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 2 8 2020
ND OIL & GAS DIVISION

Well File No.
23360

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.
PLEASE SUBMIT THE ORIGINAL.

Well Name and Number	Qtr-Qtr	Section	Township	Range	County
Atlanta 13-6H	**NENW**	**6**	**153 N**	**101 W**	**Williams**

Operator	Telephone Number	Field
Continental Resources, Inc.	**405-234-9000**	**Baker**

Address	City	State	Zip Code
P.O. Box 268870	**Oklahoma City**	**OK**	**73126**

Name of First Purchaser	Telephone Number	% Purchased	Date Effective
Continental Resources, Inc.	**405-234-9000**	**100**	**March 7, 2014**

Principal Place of Business	City	State	Zip Code
20 N. Broadway	**Oklahoma City**	**OK**	**73102**

Field Address	City	State	Zip Code

Name of Transporter	Telephone Number	% Transported	Date Effective
Hiland Crude	**580-616-2050**	**100**	**March 7, 2014**

Address	City	State	Zip Code
8811 S. Yale, Ste. 200	**Tulsa**	**OK**	**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 $VPCR_4$ requirement ☑ 13.7 psi $VPCR_4$ 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	Title
Terry L. Olson	**Terry L. Olson**	**Regulatory Compliance Specialist**

Above Signature Witnessed By

Witness Signature	Witness Printed Name	Witness Title
Christi Scritchfield	**Christi Scritchfield**	**Regulatory Compliance Specialist**

FOR STATE USE ONLY

Date Approved	NDIC CTB NO
JAN 29 2020	223372
By	Melissa Hall
Title	

5

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)

JUL 2014
RECEIVED
ND OIL & GAS DIVISION

Well File No.
23360

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

- ☐ Notice of Intent — Approximate Start Date
- ☑ Report of Work Done — Date Work Completed: **June 4, 2014**
- ☐ 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

- ☐ Drilling Prognosis
- ☐ Redrilling or Repair
- ☐ Casing or Liner
- ☐ Plug Well
- ☐ Supplemental History
- ☐ Temporarily Abandon
- ☐ Other
- ☐ Spill Report
- ☐ Shooting
- ☐ Acidizing
- ☐ Fracture Treatment
- ☑ Change Production Method
- ☐ Reclamation

Well Name and Number: **Atlanta 13-6H**

Footages	Qtr-Qtr	Section	Township	Range
495 F N L 1440 F W L	NENW	6	153 N	101 W

Field	Pool	County
Baker	Bakken	Williams

24-HOUR PRODUCTION RATE

	Before		After	
Oil	98	Bbls	79	Bbls
Water	475	Bbls	367	Bbls
Gas	0	MCF	0	MCF

Name of Contractor(s)

Address	City	State	Zip Code

DETAILS OF WORK

Continental Resources would like to request a change in production on the Atlanta 13-6H. The well went from flowing to pumping on 6/4/2014.

Company	Telephone Number
Continental Resources	(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 17, 2014
Email Address: Zach.Green@clr.com	

FOR STATE USE ONLY

☒ Received	☐ Approved
Date: 7/24/14	
By	
Title	

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
SFN 2468 (04-2010)

RECEIVED
APR 2014
ND OIL & GAS DIVISION

Well File No.
23360

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

Designate Type of Completion
☑ Oil Well ☐ EOR Well ☐ Recompletion ☐ Deepened Well ☐ Added Horizontal Leg ☐ Extended Horizontal Leg
☐ Gas Well ☐ SWD Well ☐ Water Supply Well ☐ Other:

Well Name and Number		Spacing Unit Description
Atlanta 13-6H		**Sec 5, 6, 7, & 8 T153N R101W**
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: ☐ Wildcat ☑ Development ☐ Extension

LOCATION OF WELL

At Surface	Qtr-Qtr	Section	Township	Range	County
495 F N L 1440 F W L	**NENW**	**6**	**153 N**	**101 W**	**Williams**

Spud Date	Date TD Reached	Drilling Contractor and Rig Number	KB Elevation (Ft)	Graded Elevation (Ft)
3/8/2013	**5/2/2013**	**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 Type	String Size (Inch)	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
Lateral1	Conductor	16		102	20	94				0
	Surface	13 1/2		537	13 1/2	48			481	0
	Surface	9 5/8		1992	13 1/3	36			658	0
	Liner	4 1/2		9941	8 3/4	11.6				
	Liner	4 1/2		9967	8 3/4	11.6				
	Intermediate	7		10850	8 3/4	26-32			1005	2000
	Liner	4 1/2	9921	19022	6	11.6		9921		

PERFORATION & OPEN HOLE INTERVALS

Well Bore	Well Bore TD Drillers Depth (MD Ft)	Completion Type	Open Hole/Perforated Interval (MD,Ft) Top	Bottom	Kick-off Point (MD Ft)	Top of Casing Window (MD Ft)	Date Perf'd or Drilled	Date Isolated	Isolation Method	Sacks Cement
Lateral1	19185	Perforations	10850	19185	10039					

PRODUCTION

Current Producing Open Hole or Perforated Interval(s), This Completion, Top and Bottom, (MD Ft): **Bakken 10,850' - 19,185'**
Name of Zone (If Different from Pool Name):

Date Well Completed (SEE INSTRUCTIONS)	Producing Method	Pumping-Size & Type of Pump	Well Status (Producing or Shut-In)
3/6/2014	**Flowing**		**Producing**

Date of Test	Hours Tested	Choke Size	Production for Test	Oil (Bbls)	Gas (MCF)	Water (Bbls)	Oil Gravity-API (Corr.)	Disposition of Gas
4/2/2014	**24**	**18 /64**		**522**	**255**	**125**	**39.6 °**	**Sold**

Flowing Tubing Pressure (PSI)	Flowing Casing Pressure (PSI)	Calculated 24-Hour Rate	Oil (Bbls)	Gas (MCF)	Water (Bbls)	Gas-Oil Ratio
	800		**522**	**255**	**125**	**489**

GEOLOGICAL MARKERS

Formation	MD (Ft)	TVD (Ft)
Greenhorn		4526
Dakota Group		4871
Pine Salt		7125
Minnekahta		7203
Base of Last Salt		9032
Mission Canyon		9243
Lodgepole		9793
Upper Bakken Shale		10494
Middle Bakken		10509

PLUG BACK INFORMATION

Well Bore	Type of Plug	Top (Ft)	Bottom (Ft)	Sacks Cement

CORES CUT

Top (Ft)	Bottom (Ft)	Formation	Top (Ft)	Bottom (Ft)	Formation

Drill Stem Test

Test Date	Formation	Top (Ft)	Bottom (Ft)	BH Temp (°F)	CL ppm	H2S ppm	Shut-in 1 (PSIG)	Shut-in 2 (PSIG)

Drill Pipe Recovery

Sample Chamber Recovery

Test Date	Formation	Top (Ft)	Bottom (Ft)	BH Temp (°F)	CL ppm	H2S ppm	Shut-in 1 (PSIG)	Shut-in 2 (PSIG)

Drill Pipe Recovery

Sample Chamber Recovery

Test Date	Formation	Top (Ft)	Bottom (Ft)	BH Temp (°F)	CL ppm	H2S ppm	Shut-in 1 (PSIG)	Shut-in 2 (PSIG)

Drill Pipe Recovery

Sample Chamber Recovery

Test Date	Formation	Top (Ft)	Bottom (Ft)	BH Temp (°F)	CL ppm	H2S ppm	Shut-in 1 (PSIG)	Shut-in 2 (PSIG)

Drill Pipe Recovery

Sample Chamber Recovery

Test Date	Formation	Top (Ft)	Bottom (Ft)	BH Temp (°F)	CL ppm	H2S ppm	Shut-in 1 (PSIG)	Shut-in 2 (PSIG)

Drill Pipe Recovery

Sample Chamber Recovery

Well Specific Stimulations

Date Stimulated	Stimulated Formation	Top (Ft)	Bottom (Ft)	Stimulation Stages	Volume	Volume Units
2/5/2014	Middle Bakken	10850	19185	29	47452	Barrels

Type Treatment	Acid %	Lbs Proppant	Maximum Treatment Pressure (PSI)	Maximum Treatment Rate (BBLS/Min)
Sand Frac		3069694	7468	26.0

Details
Pumped 130508# 40/70 mesh, 2207547# 20/40 sand and 862147# 20/40 creamic.

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 4/4/2014
Signature	Printed Name **Terry L. Olson**	Title **Regulatory Compliance Specialist**	

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)

Well File No.
23360
NDIC CTB No.
223372

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.
PLEASE SUBMIT THE ORIGINAL AND FOUR COPIES.

Well Name and Number	Qtr-Qtr	Section	Township	Range	County
Atlanta 13-6H	**NENW**	**6**	**153 N**	**101 W**	**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	Telephone Number	% Purchased	Date Effective
Continental Resources, Inc.	**405-234-9000**	**100**	**March 7, 2014**
Principal Place of Business: **20 N. Broadway**	City: **Oklahoma City**	State: **OK**	Zip Code: **73126**
Field Address	City	State	Zip Code
Name of Transporter: **Hiland Crude (~~West Camp Creek Pipe~~)**	Telephone Number	% Transported	Date Effective: **March 7, 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 21, 2014**

Signature	Printed Name	Title
Terry L. Olson	**Terry L. Olson**	**Regulatory Compliance Specialist**

Above Signature Witnessed By

Witness Signature	Witness Printed Name	Witness Title
Christi Scritchfield	**Christi Scritchfield**	**Regulatory Compliance Specialist**

FOR STATE USE ONLY

Date Approved	APR 14 2014
By	
Title	Oil & Gas Production Analyst

NEWSCO
International Energy Services Inc.

Continental Resources	33144	3/14/2013
Company	Job Number	Date
Cyclone 2	Atlanta 13-6H	Williams Co., ND
Rig	Well Name	County & State

Surveyed from depth of: Surface to 1963'

GL to KB: 22'

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 Resources	**NEWSCO JOB #**	33144
DATE:	3/14/2013	**WELL NAME:**	Atlanta 13-6 H
STATE:	North Dakota	**RIG:**	2
FIELD:	Williams Co.	**CONTRACTOR:**	Cyclone

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
V/SECTION PLANE:	0.00	Deg.
V/SECTION :	0.00	Feet

TARGET DATA

SENSOR TO BIT:	54.00
KB TO GL :	22.00
Total:	54.00
TVD:	0.00
INC:	0.00
VS:	0.00

Big rig KB to GL

0.00

#	DEPTH	INC	AZM	CRSL	TVD	VS	+N/S-	+E/W-	DLS	/100 FEET VBUR	WALK	TF
1	140.00	0.60	67.60	140.00	140.00	0.28	0.28	0.68	0.43	0.43	48.29	MAG
2	231.00	0.50	58.80	91.00	230.99	0.67	0.67	1.46	0.14	-0.11	-9.67	MAG
3	322.00	0.80	16.60	91.00	321.99	1.48	1.48	1.98	0.60	0.33	-46.37	MAG
4	414.00	0.10	3.30	92.00	413.98	2.18	2.18	2.17	0.76	-0.76	-14.46	MAG
5	483.00	1.10	10.30	69.00	482.98	2.89	2.89	2.29	1.45	1.45	10.14	MAG
6	504.00	0.80	274.00	21.00	503.98	3.10	3.10	2.18	6.81	-1.43	-458.57	MAG
7	596.00	0.70	341.10	92.00	595.97	3.67	3.67	1.36	0.91	-0.11	72.93	MAG
8	687.00	0.90	313.00	91.00	686.96	4.69	4.69	0.65	0.48	0.22	-30.88	MAG
9	778.00	1.10	343.20	91.00	777.95	6.01	6.01	-0.12	0.61	0.22	33.19	MAG
10	869.00	0.10	341.10	91.00	868.94	6.92	6.92	-0.40	1.10	-1.10	-2.31	MAG
11	960.00	0.60	346.70	91.00	959.94	7.46	7.46	-0.54	0.55	0.55	6.15	MAG
12	1049.00	0.70	342.90	89.00	1048.94	8.43	8.43	-0.80	0.12	0.11	-4.27	MAG
13	1141.00	0.70	320.40	92.00	1140.93	9.40	9.40	-1.33	0.30	0.00	-24.46	MAG
14	1230.00	0.80	321.80	89.00	1229.92	10.31	10.31	-2.06	0.11	0.11	1.57	MAG
15	1322.00	0.90	318.60	92.00	1321.91	11.36	11.36	-2.93	0.12	0.11	-3.48	MAG
16	1409.00	1.10	316.30	87.00	1408.90	12.47	12.47	-3.96	0.23	0.23	-2.64	MAG
17	1502.00	0.80	327.40	93.00	1501.89	13.67	13.67	-4.93	0.38	-0.32	11.94	MAG
18	1596.00	0.60	328.10	94.00	1595.88	14.64	14.64	-5.54	0.21	-0.21	0.74	MAG
19	1690.00	0.70	329.90	94.00	1689.87	15.55	15.55	-6.09	0.11	0.11	1.91	MAG
20	1784.00	0.80	350.50	94.00	1783.86	16.70	16.70	-6.48	0.30	0.11	21.91	MAG
21	1877.00	0.70	328.50	93.00	1876.86	17.82	17.82	-6.89	0.33	-0.11	-23.66	MAG
22	1963.00	1.00	330.90	86.00	1962.85	18.92	18.92	-7.53	0.35	0.35	2.79	MAG
23												
24												
25												
26												
27												
28												

#	DEPTH	INC	AZM	CRSL	TVD	VS	+N/S-	+E/W-	DLS	/100 FEET VBUR	WALK	TF
28	0.00	0.00	0.00									
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
41												

BAKER HUGHES

INTEQ

717 17th Street, Suite 2000
Denver, CO 80202
303-534-3223 Fax 303-534-1822

Report of Sub-Surface Directional Survey

CONTINENTAL
Company

ATLANTA 13-6H
Well Name

WILLIAMS/ND
Location

3/8/2013
Date

5335053
Job Number

Denver
Office

BAKER HUGHES
INTEQ

717 17th Street, Suite 2000
Denver, CO 80202
303-534-3223 Fax 303-534-1822

Survey Certification Sheet

CONTINENTAL	5335053	03/08/13
Company	Job Number	Date

SEC.06-T153N-R101W	ATLANTA 13-6H	WILLIAMS/ND
Lease	Well Name	County & State

Surveyed from a measured depth of: 2082 feet to 10780 feet

Type of Survey: MWD

Directional Surveyor: PHIL PETTEY

The data and calculations for this survey have been checked by me and conform to the standards and procedures set forth by Baker Hughes INTEQ. This report represents a true and correct Directional Survey of this well based on the original data obtained at the well site. Wellbore Coordinates are calculated using minimum curvature.

Seth Painter
Well Planner

This document has been subscribed and affirmed, or sworn to before me in the county of Denver, state of Colorado, this 8th day of April, 2013.

My commission expires 7/14/14

Certification Number: 11015
Certification Date: 4/8/13

CONTINENTAL RESOURCES

Location:	NORTH DAKOTA	Slot:	SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)
Field:	WILLIAMS COUNTY	Well:	ATLANTA 13-6H
Facility:	SEC.06-T153N-R101W	Wellbore:	ATLANTA 13-6H PWB

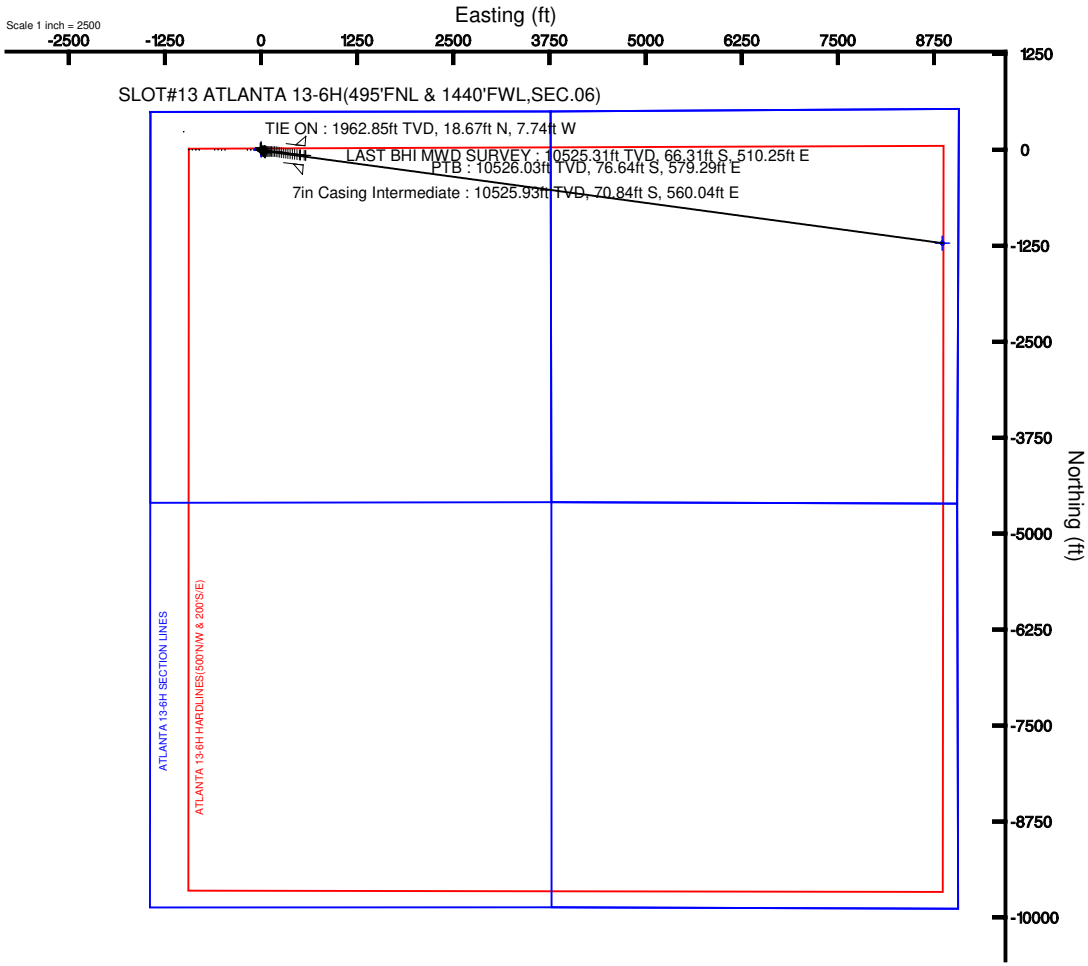
Plot reference wellpath is ATLANTA 13-6H (REV-E.0) PWP	
True vertical depths are referenced to CYCLONE 2 (RKB)	Grid System: NAD83 / Lambert North Dakota SP, Northern Zone (3301), US feet
Measured depths are referenced to CYCLONE 2 (RKB)	North Reference: True north
CYCLONE 2 (RKB) to Mean Sea Level: 1967 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 4/8/2013

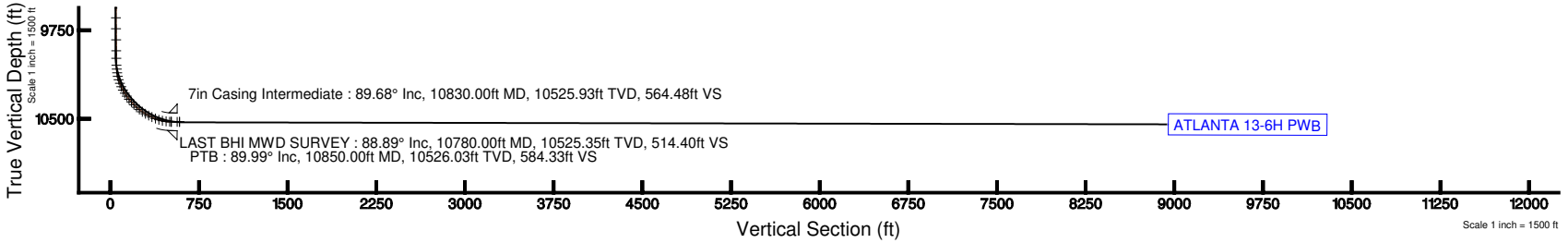
BAKER HUGHES

Continental RESOURCES

BGGM (1945.0 to 2014.0) Dip: 73.02° Field: 56527.2 nT
Magnetic North is 8.54 degrees East of True North (at 4/1/2013)

To correct azimuth from Magnetic to True add 8.54 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the True North Azimuth = 90 + 8.54 = 98.54





Azimuth 97.81° with reference 0.00 N, 0.00 E

Actual Wellpath Report

ATLANTA 13-6H AWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	**CONTINENTAL RESOURCES**	Slot	**SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)**
Area	**NORTH DAKOTA**	Well	**ATLANTA 13-6H**
Field	**WILLIAMS COUNTY**	Wellbore	**ATLANTA 13-6H AWB**
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	**5/8/2013** at **10:42:32 AM**
Convergence at slot	**2.40° West**	Database/Source file	**WA_Denver/ATLANTA_13-6H_AWB.xml**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[US ft]**	**Northing[US ft]**	**Latitude**	**Longitude**
Slot Location	27.30	1169.93	1180204.17	421177.27	**48°06'33.648"N**	**103°43'39.721"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#13 ATLANTA 13-6H(495'FNL & 1440'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	**97.48°**

REFERENCE WELLPATH IDENTIFICATION			
Operator	**CONTINENTAL RESOURCES**	Slot	**SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)**
Area	**NORTH DAKOTA**	Well	**ATLANTA 13-6H**
Field	**WILLIAMS COUNTY**	Wellbore	**ATLANTA 13-6H AWB**
Facility	**SEC.06-T153N-R101W**		

WELLPATH DATA (113 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
1963.00	1.000	330.900	1962.85	-10.03	18.88	-7.63	0.35	TIE TO NEWSCO MWD
2082.00	1.140	301.410	2081.83	-11.73	20.40	-9.15	0.47	
2176.00	0.370	195.270	2175.82	-12.63	20.60	-10.03	1.38	
2269.00	1.550	133.160	2268.81	-11.65	19.45	-9.19	1.52	
2363.00	3.150	132.100	2362.73	-8.49	16.85	-6.35	1.70	
2457.00	3.090	140.770	2456.59	-4.52	13.15	-2.83	0.51	
2550.00	3.060	149.990	2549.45	-1.18	9.06	0.00	0.53	
2643.00	3.070	153.550	2642.32	1.72	4.68	2.35	0.20	
2735.00	3.050	173.560	2734.19	3.68	0.05	3.72	1.16	
2828.00	2.800	157.470	2827.07	5.42	-4.51	4.87	0.92	
2921.00	3.380	133.920	2919.94	8.76	-8.51	7.72	1.49	
3015.00	3.500	131.030	3013.77	13.38	-12.32	11.88	0.22	
3108.00	3.510	129.010	3106.60	18.17	-15.97	16.23	0.13	
3201.00	3.120	132.140	3199.44	22.68	-19.46	20.32	0.46	
3294.00	2.800	108.670	3292.32	26.99	-21.89	24.35	1.34	
3385.00	1.680	86.410	3383.25	30.48	-22.52	27.78	1.54	
3479.00	1.500	87.280	3477.22	33.04	-22.37	30.39	0.19	
3572.00	0.660	86.700	3570.20	34.77	-22.28	32.14	0.90	
3667.00	0.720	89.320	3665.19	35.90	-22.24	33.28	0.07	
3759.00	0.570	106.720	3757.19	36.92	-22.37	34.30	0.27	
3853.00	0.530	110.450	3851.18	37.80	-22.66	35.15	0.06	
3946.00	0.300	129.050	3944.18	38.43	-22.96	35.75	0.28	
4039.00	0.340	108.370	4037.18	38.91	-23.20	36.20	0.13	
4133.00	0.440	125.220	4131.17	39.50	-23.50	36.76	0.16	
4226.00	0.410	129.340	4224.17	40.10	-23.91	37.30	0.05	
4319.00	0.280	140.480	4317.17	40.55	-24.30	37.71	0.16	
4413.00	0.260	152.360	4411.17	40.84	-24.66	37.95	0.06	
4507.00	0.230	104.660	4505.17	41.15	-24.90	38.23	0.21	
4600.00	0.170	138.270	4598.17	41.44	-25.05	38.51	0.14	
4694.00	0.350	135.250	4692.17	41.77	-25.36	38.80	0.19	

