 114.2 | 14.9 | 112.7 | 99 | +/-2% | 95 |
| 188 | 08/27/12 | #3 | 15.3 | 114.2 | 13.9 | 112.8 | 99 | +/-2% | 95 |
| 189 | 08/27/12 | #1 | 9.7 | 126.5 | 10.1 | 122.0 | 96 | +/-2% | 95 |
| 190 | 08/27/12 | #3 | 15.3 | 114.2 | 14.0 | 111.8 | 98 | +/-2% | 95 |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 181 | N 421380.15 E 1179686.15 | 1939.3 |
| 182 | N 421450.10 E 1179722.45 | 1940.2 |
| 183 | N 421439.30 E 1179760.00 | 1941.5 |
| 184 | N 421399.40 E 1179722.30 | 1941.95 |
| 185 | N 421415.95 E 1179832.95 | 1942.2 |
| 186 | N 421485.05 E 1179852.75 | 1942.95 |
| 187 | N 421491.20 E 1179749.45 | 1943.1 |
| 188 | N 421264.40 E 1179734.90 | 1938.2 |
| 189 | N 421224.35 E 1179924.85 | 1937.5 |
| 190 | N 421295.60 E 1180039.95 | 1937.35 |

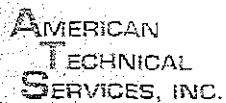
NOTES: _____

CC: _____

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AMERICAN TECHNICAL SERVICES, INC.



REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

Engineering • Environmental • Drilling • Materials
8105 Black Hawk Rd. • PO Box 558
Black Hawk, CO 80426-0558

| | |
|------------|---|
| CLIENT: | CONTINENTAL RESOURCES, INC. PO Box 268836 Oklahoma City, OK 73126 |
| ATTENTION: | Project Manager |
| PROJECT: | Atlanta Drill Site |

ATS #: 12-12165
DATE: 08/28/12
ATS TECH: Evan Schutze
GAGE #: 2
BENCHMARK: South Road Culvert Back Fill

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | | SPECIFICATIONS | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|--------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 196 | 08/27/12 | #3 | 15.3 | 114.2 | 14.8 | 112.8 | 99 | +/-2% | 95 | PASS |
| 197 | | | | | | | #DIV/0! | | | |
| 198 | | | | | | | #DIV/0! | | | |
| 199 | | | | | | | #DIV/0! | | | |
| 200 | | | | | | | #DIV/0! | | | |
| 201 | | | | | | | #DIV/0! | | | |
| 202 | | | | | | | #DIV/0! | | | |
| 203 | | | | | | | #DIV/0! | | | |
| 204 | | | | | | | #DIV/0! | | | |
| 205 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---|---------------|
| 196 | 1' East of Center of Pipe-12' South of type 2 Inlet at STA 545 + 75 | 5' Above Pipe |
| 197 | | |
| 198 | | |
| 199 | | |
| 200 | | |
| 201 | | |
| 202 | | |
| 203 | | |
| 204 | | |
| 205 | | |

NOTES: _____

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AMERICAN TECHNICAL SERVICES, INC.

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD
ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/31/12
ATS TECH: Evan Schultze
GAGE #: 2
BENCHMARK: East Valley Fill

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | | SPECIFICATIONS | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|--------------|----------------|----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE | % SPEC COMPACT | PASS |
| 197 | 08/28/12 | #1 | 9.7 | 126.5 | 8.2 | 121.3 | 96 | +/-2% | 95 | PASS |
| 198 | 08/28/12 | #1 | 9.7 | 126.5 | 9.6 | 123.2 | 97 | +/-2% | 95 | PASS |
| 199 | 08/28/12 | #1 | 9.7 | 126.5 | 9.8 | 124.5 | 98 | +/-2% | 95 | PASS |
| 200 | 08/28/12 | #1 | 9.7 | 126.5 | 9.3 | 123.6 | 98 | +/-2% | 95 | PASS |
| 201 | | | | | | | #DIV/0! | | | |
| 202 | | | | | | | #DIV/0! | | | |
| 203 | | | | | | | #DIV/0! | | | |
| 204 | | | | | | | #DIV/0! | | | |
| 205 | | | | | | | #DIV/0! | | | |
| 206 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|----------------------|-----------|
| 197 | 421186.95 1180094.55 | 1939.05 |
| 198 | 421133.25 1179974.25 | 1938.15 |
| 199 | 421273.45 1179880.10 | 1937.65 |
| 200 | 421117.15 1179767.85 | 1938.8 |
| 201 | | |
| 202 | | |
| 203 | | |
| 204 | | |
| 205 | | |
| 206 | | |

NOTES: _____

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CC:

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**AMERICAN
TECHNICAL
SERVICES, INC.**

ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
8105 Black Hawk Rd • PO Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD
ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 08/31/12
ATS TECH: Evan Schultze
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 201 | 08/29/12 | #3 | 15.3 | 114.2 | 15.0 | 112.1 | 98 | +/-2% | 95 | PASS |
| 202 | | | | | | | #DIV/0! | | | |
| 203 | | | | | | | #DIV/0! | | | |
| 204 | | | | | | | #DIV/0! | | | |
| 205 | | | | | | | #DIV/0! | | | |
| 206 | | | | | | | #DIV/0! | | | |
| 207 | | | | | | | #DIV/0! | | | |
| 208 | | | | | | | #DIV/0! | | | |
| 209 | | | | | | | #DIV/0! | | | |
| 210 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|---|---------------|
| 201 | 60' North of Type 2 Inlet at STA 545 + 70 | 4' Above Pipe |
| 202 | | |
| 203 | | |
| 204 | | |
| 205 | | |
| 206 | | |
| 207 | | |
| 208 | | |
| 209 | | |
| 210 | | |

NOTES:

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CC:

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TECHNICAL
SERVICES, INC.**

Engineering • Environmental • Drilling • Materials
8105 Black Hawk Rd. • PO Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 09/04/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | | SPECIFICATIONS | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|--------------|-----------------|-----------------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION |
| 202 | 08/30/12 | #2 | 8.3 | 123.2 | 9.7 | 122.5 | 99 | +/-2% | 95 |
| 203 | 08/30/12 | #3 | 15.3 | 114.2 | 13.4 | 115.7 | 101 | +/-2% | 95 |
| 204 | 08/30/12 | #3 | 15.3 | 114.2 | 13.6 | 113.0 | 99 | +/-2% | 95 |
| 205 | 08/30/12 | #3 | 15.3 | 114.2 | 13.5 | 113.4 | 99 | +/-2% | 95 |
| 206 | | | | | | | #DIV/0! | | |
| 207 | | | | | | | #DIV/0! | | |
| 208 | | | | | | | #DIV/0! | | |
| 209 | | | | | | | #DIV/0! | | |
| 210 | | | | | | | #DIV/0! | | |
| 211 | | | | | | | #DIV/0! | | |

| TEST # | LOCATION | ELEVATION |
|--------|-----------------------------|----------------|
| 202 | 200' North of South Manhole | 3' Below Grade |
| 203 | 120' North of South Manhole | 2' Below Grade |
| 204 | 250' North of South Manhole | 1' Below Grade |
| 205 | 80' North of South Manhole | 1' Below Grade |
| 206 | | |
| 207 | | |
| 208 | | |
| 209 | | |
| 210 | | |
| 211 | | |

NOTES: Storm Sewer in Drill Pad Area

RESPECTFULLY SUBMITTED


AMERICAN TECHNICAL SERVICES, INC.

cc:

**AMERICAN
TECHNICAL
SERVICES, INC.**

ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
8105 Black Hawk Rd. • PO Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION Project Manager

PROJECT Atlanta Drill Site

ATS # 12-12165
DATE 09/04/12
ATS TECH Russell Harwood
GAGE # 2
BENCHMARK

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 206 | 09/01/12 | #1 | 9.7 | 126.5 | 9.2 | 123.4 | 98 | +/-2% | 95 | PASS |
| 207 | 09/01/12 | #2 | 8.3 | 123.2 | 8.7 | 121.5 | 99 | +/-2% | 95 | PASS |
| 208 | 09/01/12 | #2 | 8.3 | 123.2 | 9.3 | 117.5 | 95 | +/-2% | 95 | PASS |
| 209 | 09/01/12 | #1 | 9.7 | 126.5 | 10.5 | 120.4 | 95 | +/-2% | 95 | PASS |
| 210 | 09/01/12 | #1 | 9.7 | 126.5 | 8.9 | 122.6 | 97 | +/-2% | 95 | PASS |
| 211 | 09/01/12 | #1 | 9.7 | 126.5 | 9.0 | 120.5 | 95 | +/-2% | 95 | PASS |
| 212 | 09/01/12 | #3 | 15.3 | 114.2 | 13.3 | 114.1 | 100 | +/-2% | 95 | PASS |
| 213 | | | | | | | #DIV/0! | | | |
| 214 | | | | | | | #DIV/0! | | | |
| 215 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 206 | N 421148.50 E 1179772.65 | 1939 |
| 207 | N 421278.05 E 1179873.65 | 1936.95 |
| 208 | N 421243.90 E 1179995.40 | 1937 |
| 209 | N 421256.85 E 1180111.45 | 1937 |
| 210 | N 421246.20 E 1180276.70 | 1936.7 |
| 211 | N 421165.45 E 1180219.90 | 1937 |
| 212 | N 421131.65 E 1180128.40 | 1937 |
| 213 | | |
| 214 | | |
| 215 | | |

NOTES: Drill Pad Subgrade Pre-Liner

RESPECTFULLY SUBMITTED

CC:

AMERICAN TECHNICAL SERVICES, INC.



**AMERICAN
TECHNICAL
SERVICES, INC.**

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8105 Black Hawk Rd • PO Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 09/04/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | | SPECIFICATIONS | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|--------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 213 | 09/02/12 | #3 | 15.3 | 114.2 | 13.4 | 112.5 | 99 | +/-2% | 95 | PASS |
| 214 | 09/02/12 | #2 | 8.3 | 123.2 | 8.5 | 119.2 | 97 | +/-2% | 95 | PASS |
| 215 | 09/02/12 | #2 | 8.3 | 123.2 | 7.6 | 119.4 | 97 | +/-2% | 95 | PASS |
| 216 | 09/02/12 | #3 | 15.3 | 114.2 | 13.6 | 114.1 | 100 | +/-2% | 95 | PASS |
| 217 | 09/02/12 | #3 | 15.3 | 114.2 | 13.5 | 114.1 | 100 | +/-2% | 95 | PASS |
| 218 | 09/02/12 | #1 | 9.7 | 126.5 | 9.2 | 121.9 | 96 | +/-2% | 95 | PASS |
| 219 | 09/02/12 | #1 | 9.7 | 126.5 | 8.5 | 121.7 | 96 | +/-2% | 95 | PASS |
| 220 | | | | | | | #DIV/0! | | | |
| 221 | | | | | | | #DIV/0! | | | |
| 222 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 213 | N 421177.85 E 1179944.00 | 1939.2 |
| 214 | N 421197.20 E 1179980.55 | 1938.5 |
| 215 | N 421155.10 E 1180018.00 | 1938.65 |
| 216 | N 421161.40 E 1179809.10 | 1940.8 |
| 217 | N 421166.65 E 1179943.15 | 1940.55 |
| 218 | N 421198.80 E 1179984.45 | 1939.55 |
| 219 | N 421207.30 E 1179940.30 | 1939.9 |
| 220 | | |
| 221 | | |
| 222 | | |

NOTES: Drill Pad Area Over Liner Fill

RESPECTFULLY SUBMITTED

CC:

AMERICAN TECHNICAL SERVICES, INC.





Engineering • Environmental • Drilling • Materials
8105 Black Hawk Rd. • PO Box 556
Black Hawk, SD 57718-0556

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD
ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 09/04/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | | SPECIFICATIONS | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|--------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 220 | 09/03/12 | #3 | 15.3 | 114.2 | 13.7 | 114.9 | 101 | +/-2% | 95 | PASS |
| 221 | 09/03/12 | #3 | 15.3 | 114.2 | 13.4 | 114.1 | 100 | +/-2% | 95 | PASS |
| 222 | 09/03/12 | #3 | 15.3 | 114.2 | 13.8 | 114.8 | 101 | +/-2% | 95 | PASS |
| 223 | | | | | | | #DIV/0! | | | |
| 224 | | | | | | | #DIV/0! | | | |
| 225 | | | | | | | #DIV/0! | | | |
| 226 | | | | | | | #DIV/0! | | | |
| 227 | | | | | | | #DIV/0! | | | |
| 228 | | | | | | | #DIV/0! | | | |
| 229 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 220 | N 421261.45 E 1179919.60 | 1940.9 |
| 221 | N 421234.80 E 1179980.75 | 1940.75 |
| 222 | N 421166.65 E 1179999.30 | 1940.65 |
| 223 | | |
| 224 | | |
| 225 | | |
| 226 | | |
| 227 | | |
| 228 | | |
| 229 | | |

NOTES: Drill Pad Area Over Liner Fill

CC:

RESPECTFULLY SUBMITTED

AMERICAN TECHNICAL SERVICES, INC.

**AMERICAN
TECHNICAL
SERVICES, INC.**

ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
8105 Black Hawk Rd. • PO Box 658
Black Hawk, CO 80428-0658

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD
ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 09/07/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK: _____

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | | SPECIFICATIONS | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|--------------|----------------|-------------------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE | % SPEC COMPACTION |
| 223 | 09/04/12 | #3 | 15.3 | 114.2 | 13.6 | 110.4 | 97 | +/-2% | 95 |
| 224 | 09/04/12 | #3 | 15.3 | 114.2 | 13.4 | 110.8 | 97 | +/-2% | 95 |
| 225 | 09/04/12 | #3 | 15.3 | 114.2 | 13.7 | 111.2 | 97 | +/-2% | 95 |
| 226 | 09/04/12 | #3 | 15.3 | 114.2 | 13.3 | 115.9 | 101 | +/-2% | 95 |
| 227 | 09/04/12 | #1 | 9.7 | 126.5 | 10.2 | 121.0 | 96 | +/-2% | 95 |
| 228 | 09/04/12 | #1 | 9.7 | 126.5 | 10.1 | 121.1 | 96 | +/-2% | 95 |
| 229 | 09/04/12 | #1 | 9.7 | 126.5 | 9.3 | 120.6 | 95 | +/-2% | 95 |
| 230 | 09/04/12 | #3 | 15.3 | 114.2 | 13.8 | 115.6 | 101 | +/-2% | 95 |
| 231 | 09/04/12 | #3 | 15.3 | 114.2 | 14.4 | 111.7 | 98 | +/-2% | 95 |
| 232 | | | | | | | #DIV/0! | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 223 | N 421253.00 E 1180307.60 | 1938 |
| 224 | N 421215.25 E 1180269.15 | 1938.7 |
| 225 | N 421166.55 E 1180234.35 | 1938.1 |
| 226 | N 421208.40 E 1180056.70 | 1941.35 |
| 227 | N 421254.80 E 1179946.55 | 1941.45 |
| 228 | N 421191.80 E 1179850.65 | 1941.75 |
| 229 | N 421178.45 E 1179723.60 | 1943.35 |
| 230 | N 421233.40 E 1180248.00 | 1939.75 |
| 231 | N 421180.50 E 1180248.70 | 1940.4 |
| 232 | | |

NOTES: Drill Pad Area

CC:

RESPECTFULLY SUBMITTED

AMERICAN TECHNICAL SERVICES, INC.

**AMERICAN
TECHNICAL
SERVICES, INC.**

Engineering • Environmental • Drilling • Materials
8105 Black Hawk Rd • PO Box 558
Black Hawk, SD 57712-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager

PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 09/07/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 232 | 09/05/12 | #3 | 15.3 | 114.2 | 13.3 | 114.1 | 100 | +/-2% | 95 | PASS |
| 233 | 09/05/12 | #3 | 15.3 | 114.2 | 13.6 | 114.0 | 100 | +/-2% | 95 | PASS |
| 234 | 09/05/12 | #2 | 8.3 | 123.2 | 9.5 | 120.3 | 98 | +/-2% | 95 | PASS |
| 235 | 09/05/12 | #3 | 15.3 | 114.2 | 13.4 | 114.2 | 100 | +/-2% | 95 | PASS |
| 236 | 09/05/12 | #3 | 15.3 | 114.2 | 13.7 | 114.4 | 100 | +/-2% | 95 | PASS |
| 237 | | | | | | | #DIV/0! | | | |
| 238 | | | | | | | #DIV/0! | | | |
| 239 | | | | | | | #DIV/0! | | | |
| 240 | | | | | | | #DIV/0! | | | |
| 241 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 232 | N 421154.40 E 1180235.30 | 1941.3 |
| 233 | N 421194.20 E 1180115.05 | 1941.25 |
| 234 | N 421154.70 E 1179961.25 | 1941.2 |
| 235 | N 421215.40 E 1179812.25 | 1943.3 |
| 236 | N 421164.80 E 1179750.50 | 1943.2 |
| 237 | | |
| 238 | | |
| 239 | | |
| 240 | | |
| 241 | | |

NOTES: Drill Pad Final Subgrade

RESPECTFULLY SUBMITTED

AMERICAN TECHNICAL SERVICES, INC.

CC:

**AMERICAN
TECHNICAL
SERVICES, INC.**

Engineering • Environmental • Drilling • Materials
510S Black Hawk Rd • PO Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 258836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 09/11/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | | SPECIFICATIONS | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|--------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 237 | 09/07/12 | #2 | 8.3 | 123.2 | 7.9 | 122.1 | 99 | +/-2% | 95 | PASS |
| 238 | 09/07/12 | #3 | 15.3 | 114.2 | 14.5 | 108.7 | 95 | +/-2% | 95 | PASS |
| 239 | 09/07/12 | #2 | 8.3 | 123.2 | 8.1 | 118.5 | 96 | +/-2% | 95 | PASS |
| 240 | 09/07/12 | #3 | 15.3 | 114.2 | 14.0 | 110.0 | 96 | +/-2% | 95 | PASS |
| 241 | 09/07/12 | #3 | 15.3 | 114.2 | 13.4 | 114.1 | 100 | +/-2% | 95 | PASS |
| 242 | 09/07/12 | #3 | 15.3 | 114.2 | 13.7 | 111.0 | 97 | +/-2% | 95 | PASS |
| 243 | 09/07/12 | #2 | 8.3 | 123.2 | 8.1 | 117.4 | 95 | +/-2% | 95 | PASS |
| 244 | 09/07/12 | #3 | 15.3 | 114.2 | 14.1 | 109.9 | 96 | +/-2% | 95 | PASS |
| 245 | | | | | | | #DIV/0! | | | |
| 246 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 237 | N 421519.00 E 1180368.00 | 1963.9 |
| 238 | N 421460.00 E 1180390.40 | 1956.8 |
| 239 | N 421424.20 E 1180438.15 | 1961.7 |
| 240 | N 421414.40 E 1180424.20 | 1954.1 |
| 241 | N 421365.45 E 1180416.00 | 1960.75 |
| 242 | N 421362.70 E 1180451.00 | 1954.5 |
| 243 | N 421279.10 E 1180484.90 | 1961.7 |
| 244 | N 421283.65 E 1180471.85 | 1952.45 |
| 245 | | |
| 246 | | |

NOTES: East Berm

CC:

RESPECTFULLY SUBMITTED

AMERICAN TECHNICAL SERVICES, INC.

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD
ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 09/18/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | PASS |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|---------------|-------------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE | % SPEC COMPACTION | |
| 245 | 09/14/12 | #4 | 7.2 | 131.4 | 5.3 | 127.4 | 97 | +/-2% | 95 | PASS |
| 246 | 09/14/12 | #4 | 7.2 | 131.4 | 5.7 | 131.0 | 100 | +/-2% | 95 | PASS |
| 247 | 09/14/12 | #4 | 7.2 | 131.4 | 5.4 | 131.1 | 100 | +/-2% | 95 | PASS |
| 248 | 09/14/12 | #4 | 7.2 | 131.4 | 5.6 | 127.9 | 97 | +/-2% | 95 | PASS |
| 249 | 09/14/12 | #4 | 7.2 | 131.4 | 5.5 | 131.5 | 100 | +/-2% | 95 | PASS |
| 250 | 09/14/12 | #4 | 7.2 | 131.4 | 5.3 | 130.5 | 99 | +/-2% | 95 | PASS |
| 251 | 09/14/12 | #4 | 7.2 | 131.4 | 5.4 | 131.3 | 100 | +/-2% | 95 | PASS |
| 252 | | | | | | | #DIV/0! | | | |
| 253 | | | | | | | #DIV/0! | | | |
| 254 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 245 | N 421250.10 E 1180221.35 | 1941.9 |
| 246 | N 421172.20 E 1180121.95 | 1941.9 |
| 247 | N 421231.95 E 1180017.80 | 1941.95 |
| 248 | N 421271.80 E 1179924.75 | 1941.9 |
| 249 | N 421228.85 E 1179835.15 | 1943.9 |
| 250 | N 421180.60 E 1179720.90 | 1943.9 |
| 251 | N 421236.80 E 1179604.75 | 1943.9 |
| 252 | | |
| 253 | | |
| 254 | | |

NOTES: Drill Pad Gravel

RESPECTFULLY SUBMITTED

CC:

AMERICAN TECHNICAL SERVICES, INC.



SHORING • ENVIRONMENTAL • DRILLING • MATERIALS
9105 Black Hawk Rd. • PO Box 558
Black Hawk, SD 57715-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD
ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager

PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 09/18/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | | SPECIFICATIONS | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|--------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 252 | 09/17/12 | #3 | 15.3 | 114.2 | 13.3 | 109.3 | 96 | +/-2% | 95 | PASS |
| 253 | 09/17/12 | #3 | 15.3 | 114.2 | 13.4 | 108.9 | 95 | +/-2% | 95 | PASS |
| 254 | 09/17/12 | #1 | 9.7 | 126.5 | 8.9 | 122.4 | 97 | +/-2% | 95 | PASS |
| 255 | 09/17/12 | #3 | 15.3 | 114.2 | 13.8 | 110.3 | 97 | +/-2% | 95 | PASS |
| 256 | 09/17/12 | #2 | 8.3 | 123.2 | 8.1 | 118.4 | 96 | +/-2% | 95 | PASS |
| 257 | | | | | | | #DIV/0! | | | |
| 258 | | | | | | | #DIV/0! | | | |
| 259 | | | | | | | #DIV/0! | | | |
| 260 | | | | | | | #DIV/0! | | | |
| 261 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 252 | N 420632.90 E 1180063.05 | 1880.8 |
| 253 | N 420613.15 E 1179979.55 | 1870.1 |
| 254 | N 420646.00 E 1179961.30 | 1864.95 |
| 255 | N 420670.10 E 1179894.80 | 1872.05 |
| 256 | N 420613.40 E 1179840.10 | 1873.45 |
| 257 | | |
| 258 | | |
| 259 | | |
| 260 | | |
| 261 | | |

NOTES: South Pond Pre-Liner (Finish Subgrade)

CC:

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AMERICAN TECHNICAL SERVICES, INC.

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TECHNICAL
SERVICES, INC.**

Engineering • Environmental • Drilling • Materials
8105 Bent Hwy Rd • PO Box 558
Clark Ferry, SD 57712-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126

ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 09/25/12
ATS TECH: Russell Harwood
GAGE #: 2
BENCHMARK:

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | | SPECIFICATIONS | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|--------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 257 | 09/22/12 | #3 | 15.3 | 114.2 | 14.1 | 109.2 | 96 | +/-2% | 95 | PASS |
| 258 | 09/22/12 | #2 | 8.3 | 123.2 | 7.2 | 118.5 | 96 | +/-2% | 95 | PASS |
| 259 | 09/22/12 | #2 | 8.3 | 123.2 | 8.0 | 118.7 | 96 | +/-2% | 95 | PASS |
| 260 | 09/22/12 | #2 | 8.3 | 123.2 | 7.1 | 120.7 | 98 | +/-2% | 95 | PASS |
| 261 | 09/22/12 | #3 | 15.3 | 114.2 | 13.8 | 110.0 | 96 | +/-2% | 95 | PASS |
| 262 | 09/22/12 | #2 | 8.3 | 123.2 | 7.9 | 119.6 | 97 | +/-2% | 95 | PASS |
| 263 | 09/22/12 | #3 | 15.3 | 114.2 | 13.4 | 109.4 | 96 | +/-2% | 95 | PASS |
| 264 | | | | | | | #DIV/0! | | | |
| 265 | | | | | | | #DIV/0! | | | |
| 266 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|--------------------------|-----------|
| 257 | N 420679.75 E 1180078.75 | 1870.1 |
| 258 | N 420720.90 E 1180029.20 | 1878.2 |
| 259 | N 420680.85 E 1179984.50 | 1870.7 |
| 260 | N 420614.75 E 1179949.80 | 1869.95 |
| 261 | N 420614.40 E 1179901.55 | 1868.85 |
| 262 | N 420594.10 E 1179848.15 | 1877.55 |
| 263 | N 420592.00 E 1179984.65 | 1884.6 |
| 264 | | |
| 265 | | |
| 266 | | |

NOTES: Pond Subgrade After Liner & Finish Grade

CC:

RESPECTFULLY SUBMITTED

AMERICAN TECHNICAL SERVICES, INC.



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TECHNICAL
SERVICES, INC.**

ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
8105 Black Hawk Rd. • PO Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD
ASTM D6938

| | | | |
|------------|---|-----------|------------------|
| CLIENT | CONTINENTAL RESOURCES, INC. PO Box 268836 Oklahoma City, OK 73126 | ATS # | 12-12165 |
| ATTENTION: | Project Manager | DATE | 10/15/12 |
| PROJECT: | Atlanta Drill Site | ATS TECH | Evan Schultze |
| | | GAGE # | 26 |
| | | BENCHMARK | Atlanta Pad Road |

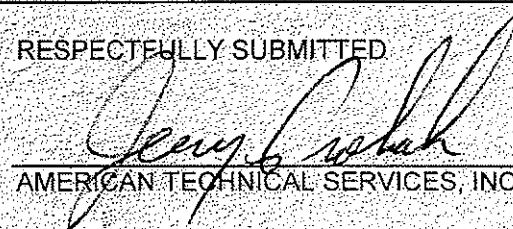
| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|---------------|-------------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE | % SPEC COMPACTION | PASS |
| 264 | 10/10/12 | #1 | 9.7 | 126.5 | 9.3 | 120.3 | 95 | +/-2% | 95 | PASS |
| 265 | 10/10/12 | #1 | 9.7 | 126.5 | 9.5 | 120.9 | 96 | +/-2% | 95 | PASS |
| 266 | 10/10/12 | #1 | 9.7 | 126.5 | 9.8 | 122.1 | 97 | +/-2% | 95 | PASS |
| 267 | | | | | | | #VALUE! | | | |
| 268 | | | | | | | #VALUE! | | | |
| 269 | | | | | | | #VALUE! | | | |
| 270 | | | | | | | #VALUE! | | | |
| 271 | | | | | | | #DIV/0! | | | |
| 272 | | | | | | | #DIV/0! | | | |
| 273 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | ELEVATION |
|--------|----------------------------|----------------------------|
| 264 | N 48D07.125' W 103D44.108' | 1.5' Below Top of Subgrade |
| 265 | N 48D07.071' W 103D44.106' | 1' Below Top of Subgrade |
| 266 | N 48D07.053' W 103D44.018' | 5' Below Top of Subgrade |
| 267 | | |
| 268 | | |
| 269 | | |
| 270 | | |
| 271 | | |
| 272 | | |
| 273 | | |

NOTES: _____

 CC: _____

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TECHNICAL
SERVICES, INC.

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8105 Black Hawk Rd • PO Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD
ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

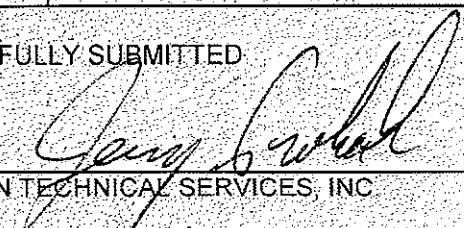
ATS #: 12-12165
DATE: 10/15/12
ATS TECH: Evan Schultze
GAGE #: 26
BENCHMARK: Atlanta Pad Road

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | PASS |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | |
| 267 | 10/11/12 | #1 | 9.7 | 126.5 | 8.9 | 123.4 | 98 | +/-2% | 95 | PASS |
| 268 | 10/11/12 | #1 | 9.7 | 126.5 | 9.2 | 122.8 | 97 | +/-2% | 95 | PASS |
| 269 | 10/11/12 | #1 | 9.7 | 126.5 | 8.8 | 124.3 | 98 | +/-2% | 95 | PASS |
| 270 | 10/11/12 | #1 | 9.7 | 126.5 | 9.1 | 123.7 | 98 | +/-2% | 95 | PASS |
| 271 | | | | | | | #VALUE! | | | |
| 272 | | | | | | | #VALUE! | | | |
| 273 | | | | | | | #VALUE! | | | |
| 274 | | | | | | | #DIV/0! | | | |
| 275 | | | | | | | #DIV/0! | | | |
| 276 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | | ELEVATION |
|--------|--------------|---------------|--------------------------|
| 267 | N 48D06.762' | W 103D44.019' | 5' Below Top of Subgrade |
| 268 | N 48D07.078' | W 103D44.106' | 5' Below Top of Subgrade |
| 269 | N 48D07.101' | W 103D44.020' | 1' Below Top of Subgrade |
| 270 | N 48D07.164' | W 103D44.019' | 2' Below Top of Subgrade |
| 271 | | | |
| 272 | | | |
| 273 | | | |
| 274 | | | |
| 275 | | | |
| 276 | | | |

NOTES: _____

RESPECTFULLY SUBMITTED



AMERICAN TECHNICAL SERVICES, INC.

CC:

**AMERICAN
TECHNICAL
SERVICES, INC.**

ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
8105 Black Hawk Rd. • PO Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 10/15/12
ATS TECH: Evan Schultze
GAGE #: 26
BENCHMARK: Atlanta Pad Road

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 271 | 10/12/12 | #1 | 9.7 | 126.5 | 9.4 | 124.8 | 99 | +/-2% | 95 | PASS |
| 272 | | | | | | | #VALUE! | | | |
| 273 | | | | | | | #VALUE! | | | |
| 274 | | | | | | | #VALUE! | | | |
| 275 | | | | | | | #VALUE! | | | |
| 276 | | | | | | | #VALUE! | | | |
| 277 | | | | | | | #VALUE! | | | |
| 278 | | | | | | | #DIV/0! | | | |
| 279 | | | | | | | #DIV/0! | | | |
| 280 | | | | | | | #DIV/0! | | | |

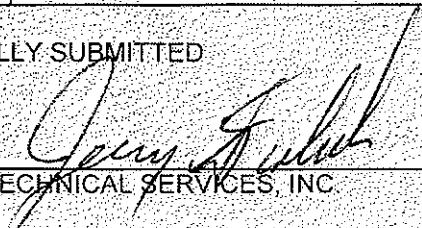
| TEST # | LOCATION | | ELEVATION |
|--------|--------------|---------------|--------------------------|
| 271 | N 48D06.807' | W 103D44.019' | 1' Below Top of Subgrade |
| 272 | | | |
| 273 | | | |
| 274 | | | |
| 275 | | | |
| 276 | | | |
| 277 | | | |
| 278 | | | |
| 279 | | | |
| 280 | | | |

NOTES: _____

CC: _____

RESPECTFULLY SUBMITTED

AMERICAN TECHNICAL SERVICES, INC.



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TECHNICAL
SERVICES, INC.

ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
8105 Black Hawk Rd. • PO Box 558
Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT: **CONTINENTAL RESOURCES, INC.**
PO Box 268836
Oklahoma City, OK 73126
ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

ATS #: 12-12165
DATE: 10/17/12
ATS TECH: Evan Schultze
GAGE #: 26
BENCHMARK: Atlanta Pad Road- Cement Stabilized Soil

| TEST # | DATE | PROCTOR # / CLASSIFICATION | LABORATORY | | FIELD | | SPECIFICATIONS | | | |
|--------|----------|----------------------------|------------|-------------|------------|-------------|----------------|-----------------|-----------------|------|
| | | | % MOIST | DRY DENSITY | % MOISTURE | DRY DENSITY | % COMPACTION | SPEC MOISTURE % | SPEC COMPACTION | PASS |
| 283 | 10/16/12 | #1 | 9.7 | 126.5 | 9.7 | 123.0 | 97 | +/-2% | 95 | PASS |
| 284 | 10/16/12 | #1 | 9.7 | 126.5 | 9.5 | 124.2 | 98 | +/-2% | 95 | PASS |
| 285 | 10/16/12 | #1 | 9.7 | 126.5 | 9.9 | 122.3 | 97 | +/-2% | 95 | PASS |
| 286 | 10/16/12 | #1 | 9.7 | 126.5 | 9.8 | 123.4 | 98 | +/-2% | 95 | PASS |
| 287 | 10/16/12 | #1 | 9.7 | 126.5 | 10.3 | 124.1 | 98 | +/-2% | 95 | PASS |
| 288 | 10/16/12 | #1 | 9.7 | 126.5 | 10.5 | 121.9 | 96 | +/-2% | 95 | PASS |
| 289 | | | | | | | #VALUE! | | | |
| 290 | | | | | | | #DIV/0! | | | |
| 291 | | | | | | | #DIV/0! | | | |
| 292 | | | | | | | #DIV/0! | | | |

| TEST # | LOCATION | | | ELEVATION |
|--------|------------------|-----------------|--|----------------------------|
| 283 | North 48d07 167' | West 103d44 014 | | 1.5' Below Top of Subgrade |
| 284 | North 48d07 187' | West 103d44 021 | | 2' Below Top of Subgrade |
| 285 | North 48d07 175' | West 103d44 017 | | 1' Below Top of Subgrade |
| 286 | North 48d06 217' | West 103d44 015 | | 1' Below Top of Subgrade |
| 287 | North 48d07 235' | West 103d44 013 | | .5' Below Top of Subgrade |
| 288 | North 48d07 197' | West 103d44 014 | | 5' Below Top of Subgrade |
| 289 | | | | |
| 290 | | | | |
| 291 | | | | |
| 292 | | | | |

NOTES: _____

CC: _____

RESPECTFULLY SUBMITTED


AMERICAN TECHNICAL SERVICES, INC.



23368 Oil and Gas Division

Lynn D. Helms - Director Bruce E. Hicks - Assistant Director

Department of Mineral Resources

Lynn D. Helms - Director

North Dakota Industrial Commission

www.dmr.nd.gov/oilgas

RECKY BARNES
CONTINENTAL RESOURCES, INC.
PO BOX 1032
ENID, OK 73702-1032 USA

Date: 7/23/2012

RE: CORES AND SAMPLES

Well Name: **ATLANTA FEDERAL 5-6H** Well File No.: **23368**
Location: **NWNW 6-153-101** County: **WILLIAMS**
Permit Type: **Development - HORIZONTAL**
Field: **BAKER** Target Horizon: **BAKKEN**

Dear BECKY BARNES:

North Dakota Century Code (NDCC) Section 38-08-04 provides for the preservation of cores and samples and their shipment to the State Geologist when requested. The following is required on the above referenced well:

- 1) All cores, core chips and samples must be submitted to the State Geologist as provided for the NDCC Section 38-08-04 and North Dakota Administrative Code 43-02-03-38.1.
- 2) Samples shall include all cuttings from:

Base of the Last Charles Salt

Samples of cuttings shall be taken at 30' maximum intervals through all vertical, build and horizontal sections. Samples must be washed, dried, packed in sample envelopes in correct order with labels showing operator, well name, location and depth, and forwarded in standard boxes to the State Geologist within 30 days of the completion of drilling operations.