REFERENCE WELLPATH IDENTIFICATION			
Operator	**CONTINENTAL RESOURCES**	Slot	**SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)**
Area	**NORTH DAKOTA**	Well	**ATLANTA 13-6H**
Field	**WILLIAMS COUNTY**	Wellbore	**ATLANTA 13-6H AWB**
Facility	**SEC.06-T153N-R101W**		

WELLPATH DATA (113 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
4787.00	0.770	172.290	4785.16	42.16	-26.18	39.08	0.57	
4881.00	0.720	162.320	4879.15	42.58	-27.37	39.35	0.15	
4974.00	0.830	166.440	4972.15	43.07	-28.58	39.68	0.13	
5068.00	1.390	123.680	5066.13	44.34	-29.87	40.79	1.02	
5160.00	2.090	102.110	5158.09	47.01	-30.85	43.36	1.03	
5254.00	1.820	99.290	5252.03	50.21	-31.45	46.51	0.30	
5347.00	1.300	78.290	5345.00	52.68	-31.47	49.00	0.82	
5440.00	1.240	329.430	5437.99	53.06	-30.39	49.52	2.22	
5534.00	0.890	333.250	5531.97	52.02	-28.86	48.68	0.38	
5628.00	0.710	347.560	5625.96	51.41	-27.64	48.22	0.28	
5722.00	0.680	355.680	5719.95	51.10	-26.52	48.05	0.11	
5815.00	0.560	39.660	5812.95	51.23	-25.62	48.30	0.51	
5909.00	0.810	94.030	5906.94	52.14	-25.31	49.26	0.71	
6003.00	1.330	133.430	6000.93	53.68	-26.11	50.71	0.93	
6096.00	1.410	171.410	6093.90	54.87	-27.98	51.67	0.96	
6190.00	0.540	99.750	6187.89	55.64	-29.20	52.28	1.43	
6283.00	1.050	167.960	6280.88	56.36	-30.11	52.89	1.06	
6377.00	2.720	166.350	6374.83	57.45	-33.12	53.59	1.78	
6471.00	2.580	155.460	6468.73	59.38	-37.21	55.00	0.56	
6564.00	1.670	208.590	6561.67	60.00	-40.30	55.22	2.22	
6658.00	1.440	257.400	6655.64	58.40	-41.76	53.41	1.38	
6751.00	1.720	282.970	6748.61	55.91	-41.70	50.91	0.81	
6844.00	2.260	339.620	6841.56	53.66	-39.67	48.91	2.09	
6938.00	2.500	343.520	6935.48	51.96	-35.97	47.69	0.31	
7031.00	2.270	340.250	7028.40	50.30	-32.29	46.49	0.29	
7124.00	2.400	332.440	7121.32	48.34	-28.83	44.96	0.37	
7218.00	2.530	332.690	7215.23	46.02	-25.24	43.10	0.14	
7311.00	0.950	46.360	7308.20	45.34	-22.89	42.72	2.62	
7405.00	0.830	77.460	7402.18	46.46	-22.20	43.95	0.52	
7498.00	0.680	102.850	7495.18	47.65	-22.18	45.14	0.39	

REFERENCE WELLPATH IDENTIFICATION			
Operator	**CONTINENTAL RESOURCES**	Slot	**SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)**
Area	**NORTH DAKOTA**	Well	**ATLANTA 13-6H**
Field	**WILLIAMS COUNTY**	Wellbore	**ATLANTA 13-6H AWB**
Facility	**SEC.06-T153N-R101W**		

WELLPATH DATA (113 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
7592.00	0.500	340.730	7589.17	48.02	-21.91	45.55	1.10	
7686.00	0.440	342.090	7683.17	47.68	-21.18	45.30	0.06	
7779.00	0.990	4.610	7776.16	47.48	-20.04	45.26	0.65	
7872.00	0.840	8.150	7869.15	47.45	-18.57	45.42	0.17	
7965.00	0.520	260.360	7962.15	47.06	-17.96	45.10	1.20	
8059.00	0.580	291.230	8056.14	46.19	-17.86	44.24	0.32	
8152.00	0.270	337.420	8149.14	45.62	-17.49	43.71	0.47	
8246.00	0.310	284.980	8243.14	45.26	-17.22	43.38	0.28	
8340.00	0.350	262.910	8337.14	44.73	-17.19	42.85	0.14	
8434.00	0.250	283.100	8431.14	44.24	-17.18	42.37	0.15	
8526.00	0.250	278.430	8523.14	43.84	-17.10	41.97	0.02	
8620.00	0.220	296.710	8617.14	43.47	-16.99	41.61	0.09	
8712.00	0.150	342.680	8709.14	43.25	-16.80	41.42	0.17	
8805.00	0.040	29.390	8802.14	43.21	-16.65	41.40	0.14	
8899.00	0.100	34.220	8896.14	43.26	-16.56	41.46	0.06	
8993.00	0.200	60.840	8990.13	43.43	-16.41	41.65	0.13	
9086.00	0.120	82.320	9083.13	43.65	-16.32	41.89	0.11	
9180.00	0.290	105.150	9177.13	43.98	-16.36	42.21	0.20	
9273.00	0.380	107.340	9270.13	44.52	-16.52	42.73	0.10	
9367.00	0.390	122.170	9364.13	45.12	-16.78	43.30	0.11	
9461.00	0.230	111.560	9458.13	45.59	-17.02	43.75	0.18	
9554.00	0.430	107.990	9551.13	46.12	-17.20	44.25	0.22	
9647.00	0.460	118.700	9644.12	46.81	-17.48	44.91	0.09	
9740.00	0.410	104.490	9737.12	47.49	-17.75	45.56	0.13	
9834.00	0.560	106.200	9831.12	48.28	-17.96	46.33	0.16	
9927.00	0.460	98.060	9924.11	49.10	-18.14	47.14	0.13	
9990.00	0.620	100.440	9987.11	49.69	-18.24	47.72	0.26	
10050.00	2.180	101.870	10047.09	51.15	-18.53	49.16	2.60	
10082.00	5.300	104.700	10079.02	53.23	-19.03	51.18	9.76	
10113.00	8.550	103.260	10109.79	56.94	-19.92	54.81	10.50	

REFERENCE WELLPATH IDENTIFICATION			
Operator	**CONTINENTAL RESOURCES**	Slot	**SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)**
Area	**NORTH DAKOTA**	Well	**ATLANTA 13-6H**
Field	**WILLIAMS COUNTY**	Wellbore	**ATLANTA 13-6H AWB**
Facility	**SEC.06-T153N-R101W**		

WELLPATH DATA (113 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
10144.00	12.380	99.480	10140.27	62.56	-21.00	60.34	12.55	
10174.00	16.610	96.610	10169.31	70.06	-22.02	67.77	14.30	
10206.00	20.600	93.970	10199.63	80.26	-22.94	77.93	12.74	
10237.00	24.420	92.480	10228.26	92.09	-23.59	89.78	12.46	
10269.00	28.360	90.950	10256.92	106.24	-24.01	103.99	12.49	
10300.00	31.920	90.490	10283.73	121.69	-24.20	119.56	11.51	
10330.00	35.340	90.370	10308.70	138.18	-24.32	136.17	11.40	
10362.00	38.990	91.820	10334.20	157.38	-24.70	155.49	11.73	
10393.00	42.080	93.570	10357.76	177.46	-25.66	175.61	10.62	
10424.00	44.240	97.680	10380.37	198.64	-27.75	196.70	11.43	
10456.00	48.020	99.860	10402.55	221.70	-31.28	219.49	12.79	
10487.00	52.240	100.610	10422.42	245.46	-35.51	242.90	13.74	
10518.00	55.680	99.210	10440.65	270.50	-39.82	267.59	11.68	
10549.00	58.740	98.210	10457.44	296.55	-43.76	293.35	10.24	
10580.00	63.380	97.680	10472.44	323.67	-47.51	320.21	15.04	
10611.00	65.800	97.340	10485.74	351.67	-51.17	347.97	7.87	
10643.00	68.050	97.240	10498.28	381.11	-54.90	377.17	7.04	
10674.00	72.740	97.100	10508.68	410.30	-58.54	406.13	15.14	
10705.00	77.300	96.800	10516.69	440.24	-62.17	435.85	14.74	
10736.00	82.370	96.040	10522.16	470.73	-65.58	466.16	16.53	
10767.00	87.390	95.370	10524.92	501.59	-68.64	496.88	16.34	
10780.00	88.890	95.310	10525.34	514.57	-69.85	509.81	11.55	LAST BHI MWD SURVEY
10850.00	89.990	95.000	10526.03	584.51	-76.14	579.53	1.63	PTB

REFERENCE WELLPATH IDENTIFICATION			
Operator	**CONTINENTAL RESOURCES**	Slot	**SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)**
Area	**NORTH DAKOTA**	Well	**ATLANTA 13-6H**
Field	**WILLIAMS COUNTY**	Wellbore	**ATLANTA 13-6H AWB**
Facility	**SEC.06-T153N-R101W**		

HOLE & CASING SECTIONS - Ref Wellbore: ATLANTA 13-6H AWB Ref Wellpath: ATLANTA 13-6H AWP

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]
9.625in Casing Surface	22.00	2007.00	1985.00	22.00	2006.84	0.00	0.00	19.51	-8.08
8.75in Open Hole	2007.00	10850.00	8843.00	2006.84	10526.03	19.51	-8.08	-76.14	579.53
7in Casing Intermediate	22.00	10830.00	10808.00	22.00	10525.97	0.00	0.00	-74.38	559.60

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
ATLANTA 13-6H SECTION 05		0.00	0.00	0.00	1180204.17	421177.27	48°06'33.648"N	103°43'39.721"W	polygon
ATLANTA 13-6H SECTION 06		0.00	0.00	0.00	1180204.17	421177.27	48°06'33.648"N	103°43'39.721"W	polygon
ATLANTA 13-6H SECTION 08		0.00	0.00	0.00	1180204.17	421177.27	48°06'33.648"N	103°43'39.721"W	polygon
ATLANTA 13-6H SECTION LINES		0.00	0.00	0.00	1180204.17	421177.27	48°06'33.648"N	103°43'39.721"W	polygon
ATLANTA 13-6H BHL ON PLAT REV-1(1711'FNL & 500'FEL,SEC.05)		10533.00	-1216.00	8620.04	1188765.12	419601.19	48°06'21.629"N	103°41'32.713"W	point
ATLANTA 13-6H BHL REV-2 (1711'FNL & 200'FEL,SEC.05)		10533.00	-1216.04	8920.00	1189064.79	419588.58	48°06'21.627"N	103°41'28.293"W	point
ATLANTA 13-6H BHL REV-3 (1711'FNL & 200'FEL,SEC.05)		10547.00	-1216.00	8855.90	1189000.75	419591.31	48°06'21.628"N	103°41'29.238"W	point
ATLANTA 13-6H BHL REV-4 (1711'FNL & 200'FEL,SEC.05)		10547.00	-1216.00	8867.00	1189011.84	419590.84	48°06'21.628"N	103°41'29.074"W	point
ATLANTA 13-6H HARDLINES (500'N/W & 200'S/E)		10547.00	19.96	0.00	1180205.01	421197.21	48°06'33.845"N	103°43'39.721"W	polygon

REFERENCE WELLPATH IDENTIFICATION			
Operator	**CONTINENTAL RESOURCES**	Slot	**SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)**
Area	**NORTH DAKOTA**	Well	**ATLANTA 13-6H**
Field	**WILLIAMS COUNTY**	Wellbore	**ATLANTA 13-6H AWB**
Facility	**SEC.06-T153N-R101W**		

WELLPATH COMPOSITION - Ref Wellbore: ATLANTA 13-6H AWB Ref Wellpath: ATLANTA 13-6H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
22.00	1963.00	ISCWSA MWD, Rev. 2 (Standard)	NEWSCO SURFACE MWD<140-1963>	ATLANTA 13-6H AWB
1963.00	10780.00	NaviTrak (Standard)	BHI MWD 8.75 HOLE<2082-10780>	ATLANTA 13-6H AWB
10780.00	10850.00	Blind Drilling (std)	Projection to bit	ATLANTA 13-6H AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	**CONTINENTAL RESOURCES**	Slot	**SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)**
Area	**NORTH DAKOTA**	Well	**ATLANTA 13-6H**
Field	**WILLIAMS COUNTY**	Wellbore	**ATLANTA 13-6H AWB**
Facility	**SEC.06-T153N-R101W**		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1963.00	1.000	330.900	1962.85	TIE TO NEWSCO MWD
10780.00	88.890	95.310	10525.34	LAST BHI MWD SURVEY
10850.00	89.990	95.000	10526.03	PTB

MS Energy Services

7821 Will Rogers Blvd.
Fort Worth, Texas 76140

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

May 20, 2013

North Dakota Mineral Resources
Survey Certification Sheet

Company: Continental Resources, Inc.
Lease: Atlanta 13
Well Number: 6H
Location: Williams County, ND
Job Number: DDMT-130259

Well API# 33-105-02720

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	10,892' – 19,115' MD	04/24/2013 to 05/03/2013	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

MS Energy Services

V09.04.02

SURVEY CALCULATION PROGRAM

5/17/13 16:58

Company:	Continental Resources, Inc.				
Well Name:	Atlanta 13-6H				
Location:	Williams County, ND				
Rig:	Cyclone #2	Magnetic Declination:	8.54	REFERENCED TO TRUE NORTH	
Job Number:	DDMT-130259				
API #:	33-105-02720				
Vertical Section Azimuth:	97.81	Proposed Direction:	97.81		
Survey Calculation Method:	Minimum Curvature				

PTB:	MD	INC	AZM	TVD	N/S	E/W	VS
	19,185	92	97.9	10495.54	-1204.48	8834.44	8916.17

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Closure Azm	DLS/ 100	BUR/ 100'
TIE IN	10,780	88.89	95.31	10252.34	-69.85	509.81	514.57	514.57	97.80		
1	10,892	90.90	95.60	10252.55	-80.50	621.30	626.47	626.49	97.38	1.81	1.79
2	10,987	93.10	94.80	10249.23	-89.10	715.84	721.31	721.37	97.10	2.46	2.32
3	11,081	93.50	93.80	10243.82	-96.14	809.42	814.98	815.11	96.77	1.14	0.43
4	11,176	89.70	94.10	10241.17	-102.68	904.14	909.71	909.95	96.48	4.01	-4.00
5	11,270	90.60	94.80	10240.92	-109.97	997.85	1003.54	1003.90	96.29	1.21	0.96
6	11,364	91.30	96.60	10239.36	-119.31	1091.37	1097.46	1097.87	96.24	2.05	0.74
7	11,458	91.00	97.70	10237.48	-131.00	1184.62	1191.43	1191.84	96.31	1.21	-0.32
8	11,552	87.80	98.50	10238.46	-144.25	1277.67	1285.42	1285.78	96.44	3.51	-3.40
9	11,646	88.40	98.30	10241.58	-157.97	1370.61	1379.36	1379.68	96.57	0.67	0.64
10	11,740	89.10	97.30	10243.63	-170.72	1463.71	1473.33	1473.63	96.65	1.30	0.74
11	11,834	88.60	95.80	10245.51	-181.44	1557.08	1567.29	1567.61	96.65	1.68	-0.53
12	11,928	91.20	96.30	10245.68	-191.35	1650.54	1661.24	1661.60	96.61	2.82	2.77
13	12,023	92.30	98.90	10242.78	-203.91	1744.66	1756.18	1756.53	96.67	2.97	1.16
14	12,116	90.50	96.70	10240.50	-216.52	1836.76	1849.14	1849.48	96.72	3.06	-1.94
15	12,211	88.40	96.00	10241.42	-227.03	1931.17	1944.10	1944.47	96.70	2.33	-2.21
16	12,306	90.70	99.20	10242.16	-239.59	2025.31	2039.08	2039.43	96.75	4.15	2.42
17	12,400	90.30	98.30	10241.34	-253.89	2118.21	2133.06	2133.37	96.83	1.05	-0.43
18	12,495	90.40	98.00	10240.76	-267.36	2212.25	2228.06	2228.35	96.89	0.33	0.11
19	12,591	90.90	97.00	10239.67	-279.89	2307.42	2324.05	2324.33	96.92	1.16	0.52
20	12,684	89.20	97.00	10239.59	-291.22	2399.72	2417.04	2417.33	96.92	1.83	-1.83
21	12,779	89.60	99.40	10240.59	-304.77	2493.74	2512.02	2512.30	96.97	2.56	0.42
22	12,874	90.80	100.90	10240.25	-321.51	2587.25	2606.94	2607.15	97.08	2.02	1.26
23	12,968	90.20	100.20	10239.43	-338.72	2679.66	2700.83	2700.98	97.20	0.98	-0.64
24	13,062	90.10	99.30	10239.19	-354.64	2772.30	2794.77	2794.89	97.29	0.96	-0.11
25	13,157	89.20	98.80	10239.77	-369.58	2866.11	2889.75	2889.84	97.35	1.08	-0.95
26	13,251	91.40	98.20	10239.28	-383.47	2959.07	2983.73	2983.82	97.38	2.43	2.34
27	13,345	89.80	98.00	10238.29	-396.72	3052.13	3077.72	3077.80	97.41	1.72	-1.70
28	13,440	90.30	97.00	10238.21	-409.12	3146.31	3172.72	3172.80	97.41	1.18	0.53
29	13,535	89.40	96.50	10238.46	-420.28	3240.65	3267.70	3267.79	97.39	1.08	-0.95
30	13,628	88.80	96.60	10239.92	-430.89	3333.03	3360.67	3360.77	97.37	0.65	-0.65
31	13,723	89.10	94.80	10241.66	-440.32	3427.54	3455.58	3455.71	97.32	1.92	0.32

MS Energy Services

V09.04.02

SURVEY CALCULATION PROGRAM

5/17/13 16:58

Company:	Continental Resources, Inc.				
Well Name:	Atlanta 13-6H				
Location:	Williams County, ND				
Rig:	Cyclone #2	Magnetic Declination:	8.54	REFERENCED TO TRUE NORTH	
Job Number:	DDMT-130259				
API #:	33-105-02720				
Vertical Section Azimuth:	97.81	Proposed Direction:	97.81		
Survey Calculation Method:	Minimum Curvature				

PTB:	MD	INC	AZM	TVD	N/S	E/W	VS
	19,185	92	97.9	10495.54	-1204.48	8834.44	8916.17

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Closure Azm	DLS/ 100	BUR/ 100'
32	13,817	89.10	97.10	10243.14	-450.06	3521.02	3549.52	3549.67	97.28	2.45	0.00
33	13,911	90.00	97.20	10243.87	-461.76	3614.28	3643.51	3643.66	97.28	0.96	0.96
34	14,006	91.30	98.30	10242.80	-474.57	3708.41	3738.50	3738.65	97.29	1.79	1.37
35	14,100	89.80	98.50	10241.89	-488.30	3801.39	3832.48	3832.63	97.32	1.61	-1.60
36	14,195	90.10	97.70	10241.98	-501.69	3895.44	3927.48	3927.62	97.34	0.90	0.32
37	14,289	90.80	98.30	10241.24	-514.77	3988.52	4021.48	4021.61	97.35	0.98	0.74
38	14,384	90.30	98.70	10240.33	-528.81	4082.48	4116.47	4116.58	97.38	0.67	-0.53
39	14,478	91.10	97.70	10239.18	-542.22	4175.51	4210.46	4210.56	97.40	1.36	0.85
40	14,573	89.70	97.80	10238.52	-555.03	4269.63	4305.45	4305.56	97.41	1.48	-1.47
41	14,667	89.80	99.60	10238.93	-569.25	4362.55	4399.43	4399.53	97.43	1.92	0.11
42	14,761	88.70	98.30	10240.16	-583.87	4455.39	4493.40	4493.49	97.47	1.81	-1.17
43	14,855	88.80	98.20	10242.21	-597.35	4548.40	4587.38	4587.45	97.48	0.15	0.11
44	14,950	89.10	98.50	10243.95	-611.15	4642.37	4682.36	4682.43	97.50	0.45	0.32
45	15,044	90.10	98.00	10244.60	-624.63	4735.40	4776.35	4776.42	97.51	1.19	1.06
46	15,138	91.10	97.50	10243.62	-637.31	4828.53	4870.35	4870.41	97.52	1.19	1.06
47	15,233	91.90	96.60	10241.13	-648.97	4922.78	4965.30	4965.37	97.51	1.27	0.84
48	15,327	90.40	98.20	10239.25	-661.07	5015.97	5059.28	5059.35	97.51	2.33	-1.60
49	15,421	90.60	97.70	10238.43	-674.07	5109.06	5153.27	5153.34	97.52	0.57	0.21
50	15,516	91.10	97.80	10237.02	-686.88	5203.19	5248.26	5248.33	97.52	0.54	0.53
51	15,610	90.60	98.90	10235.62	-700.53	5296.18	5342.24	5342.31	97.53	1.29	-0.53
52	15,704	91.70	97.70	10233.74	-714.09	5389.17	5436.22	5436.28	97.55	1.73	1.17
53	15,798	92.00	97.20	10230.70	-726.28	5482.33	5530.17	5530.23	97.55	0.62	0.32
54	15,893	92.20	98.60	10227.22	-739.32	5576.36	5625.10	5625.16	97.55	1.49	0.21
55	15,986	88.90	99.20	10226.33	-753.71	5668.22	5718.07	5718.12	97.57	3.61	-3.55
56	16,081	90.10	99.90	10227.16	-769.47	5761.90	5813.02	5813.05	97.61	1.46	1.26
57	16,174	91.30	99.50	10226.02	-785.14	5853.56	5905.96	5905.98	97.64	1.36	1.29
58	16,268	90.00	99.30	10224.95	-800.49	5946.29	5999.91	5999.93	97.67	1.40	-1.38
59	16,362	87.90	99.60	10226.68	-815.92	6039.00	6093.85	6093.87	97.69	2.26	-2.23
60	16,455	88.80	100.50	10229.35	-832.14	6130.53	6186.74	6186.75	97.73	1.37	0.97
61	16,549	89.30	99.70	10230.91	-848.62	6223.06	6280.65	6280.66	97.77	1.00	0.53
62	16,644	90.70	99.60	10230.91	-864.55	6316.71	6375.60	6375.60	97.79	1.48	1.47
63	16,737	90.30	98.80	10230.10	-879.42	6408.51	6468.57	6468.57	97.81	0.96	-0.43
64	16,831	92.60	98.80	10227.72	-893.79	6501.37	6562.52	6562.52	97.83	2.45	2.45

MS Energy Services

V09.04.02

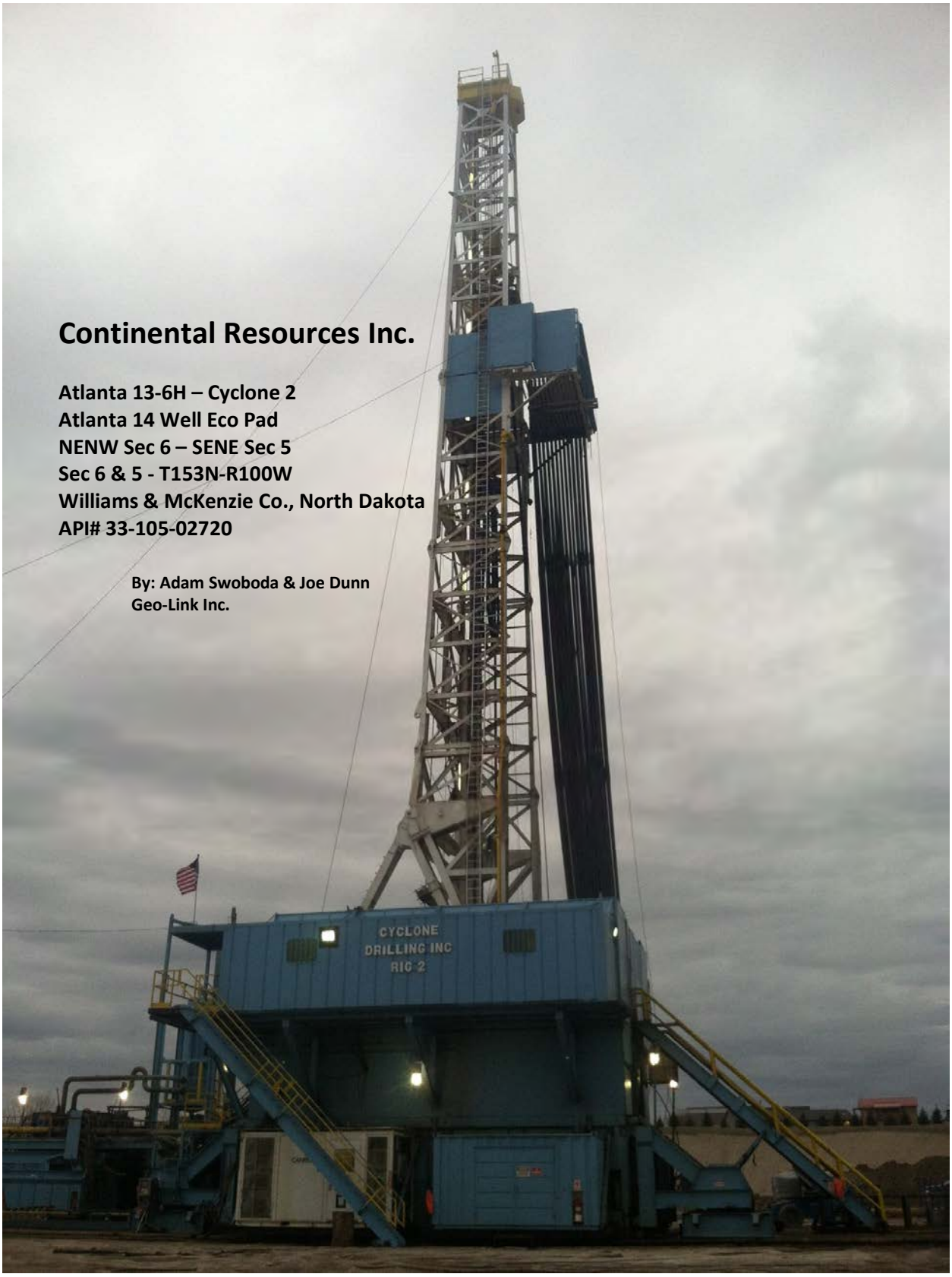
SURVEY CALCULATION PROGRAM

5/17/13 16:58

Company:	Continental Resources, Inc.				
Well Name:	Atlanta 13-6H				
Location:	Williams County, ND				
Rig:	Cyclone #2	Magnetic Declination:	8.54	REFERENCED TO TRUE NORTH	
Job Number:	DDMT-130259				
API #:	33-105-02720				
Vertical Section Azimuth:	97.81	Proposed Direction:	97.81		
Survey Calculation Method:	Minimum Curvature				

PTB:	MD	INC	AZM	TVD	N/S	E/W	VS
	19,185	92	97.9	10495.54	-1204.48	8834.44	8916.17

#	Depth Feet	Inc Degrees	Azm Degrees	TVD Feet	N/S Feet	E/W Feet	Surface Vert Sec	Closure Distance	Closure Azm	DLS/ 100	BUR/ 100'
65	16,926	90.50	98.20	10225.15	-907.83	6595.29	6657.47	6657.47	97.84	2.30	-2.21
66	17,020	90.70	97.70	10224.17	-920.83	6688.38	6751.47	6751.47	97.84	0.57	0.21
67	17,115	89.90	97.40	10223.67	-933.31	6782.55	6846.46	6846.46	97.83	0.90	-0.84
68	17,209	90.10	97.50	10223.67	-945.50	6875.76	6940.46	6940.46	97.83	0.24	0.21
69	17,304	89.90	97.30	10223.67	-957.73	6969.97	7035.46	7035.46	97.82	0.30	-0.21
70	17,398	89.90	97.10	10223.83	-969.51	7063.22	7129.45	7129.45	97.82	0.21	0.00
71	17,492	90.70	97.70	10223.34	-981.62	7156.44	7223.45	7223.45	97.81	1.06	0.85
72	17,587	90.30	97.20	10222.51	-993.94	7250.63	7318.44	7318.44	97.81	0.67	-0.42
73	17,681	89.90	97.30	10222.35	-1005.80	7343.88	7412.44	7412.44	97.80	0.44	-0.43
74	17,776	90.60	96.60	10221.93	-1017.30	7438.18	7507.42	7507.43	97.79	1.04	0.74
75	17,870	89.60	97.10	10221.77	-1028.51	7531.51	7601.41	7601.41	97.78	1.19	-1.06
76	17,965	88.80	97.50	10223.10	-1040.58	7625.73	7696.40	7696.40	97.77	0.94	-0.84
77	18,058	88.60	97.00	10225.21	-1052.31	7717.96	7789.37	7789.37	97.76	0.58	-0.22
78	18,153	89.00	97.70	10227.20	-1064.46	7812.16	7884.34	7884.35	97.76	0.85	0.42
79	18,247	90.00	97.70	10228.02	-1077.06	7905.31	7978.34	7978.34	97.76	1.06	1.06
80	18,341	91.10	98.80	10227.11	-1090.54	7998.33	8072.33	8072.33	97.76	1.65	1.17
81	18,436	90.00	98.20	10226.20	-1104.58	8092.28	8167.31	8167.32	97.77	1.32	-1.16
82	18,529	90.50	97.00	10225.80	-1116.88	8184.46	8260.31	8260.31	97.77	1.40	0.54
83	18,623	90.90	97.70	10224.65	-1128.91	8277.68	8354.30	8354.30	97.77	0.86	0.43
84	18,716	89.00	97.90	10224.73	-1141.53	8369.81	8447.30	8447.30	97.77	2.05	-2.04
85	18,810	88.60	97.40	10226.70	-1154.04	8462.96	8541.27	8541.28	97.77	0.68	-0.43
86	18,905	89.50	97.50	10228.27	-1166.35	8557.14	8636.26	8636.26	97.76	0.95	0.95
87	18,998	90.90	97.70	10227.95	-1178.65	8649.32	8729.25	8729.26	97.76	1.52	1.51
88	19,093	91.80	98.20	10225.71	-1191.79	8743.38	8824.23	8824.23	97.76	1.08	0.95
89	19,115	92.00	97.90	10224.98	-1194.87	8765.15	8846.21	8846.22	97.76	1.64	0.91



Continental Resources Inc.

Atlanta 13-6H – Cyclone 2
Atlanta 14 Well Eco Pad
NENW Sec 6 – SENE Sec 5
Sec 6 & 5 - T153N-R100W
Williams & McKenzie Co., North Dakota
API# 33-105-02720

By: Adam Swoboda & Joe Dunn
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 13-6H Well Plat

Atlanta Eco Pad Plat

MWD Surveys (Baker Hughes & MS Energy)

Drilling / Sliding Report

TVD Log

Well Information

WELL NAME:	Atlanta 13-6H Atlanta 14 Well Eco Pad
OPERATOR:	Continental Resources, Inc. P.O. Box 269000 Oklahoma City, Ok 73126
SURFACE LOCATION:	495' FNL & 1440' FWL NENW Section 6: T153N, R101W
CASING:	7" intermediate casing set at 10850' MD, 10525.47' TVD 571' FNL & 2020' FWL NENW Section 6: T153N, R101W
BOTTOM HOLE LOCATION:	Projection to Bit: 19185' MD, 10495.54' TVD 1748' FSL & 242' FEL SENE Section 7, T153N, R101W
FIELD/AREA:	Williston
COUNTY:	Williams & McKenzie
STATE:	North Dakota
API#:	33-105-02720
ELEVATION:	GL: 1945' KB: 1967'
SPUD:	March 8th, 2013
DRILLED SURFACE:	April 1st, 2013
DRILLED OUT OF CASING (Lateral):	April 26th, 2013
TOTAL DEPTH/DATE:	19185' MD on May 2, 2013
Total Days:	55
BOTTOM HOLE DATA:	
Kick-off Point:	10039' MD; 10036' TVD
Vertical Section:	8916.28
Drift of Azimuth	97.81°
Average Inclination (lateral):	90.14°
Lateral footage:	8335'
WELL STATUS:	To be completed as a Middle Bakken oil well
MWD REP:	Baker Hughes / MS Energy

DIRECTIONAL REP:	Baker Hughes / MS Energy
MUD LOGGING SERVICE:	Geo-Link Inc.
GEOLOGICAL CONSULTANT: SECOND HAND:	Adam Swoboda Joe Dunn
GAS EQUIPMENT:	M-Logger / M-Control ÆSN ML-197 Spare SN ML-145
SAMPLE PROGRAM:	30ªSamples lagged and caught by mud loggers 8300ª¶0850ª Logging: Top Charles, BLS, Mission Canyon, Lodgepole, Upper Bakken Shale, Middle Bakken Member 100ªSamples lagged and caught by mud loggers 10900ª¶9185ª Logging: Middle Bakken Member One set sent to NDGS Core Library (Grand Forks)
DISTRIBUTION LIST:	

Continental Resources, Inc.
Land Department

Memo

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

From: Nicole Hodges

CC: Rick Muncrief and Heath Hibbard

Date: January 2, 2013

RE: **Atlanta 13-6H**
Sections 5, 6, 7 & 8-153N-101W
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:

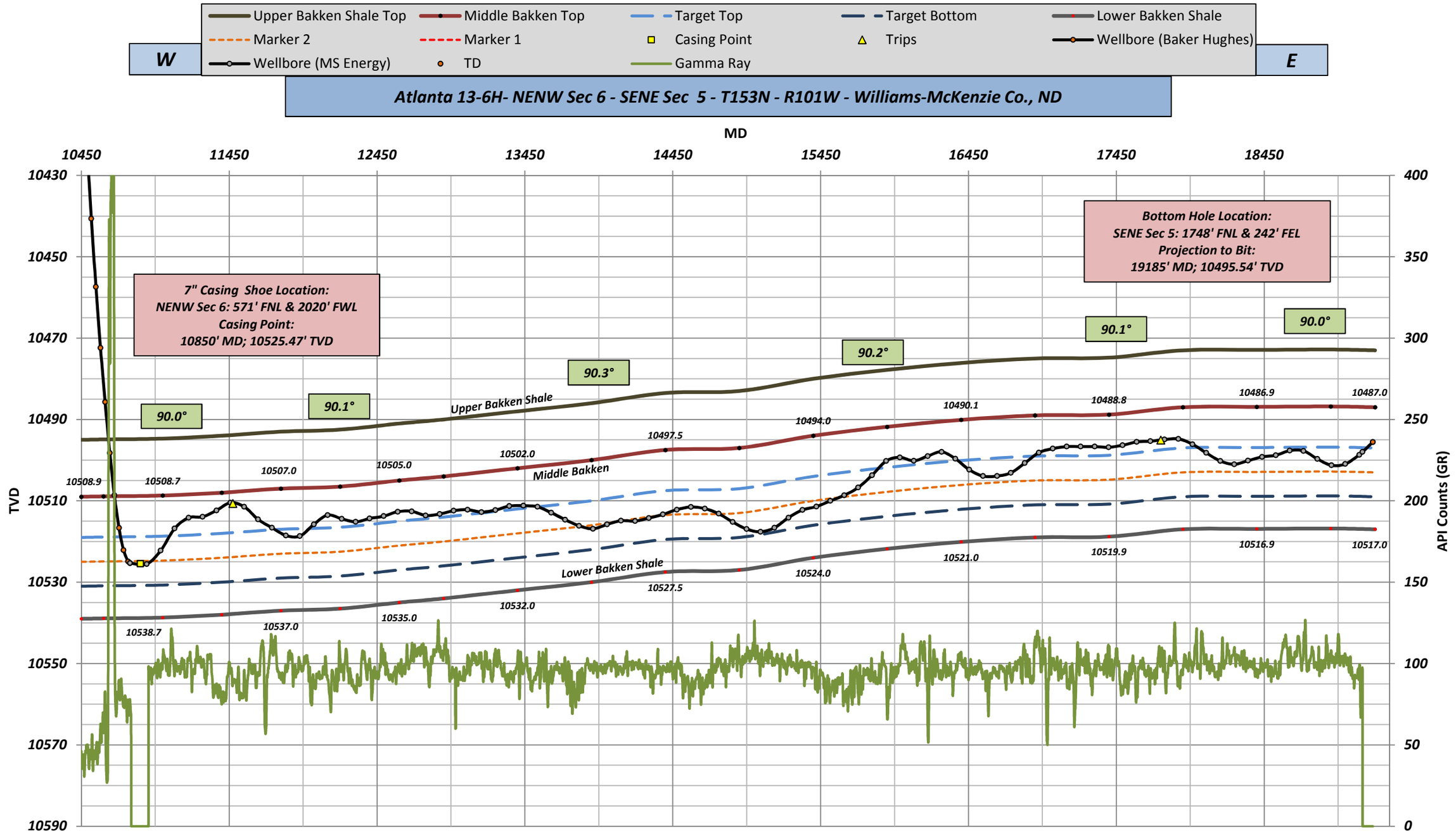
1) Complete Electric Log
2) Complete Mud Log
3) Complete DST report
4) Core Analyses
5) Complete Directional Surveys
6) Complete Lateral Profile
7) Water, Oil & Gas Analysis
8) Cement Bond Log
9) Final complete drilling report

Owner	Information	Casing Point Election	Dry Hole Takeover Election
NDIC Oil and Gas Division Attn: Open Hole Logs 1016 East Calgary Ave. Bismarck, ND 58503-5512 Email: digitallogs@nd.gov	**Open Hole Logs (1 paper copy) – (email TIFF/ LAS)**	No	No
Continental Resources, Inc. Attn: Robert Sandbo P.O. Box 269000 OKC, OK 73126 Email: GeoOps@clr.com	Standard Information **(2 copies of Final Geological Reports/Mud Logs) – (email PDF)**	No	No
Continental Resources, Inc. Attn: Robert Sandbo P.O. Box 269000 OKC, OK 73126 Email: GeoOps@clr.com	**Cased and Open Hole Logs (2 hard-copies) – (email TIFF/LAS)**	No	No

Black Stone Energy Company, LLC c/o Mark Connally 1001 Fannin, Suite 2020 Houston, TX 77002 Phone: 713.658.0647 Fax: 713.658.0943 Email: kdolfi@blackstoneminerals.com, mconnally@blackstoneminerals.com (Send Well Information daily, via email)	See Attached Well Requirements	No	Yes
Boedecker Resources 151 O'Brien Ln. Moore, MT 59464 Phone: 406.374.2270 (Send Well Info weekly, via US Mail)	Standard Well Information	No	Yes
Brigham Oil & Gas, L.P. 6300 Bridge Point Parkway Building 2, Suite 500 Austin, TX 78730 Phone: 512.427.3300 Fax: 512.427.3388 Email: reports@bexp3d.com (Send Well Information daily, via email)	See Attached Well Requirements	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 Email: reports@dale-energy.com, johnc@dale-energy.com (Send Well Information daily, via email)	See Attached Well Requirements	No	Yes
Golden Eye Resources, LLC 5460 South Quebec Street, Suite 335 Greenwood Village, CO 80111 Phone: 303.832.1994 Fax: 303.832.5118 Email: reports@goldeneyeresources.com (Send Well Information daily, via email)	See Attached Well 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 Well 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
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 Well Requirements	No	Yes
Liberty Resources, LLC Attn: Reports 1200 17th Street, Suite 2050 Denver, CO 80202 Email: reports@libertyresourcesllc.com (Send Well Information daily, via email)	See Attached Well 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: drlgreports@mhmresourceslp.com, jlarson@mhmresourceslp.com (Send Well Information daily, via email)	See Attached Well Requirements	No	Yes

Michael Harrison Moore 2006 Trust Attn: Julie Larson P.O. Box 51570 Midland, TX 79710 Phone: 432.685.6045 Fax: 432.685.9081 Email: drlgreports@mhmresourceslp.com, jlarson@mhmresourceslp.com (Send Well Information daily, via email)	See Attached Well Requirements	No	Yes
Steven H. Harris Family L.P. P.O. Box 2323 Bismarck, ND 58502 Phone: 701.223.4866 Fax: 701.223.2556 Email: w2harris@aol.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 Well Requirements	No	Yes


Upper Bakken Shale Top
Middle Bakken Top
Target Top
Target Bottom
Lower Bakken Shale
Marker 2
Marker 1
Casing Point
Trips
Wellbore (Baker Hughes)
W
Wellbore (MS Energy)
TD
Gamma Ray
E
Atlanta 13-6H- NENW Sec 6 - SENE Sec 5 - T153N - R101W - Williams-McKenzie Co., ND
MD
10450
11450
12450
13450
14450
15450
16450
17450
18450
TVD
10430
10450
10470
10490
10510
10530
10550
10570
10590
API Counts (GR)
400
350
300
250
200
150
100
50
0
7" Casing Shoe Location:
NENW Sec 6: 571' FNL & 2020' FWL
Casing Point:
10850' MD; 10525.47' TVD
Bottom Hole Location:
SENE Sec 5: 1748' FNL & 242' FEL
Projection to Bit:
19185' MD; 10495.54' TVD
90.0°
90.1°
90.3°
90.2°
90.1°
90.0°
Upper Bakken Shale
Middle Bakken
Lower Bakken Shale
10508.9
10508.7
10507.0
10505.0
10502.0
10497.5
10494.0
10490.1
10488.8
10486.9
10487.0
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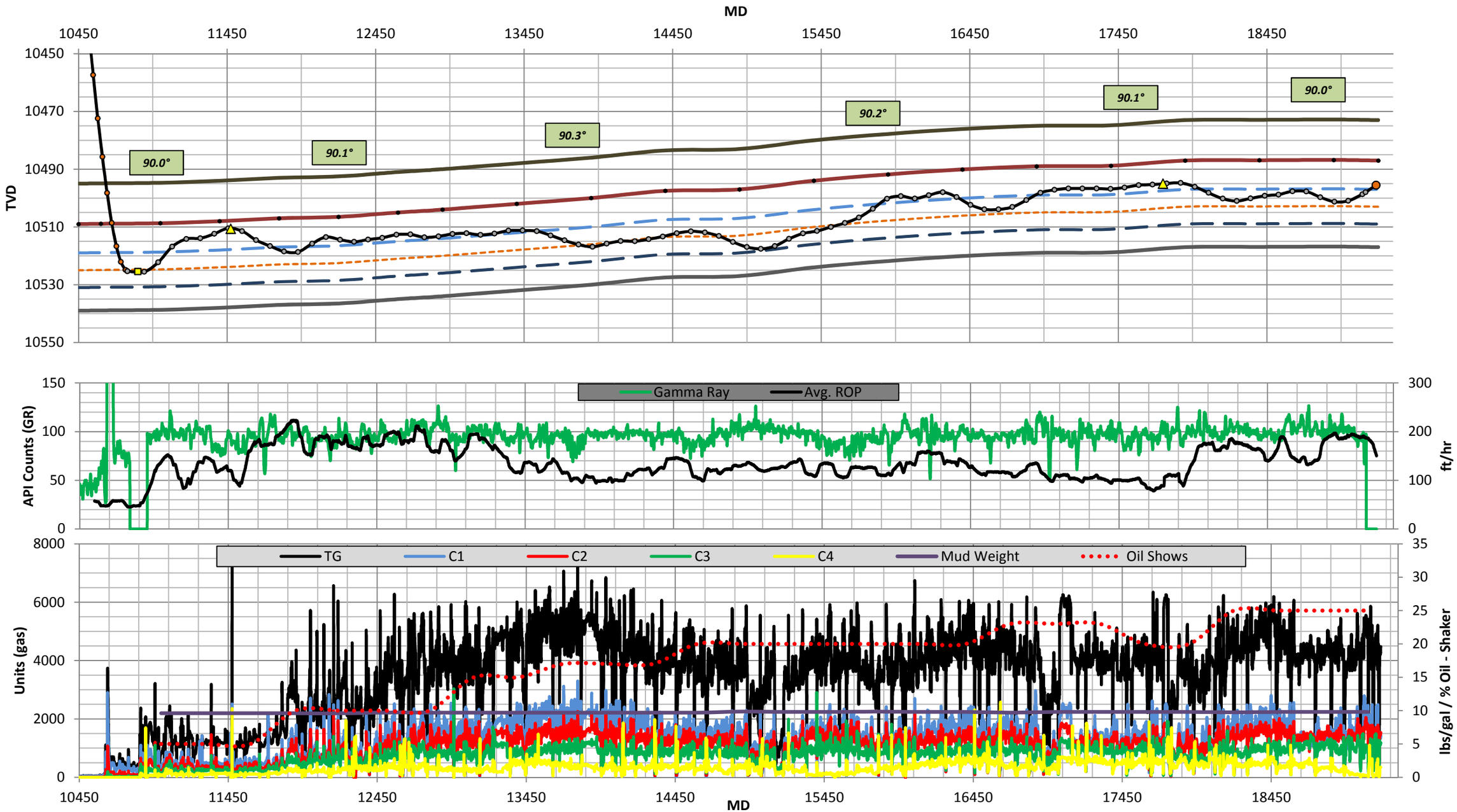
10524.0
10521.0
10519.9
10516.9
10517.0


MD
10450
11450
12450
13450
14450
15450
16450
17450
18450
TVD
10450
10470
10490
10510
10530
10550
90.0°
90.1°
90.3°
90.2°
90.1°
90.0°
Gamma Ray
Avg. ROP
API Counts (GR)
150
100
50
0
300
200
100
0
ft/hr
TG
C1
C2
C3
C4
Mud Weight
Oil Shows
Units (gas)
8000
6000
4000
2000
0
35
30
25
20
15
10
5
0
lbs/gal / % Oil - Shaker
MD

WELL SYNOPSIS

Well Plan: *The Atlanta 13-6H was spud on March 8h, 2013 with a surface location of 495' FNL and 1440' FWL, NENW 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 10039' MD and actual casing point is 10850' MD; 10525' 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 8379' to the hardline in the SENE of section 5 - Township 153 North and Range 101 West following the estimated up dip of 89.88° - dropping 17' over the length of the lateral and following an azimuth of 97.81°.*

The offsets provided were wells drilled on the Atlanta 14 Well Eco Pad. These include the Atlanta 1-6H, 2-6H, 3-6H and 4-6H. Drilled in Section 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 10039' MD on April 6th, 2013. The up hole markers logged were the Charles Salt 8300' TVD, Base of the Last Salt 9018' TVD, Mission Canyon 9241' TVD, and the Lodgepole 9784' TVD. The down hole markers below kick off point consisted of the False Bakken 10487' TVD, Upper Bakken Shale 10495' TVD and the Middle Bakken Member 10509' 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 April 7th, 2013 at 02:45 hours, 17' TVD into the Middle Bakken Dolomite with a landing at 10850' MD and 10525' TVD, with a location; NENW Sec 6 – T153N – R101W -- 571' FNL & 2020' FWL. (See Atlanta 13-6H Build and TVD logs for any additional information)*

Gas observed in the build section, which showed gas averaging 47-151 units through the Lodgepole formation, with a max trip gas of 3738 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 381-570u of background, or average gas.