- 3) Cores: ALL CORES cut shall be preserved in correct order, properly boxed, and forwarded to the State Geologist within 90 days of completion of drilling operations. Any extension of time must have written approval from the State Geologist.
- 4) All cores, core chips, and samples must be shipped, prepaid, to the State Geologist at the following address:

ND Geological Survey Core Library
Campus Road and Cornell
Grand Forks, ND 58202

- 5) NDCC Section 38-08-16 allows for a civil penalty for any violation of Chapter 38 08 not to exceed \$12,500 for each offense, and each day's violation is a separate offense.

Sincerely

Richard A. Suggs
Geologist

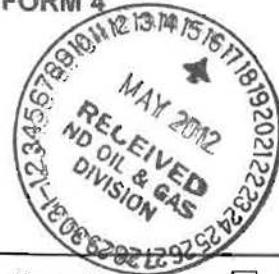


SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 5749 (09-2006)

Well File No.

23368



>PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.
>PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

| | | | |
|---|------------------------|---|---|
| <input type="checkbox"/> Notice of Intent | Approximate Start Date | <input type="checkbox"/> Drilling Prognosis | <input type="checkbox"/> Spill Report |
| <input type="checkbox"/> Report of Work Done | Date Work Completed | <input type="checkbox"/> Redrilling or Repair | <input type="checkbox"/> Shooting |
| <input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03. | | <input type="checkbox"/> Casing or Liner | <input type="checkbox"/> Acidizing |
| Approximate Start Date | | <input type="checkbox"/> Plug Well | <input type="checkbox"/> Fracture Treatment |
| | | <input type="checkbox"/> Supplemental History | <input type="checkbox"/> Change Production Method |
| | | <input type="checkbox"/> Temporarily Abandon | <input type="checkbox"/> Reclamation |
| | | <input checked="" type="checkbox"/> Other | <u>Open Hole Log Waiver</u> |

Well Name and Number

Atlanta Federal 5-6H

| | | | | |
|-----------|-----------|----------|----------|-------------|
| Footages | Qlr-Qtr | Section | Township | Range |
| 495 F N L | 835 F W L | NWNW | 6 | 153 N 101 W |
| Field | Pool | County | | |
| | Bakken | Williams | | |

24-HOUR PRODUCTION RATE

| Before | After |
|------------|------------|
| Oil Bbls | Oil Bbls |
| Water Bbls | Water Bbls |
| Gas MCF | Gas MCF |

Name of Contractor(s)

Address City State Zip Code

DETAILS OF WORK

Requested variance to not run openhole logs. GR/CBL/CCL will be run from deepest point obtainable to base of surface casing.

Offset logs used will be the Brigham Oil and Gas, LP, Lippert 1-12, Sec 1-153N-102W, Williams County, ND.

The Gamma Ray Log will be run all the way to surface and all mud logs will be submitted as one digital tiff formatted file and one digital LAS formatted file.

| | | |
|--|---|--------------------------|
| Company Continental Resources, Inc. | Telephone Number 580-233-8955 | |
| Address P.O. Box 1032 | | |
| City Enid | State OK | Zip Code 73702 |
| Signature <i>Terry L. Olson</i> | Printed Name Terry L. Olson | |
| Title Regulatory Compliance Specialist | Date May 7, 2012 | |
| Email Address Terry.Olson@clr.com | | |

FOR STATE USE ONLY

| | |
|-----------------------------------|--|
| <input type="checkbox"/> Received | <input checked="" type="checkbox"/> Approved |
| Date <i>7-20-2012</i> | |
| By <i>Richard A. Suggs</i> | |
| Title Geologist | |

Richard A. Suggs
Geologist



Approved
David Tabor
7-20-2012

Engineering Technician

July 20, 2012

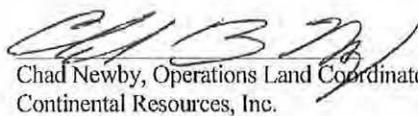
Industrial Commission of North Dakota
Oil & Gas Division
600 East Boulevard, Dept 405
Bismarck, North Dakota 58505

Continental Resources, Inc. (CRI) respectfully requests a waiver to the requirement to delay commencement of operations until three business days following approval of the drilling permit for the Atlanta 1-14-6H.

Township 153N, Range 101W of the 5th P.M.
Section 6, N/2 NW/4 Williams County, North Dakota.

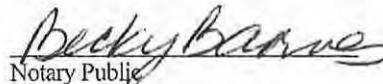
In the event that another owner seeks revocation of the drilling permit, CRI should retain the permit for the following reasons:

- 1) CRI has the necessary technical ability to drill and complete the well(s).
- 2) CRI has drilled and completed more than 130 horizontal Bakken wells in North Dakota.
- 3) CRI operates more than 500 wells in North Dakota and more than 100 in McKenzie County.
- 4) CRI has a contract with Cyclone Drilling that may require standby payments in the event a location is not ready to move onto. There are no near term lease expirations associated with the subject well.
- 5) CRI controls a working interest of 55.54% and is the majority working interest owner within the subject spacing unit consisting of 2560 acres of sections 5, 6, 7, 8, 153N – 101W of the 5th P.M.


Chad Newby, Operations Land Coordinator
Continental Resources, Inc.

STATE OF OKLAHOMA)
)ss:
COUNTY OF GARFIELD)

On the 20th day of July 2012, before me, a Notary Public in and for said County and State, personally appeared Chad Newby, known to me to be the Operations Land Coordinator of Continental Resources, Inc., the Corporation that executed the within instrument, and acknowledged to me that such Corporation executed the same.


Notary Public

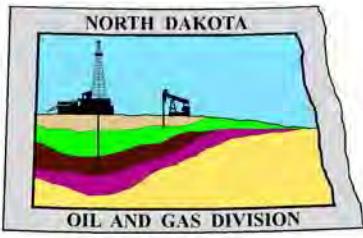
Garfield County, Oklahoma

My Commission Expires: 7/5/2015

Commission No.: 11006023

P.O. Box 1032 • 302 N. Independence • Enid, OK 73702
Voice (580) 233-8955 • Fax (580) 242-4703





Oil and Gas Division

Lynn D. Helms - Director

Bruce E. Hicks - Assistant Director

Department of Mineral Resources

Lynn D. Helms - Director

North Dakota Industrial Commission

www.oilgas.nd.gov

July 20, 2012

Terry L. Olson
Regulatory Compliance Specialist
CONTINENTAL RESOURCES, INC.
P.O. Box 1032
Enid, OK 73702

**RE: HORIZONTAL WELL
ATLANTA FEDERAL 5-6H
NW NW Section 6-153N-101W
Williams County
Well File # 23368**

Dear Terry :

Pursuant to Commission Order No. 19840, approval to drill the above captioned well is hereby given. The approval is granted on the condition that all portions of the well bore not isolated by cement, be no closer than the **500' setback** from the north or west boundaries and **200' setback** from the east or south boundaries within the 2560 acre spacing unit consisting of Sections 5, 6, 7, & 8 T153N R101W.

PERMIT STIPULATIONS: A sufficient number of horizontal wells shall be drilled and completed in the 2560-acre spacing unit described as Sections 5, 6, 7, and 8, Township 153 North, Range 101 West, McKenzie and Williams Counties, North Dakota, which reasonably develop all portions of the 2560-acre spacing unit within two years after the first horizontal well is completed. If this condition is not met, the Commission shall schedule the matter for a consideration to reduce the size of the spacing unit **THIS WELL IS LOCATED IN A SURFACE WATER PROTECTION AREA: ONSITE INSPECTION REQUIRED (CONTACT NDIC FIELD INSPECTOR FOR SITE SPECIFIC STIPULATIONS).** TO INCLUDE BUT NOT LIMITED TO: CLOSED MUD SYSTEM, NO DRILLING PIT, AND IMPERMEABLE LINER IS REQUIRED ON THE ENTIRE LOCATION AND A STRING OF CASING MUST BE PLACED IN THE RAT AND MOUSE HOLE AND CEMENTED TO GROUND LEVEL. FURTHERMORE CONTINENTAL MUST COMPLY WITH ALL AFFIDAVIT'S. LASTLY, AN IMPERMEABLE PERIMETER DIKE MUST BE PLACED AROUND THE ENTIRE LOCATION. CONTINENTAL RESOURCES must contact NDIC Field Inspector John Axtman at 701-770-2564 prior to location construction.

Drilling pit

NDAC 43-02-03-19.4 states that "a pit may be utilized to bury drill cuttings and solids generated during well drilling and completion operations, providing the pit can be constructed, used and reclaimed in a manner that will prevent pollution of the land surface and freshwaters. Reserve and circulation of mud system through earthen pits are prohibited. All pits shall be inspected by an authorized representative of the director prior to lining and use. Drill cuttings and solids must be stabilized in a manner approved by the director prior to placement in a cuttings pit."

Form 1 Changes & Hard Lines

Any changes, shortening of casing point or lengthening at Total Depth must have prior approval by the NDIC. The proposed directional plan is at a legal location. The minimum legal coordinate from the well head at casing point is: 5S. Also, based on the azimuth of the proposed lateral the maximum legal coordinate from the well head is: 9676S.

Location Construction Commencement (Three Day Waiting Period)

Operators shall not commence operations on a drill site until the 3rd business day following publication of the approved drilling permit on the NDIC - OGD Daily Activity Report. If circumstances require operations to commence before the 3rd business day following publication on the Daily Activity Report, the waiting period may be waived by the Director. Application for a waiver must be by sworn affidavit providing the information necessary to evaluate the extenuating circumstances, the factors of NDAC 43-02-03-16.2 (1), (a)-(f), and any other information that would allow the Director to conclude that in the event another owner seeks revocation of the drilling permit, the applicant should retain the permit.

Permit Fee & Notification

Payment was received in the amount of \$100 via credit card. It is requested that notification be given immediately upon the spudding of the well. This information should be relayed to the Oil & Gas Division, Bismarck, via telephone. The following information must be included: Well name, legal location, permit number, drilling contractor, company representative, date and time of spudding. Office hours are 8:00 a.m. to 12:00 p.m. and 1:00 p.m. to 5:00 p.m. Central Time. Our telephone number is (701) 328-8020, leave a message if after hours or on the weekend.

Survey Requirements for Horizontal, Horizontal Re-entry, and Directional Wells

NDAC Section 43-02-03-25 (Deviation Tests and Directional Surveys) states in part (that) the survey contractor shall file a certified copy of all surveys with the director free of charge within thirty days of completion. Surveys must be submitted as one electronic copy, or in a form approved by the director. However, the director may require the directional survey to be filed immediately after completion if the survey is needed to conduct the operation of the director's office in a timely manner. Certified surveys must be submitted via email in one adobe document, with a certification cover page to certsurvey@nd.gov.

Survey points shall be of such frequency to accurately determine the entire location of the well bore.

Specifically, the Horizontal and Directional well survey frequency is 100 feet in the vertical, 30 feet in the curve (or when sliding) and 90 feet in the lateral.

Confidential status

Your request for confidential status of all information furnished to the Director, or his representatives, is hereby granted. Such information, except production runs, shall remain confidential for six months commencing on the date the well is spud.

Confidential status notwithstanding, the Director and his representatives shall have access to all well records wherever located. Your company personnel, or any person performing work for your company shall permit the Director and his representatives to come upon any lease, property, well, or drilling rig operated or controlled by them, complying with all safety rules, and to inspect the records and operation of such wells and to have access at all times to any and all records of wells. The Commission's field personnel periodically inspect producing and drilling wells. Any information regarding such wells shall be made available to them at any time upon request. The information so obtained by the field personnel shall be maintained in strict confidence and shall be available only to the Commission and its staff.

Surface casing cement

Tail cement utilized on surface casing must have a minimum compressive strength of 500 psi within 12 hours, and tail cement utilized on production casing must have a minimum compressive strength of 500 psi before drilling the plug or initiating tests.

Logs

NDAC Section 43-02-03-31 requires the running of (1) a suite of open hole logs from which formation tops and porosity zones can be determined, (2) a Gamma Ray Log run from total depth to ground level elevation of the well bore, and (3) a log from which the presence and quality of cement can be determined (Standard CBL or Ultrasonic cement evaluation log) in every well in which production or intermediate casing has been set, this log must be run prior to completing the well. All logs run must be submitted free of charge, as one digital TIFF (tagged image file format) copy and one digital LAS (log ASCII) formatted copy. Digital logs may be submitted on a standard CD, DVD, or attached to an email sent to digitallogs@nd.gov. Thank you for your cooperation.

Sincerely,

Todd L. Holweger
Mineral Resources Permit Manager



APPLICATION FOR PERMIT TO DRILL HORIZONTAL WELL - FORM 1H

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 54269 (08-2005)

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

| | | | |
|--|--------------------------------------|---|---|
| Type of Work New Location | Type of Well Oil & Gas | Approximate Date Work Will Start 6 / 1 / 2012 | Confidential Status Yes |
| Operator CONTINENTAL RESOURCES, INC. | | Telephone Number 580-233-8955 | |
| Address P.O. Box 1032 | | City Enid | State OK Zip Code 73702 |

Notice has been provided to the owner of any permanently occupied dwelling within 1,320 feet.

This well is not located within five hundred feet of an occupied dwelling.

WELL INFORMATION (If more than one lateral proposed, enter data for additional laterals on page 2)

| | | | | | | | |
|---|---|--|---|---|--|---|-------------------------------------|
| Well Name ATLANTA FEDERAL | | | Well Number 5-6H | | | | |
| Surface Footages 495 F N L 835 F W L | | Qtr-Qtr NWNW | Section 6 | Township 153 N | Range 101 W | County Williams | |
| Longstring Casing Point Footages 1005 F N L 1097 F W L | | Qtr-Qtr NWNW | Section 6 | Township 153 N | Range 101 W | County Williams | |
| Longstring Casing Point Coordinates From Well Head 510 S From WH 262 E From WH | | Azimuth 153 ° | Longstring Total Depth 10857 Feet MD 10530 Feet TVD | | | | |
| Bottom Hole Footages From Nearest Section Line 203 F S L 581 F W L | | Qtr-Qtr SWSW | Section 8 | Township 153 N | Range 101 W | County McKenzie | |
| Bottom Hole Coordinates From Well Head 9673 S From WH 4969 E From WH | | KOP Lateral 1 9957 Feet MD | Azimuth Lateral 1 153 ° | Estimated Total Depth Lateral 1 21159 Feet MD 10530 Feet TVD | | | |
| Latitude of Well Head 48 ° 06 ' 33.66 " | | Longitude of Well Head -103 ° 43 ' 48.63 " | NAD Reference NAD83 | | Description of (Subject to NDIC Approval) Spacing Unit: Sec 5, 6, 7, & 8 T153N R101W | | |
| Ground Elevation 1945 Feet Above S.L. | Acres in Spacing/Drilling Unit 2560 | | Spacing/Drilling Unit Setback Requirement Feet N/S Feet E/W | | | Industrial Commission Order 19840 | |
| North Line of Spacing/Drilling Unit 10516 Feet | | South Line of Spacing/Drilling Unit 10510 Feet | | East Line of Spacing/Drilling Unit 10422 Feet | | West Line of Spacing/Drilling Unit 10367 Feet | |
| Objective Horizons Bakken | | | | | | Pierre Shale Top 1867 | |
| Proposed Surface Casing | Size 9 - 5/8 " | Weight 36 Lb./Ft. | Depth 1970 Feet | Cement Volume 743 Sacks | NOTE: Surface hole must be drilled with fresh water and surface casing must be cemented back to surface. | | |
| Proposed Longstring Casing | Size 7 - " | Weight(s) 26-32 Lb./Ft. | Longstring Total Depth 10857 Feet MD 10530 Feet TVD | | Cement Volume 833 Sacks | Cement Top 0 Feet | Top Dakota Sand 4925 Feet |
| Base Last Charles Salt (If Applicable) 9011 Feet | | NOTE: Intermediate or longstring casing string must be cemented above the top Dakota Group Sand. | | | | | |
| Proposed Logs CBL/GR from deepest depth obtainable to ground surface/mud | | | | | | | |
| Drilling Mud Type (Vertical Hole - Below Surface Casing) Invert | | | | Drilling Mud Type (Lateral) Brine | | | |
| Survey Type in Vertical Portion of Well MWD Every 100 Feet | | Survey Frequency: Build Section 30 Feet | | Survey Frequency: Lateral 90 Feet | | Survey Contractor Baker Hughes | |

NOTE: A Gamma Ray log must be run to ground surface and a CBL must be run on intermediate or longstring casing string if set.

Surveys are required at least every 30 feet in the build section and every 90 feet in the lateral section of a horizontal well. Measurement inaccuracies are not considered when determining compliance with the spacing/drilling unit boundary setback requirement except in the following scenarios: 1) When the angle between the well bore and the respective boundary is 10 degrees or less; or 2) If Industry standard methods and equipment are not utilized. Consult the applicable field order for exceptions.

If measurement inaccuracies are required to be considered, a 2° MWD measurement inaccuracy will be applied to the horizontal portion of the well bore. This measurement inaccuracy is applied to the well bore from KOP to TD.

REQUIRED ATTACHMENTS: Certified surveyor's plat, horizontal section plat, estimated geological tops, proposed mud/cementing plan, directional plot/plan, \$100 fee.

See Page 2 for Comments section and signature block.

COMMENTS, ADDITIONAL INFORMATION, AND/OR LIST OF ATTACHMENTS**Proposed FW Casing: 13 3/8, 48#, 0-500', 189 sks cmt Setbacks: 500' N&W 200' E&S**

Lateral 2

| KOP Lateral 2 Feet MD | Azimuth Lateral 2 ° | Estimated Total Depth Lateral 2 Feet MD Feet TVD | | | KOP Coordinates From Well Head From WH From WH | | |
|--|------------------------|--|---------|----------------------|--|--------|--|
| Formation Entry Point Coordinates From Well Head From WH From WH | | Bottom Hole Coordinates From Well Head From WH From WH | | | | | |
| KOP Footages From Nearest Section Line F L F L | | Qtr-Qtr | Section | Township N | Range W | County | |
| Bottom Hole Footages From Nearest Section Line F L F L | | Qtr-Qtr | Section | Township N | Range W | County | |

Lateral 3

| KOP Lateral 3 Feet MD | Azimuth Lateral 3 ° | Estimated Total Depth Lateral 3 Feet MD Feet TVD | | | KOP Coordinates From Well Head From WH From WH | | |
|--|------------------------|--|---------|----------------------|--|--------|--|
| Formation Entry Point Coordinates From Well Head From WH From WH | | Bottom Hole Coordinates From Well Head From WH From WH | | | | | |
| KOP Footages From Nearest Section Line F L F L | | Qtr-Qtr | Section | Township N | Range W | County | |
| Bottom Hole Footages From Nearest Section Line F L F L | | Qtr-Qtr | Section | Township N | Range W | County | |

Lateral 4

| KOP Lateral 4 Feet MD | Azimuth Lateral 4 ° | Estimated Total Depth Lateral 4 Feet MD Feet TVD | | | KOP Coordinates From Well Head From WH From WH | | |
|--|------------------------|--|---------|----------------------|--|--------|--|
| Formation Entry Point Coordinates From Well Head From WH From WH | | Bottom Hole Coordinates From Well Head From WH From WH | | | | | |
| KOP Footages From Nearest Section Line F L F L | | Qtr-Qtr | Section | Township N | Range W | County | |
| Bottom Hole Footages From Nearest Section Line F L F L | | Qtr-Qtr | Section | Township N | Range W | County | |

Lateral 5

| KOP Lateral 5 Feet MD | Azimuth Lateral 5 ° | Estimated Total Depth Lateral 5 Feet MD Feet TVD | | | KOP Coordinates From Well Head From WH From WH | | |
|--|------------------------|--|---------|----------------------|--|--------|--|
| Formation Entry Point Coordinates From Well Head From WH From WH | | Bottom Hole Coordinates From Well Head From WH From WH | | | | | |
| KOP Footages From Nearest Section Line F L F L | | Qtr-Qtr | Section | Township N | Range W | County | |
| Bottom Hole Footages From Nearest Section Line F L F L | | Qtr-Qtr | Section | Township N | Range W | County | |

I hereby swear or affirm the information provided is true, complete and correct as determined from all available records.

Date

5 / 7 / 2012

ePermit

Printed Name
Terry L. Olson

Title

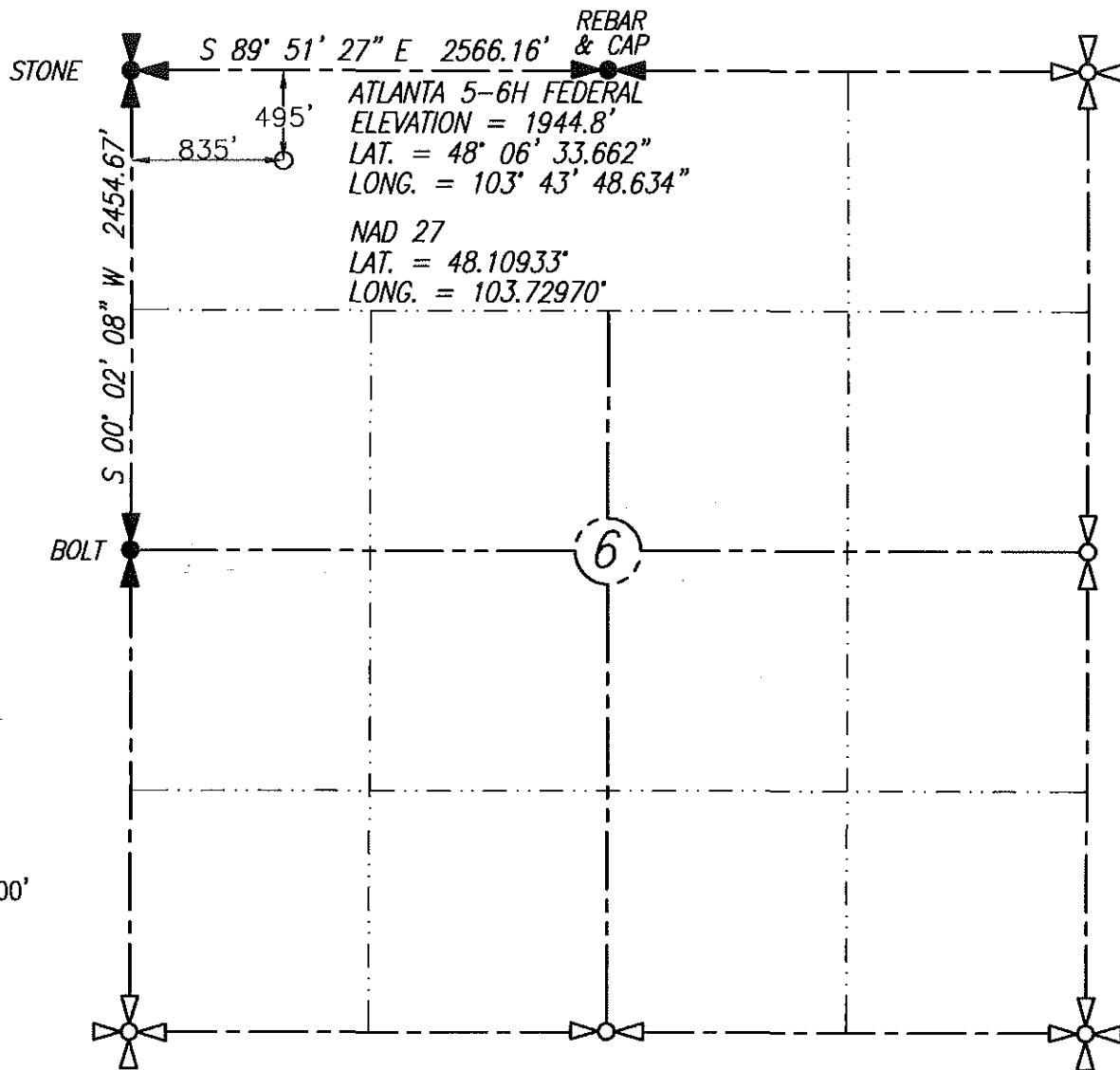
Regulatory Compliance Specialist**FOR STATE USE ONLY**

| | |
|--|---------------------------------------|
| Permit and File Number 23368 | API Number 33 - 105 - 02728 |
| Field BAKER | |
| Pool BAKKEN | Permit Type DEVELOPMENT |

FOR STATE USE ONLY

| |
|--|
| Date Approved 7 / 20 / 2012 |
| By Todd L. Holweger |
| Title Mineral Resources Permit Manager |

WELL LOCATION PLAT
 CONTINENTAL RESOURCES INC.
 ATLANTA 5-6H FEDERAL
 SECTION 6, T153N, R101W
 WILLIAMS COUNTY, NORTH DAKOTA
 495' FNL & 835' FWL



I CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS
 WORK PERFORMED BY ME OR UNDER MY RESPONSIBLE
 CHARGE, AND IS TRUE AND CORRECT TO THE BEST OF
 MY KNOWLEDGE AND BELIEF

Chad Newby
4-23-12



DATE STAKED: 2-9-2012

BASIS OF VERTICAL DATUM:
NAVD 1988 GEODETIC

PERSON AUTHORIZING SURVEY;
CHAD NEWBY

EXPLANATION AREA: NAD83(CORS96)

BASIS OF BEARING: TRUE NORTH

BROSZ ENGINEERING INC.

BOX 357
BOWMAN, N.D. 58623
PHONE: 701-523-3340
FAX: 701-523-5243

PROJECT NO. 12-10

Continental Resources, Inc. (CRI) respectfully submits the following information concerning the drilling of the Atlanta 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 -- 6H, N/2 NW/4 Sec. 6, T153N, R101W, Williams County, North Dakota.

The Atlanta well(s) are located in a Well Head Protection Area. CRI would like to propose the following safeguards and precautions to be taken to prevent any contamination to freshwater sources during the drilling and completion of the well.

- 1) During construction of the location, the entire location will be constructed per NDIC permit stipulations, and to ensure any spills or runoff which occur on location do not penetrate the fresh ground water and are contained on surface of the location.
- 2) Drainage will be re-routed to avoid the location and fiber rolls will be employed around the site to reduce sediment contamination to freshwater runoff due to weather events.
- 3) The earthen berm constructed to keep any freshwater runoff off the location will also eliminate any spills from leaving the location
- 4) No reserve pit or dry cuttings pit will be utilized on location.
- 5) The conductor will be drilled to a depth of 80' and 20" pipe will be run to depth and cemented to surface.
- 6) During drilling operations, a freshwater protection string of 13-3/8" 48# H40 casing will be set to a depth of 500' and cemented to surface to protect the shallow freshwater zones. Standard 9-5/8" 36# J-55 surface casing will be set 100' into the Pierre Shale to a depth of 1970' and cemented to surface.
- 7) A frac string will be used to protect the intermediate casing during hydraulic fracturing of the well.
- 8) CRI is submitting a comprehensive; site specific Spill Contingency Plan to prepare for any event which may occur during drilling and completion operations.
- 9) CRI believes a Flood Prevention plan is not necessary for this site due to the Army Corps of Engineers documentation that the high water level for Lake Sakakawea will not affect any elevation 1855' above sea level or higher. The finished rig grade elevation for Atlanta location is 1959.6' above sea level.
- 10) The Atlanta wells will be drilled continuously. They will be batch drilled. The order of drilling for all wells on the pad will be:
 - a. 1, 2, 3, 4,
 - b. 11, 12, 13, 14,
 - c. 9, 10,
 - d. 5, 6, 7, 8.

CRI believes adequate planning and precautions are being taken to prevent any contamination to ground water, shallow aquifers, and fresh water reservoirs.


Chad Newby, Operations Land Coordinator
Continental Resources, Inc.

STATE OF OKLAHOMA)
)ss:
COUNTY OF GARFIELD)

On the 8th day of June 2012, before me, a Notary Public in and for said County and State, personally appeared Chad Newby, known to me to be the Operations Land Coordinator of Continental Resources, Inc., the Corporation that executed the within instrument, and acknowledged to me that such Corporation executed the same.


Notary Public

Garfield County, Oklahoma

My Commission Expires: 7/5/2015

Commission No.: 11006023



Continental Resources Atlanta Site Contact List

Drilling & Completions / Production

| | | phone | mobile |
|---|--------------------------------------|--------------|--------------|
| Construction / Reclaim & ROW | Title | | |
| Terry Chapman | Construction foreman | | 970.673.2411 |
| Chad Newby | Operations Land Coordinator - Office | | 405.574.2172 |
| Drilling | | | |
| Company man Cyclone 2 Rig Phone | | 701.570.8834 | |
| Jared Miller | Lead Company Man Cyclone 2 | | 701.290.0443 |
| Brandon Simkins | Relief Company Man Cyclone 2 | | 307.231.6420 |
| Don Radke | Drilling Superintendent - Field | | 701.570.6326 |
| Kyle Davis | Drilling Engineer - Office | 580.249.4750 | |
| Bryan George | Drilling Superintendent - Office | 580.249.4757 | |
| Alan McNally | Drilling Manager - Office | 580.249.4792 | |
| Completions | | | |
| Jason Walters | Production Superintendent | | 406.489.1456 |
| Gene Dowhaniuk | Production Superintendent | | 701.770.8358 |
| Chris Nichols | Area Completions Manager - Office | 580.249.4711 | 580.278.9003 |
| Production | | | |
| Howard Hill | Operator | | 406.489.2832 |
| Brent Bowlds | Production Foreman | 406.433.3006 | 406.489.3029 |
| Donald Kennedy | Senior Production Engineer - Office | 580.249.4788 | |
| Russ Atkins | Area Production Manager | | 406.433.3006 |
| Brad Aman | VP Production Northern Region | 580.548.5283 | |

Health Safety Environmental

| | | | |
|----------------|---|--|--------------|
| Dusty Grosulak | Safety Supervisor | | 701.260.1138 |
| Zach Laird | Safety Manager | | 405.742.2696 |
| Mike White | Northern Region Senior Environment Specialist | | 406.941.2521 |
| Stacy Aguirre | Northern Region Environmental Supervisor | | 406.478.4450 |
| Andy Truhan | Director of Environmental Compliance | | 405.535.8967 |

Public Relations & Media Contact Information

| | | | |
|-------------------|---------------------|--------------|--|
| Kristin Miskovsky | VP Public Relations | 405.234.9480 | |
|-------------------|---------------------|--------------|--|

Burns, David J.

From: Shawn Svob <ShawnSvob@contres.com>
Sent: Tuesday, March 13, 2012 3:23 PM
To: Burns, David J.
Cc: Holweger, Todd L.; Becky Barnes; Nicole Caddell; Terry Olson
Subject: Clarification of Drilling and Mud program

Continental Resources respectfully submits this memo as clarification on previously submitted permits.

In the Drilling Program, sub-section Mud Program, Surface Holes will be drilled with Fresh Water. Current Drilling Programs state "Native" as the current mud system. Future permits will reflect Fresh Water as the mud system.

Please contact me if you have further questions or require more clarification.

Respectfully,

Shawn Svob
580-747-6678

Shawn

NOTICE: This message contains confidential information and is intended for the individual named. If you are not the named addressee, you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by reply e-mail if you have received this e-mail by mistake and delete this e-mail from your system. E-mail transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. The sender therefore does not accept liability for any errors or omissions in the contents of this message which arise as a result of e-mail transmission.

PRELIMINARY DRILLING PROGRAM

5/7/2012

Lease and Well No.

Atlanta Federal 5-6H

MUD PROGRAM

| Depth | Type | Weight | Remarks |
|----------------|-------------------|----------|--|
| 0' - 1970' | Native Freshwater | 8.4-8.8 | Add Soap Sticks for Mud Rings |
| 1970' - 6500' | Invert | 9.3-9.5 | 35-50 sec, 10-30 cc's |
| 6500' - 10857' | Invert | 9.6-10.0 | 40-55 sec, 10-15 cc's O/W 70/30 to 80/20 |
| 10857' - TD | Brine | 8.7-10.0 | Cuttings Pit |

TUBULAR PROGRAM

| String Type | Hole Size | Depth | Feet | Casing Diameter | Weight, Grade, Connection | ERW/ Seamless | Critical Inspection |
|-------------|--|--------|--------|-----------------|---------------------------|---------------|---------------------|
| FW | 17 1/2 " | 500' | 500' | 13-3/8 " | 13-3/8", 48#, H-40, STC | ERW | BCI & Drift |
| | Float shoe, shoe joint & float collar. Centralize bottom 3 jts and every 4th jt to surface. | | | | | | |
| Surf | 12 1/4 " | 1970' | 1970' | 9 5/8 " | 9-5/8", 36#, J-55, STC | ERW | BCI & Drift |
| | Float shoe, shoe joint & float collar. Centralize bottom joint then 5 more every other, 1 at conductor | | | | | | |
| Int | 8 3/4 " | 80' | 80' | 7 " | 7", 32#, P-110 IC, LTC | ERW | BCI & Drift |
| | | 4000' | 3920' | 7 " | 7", 26#, P-110 IC, LTC | ERW | BCI & Drift |
| | | 8100' | 4100' | 7 " | 7", 29#, P-110 IC, LTC | ERW | BCI & Drift |
| | | 9210' | 1110' | 7 " | 7", 32#, P-110 IC, LTC | Seamless | BCI & Drift |
| | | 10857' | 1647' | 7 " | 7", 29#, P-110 IC, LTC | ERW | BCI & Drift |
| | Float shoe, shoe joint & float collar. Centralize bottom 3 joints. Centralize thru curve and across all salts. | | | | | | |
| Liner | 6 " | 20980' | 11060' | 4 1/2 " | 4-1/2", 11.6#, P-110, BTC | | |
| Tubing | | 9960' | 9960' | 2 7/8 " | 2-7/8", 6.5#, L-80, EUE | | |

Notes: Pipe to end up in hole from top to bottom as shown.

CEMENT PROGRAM

| String Type | SHOE/DV Depth | Stage Lead/Tail | Cement Bottom | Cement Top | No Sacks | Cement System | Cement Yield | Cement Weight |
|---|---------------|-----------------|---------------|------------|----------|---|--------------|---------------|
| | | Lead | 350' | 0' | 111 | 35/65 Poz/Class "C", 3% CaCl, 12% gel | 2.39 | 12 |
| FW | 500 | Tail | 500' | 350' | 77.8 | Class "C", 2% CaCl | 1.46 | 14.3 |
| (Basis: Gauge hole + 55% excess, tail 30% of length, lead to surface.) | | | | | | | | |
| | | Lead | 1380' | 0' | 437 | 35/65 Poz/Class "C", 3% CaCl, 12% gel | 2.39 | 12 |
| Surf | 1970 | Tail | 1970' | 1380' | 306 | Class "C", 2% CaCl | 1.46 | 14.3 |
| (Basis: Gauge hole + 55% excess, tail 30% of length, lead to surface.) | | | | | | | | |
| Int | 10857 | Lead | 7800' | 0' | 457 | 35/65 Poz/Class "C", 3% KCl, 5#/sk Silica | 3.21 | 11.3 |
| | | Tail | 10857' | 7800' | 376 | Class "G", 3% KCl, 35% Silica | 1.59 | 15.6 |
| (Basis: Gauge hole + 30% excess, Tail to 500 ft above top of Charles Salt, Lead to Surface) | | | | | | | | |

GEOLOGIC PROGNOSIS

Well Name: Atlanta Federal 5-6H
Rig: Cyclone 02
Prospect: Williston
Target: Middle Bakken
Spacing: 2560

SHL: 495' FNL & 835' FWL
 Sec. 6 - 153N - 101W
 Williams , ND
BHL: 200' FSL & 598' FWL
 Sec. 8 - 153N - 101W
 Williams , ND

- Pre-Staked
 Staked

Rig Grade Elevation: 1945'
 KB: 22'
 RKB: 1967'

| FORMATION | SUBSEA | TVD |
|--------------------------|--------|---------------|
| Pierre Shale | 100 | 1,867 |
| Greenhorn | -2,582 | 4,549 |
| Dakota Group (fka Mowry) | -2,958 | 4,925 |
| Basal Dakota Sand | -3,657 | 5,624 |
| Dunham Salt Top | NA | |
| Dunham Salt Base | NA | |
| Pine Salt Top | -5,189 | 7,156 |
| Pine Salt Base | -5,216 | 7,183 |
| Minnekahta | -5,235 | 7,202 |
| Opeche Salt Top | NA | |
| Opeche Salt Base | NA | |
| Minnelusa Group | -5,464 | 7,431 |
| Tyler | -5,650 | 7,617 |
| Kibby | -6,186 | 8,153 |
| Top Charles | -6,333 | 8,300 |
| Base Last Charles Salt | -7,044 | 9,011 |
| Mission Canyon | -7,267 | 9,234 |
| Lodgepole | -7,820 | 9,787 |
| Upper Bakken Shale | -8,529 | 10,496 |
| Middle Bakken Member | -8,543 | 10,510 |
| Middle Bakken Target | -8,563 | 10,530 |
| End of Lateral | -8,563 | 10,530 |
| | | |
| | | |



To: Todd Holweger, NDIC
From: Shawn Svob
Date: 4/5/2012
Re: Continental Resources standard CCL, CBL, 4-1/2" liner running and testing procedures

Continental Resources' standard practice for running the cement bond log and casing caliper log is to run both logs immediately after coming out of the hole after TD, prior to running the 4-1/2" liner, to the deepest depth obtainable; however, if there are well control concerns that require us to run the liner sooner, only the CBL will be run and the CCL will be run after setting the liner.