Lateral Leg: *Casing operations were completed and penetration of the lateral section started, on April 26th, 2013 at 19:00 hours with a depth of 10850'MD and 10525' TVD. The plan was to drill in the target zone and follow the 12' zone of interest. The lateral section was drilled from 10850' MD to 19185' MD for a lateral length of 8335' MD. The section was drilled entirely in the Middle Bakken. There were two complete trips in the lateral section, one trip for erratic build rates and for slow ROP. The lateral section was completed on May 2nd, 2013 – 19185' MD and 10495.54 TVD, with a bottom hole location of: SENE Sec 5: 1748' FNL & 242' FEL.*

Oil observed in the possum during the lateral section, ranged from 5-25% 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 fluorescence. 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 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)

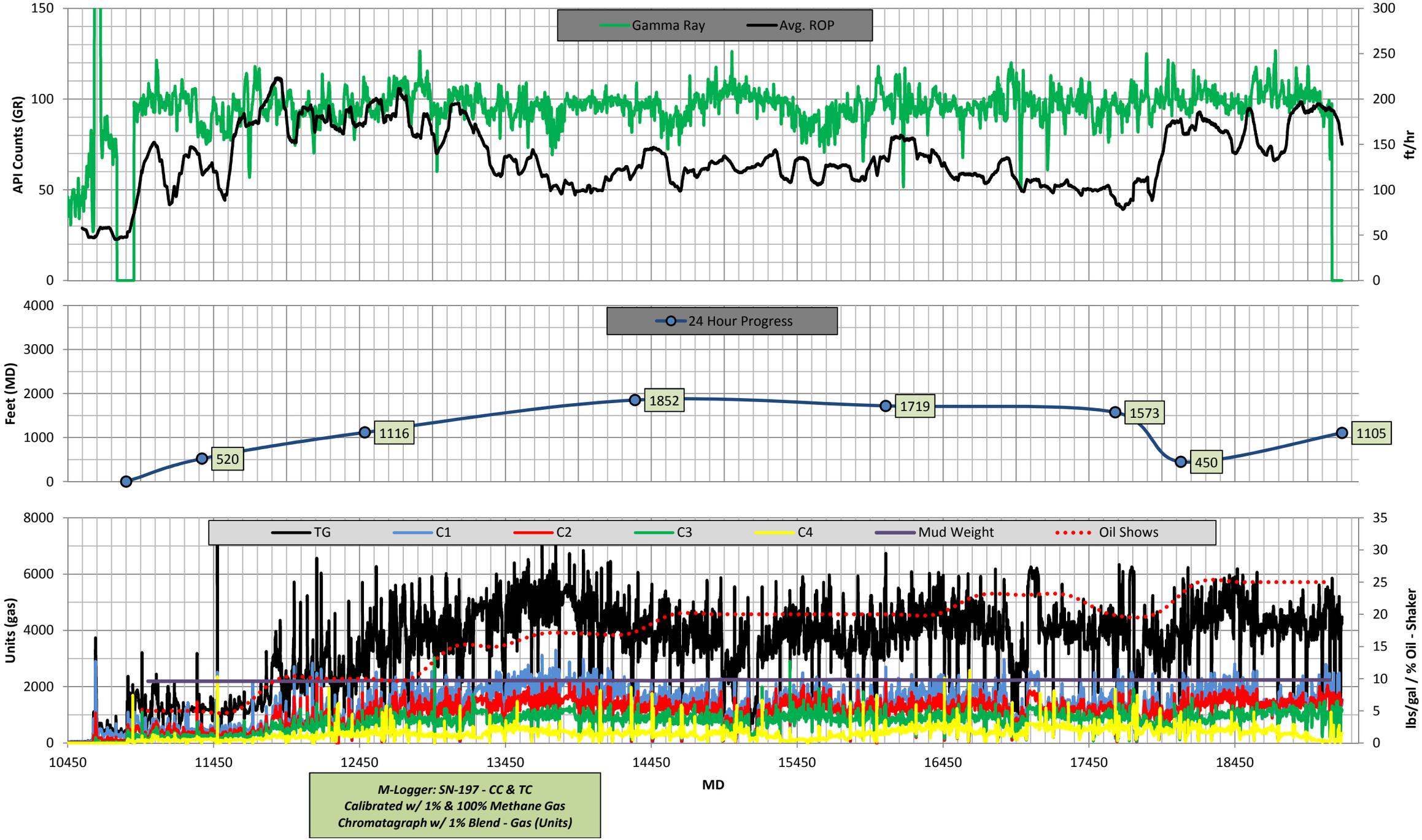
Gas observed in the lateral section displayed an average of 3297u, ranging from 1582u to 7300u. Connection gasses were ranging from 1431u to 7300u and trip gas maxed out at 7200 units with the gas buster on. Once total depth was reached, a short trip to the shoe and back to bottom resulted in 8500u of gas after circulating.

Using the cooler and more consistent gamma counts in the lower 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 and corresponded with the tan/brown dolomite we were seeing near our upper hard streak. We also had Cooler gamma present in the middle target zone. 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 was projected to come down 17', an average dip of 89.88°, but the formation came up roughly 22', an average dip of 90.14°.

Drilling Activity												
ATLANTA 13-6H												
Day	**Date**	**Depth**	**Footage**	**WOB**	**RPM**	**Diff P**	**ROP**	**PP**	**SPM**	**WT**	**VIS**	**ACTIVITY**
28	4/5/2013	9773	1397	36.4	47	393.2	30.3	3655	103	10.4	54	Drill, Slide, Survey, Rig Service
29	4/6/2013	10065	292	23.9	0	347.5	44.6	3734	98	10.4	56	TIH, TOOH for Build Assembley, Reached KOP @ 10039' MD, Drill, Slide, Survey Rig Service
30	4/7/2013	10850	785	25.3	27	209.6	37.1	3471	100	10.5	60	TD Atlanta 13-6H Build Section @ 10850' MD - 4/7/13 - 02:45, Drill, Slide, Survey, Rig Service, Casing Operations
31	4/8/2013	**Casing Operations**										
50	4/27/2013	11370	520	18.5	0	175.7	38.2	2029	90	9.6	32	Drill, Slide, Survey, Drilled out of Casing: 2/26/13 - 19:00, Rig Service
51	4/28/2013	12486	1116	13.2	61	867.2	223.8	2993	89	9.7	28	Drill, Slide, Survey, Rig Service, TIH w/ new lateral assembly, TOOH for BHA (Build Rates)
52	4/29/2013	14338	1852	20.3	66	673	147.7	3003	90	9.7	28	Drill, Slide, Survey, Rig Service
53	4/30/2013	16057	1719	16.1	61	817.5	148	3247	91	9.75	28	Drill, Slide, Survey, Rig Service
54	5/1/2013	17630	1573	12.1	62	571.4	90.1	3201	95	9.8	28	Drill, Slide, Survey, Rig Service
55	5/2/2013	18080	450	17.9	61	748.9	189.9	3620	96	9.8	28	Drill, Slide, Survey, Rig Service, TIH w/ new lateral assembly, TOOH for BHA (ROP)
55	5/2/2013	19185	1105	12.4	61	542.1	112.6	3154	96	9.8	28	TD Atlanta 13-6H Lateral Section @ 19185' MD - 5/2/13 - 16:24 , Drill, Slide, Survey, Rig Service

Chronological Gas/Sample/Oil							
Atlanta 13-6H							
Date	**Depth 0500hrs**	**Max Gas(u)**	**Avg Gas(u)**	**Conn Gas(u)**	**Trip Gas(u)**	**Oil Show**	**Sample Show**
4/5/2013	9773	147	28	39-103	na	0%	no shows
4/6/2013	10065	82	37	35-40	na	0%	no shows
4/7/2013	10850	3738	184	541-951	na	0%	DULL INVERT FLOR, G IMMED STREAMING WHT POS IVERT CUT
4/8/2013	**Casing Operations**						
4/27/2013	11370	3215	1206	1431-3215	2200-3200	5%	FNT YEL-GRN FLOR, LT BLU/WHT FLASH/DIFF C
4/28/2013	12486	7234	1900	1458-6034	7500-7300	10%	SL BRI YEL-GRN FLOR, LT BLU/WHT FLASH/DIFF C
4/29/2013	14338	7300	4254	5070-7300	na	17%	G-VG BRI YEL-GRN FLOR, BRI IM STMG BLU/WHT FLASH/DIFF C
4/30/2013	16057	6055	3602	2504-6055	na	20%	G BRI YEL-GRN FLOR, BRI IM CLDY STMG BLU/WHT FLASH/DIFF C
5/1/2013	17630	6734	4111	2693-6734	na	20%	G-VG BRI YEL-GRN FLOR, BRI IM CLDY STMG BLU/WHT FLASH/DIFF C
5/2/2013	18080	6340	3705	4383-6340	4522-6038*	20%	G-VG BRI YEL-GRN FLOR, BRI IM CLDY STMG BLU/WHT FLASH/DIFF C
5/2/2013	19185	6232	4320	4525-6037	4200-7300*	25%	G-VG BRI YEL-GRN FLOR, BRI IM CLDY STMG BLU/WHT FLASH/DIFF C

**** Gas Buster On***


Gamma Ray
Avg. ROP
API Counts (GR)
ft/hr
150
100
50
0
300
250
200
150
100
50
0
24 Hour Progress
Feet (MD)
4000
3000
2000
1000
0
520
1116
1852
1719
1573
450
1105
TG
C1
C2
C3
C4
Mud Weight
Oil Shows
Units (gas)
lbs/gal / % Oil - Shaker
8000
6000
4000
2000
0
35
30
25
20
15
10
5
0
10450
11450
12450
13450
14450
15450
16450
17450
18450
MD
M-Logger: SN-197 - CC & TC
Calibrated w/ 1% & 100% Methane Gas
Chromatograph w/ 1% Blend - Gas (Units)

Formation Tops

Atlanta 13-6H

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	8303	8300	44.95	-6333	-6333	0
BLS	9021	9018	43.51	-7051	-7044	7
Mission Canyon	9244	9241	44.37	-7274	-7267	7
Lodgepole	9787	9784	47.88	-7817	-7820	-3
False Bakken	10613	10487	353.41	-8520	NP	NA
Upper Bakken Shale	10635	10495	373.65	-8528	-8529	-1
Middle Bakken	10677	10509	413.09	-8542	-8543	-1

	Projected Tops
	Not Projected
	Sub Sea (ft)
	Actual Tops Picked

Tops picked by Drilling breaks (Rop & Differential), Samples, and Gamma

Critical Points	MD	TVD	SUBSEA	V/S
Middle Bakken Member	**10677**	**10509**	**-8542**	**413.09**
Surface Hole location	**NENW Section 6: 495' FNL & 1440' FWL**			
KOP	**10039**	**10036**	**-8069**	**50.89**
Casing Point	**10850**	**10525**	**-8558**	**584.39**
Casing Location	**NENW Section 6: 571' FNL & 2020' FWL**			
Total Depth (projection to Bit)	**19185**	**10495**	**-8528**	**8916.28**
Bottom Hole Location	**SENE Section 5: 1748' FNL & 242' FEL**			

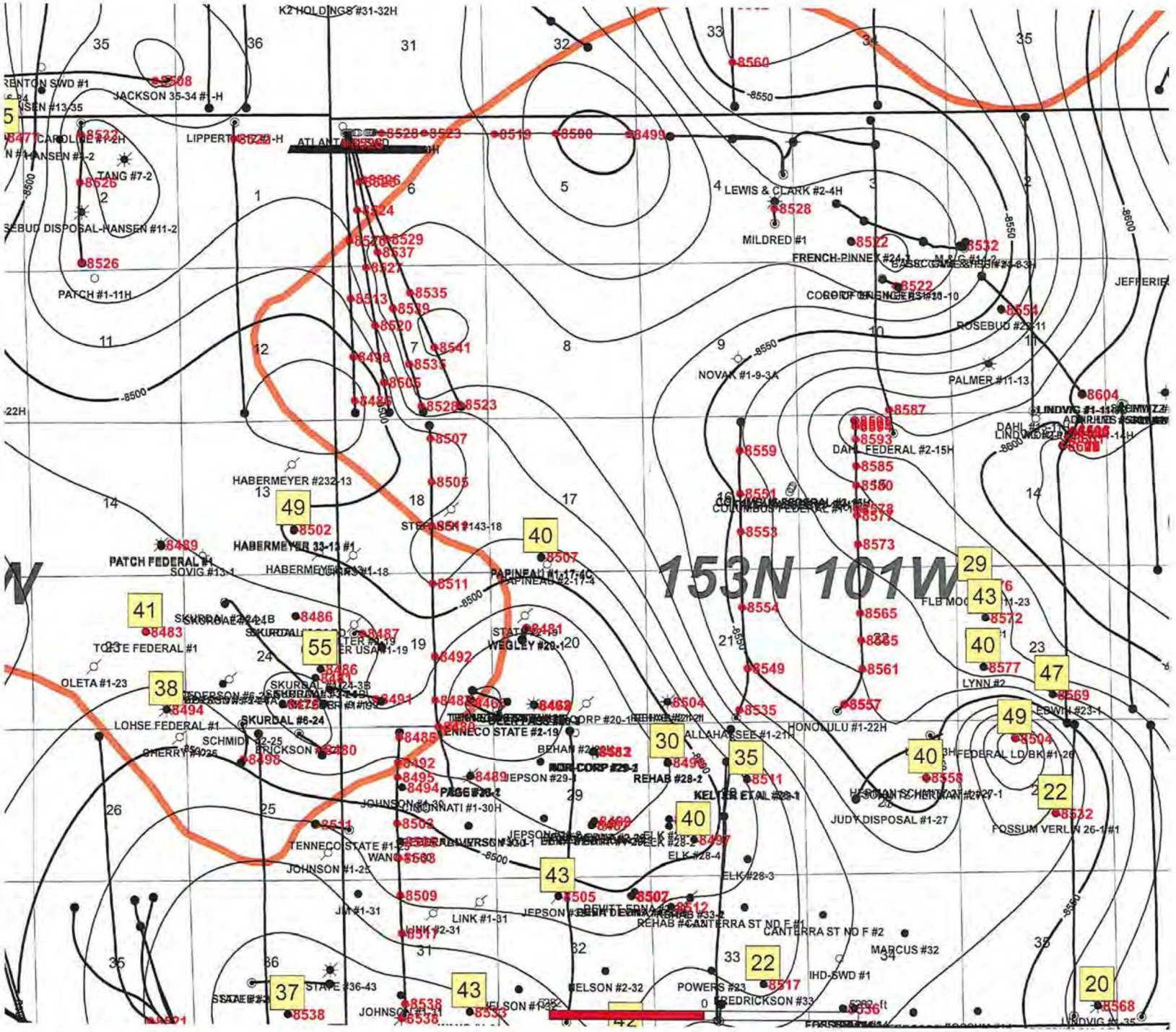
Lateral Trips	MD	TVD	Vertical & Build Trips	MD	TVD
TOOH for BHA (Build Rates)	**11475**	**10510**	TOOH for Build Assembly	**10039**	**10036**
TOOH for BHA (Slow ROP)	**17751**	**10495**			

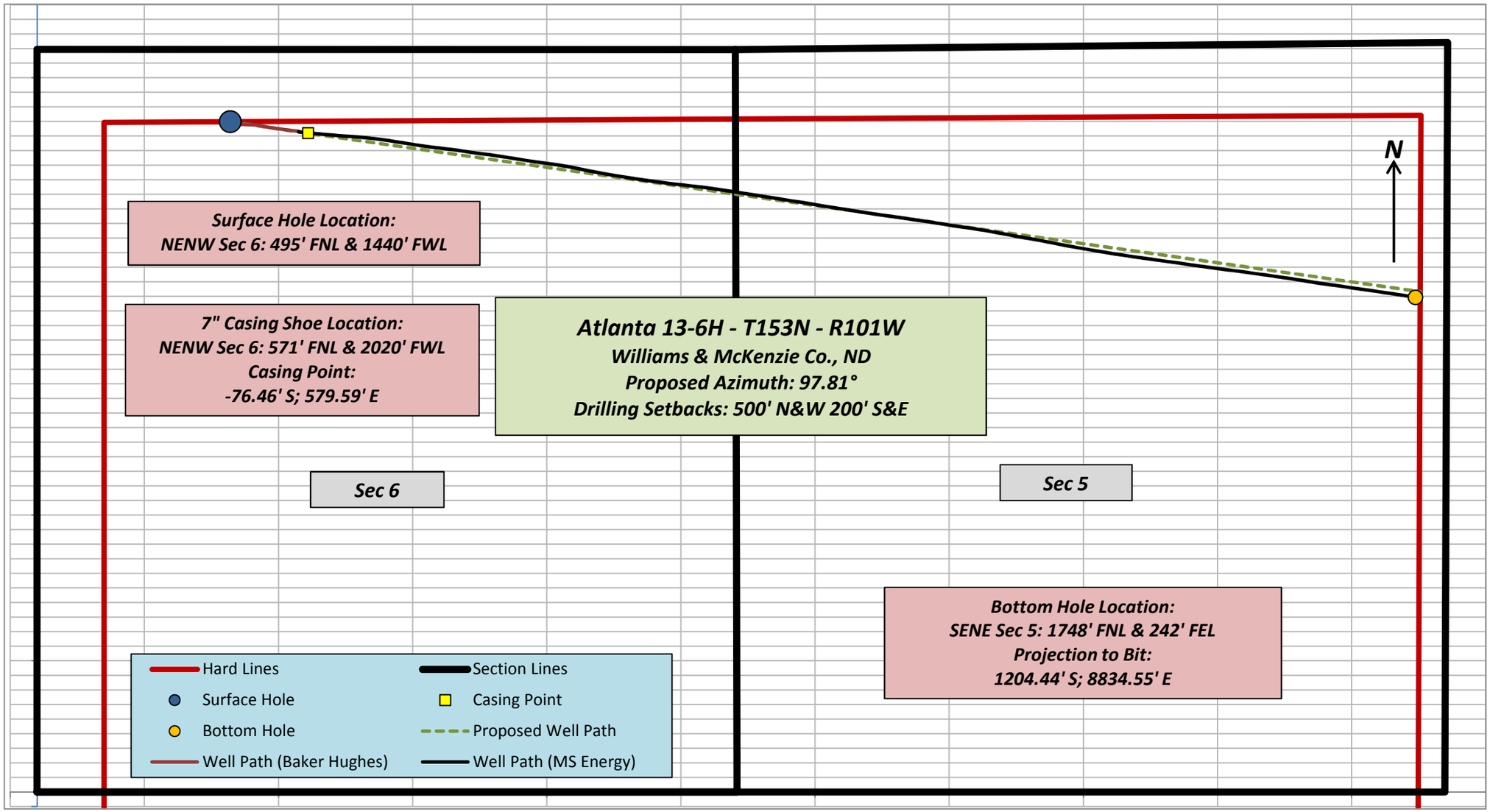
LATERAL SUMMARY

Total Lateral Footage	**19185**	**%**	
Middle Bakken	19185	100.0%	*Target Zone*
		0.0%	*Out of Target Zone*
		100.0%	

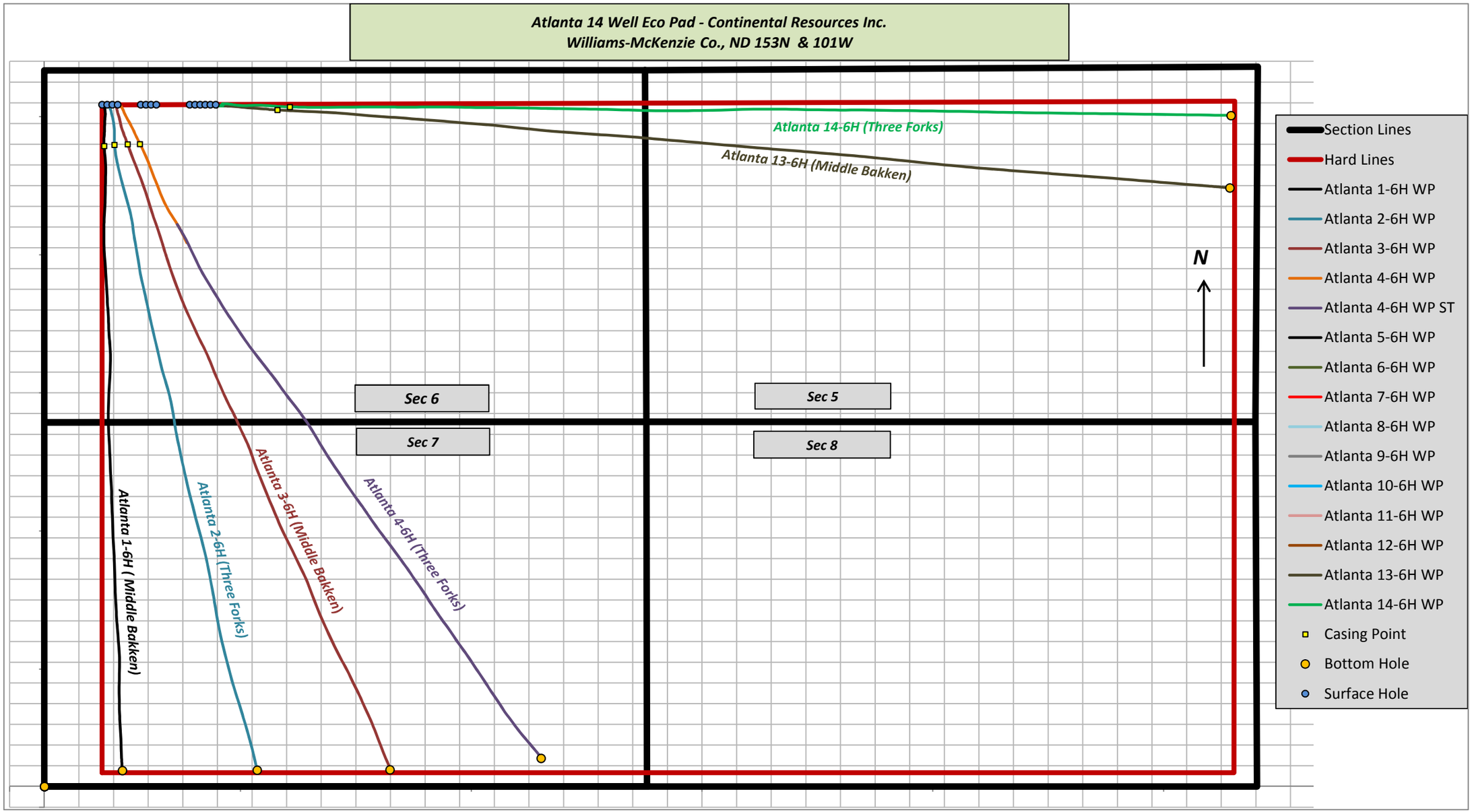
Atlanta 13-6H: STRUCTURE (MD - TVD)									
MD (ft)	Upper Bakken Shale Top	Middle Bakken Top	Target Zone Top	Target Zone Bottom	Lower Bakken Shale	Marker 2	Marker 1	Dip (angle)	Dip Rate (ft/100)
10450.0	10495.0	**10509.0**	10519.0	10531.0	10539.0	10525.0			
10600.0	10494.9	**10508.9**	10518.9	10530.9	10538.9	10524.9		**90.04**	**-0.07**
11000.0	10494.7	**10508.7**	10518.7	10530.7	10538.7	10524.7		**90.03**	**-0.05**
11400.0	10494.0	**10508.0**	10518.0	10530.0	10538.0	10524.0		**90.10**	**-0.18**
11800.0	10493.0	**10507.0**	10517.0	10529.0	10537.0	10523.0		**90.14**	**-0.25**
12200.0	10492.5	**10506.5**	10516.5	10528.5	10536.5	10522.5		**90.07**	**-0.13**
12600.0	10491.0	**10505.0**	10515.0	10527.0	10535.0	10521.0		**90.21**	**-0.38**
12900.0	10490.0	**10504.0**	10514.0	10526.0	10534.0	10520.0		**90.19**	**-0.33**
13400.0	10488.0	**10502.0**	10512.0	10524.0	10532.0	10518.0		**90.23**	**-0.40**
13900.0	10486.0	**10500.0**	10510.0	10522.0	10530.0	10516.0		**90.23**	**-0.40**
14400.0	10483.5	**10497.5**	10507.5	10519.5	10527.5	10513.5		**90.29**	**-0.50**
14900.0	10483.0	**10497.0**	10507.0	10519.0	10527.0	10513.0		**90.06**	**-0.10**
15400.0	10480.0	**10494.0**	10504.0	10516.0	10524.0	10510.0		**90.34**	**-0.60**
15900.0	10477.8	**10491.8**	10501.8	10513.8	10521.8	10507.8		**90.25**	**-0.44**
16400.0	10476.1	**10490.1**	10500.1	10512.1	10520.1	10506.1		**90.19**	**-0.34**
16900.0	10475.0	**10489.0**	10499.0	10511.0	10519.0	10505.0		**90.13**	**-0.22**
17400.0	10474.8	**10488.8**	10498.8	10510.8	10518.8	10504.8		**90.02**	**-0.04**
17900.0	10473.0	**10487.0**	10497.0	10509.0	10517.0	10503.0		**90.21**	**-0.36**
18400.0	10472.9	**10486.9**	10496.9	10508.9	10516.9	10502.9		**90.01**	**-0.02**
18900.0	10472.8	**10486.8**	10496.8	10508.8	10516.8	10502.8		**90.01**	**-0.02**
19200.0	10473.0	**10487.0**	10497.0	10509.0	10517.0	10503.0		**89.96**	**0.07**

Bakken Structure Map C.I. 10'




N
Surface Hole Location:
NENW Sec 6: 495' FNL & 1440' FWL
7" Casing Shoe Location:
NENW Sec 6: 571' FNL & 2020' FWL
Casing Point:
-76.46' S; 579.59' E
Atlanta 13-6H - T153N - R101W
Williams & McKenzie Co., ND
Proposed Azimuth: 97.81°
Drilling Setbacks: 500' N&W 200' S&E
Sec 6
Sec 5
Bottom Hole Location:
SENE Sec 5: 1748' FNL & 242' FEL
Projection to Bit:
1204.44' S; 8834.55' E
Hard Lines
Section Lines
Surface Hole
Casing Point
Bottom Hole
Proposed Well Path
Well Path (Baker Hughes)
Well Path (MS Energy)

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



ADVANTAGE Field Survey Listing

BAKER HUGHES
INTEQ

Operator	Continental Resources	**Fields**	Williams County	**API No**	33-105-02720	**Location**	S6 T153N R101E
Well	Atlanta 13-6H	**Wellbore**	Atlanta 13-6H Orig Hole	**Rig**	Cyclone 2	**Job**	5335053

Well Origin

Latitude	48.109 deg	**Longitude**	-103.728 deg
North Reference	True	**Drill Depth Zero**	
Vertical Datum is	Mean Sea Level	**Vertical Datum to DDZ**	1967.00 ft
Vertical Section North	0.00 ft	**Vertical Section East**	0.00 ft
Vertical Section Azimuth	97.810 deg	**Vertical Section Depth**	0.00 ft
Grid Convergence	0.000 deg	**Magnetic Declination**	8.533 deg
Total Correction	8.533 deg	**TVD Calculation Method**	Minimum Curvature
D-Raw Calculation	None	**Local Magnetic Field**	56511 nT
Local Magnetic Dip Angle	73.016 deg	**Local Gravity Field**	9.808 m/s^2

Tie In	MD ft	Incl deg	Azim deg	North ft	East ft	TVD ft	VS ft	Temperature degF	CRS LEN ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft
U	1953.00	1.00	330.90	22.30	-7.07	1952.81	0.00					
	2082.00	1.14	301.41	23.95	-8.71	2081.79	-11.89	385.2	129.00	0.44	0.11	-22.86
	2176.00	0.37	195.27	24.15	-9.59	2175.78	-12.78	87.8	94.00	1.38	-0.82	-112.91
	2269.00	1.55	133.16	23.00	-8.75	2268.77	-11.80	96.0	93.00	1.52	1.27	-66.78
	2363.00	3.15	132.10	20.40	-5.91	2362.69	-8.63	98.7	94.00	1.70	1.70	-1.13
	2457.00	3.09	140.77	16.70	-2.39	2456.55	-4.64	104.1	94.00	0.51	-0.06	9.22
	2550.00	3.06	149.99	12.61	0.44	2549.41	-1.28	106.8	93.00	0.53	-0.03	9.91
	2643.00	3.07	153.55	8.23	2.79	2642.28	1.64	109.5	93.00	0.20	0.01	3.83
	2735.00	3.05	173.57	3.59	4.16	2734.15	3.63	112.2	92.00	1.16	-0.02	21.76
	2828.00	2.80	157.47	-0.96	5.31	2827.03	5.39	120.3	93.00	0.92	-0.27	-17.31
	2921.00	3.38	133.92	-4.96	8.15	2919.90	8.75	120.3	93.00	1.49	0.62	-25.32
	3015.00	3.50	131.03	-8.77	12.31	3013.73	13.39	123.0	94.00	0.22	0.12	-3.07
	3108.00	3.51	129.09	-12.42	16.66	3106.56	18.19	123.0	93.00	0.13	0.01	-2.09
	3201.00	3.12	132.14	-15.92	20.75	3199.40	22.72	128.4	93.00	0.46	-0.42	3.28
	3294.00	2.80	108.67	-18.34	24.77	3292.28	27.04	131.1	93.00	1.34	-0.34	-25.24
	3385.00	1.68	86.41	-18.97	28.21	3383.21	30.53	133.8	91.00	1.54	-1.23	-24.46
	3479.00	1.50	87.28	-18.83	30.82	3477.18	33.09	133.8	94.00	0.19	-0.19	0.93
	3572.00	0.66	86.70	-18.74	32.57	3570.16	34.81	139.2	93.00	0.90	-0.90	-0.62
	3667.00	0.72	89.32	-18.70	33.71	3665.15	35.94	131.1	95.00	0.07	0.06	2.76
	3759.00	0.57	106.72	-18.82	34.73	3757.15	36.96	136.5	92.00	0.27	-0.16	18.91
	3853.00	0.53	110.45	-19.11	35.58	3851.14	37.85	139.2	94.00	0.06	-0.04	3.97
	3946.00	0.30	129.05	-19.41	36.17	3944.14	38.48	139.2	93.00	0.28	-0.25	20.00
	4039.00	0.34	108.37	-19.65	36.62	4037.14	38.96	144.6	93.00	0.13	0.04	-22.24
	4133.00	0.44	125.22	-19.95	37.18	4131.14	39.55	141.9	94.00	0.16	0.11	17.93
	4226.00	0.41	129.34	-20.37	37.73	4224.13	40.15	144.6	93.00	0.05	-0.03	4.43
	4320.00	0.28	140.48	-20.76	38.14	4318.13	40.61	136.5	94.00	0.16	-0.14	11.85
	4413.00	0.26	152.36	-21.12	38.38	4411.13	40.90	139.2	93.00	0.06	-0.02	12.77
	4507.00	0.23	104.66	-21.36	38.66	4505.13	41.21	141.9	94.00	0.21	-0.03	-50.74
	4600.00	0.17	138.27	-21.51	38.94	4598.13	41.50	144.6	93.00	0.14	-0.06	36.14
	4694.00	0.35	135.25	-21.81	39.23	4692.13	41.83	98.7	94.00	0.19	0.19	-3.21
	4788.00	0.77	172.29	-22.64	39.52	4786.12	42.23	144.6	94.00	0.57	0.45	39.40
	4881.00	0.72	162.32	-23.82	39.78	4879.12	42.65	147.3	93.00	0.15	-0.05	-10.72
	4975.00	0.83	166.44	-25.05	40.12	4973.11	43.15	147.3	94.00	0.13	0.12	4.38
	5068.00	1.39	123.68	-26.33	41.22	5066.09	44.41	150.0	93.00	1.04	0.60	-45.98
	5161.00	2.09	102.11	-27.31	43.81	5159.05	47.12	152.7	93.00	1.02	0.75	-23.19
	5254.00	1.82	99.29	-27.90	46.93	5251.99	50.28	147.3	93.00	0.31	-0.29	-3.03
	5347.00	1.30	78.29	-27.93	49.42	5344.96	52.75	152.7	93.00	0.82	-0.56	-22.58
	5441.00	1.24	329.43	-26.83	49.94	5438.95	53.13	155.4	94.00	2.20	-0.06	-115.81
	5535.00	0.89	333.25	-25.31	49.10	5532.93	52.08	150.0	94.00	0.38	-0.37	4.06
	5628.00	0.71	347.56	-24.10	48.65	5625.92	51.47	158.1	93.00	0.29	-0.19	15.39
	5722.00	0.68	355.68	-22.97	48.48	5719.92	51.15	158.1	94.00	0.11	-0.03	8.64
	5816.00	0.56	39.66	-22.06	48.73	5813.91	51.28	158.1	94.00	0.51	-0.13	46.79
	5909.00	0.81	94.03	-21.76	49.68	5906.90	52.17	163.5	93.00	0.71	0.27	58.46
	6003.00	1.33	133.43	-22.56	51.13	6000.89	53.72	163.5	94.00	0.93	0.55	41.91
	6097.00	1.41	171.41	-24.45	52.10	6094.86	54.94	163.5	94.00	0.95	0.09	40.40
	6190.00	0.54	99.75	-25.65	52.70	6187.85	55.70	166.2	93.00	1.44	-0.94	-77.05
	6284.00	1.05	167.96	-26.57	53.32	6281.84	56.43	177.0	94.00	1.05	0.54	72.56
	6377.00	2.72	166.35	-29.55	54.02	6374.79	57.53	168.9	93.00	1.80	1.80	-1.73
	6471.00	2.58	155.46	-33.64	55.42	6468.69	59.48	166.2	94.00	0.55	-0.15	-11.59
	6564.00	1.67	208.59	-36.74	55.64	6561.63	60.12	166.2	93.00	2.22	-0.98	57.13

ADVANTAGE Field Survey Listing

BAKER HUGHES
INTEQ

Operator Continental Resources **Fields** Williams County **API No** 33-105-02720 **Location** S6 T153N R101E
Well Atlanta 13-6H **Wellbore** Atlanta 13-6H Orig Hole **Rig** Cyclone 2 **Job** 5335053

Tie In	MD ft	Incl deg	Azim deg	North ft	East ft	TVD ft	VS ft	Temperature degF	CRS LEN ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft
	6658.00	1.44	257.40	-38.20	53.83	6655.60	58.53	166.2	94.00	1.39	-0.24	51.93
	6751.00	1.72	282.97	-38.14	51.33	6748.57	56.04	179.7	93.00	0.81	0.30	27.49
	6844.00	2.26	339.62	-36.11	49.33	6841.52	53.78	168.9	93.00	2.09	0.58	60.91
	6938.00	2.50	343.52	-32.40	48.11	6935.44	52.06	174.3	94.00	0.31	0.26	4.15
	7031.00	2.27	340.25	-28.73	46.91	7028.36	50.38	236.5	93.00	0.29	-0.25	-3.52
	7124.00	2.40	332.44	-25.27	45.39	7121.28	48.40	177.0	93.00	0.37	0.14	-8.40
	7218.00	2.53	332.69	-21.68	43.52	7215.20	46.07	223.0	94.00	0.14	0.14	0.27
	7311.00	0.95	46.36	-19.32	43.14	7308.16	45.37	177.0	93.00	2.62	-1.70	79.22
	7405.00	0.83	77.46	-18.64	44.37	7402.15	46.49	179.7	94.00	0.52	-0.13	33.09
	7498.00	0.68	102.85	-18.61	45.56	7495.14	47.67	179.7	93.00	0.39	-0.16	27.30
	7592.00	0.50	340.73	-18.35	45.97	7589.14	48.04	179.7	94.00	1.10	-0.19	-129.91
	7686.00	0.44	342.09	-17.62	45.73	7683.13	47.70	177.0	94.00	0.06	-0.06	1.45
	7779.00	0.99	4.61	-16.48	45.68	7776.13	47.50	179.7	93.00	0.65	0.59	24.22
	7872.00	0.84	8.15	-15.00	45.84	7869.11	47.46	182.5	93.00	0.17	-0.16	3.81
	7965.00	0.52	260.36	-14.40	45.52	7962.11	47.06	187.9	93.00	1.20	-0.34	-115.90
	8059.00	0.58	291.23	-14.30	44.66	8056.11	46.19	185.2	94.00	0.32	0.06	32.84
	8152.00	0.27	337.42	-13.92	44.14	8149.10	45.62	166.2	93.00	0.47	-0.33	49.67
	8246.00	0.31	284.98	-13.65	43.81	8243.10	45.25	60.8	94.00	0.28	0.04	-55.79
	8340.00	0.35	262.91	-13.62	43.27	8337.10	44.72	163.5	94.00	0.14	0.04	-23.48
	8433.00	0.25	283.10	-13.61	42.80	8430.10	44.25	182.5	93.00	0.15	-0.11	21.71
	8526.00	0.25	278.43	-13.54	42.40	8523.10	43.84	185.2	93.00	0.02	0.00	-5.02
	8620.00	0.22	296.71	-13.43	42.03	8617.10	43.47	185.2	94.00	0.09	-0.03	19.45
	8712.00	0.15	342.68	-13.23	41.84	8709.10	43.25	187.9	92.00	0.17	-0.08	49.97
	8806.00	0.04	29.39	-13.09	41.82	8803.10	43.21	190.6	94.00	0.13	-0.12	49.69
	8899.00	0.10	34.22	-12.99	41.88	8896.10	43.26	193.3	93.00	0.06	0.06	5.19
	8993.00	0.20	60.84	-12.84	42.07	8990.10	43.42	190.6	94.00	0.13	0.11	28.32
	9086.00	0.12	82.32	-12.75	42.31	9083.10	43.65	193.3	93.00	0.11	-0.09	23.10
	9180.00	0.29	105.15	-12.80	42.63	9177.10	43.98	328.4	94.00	0.20	0.18	24.29
	9273.00	0.38	107.34	-12.95	43.16	9270.09	44.52	193.3	93.00	0.10	0.10	2.36
	9367.00	0.39	122.17	-13.22	43.72	9364.09	45.12	193.3	94.00	0.11	0.01	15.78
	9461.00	0.23	111.56	-13.46	44.17	9458.09	45.59	198.7	94.00	0.18	-0.17	-11.29
	9554.00	0.43	107.99	-13.63	44.68	9551.09	46.11	198.7	93.00	0.22	0.22	-3.84
	9647.00	0.46	118.70	-13.92	45.34	9644.09	46.81	201.4	93.00	0.09	0.03	11.52
	9740.00	0.41	104.49	-14.18	45.99	9737.08	47.49	204.1	93.00	0.13	-0.05	-15.28
	9834.00	0.56	106.20	-14.39	46.75	9831.08	48.27	209.5	94.00	0.16	0.16	1.82
	9927.00	0.46	98.06	-14.57	47.56	9924.08	49.10	206.8	93.00	0.13	-0.11	-8.75
	9990.00	0.62	100.44	-14.67	48.14	9987.07	49.69	209.5	63.00	0.26	0.25	3.78
	10050.00	2.18	101.87	-14.96	49.58	10047.05	51.15	179.7	60.00	2.60	2.60	2.38
	10082.00	5.30	104.70	-15.46	51.61	10078.98	53.23	187.9	32.00	9.76	9.75	8.84
	10113.00	8.55	103.26	-16.36	55.23	10109.75	56.95	187.9	31.00	10.50	10.48	-4.65
	10144.00	12.38	99.48	-17.43	60.76	10140.23	62.56	187.9	31.00	12.55	12.35	-12.19
	10175.00	16.61	96.61	-18.49	68.44	10170.24	70.32	187.9	31.00	13.83	13.64	-9.26
	10206.00	20.60	93.97	-19.38	78.29	10199.61	80.19	187.9	31.00	13.15	12.87	-8.52
	10237.00	24.42	92.48	-20.03	90.13	10228.25	92.02	187.9	31.00	12.46	12.32	-4.81
	10269.00	28.36	90.95	-20.45	104.35	10256.91	106.16	187.9	32.00	12.49	12.31	-4.78
	10300.00	31.92	90.49	-20.64	119.91	10283.71	121.60	190.6	31.00	11.51	11.48	-1.48
	10330.00	35.34	90.47	-20.78	136.52	10308.69	138.08	193.3	30.00	11.40	11.40	-0.07
	10362.00	38.99	91.82	-21.17	155.84	10334.18	157.27	190.6	32.00	11.69	11.41	4.22
	10393.00	42.08	93.57	-22.13	175.96	10357.74	177.34	193.3	31.00	10.62	9.97	5.65
	10424.00	44.24	97.68	-24.22	197.05	10380.36	198.52	193.3	31.00	11.43	6.97	13.26
	10456.00	48.02	99.86	-27.75	219.85	10402.53	221.58	190.6	32.00	12.79	11.81	6.81
	10487.00	52.24	100.61	-31.98	243.25	10422.40	245.34	198.7	31.00	13.74	13.61	2.42
	10518.00	55.68	99.21	-36.29	267.94	10440.64	270.39	198.7	31.00	11.68	11.10	-4.52
	10549.00	58.74	98.21	-40.23	293.70	10457.42	296.44	198.7	31.00	10.24	9.87	-3.23
	10580.00	63.38	97.68	-43.98	320.56	10472.42	323.56	198.7	31.00	15.04	14.97	-1.71
	10611.00	65.80	97.34	-47.64	348.32	10485.72	351.56	198.7	31.00	7.87	7.81	-1.10
	10643.00	68.05	97.24	-51.37	377.52	10498.26	381.00	198.7	32.00	7.04	7.03	-0.31
	10674.00	72.74	97.10	-55.02	406.49	10508.66	410.19	198.7	31.00	15.14	15.13	-0.45
	10705.00	77.30	96.80	-58.64	436.20	10516.67	440.13	198.7	31.00	14.74	14.71	-0.97
	10736.00	82.37	96.04	-62.05	466.52	10522.14	470.62	201.4	31.00	16.53	16.35	-2.45

ADVANTAGE Field Survey Listing

BAKER HUGHES
INTEQ

Operator	Continental Resources	**Fields**	Williams County	**API No**	33-105-02720	**Location**	S6 T153N R101E
Well	Atlanta 13-6H	**Wellbore**	Atlanta 13-6H Orig Hole	**Rig**	Cyclone 2	**Job**	5335053

Tie In	MD ft	Incl deg	Azim deg	North ft	East ft	TVD ft	VS ft	Temperature degF	CRS LEN ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft
	10767.00	87.39	95.37	-65.11	497.23	10524.91	501.47	201.4	31.00	16.34	16.19	-2.16
	10780.00	88.89	95.31	-66.32	510.17	10525.33	514.45	279.8	13.00	11.55	11.54	-0.46

Tie Column Legend: I - interpolated tie-point, S - survey station, U - user-defined, T - Surface

Notice: Field Copy Only. Certified results will be provided after submission to the Baker Hughes INTEQ office.

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 13-6H**	**TARGET TVD:**	10547.00	**NORTH/SOUTH:**	0.00
COUNTY / STATE:	**North Dakota**	**TARGET INCL:**	89.88	**EAST/WEST:**	0.00
RIG:	**Cyclone#2**	**TARGET AZM:**	97.74	**(Enter 0' N and 0' E for Surface)**	
JOB NUMBER:	**DDMT-130259**				
SURVEY COMPANY:	**DIRECTIONAL COMPANY:**	**PROPOSED DIRECTION:**	97.81	**MAG-DEC. / TOTAL CORR.(+/-):**	**8.54**
MS Guidance	**MSGuidance**			**REFERENCED TO:**	**True North**
MWD SPECIALIST(S):	**DIRECTIONAL DRILLER(S):**	**COMMENTS:**			
Tim Coleman / Cliff Bray	Casey Crawford / Justin Klauser	Tie-In Provided by Continental Resources.Final Survey PBHL.			