Based on the CCL results, we determine the actual API minimum burst allowance for the 7" casing. If the downgraded API burst pressure is below our minimum required frac pressures, we will run a 4-1/2" frac string; if severe wear or holes are found in the casing, we will run a 5" cemented, to surface, tie back string.

The CBL log is run in order to determine the top of cement, as required by the NDIC. Our current 4-1/2" liner program for a 1280 unit is 30, evenly spaced, stages with 29 swellable packers. The liner shoe is set approximately 180 feet off bottom. The shoe stage below the last packer has 2 joints, a double valved float, one joint, and a ported guide shoe – appx 130 ft. The liner is run using a running tool on the end of 4" DP. The 7" packer/hanger is set about 40 ft above KOP between two casing collars but conditions occasionally occur that require setting higher, either through unexpected failure or in order to isolate casing wear close to KOP. Recently we have tried 40 stage liners and the trend to explore the optimum stage count will continue.. Once the liner is at depth, a ball is dropped through the DP, the ball is pressured up against the setting tool to approximately 2500 psi, and the 7" packer/hanger is set.

A push pull test is done to confirm the hanger has set. Then, a 4500 psi pressure test is completed on the back side of the 4" DP to confirm the packer has set. The setting tool is then backed off and the 4" DP/running tool is laid down.

Immediately after the rotary rig has been moved off the well location, the 7" csg and liner packer/ hanger are tested to the frac pressure. The testers will rig up and test the tubing head to 5000 psi. Next a test plug will be run and set, using wire line, in the top of the 7" packer/hanger. Testers will pressure up to our frac pressure, typically 8500 psi, to confirm the 7" is ready for completion.

Shawn Svob
Drilling Operations Coordinator

CONTINENTAL RESOURCES

Location: NORTH DAKOTA
 Field: WILLIAMS COUNTY
 Facility: SEC.06-T153N-R101W

Slot: SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06)
 Well: ATLANTA FEDERAL 5-6H
 Wellbore: ATLANTA FEDERAL 5-6H PWB

Pilot reference wellpath is ATLANTA FEDERAL 5-6H (REV.D.0) PWP

True vertical depths are referenced to CYCLONE 2 (RKB)
 Maximum depths are referenced to CYCLONE 2 (RKB)
 CYCLONE 2 (RKB) Is Mean Sea Level: 1017 ft.
 Mean Sea Level to Mud Line (At Slot: SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06)): 0 feet.
 Coordinates are in feet referenced to Slot
 Grid System: NAD83 / Lambert North Dakota SP, Northern Zone (3301), US feet.
 North Reference: True north
 Scale: True distance
 Depths are in feet
 Created by: paulstr on 1/16/2012

Location Information

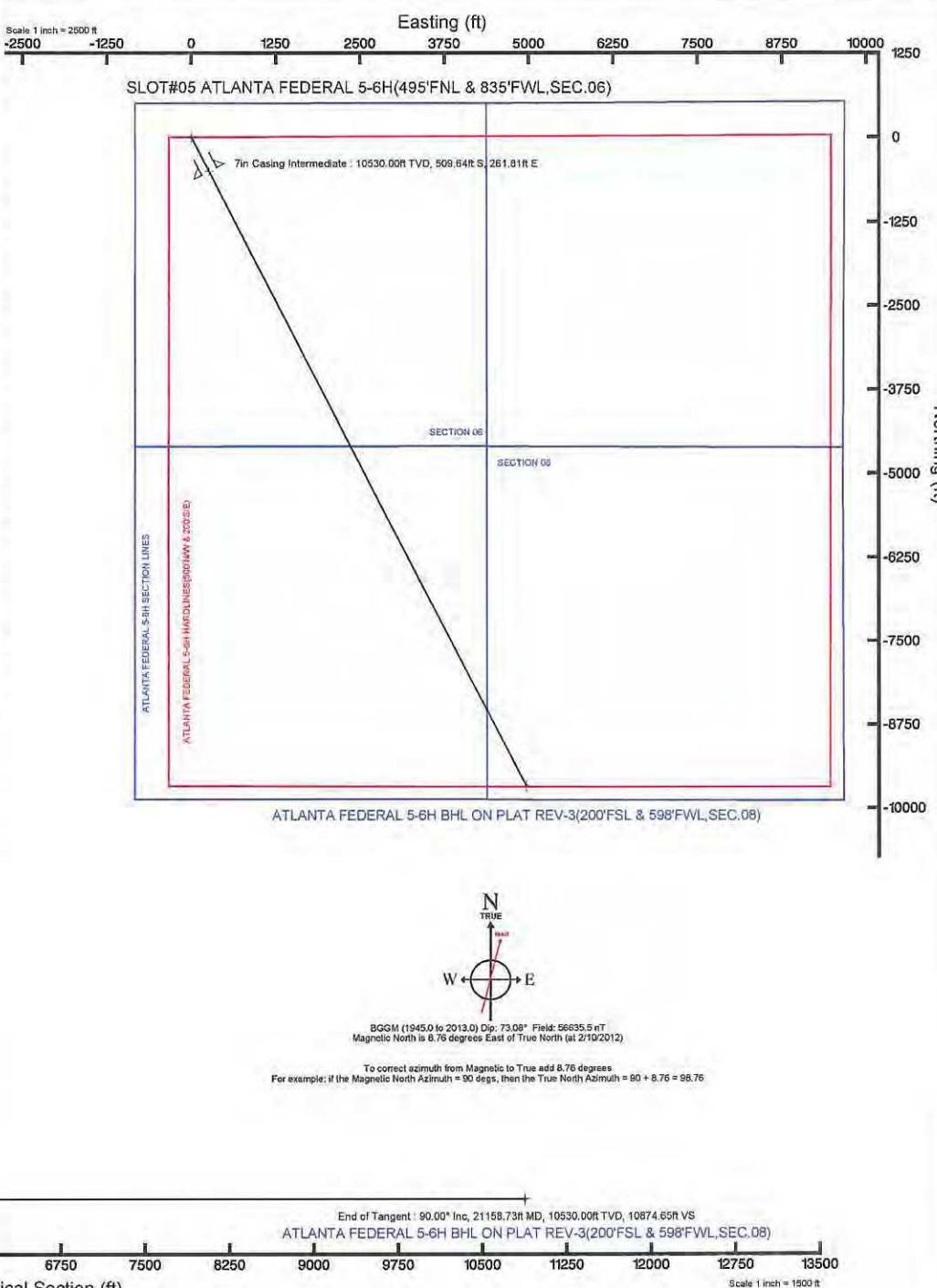
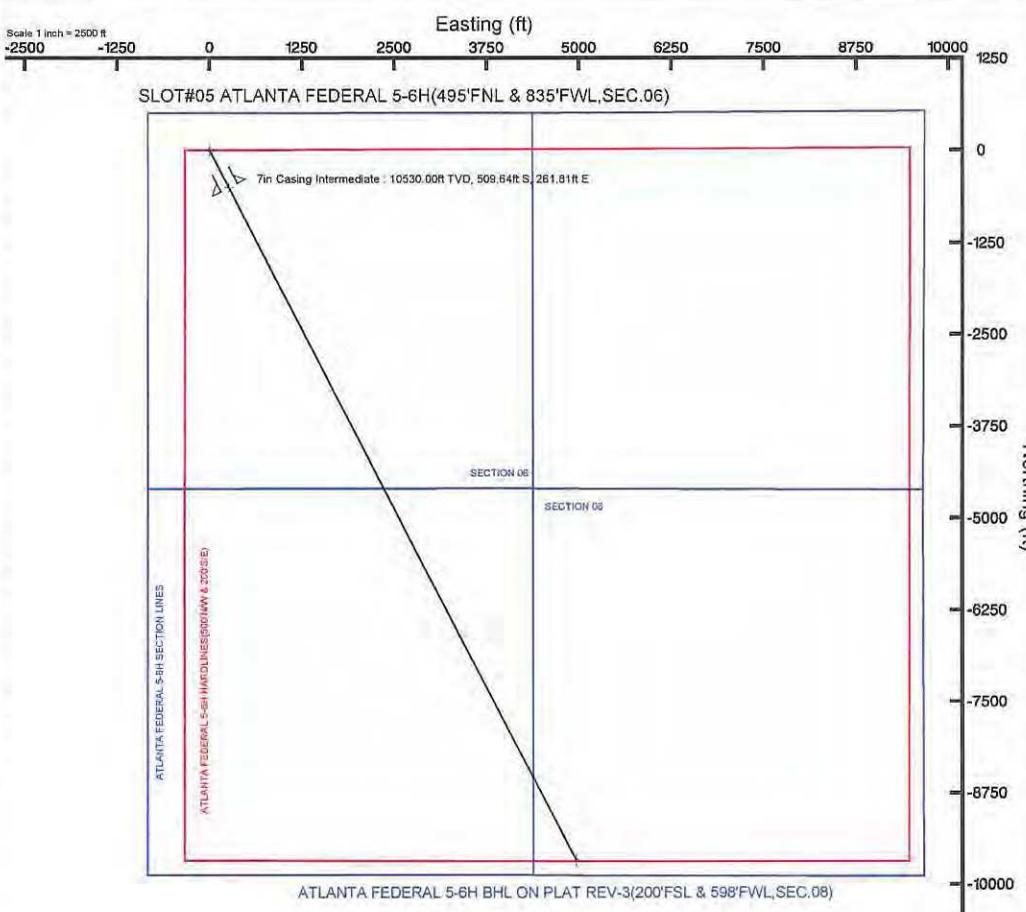
| Facility Name | Grid East (US ft) | Grid North (US ft) | Latitude | Longitude | | |
|---|-------------------|--------------------|-------------------|--------------------|----------------|-----------------|
| SEC 06-T153N-R101W | 1170834.103 | 421109.095 | 48°09'33.379"N | 103°43'56.980"W | | |
| Slot | Local N (ft) | Local E (ft) | Grid East (US ft) | Grid North (US ft) | Latitude | Longitude |
| SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06) | 28.69 | 365.05 | 1178939.916 | 421204.040 | 48°09'23.662"N | 103°43'48.834"W |
| CYCLONE 2 (RKB) to Mud Line (At Slot: SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06)) | | | | | 10087 ft | |
| Mean Sea Level to Mud Line (At Slot: SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06)) | | | | | 0 ft | |
| CYCLONE 2 (RKB) Is Mean Sea Level: | | | | | 10087 ft | |

Targets

| Name | MD (ft) | TVD (ft) | Local N (ft) | Local E (ft) | Grid East (US ft) | Grid North (US ft) | Latitude | Longitude |
|--|----------|----------|--------------|--------------|-------------------|--------------------|-----------------|-----------------|
| ATLANTA FEDERAL 5-6H SECTION 05 | 0.00 | 0.00 | 0.00 | 1178295.92 | 421204.64 | 48°08'33.642"N | 103°43'48.834"W | |
| ATLANTA FEDERAL 5-6H SECTION 06 | 0.00 | 0.00 | 0.00 | 1178298.82 | 421204.28 | 48°08'33.642"N | 103°43'48.834"W | |
| ATLANTA FEDERAL 5-6H SECTION 07ES | 0.00 | 0.00 | 0.00 | 1178309.82 | 421204.84 | 48°08'33.682"N | 103°43'48.834"W | |
| ATLANTA 5-6H BHL ON PLAT REV-1(200'FSL & 598'FWL,SEC.06) | 10518.00 | -3688.04 | 5943.00 | 1180224.44 | 411128.65 | 48°09'25.304"N | 103°42'35.384"W | |
| ATLANTA FEDERAL 5-6H HARDLINE(598'FWL & 200'FSL) | 10530.00 | 0.00 | 0.00 | 1178309.82 | 421204.04 | 48°08'33.682"N | 103°43'48.834"W | |
| ATLANTA FEDERAL 5-6H BHL ON PLAT REV-2(200'FSL & 598'FWL,SEC.06) | 10530.00 | -9672.90 | 4958.00 | 1184176.35 | 411231.19 | 48°09'28.202"N | 103°42'35.151"W | |
| ATLANTA FEDERAL 5-6H BHL ON PLAT REV-3(200'FSL & 598'FWL,SEC.06) | 21158.73 | 10830.00 | -9672.90 | 4959.20 | 1184150.76 | 411231.00 | 48°09'28.202"N | 103°42'35.497"W |

Well Profile Data

| Design Comment | MD (ft) | Incl (°) | Az (°) | TVD (ft) | Local N (ft) | Local E (ft) | DLS (*100ft) | VS (ft) |
|----------------|----------|----------|---------|----------|--------------|--------------|--------------|----------|
| Tie On | 22.00 | 0.000 | 152.809 | 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| End of Tangent | 9957.04 | 0.000 | 152.809 | 9957.04 | 0.00 | 0.00 | 0.00 | 0.00 |
| End of Build | 10857.04 | 90.000 | 152.809 | 10530.00 | -509.64 | 261.81 | 10.00 | 572.96 |
| End of Tangent | 21158.73 | 90.000 | 152.809 | 10530.00 | -9672.90 | 4959.20 | 0.00 | 10874.65 |





Planned Wellpath Report

ATLANTA FEDERAL 5-6H (REV-D.0) PWP
Page 1 of 11



REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|-----------------------|----------|--|
| Operator | CONTINENTAL RESOURCES | Slot | SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06) |
| Area | NORTH DAKOTA | Well | ATLANTA FEDERAL 5-6H |
| Field | WILLIAMS COUNTY | Wellbore | ATLANTA FEDERAL 5-6H PWB |
| Facility | SEC.06-T153N-R101W | | |

REPORT SETUP INFORMATION

| | | | |
|---------------------|--|----------------------|--|
| Projection System | NAD83 / Lambert North Dakota SP, Northern Zone (3301), US feet | Software System | WellArchitect® 3.0.2 |
| North Reference | True | User | Painsetr |
| Scale | 0.999936 | Report Generated | 5/4/2012 at 9:10:20 AM |
| Convergence at slot | 2.40° West | Database/Source file | WA_Denver/ATLANTA_FEDERAL_5-6H_PWB.xml |

WELLPATH LOCATION

| | Local coordinates | | Grid coordinates | | Geographic coordinates | |
|-----------------------|-------------------|----------|------------------|-----------------|------------------------|-----------------|
| | North[ft] | East[ft] | Easting[US ft] | Northing[US ft] | Latitude | Longitude |
| Slot Location | 28.69 | 565.05 | 1179599.92 | 421204.04 | 48°06'33.662"N | 103°43'48.634"W |
| Facility Reference Pt | | | 1179034.20 | 421199.10 | 48°06'33.379"N | 103°43'56.960"W |
| Field Reference Pt | | | 1379474.78 | 594749.03 | 48°36'17.680"N | 102°56'05.560"W |

WELLPATH DATUM

| | | | |
|--------------------------|-------------------|--|-------------------|
| Calculation method | Minimum curvature | CYCLONE 2 (RKB) to Facility Vertical Datum | 1967.00ft |
| Horizontal Reference Pt | Slot | CYCLONE 2 (RKB) to Mean Sea Level | 1967.00ft |
| Vertical Reference Pt | CYCLONE 2 (RKB) | CYCLONE 2 (RKB) to Mud Line at Slot (SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06)) | 1967.00ft |
| MD Reference Pt | CYCLONE 2 (RKB) | Section Origin | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level | Section Azimuth | 152.81° |



Planned Wellpath Report
ATLANTA FEDERAL 5-6H (REV-D.0) PWP
 Page 2 of 11



REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|-----------------------|----------|--|
| Operator | CONTINENTAL RESOURCES | Slot | SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06) |
| Area | NORTH DAKOTA | Well | ATLANTA FEDERAL 5-6H |
| Field | WILLIAMS COUNTY | Wellbore | ATLANTA FEDERAL 5-6H PWB |
| Facility | SEC.06-T153N-R101W | | |

WELLPATH DATA (216 stations) † = interpolated/extrapolated station

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|----------|
| 0.00† | 0.000 | 152.809 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 22.00 | 0.000 | 152.809 | 22.00 | 0.00 | 0.00 | 0.00 | 0.00 | Tie On |
| 122.00† | 0.000 | 152.809 | 122.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 222.00† | 0.000 | 152.809 | 222.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 322.00† | 0.000 | 152.809 | 322.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 422.00† | 0.000 | 152.809 | 422.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 522.00† | 0.000 | 152.809 | 522.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 622.00† | 0.000 | 152.809 | 622.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 722.00† | 0.000 | 152.809 | 722.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 822.00† | 0.000 | 152.809 | 822.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 922.00† | 0.000 | 152.809 | 922.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1022.00† | 0.000 | 152.809 | 1022.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1122.00† | 0.000 | 152.809 | 1122.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1222.00† | 0.000 | 152.809 | 1222.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1322.00† | 0.000 | 152.809 | 1322.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1422.00† | 0.000 | 152.809 | 1422.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1522.00† | 0.000 | 152.809 | 1522.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1622.00† | 0.000 | 152.809 | 1622.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1722.00† | 0.000 | 152.809 | 1722.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1822.00† | 0.000 | 152.809 | 1822.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1922.00† | 0.000 | 152.809 | 1922.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2022.00† | 0.000 | 152.809 | 2022.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2122.00† | 0.000 | 152.809 | 2122.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2222.00† | 0.000 | 152.809 | 2222.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2322.00† | 0.000 | 152.809 | 2322.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2422.00† | 0.000 | 152.809 | 2422.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2522.00† | 0.000 | 152.809 | 2522.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2622.00† | 0.000 | 152.809 | 2622.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2722.00† | 0.000 | 152.809 | 2722.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2822.00† | 0.000 | 152.809 | 2822.00 | 0.00 | 0.00 | 0.00 | 0.00 | |



Planned Wellpath Report

ATLANTA FEDERAL 5-6H (REV-D.0) PWP
Page 3 of 11



REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|-----------------------|----------|--|
| Operator | CONTINENTAL RESOURCES | Slot | SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06) |
| Area | NORTH DAKOTA | Well | ATLANTA FEDERAL 5-6H |
| Field | WILLIAMS COUNTY | Wellbore | ATLANTA FEDERAL 5-6H PWB |
| Facility | SEC.06-T153N-R101W | | |

WELLPATH DATA (216 stations) † = interpolated/extrapolated station

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|----------|
| 2922.00† | 0.000 | 152.809 | 2922.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3022.00† | 0.000 | 152.809 | 3022.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3122.00† | 0.000 | 152.809 | 3122.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3222.00† | 0.000 | 152.809 | 3222.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3322.00† | 0.000 | 152.809 | 3322.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3422.00† | 0.000 | 152.809 | 3422.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3522.00† | 0.000 | 152.809 | 3522.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3622.00† | 0.000 | 152.809 | 3622.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3722.00† | 0.000 | 152.809 | 3722.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3822.00† | 0.000 | 152.809 | 3822.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3922.00† | 0.000 | 152.809 | 3922.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4022.00† | 0.000 | 152.809 | 4022.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4122.00† | 0.000 | 152.809 | 4122.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4222.00† | 0.000 | 152.809 | 4222.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4322.00† | 0.000 | 152.809 | 4322.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4422.00† | 0.000 | 152.809 | 4422.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4522.00† | 0.000 | 152.809 | 4522.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4622.00† | 0.000 | 152.809 | 4622.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4722.00† | 0.000 | 152.809 | 4722.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4822.00† | 0.000 | 152.809 | 4822.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4922.00† | 0.000 | 152.809 | 4922.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5022.00† | 0.000 | 152.809 | 5022.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5122.00† | 0.000 | 152.809 | 5122.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5222.00† | 0.000 | 152.809 | 5222.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5322.00† | 0.000 | 152.809 | 5322.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5422.00† | 0.000 | 152.809 | 5422.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5522.00† | 0.000 | 152.809 | 5522.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5622.00† | 0.000 | 152.809 | 5622.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5722.00† | 0.000 | 152.809 | 5722.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5822.00† | 0.000 | 152.809 | 5822.00 | 0.00 | 0.00 | 0.00 | 0.00 | |



Planned Wellpath Report

ATLANTA FEDERAL 5-6H (REV-D.0) PWP
Page 4 of 11



**BAKER
HUGHES**

REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|-----------------------|----------|--|
| Operator | CONTINENTAL RESOURCES | Slot | SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06) |
| Area | NORTH DAKOTA | Well | ATLANTA FEDERAL 5-6H |
| Field | WILLIAMS COUNTY | Wellbore | ATLANTA FEDERAL 5-6H PWB |
| Facility | SEC.06-T153N-R101W | | |

WELLPATH DATA (216 stations) † = interpolated/extrapolated station

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|----------|
| 5922.00† | 0.000 | 152.809 | 5922.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6022.00† | 0.000 | 152.809 | 6022.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6122.00† | 0.000 | 152.809 | 6122.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6222.00† | 0.000 | 152.809 | 6222.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6322.00† | 0.000 | 152.809 | 6322.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6422.00† | 0.000 | 152.809 | 6422.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6522.00† | 0.000 | 152.809 | 6522.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6622.00† | 0.000 | 152.809 | 6622.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6722.00† | 0.000 | 152.809 | 6722.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6822.00† | 0.000 | 152.809 | 6822.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6922.00† | 0.000 | 152.809 | 6922.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7022.00† | 0.000 | 152.809 | 7022.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7122.00† | 0.000 | 152.809 | 7122.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7222.00† | 0.000 | 152.809 | 7222.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7322.00† | 0.000 | 152.809 | 7322.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7422.00† | 0.000 | 152.809 | 7422.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7522.00† | 0.000 | 152.809 | 7522.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7622.00† | 0.000 | 152.809 | 7622.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7722.00† | 0.000 | 152.809 | 7722.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7822.00† | 0.000 | 152.809 | 7822.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7922.00† | 0.000 | 152.809 | 7922.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8022.00† | 0.000 | 152.809 | 8022.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8122.00† | 0.000 | 152.809 | 8122.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8222.00† | 0.000 | 152.809 | 8222.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8322.00† | 0.000 | 152.809 | 8322.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8422.00† | 0.000 | 152.809 | 8422.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8522.00† | 0.000 | 152.809 | 8522.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8622.00† | 0.000 | 152.809 | 8622.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8722.00† | 0.000 | 152.809 | 8722.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8822.00† | 0.000 | 152.809 | 8822.00 | 0.00 | 0.00 | 0.00 | 0.00 | |



Planned Wellpath Report
ATLANTA FEDERAL 5-6H (REV-D.0) PWP
 Page 5 of 11



REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|-----------------------|----------|--|
| Operator | CONTINENTAL RESOURCES | Slot | SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06) |
| Area | NORTH DAKOTA | Well | ATLANTA FEDERAL 5-6H |
| Field | WILLIAMS COUNTY | Wellbore | ATLANTA FEDERAL 5-6H PWB |
| Facility | SEC.06-T153N-R101W | | |

WELLPATH DATA (216 stations) † = interpolated/extrapolated station

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|----------------|
| 8922.00† | 0.000 | 152.809 | 8922.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 9022.00† | 0.000 | 152.809 | 9022.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 9122.00† | 0.000 | 152.809 | 9122.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 9222.00† | 0.000 | 152.809 | 9222.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 9322.00† | 0.000 | 152.809 | 9322.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 9422.00† | 0.000 | 152.809 | 9422.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 9522.00† | 0.000 | 152.809 | 9522.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 9622.00† | 0.000 | 152.809 | 9622.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 9722.00† | 0.000 | 152.809 | 9722.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 9822.00† | 0.000 | 152.809 | 9822.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 9922.00† | 0.000 | 152.809 | 9922.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 9957.04 | 0.000 | 152.809 | 9957.04 | 0.00 | 0.00 | 0.00 | 0.00 | End of Tangent |
| 10022.00† | 6.496 | 152.809 | 10021.86 | 3.68 | -3.27 | 1.68 | 10.00 | |
| 10122.00† | 16.496 | 152.809 | 10119.73 | 23.58 | -20.98 | 10.78 | 10.00 | |
| 10222.00† | 26.496 | 152.809 | 10212.66 | 60.18 | -53.53 | 27.50 | 10.00 | |
| 10322.00† | 36.496 | 152.809 | 10297.82 | 112.36 | -99.94 | 51.34 | 10.00 | |
| 10422.00† | 46.496 | 152.809 | 10372.62 | 178.53 | -158.80 | 81.58 | 10.00 | |
| 10522.00† | 56.496 | 152.809 | 10434.80 | 256.69 | -228.32 | 117.29 | 10.00 | |
| 10622.00† | 66.496 | 152.809 | 10482.46 | 344.45 | -306.39 | 157.40 | 10.00 | |
| 10722.00† | 76.496 | 152.809 | 10514.16 | 439.16 | -390.63 | 200.68 | 10.00 | |
| 10822.00† | 86.496 | 152.809 | 10528.93 | 537.94 | -478.49 | 245.81 | 10.00 | |
| 10857.04 | 90.000 | 152.809 | 10530.00 | 572.96 | -509.64 | 261.81 | 10.00 | End of Build |
| 10922.00† | 90.000 | 152.809 | 10530.00 | 637.92 | -567.42 | 291.50 | 0.00 | |
| 11022.00† | 90.000 | 152.809 | 10530.00 | 737.92 | -656.37 | 337.19 | 0.00 | |
| 11122.00† | 90.000 | 152.809 | 10530.00 | 837.92 | -745.32 | 382.89 | 0.00 | |
| 11222.00† | 90.000 | 152.809 | 10530.00 | 937.92 | -834.27 | 428.58 | 0.00 | |
| 11322.00† | 90.000 | 152.809 | 10530.00 | 1037.92 | -923.22 | 474.28 | 0.00 | |
| 11422.00† | 90.000 | 152.809 | 10530.00 | 1137.92 | -1012.17 | 519.97 | 0.00 | |
| 11522.00† | 90.000 | 152.809 | 10530.00 | 1237.92 | -1101.11 | 565.67 | 0.00 | |
| 11622.00† | 90.000 | 152.809 | 10530.00 | 1337.92 | -1190.06 | 611.36 | 0.00 | |



Planned Wellpath Report

ATLANTA FEDERAL 5-6H (REV-D.0) PWP

Page 6 of 11



REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|------------------------------|----------|---|
| Operator | CONTINENTAL RESOURCES | Slot | SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06) |
| Area | NORTH DAKOTA | Well | ATLANTA FEDERAL 5-6H |
| Field | WILLIAMS COUNTY | Wellbore | ATLANTA FEDERAL 5-6H PWB |
| Facility | SEC.06-T153N-R101W | | |

WELLPATH DATA (216 stations) † = interpolated/extrapolated station

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|----------|
| 11722.00† | 90.000 | 152.809 | 10530.00 | 1437.92 | -1279.01 | 657.06 | 0.00 | |
| 11822.00† | 90.000 | 152.809 | 10530.00 | 1537.92 | -1367.96 | 702.75 | 0.00 | |
| 11922.00† | 90.000 | 152.809 | 10530.00 | 1637.92 | -1456.91 | 748.45 | 0.00 | |
| 12022.00† | 90.000 | 152.809 | 10530.00 | 1737.92 | -1545.86 | 794.15 | 0.00 | |
| 12122.00† | 90.000 | 152.809 | 10530.00 | 1837.92 | -1634.81 | 839.84 | 0.00 | |
| 12222.00† | 90.000 | 152.809 | 10530.00 | 1937.92 | -1723.76 | 885.54 | 0.00 | |
| 12322.00† | 90.000 | 152.809 | 10530.00 | 2037.92 | -1812.71 | 931.23 | 0.00 | |
| 12422.00† | 90.000 | 152.809 | 10530.00 | 2137.92 | -1901.66 | 976.93 | 0.00 | |
| 12522.00† | 90.000 | 152.809 | 10530.00 | 2237.92 | -1990.61 | 1022.62 | 0.00 | |
| 12622.00† | 90.000 | 152.809 | 10530.00 | 2337.92 | -2079.55 | 1068.32 | 0.00 | |
| 12722.00† | 90.000 | 152.809 | 10530.00 | 2437.92 | -2168.50 | 1114.01 | 0.00 | |
| 12822.00† | 90.000 | 152.809 | 10530.00 | 2537.92 | -2257.45 | 1159.71 | 0.00 | |
| 12922.00† | 90.000 | 152.809 | 10530.00 | 2637.92 | -2346.40 | 1205.40 | 0.00 | |
| 13022.00† | 90.000 | 152.809 | 10530.00 | 2737.92 | -2435.35 | 1251.10 | 0.00 | |
| 13122.00† | 90.000 | 152.809 | 10530.00 | 2837.92 | -2524.30 | 1296.79 | 0.00 | |
| 13222.00† | 90.000 | 152.809 | 10530.00 | 2937.92 | -2613.25 | 1342.49 | 0.00 | |
| 13322.00† | 90.000 | 152.809 | 10530.00 | 3037.92 | -2702.20 | 1388.18 | 0.00 | |
| 13422.00† | 90.000 | 152.809 | 10530.00 | 3137.92 | -2791.15 | 1433.88 | 0.00 | |
| 13522.00† | 90.000 | 152.809 | 10530.00 | 3237.92 | -2880.10 | 1479.57 | 0.00 | |
| 13622.00† | 90.000 | 152.809 | 10530.00 | 3337.92 | -2969.05 | 1525.27 | 0.00 | |
| 13722.00† | 90.000 | 152.809 | 10530.00 | 3437.92 | -3057.99 | 1570.97 | 0.00 | |
| 13822.00† | 90.000 | 152.809 | 10530.00 | 3537.92 | -3146.94 | 1616.66 | 0.00 | |
| 13922.00† | 90.000 | 152.809 | 10530.00 | 3637.92 | -3235.89 | 1662.36 | 0.00 | |
| 14022.00† | 90.000 | 152.809 | 10530.00 | 3737.92 | -3324.84 | 1708.05 | 0.00 | |
| 14122.00† | 90.000 | 152.809 | 10530.00 | 3837.92 | -3413.79 | 1753.75 | 0.00 | |
| 14222.00† | 90.000 | 152.809 | 10530.00 | 3937.92 | -3502.74 | 1799.44 | 0.00 | |
| 14322.00† | 90.000 | 152.809 | 10530.00 | 4037.92 | -3591.69 | 1845.14 | 0.00 | |
| 14422.00† | 90.000 | 152.809 | 10530.00 | 4137.92 | -3680.64 | 1890.83 | 0.00 | |
| 14522.00† | 90.000 | 152.809 | 10530.00 | 4237.92 | -3769.59 | 1936.53 | 0.00 | |
| 14622.00† | 90.000 | 152.809 | 10530.00 | 4337.92 | -3858.54 | 1982.22 | 0.00 | |



Planned Wellpath Report

ATLANTA FEDERAL 5-6H (REV-D.0) PWP

Page 7 of 11



REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|-----------------------|----------|--|
| Operator | CONTINENTAL RESOURCES | Slot | SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06) |
| Area | NORTH DAKOTA | Well | ATLANTA FEDERAL 5-6H |
| Field | WILLIAMS COUNTY | Wellbore | ATLANTA FEDERAL 5-6H PWB |
| Facility | SEC.06-T153N-R101W | | |

WELLPATH DATA (216 stations) † = interpolated/extrapolated station

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|----------|
| 14722.00† | 90.000 | 152.809 | 10530.00 | 4437.92 | -3947.49 | 2027.92 | 0.00 | |
| 14822.00† | 90.000 | 152.809 | 10530.00 | 4537.92 | -4036.43 | 2073.61 | 0.00 | |
| 14922.00† | 90.000 | 152.809 | 10530.00 | 4637.92 | -4125.38 | 2119.31 | 0.00 | |
| 15022.00† | 90.000 | 152.809 | 10530.00 | 4737.92 | -4214.33 | 2165.00 | 0.00 | |
| 15122.00† | 90.000 | 152.809 | 10530.00 | 4837.92 | -4303.28 | 2210.70 | 0.00 | |
| 15222.00† | 90.000 | 152.809 | 10530.00 | 4937.92 | -4392.23 | 2256.39 | 0.00 | |
| 15322.00† | 90.000 | 152.809 | 10530.00 | 5037.92 | -4481.18 | 2302.09 | 0.00 | |
| 15422.00† | 90.000 | 152.809 | 10530.00 | 5137.92 | -4570.13 | 2347.78 | 0.00 | |
| 15522.00† | 90.000 | 152.809 | 10530.00 | 5237.92 | -4659.08 | 2393.48 | 0.00 | |
| 15622.00† | 90.000 | 152.809 | 10530.00 | 5337.92 | -4748.03 | 2439.18 | 0.00 | |
| 15722.00† | 90.000 | 152.809 | 10530.00 | 5437.92 | -4836.98 | 2484.87 | 0.00 | |
| 15822.00† | 90.000 | 152.809 | 10530.00 | 5537.92 | -4925.93 | 2530.57 | 0.00 | |
| 15922.00† | 90.000 | 152.809 | 10530.00 | 5637.92 | -5014.87 | 2576.26 | 0.00 | |
| 16022.00† | 90.000 | 152.809 | 10530.00 | 5737.92 | -5103.82 | 2621.96 | 0.00 | |
| 16122.00† | 90.000 | 152.809 | 10530.00 | 5837.92 | -5192.77 | 2667.65 | 0.00 | |
| 16222.00† | 90.000 | 152.809 | 10530.00 | 5937.92 | -5281.72 | 2713.35 | 0.00 | |
| 16322.00† | 90.000 | 152.809 | 10530.00 | 6037.92 | -5370.67 | 2759.04 | 0.00 | |
| 16422.00† | 90.000 | 152.809 | 10530.00 | 6137.92 | -5459.62 | 2804.74 | 0.00 | |
| 16522.00† | 90.000 | 152.809 | 10530.00 | 6237.92 | -5548.57 | 2850.43 | 0.00 | |
| 16622.00† | 90.000 | 152.809 | 10530.00 | 6337.92 | -5637.52 | 2896.13 | 0.00 | |
| 16722.00† | 90.000 | 152.809 | 10530.00 | 6437.92 | -5726.47 | 2941.82 | 0.00 | |
| 16822.00† | 90.000 | 152.809 | 10530.00 | 6537.92 | -5815.42 | 2987.52 | 0.00 | |
| 16922.00† | 90.000 | 152.809 | 10530.00 | 6637.92 | -5904.37 | 3033.21 | 0.00 | |
| 17022.00† | 90.000 | 152.809 | 10530.00 | 6737.92 | -5993.31 | 3078.91 | 0.00 | |
| 17122.00† | 90.000 | 152.809 | 10530.00 | 6837.92 | -6082.26 | 3124.60 | 0.00 | |
| 17222.00† | 90.000 | 152.809 | 10530.00 | 6937.92 | -6171.21 | 3170.30 | 0.00 | |
| 17322.00† | 90.000 | 152.809 | 10530.00 | 7037.92 | -6260.16 | 3216.00 | 0.00 | |
| 17422.00† | 90.000 | 152.809 | 10530.00 | 7137.92 | -6349.11 | 3261.69 | 0.00 | |
| 17522.00† | 90.000 | 152.809 | 10530.00 | 7237.92 | -6438.06 | 3307.39 | 0.00 | |
| 17622.00† | 90.000 | 152.809 | 10530.00 | 7337.92 | -6527.01 | 3353.08 | 0.00 | |