														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 (-)
Tie In	**10780**	**88.89**	**95.31**			**10525.34**	**-69.81**	**509.92**	514.68	514.68	97.80			**10524.26**	**0.50**	**22.74**
1	10892	90.90	95.60	223.1	112	10525.55	-80.46	621.41	626.58	626.59	97.38	1.81	1.79	10524.23	-3.97	22.77
2	10987	93.10	94.80	220.5	95	10522.23	-89.06	715.95	721.41	721.47	97.09	2.46	2.32	10520.72	-8.17	26.28
3	11081	93.50	93.80	212.4	94	10516.82	-96.10	809.53	815.08	815.21	96.77	1.14	0.43	10515.11	-13.80	31.89
4	11176	89.70	94.10	214.2	95	10514.17	-102.64	904.25	909.81	910.06	96.48	4.01	-4.00	10512.26	-20.08	34.74
5	11270	90.60	94.80	216.9	94	10513.92	-109.93	997.96	1003.65	1004.00	96.29	1.21	0.96	10511.82	-25.47	35.18
6	11364	91.30	96.60	217.8	94	10512.36	-119.27	1091.48	1097.57	1097.98	96.24	2.05	0.74	10510.06	-28.82	36.94
7	11458	91.00	97.70	225.8	94	10510.48	-130.96	1184.73	1191.54	1191.95	96.31	1.21	-0.32	10507.98	-29.79	39.02
8	11552	87.80	98.50	225.8	94	10511.46	-144.21	1277.78	1285.52	1285.89	96.44	3.51	-3.40	10508.77	-29.20	38.23
9	11646	88.40	98.30	224.9	94	10514.58	-157.93	1370.72	1379.46	1379.78	96.57	0.67	0.64	10511.69	-28.11	35.31
10	11740	89.10	97.30	226.7	94	10516.63	-170.68	1463.82	1473.44	1473.74	96.65	1.30	0.74	10513.54	-28.02	33.46
11	11834	88.60	95.80	228.5	94	10518.51	-181.40	1557.19	1567.39	1567.72	96.64	1.68	-0.53	10515.23	-29.97	31.77
12	11928	91.20	96.30	227.6	94	10518.68	-191.31	1650.65	1661.34	1661.70	96.61	2.82	2.77	10515.20	-32.74	31.80
13	12023	92.30	98.90	228.5	95	10515.78	-203.87	1744.77	1756.29	1756.64	96.66	2.97	1.16	10512.10	-32.97	34.90
14	12116	90.50	96.70	230.3	93	10513.50	-216.48	1836.87	1849.25	1849.58	96.72	3.06	-1.94	10509.63	-32.88	37.37
15	12211	88.40	96.00	228.5	95	10514.42	-226.99	1931.28	1944.21	1944.57	96.70	2.33	-2.21	10510.34	-35.18	36.66
16	12306	90.70	99.20	231.2	95	10515.16	-239.55	2025.42	2039.18	2039.54	96.75	4.15	2.42	10510.89	-35.41	36.11
17	12400	90.30	98.30	231.2	94	10514.34	-253.85	2118.32	2133.17	2133.48	96.83	1.05	-0.43	10509.87	-33.76	37.13
18	12495	90.40	98.00	233.0	95	10513.76	-267.32	2212.36	2228.16	2228.45	96.89	0.33	0.11	10509.09	-33.08	37.91
19	12591	90.90	97.00	231.2	96	10512.67	-279.85	2307.53	2324.15	2324.44	96.91	1.16	0.52	10507.80	-33.48	39.20
20	12684	89.20	97.00	234.8	93	10512.59	-291.18	2399.83	2417.14	2417.44	96.92	1.83	-1.83	10507.53	-34.68	39.47
21	12779	89.60	99.40	233.9	95	10513.59	-304.73	2493.85	2512.13	2512.40	96.97	2.56	0.42	10508.32	-33.92	38.68

														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 (-)
22	12874	90.80	100.90	236.6	95	10513.25	-321.47	2587.36	2607.04	2607.25	97.08	2.02	1.26	10507.79	-29.92	39.21
23	12968	90.20	100.20	237.5	94	10512.43	-338.68	2679.77	2700.93	2701.08	97.20	0.98	-0.64	10506.78	-25.31	40.22
24	13062	90.10	99.30	239.3	94	10512.19	-354.60	2772.41	2794.88	2794.99	97.29	0.96	-0.11	10506.33	-22.02	40.67
25	13157	89.20	98.80	239.3	95	10512.77	-369.54	2866.22	2889.85	2889.95	97.35	1.08	-0.95	10506.72	-19.84	40.28
26	13251	91.40	98.20	240.2	94	10512.28	-383.43	2959.18	2983.84	2983.92	97.38	2.43	2.34	10506.03	-18.60	40.97
27	13345	89.80	98.00	238.4	94	10511.29	-396.68	3052.24	3077.83	3077.90	97.40	1.72	-1.70	10504.85	-18.01	42.15
28	13440	90.30	97.00	240.2	95	10511.21	-409.08	3146.42	3172.82	3172.90	97.41	1.18	0.53	10504.56	-18.41	42.44
29	13535	89.40	96.50	240.2	95	10511.46	-420.24	3240.76	3267.81	3267.89	97.39	1.08	-0.95	10504.61	-20.05	42.39
30	13628	88.80	96.60	242.0	93	10512.92	-430.85	3333.14	3360.77	3360.87	97.37	0.65	-0.65	10505.88	-21.98	41.12
31	13723	89.10	94.80	240.2	95	10514.66	-440.28	3427.65	3455.69	3455.81	97.32	1.92	0.32	10507.42	-25.36	39.58
32	13817	89.10	97.10	242.9	94	10516.14	-450.02	3521.13	3549.62	3549.77	97.28	2.45	0.00	10508.70	-28.29	38.30
33	13911	90.00	97.20	242.0	94	10516.87	-461.72	3614.39	3643.61	3643.77	97.28	0.96	0.96	10509.24	-29.26	37.76
34	14006	91.30	98.30	242.0	95	10515.80	-474.53	3708.52	3738.60	3738.75	97.29	1.79	1.37	10507.97	-29.25	39.03
35	14100	89.80	98.50	242.9	94	10514.89	-488.26	3801.50	3832.59	3832.73	97.32	1.61	-1.60	10506.87	-28.16	40.13
36	14195	90.10	97.70	245.6	95	10514.98	-501.65	3895.55	3927.59	3927.72	97.34	0.90	0.32	10506.75	-27.57	40.25
37	14289	90.80	98.30	242.9	94	10514.24	-514.73	3988.63	4021.58	4021.71	97.35	0.98	0.74	10505.82	-27.14	41.18
38	14384	90.30	98.70	246.5	95	10513.33	-528.77	4082.59	4116.57	4116.69	97.38	0.67	-0.53	10504.71	-25.88	42.29
39	14478	91.10	97.70	247.4	94	10512.18	-542.18	4175.62	4210.56	4210.67	97.40	1.36	0.85	10503.36	-25.12	43.64
40	14573	89.70	97.80	245.6	95	10511.52	-554.99	4269.74	4305.55	4305.66	97.41	1.48	-1.47	10502.50	-25.11	44.50
41	14667	89.80	99.60	246.5	94	10511.93	-569.21	4362.66	4399.54	4399.63	97.43	1.92	0.11	10502.71	-23.53	44.29
42	14761	88.70	98.30	247.4	94	10513.16	-583.83	4455.50	4493.51	4493.59	97.47	1.81	-1.17	10503.74	-21.55	43.26
43	14855	88.80	98.20	249.2	94	10515.21	-597.31	4548.51	4587.48	4587.56	97.48	0.15	0.11	10505.60	-20.71	41.40
44	14950	89.10	98.50	249.2	95	10516.95	-611.11	4642.48	4682.46	4682.53	97.50	0.45	0.32	10507.14	-19.70	39.86
45	15044	90.10	98.00	250.1	94	10517.60	-624.59	4735.51	4776.46	4776.52	97.51	1.19	1.06	10507.60	-18.86	39.40
46	15138	91.10	97.50	248.3	94	10516.62	-637.27	4828.64	4870.45	4870.51	97.52	1.19	1.06	10506.42	-18.85	40.58
47	15233	91.90	96.60	251.0	95	10514.13	-648.93	4922.89	4965.41	4965.47	97.51	1.27	0.84	10503.73	-19.99	43.27
48	15327	90.40	98.20	250.1	94	10512.25	-661.03	5016.08	5059.38	5059.45	97.51	2.33	-1.60	10501.65	-20.55	45.35
49	15421	90.60	97.70	251.0	94	10511.43	-674.03	5109.17	5153.38	5153.44	97.52	0.57	0.21	10500.63	-20.20	46.37
50	15516	91.10	97.80	249.2	95	10510.02	-686.84	5203.30	5248.36	5248.43	97.52	0.54	0.53	10499.02	-20.19	47.98
51	15610	90.60	98.90	250.1	94	10508.62	-700.49	5296.29	5342.35	5342.41	97.53	1.29	-0.53	10497.43	-19.19	49.57
52	15704	91.70	97.70	251.9	94	10506.74	-714.05	5389.28	5436.32	5436.38	97.55	1.73	1.17	10495.35	-18.27	51.65
53	15798	92.00	97.20	250.1	94	10503.70	-726.24	5482.44	5530.27	5530.33	97.55	0.62	0.32	10492.12	-18.74	54.88
54	15893	92.20	98.60	250.1	95	10500.22	-739.28	5576.47	5625.20	5625.26	97.55	1.49	0.21	10488.44	-18.48	58.56
55	15986	88.90	99.20	248.3	93	10499.33	-753.67	5668.33	5718.17	5718.22	97.57	3.61	-3.55	10487.35	-16.60	59.65
56	16081	90.10	99.90	251.0	95	10500.16	-769.43	5762.01	5813.12	5813.16	97.61	1.46	1.26	10487.98	-13.60	59.02
57	16174	91.30	99.50	252.8	93	10499.02	-785.10	5853.67	5906.06	5906.09	97.64	1.36	1.29	10486.65	-10.42	60.35

															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 (-)
58	16268	90.00	99.30	251.0	94	10497.95	-800.45	5946.40	6000.02	6000.04	97.67	1.40	-1.38		10485.39	-7.69	61.61
59	16362	87.90	99.60	251.9	94	10499.68	-815.88	6039.11	6093.96	6093.97	97.69	2.26	-2.23		10486.91	-4.89	60.09
60	16455	88.80	100.50	251.0	93	10502.35	-832.10	6130.64	6186.85	6186.85	97.73	1.37	0.97		10489.40	-1.14	57.60
61	16549	89.30	99.70	251.0	94	10503.91	-848.58	6223.17	6280.76	6280.76	97.76	1.00	0.53		10490.76	2.73	56.24
62	16644	90.70	99.60	253.7	95	10503.91	-864.51	6316.82	6375.71	6375.71	97.79	1.48	1.47		10490.56	5.90	56.44
63	16737	90.30	98.80	252.8	93	10503.10	-879.38	6408.62	6468.67	6468.67	97.81	0.96	-0.43		10489.55	8.26	57.45
64	16831	92.60	98.80	251.9	94	10500.72	-893.75	6501.48	6562.62	6562.62	97.83	2.45	2.45		10486.98	10.00	60.02
65	16926	90.50	98.20	252.8	95	10498.15	-907.79	6595.40	6657.58	6657.58	97.84	2.30	-2.21		10484.21	11.26	62.79
66	17020	90.70	97.70	253.7	94	10497.17	-920.79	6688.49	6751.57	6751.57	97.84	0.57	0.21		10483.03	11.61	63.97
67	17115	89.90	97.40	252.8	95	10496.67	-933.27	6782.66	6846.57	6846.57	97.83	0.90	-0.84		10482.33	11.29	64.67
68	17209	90.10	97.50	253.7	94	10496.67	-945.46	6875.87	6940.56	6940.57	97.83	0.24	0.21		10482.13	10.82	64.87
69	17304	89.90	97.30	253.7	95	10496.67	-957.69	6970.08	7035.56	7035.56	97.82	0.30	-0.21		10481.94	10.25	65.06
70	17398	89.90	97.10	254.6	94	10496.83	-969.47	7063.33	7129.56	7129.56	97.82	0.21	0.00		10481.90	9.37	65.10
71	17492	90.70	97.70	255.5	94	10496.34	-981.58	7156.55	7223.55	7223.55	97.81	1.06	0.85		10481.21	8.81	65.79
72	17587	90.30	97.20	251.9	95	10495.51	-993.90	7250.74	7318.55	7318.55	97.81	0.67	-0.42		10480.19	8.33	66.81
73	17681	89.90	97.30	253.7	94	10495.35	-1005.76	7343.99	7412.54	7412.54	97.80	0.44	-0.43		10479.82	7.52	67.18
74	17776	90.60	96.60	250.1	95	10494.93	-1017.26	7438.29	7507.53	7507.53	97.79	1.04	0.74		10479.21	6.21	67.79
75	17870	89.60	97.10	251.9	94	10494.77	-1028.47	7531.62	7601.51	7601.51	97.78	1.19	-1.06		10478.85	4.75	68.15
76	17965	88.80	97.50	253.7	95	10496.10	-1040.54	7625.84	7696.50	7696.50	97.77	0.94	-0.84		10479.98	4.02	67.02
77	18058	88.60	97.00	253.7	93	10498.21	-1052.27	7718.07	7789.47	7789.47	97.76	0.58	-0.22		10481.89	3.23	65.11
78	18153	89.00	97.70	255.5	95	10500.20	-1064.42	7812.27	7884.45	7884.45	97.76	0.85	0.42		10483.68	2.58	63.32
79	18247	90.00	97.70	255.5	94	10501.02	-1077.02	7905.42	7978.44	7978.44	97.76	1.06	1.06		10484.31	2.52	62.69
80	18341	91.10	98.80	256.4	94	10500.11	-1090.50	7998.44	8072.43	8072.43	97.76	1.65	1.17		10483.21	3.35	63.79
81	18436	90.00	98.20	255.5	95	10499.20	-1104.54	8092.39	8167.42	8167.42	97.77	1.32	-1.16		10482.10	4.61	64.90
82	18529	90.50	97.00	256.4	93	10498.80	-1116.84	8184.57	8260.41	8260.42	97.77	1.40	0.54		10481.50	4.39	65.50
83	18623	90.90	97.70	257.3	94	10497.65	-1128.87	8277.79	8354.40	8354.41	97.77	0.86	0.43		10480.15	3.75	66.85
84	18716	89.00	97.90	257.3	93	10497.73	-1141.49	8369.92	8447.40	8447.40	97.77	2.05	-2.04		10480.04	3.84	66.96
85	18810	88.60	97.40	258.2	94	10499.70	-1154.00	8463.07	8541.38	8541.38	97.76	0.68	-0.43		10481.81	3.70	65.19
86	18905	89.50	97.50	258.2	95	10501.27	-1166.31	8557.25	8636.36	8636.37	97.76	0.95	0.95		10483.19	3.22	63.81
87	18998	90.90	97.70	258.2	93	10500.95	-1178.61	8649.43	8729.36	8729.36	97.76	1.52	1.51		10482.67	2.99	64.33
88	19093	91.80	98.20	259.1	95	10498.71	-1191.75	8743.49	8824.33	8824.33	97.76	1.08	0.95		10480.23	3.34	66.77
89	19115	92.00	97.90	257.3	22	10497.98	-1194.83	8765.26	8846.32	8846.32	97.76	1.64	0.91		10479.45	3.46	67.55
90	19185	92.00	97.90	PBHL	70	10495.54	-1204.44	8834.55	8916.28	8916.28	97.76	0.00	0.00		10476.86	3.65	70.14

MS Directional

JOB NO.:	DDMT-130259
Company:	Continental Resources
LOCATION:	Williston, ND
RIG NAME:	Cyclone 2
STATE:	North Dakota
COUNTY:	Williams
WELL NAME:	Atlanta 13-6H
Survey File:	

FIELD:	Williston
Township:	153N
Range/Section	101W/6

MOTOR INFORMATION

Desc: 4 3/4 5/6 8.3 1.5 fxd W 5 5/8stb 1.04rpg

Bent Hsg/Sub: 1.5 | 0 | **Bit to Bend:** 0

Pad OD: .25 | **NB Stab:**

Slide Report for all BHA's in Job: DDMT-130259

Note: Sliding and Drilling Surveys are LOGICAL expectations.

#	Date	Hrs	Start MD	End MD	DMD	WOB	ROP	RPM	Surf Torq	Flow Rate	SPP On B	SPP Off B	Delta SPP	TFO cTFO	Survey MD	INC	AZM	Surv DLS	Mot DLS	Rot DLS	Q	Drill Mode
1	26-Apr	1.00	10856	10958	102	10	102.0	60	5000	291	2700	2250	450		10958	0.00	0.00	0.00	0.00	0.00	0	Drilling
1	26-Apr	1.17	10958	11065	107	11	91.7	60	5000	291	2850	2250	600		11065	0.00	0.00	0.00	0.00	0.00	0	Drilling
1	26-Apr	0.08	11065	11068	3	15	36.0	60	0	261	1980	1800	180	150L	11068	0.00	0.00	0.00	0.00	0.00	0	Sliding
1	26-Apr	0.58	11068	11083	15	15	25.7	0	0	261	2050	1850	200	150L	11083	0.00	0.00	0.00	0.00	0.00	0	Sliding
1	26-Apr	0.17	11083	11095	12	13	72.0	62	4500	291	3050	2250	800		11095	0.00	0.00	0.00	0.00	0.00	0	Drilling
1	26-Apr	0.50	11095	11102	7	16	14.0	0	0	261	2050	1850	200	140L	11102	0.00	0.00	0.00	0.00	0.00	0	Sliding
1	27-Apr	0.42	11102	11115	13	15	31.2	0	0	262	2050	1850	200	180	11115	0.00	0.00	0.00	0.00	0.00	0	Sliding
1	27-Apr	0.08	11115	11130	15	13	180.0	62	5200	262	2940	2140	800		11130	0.00	0.00	0.00	0.00	0.00	0	Drilling
1	27-Apr	0.75	11130	11145	15	15	20.0	0	0	262	2050	1850	200	180	11145	0.00	0.00	0.00	0.00	0.00	0	Sliding
1	27-Apr	0.08	11145	11147	2	13	24.0	62	5200	262	2940	2140	800		11147	0.00	0.00	0.00	0.00	0.00	0	Drilling
1	27-Apr	0.25	11147	11179	32	13	128.0	62	5200	262	2940	2140	800		11179	0.00	0.00	0.00	0.00	0.00	0	Drilling
1	27-Apr	0.42	11179	11189	10	15	24.0	0	0	262	2050	1850	200	180	11189	0.00	0.00	0.00	0.00	0.00	0	Sliding
1	27-Apr	1.50	11189	11336	147	13	98.0	62	5200	262	2940	2140	800		11336	0.00	0.00	0.00	0.00	0.00	0	Drilling
1	27-Apr	0.17	11336	11350	14	13	84.0	62	5200	262	2940	2140	800		11350	0.00	0.00	0.00	0.00	0.00	0	Drilling
1	27-Apr	0.33	11350	11370	20	15	60.0	0	0	262	2050	1850	200	125	11370	0.00	0.00	0.00	0.00	0.00	0	Sliding
1	27-Apr	0.50	11370	11430	60	13	120.0	62	5200	262	2940	2140	800		11430	0.00	0.00	0.00	0.00	0.00	0	Drilling
1	27-Apr	0.08	11430	11440	10	13	120.0	62	5200	262	2940	2140	800		11440	0.00	0.00	0.00	0.00	0.00	0	Drilling
1	27-Apr	0.33	11440	11465	25	15	75.0	0	0	262	2050	1850	200	170 R	11465	0.00	0.00	0.00	0.00	0.00	0	Sliding
1	27-Apr	0.58	11465	11475	10	15	17.1	0	0	262	2050	1850	200	170 R	11475	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	27-Apr	0.50	11475	11485	10	20	20.0	0	0	262	2200	2000	200	160 R	11485	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	27-Apr	1.67	11485	11659	174	15	104.4	62	5700	262	2850	2080	770		11659	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	27-Apr	0.33	11659	11667	8	28	24.0	0	0	262	2200	2030	170		11667	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	27-Apr	0.33	11667	11716	49	15	147.0	62	5800	262	2850	2080	770		11716	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	27-Apr	1.17	11716	11915	199	16	170.6	60	5500	262	2800	2080	720		11915	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	27-Apr	0.33	11915	11930	15	25	45.0	0	0	262	2350	2130	220	15R	11930	0.00	0.00	0.00	0.00	0.00	0	Sliding

Slide Report for all BHA's in Job: DDMT-130259

Note: Sliding and Drilling Surveys are LOGICAL expectations.

#	Date	Hrs	Start MD	End MD	DMD	WOB	ROP	RPM	Surf Torq	Flow Rate	SPP On B	SPP Off B	Delta SPP	TFO cTFO	Survey MD	INC	AZM	Surv DLS	Mot DLS	Rot DLS	Q	Drill Mode
2	27-Apr	0.25	11930	11945	15	16	60.0	60	5500	262	2815	2115	700		11945	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	27-Apr	0.42	11945	11960	15	28	36.0	0	0	262	2300	2130	170	85R	11960	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	27-Apr	0.25	11960	11998	38	15	152.0	60	5500	262	2850	2115	735		11998	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	27-Apr	0.25	11998	12045	47	15	188.0	60	5500	262	2830	2180	650		12045	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	27-Apr	0.33	12045	12055	10	25	30.0	0	0	262	2200	2050	150	160L	12055	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	27-Apr	0.83	12055	12130	75	15	90.0	60	5500	262	2900	2180	720		12130	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	27-Apr	0.33	12130	12140	10	28	30.0	0	0	262	2280	2080	200	160R	12140	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	28-Apr	0.83	12140	12186	46	15	55.2	60	6500	262	2820	2080	740		12186	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	0.33	12186	12240	54	14	162.0	60	6500	262	2980	2170	810		12240	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	0.33	12240	12255	15	28	45.0	0	0	262	2300	2080	220	80R	12255	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	28-Apr	0.25	12255	12281	26	14	104.0	60	6500	262	2980	2170	810		12281	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	0.75	12281	12390	109	14	145.3	60	6500	262	2980	2170	810		12390	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	0.75	12390	12400	10	28	13.3	0	0	262	2265	2130	135	170R	12400	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	28-Apr	1.50	12400	12598	198	14	132.0	60	6200	262	2860	2100	760		12598	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	0.50	12598	12613	15	28	30.0	60	6200	262	2265	2100	165	170R	12613	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	28-Apr	1.50	12613	12772	159	14	106.0	60	6200	262	2265	2100	165		12772	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	0.42	12772	12790	18	28	43.2	60	6200	262	2265	2100	165	170R	12790	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	28-Apr	1.58	12790	12962	172	14	108.6	60	6200	262	2265	2100	165		12962	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	0.17	12962	12972	10	28	60.0	60	6200	262	2265	2100	165	170R	12972	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	28-Apr	1.33	12972	13132	160	15	120.0	60	6200	262					13132	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	0.25	13132	13138	6	28	24.0	0	0	262	2265	2100	165	180	13138	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	28-Apr	1.42	13138	13321	183	18	129.2	60	6200	262	2265	2100	165		13321	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	0.75	13326	13339	13	40	17.3	0	0	262	2265	2100	165	180	13339	91.40	98.20	0.00	0.00	0.00	0	Sliding
2	28-Apr	1.50	13339	13510	171	18	114.0	60	6200	262	2265	2100	165		13510	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	0.08	13510	13523	13	18	156.0	60	6200	262	2265	2100	165		13523	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	0.17	13523	13535	12	40	72.0	60	6200	262	2265	2100	165	180	13535	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	28-Apr	0.50	13535	13605	70	18	140.0	60	6200	262	2265	2100	165		13605	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	1.00	13605	13736	131	18	131.0	60	10000	262	2850	2250	600		13736	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	0.92	13736	13756	20	51	21.8	0	0	262	2480	2290	190	80R	13756	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	28-Apr	1.42	13756	13887	131	18	92.5	60	10000	262	2900	2250	650		13887	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	0.17	13887	13902	15	18	90.0	60	10000	262	2900	2250	650		13902	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	28-Apr	0.42	13902	13922	20	55	48.0	0	0	262	2470	2250	220	90R	13922	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	28-Apr	1.25	13922	14015	93	18	74.4	60	9700	262	2650	2220	430		14015	0.00	0.00	0.00	0.00	0.00	0	Drilling

Slide Report for all BHA's in Job: DDMT-130259

Note: Sliding and Drilling Surveys are LOGICAL expectations.

#	Date	Hrs	Start MD	End MD	DMD	WOB	ROP	RPM	Surf Torq	Flow Rate	SPP On B	SPP Off B	Delta SPP	TFO cTFO	Survey MD	INC	AZM	Surv DLS	Mot DLS	Rot DLS	Q	Drill Mode
2	28-Apr	0.33	14015	14019	4	38	12.0	0	0	262	2525	2250	275	90R	14019	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	29-Apr	0.67	14019	14035	16	55	24.0	0	0	262	2525	2250	275	120R	14035	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	29-Apr	0.42	14035	14075	40	18	96.0	65	9500	262	2950	2340	610		14075	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.83	14075	14152	77	18	92.4	65	9500	262	3000	2340	660		14152	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.08	14152	14170	18	20	216.0	65	9800	262	2840	2300	540		14170	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.75	14170	14285	115	20	153.3	65	10000	262	2840	2300	540		14285	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.92	14285	14302	17	55	18.5	0	0	262	2515	2340	175	90R	14302	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	29-Apr	1.83	14302	14454	152	20	82.9	65	10000	262	2515	2340	175		14454	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.75	14454	14548	94	20	125.3	65	10000	262	2515	2340	175		14548	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.08	14548	14553	5	20	60.0	65	10000	262	2515	2340	175		14553	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.67	14553	14565	12	55	18.0	0	0	262	2515	2340	175	180	14565	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	29-Apr	0.50	14565	14580	15	40	30.0	0	0	262	2515	2340	175	90R	14580	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	29-Apr	0.67	14580	14643	63	20	94.5	65	10000	262	2515	2340	175		14643	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.83	14643	14737	94	20	112.8	65	10000	262	2515	2340	175		14737	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.42	14737	14742	5		12.0	0	0	262	2515	2340	175		14742	89.80	99.60	0.00	0.00	0.00	0	Sliding
2	29-Apr	0.75	14742	14831	89	15	118.7	65	10000	262	2515	2340	175		14831	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.83	14831	14925	94	15	112.8	65	10000	262	2515	2340	175		14925	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.75	14925	15020	95	15	126.7	60	10000	262	2515	2340	175		15020	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.83	15020	15114	94	15	112.8	60	10000	262	2515	2340	175		15114	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.75	15114	15208	94	15	125.3	60	10000	262	2515	2340	175		15208	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.75	15208	15303	95	15	126.7	60	10000	262	2515	2340	175		15303	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.08	15303	15310	7	15	84.0	60	10000	262	2515	2340	175		15310	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	0.83	15310	15335	25	45	30.0	0	0	262	2515	2340	175	120R	15335	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	29-Apr	2.00	15335	15523	188	17	94.0	60	9200	262	2900	2350	550		15523	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	1.17	15523	15543	20	43	17.1	0	0	262	2520	2330	190	90R	15543	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	29-Apr	0.33	15543	15586	43	17	129.0	60	9000	262	3050	2330	720		15586	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	29-Apr	1.83	15586	15788	202	13	110.2	60	8000	262	2980	2330	650		15788	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	30-Apr	0.17	15788	15806	18	13	108.0	60	8000	262	2980	2330	650		15806	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	30-Apr	0.58	15806	15821	15	60	25.7	0	0	262	2525	2330	195	160R	15821	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	30-Apr	0.50	15821	15868	47	13	94.0	60	8000	262	2950	2330	620		15868	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	30-Apr	0.25	15868	15900	32	13	128.0	60	8200	262	3000	2330	670		15900	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	0.25	15900	15915	15	62	60.0	0	0	262	2615	2430	185	140R	15915	0.00	0.00	0.00	0.00	0.62	0	Sliding
2	30-Apr	1.00	15915	15975	60	13	60.0	65	8500	262	3120	2440	680		15975	0.00	0.00	0.00	0.00	0.62	0	Drilling

Slide Report for all BHA's in Job: DDMT-130259

Note: Sliding and Drilling Surveys are LOGICAL expectations.

#	Date	Hrs	Start MD	End MD	DMD	WOB	ROP	RPM	Surf Torq	Flow Rate	SPP On B	SPP Off B	Delta SPP	TFO cTFO	Survey MD	INC	AZM	Surv DLS	Mot DLS	Rot DLS	Q	Drill Mode
2	30-Apr	0.67	15975	15990	15	60	22.5	0	0	262	2650	2430	220	170R	15990	0.00	0.00	0.00	0.00	0.62	0	Sliding
2	30-Apr	0.67	15990	16056	66	13	99.0	65	0	262	2650	2430	220		16056	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	0.75	16056	16151	95	13	126.7	65	10000	262	2650	2430	220		16151	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	0.67	16151	16244	93	13	139.5	60	10000	262	2650	2430	220		16244	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	0.17	16244	16250	6	13	36.0	60	10000	262	2650	2430	220		16250	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	0.67	16250	16266	16	60	24.0	0	0	262	2650	2430	220	170R	16266	0.00	0.00	0.00	0.00	0.62	0	Sliding
2	30-Apr	0.58	16266	16338	72	13	123.4	60	10000	262	2650	2430	220		16338	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	0.08	16338	16343	5	13	60.0	60	9000	262	2650	2430	220		16343	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	0.58	16343	16353	10	50	17.1	0	0	262	2650	2430	220	170R	16353	0.00	0.00	0.00	0.00	0.62	0	Sliding
2	30-Apr	0.67	16353	16432	79	13	118.5	60	9000	262	2650	2430	220		16432	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	0.25	16432	16450	18	13	72.0	60	9000	262	2650	2430	220		16450	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	0.50	16450	16460	10	60	20.0	0	0	262	2650	2430	220	10L	16460	0.00	0.00	0.00	0.00	0.62	0	Sliding
2	30-Apr	0.83	16460	16525	65	13	78.0	60	9000	262	2650	2430	220		16525	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	1.00	16525	16619	94	13	94.0	60	9000	262	2650	2430	220		16619	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	0.92	16619	16714	95	13	103.6	60	9000	262	2650	2430	220		16714	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	0.08	16714	16720	6	13	72.0	60	10000	262	2650	2430	220		16720	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	0.50	16720	16725	5	60	10.0	0	0	262	2650	2430	220	140R	16725	0.00	0.00	0.00	0.00	0.62	0	Sliding
2	30-Apr	0.75	16725	16807	82	18	109.3	60	10000	262	2650	2430	220		16807	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	0.92	16807	16901	94	18	102.5	60	7000	262	2650	2430	220		16901	0.00	0.00	0.00	0.00	0.62	0	Drilling
2	30-Apr	0.67	16901	16921	20	45	30.0	0	0	262	2650	2430	220	170R	16921	0.00	0.00	0.00	0.00	0.62	0	Sliding
2	30-Apr	2.50	16921	17105	184	14	73.6	61	8000	262	3150	2450	700		17105	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	30-Apr	0.42	17105	17115	10	49	24.0	0	0	262	2520	2350	170	170R	17115	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	30-Apr	0.75	17115	17185	70	14	93.3	61	8200	262	3120	2450	670		17185	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	30-Apr	1.25	17185	17300	115	11	92.0	60	7800	262	3200	2680	520		17300	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	30-Apr	0.33	17300	17308	8	60	24.0	0	0	262	2845	2680	165	150R	17308	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	30-Apr	0.25	17308	17318	10	11	40.0	60	8000	262	3220	2680	540		17318	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	1-May	1.67	17318	17468	150	14	90.0	63	9600	276	3350	2660	690		17468	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	1-May	1.25	17468	17582	114	14	91.2	63	9400	276	3350	2660	690		17582	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	1-May	1.00	17582	17592	10	80	10.0	0	0	276	2750	2630	120	160R	17592	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	1-May	0.67	17592	17630	38	14	57.0	63	9800	276	3350	2630	720		17630	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	1-May	0.25	17630	17635	5	42	20.0	0	0	276	2830	2615	215	160R	17635	0.00	0.00	0.00	0.00	0.00	0	Sliding
2	1-May	0.25	17635	17657	22	14	88.0	60	6	276	3250	2620	630		17657	0.00	0.00	0.00	0.00	0.00	0	Drilling
2	1-May	1.50	17657	17751	94	18	62.7	60	9500	276	3200	2400	800		17751	0.00	0.00	0.00	0.00	0.00	0	Drilling

Slide Report for all BHA's in Job: DDMT-130259

Note: Sliding and Drilling Surveys are LOGICAL expectations.

#	Date	Hrs	Start MD	End MD	DMD	WOB	ROP	RPM	Surf Torq	Flow Rate	SPP On B	SPP Off B	Delta SPP	TFO cTFO	Survey MD	INC	AZM	Surv DLS	Mot DLS	Rot DLS	Q	Drill Mode
3	2-May	1.75	17751	17860	109	16	62.3	60	8000	262	3200	2530	670		17860	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.67	17860	17880	20	75	30.0	0	0	276	3080	2860	220	150R	17880	0.00	0.00	0.00	0.00	0.00	0	Sliding
3	2-May	1.50	17880	18035	155	16	103.3	60	8000	262	3080	2860	220		18035	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.25	18035	18080	45	16	180.0	60	8000	262	3080	2860	220		18080	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.25	18080	18090	10	65	40.0	60	0	276	3080	2860	220	40R	18090	0.00	0.00	0.00	0.00	0.00	0	Sliding
3	2-May	0.33	18090	18160	70	16	210.0	60	0	262	3080	2860	220		18160	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.58	18160	18223	63	16	108.0	60	0	262	3080	2860	220		18223	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.58	18223	18317	94	16	161.1	60	8000	262	3080	2860	220		18317	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.67	18317	18411	94	16	141.0	60	8000	262	3080	2860	220		18411	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.17	18411	18420	9	16	54.0	60	8000	262	3080	2860	220		18420	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.83	18420	18430	10	40	12.0	0	0	262	3080	2860	220	150R	18430	0.00	0.00	0.00	0.00	0.00	0	Sliding
3	2-May	0.42	18430	18506	76	16	182.4	60	8000	262	3080	2860	220		18506	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.67	18506	18599	93	16	139.5	60	8000	262	3080	2860	220		18599	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.67	18599	18693	94	16	141.0	60	8000	262	3080	2860	220		18693	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.08	18693	18700	7	16	84.0	60	8000	262	3080	2860	220		18700	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.75	18700	18710	10	40	13.3	0	0	262	3080	2860	220	150R	18710	0.00	0.00	0.00	0.00	0.00	0	Sliding
3	2-May	0.58	18710	18786	76	16	130.3	60	8000	262	3080	2860	220		18786	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.50	18786	18880	94	16	188.0	60	8000	262	3080	2860	220		18880	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.50	18880	18975	95	16	190.0	60	8000	262	3080	2860	220		18975	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.50	18975	19068	93	16	186.0	60	8000	262	3080	2860	220		19068	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	0.67	19068	19163	95	16	142.5	60	8000	262	3080	2860	220		19163	0.00	0.00	0.00	0.00	0.00	0	Drilling
3	2-May	-16.08	19163	19184	21	16	-1.3	60	8000	262	3080	2860	220		19184	0.00	0.00	0.00	0.00	0.00	0	Drilling

Total Drilled:	8323	**Avg. Total ROP:**	103.61	**DEPTH% - TIME %**	
Total Rotary Drilled:	7695	**Avg. Rotary ROP:**	139.91	**Percent Rotary:**	92.45 - 68.46
Total Drilled Sliding:	628	**Avg. Slide ROP:**	24.79	**Percent Slide:**	7.55 - 31.54

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

Well Name:	Atlanta 13-6H (Atlanta 14 Well Eco Pad)
Location:	NENW Sec 6 - T153N - R101W - Williams Co., ND
License Number:	33-105-02720
Region:	Williston
Spud Date:	3/8/13
Drilling Completed:	4/7/13
Surface Coordinates:	NENW Sec 6 - T153N - R101W - Williams Co., ND 495' FNL & 1440' FWL
Bottom Hole Coordinates:	NENW Sec 6 - T153N - R101W - Williams Co., ND CP: 10850' MD; 10525.47' TVD, 571' FNL & 2020' FWL
Ground Elevation (ft):	1945'
K.B. Elevation (ft):	1967'
Logged Interval (ft):	9700' To: 10525'
Total Depth (ft):	825'
Formation:	MCyn, Lodgp, UBkkn SH, MBkkn Dol
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

Baker Hughes

Second Hand

Joe Dunn

ROCK TYPES

Anhy
Bent
Brec
Cht
Clyst
Coal
Congl
Dol
Gyp
Igne
Lmst
Meta
Mrlst
Salt
Shale
Shcol
Shgy
Sltst
Ss
Till

ACCESSORIES

MINERAL

Anhy
Arggrn
Arg
Bent
Bit
Brecfrag
Calc
Carb
Chtdk
Chtlt
Dol
Feldspar
Ferrpel
Ferr
Glau
Gyp
Hvymin
Kaol
Marl
Minxl
Nodule
Phos
Pyr
Salt
Sandy
Silt
Sil
Sulphur
Tuff

FOSSIL

Algae
Amph
Belm
Bioclst
Brach
Bryozoa
Cephal
Coral
Crin
Echin
Fish
Foram
Fossil
Gastro
Oolite
Ostra
Pelec
Pellet
Pisolite
Plant
Strom

STRINGER

Anhy
Arg
Bent
Coal
Dol
Gyp
Ls
Mrst
Sltstrg
Ssstrg

TEXTURE

Boundst
Chalky
Cryxln
Earthy
Finexln
Grainst
Lithogr
Microxln
Mudst
Packst
Wackest

OTHER SYMBOLS

POROSITY TYPE

Earthy
Fenest
Fracture
Inter
Moldic
Organic
Pinpoint
Vuggy

SORTING

Well
Moderate
Poor

ROUNDING

Rounded
Subrnd
Subang
Angular

OIL SHOWS

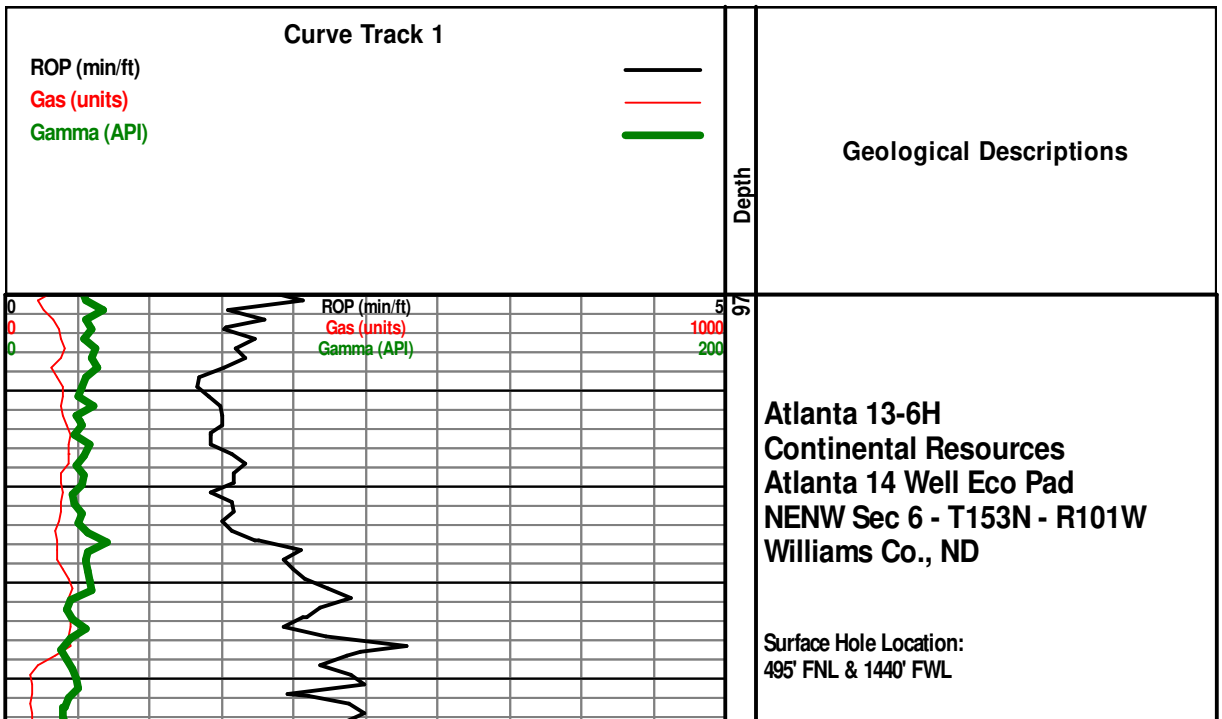
Even
Spotted
Ques
Dead

INTERVALS

Core
Dst

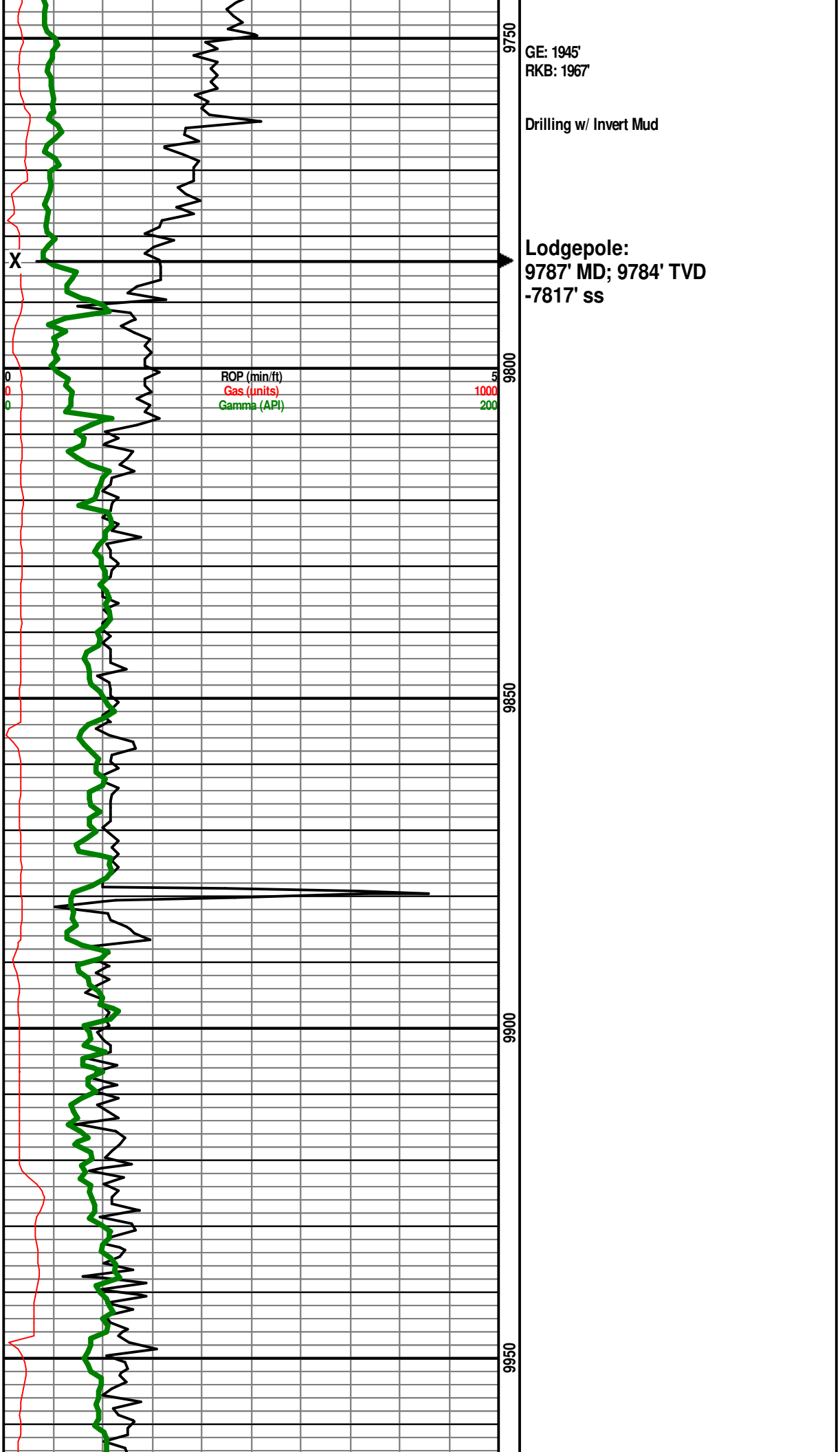
EVENTS

Rft
Sidewall



Atlanta 13-6H
Continental Resources
Atlanta 14 Well Eco Pad
NENW Sec 6 - T153N - R101W
Williams Co., ND

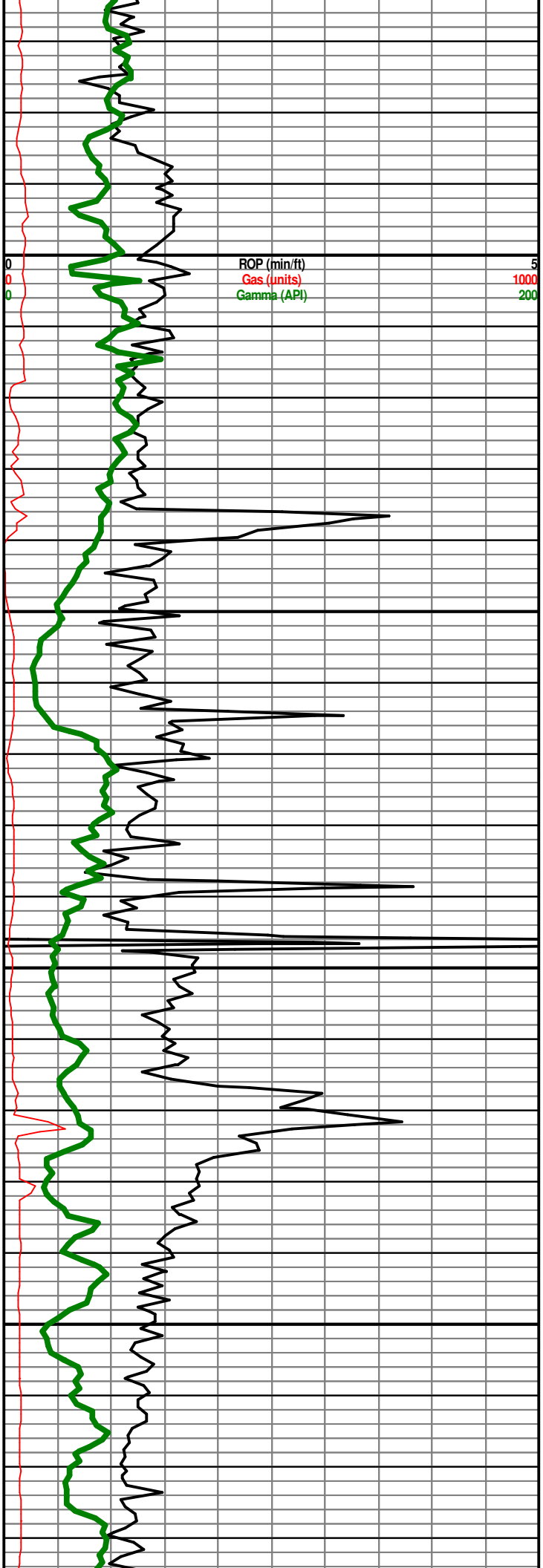
Surface Hole Location:
495' FNL & 1440' FWL



GE: 1945'
RKB: 1967'