Planned Wellpath Report

ATLANTA FEDERAL 5-6H (REV-D.0) PWP
Page 8 of 11



REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|-----------------------|----------|--|
| Operator | CONTINENTAL RESOURCES | Slot | SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06) |
| Area | NORTH DAKOTA | Well | ATLANTA FEDERAL 5-6H |
| Field | WILLIAMS COUNTY | Wellbore | ATLANTA FEDERAL 5-6H PWB |
| Facility | SEC.06-T153N-R101W | | |

WELLPATH DATA (216 stations) † = interpolated/extrapolated station

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|------------------|----------|
| 17722.00† | 90.000 | 152.809 | 10530.00 | 7437.92 | -6615.96 | 3398.78 | 0.00 | |
| 17822.00† | 90.000 | 152.809 | 10530.00 | 7537.92 | -6704.91 | 3444.47 | 0.00 | |
| 17922.00† | 90.000 | 152.809 | 10530.00 | 7637.92 | -6793.86 | 3490.17 | 0.00 | |
| 18022.00† | 90.000 | 152.809 | 10530.00 | 7737.92 | -6882.81 | 3535.86 | 0.00 | |
| 18122.00† | 90.000 | 152.809 | 10530.00 | 7837.92 | -6971.76 | 3581.56 | 0.00 | |
| 18222.00† | 90.000 | 152.809 | 10530.00 | 7937.92 | -7060.70 | 3627.25 | 0.00 | |
| 18322.00† | 90.000 | 152.809 | 10530.00 | 8037.92 | -7149.65 | 3672.95 | 0.00 | |
| 18422.00† | 90.000 | 152.809 | 10530.00 | 8137.92 | -7238.60 | 3718.64 | 0.00 | |
| 18522.00† | 90.000 | 152.809 | 10530.00 | 8237.92 | -7327.55 | 3764.34 | 0.00 | |
| 18622.00† | 90.000 | 152.809 | 10530.00 | 8337.92 | -7416.50 | 3810.03 | 0.00 | |
| 18722.00† | 90.000 | 152.809 | 10530.00 | 8437.92 | -7505.45 | 3855.73 | 0.00 | |
| 18822.00† | 90.000 | 152.809 | 10530.00 | 8537.92 | -7594.40 | 3901.42 | 0.00 | |
| 18922.00† | 90.000 | 152.809 | 10530.00 | 8637.92 | -7683.35 | 3947.12 | 0.00 | |
| 19022.00† | 90.000 | 152.809 | 10530.00 | 8737.92 | -7772.30 | 3992.81 | 0.00 | |
| 19122.00† | 90.000 | 152.809 | 10530.00 | 8837.92 | -7861.25 | 4038.51 | 0.00 | |
| 19222.00† | 90.000 | 152.809 | 10530.00 | 8937.92 | -7950.20 | 4084.21 | 0.00 | |
| 19322.00† | 90.000 | 152.809 | 10530.00 | 9037.92 | -8039.14 | 4129.90 | 0.00 | |
| 19422.00† | 90.000 | 152.809 | 10530.00 | 9137.92 | -8128.09 | 4175.60 | 0.00 | |
| 19522.00† | 90.000 | 152.809 | 10530.00 | 9237.92 | -8217.04 | 4221.29 | 0.00 | |
| 19622.00† | 90.000 | 152.809 | 10530.00 | 9337.92 | -8305.99 | 4266.99 | 0.00 | |
| 19722.00† | 90.000 | 152.809 | 10530.00 | 9437.92 | -8394.94 | 4312.68 | 0.00 | |
| 19822.00† | 90.000 | 152.809 | 10530.00 | 9537.92 | -8483.89 | 4358.38 | 0.00 | |
| 19922.00† | 90.000 | 152.809 | 10530.00 | 9637.92 | -8572.84 | 4404.07 | 0.00 | |
| 20022.00† | 90.000 | 152.809 | 10530.00 | 9737.92 | -8661.79 | 4449.77 | 0.00 | |
| 20122.00† | 90.000 | 152.809 | 10530.00 | 9837.92 | -8750.74 | 4495.46 | 0.00 | |
| 20222.00† | 90.000 | 152.809 | 10530.00 | 9937.92 | -8839.69 | 4541.16 | 0.00 | |
| 20322.00† | 90.000 | 152.809 | 10530.00 | 10037.92 | -8928.64 | 4586.85 | 0.00 | |
| 20422.00† | 90.000 | 152.809 | 10530.00 | 10137.92 | -9017.58 | 4632.55 | 0.00 | |
| 20522.00† | 90.000 | 152.809 | 10530.00 | 10237.92 | -9106.53 | 4678.24 | 0.00 | |
| 20622.00† | 90.000 | 152.809 | 10530.00 | 10337.92 | -9195.48 | 4723.94 | 0.00 | |



Planned Wellpath Report

ATLANTA FEDERAL 5-6H (REV-D.0) PWP
Page 9 of 11



REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|-----------------------|----------|--|
| Operator | CONTINENTAL RESOURCES | Slot | SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06) |
| Area | NORTH DAKOTA | Well | ATLANTA FEDERAL 5-6H |
| Field | WILLIAMS COUNTY | Wellbore | ATLANTA FEDERAL 5-6H PWB |
| Facility | SEC.06-T153N-R101W | | |

WELLPATH DATA (216 stations) † = interpolated/extrapolated station

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | DLS [°/100ft] | Comments |
|-----------|-----------------|-------------|-----------------------|----------------|------------|-----------|---------------|----------------|
| 20722.00† | 90.000 | 152.809 | 10530.00 | 10437.92 | -9284.43 | 4769.63 | 0.00 | |
| 20822.00† | 90.000 | 152.809 | 10530.00 | 10537.92 | -9373.38 | 4815.33 | 0.00 | |
| 20922.00† | 90.000 | 152.809 | 10530.00 | 10637.92 | -9462.33 | 4861.03 | 0.00 | |
| 21022.00† | 90.000 | 152.809 | 10530.00 | 10737.92 | -9551.28 | 4906.72 | 0.00 | |
| 21122.00† | 90.000 | 152.809 | 10530.00 | 10837.92 | -9640.23 | 4952.42 | 0.00 | |
| 21158.73 | 90.000 | 152.809 | 10530.00 ¹ | 10874.65 | -9672.90 | 4969.20 | 0.00 | End of Tangent |

HOLE & CASING SECTIONS - Ref Wellbore: ATLANTA FEDERAL 5-6H PWB Ref Wellpath: ATLANTA FEDERAL 5-6H (REV-D.0) PWP

| String/Diameter | Start MD [ft] | End MD [ft] | Interval [ft] | Start TVD [ft] | End TVD [ft] | Start N/S [ft] | Start E/W [ft] | End N/S [ft] | End E/W [ft] |
|-------------------------|---------------|-------------|---------------|----------------|--------------|----------------|----------------|--------------|--------------|
| 7in Casing Intermediate | 22.00 | 10857.04 | 10835.04 | 22.00 | 10530.00 | 0.00 | 0.00 | -509.64 | 261.81 |



Planned Wellpath Report

ATLANTA FEDERAL 5-6H (REV-D.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

| | | | | | | | |
|----------|------------------------------|----------|---|--|--|--|--|
| Operator | CONTINENTAL RESOURCES | Slot | SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06) | | | | |
| Area | NORTH DAKOTA | Well | ATLANTA FEDERAL 5-6H | | | | |
| Field | WILLIAMS COUNTY | Wellbore | ATLANTA FEDERAL 5-6H PWB | | | | |
| Facility | SEC.06-T153N-R101W | | | | | | |

TARGETS

| Name | MD [ft] | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Shape |
|--|------------|-------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|---------|
| ATLANTA FEDERAL 5-6H SECTION 06 | | 0.00 | 0.00 | 0.00 | 1179599.92 | 421204.04 | 48°06'33.662"N | 103°43'48.634"W | polygon |
| ATLANTA FEDERAL 5-6H SECTION 08 | | 0.00 | 0.00 | 0.00 | 1179599.92 | 421204.04 | 48°06'33.662"N | 103°43'48.634"W | polygon |
| ATLANTA FEDERAL 5-6H SECTION LINES | | 0.00 | 0.00 | 0.00 | 1179599.92 | 421204.04 | 48°06'33.662"N | 103°43'48.634"W | polygon |
| ATLANTA 5-6H BHL ON PLAT REV-1 (200'FSL & 598'FWL,SEC.08) | | 10518.00 | -9865.04 | 5043.00 | 1184224.44 | 411136.85 | 48°04'56.304"N | 103°42'34.364"W | point |
| ATLANTA FEDERAL 5-6H HARDLINES (500'N/W & 200'S/E) | | 10530.00 | 0.00 | 0.00 | 1179599.92 | 421204.04 | 48°06'33.662"N | 103°43'48.634"W | polygon |
| ATLANTA FEDERAL 5-6H BHL ON PLAT REV-2(200'FSL & 598'FWL,SEC.08) | | 10530.00 | -9672.90 | 4986.80 | 1184176.35 | 411331.16 | 48°04'58.200"N | 103°42'35.191"W | point |
| 1) ATLANTA FEDERAL 5-6H BHL ON PLAT REV-3(200'FSL & 598'FWL,SEC.08) | 21158.73 | 10530.00 | -9672.90 | 4969.20 | 1184158.76 | 411331.90 | 48°04'58.200"N | 103°42'35.450"W | point |

| SURVEY PROGRAM - Ref Wellbore: ATLANTA FEDERAL 5-6H PWB | | Ref Wellpath: ATLANTA FEDERAL 5-6H (REV-D.0) PWP | | | | | |
|---|----------------|--|--|------------------|--|--------------------------|--|
| Start MD [ft] | End MD [ft] | Positional Uncertainty Model | | Log Name/Comment | | Wellbore | |
| 22.00 | 22000.00 | NaviTrak (Standard) | | | | ATLANTA FEDERAL 5-6H PWB | |

iâ



Planned Wellpath Report
ATLANTA FEDERAL 5-6H (REV-D.0) PWP
 Page 11 of 11



REFERENCE WELLPATH IDENTIFICATION

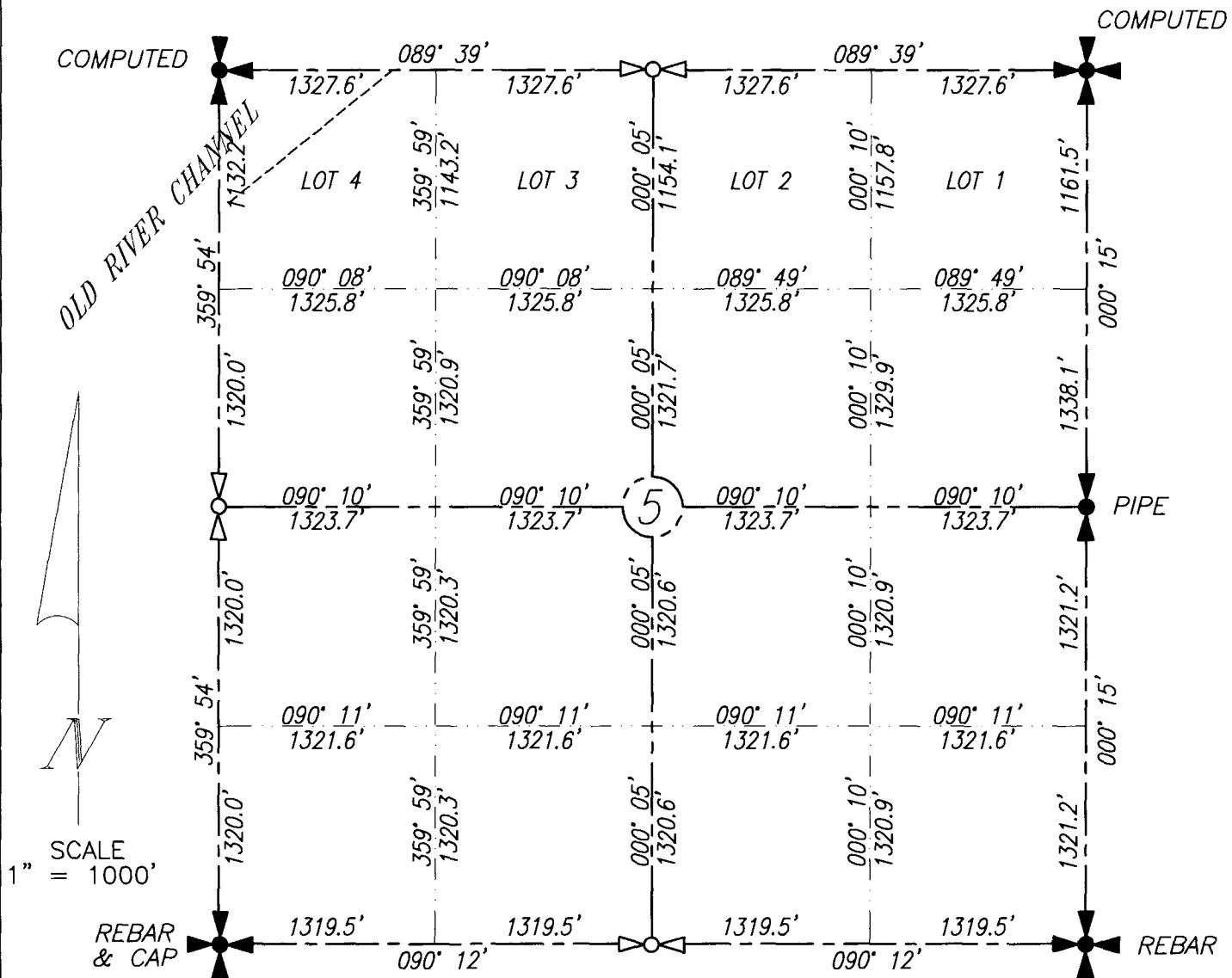
| | | | |
|----------|-----------------------|----------|--|
| Operator | CONTINENTAL RESOURCES | Slot | SLOT#05 ATLANTA FEDERAL 5-6H(495'FNL & 835'FWL,SEC.06) |
| Area | NORTH DAKOTA | Well | ATLANTA FEDERAL 5-6H |
| Field | WILLIAMS COUNTY | Wellbore | ATLANTA FEDERAL 5-6H PWB |
| Facility | SEC.06-T153N-R101W | | |

DESIGN COMMENTS

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Comment |
|------------|--------------------|----------------|-------------|----------------|
| 22.00 | 0.000 | 152.809 | 22.00 | Tie On |
| 9957.04 | 0.000 | 152.809 | 9957.04 | End of Tangent |
| 10857.04 | 90.000 | 152.809 | 10530.00 | End of Build |
| 21158.73 | 90.000 | 152.809 | 10530.00 | End of Tangent |

HORIZONTAL SECTION PLAT
CONTINENTAL RESOURCES INC.

ATLANTA 14-6H
SECTION 5, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA
MCKENZIE COUNTY, NORTH DAKOTA



ALL CORNERS SHOWN ON THIS PLAT WERE FOUND IN THE FIELD
DISTANCES TO ALL OTHERS ARE CALCULATED.
ALL BEARINGS SHOWN ARE ASSUMED.

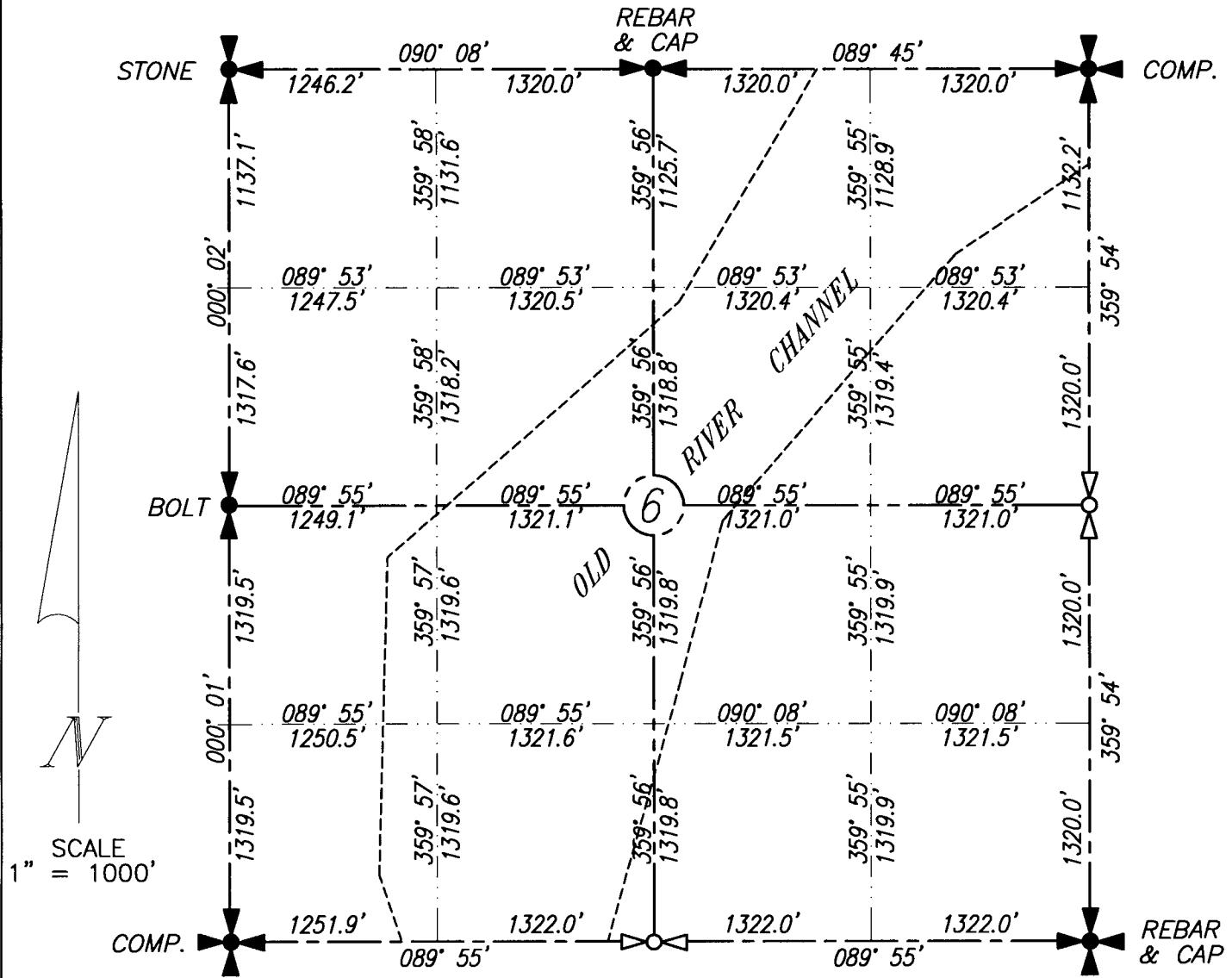
I CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS
WORK PERFORMED BY ME OR UNDER MY RESPONSIBLE
CHARGE AND IS TRUE AND CORRECT TO THE BEST OF
MY KNOWLEDGE AND BELIEF
L.S. 3366

John Paulson
John Paulson P.L.S. 3366

BROSZ ENGINEERING INC.

BOX 357
BOWMAN, N.D. 58623
PHONE: 701-523-3340
FAX: 701-523-5243
PROJECT NO. 12-10

HORIZONTAL SECTION PLAT
CONTINENTAL RESOURCES INC.
ATLANTA 5-6H
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA
MCKENZIE COUNTY, NORTH DAKOTA



MOST OF THE SECTION IS LOTTED DUE TO THE MISSOURI RIVER.

ALL CORNERS SHOWN ON THIS PLAT WERE FOUND IN THE FIELD
DISTANCES TO ALL OTHERS ARE CALCULATED.
~~ALL BEARINGS SHOWN ARE ASSUMED.~~

I CERTIFY THAT THE REGISTERED CORRECTLY REPRESENTS
WORK PERFORMED BY ME OR UNDER MY RESPONSIBLE
CHARGE, AND IS TRUE, AND CORRECT TO THE BEST OF
MY KNOWLEDGE AND BELIEF.

~~JOHN PAULSON RES 376~~

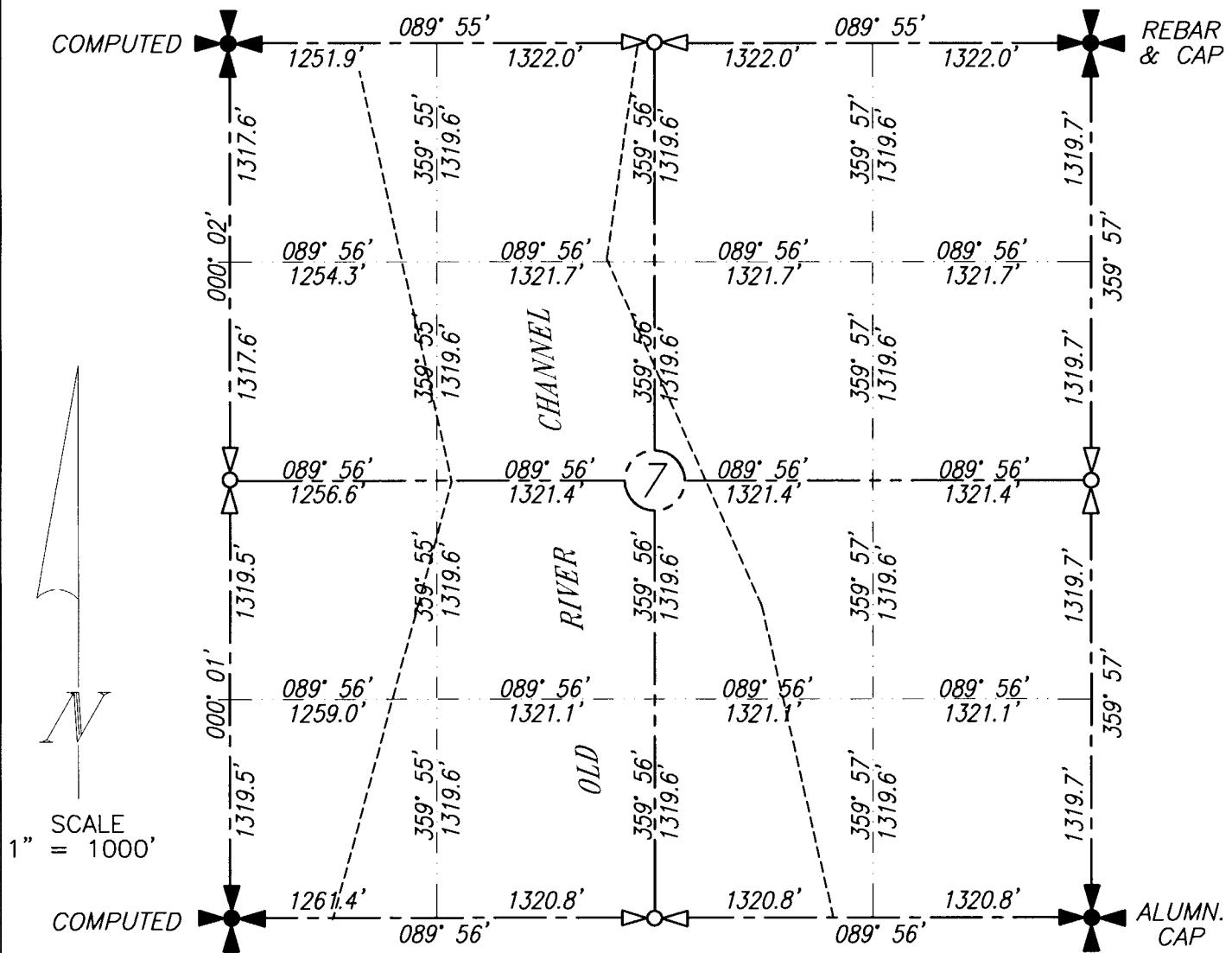
BROSZ ENGINEERING INC.

BOX 357
BOWMAN, N.D. 58623
PHONE: 701-523-3340
FAX: 701-523-5243

PROJECT NO. 12-10

HORIZONTAL SECTION PLAT
CONTINENTAL RESOURCES INC.

ATLANTA 4-6H
SECTION 7, T153N, R101W
MCKENZIE COUNTY, NORTH DAKOTA



MOST OF THE SECTION IS LOTTED DUE TO THE MISSOURI RIVER.

ALL CORNERS SHOWN ON THIS PLAT WERE FOUND IN THE FIELD
DISTANCES TO ALL OTHERS ARE CALCULATED.
ALL BEARINGS SHOWN ARE ASSUMED.

I CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS
WORK PERFORMED BY ME OR UNDER MY RESPONSIBLE
CHARGE, AND IS TRUE AND CORRECT TO THE BEST OF
MY KNOWLEDGE AND BELIEF
REGISTERED
125.3366

JOHN PAULSON, P.E., S.R.E.
JOHN PAULSON, P.E., S.R.E. 3366

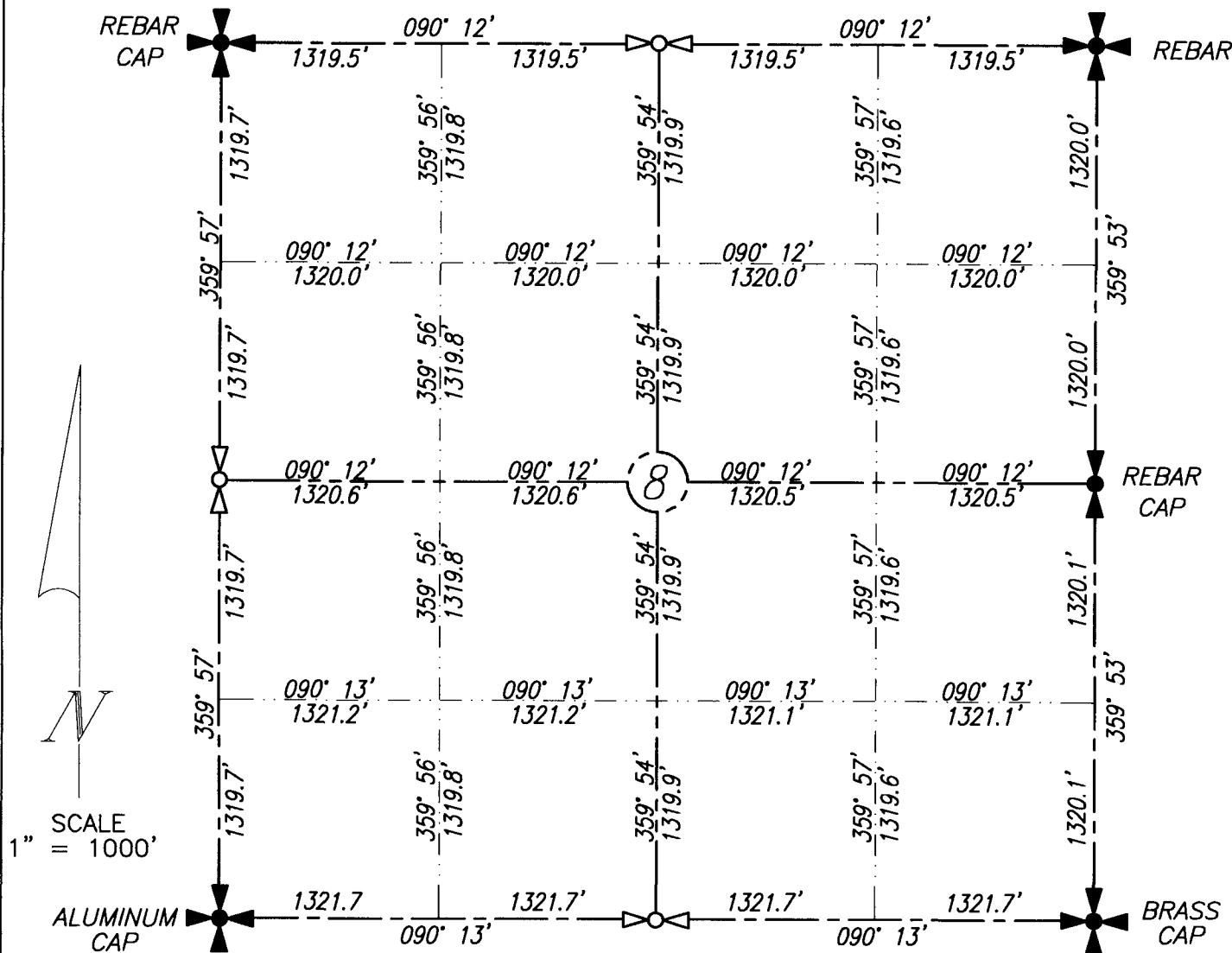
BROSZ ENGINEERING INC.

BOX 357
BOWMAN, N.D. 58623
PHONE: 701-523-3340
FAX: 701-523-5243

PROJECT NO. 12-10

HORIZONTAL SECTION PLAT
CONTINENTAL RESOURCES INC.
ATLANTA 5-6H FEDERAL
SECTION 8, T153N, R101W
MCKENZIE COUNTY, NORTH DAKOTA

REVISED: 5-2-2012

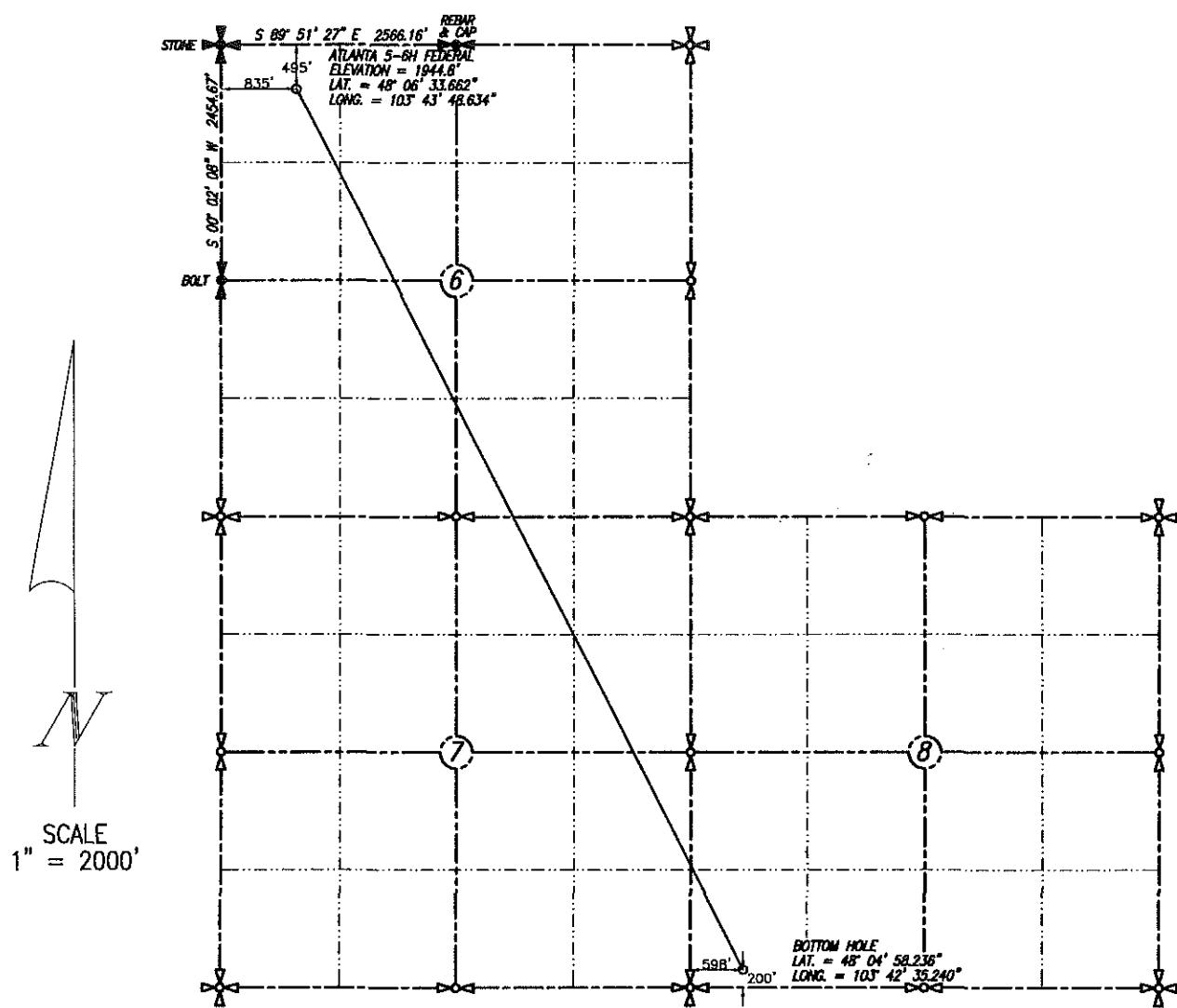


ALL CORNERS SHOWN ON THIS PLAT WERE FOUND IN THE FIELD
DISTANCES TO ALL OTHERS ARE CALCULATED.
ALL BEARINGS SHOWN ARE ASSUMED.

I CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS
WORK PERFORMED BY ME OR UNDER MY RESPONSIBLE
CHARGE, AND IS TRUE AND CORRECT TO THE BEST OF
MY KNOWLEDGE AND BELIEF SURVEYOR
L.S. 3366
John Paulson
JOHN PAULSON R.L.S. 3366 N.D.
5-2-12

BROSZ ENGINEERING INC.
BOX 357
BOWMAN, N.D. 58623
PHONE: 701-523-3340
FAX: 701-523-5243
PROJECT NO. 12-10

BOTTOM HOLE LOCATION PLAT
 CONTINENTAL RESOURCES INC.
 ATLANTA 5-6H FEDERAL
 SECTION 6, T153N, R101W
 WILLIAMS COUNTY, NORTH DAKOTA
 495' FNL & 835' FWL



I CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS
 WORK PERFORMED BY ME OR UNDER MY RESPONSIBLE
 CHARGE, AND IS TRUE AND CORRECT TO THE BEST OF
 MY KNOWLEDGE AND BELIEF

John Newby 4/23/12
 JOHN NEWBY, L.S. 3366

LAND
 SURVEYOR
 L.S. 3366
 NORTH DAKOTA

DATE STAKED: 2-9-2012

BASIS OF VERTICAL DATUM:
 NAVD 1988 GEOD 09

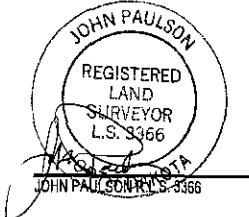
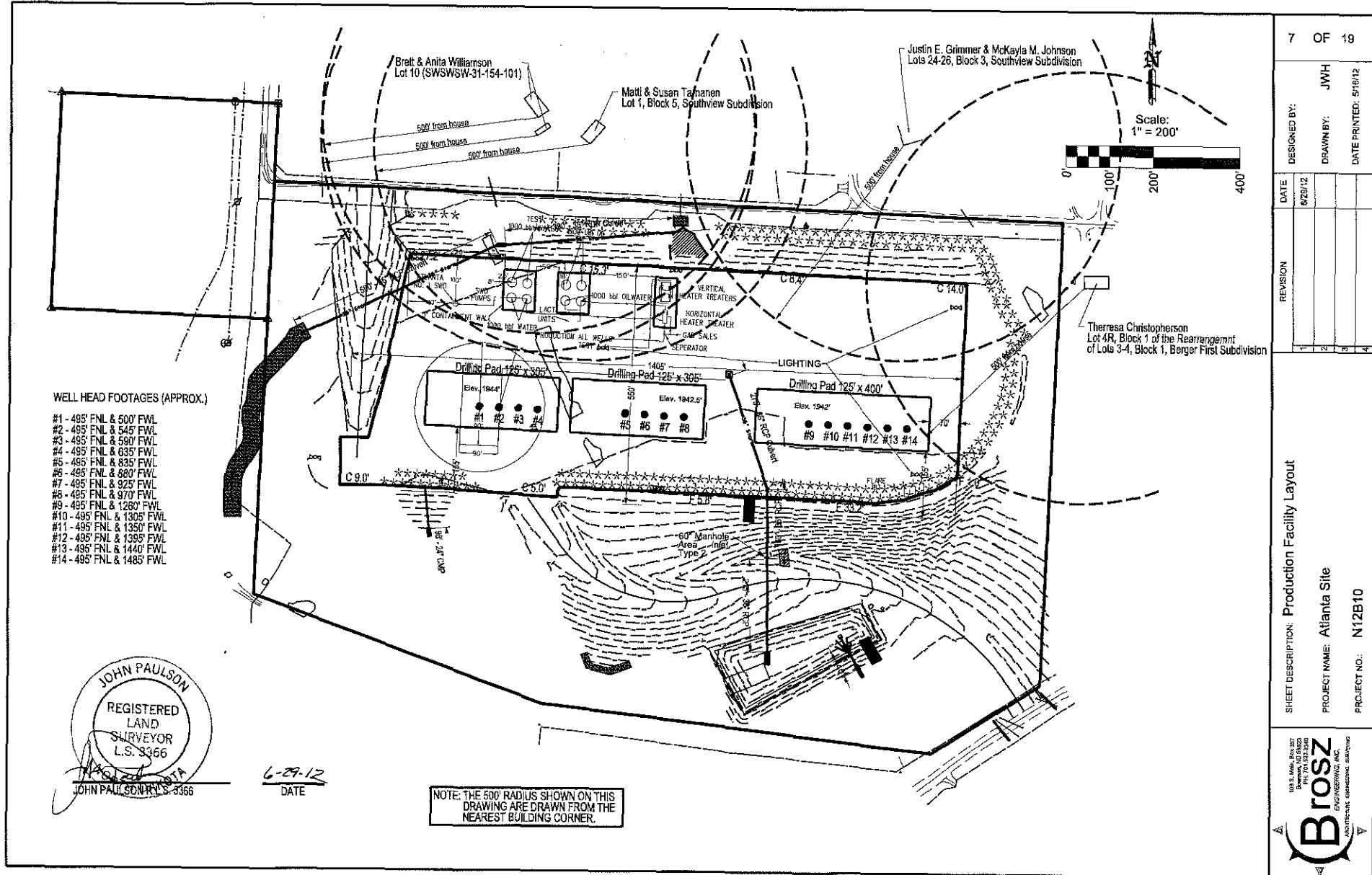
PERSON AUTHORIZING SURVEY;
CHAD NEWBY

EXPLANATION AREA: NAD83(CORS96)

BASIS OF BEARING: TRUE NORTH

BROSZ ENGINEERING INC.

BOX 357
 BOWMAN, N.D. 58623
 PHONE: 701-523-3340
 FAX: 701-523-5243
 PROJECT NO. 12-10



Spill Toolkit Inventory

(To be Checked After Each Use)

| Supplies | Quantity | Actual | Supplies | Quantity | Actual |
|------------------------------------|----------|--------|--|----------|--------|
| Personal Protection | | | Miscellaneous | | |
| Trauma/1st Aid Kit | 1 | | EnviroClean (5-gal units of concentrate) | 2 | |
| Eye Wash | 1 | | Duct Tape (Case) | 3 | |
| Hand Cleaner | 2 | | Flashlights | 6 | |
| Nitrile Gloves (L & XL Case) | 2 | | Flood Lights | 2 | |
| FRC Rain Coat - Extra Large | 3 | | Extension Cord 50' 12-gauge | 5 | |
| FRC Rain Coat - Large | 3 | | 55-gal. Drums w/lids | 2 | |
| Rubber Safety Toed Boots - Size 10 | 2 | | Large Trash Cans | 2 | |
| Rubber Safety Toed Boots - Size 11 | 2 | | HD Drum Liners - boxes | 2 | |
| Rubber Safety Toed Boots - Size 12 | 2 | | Hoses - Kit (Blue & Green) | 5 | |
| FRC Tyvex Suits - Case XL | 1 | | Plastic Buckets | 5 | |
| Neoprene Chest Waders - L | 1 | | Propane Cylinders - 20-lb. | 2 | |
| Neoprene Chest Waders - L | 1 | | Propane Weed Burner W/Hose | 1 | |
| Containment | | | Pump - Trash | 2 | |
| Absorbent (sphag) | 10 | | Pump - 115V Water Transfer | 2 | |
| Absorbent Boom 3" x 10' | 2 | | Gas Powered Generator (3-5K Watt) | 1 | |
| Absorbent Boom 5" x 10' | 10 | | Misc. Ratchet Straps | 6 | |
| Absorbent Boom 8" x 10' | 8 | | Rope 1/2" x 100' | 2 | |
| Containment Boom - Fast Water | 3 | | Rope 1/4" x 50' | 4 | |
| Absorbent Pads (Hydrocarbon) | 10 | | Rope 3/8" x 100' | 2 | |
| Absorbent Pads (Universal) | 5 | | Shop Towels - box | 2 | |
| Absorbent Pillows 18" x 18" box | 3 | | Caulking Gun | 2 | |
| Absorbent Pom Pom Cube | 7 | | Silicon Tubes | 10 | |
| Absorbent Sweep - 16" x 100' - Bag | 5 | | Metal Stakes/Spikes | 8 | |
| Miscellaneous | | | Metal T-Posts | 6 | |
| Antifreeze | 2 | | Bungee Cords | 3 | |
| Push Broom | 2 | | Wire - 25' roll - smooth | 1 | |
| Shovels | 2 | | Fire Extinguisher | 1 | |
| Rake | 5 | | Equipment Hooks | 6 | |
| Squeegees | 2 | | Shelving | 4 | |
| Scoop | 2 | | Drawers | 1 | |
| Spark Resistant Scoop | 1 | | Misc. Building Supplies | 1 | |

Tabor, David

From: Becky Barnes <Becky.Barnes@clr.com>
Sent: Wednesday, June 06, 2012 1:46 PM
To: Tabor, David
Subject: Atlanta Pad Wells

All cuttings for the Atlanta Pad wells will be hauled to the Tioga Prairie disposal.

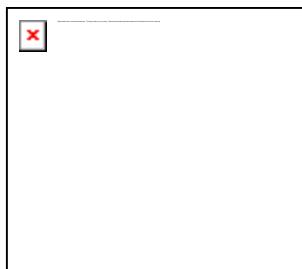
Prairie Disposal for Cuttings
102C10 52nd St NW
Tioga ND 58852

Let me know if there is anything else that you need.

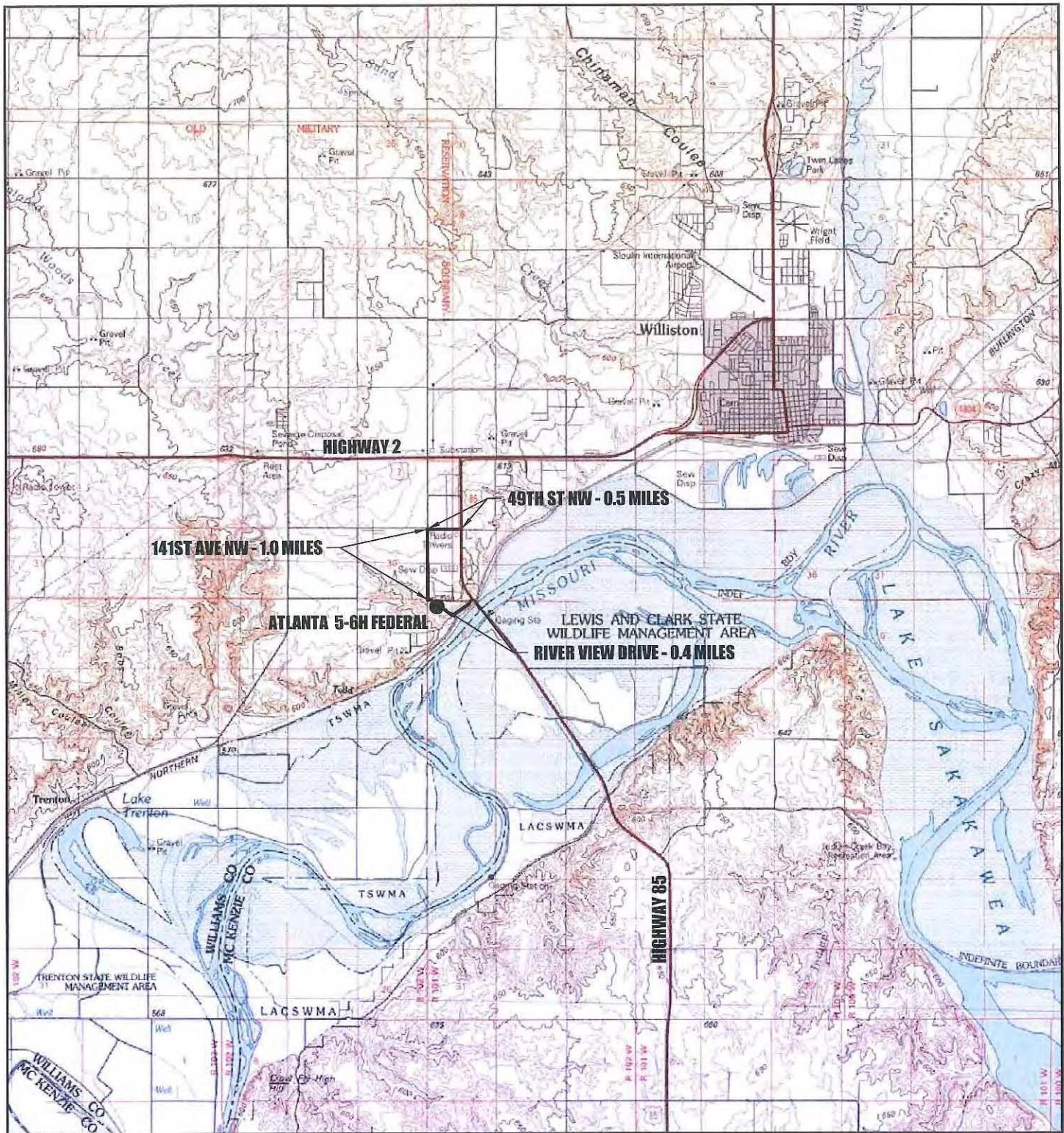
Thanks.

Bb

Becky Barnes
Regulatory Compliance Specialist
Continental Resources, Inc.
Office 405-234-9161
Fax 580-548-5293



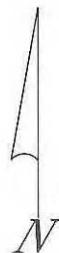
NOTICE: This message contains confidential information and is intended for the individual named. If you are not the named addressee, you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by reply e-mail if you have received this e-mail by mistake and delete this e-mail from your system. E-mail transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. The sender therefore does not accept liability for any errors or omissions in the contents of this message which arise as a result of e-mail transmission.

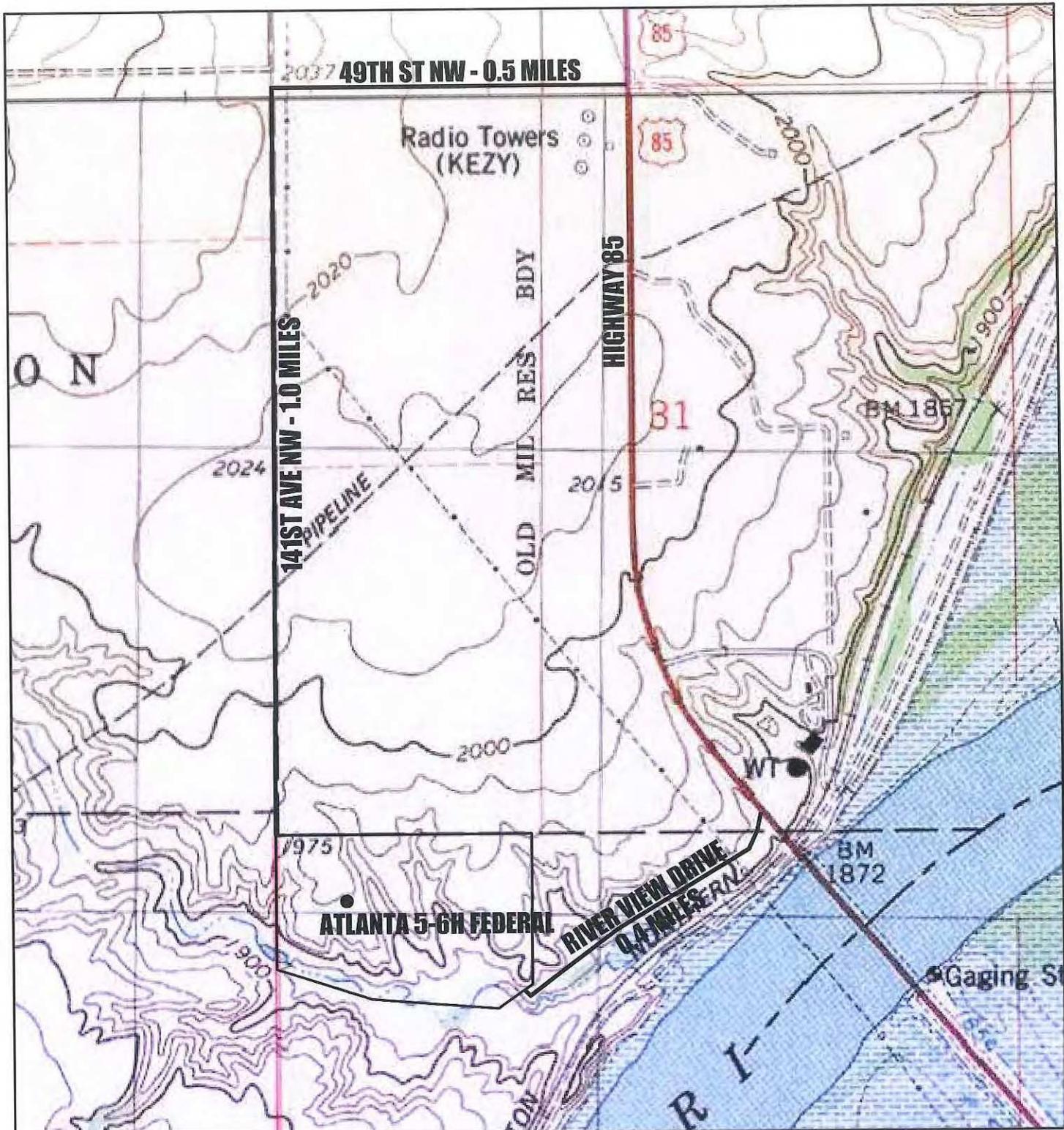


CONTINENTAL RESOURCES INC.

EXHIBIT 1
VICINITY MAP
PROPOSED ACCESS ROUTE

**ATLANTA 5-6H FEDERAL
 SECTION 6, T153N, R101W
 WILLIAMS COUNTY, NORTH DAKOTA**





CONTINENTAL RESOURCES INC.

EXHIBIT 2
QUAD ACCESS

ATLANTA 5-6H FEDERAL
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA

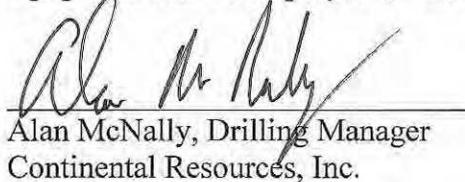
Continental Resources, Inc. (CRI) respectfully submits the following information concerning the drilling of the Atlanta 1 through 14-H, NWNW Sec. 6, T153N, R101W, Williams County, North Dakota.

The Atlanta site is located in an area with neighboring occupied dwellings located within 500 feet of the production equipment and is therefore subject to the provisions of:

NORTH DAKOTA ADMINISTRATIVE CODE § 43-02-03-28.

1. To illustrate more clearly the proximity of the occupied dwellings, the Atlanta Site Production Facility Layout, page 7 of 19 revised 6/29/12 of the plan set has been attached with this affidavit.
2. To comply with the provisions of NORTH DAKOTA ADMINISTRATIVE CODE § 43-02-03-28, waivers from the affected homeowners have been executed and are attached with this affidavit and illustrated on the attached.
 - a. Homeowners affected: Brett and Anita Williamson in Lot 10(SWSWSW-31-154-101).
 - b. Homeowners affected: Matti & Susan Tarnanen in Lot 1, Block 5, Southview Subdivision.
3. Shown on the Atlanta Site Production Facility Layout, page 7 of 19 revised 6/29/12, but not subject to the provisions of NORTH DAKOTA ADMINISTRATIVE CODE § 43-02-03-28 are the homes of:
 - a. Justin E. Grimmer & McKayla M. Johnson in Lots 24-26, Block 3, Southview Subdivision.
 - b. Therresa Christopherson in Lot 4R, Block 1 of the Rearrangement of Lots 3-4, Block 1, Berger First Subdivision.
 - i. Waivers from these homeowners have not been executed.

CRI believes adequate planning and precautions are being taken to limit the impact to the affected homeowners through enhanced drilling and completion techniques such as electric line fed drilling and supplying water pipelined to the site instead of trucking along with visual mitigation via landscaping and privacy fencing to be installed as part of the construction of the site. Fire suppression and other safety equipment will be employed on the site to ensure the safety of these homeowners and their property.



Alan McNally, Drilling Manager
Continental Resources, Inc.

STATE OF OKLAHOMA)
)ss:
COUNTY OF GARFIELD)

On the 29th day of June 2012, before me, a Notary Public in and for said County and State, personally appeared Alan McNally, known to me to be the Drilling Manager of Continental Resources, Inc., the Corporation that executed the within instrument, and acknowledged to me that such Corporation executed the same.

Becky Barnes
Notary Public

Garfield County, Oklahoma

My Commission Expires: 7/5/2015

Commission No.: 11006023



**AFFIDAVIT WAIVING PROVISIONS OF
NORTH DAKOTA ADMINISTRATIVE CODE § 43-02-03-28**

STATE OF NORTH DAKOTA)
)ss:
COUNTY OF WILLIAMS)

Brett M. Williamson and Anita J. Williamson, being duly sworn deposes and states as follows:

1. That we are the owners of two houses located on a parcel of land in SW¼SW¼SW¼ (Lot 10) MFD in Document #720523 containing 5.0 acres more or less in TWN 154 RNG 101 SEC 31 of the Williston Township.
2. That we are aware of the proposed location for Continental Resources, Inc.'s Atlanta multi well pad, which is less than 500 feet from the location of our houses which are located on the above parcel of land.
3. That Section 43-02-03-28 of the North Dakota Administrative Code provided in pertinent part "no well shall be drilled nor production equipment installed less than five hundred feet [152.40 meters] from an occupied dwelling unless agreed to in writing by the surface owner or authorized by order of the commission."
4. I hereby agree to the location of the Continental Resources, Inc.'s Atlanta multi well pad which is less than 500 feet from our houses. Further, I waive any rights that I might otherwise have to protest or contest such location.

Dated this 22nd day of June, 2012.

Affiant:

x Brett Williamson
Brett M. Williamson

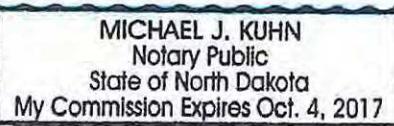
Affiant:

x Anita Williamson
Anita J. Williamson

STATE OF NORTH DAKOTA)
)ss:
COUNTY OF WILLIAMS)

The foregoing instrument was acknowledged before me this 22nd day of June, 2012, by
Brett M. Williamson and Anita J. Williamson.

Michael J. Kuhn
Notary Public
My Commission Expires: OCT 4th - 2017



**AFFIDAVIT WAIVING PROVISIONS OF
NORTH DAKOTA ADMINISTRATIVE CODE § 43-02-03-28**

STATE OF NORTH DAKOTA)
)ss:
COUNTY OF WILLIAMS)

Matti K. Tarnanen and Susan V. Tarnanen, being duly sworn deposes and states as follows:

1. That we are the owners of the house located on a parcel of land in Lot 1 Block 5 of Southview Subdivision in TWN 154 RNG 101 SEC 31 of the Williston Township.
2. That we are aware of the proposed location for Continental Resources, Inc.'s Atlanta multi well pad, which is less than 500 feet from the location of our house which is located on the above parcel of land.
3. That Section 43-02-03-28 of the North Dakota Administrative Code provided in pertinent part "no well shall be drilled nor production equipment installed less than five hundred feet [152.40 meters] from an occupied dwelling unless agreed to in writing by the surface owner or authorized by order of the commission."
4. I hereby agree to the location of the Continental Resources, Inc.'s Atlanta multi well pad which is less than 500 feet from our house. Further, I waive any rights that I might otherwise have to protest or contest such location.

Dated this 20th day of June, 2012.

Affiant:

X Matti K. Tarnanen
Matti K. Tarnanen

Affiant:

X Susan V. Tarnanen
Susan V. Tarnanen

STATE OF NORTH DAKOTA)
)ss:
COUNTY OF WILLIAMS)

The foregoing instrument was acknowledged before me this 20th day of June, 2012, by
Matti K. Tarnanen and Susan V. Tarnanen.


Notary Public
My Commission Expires: Jan 31, 2016





July 19, 2012

Industrial Commission of North Dakota
Oil & Gas Division
600 East Boulevard, Dept 405
Bismarck, North Dakota 58505

Continental Resources, Inc. (CRI) respectfully submits the following information concerning the drilling of the Atlanta 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 -- 6H,

Township 153N, Range 101W of the 5th P.M.
Section 6, N/2 NW/4 Williams County, North Dakota.

Continental Resources Inc. is currently conducting or planning to conduct the following work in the following manner in accordance with NDIC requirements:

- 1) Testing of water well(s)
 - a. The water well on the Atlanta property will be kept operable and has had baseline testing conducted including, hydrocarbon, salinity etc. These results will be kept on record and the well tested from time to time or as requested.
 - b. Currently, the environmental and operations teams are researching other wells in the area to sample.
- 2) CEMENT STABILIZATION:
 - a. Per NDIC requirement, samples will be taken for stabilized areas at pad grade and will be tested for current levels of: pH / EC / CEC / SAR / Soil Permeability.
 - b. These test results will be submitted before cement stabilization work begins and submitted via the appropriate NDIC Form 4 sundry
- 3) The contractor on the project is OE Construction - 16702 West 56th Drive Golden, CO 80403
 - a. Cement soil stabilization will be conducted in accordance NDIC requirements and project specifications stated on:
Plan Page 3, of the construction plan set, section 4. B. Cement Application and Blending:
Portland cement shall be added to the top 8 inches of the final subgrade at a rate of 5 percent by weight of material or as otherwise indicated in the basis of estimate. The specified manner that allows for uniform distribution of cement over the entire area. The contractor shall supply and use a computer controlled vane feeder to place the cement on the sub-grade prior to mixing. The vane feeder will spread the cement uniformly in the quantity specified. Dumping or blowing cement directly on the ground will not be accepted. The contractor shall apply the cement in a way that minimizes dust and is satisfactory to the Owner.
- 4) RECLAMATION PLAN for the stabilized portion of the drilling pad will be to rip and till the soil adding soil amendments as applicable to reach the original pH, permeability, and other test levels identified above.
- 5) REASON FOR CEMENT STABILIZATION: Cement stabilization will be conducted on this drilling pad to produce the most serviceable and least permeable surface possible so that water that falls on site will sheet directly to the planned site drainage system where it can be disposed of in a controlled fashion.

July 19, 2012

- 6) LINING OF THE SITE: Soil stabilization will be conducted in conjunction with permanently lining with a poly liner, the area around the wellheads, the trenches containing the flow lines from the well heads to the production equipment and the area under the production equipment itself inside the steel containment berms along with the detention pond. Under these systems, a minimum of 1ft. compacted clay liner of native and / or engineered fill material will be placed in 6" lifts maximum and density tested to 95% proctor per specifications provided in the Geotechnical Engineering Analysis for the project dated June 12, 2012 from American Technical Services.
- 7) As the land owner of the property in question, CRI is fully aware and approves of this system. This will also be identified on the sundry form 4 to be provided with the testing data listed above prior to beginning stabilization work.



Chad Newby, Operations Land Coordinator
Continental Resources, Inc.

STATE OF OKLAHOMA)
)ss:
COUNTY OF GARFIELD)

On the 19th day of July 2012, before me, a Notary Public in and for said County and State, personally appeared Chad Newby, known to me to be the Operations Land Coordinator of Continental Resources, Inc., the Corporation that executed the within instrument, and acknowledged to me that such Corporation executed the same.



Becky Barnes
Notary Public

Garfield County, Oklahoma

My Commission Expires: 7/5/2015

Commission No.: 11006023



Sincerely,

CONTINENTAL RESOURCES, INC.

Becky Barnes
Regulatory Compliance Specialist



July 13, 2012

Industrial Commission of North Dakota
Oil & Gas Division
600 East Boulevard, Dept 405
Bismarck, North Dakota 58505

Continental Resources, Inc. (CRI) respectfully submits the following information concerning the drilling of the Atlanta 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 -- 6H,

Township 153N, Range 101W of the 5th P.M.

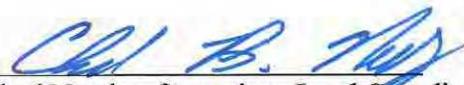
Section 6, N/2 NW/4 Williams County, North Dakota.

The Atlanta well(s) are located in an environmentally sensitive area in close proximity to a subdivision. Therefore, Continental Resources Inc. would like to propose the following automatic shut down equipment and level sensing monitoring equipment be deployed on the site to aid in the prevention of any accidental release or safety issue. One-line schematic diagrams, flowchart model, and general product information are attached for your review and approval with this affidavit.

- 1) Tank Side
 - a. K-Tek Guided Wave Radar and Z-Bend High Level Switch Level Detectors
 - i. High level switches for oil and water tanks
 - ii. Battery box with solar backup
- 2) Treater – Separator
 - a. Buffer Switch
 - b. U003 Gap Switch
 - i. 2 - AST 4600 pressure transducers – monitor pressure & liquid content of flare / gas sales lines
 - ii. Battery box with solar backup
- 3) Wellhead
 - i. TotalFlow Controller
 - ii. Emergency ShutDown Valve package
 - iii. Battery box with solar backup
- 4) System Automation through the proposed equipment will provide an independent control system on all equipment on site which will be able to shut the well in should any of the other equipment be incapacitated or functioning improperly.
- 5) Once the system is operational and linked to the CRI Williston Basin SCADA system, a notification will be sent directly to the (Sidney, MT) field office, and field personnel in charge of the site's operation. In the event that an alert was sent from the site, CRI estimates that

July 13, 2012

personnel would be able to respond to an incident and be present at the site within 15 to 30 minutes.



Chad Newby, Operations Land Coordinator
Continental Resources, Inc.

STATE OF OKLAHOMA)
)ss:
COUNTY OF GARFIELD)

On the 13th day of June 2012, before me, a Notary Public in and for said County and State, personally appeared Chad Newby, known to me to be the Operations Land Coordinator of Continental Resources, Inc., the Corporation that executed the within instrument, and acknowledged to me that such Corporation executed the same.

Becky Barnes
Notary Public

Garfield County, Oklahoma

My Commission Expires: 7/5/2015

Commission No.: 11006023



Sincerely,

CONTINENTAL RESOURCES, INC.

Becky Barnes
Regulatory Compliance Specialist

**OILFIELD SAFETY INC
A Total Safety Company**

CONTINGENCY PLAN

This Contingency Plan was written
Specifically for:

**Continental Resources Inc.
P.O. Box 1032
Enid, Oklahoma 73702**

SAFETY PROGRAM & EMERGENCY EVACUATION PLAN

**Continental Resources Inc.
Williams County, North Dakota**

**Oilfield Safety Inc.
A Total Safety Company
2523 2nd Street West
Williston, ND 58801**

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THIS PLAN IS SUBJECT TO UPDATING

PURPOSE OF PROGRAM

It is Continental Resources Inc. practice, to provide for the safety of its employees and contractor's employees at the job site, and to provide for the protection of the environment in accordance with applicable laws and regulations.

The primary purpose of this contingency plan is to guide location personnel in the responses expected of them in the event that hydrogen sulfide (H₂S) is liberated during the drilling program.

Hydrogen Sulfide is extremely hazardous to normal oil field operations due to its capability (1) of destroying life at very low concentrations and (2) of causing instantaneous failure of high strength metals. Drilling and producing operations of hydrocarbons containing toxic gases can, however, be performed safely and without incident when the necessary precautions are taken and the outlined safety procedures are followed. It is imperative that sulfide resistant materials be used, that the proper safety equipment be used, that this equipment be properly maintained, and that all safety regulations be complied with.

The procedures outlined are for your safety and the safety of all others: therefore, it is mandatory that each individual give his one hundred percent cooperation.

RESPONSIBILITIES AND DUTIES

ALL PERSONNEL

1. It is the responsibility of all personnel on location to familiarize themselves with the safety procedures.
2. All personnel will attend to their personal safety first.
3. Help anyone who may be injured or overcome by toxic gases. The Drilling Foreman will assign someone to administer first aid to unconscious person (s).
4. Report to the designated "SAFE BRIEFING AREA" and follow the instructions of the Drilling Foreman.

DRILLING FOREMAN

1. It is the responsibility of the Drilling Foreman to see that these safety and emergency procedures are observed by all personnel on location.
2. The Drilling Foreman will advise Oilfield Safety Inc. whenever the procedures as specified herein are complied with or cannot be followed.
3. The Drilling Foreman will notify the Safety Advisor at least two weeks before the safety equipment specified herein is needed.
4. The Drilling Foreman will keep the number of personnel on location to a minimum during hazardous operations.
5. The Drilling Foreman is responsible for designating the "SAFE BRIEFING AREA". This "SAFE BRIEFING AREA" will change depending upon wind direction and must be redesignated as soon as a wind change occurs.
6. If an unexpected emergency occurs or the H2S alarm sounds, the Drilling Foreman will assess the situation and will advise all personnel what condition exists.
7. When it is necessary to secure the location, the access road to location will be blocked; personnel from the rig crew will be used to guard same.

TEMPORARY SERVICE PERSONNEL

All service personnel such as cementing crews, logging crews, specialists, mechanics, and welders will furnish their own safety equipment as required, to comply with OSHA and the DRILLING FOREMAN for CONTINENTAL RESOURCES INC.

VISITORS

1. VISITORS will be restricted when Hydrogen Sulfide might be unless accompanied by the DRILLING FOREMAN for CONTINENTAL RESOURCES INC.
2. VISITORS and non-essential personnel will be prohibited from remaining in or entering contaminated areas where Hydrogen Sulfide concentration in the atmosphere exceeds 10 ppm.

NOTE: WHEN HYDROGEN SULFIDE MIGHT BE ENCOUNTERED NO PERSONNEL ON LOCATION WILL BE PERMITTED TO SLEEP IN VEHICLES.

DIRECTIONS TO: Atlanta 5-6H Federal

From Williston, ND head West on E Broadway toward 2nd Ave E; turn left onto Main St; Take the first right onto N Dakota 1804 W/2nd St W; continue to follow N Dakota 1804 W for 4.8 miles; Turn left onto US-85 S for 2 miles; Turn right onto 47th Ln NW; Turn right onto 48th St NW ; Continue onto 141st Ave NW and your destination will be ahead.

THE DRILL SITE

The location as shown in Figure 2 is planned in order to obtain the maximum safety benefits consistent with the rig configuration, well depth, and prevailing winds.

1. Through the use of several maps, the area within a One mile radius of the location has been surveyed and contacts with all permanent residents have been made. Except in a dead calm and a tremendous release of high concentration gases, the probability of lethal dosages beyond one mile is extremely unlikely. Note on the rig layout plat, Figure 2, the direction of prevailing winds.
2. The location of houses, schools, roads, and anything where people may be present and who might need to be warned or evacuated in a crisis have been surveyed. This information with names and telephone numbers are keyed and listed on page 11 and Figure 3 for use if evacuation might be necessary should an emergency develop.
3. The drilling rig, see Figure 2, should be situated at such a location that prevailing winds blow across the rig toward the flare pit.
4. Two (2) SAFETY BRIEFING AREAS will be established not less than 200 feet from the wellhead and in locations so that at least one SAFE BRIEFING AREA will be up-wind of the well at all times.
5. Protective equipment will be stored in strategic locations around the wellsite and each of the SAFE BRIEFING AREAS. Such equipment will include Self Contained Breathing Apparatus (SCBA), First Aid Kits, Stretchers, and Hydrogen Sulfide Hand Operated Detectors. In the event of an emergency, personnel should assemble at the up-wind SAFE BRIEFING AREA for instructions from their supervisor.
6. Windsocks or streamers will be utilized to give wind directions at several elevations; i.e., tree top, derrick floor level, and 6 to 8 feet above ground level. PERSONNEL SHOULD DEVELOP THE PRACTICE OF ROUTINE OBSERVATION OF WIND DIRECTION.
7. Windbreakers and rig curtains can be removed from around the derrick floor and monkey board, if hazardous amounts of H₂S encountered.
8. Explosion proof ventilating fans if required will be positioned to ensure adequate circulation at the derrick floor, cellar area and any other location where hydrogen sulfide is accumulating in excess of 10 PPM.
9. A kill line of ample strength and securely staked should be laid to the well head from a safe location to permit pumping into the well in an emergency.
10. When approaching a depth where Hydrogen Sulfide may be encountered, the MUD SHOULD BE MAINTAINED IN AN OVER BALANCED CONDITION TO restrict the Hydrogen Sulfide to be treated to that contained in the formation drilled.
11. When approaching a depth where Hydrogen Sulfide may be encountered, appropriate operational danger or caution sign(s) shall be displayed along all controlled accesses to the site.

12. When available 24-hour radio or telephone communication will be provided at the rig. Emergency telephone numbers will be prominently posted: SHERIFF'S DEPARTMENT, AMBULANCE, HOSPITALS, DOCTORS, AND OPERATORS' SUPERVISORY PERSONNEL.
13. Filter-type gas masks are not suitable for protection from Hydrogen Sulfide on drilling rigs. Pressure demand, SCBA'S will be provided for use in any Hydrogen Sulfide concentration. They are not physically exhausting to use, are rugged and dependable, and require little maintenance.
14. SCBA'S will be stored on racks and protected from the weather. Rig crew equipment will be located at readily accessible location on the rig floor. For hygienic reasons, SCBA'S are to be cleaned and sterilized at regular intervals. A six outlet air supply manifold will be installed on the rig floor for continuous use by crews and supervisory personnel working in a "Mask On" situation. The multi-bottle supply cylinders are to be located approximately 200 feet from the well. A minimum of 3,600 cu. ft. compressed breathing air will be on location at all times.
15. An alarm system which can be heard during operations and which can be activated from several points if gas is detected will be installed. When the alarm is sounded, personnel must assemble at the BRIEFING AREA designated SAFE. However, your company may have steps different from these, so pay heed to the requirements on your rig.
16. There will be No Smoking on rig floor or near wellhead. Designated Smoking Areas will be provided by your Supervisor.
17. Safety meetings and training sessions will be held at frequent intervals by the Safety Advisor, the Drilling Supervisor, or the Rig Supervisor. All persons required to work on location will be thoroughly familiar with the use, care and servicing of the following: Personal protective equipment such as respirators, and gas detection equipment.
18. All electric lighting, wiring and electrical devices within 100 feet of the well will be put in vapor-proof condition to minimize the possibility of explosion.
19. Blowout preventers should meet or exceed the recommendations for hydrogen sulfide service (API RP 53). Choke manifolds will be of similar materials.
20. Inspection of installation, operation, and testing of blowout preventers, choke manifolds, etc., dressed for Hydrogen Sulfide services, will be conducted regularly.
21. Every person involved in the operation will be informed of the characteristics of Hydrogen Sulfide and its dangers, safe procedures to use when it is encountered, and recommended first aid procedures. This will be done through frequent safety talks and training sessions.

NAMES AND DUTIES OF PERSONS WITH PRIME RESPONSIBILITIES

A. Continental Resources Inc.
P.O. Box 1032
Enid, Oklahoma 73702

B. OILFIELD SAFETY INC.
2523 2nd Street West
Williston, ND 58802

Terrie Turbiville
District Manager
Office: 701-774-3014
Cell: 701-580-2912

EMERGENCY NOTIFICATION

LOCAL OFFICIALS AND MEDICAL

WILLISTON, NORTH DAKOTA

| | |
|---|--------------|
| AMBULANCE | 911 |
| FIRE | 911 |
| NON-EMERGENCY | 701-627-3903 |
| POLICE | 911 |
| THREE AFFILIATED TRIBES | 701-627-3244 |
| MOUNTRAIL COUNTY SHERIF..... | 701-628-2975 |
| MOUNTRAIL COUNTY SHERIFF DISPATCH | 911 |

WATFORD CITY, NORTH DAKOTA

| | |
|--|---------------------|
| AMBULANCE | 911 |
| FIRE | 911 |
| POLICE | 911 OR 701-842-2400 |
| McKenzie COUNTY SHERIFF DISPATCH | 911 |

BUREAU OF LAND MANAGEMENT

| | |
|-----------------------------|-------------------------------|
| OFFICE REPRESENTATIVE | DICKINSON, ND 701-225-9148 |
|-----------------------------|-------------------------------|

NORTH DAKOTA HIGHWAY EMERGENCY ASSISTANCE 1-800-472-2121

PHYSICAL AND CHEMICAL PROPERTIES

1. Extremely toxic (almost as toxic as Hydrogen Cyanide and 5 to 6 times toxic as Carbon Monoxide).
2. Colorless.
3. Offensive odor, often described as that of rotten eggs.
4. Heavier than air - specific gravity 1.189 (Air = 1.000 @ 60° F.). Vapors may travel considerable distance to a source of ignition and flash back.
5. Forms an explosive mixture with a concentration between 4.3 and 46 percent by volume with auto-ignition occurring at 500° F.
6. Burns with a blue flame and produces Sulfur Dioxide (SO₂), which is less toxic than Hydrogen Sulfide but very irritating to eyes and lungs and causes serious injury.
7. Soluble in both water and liquid hydrocarbons.
8. Produces irritation to eyes, throat and respiratory system.
9. Threshold Limit Valve (TLV) - Maximum of eight hours exposure.
10. Corrosive to all electrochemical series metals.
11. Boiling Point (-79° F).
12. Melting Point (-177° F).

PHYSICAL EFFECTS OF HYDROGEN SULFIDE POISONING

THE PRINCIPAL HAZARD IS DEATH BY INHALATION. When the amount of gas absorbed into the blood stream exceeds that which is readily oxidized, systemic poisoning results, with a general action on the nervous system. Labored respiration occurs shortly, and respiratory paralysis may follow immediately at concentrations of 700 ppm and above. This condition may be reached almost without warning as the originally detected odor of Hydrogen Sulfide may have disappeared due to olfactory paralysis. Death then occurs from asphyxiation unless the exposed person is removed immediately to fresh air and breathing stimulated by artificial respiration. Other levels of exposure may cause the following symptoms individually or in combinations:

- a. Headache
- b. Dizziness
- c. Excitement
- d. Nausea or gastro-intestinal disturbances
- e. Dryness and sensation of pain in nose, throat and chest
- f. Coughing
- g. Drowsiness

All personnel should be alerted to the fact that detection of Hydrogen Sulfide solely by smell is highly dangerous as the sense of smell is rapidly paralyzed by the gas.

H2S TOXICITY TABLE

| | | | |
|-----------|---|-------------------------|--|
| 1 ppm | = | .0001% (1/10,000 of 1%) | Can smell |
| 10 ppm | = | .001% (1/1000 of 1%) | Allowable for 8 hours' exposure. OVER THE ALLOWABLE CONCENTRATION, PROTECTIVE EQUIPMENT WILL BE NECESSARY. |
| 100 ppm | = | .01% (1/100 of 1%) | Kills smell in 3 to 15 minutes. May burn eyes and throat. |
| 200 ppm | = | .02% (2/100 of 1%) | Kills smell rapidly. Burns eyes and throat. |
| 500 ppm | = | .05% (5/100 of 1%) | Loses sense of reasoning and balance. Respiratory disturbances in 2 to 15 minutes. Needs prompt artificial resuscitation. |
| 700 ppm | = | .07% (7/100 of 1%) | Will become unconscious quickly. Breathing will stop and death result if not rescued promptly. Immediate artificial resuscitation. |
| 1,000 ppm | = | .10% (1/10 of 1%) | Unconscious at once. PERMANENT BRAIN DAMAGE MAY RESULT UNLESS RESCUED PROMPTLY. |

Ppm= Parts of gas per million parts of air by volume.

1%= 10,000 ppm

RESUSCITATION CHART

DID YOU KNOW?

THERE IS NO TIME TO WASTE
WHEN BREATHING STOPS!

ARTIFICIAL RESUSCITATION MUST BE STARTED IMMEDIATELY!!!

After Breathing is stopped for:

1 Minute
2 Minutes
3 Minutes
4 Minutes
5 Minutes
6 Minutes
7 Minutes
8 Minutes
9 Minutes
10 Minutes
11 Minutes
12 Minutes

The Chances for Life are:
98 out of 100
92 out of 100
72 out of 100
50 out of 100
25 out of 100 *
11 out of 100 *
8 out of 100 *
5 out of 100 *
2 out of 100 *
1 out of 100 *
1 out of 1,000 *
1 out of 10,000 *

* Irreparable brain damage starts at about the fifth minute.

COOL-HEADED ACTION IN RESCUE IS CRITICAL.

TREATMENT FOR HYDROGEN SULFIDE POISONING

INHALATION

As Hydrogen Sulfide in the blood oxidizes rapidly, symptoms of acute poisoning pass off when inhalation of the gas ceases. It is important, therefore, to get the victim of poisoning to fresh air as quickly as possible. He should be kept at rest and chilling should be prevented. If respiration is slow, labored, or impaired, artificial respiration may be necessary. Most persons overcome by Hydrogen Sulfide may be revived if artificial respiration is applied before the heart action ceases. Victims of poisoning should be under the care of a physician as soon as possible. Irritation due to sub-acute poisoning may lead to serious complications such as pneumonia. Under those conditions, treatment by the physician necessarily would be symptomatic. The patient should be kept in fresh air, and hygienic conditions should be watched carefully.

CONTACT WITH EYES

Eye contact with liquid and/or gas containing Hydrogen Sulfide will cause painful irritation (conjunctivitis). Keep patient in a darkened room, apply ice compresses to eyes, put ice on forehead, and send for a physician. Eye irritation caused by exposure to Hydrogen Sulfide requires treatment by a physician, preferably an eye specialist. The progress to recovery in these cases is usually good.

CONTACT WITH SKIN

Skin absorption is very low. Skin discoloration is possible after contact with liquids containing Hydrogen Sulfide. If such skin contact is suspected, the area should be thoroughly washed.

EFFECTS OF HYDROGEN SULFIDE ON METAL

Hydrogen Sulfide dissolves in water to form a weak acid that can cause some pitting, particularly in the presence of oxygen and/or carbon dioxide. However, the most significant action of H₂S is its contribution to a form of hydrogen embrittlement known as sulfide stress cracking. Sulfide stress cracking is a result of metals being subjected to high stress levels in a corrosive environment where H₂S is present. The metal will often fail catastrophically in a brittle manner. Sulfide stress cracking of steel is dependent upon and determined by:

- a. Strength (hardness) of the steel - the higher the strength, the greater the susceptibility to sulfide stress cracking. Steels having yield strengths up to 95,000 psi and hardness up to Rockwell C 22 are generally resistant to sulfide stress cracking. These limitations can be extended slightly higher for properly quenched and tempered materials.
- b. Total member stress (load) - the higher the stress level (load) the greater the susceptibility to sulfide stress cracking.
- c. Corrosive environment - corrosive reactions, acids, bacterial action, thermal degradation, or low PH fluid environment.

Use as protection against sulfide stresses cracking, all casing, BOP and safety equipment should be of H₂S resistant material.

CASING GRADES ACCEPTABLE FOR H2S SERVICE

| CASING GRADE | H2S SERVICE | COMMENTS ** | |
|--------------|-------------|-------------|--------|
| H-40 | YES | | |
| K-55 | YES | | |
| C-75 | YES | | |
| N-80 | CONDITIONAL | ABOVE | 200° F |
| L-80 | YES | | |
| MN-80 | YES | | |
| C-90 | YES | | |
| C-95 | YES | | |
| S-95 | NO | ABOVE | 200° F |
| SOO-95 | NO | ABOVE | 200° F |
| S-105 | NO | ABOVE | 200° F |
| SOO-90 | YES | ABOVE | 200° F |
| P-110 | NO | ABOVE | 200° F |
| S-135 | NO | ABOVE | 200° F |
| V-150 | NO | ABOVE | 200° F |

* Service conditions for any H2S environment.

** Denotes usable grades above 200° F.

DRILL PIPE GRADES FOR H2S SERVICE

| <u>GRADE</u> | <u>H2S SERVICE</u> |
|--------------|--------------------|
| D | YES |
| E | YES |
| X-95 | YES |
| G-105 | NO |
| S-135 | YES |
| ALUMINUM | YES |

DRILL STEM TEST

1. Drill Stem testing shall be done during daylight hours whenever practical. If it is necessary to work under artificial light, levels shall be sufficient to allow employees to conduct the test safely.
2. Ammine Corrosion Inhibitor should be used to coat inside of drill pipe prior to conducting Drill Stem Test in order to prevent Sulfide Stress Cracking.
3. If warranted, the use of Ammonia Hydroxide (26 Degree B'eaume Aqua Ammonia) for neutralizing Hydrogen Sulfide from tubing or drill pipe can be used.

H2S SAFETY EQUIPMENT ON LOCATION

(PROVIDED BY SAFETY CONTRACTOR)

1. One safety trailer with a cascade system of cylinders of compressed GRADE D breathing air, complete with high pressure regulator.
2. Low pressure breathing air line (approximately 1,000 feet depending on the location). Equipped with quick connects.
3. Two low pressure manifold systems.
4. Eight pressure-demand type breathing apparatus (SCBA) 30 minute duration, NIOSH, and MSHA approved.
5. Eight airline breathing apparatus c/w 7 cu. ft. egress cylinders.
6. One four (4) channel fixed electronic monitoring system with sensors and alarms (explosion proof light and siren).
7. One hand operated portable pump type (with low and high range H2S detector tubes).
8. One first aid kit.
9. One stretcher (Ferro folding).
10. Three luminous wind socks with frames and extension poles. Windsocks must be placed so that they are visible by day and by night from all points on location.
11. One Flare Piston with 12 gauge meteor flares for igniting well.
12. One operating condition sign with flags at well entrance.
Condition I - Normal Operating Conditions (green flag);
Condition II - Potential to Moderate Danger to Life (yellow flag);
Condition III - Moderate to Extreme Danger to Life (red flag).
13. One fire blanket.
14. One warning light.
15. One warning siren.

H2S SAFETY EQUIPMENT ON LOCATION

(PROVIDED BY THE SAFETY CONTRACTOR)

16. Two traffic cones.
17. Two compressed breathing air cylinders for briefing area number 2.
18. Briefing area stand
19. Briefing area number 2 sign.

NOTE: ADDITIONAL EQUIPMENT WILL BE ADDED IF WELL CONDITIONS REQUIRE OR UPON REQUEST

NOTE: Equipment for a maximum of sixteen (16) people on location.

Equipment will be rigged up and operational when drilling reaches a depth of 500 ft. above, or three days, whichever is sooner, prior to penetrating the first zone containing or reasonably expected to contain H2S.

IGNITING THE WELL

RESPONSIBILITY

THE DECISION TO IGNITE THE WELL IS THE RESPONSIBILITY OF THE DRILLING FOREMAN. In the event he is incapacitated, it becomes the responsibility of the Rig Tool Pusher. This decision should be made only as a last resort and in a situation where it is clear that:

1. Human life and property are endangered.
2. No hope exists for controlling the blowout under prevailing conditions at the well.

Notify the Oilfield Safety Inc. office, if time permits, but do not delay if human life is in danger. Initiate first phase of evacuation plan.

INSTRUCTIONS FOR IGNITING THE WELL

1. Two people are required for the actual igniting operation. They must wear self-contained breathing units and have a safety rope attached. One man will check the atmosphere for explosive gases with the Explosimeter. The other man is responsible for igniting the well.
2. Primary method to ignite: Meteor-type Flare Gun.
3. Ignite upwind and do not approach any closer than is warranted.
4. Select the ignition site which is best for protection.
5. Select area for hasty retreat.
6. BEFORE FIRING, check regarding combustible gases.
7. Since Hydrogen Sulfide converts to Sulfur Dioxide, the area is not safe after igniting the well.
8. After igniting, continue emergency action and procedure as before.
9. All unassigned personnel will limit their actions to only those directed by the Drilling Foreman.

REMEMBER: AFTER WELL IS IGNITED, BURNING HYDROGEN SULFIDE WILL CONVERT TO SULFUR DIOXIDE, WHICH IS ALSO HIGHLY TOXIC. DO NOT ASSUME THE AREA IS SAFE AFTER THE WELL IS IGNITED.

BLOWOUT PREVENTION EQUIPMENT

1. A kill line of ample strength and length should be laid to a safe point to allow pumping into the well in an emergency situation.
2. The closing unit should be located a safe distance from the wellbore and positioned for maximum utilization based on the prevailing wind direction.
3. BOP equipment will be tested in accordance with standard company practice.
4. All equipment should be H2S trimmed for service in sour gas environments.
5. All drill pipe and casing will be of a grade acceptable for H2S service.

SPECIAL EQUIPMENT

1. If a MUD-GAS SEPARATOR is installed, it will be installed with one or more flare lines.
2. Flare lines should be as long as practical and securely staked.
3. Flare Systems must be equipped with a safe and suitable means of ignition. The ignition system must either be electrically or gas operated. Buckets of diesel fuel and torches are no longer acceptable.
4. An automatic Hydrogen Sulfide monitor will be installed with a combination visual and audible alarm system located where it can be seen and/or heard throughout the drilling location. This system will have the capabilities of being activated from several points, which are the rig floor, cellar, and shale shaker.
5. The automatic monitor should be set to trigger the drilling location visual/audible alarms when the Hydrogen Sulfide concentration in the atmosphere reaches 10 ppm. Explosion proof lights and sirens will be provided at or near the rig floor and such that all personnel will be subject to visual and audible warnings.

MUD ADDITIVES

DRILLING FLUID RECOMMENDATION

MUD TYPE

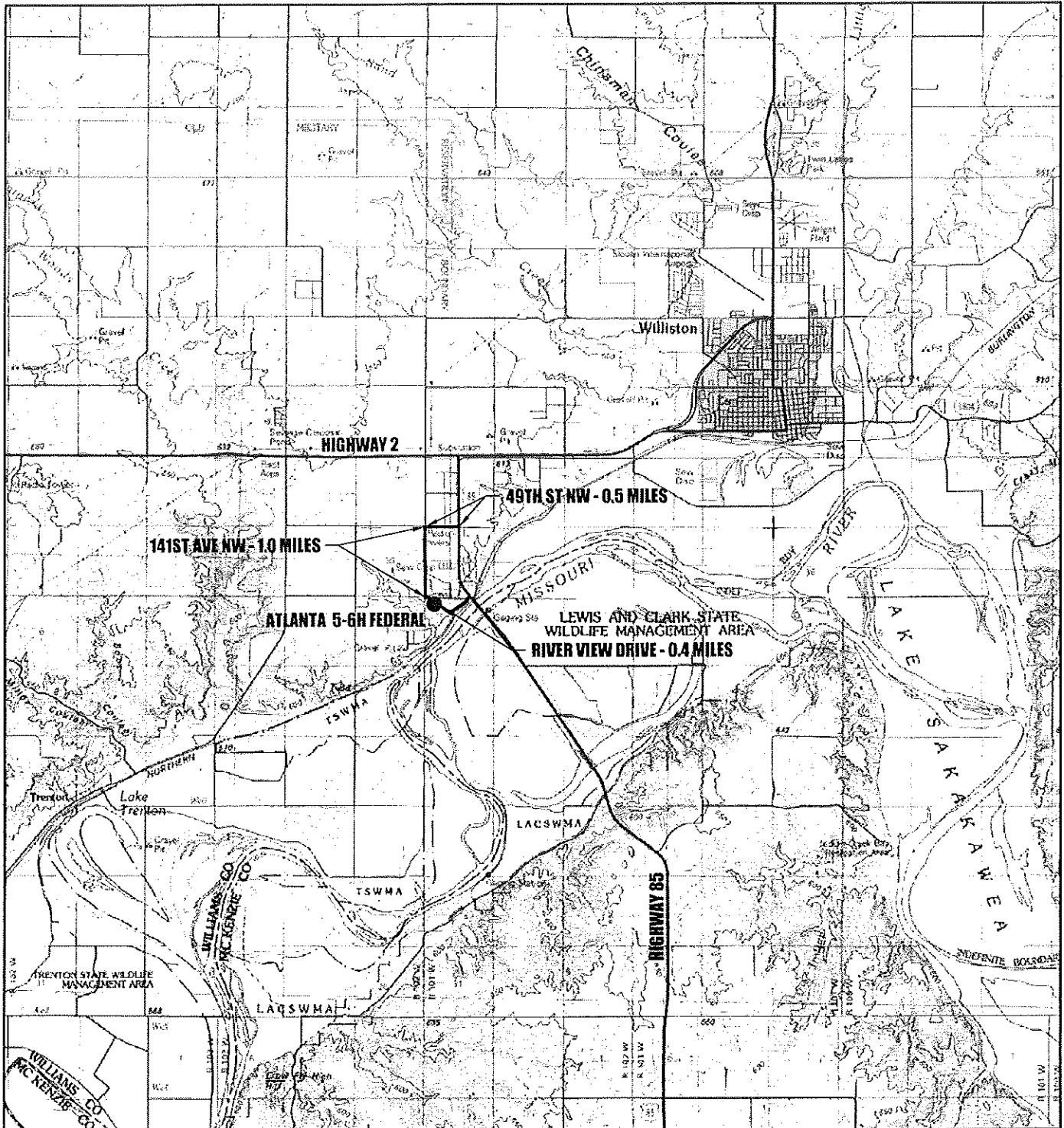
An overbalanced mud should be used to drill potential pay zone with necessary additives for all stabilization.

In the event of H₂S contamination of the mud system, Hydrogen Sulfide scavengers should be added to the mud.

EMERGENCY DRILLS

Hydrogen Sulfide Alarm Drills

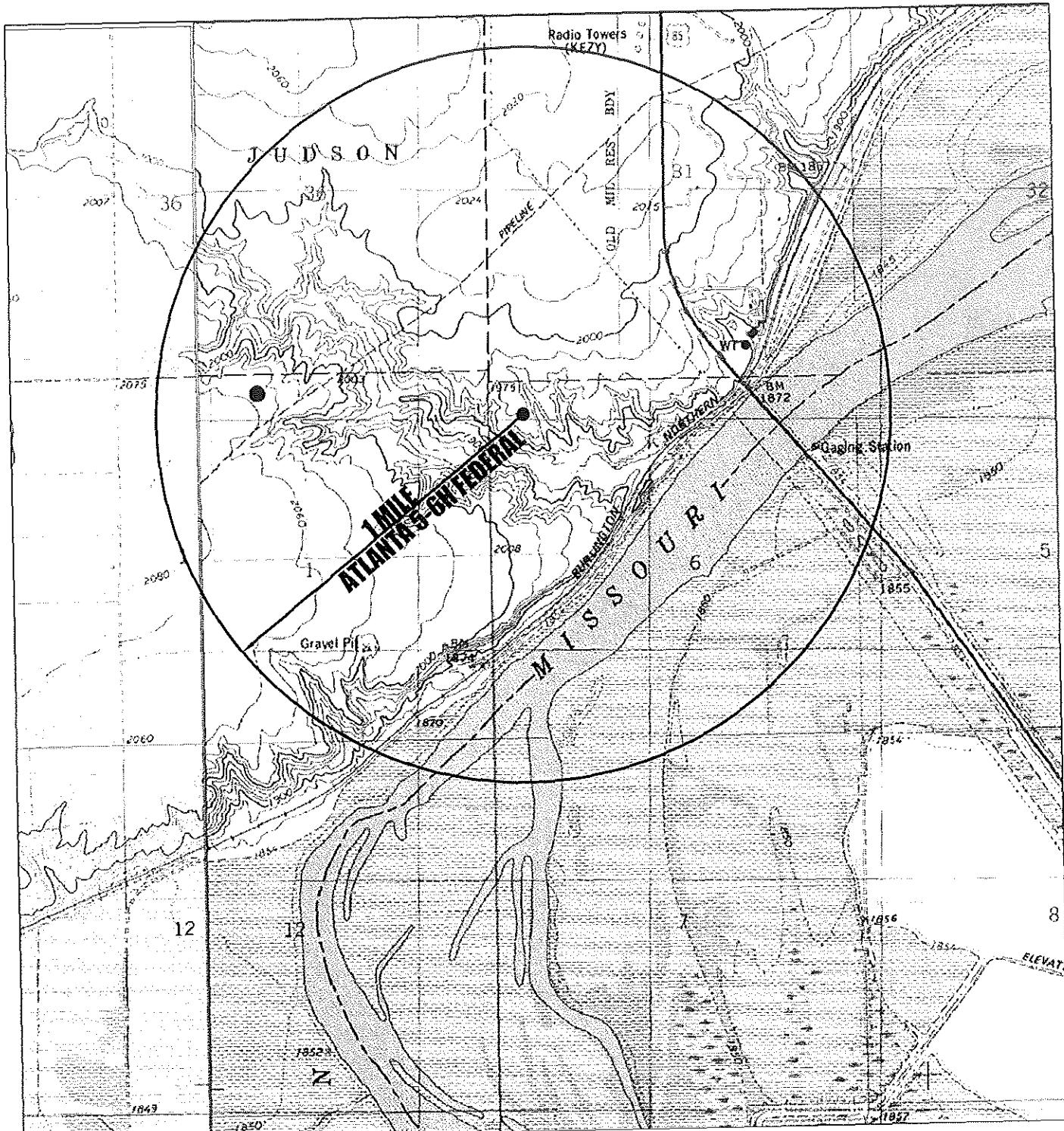
The Safety Advisor will conduct frequent H2S emergency drills for each crew by manually activating the H2S detector. When the lights flash, all personnel on location will assemble at the Upwind Briefing Area. A head count will be taken at this time to determine if rescue operations are indicated. The Safety Advisor must be notified if more personnel are on location than during normal operations. A "Masks On" policy will prevail until the all clear is sounded. These drills will be implemented as frequently as required to familiarize all personnel with the procedures to be followed in the event an actual emergency occurs.



CONTINENTAL RESOURCES INC.

EXHIBIT 1
VICINITY MAP
PROPOSED ACCESS ROUTE

ATLANTA 5-6H FEDERAL
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA



CONTINENTAL RESOURCES INC.

● = OIL WELL

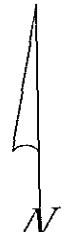
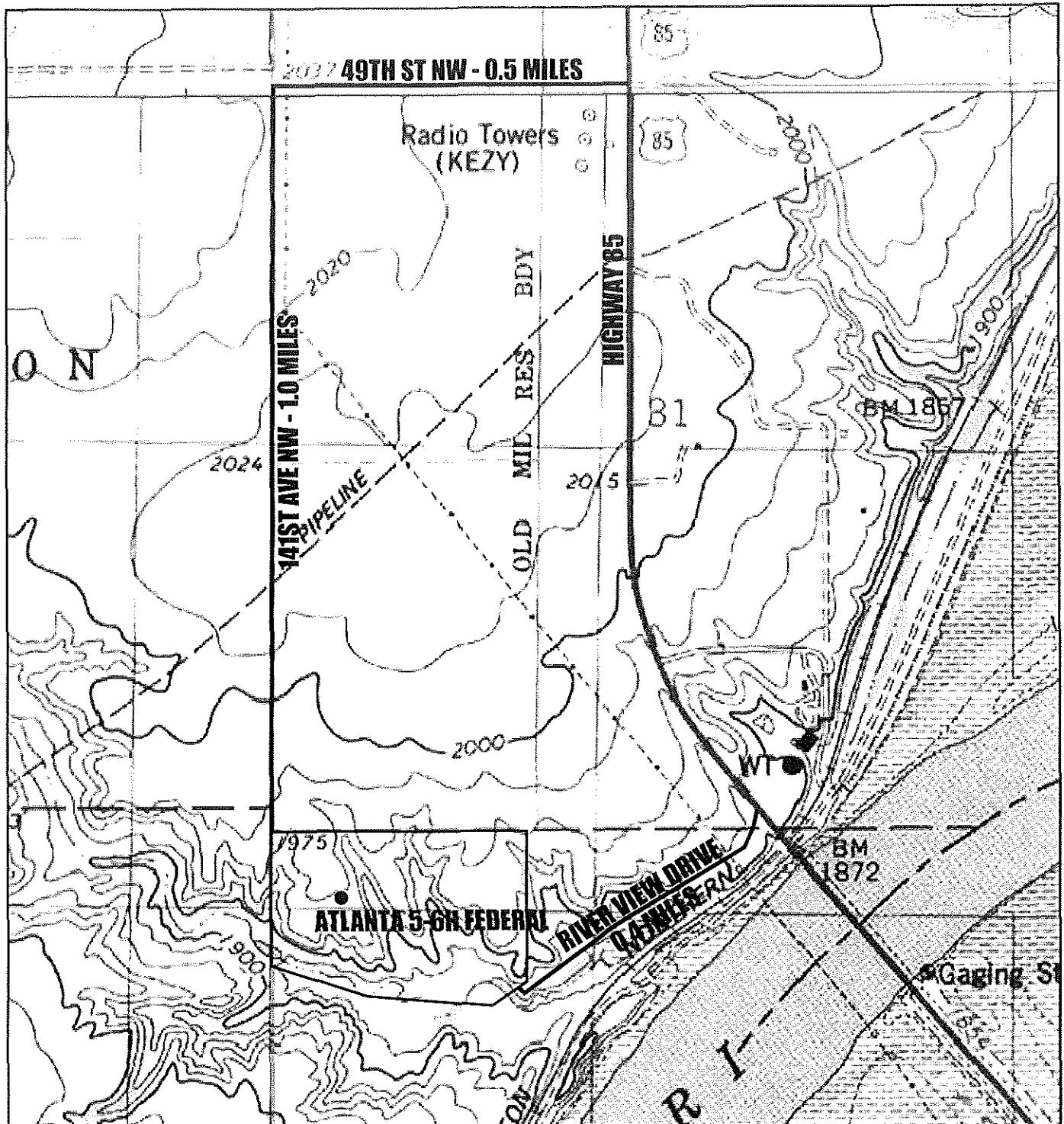


EXHIBIT 3
ONE-MILE RADIUS MAP

ATLANTA 5-6H FEDERAL
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA



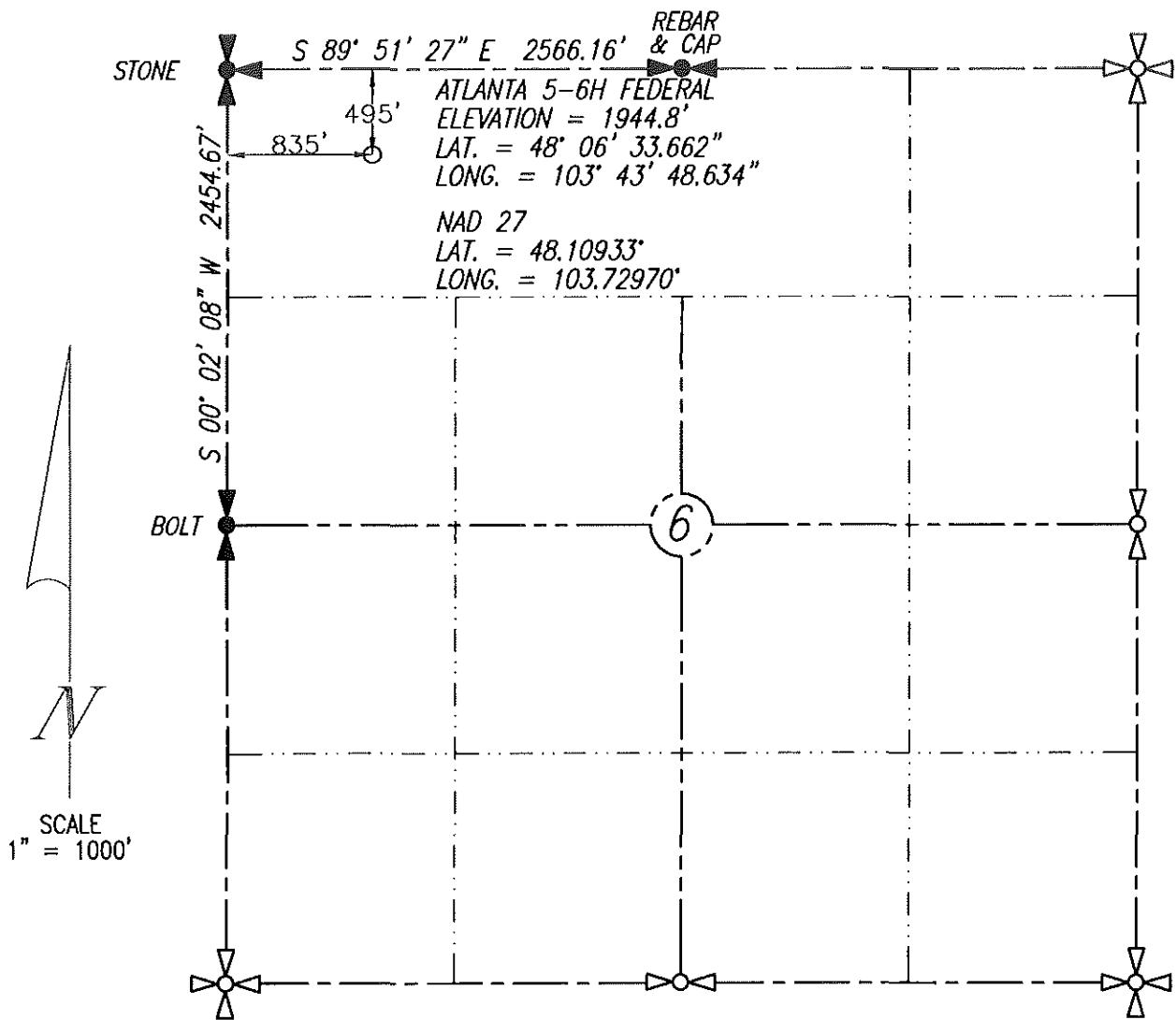
CONTINENTAL RESOURCES INC.

EXHIBIT 2
QUAD ACCESS

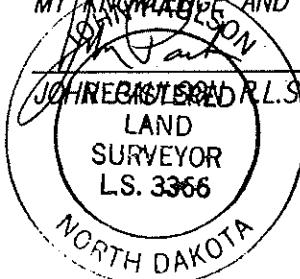
ATLANTA 5-6H FEDERAL
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA

REVISED: 4-23-2012

WELL LOCATION PLAT
CONTINENTAL RESOURCES INC.
ATLANTA 5-6H FEDERAL
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA
495' FNL & 835' FWL



I CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS
WORK PERFORMED BY ME OR UNDER MY RESPONSIBLE
CHARGE, AND IS TRUE AND CORRECT TO THE BEST OF
MY KNOWLEDGE AND BELIEF



4-23-12

DATE STAKED: 2-9-2012

BASIS OF VERTICAL DATUM:
NAVD 1988 GEOID 09

PERSON AUTHORIZING SURVEY;
CHAD NEWBY

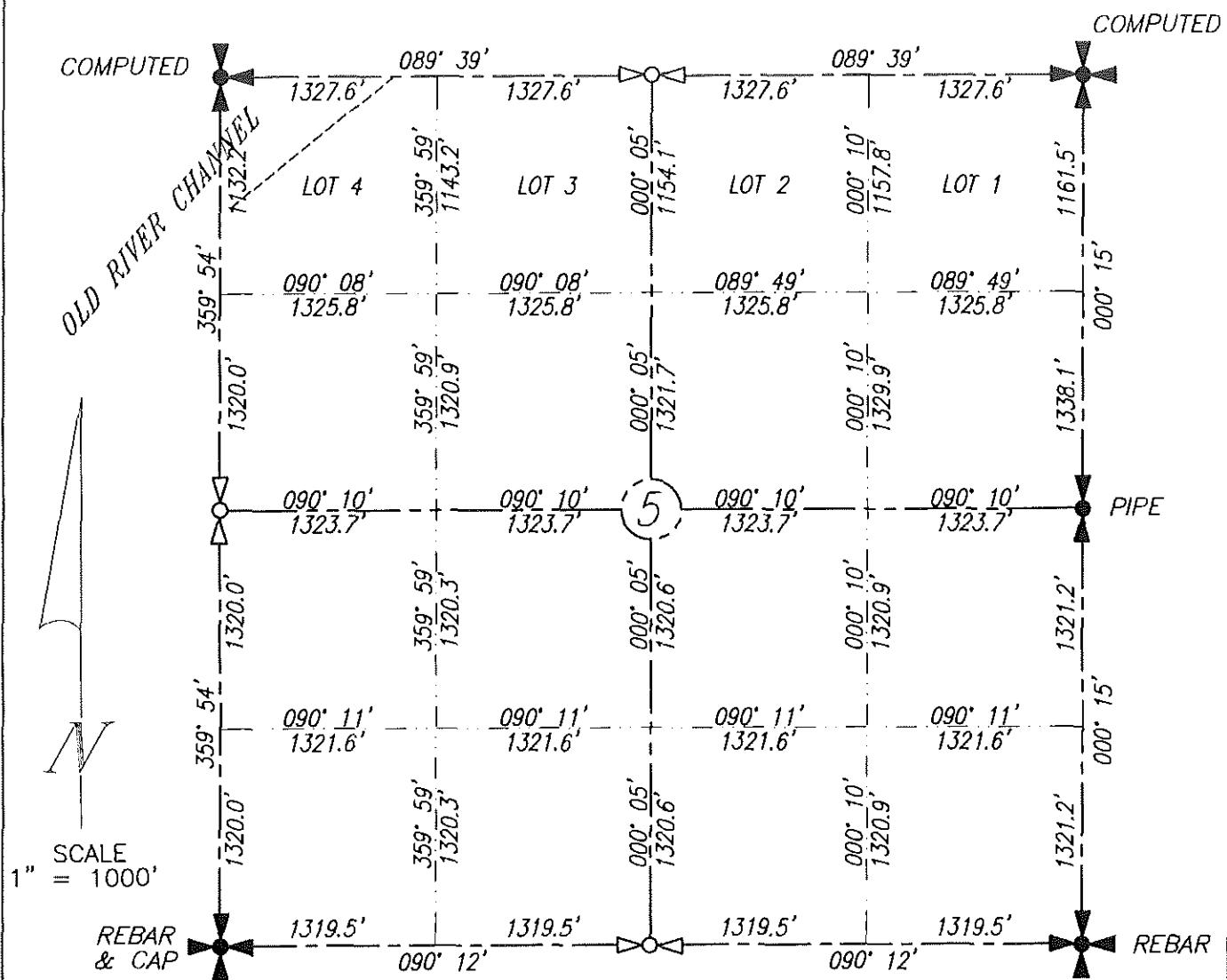
EXPLANATION AREA: NAD83(CORS96)

BASIS OF BEARING: TRUE NORTH

BROSZ ENGINEERING INC.

BOX 357
BOWMAN, N.D. 58623
PHONE: 701-523-3340
FAX: 701-523-5243
PROJECT NO. 12-10

HORIZONTAL SECTION PLAT
CONTINENTAL RESOURCES INC.
ATLANTA 5-6H FEDERAL
SECTION 5, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA
MCKENZIE COUNTY, NORTH DAKOTA



ALL CORNERS SHOWN ON THIS PLAT WERE FOUND IN THE FIELD
DISTANCES TO ALL OTHERS ARE CALCULATED.
ALL BEARINGS SHOWN ARE ASSUMED.

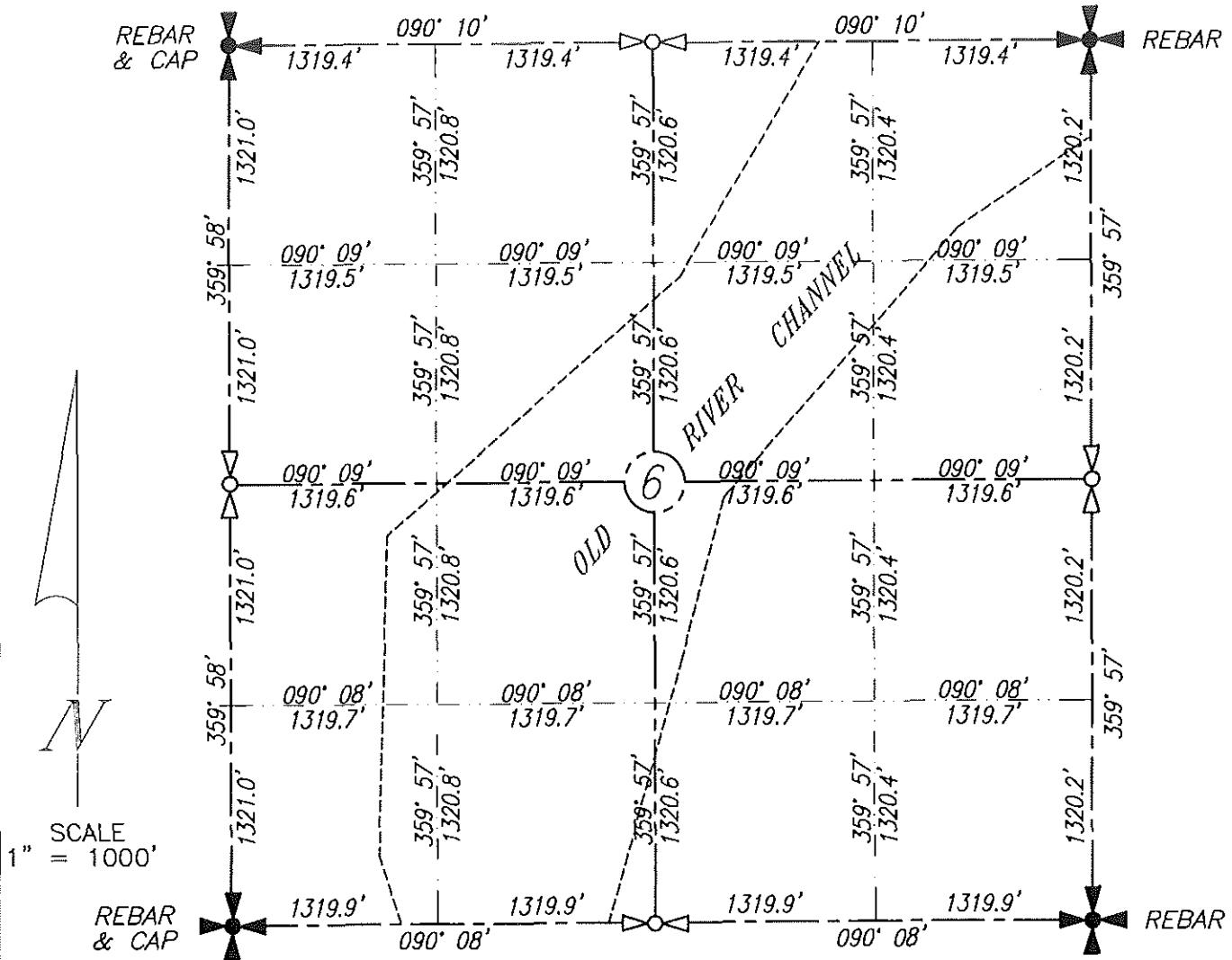
I CERTIFY THAT THIS PLAN CORRECTLY REPRESENTS
WORK PERFORMED BY ME OR UNDER MY RESPONSIBLE
CHARGE, AND IS STRIVED AND CORRECT TO THE BEST OF
MY KNOWLEDGE AND BELIEF
SURVEYOR

SURVEYOR
R.L.S. 3366
JOHN PAULSON R.L.S. 3366
OATH TAKING

4-9-12

BROSZ ENGINEERING INC.
BOX 357
BOWMAN, N.D. 58623
PHONE: 701-523-3340
FAX: 701-523-5243
PROJECT NO. 12-10

HORIZONTAL SECTION PLAT
CONTINENTAL RESOURCES INC.
ATLANTA 5-6H FEDERAL
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA
MCKENZIE COUNTY, NORTH DAKOTA



MOST OF THE SECTION IS LOTTED DUE TO THE MISSOURI RIVER.

ALL CORNERS SHOWN ON THIS PLAT WERE FOUND IN THE FIELD
DISTANCES TO ALL OTHERS ARE CALCULATED.

~~ALL BEARINGS SHOWN ARE ASSUMED.~~

I CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS
WORK PERFORMED BY ME OR UNDER MY RESPONSIBLE
CHARGE, WHICH IS TRUE AND CORRECT TO THE BEST OF
MY KNOWLEDGE AND BELIEF

~~JOHN PATRICK DALE~~ 49-12
JOHN PATRICK DALE S. 3366

BROSZ ENGINEERING INC.

BOX 357

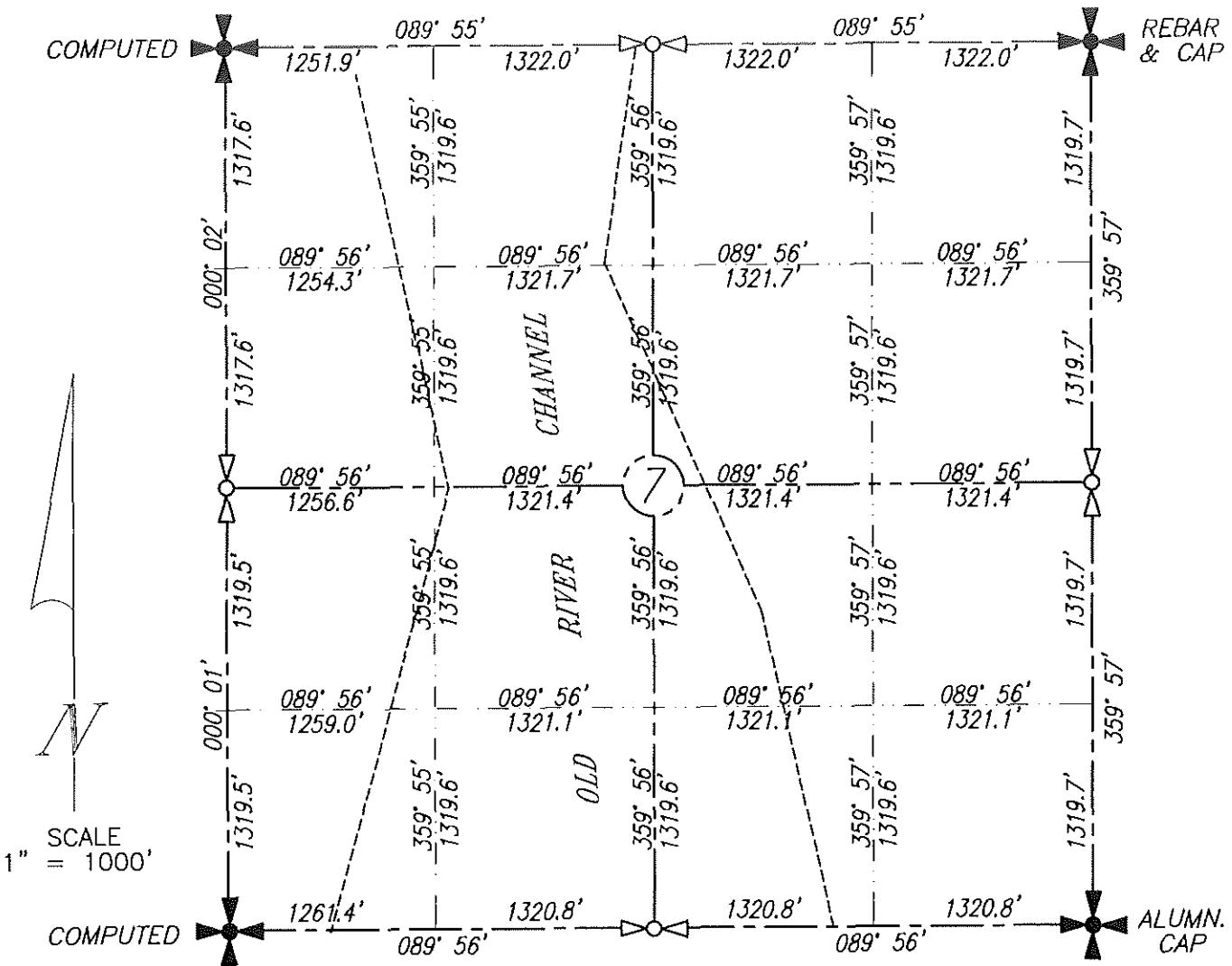
BOWMAN, N.D. 58623

PHONE: 701-523-3340

FAX: 701-523-5243

PROJECT NO. 12-10

HORIZONTAL SECTION PLAT
CONTINENTAL RESOURCES INC.
ATLANTA 5-6H FEDERAL
SECTION 7, T153N, R101W
CKENZIE COUNTY, NORTH DAKOT



MOST OF THE SECTION IS LOTTED DUE TO THE MISSOURI RIVER.

ALL CORNERS SHOWN ON THIS PLAT WERE FOUND IN THE FIELD
DISTANCES TO ALL OTHERS ARE CALCULATED.

JOHN PROSPER
ALL DAY

I CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS
WORK PERFORMED BY ME OR UNDER MY RESPONSIBLE
CHARGE, AND IS BASED AND CORRECT TO THE BEST OF
MY KNOWLEDGE AND BELIEF.

John NORTH DAKOTA

4-9-12

JOHN PAULSON R.L.S. 3366

BROSZ ENGINEERING INC.

Box 357

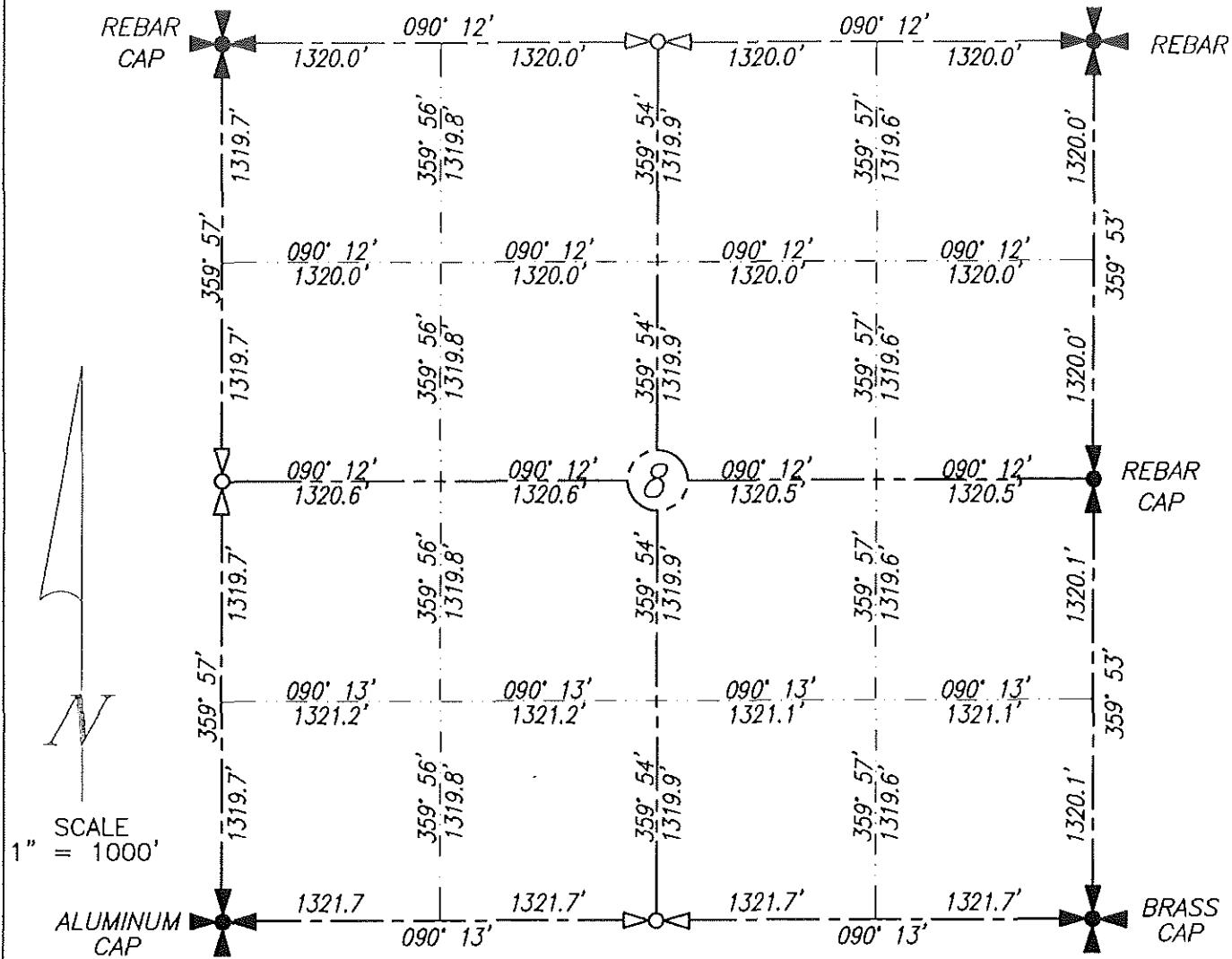
BOWMAN, N.D. 58623

PHONE: 701-523-3340

FAX: 701-523-5243

PROJECT NO. 12-10

HORIZONTAL SECTION PLAT
CONTINENTAL RESOURCES INC.
ATLANTA 5-6H FEDERAL
SECTION 8, T153N, R101W
MCKENZIE COUNTY, NORTH DAKOTA



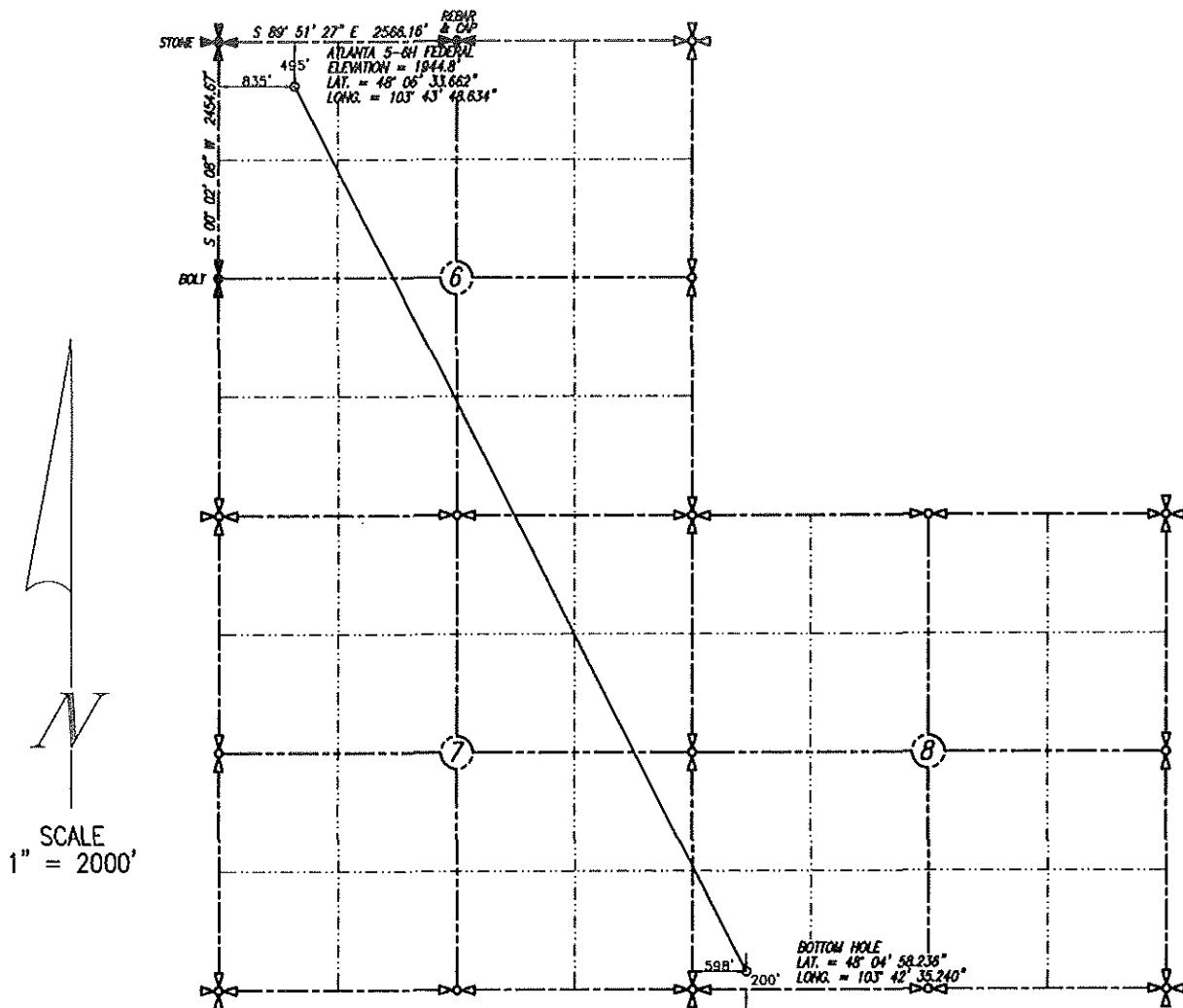
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WORK PERFORMED OR UNDER MY RESPONSIBLE
CHARGE, AND IS FAIR AND CORRECT TO THE BEST OF
MY KNOWLEDGE AND BELIEF
L.S. 3366

JOHN PAULSON
SOUTH DAKOTA
L.S. 3366

4-9-12

BROSZ ENGINEERING INC.
BOX 357
BOWMAN, N.D. 58623
PHONE: 701-523-3340
FAX: 701-523-5243
PROJECT NO. 12-10

BOTTOM HOLE LOCATION PLAT
 CONTINENTAL RESOURCES INC.
 ATLANTA 5-6H FEDERAL
 SECTION 6, T153N, R101W
 WILLIAMS COUNTY, NORTH DAKOTA
 495' FNL & 835' FWL



I CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS
 WORK PERFORMED BY ME OR UNDER MY RESPONSIBLE
 CHARGE, AND IS TRUE AND CORRECT TO THE BEST OF
 MY KNOWLEDGE AND BELIEF

John Pagsund -23-12
 JOHN PAGSUND L.S. 3366
 LAND SURVEYOR
 L.S. 3366

NORTH DAKOTA

DATE STAKED: 2-9-2012

BASIS OF VERTICAL DATUM:
 NAVD 1988 GEODETIC

PERSON AUTHORIZING SURVEY;
CHAD NEWBY

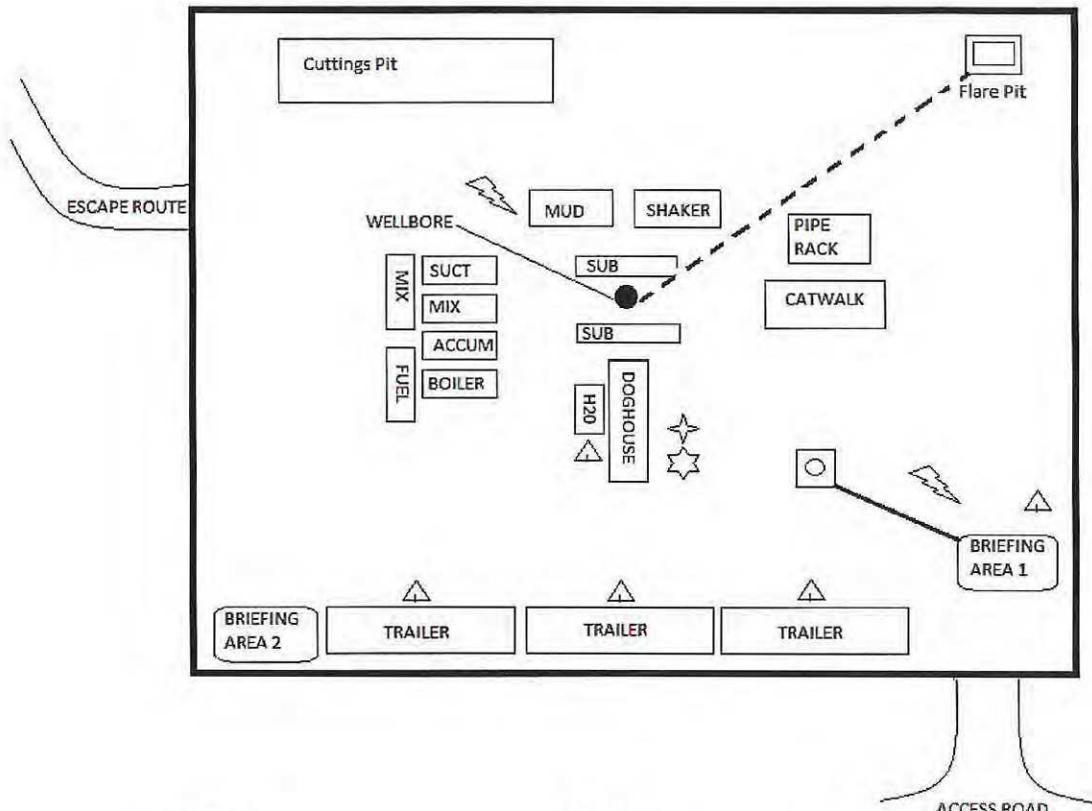
EXPLANATION AREA: NAD83(CORS96)

BASIS OF BEARING: TRUE NORTH

BROSZ ENGINEERING INC.

BOX 357
 BOWMAN, N.D. 58623
 PHONE: 701-523-3340
 FAX: 701-523-5243

PROJECT NO. 12-10



LEGEND

- ⚡ WINDSOCK
- ★ ALARM FLASHING LIGHT
- ☆ ALARM SIREN
- ▲ 30 MIN AIRPACK
- ▢ AIRLINE BREATHING APPARATUS W/MANIFOLD
- WELLBORE
- ─ 1/2" LOW PRESSURE HOSE CONNECTED TO BREATHING AIR TRAILER
- SAFETY TRAILER W/ CASCADE AIRSYSTEM

NOTE: Continuous H₂S monitoring heads located:

- A. Return airline while air drilling
- B. Shaker while mud drilling
- C. Floor
- D. Substructure, Bell Nipple

READOUT INSTRUMENT IN DOGHOUSE

| Continental Resources, Inc | |
|-----------------------------|-------------------------------|
| Name: Atlanta Federal 5-6H | Site Plan of Safety Equipment |
| Location: Sec 6-T153N-R101W | |
| State: ND County: Williams | |



July 20, 2012

Industrial Commission of North Dakota
Oil & Gas Division
600 East Boulevard, Dept 405
Bismarck, North Dakota 58505

Continental Resources, Inc. (CRI) respectfully submits the following information concerning the drilling of the Atlanta 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 -- 6H,
Township 153N, Range 101W of the 5th P.M.
Section 6, N/2 NW/4 Williams County, North Dakota.

Continental Resources Inc. would like to propose the following automatic shut down equipment and level sensing monitoring equipment be installed on the site to aid in the prevention of any accidental release or safety issue. One-line schematic diagrams, flowchart model, and general product information are attached for your review and approval with this affidavit.

- 1) Tank Side – i) K-Tek Guided Wave Radar and Z-Bend High Level Switch Level Detectors ii) High level switches for oil and water tanks ii) Battery box with solar backup
 - 2) Treater / Separator – i) Buffer Switch ii) U003 Gap Switch iii) 2 - AST 4600 pressure transducers – monitor pressure & liquid content of flare / gas sales lines iv) Battery box with solar backup
 - 3) Wellhead – i) TotalFlow Controller ii) Emergency ShutDown Valve package iii) Battery box with solar backup
 - 4) System Automation through the proposed equipment will provide an independent control system on all equipment on site which will be able to shut the well(s) in should any of the other equipment be incapacitated or functioning improperly.
 - 5) Once the system is operational and linked to the CRI Williston Basin SCADA system, a notification will be sent directly to the (Sidney, MT) field office, and field personnel in charge of the site's operation. This system will also provide the capability for remote shutdown from a computer terminal on the system at another location. In the event that an alert was sent from the site, or a call received, CRI estimates that personnel would be able to respond to an incident through the remote system within minutes and be present at the site within 15 to 30 minutes.

~~Chad Newby, Operations Land Coordinator
Continental Resources, Inc.~~

STATE OF OKLAHOMA)
COUNTY OF GARFIELD)ss:

On the 20th day of July 2012, before me, a Notary Public in and for said County and State, personally appeared Chad Newby, known to me to be the Operations Land Coordinator of Continental Resources, Inc., the Corporation that executed the within instrument, and acknowledged to me that such Corporation executed the same.

Percy Barnes
Notary Public

Garfield County, Oklahoma

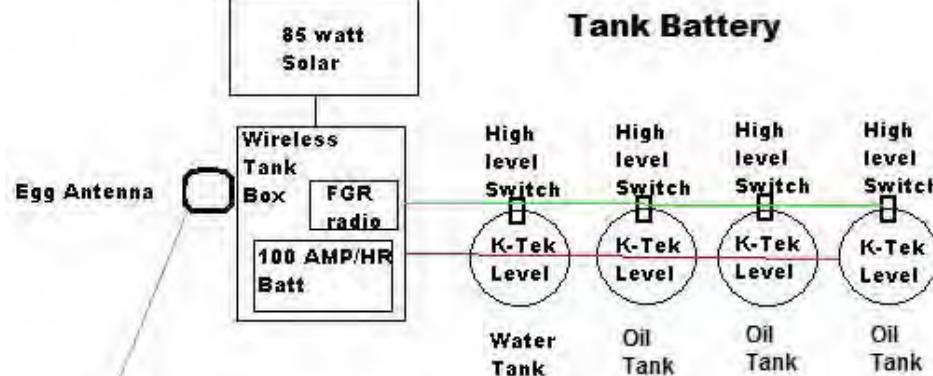
My Commission Expires: 7/5/2015
Commission No.: 11006023



Continental Resources Wellhead Automation

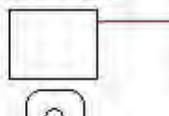


Analog
Radio
RS485 Modbus
Digital I/O



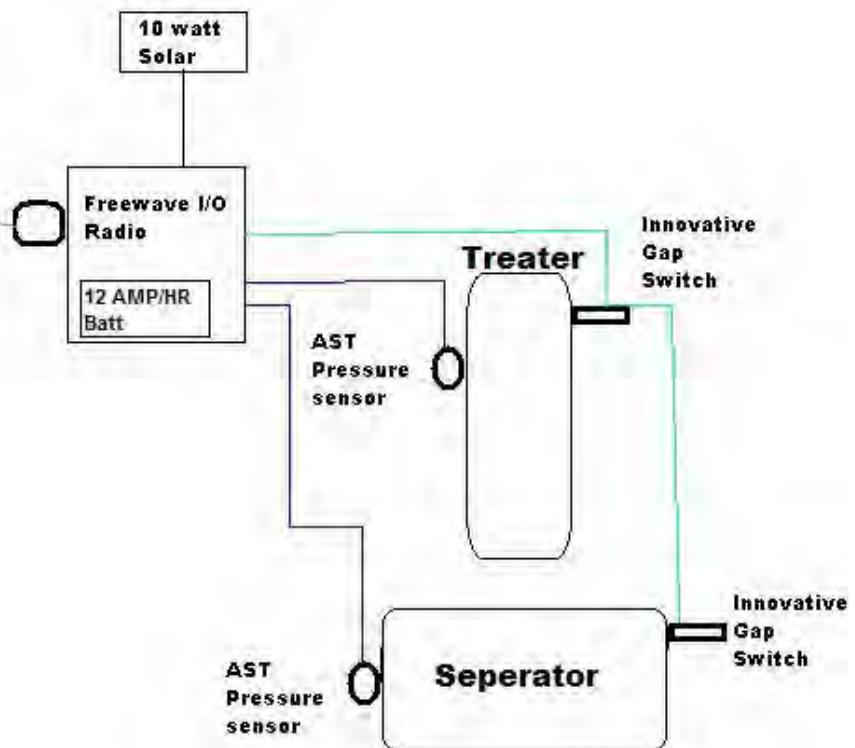
Wellhead

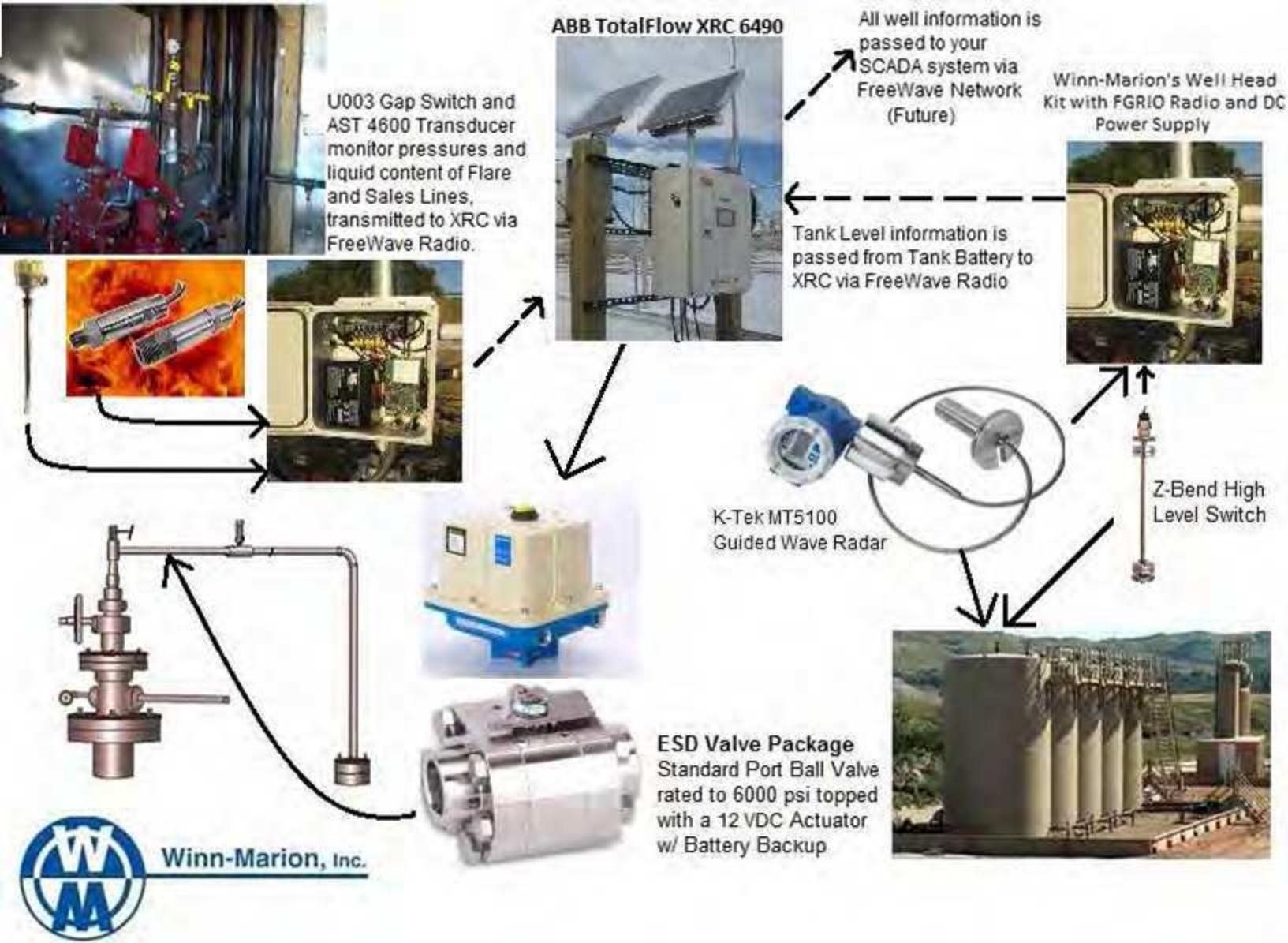
LADC1000
Actuator



Habonim Valve

Egg Antenna





Tank Side

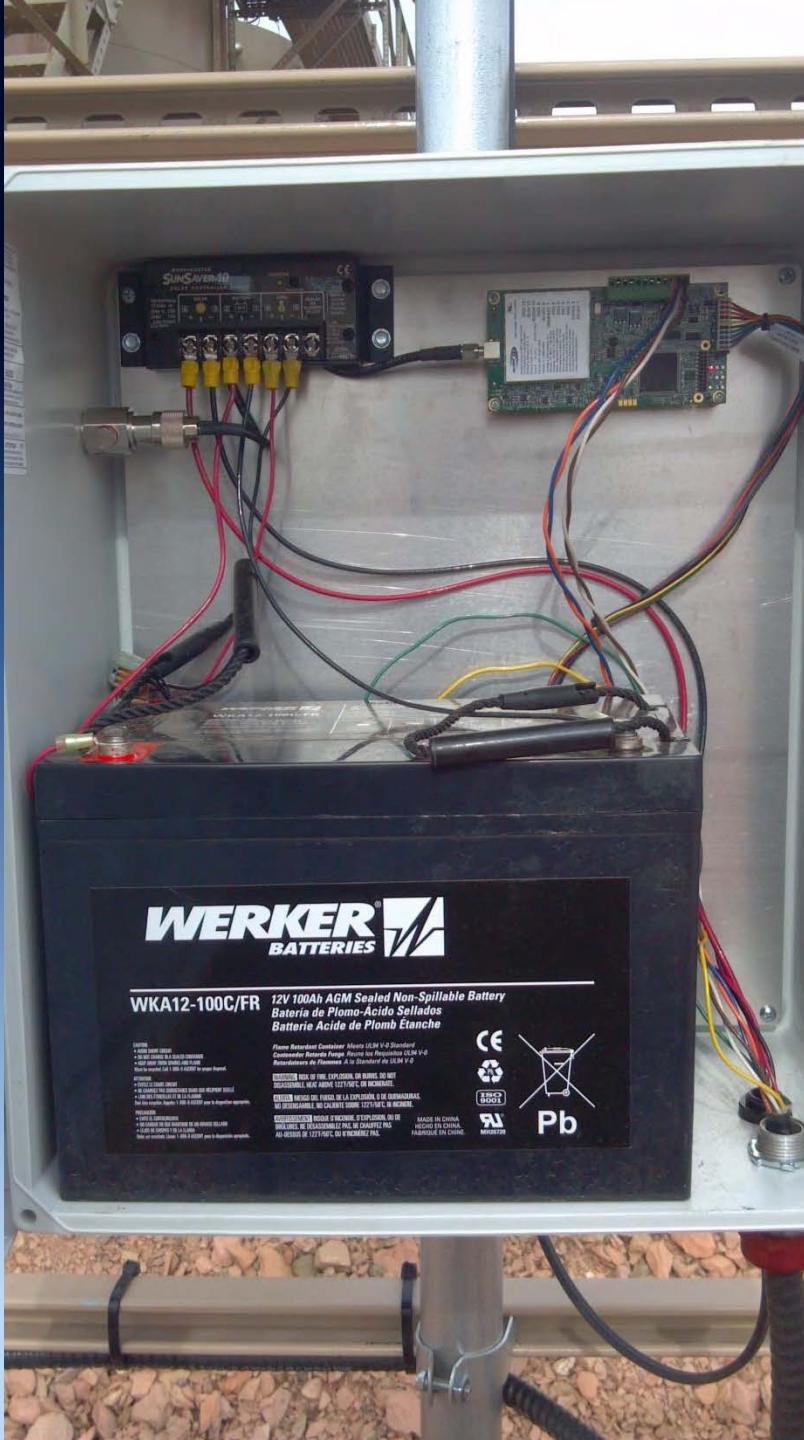
Contains the following Equipment

- 4 K-Tek Guided Wave Radar Level Detectors
- 3 High Level Switches (Oil Tanks)
- 1 Side Level Switch (Water Tank)
- Battery box with 100 AH Battery and 90 W Solar





WM Automation
Service, LLC



WM Automation
Service, LLC



WM Automation
Service, LLC



WM Automation
Service, LLC



WM Automation
Service, LLC

Treater Shack

Contains the following Equipment

- 1 Buffer Switch (Short Gap Switch)
- 1 Gap Switch
- 2 Pressure Transducers
- Battery box with 35 AH Battery and 10 W Solar





WM Automation
Service, LLC



WM Automation
Service, LLC



WM Automation
Service, LLC





WM Automation
Service, LLC



WM Automation
Service, LLC

Wellhead

Contains the following Equipment

- TotalFlow
- ESD Valve
- Battery box with 100 AH Battery and 50 W Solar

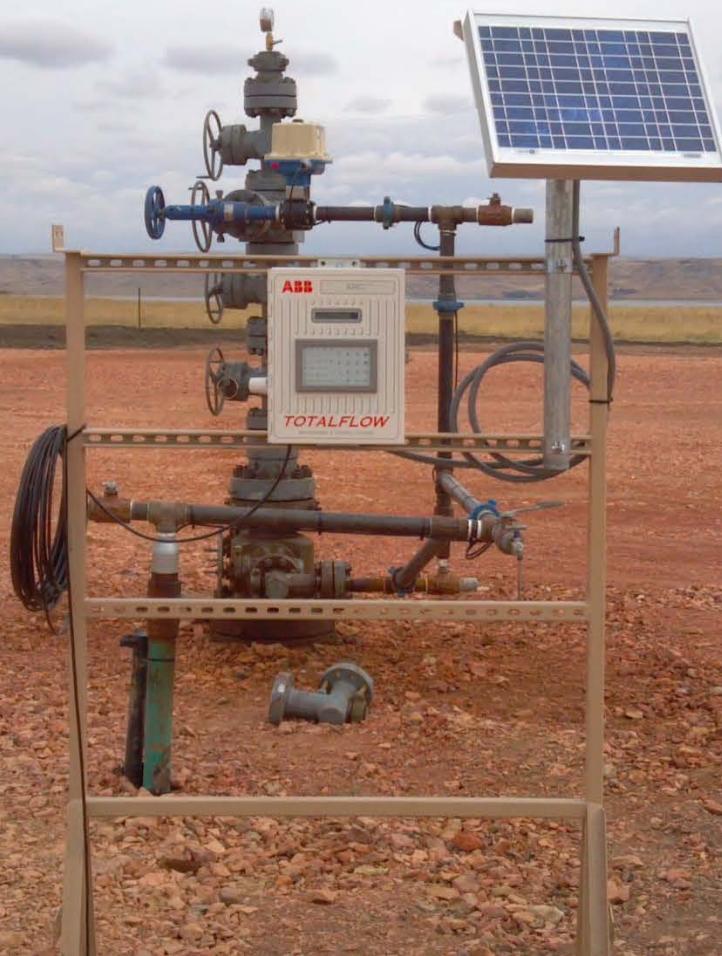




WM Automation
Service, LLC



WM Automation
Service, LLC



WM Automation
Service, LLC

**Cyclone Drilling Rig No. 20
Contingency Plan
For Drilling Activities Conducted at
Continental Resources, Inc.'s
Atlanta 1-6H
Located in Williams County, ND**



November 2011

**CYCLONE DRILLING, INC. RIG NO. 20
CONTINGENCY PLAN
FOR DRILLING ACTIVITIES CONDUCTED AT THE
CONTINENTAL RESOURCES, INC. ATLANTA 1-6H
6-153N-101W, WILLIAMS COUNTY, NORTH DAKOTA**

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CYCLONE DRILLING, INC. RIG NO. 20
CONTINGENCY PLAN
FOR DRILLING ACTIVITIES CONDUCTED AT THE
CONTINENTAL RESOURCES, INC. ATLANTA 1-6H
6-153N-101W, WILLIAMS COUNTY, NORTH DAKOTA

1. INTRODUCTION

The purpose of this Contingency Plan is to outline the procedures that will be implemented by Cyclone Drilling, Inc.'s Rig No. 20 personnel should a spill or flood occur during drilling activities conducted at the Continental Resources, Inc. Atlanta 1-6H lease located in Section 6, 153N, 101W in Williams County, North Dakota. Such procedures are designed to minimize the effects of spills and potential flooding on Cyclone field personnel, Continental facilities, the surrounding community, and the environment in general.

2. GENERAL INFORMATION

2.1 Equipment Description. Cyclone Drilling, Inc. operates drilling rigs that are moved from site to site therefore, the exact equipment layout will vary slightly. The Atlanta 1-6H location encompasses 3.1-acres and the standard equipment for most drilling jobs is as follows:

- r Mobile Rig (w/integrated fuel/oil storage tanks)
- r Storage Facilities
- r Mud Pumps (diesel-powered pumps w/integrated fuel storage tanks)
- r Generators (w/integrated fuel storage tanks)
- r Water Tanks
- r Pipe Racks

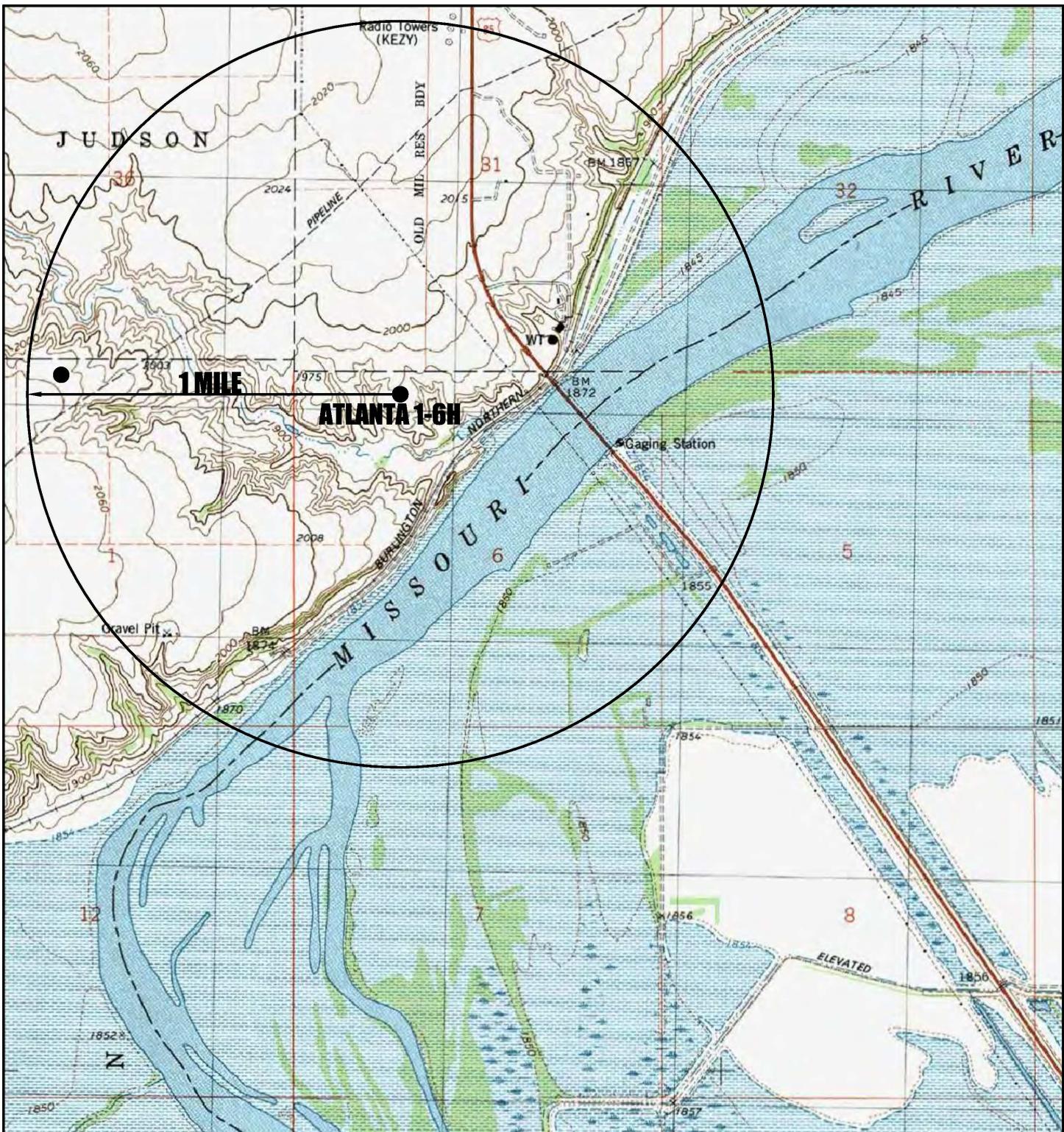
2.2 Proximity of Rigs to Navigable Waters. According to 40 CFR 112.7(e)(6)(i), mobile drilling equipment should be positioned or located so as to prevent spilled oil from reaching navigable waters. Depending on the location, catch basins or diversion structures may be necessary to intercept and contain fuel, crude oil, or oily drilling fluid spills.

The nearest potential receiving water for an oil spill is unnamed intermittent tributary of the Missouri River located approximately 500-ft. south of the Atlanta 1-6 lease. A One-Mile Radius Map indicating the location of Continental's Atlanta 1-6H lease is included herein as *Figure 1*.

Cyclone personnel will locate Rig No. 20 and its associated equipment to best prevent a potential release to waterways and provide drainage and containment, as discussed in *Section 3.4* of this Plan. A Drilling Rig Layout Map is included herein as *Figure 2*.

2.3 Potential Spills and Releases. The spill prevention system includes visual inspections and containment structures to help reduce the potential for releases to the off-site soil or surface waters. Generally, minor spills or leaks within the work site will be contained by drip pans located on skid-mounted equipment and cleaned-up using an absorbent (i.e., granular or pads). A list of activities that represent the greatest potential for a release of oil to the environment is as follows:

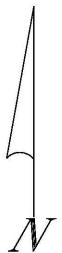
- r Loading/unloading fuel, oil, and used oil to/from storage tanks and containers.
- r Temporary storage of oil containers outside of secondary containment.



CONTINENTAL RESOURCES INC.

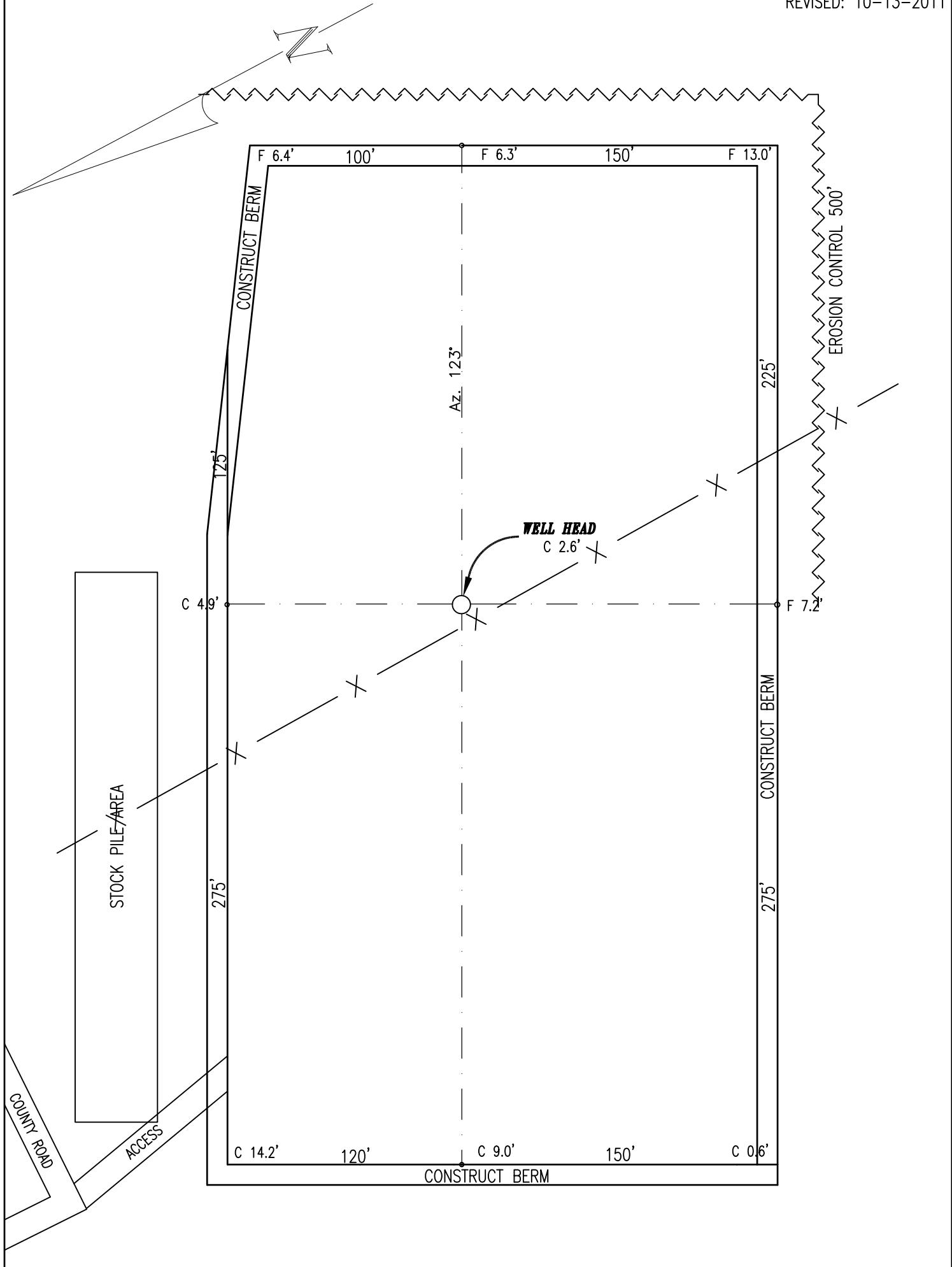
ONE-MILE RADIUS MAP

● = OIL WELL



SCALE 1" = 2000'

ATLANTA 1-6H
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA



| | | | |
|---|---|--------------------|---|
| CONTINENTAL RESOURCES INC. PO BOX 1032 ENID, OKLAHOMA 73702 | ESTIMATED EARTH QUANTITIES | | ALL INDICATED CUTS & FILLS ARE STAKED GRADE ELEVATIONS. |
| | TOP-SOIL: | 2,500 CUBIC YARDS | |
| DRILLING RIG LAYOUT ATLANTA 1-6H SECTION 6, T153N, R101W WILLIAMS COUNTY, NORTH DAKOTA | SUB-SOIL: | 14,531 CUBIC YARDS | BACKSLOPES ASSUMED AT 1 1/2 : 1 % |
| | TOTAL CUT: | 17,031 CUBIC YARDS | |
| | TOTAL FILL: | 12,769 CUBIC YARDS | Use excess materials in access road fill |
| | Ground Elevation at Well Head: 1955.6 ft. ASL | | |
| Finished Rig Grade Elevation: 1953.0 ft. ASL | | | |
| DRAFT: PAULSON | SCALE 1" = 60' | DATE: MAY 29, 2010 | PROJECT NO. 10-10 |

**CYCLONE DRILLING, INC. RIG NO. 20
CONTINGENCY PLAN
FOR DRILLING ACTIVITIES CONDUCTED AT THE
CONTINENTAL RESOURCES, INC. ATLANTA 1-6H
6-153N-101W, WILLIAMS COUNTY, NORTH DAKOTA**

- r Rigs that are operated without a fresh water or well fluids pit.

3. OIL/FUEL STORAGE

- 3.1 Oil, Fuel, and Used Oil Storage Tanks.** The materials stored on-site are mainly used to operate the drilling rig's generators and pumps and generally included the following:

- r Diesel Fuel
- r Engine Oil
- r Hydraulic Oil
- r Gear Oil
- r Used Oil

- 3.2 Container Storage.** Multi-compartment storage containers are used to store hydraulic, motor and gear oil in approximate 100- to 150-gal. capacities. These container is generally located within the operating area near the accumulator valve skid. In lieu of such a multi-compartment storage container, fresh oil may be stored in 55-gal. drums.

Used oil is stored in 55-gal. drums prior to contractor removal. Because of limited available space within the rig's operating area, these drums are usually stored outside the operating area. In this event, these drums will be placed in a spill containment pan or within an earthen berm.

Containers stored within the trenched operating area would be contained by drainage to the well fluids pit. Containers used at sites that do not use pits are provided with earthen dike containment or other containment (i.e., metal containment pan.) The containment volume for containers located outside of the trenched operating area will be approximately 10% of the total volume of all containers within the containment area.

- 3.3 Transfer Facilities.** Fuel is transferred from bulk tanks into smaller day tanks located on the drilling rig, pump skids, and generator skids. Most bulk fuel tanks are equipped with a fuel pump attached to the skid. The fuel level in the day tanks is usually monitored until the tank is full.

Personnel transfer fresh oil from bulk storage tanks or drums into smaller tanks located on the drilling rig by filling 5-gal. buckets and manually filling the smaller tanks. Personnel transfer used equipment oil into 55-gal. drums using 5-gal. buckets.

Cyclone personnel are present at all times during oil and diesel transfer operations to ensure quick response in the event of a release. In addition, all pumps are securely grounded for static electricity for safety and personnel protection purposes.

- 3.4 Drainage and Containment Facilities.** The drains on containment systems will be closed and sealed except during water drainage. Prior to draining water the following steps will be taken:

**CYCLONE DRILLING, INC. RIG NO. 20
CONTINGENCY PLAN
FOR DRILLING ACTIVITIES CONDUCTED AT THE
CONTINENTAL RESOURCES, INC. ATLANTA 1-6H
6-153N-101W, WILLIAMS COUNTY, NORTH DAKOTA**

- r Visually inspect the diked areas around tanks to ensure that the water does not exhibit an oily sheen and will not result in a harmful discharge.
- r Opening, closing, and locking the bypass valve under responsible supervision following drainage activities.
- r Maintain adequate drainage operation records.

3.5 Bulk Storage Tanks. The bulk storage tanks are located within a trenched area where releases drain into the well fluids pit. The well fluids pit will be sized to provide containment volume to accommodate the largest tank within the containment area as well as sufficient volume for stormwater accumulation and the volume required for well fluid storage. Bulk storage tanks at sites that do not use pits are contained by an earthen containment dike constructed around the tank.

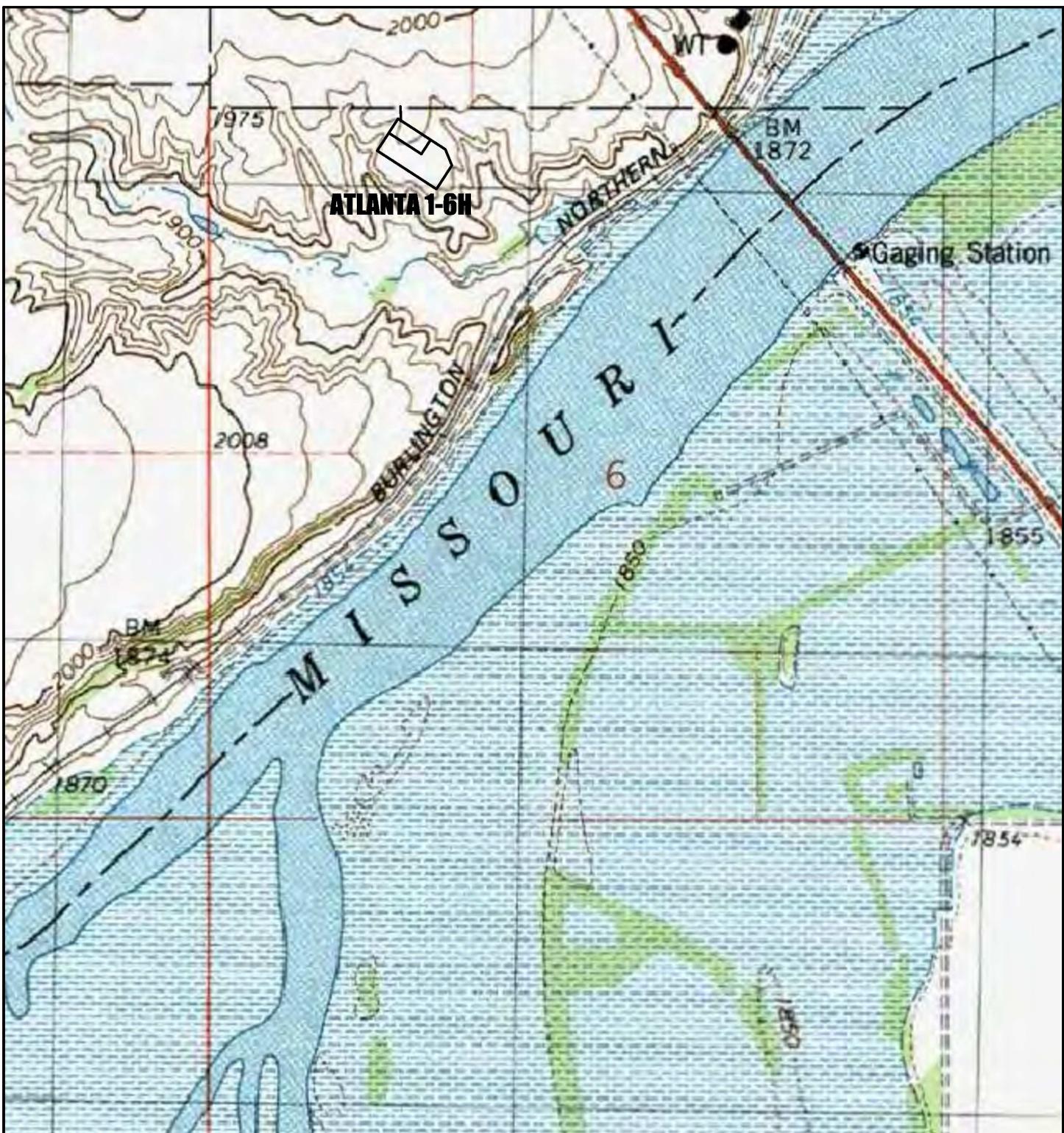
Stormwater that collects within the trenched area flows into the well fluids pit. Stormwater that collects within the earthen dike containment structures is inspected and if no free oil or oil sheen is observed, Continental field personnel or their on-site representatives may pump the water outside of the containment structure. In the event oil is observed in the stormwater within the earthen dike containment structures, it is pumped into a temporary container or storage tank for off-site disposal.

3.6 Truck Loading/Unloading Areas. Cyclone personnel will use spill containment booms to contain a release from a truck during loading/unloading operations or hand shovels and containment booms to direct the release to a containment trench or pit. Collected oil from such a release will be pumped into a temporary container or storage tank for off-site disposal.

4. FLOOD CONTINGENCY

Floods can develop slowly during an extended period of rain, or in a warming trend following a heavy snow. Others, such as flash floods, can occur quickly, even without any visible signs of rain. It's important to be prepared for flooding when working in a low-lying area, near water or downstream from a dam. The Atlanta 1-6H lease is located approximately 500-ft. north of an unnamed intermittent tributary of the Missouri River at an approximate elevation of 1,953-ft. above Mean Sea Level (MSL). A Well Location Map reflecting the topography of the subject site is presented herein as *Figure 3*.

- 4.1 Flood Watch.** A Flood Watch indicates flooding is possible. Tune in to NOAA Weather Radio, commercial radio, or television for information regarding potential timing of flooding. Begin preparing to move portable equipment and storage tanks to higher ground. Anchor equipment and storage tanks that cannot be readily moved.
- 4.2 Flash Flood Watch.** A Flash Flood Watch indicates flooding may occur without warning. Be prepared to move personnel, equipment, and portable storage tanks to higher ground; listen to NOAA Weather Radio, commercial radio, or television for information.



CONTINENTAL RESOURCES
WELL LOCATION



ATLANTA 1-6H
SECTION 6, T153N, R101W
WILLIAMS CO., NORTH DAKOTA

**CYCLONE DRILLING, INC. RIG NO. 20
CONTINGENCY PLAN
FOR DRILLING ACTIVITIES CONDUCTED AT THE
CONTINENTAL RESOURCES, INC. ATLANTA 1-6H
6-153N-101W, WILLIAMS COUNTY, NORTH DAKOTA**

- 4.3 Flood Warning.** A Flood Warning indicates flooding is occurring or will occur soon; if advised to evacuate, do so immediately, if safe to do so move equipment and portable storage tanks to higher ground.
- 4.4 Flash Flood Warning.** A Flash Flood Warning indicates flash flood is occurring; personnel should seek higher ground on foot immediately.
- 4.5 Flood Evacuation Plan.** In the event the Cyclone Drilling Foreman determines that the facility must be evacuated due to flooding, they will notify the personnel concerned by verbally announcing an evacuation or using internal two-way radios. All personnel will be required to meet at the designated evacuation assembly area.

The Cyclone Drilling Foreman will account for all employees at the work site. In the event any employees are missing, an immediate report will be made to the Safety Department. Good judgment must be used in evacuation procedures to avoid placing people in greater danger.

5. PREPAREDNESS AND PREVENTION REQUIREMENTS

Preparedness and prevention is required for all spills and potential flooding. The Cyclone Drilling Foreman will function as Emergency Coordinator and be responsible for establishing and implementing the preparedness and prevention measures discussed in the following sections of this Plan.

- 5.1 Emergency Equipment.** Cyclone Rig No. 20 located at the Atlanta 1-6H will be properly equipped so that Cyclone personnel can immediately respond to an emergency during working hours utilizing emergency equipment. Typical emergency equipment includes but is not limited to fire extinguishers, eyewash stations, first-aid stations, and spill response equipment. Employees will be trained and familiarized with the use and location of all emergency equipment prior to beginning operations at a work site
- 5.2 Internal Communication.** For larger jobs, Cyclone personnel use two-way radios to communicate between the rig personnel and supervisor. For smaller jobs, verbal communication is sufficient. During emergency situations, verbal communication and two-way radios (if available) will be used to provide immediate instructions to emergency response personnel. These systems are maintained, as necessary, to ensure proper operation during an emergency.
- 5.3 External Communication.** Telephones (available on some larger jobs) and cell phones are used to notify Continental's office in the event of an emergency. The office would telephone for assistance from local emergency response personnel, if necessary. The phones are routinely used to ensure proper operation.
- 5.4 Inspections.** Inspections of oil storage units, containment, and emergency equipment are conducted routinely to detect malfunctions and deterioration, operator errors, and/or

**CYCLONE DRILLING, INC. RIG NO. 20
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FOR DRILLING ACTIVITIES CONDUCTED AT THE
CONTINENTAL RESOURCES, INC. ATLANTA 1-6H
6-153N-101W, WILLIAMS COUNTY, NORTH DAKOTA**

discharges that may lead to, or cause a release of, oil from containment units or from the work site.

- 5.5 Training.** Cyclone personnel that are likely to respond to an incident are trained at least annually in solid waste management, spill response procedures, and stormwater management according to the procedures contained in this Plan. These employees are trained to perform in a manner that emphasizes accident and pollution prevention in an effort to safeguard human health and the environment.

The Cyclone Drilling Foreman is responsible for instructing appropriate personnel in the operation and maintenance of spill response equipment as well as all applicable spill control procedures. When employees are assigned to areas where oil spills may occur, it is required that a review of this Contingency Plan be conducted during on-the-job training sessions.

- 5.6 Emergency Evacuation Plan.** In the event the Cyclone Drilling Foreman determines that the facility has experienced a release, fire, or explosion that could threaten human health, they will notify the personnel concerned by verbally announcing an evacuation or using internal two-way radios. All personnel in the immediate vicinity of the emergency will be required to leave the area and report to his/her immediate supervisor at the designated evacuation assembly area. The assembly area will be determined prior to beginning operations at a work site, but may change based on wind direction during an actual emergency. The assembly area should be upwind of the work site.

The Cyclone Drilling Foreman will account for all employees at the work site. In the event any employees are missing, an immediate report will be made to the Safety Department. Good judgment must be used in evacuation procedures to avoid placing people in greater danger.

6. EMERGENCY RESPONSE PROCEDURES

Emergency Response Procedures have been established for Cyclone's work sites in the event of a spill. All spills, major and minor, will be reported to the Cyclone Drilling Foreman and Continental's Environmental Specialist. The emergency response procedures are included in *Appendix A*. The responsibilities of the First Responder, Cyclone Drilling Foreman, and Continental's Environmental Specialist are addressed in the following sections of this Plan.

- 6.1 First Responder.** When a spill occurs, the employee observing the incident will immediately notify the Cyclone Drilling Foreman and proceed to eliminate the spill source, if possible.
- 6.2 Emergency Coordinator Responsibilities.** The Cyclone Drilling Foreman will **(a)** be responsible for determining whether the release could reach navigable waters or threaten human health and/or the environment; **(b)** assess the hazard, make immediate notifications, and implement spill response procedures; **(c)** collect the necessary information for regulatory notifications and reports; and **(d)** provide the reporting information to Continental's Environmental Specialist.

**CYCLONE DRILLING, INC. RIG NO. 20
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FOR DRILLING ACTIVITIES CONDUCTED AT THE
CONTINENTAL RESOURCES, INC. ATLANTA 1-6H
6-153N-101W, WILLIAMS COUNTY, NORTH DAKOTA**

Continental's Environmental Specialist will make immediate verbal notifications and prepare and submit all required written spill reports.

Material Safety Data Sheets (MSDS) for the hazardous materials used at the work site are maintained on-site in the "doghouse" and provide information on the chemical hazards at the work site. Most releases will be minor and require only clean-up and disposal of small quantities of material. However, in the event the assessment indicates that evacuation of local areas may be advisable, they will immediately notify appropriate local authorities, as necessary. Appropriate authorities may include local police and fire departments, hospitals, and state and local emergency response teams, as identified in *Table 1*.

The Cyclone Drilling Foreman will immediately notify Continental's Environmental Specialist who will make initial verbal notifications to regulatory agencies and prepare written follow-up reports, as required. In the event the release has impacted the environment, the Cyclone Drilling Foreman and Continental's Environmental Specialist will determine clean-up requirements. In addition, the Cyclone Drilling Foreman and Environmental Specialist will coordinate the appropriate disposal of waste material generated during the response activities.

7. SPILL NOTIFICATION REPORTING

7.1 Spill Notification and Reporting. Upon receiving spill information, the Emergency Coordinator will notify Continental's Environmental Specialist who will determine if the spill requires notification and/or reporting to regulatory agencies, as outlined below:

7.1.1 North Dakota Industrial Commission (NDIC). According to the North Dakota Industrial Commission's (NDIC) General Rules and Regulations North Dakota Administrative Code (NAC) Chapter 43-02-03 Section C. Drilling:

All persons controlling or operating any well, pipeline, receiving tank, storage tank, or production facility into which oil, gas, or water is produced, received, stored, processed, or through which oil, gas, or water is injected, piped, or transported, shall verbally notify the director within 24-hrs. after discovery of any fire, leak, spill, blowout, or release of fluid. If any such incident occurs or travels offsite of a facility, the persons, as named above, responsible for proper notification shall within a reasonable time also notify the surface owners upon whose land the incident occurred or traveled. Notification requirements prescribed by this section do not apply to any leak, spill or release of fluid that is less than 1-bbl total volume and remains onsite of a facility. The verbal notification must be followed by a written report within 10-days after cleanup of the incident, unless deemed unnecessary by the director.

7.1.2 National Response Center (NRC). Any discharge to water must be reported immediately to the National Response Center. Therefore, the Cyclone Drilling Foreman must immediately inform Continental's Environmental Specialist with details regarding the spill so that official notifications can be made to the National Response Center.

CYCLONE DRILLING, INC. RIG NO. 20
CONTINGENCY PLAN
FOR DRILLING ACTIVITIES CONDUCTED AT THE
CONTINENTAL RESOURCES, INC. ATLANTA 1-6H
6-153N-101W, WILLIAMS COUNTY, NORTH DAKOTA

8. PLAN AMENDMENT

In the event that a reportable spill or flooding occurs, Cyclone personnel will review the event to determine if an amendment to this Plan is necessary. In addition, Cyclone personnel will amend the Plan whenever there is a modification in the facility design, construction, storage capacity, operation, or maintenance that renders the existing Plan inadequate.

9. MANAGEMENT APPROVAL

This Contingency Plan has been prepared for operation of Cyclone Drilling, Inc.'s Rig No. 20 to be reviewed prior to beginning operations at the Continental Resources, Inc. Atlanta 1-6 lease. The Plan will be implemented as herein described.

Ryan M

(Signature)

Ryan Nelson *Drilling Engineer*

(Name and Title - Please Print)



May 9, 2012

Industrial Commission of North Dakota
Oil & Gas Division
600 East Boulevard, Dept 405
Bismarck, North Dakota 58505

Re: Atlanta Federal 5-6H

Continental Resources, Inc., would like to request all filings and information regarding the above captioned well be considered "Tight Hole".

Please charge the Continental Resources, Inc., credit card that is on file with your agency for the application fee of this well.

Thank you for your prompt attention to this matter. If you have any questions, you may contact me at 580-548-5139 or email the following Terry.Olson@clr.com.

Sincerely,

CONTINENTAL RESOURCES, INC.



Terry L. Olson
Regulatory Compliance Specialist