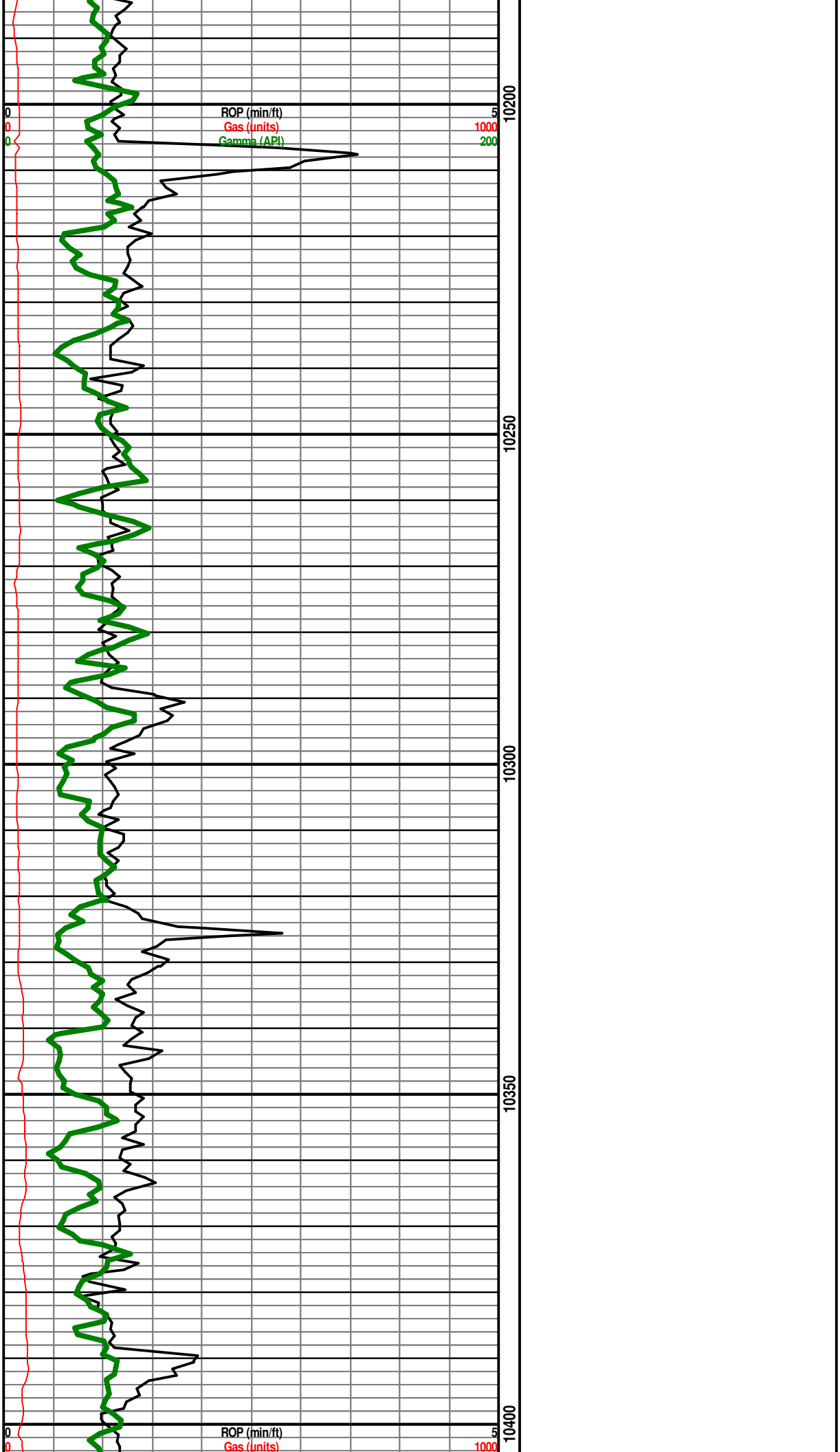
Drilling w/ Invert Mud

Lodgepole:
9787' MD; 9784' TVD
-7817' ss



TOOH for Build Assembly @ 10039' MD
4/5/13 - 11:20
Resume Drilling: 4/6/13 - 04:00

KOP: 10039' MD; 10036' TVD
-8069' ss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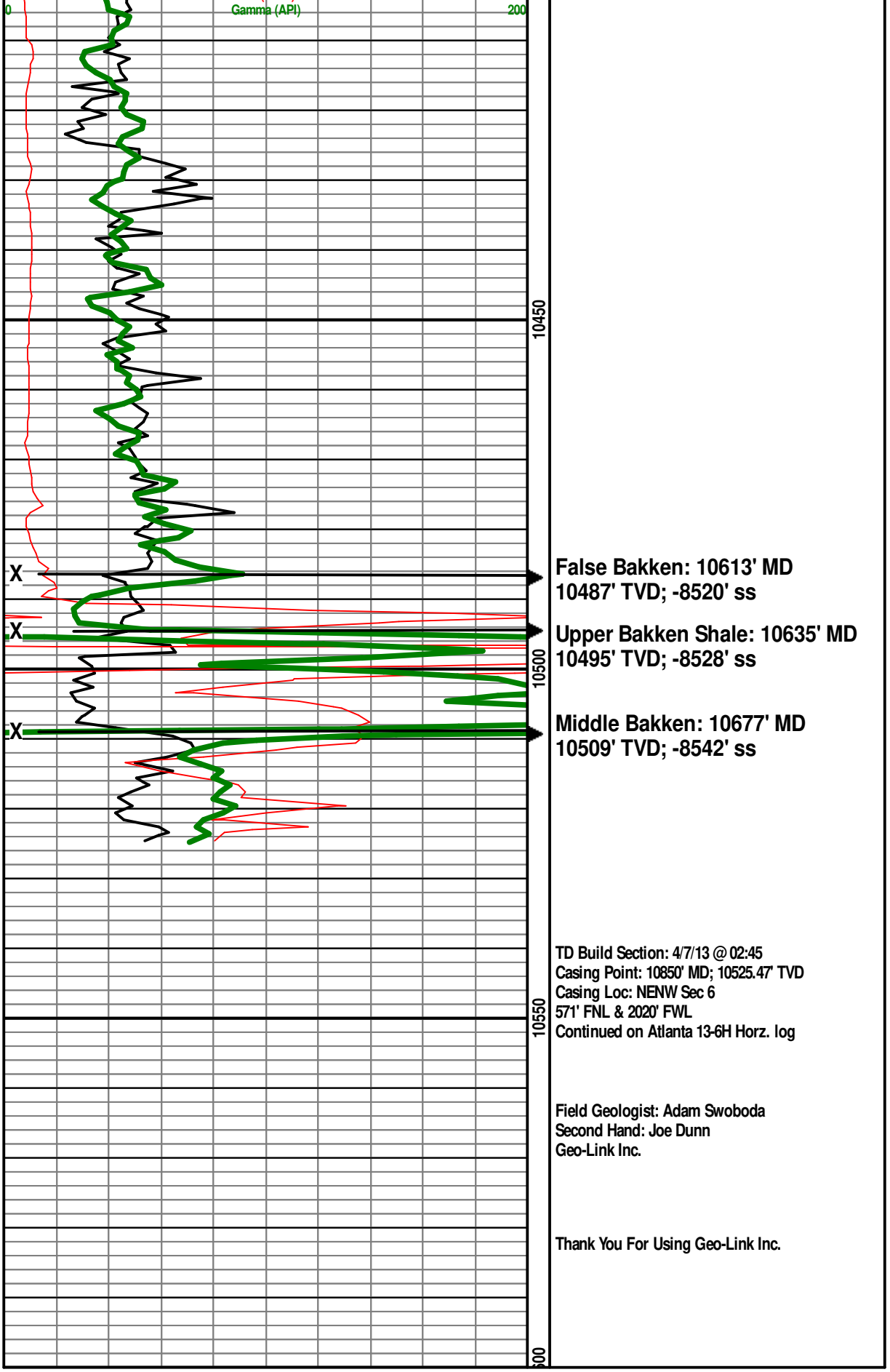
ROP (min/ft)
5
0
Gas (units)
1000
0
Gamma (API)
200
10200
10250
10300
10350
10400
0
ROP (min/ft)
5
0
Gas (units)
1000


Gamma (API)
200
10450
10500
10550
X
X
X
False Bakken: 10613' MD
10487' TVD; -8520' ss
Upper Bakken Shale: 10635' MD
10495' TVD; -8528' ss
Middle Bakken: 10677' MD
10509' TVD; -8542' ss
TD Build Section: 4/7/13 @ 02:45
Casing Point: 10850' MD; 10525.47' TVD
Casing Loc: NENW Sec 6
571' FNL & 2020' FWL
Continued on Atlanta 13-6H Horz. log
Field Geologist: Adam Swoboda
Second Hand: Joe Dunn
Geo-Link Inc.
Thank You For Using Geo-Link Inc.

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.
23360

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

- [x] Notice of Intent — Approximate Start Date: **January 29, 2013**
- [ ] Report of Work Done — Date Work Completed:
- [ ] 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:

- [ ] Drilling Prognosis
- [ ] Redrilling or Repair
- [ ] Casing or Liner
- [ ] Plug Well
- [ ] Supplemental History
- [ ] Temporarily Abandon
- [x] Spill Report
- [ ] Shooting
- [ ] Acidizing
- [ ] Fracture Treatment
- [ ] Change Production Method
- [ ] Reclamation
- [x] Other **Flow back exemption**

Well Name and Number
Atlanta 13-6H

Footages	Qtr-Qtr	Section	Township	Range
495 F N L 1440 F W L	NENW	6	153 N	101 W

Field	Pool	County
Baker	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

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	Telephone Number
Continental Resources, Inc.	405-234-9000

Address		
P.O. Box 269000		
City	State	Zip Code
Oklahoma City	OK	73126

Signature	Printed Name
	Jim Landrigan
Title	Date
Completion Engineer	December 3, 2012

FOR STATE USE ONLY

- [ ] Received
- [x] Approved

Date: December 14, 2012
By:
Title: PETROLEUM ENGINEER

AMERICAN
TECHNICAL
SERVICES, INC.

8105 Black Hawk Rd • PO Box 658 • 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. June 12, 2012
C/O Brosz Engineering
P.O. Box 357
Bowman, North Dakota 58623

Attn: Jade Hedge

Subj: Report of Geotechnical Engineering Analysis ATS No. 12-12165
Atlanta Drill Pad
Continental Resources
Near Williston, North Dakota

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.

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 in 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:

- 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)

- 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

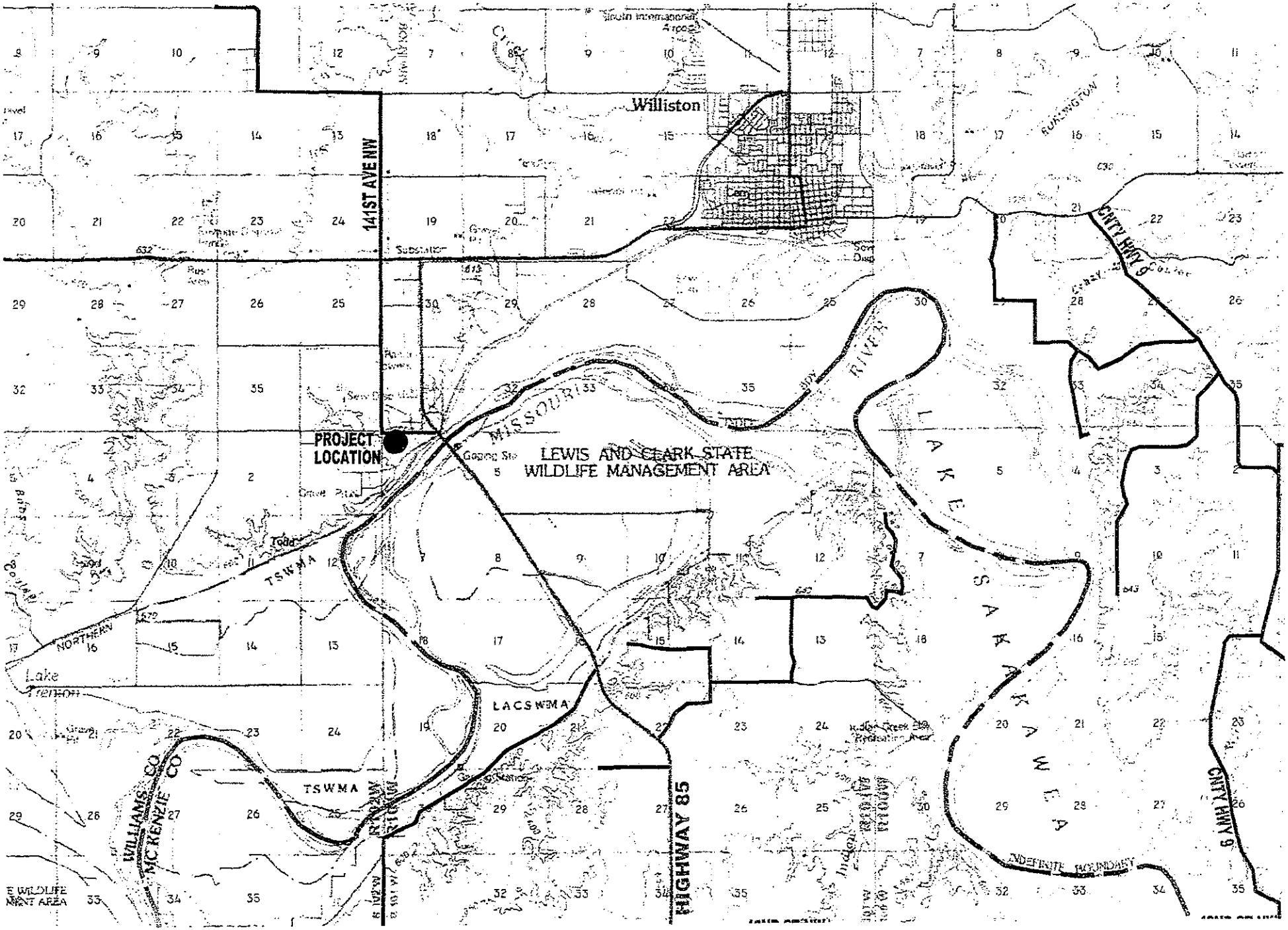
SITE PLAN WITH BORING LOCATIONS

BORING LOGS

BORING LOG GENERAL NOTES

CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES

MOISTURE-DENSITY CURVES


Williston
141ST AVE NW
PROJECT LOCATION
MISSOURI RIVER
LEWIS AND CLARK STATE WILDLIFE MANAGEMENT AREA
LAKE SAKAKAWEA
TSWMA
LACSWMA
HIGHWAY 85
CNTY HWY 9
WILLIAMS CO
MCKENZIE CO
INDEFINITE BOUNDARY

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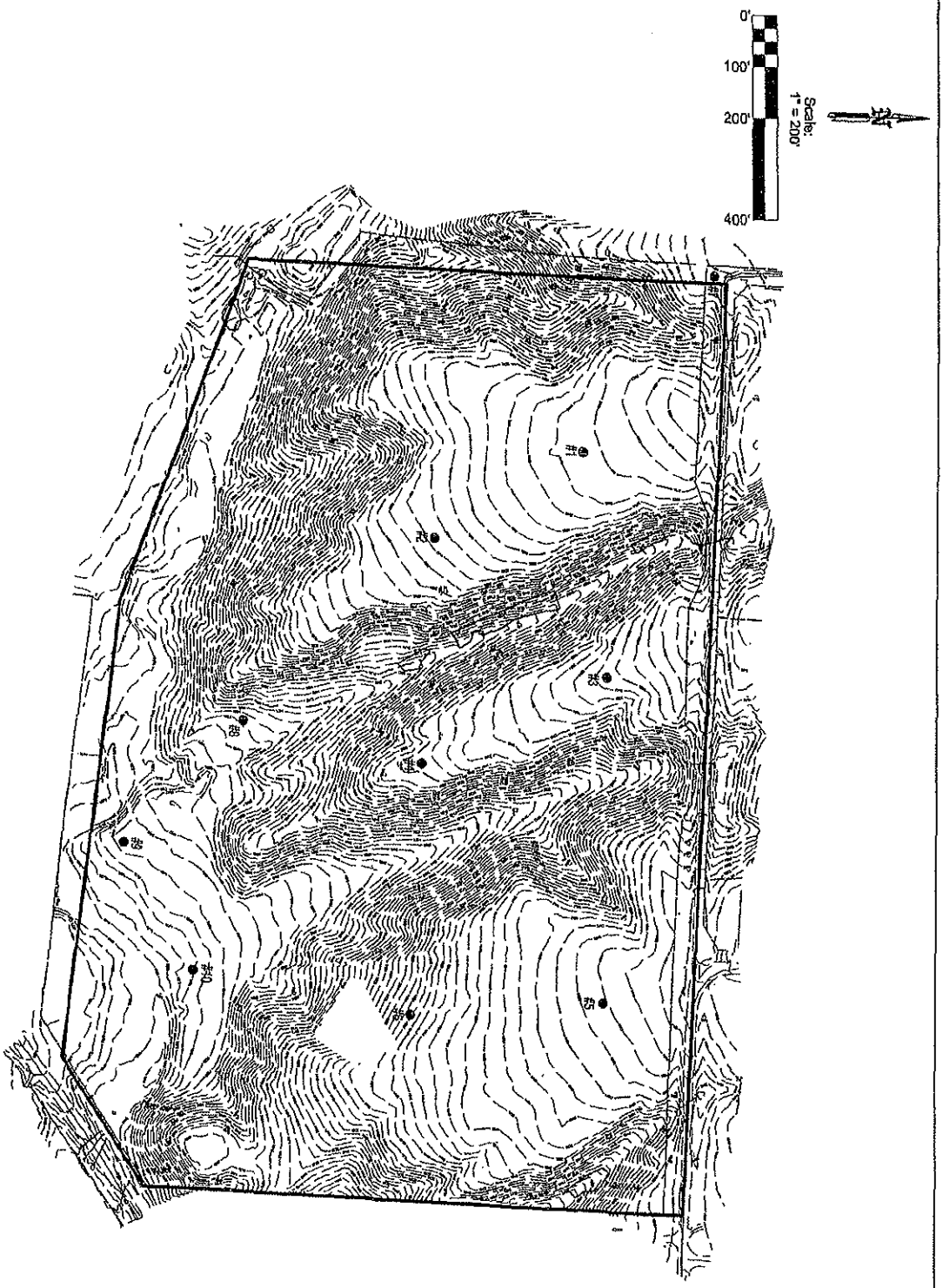

Brosz Engineering, Inc.	SHEET DESCRIPTION: Site Layout	REVISION / DATE	DESIGNED BY:
	PROJECT NAME: Atlanta Site		DRAWN BY: JBE
	PROJECT NO.: N12B10		DATE PRINTED: 5/8/12

0 OF

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 WL	N	NO	TYPE	LABORATORY TESTS W	D	LL / PL	QU
0.0'	Grass/weed cover									
2.5'	Sand w/clay: Brown, dry, loose (SC)	Alluvium								
	Sand: Brown, sl. moist, loose, m. grained, poorly graded, gravel	Glacial Deposit								
5.0'	present (SP)			7	1	SB	4	FR	NP	
9.0'										
10.0'	Sandy Clay w/gravel: Brown, sl. Moist			15	2	SB	9	118		
12.0'	v. stiff, cobble present, variable gravel and sand content (CL w/sand and gravel)									
15.0'	cobble absent, less gravel			12	3	SB	17	110		
17.5'										
	Fat Clay w/sand: Brown, moist,	Glacial Till								
20.0'	stiff, gravel present (CH w/sand) traces of gravel, variable sand content			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	18	111		
45.0'					NSR					
48.0'										
50.0'	Dk gray			14	8	SB				
55.0'					NSR					
57.0'			V							
58.0'										
	Shale: Dk. Gray, wet,	Pierre								
60.0'	m. stiff (CH)	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 WL	N	NO	TYPE	LABORATORY TESTS W	D	LL / PL	QU
0.0'	Grass/weed cover									
	Sand w/clay: Brown, dry, loose	Glacial								
2.5'	variable clay content (SC)	Deposit								
	Clayey Sand: Brown, sl. Moist, m. dense, variable sand content,									
5.0'	trace of gravel (SC)			16	1	SB	8	117		
8.0'										
	Fat Clay w/sand: Brown, moist,	Glacial Till								
10.0'	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'				14	7	SB				
41.0'	End of Boring									

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 WL	N	NO	TYPE	LABORATORY TESTS W	D	LL / PL	QU
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				
	Sandy Clay: Brown, moist, stiff, gravel present, variable sand content (CL)									
13.0'										
	Fat Clay w/sand: Brown, moist, stiff, traces of gravel variable sand content (CH)	Glacial Till								
15.0'				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			9	6	SB				
41.0'	End of Boring									

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: 4

DEPTH IN FEET	Approximate Surface Elevation = 1941.2' Description of Materials	GEOLOGIC ORIGIN	SAMPLE DATA WL	N	NO	TYPE	LABORATORY TESTS W	D	LL / PL	QU
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)			17	1	SB	11	FR	36 / 22	
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	16	107		
15.0'				14	3	SB				
16.0'										
20.0'				14	4	SB				
24.0'										
25.0'					NSR					
30.0'				9	5	SB				
31.0'	End of Boring									
32.0'										
40.0'										

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: 5

DEPTH IN FEET	Approximate Surface Elevation = 1963.6' Description of Materials	GEOLOGIC ORIGIN	SAMPLE DATA WL	N	NO	TYPE	LABORATORY TESTS W	D	LL / PL	QU
0.0'	Grass/weed cover									
1.0'	Sand w/clay: Brown, dry, loose (SC)	Alluvium								
	Sand w/clay: Brown, sl. moist, m. dense, m. grained, poorly graded, gravel present (SP)	Glacial Deposit								
5.0'				13	1	SB	5	FR		
10.0'				11	2	SB	15	112		
12.0'	Fat Clay w/sand: Brown, moist, stiff, gravel present, (CH w/sand)	Glacial Till								
15.0'				11	3	SB	20	97	62 / 26	
20.0'				10	4	SB	19	107		
24.0'										
25.0'					NSR					
30.0'				9	5	SB	19	108		
35.0'					NSR					
36.0'										
40.0'	dk. Gray			12	6	SB	15	115		
45.0'					NSR					
48.0'										
50.0'	v. stiff			15	7	SB	15	FR		
51.0'	End of Boring									
60.0'										

DATE:	WATER TABLE MEASUREMENTS	DATE: 6/6/12
6/6/12	Not Encountered	METHOD OF DRILLING: 2.25" HSA
	Borehole caved to 32'	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 WL	N	NO	TYPE	LABORATORY TESTS W	D	LL / PL	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'				11	5	SB				
26.0'	End of Boring									

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 WL	N	NO	TYPE	LABORATORY TESTS W	O	LL / PL	QU
0.0'	Grass/weed cover									
2.0'	Sand w/clay: Brown, dry, loose (SC)	Alluvium								
	Sand: Brown, sl. moist, loose, m. grained, poorly graded, gravel present (SP)	Glacial Deposit								
5.0'				9	1	SB	6	FR		
	Fat Clay w/sand: Brown, moist, stiff, gravel present, (CH w/sand) variable sand content	Glacial Till								
10.0'				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'				8	9	SB				
61.0'	End of Boring									

DATE:	WATER TABLE MEASUREMENTS	DATE: 6/6/12
6/6/12	Not Encountered	METHOD OF DRILLING: 2.25" HSA
	Borehole caved to 43'	CREW CHIEF: MS

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 WL	N	NO	TYPE	LABORATORY TESTS W	D	LL / PL	QU
0.0'	Grass/weed cover									
	Clay w/sand: Gray, moist, stiff, sand present (CL)	Alluvium								
5.0'				8	1	SB	21	97		
10.0'				10	2	SB	19	107		
	Fat Clay w/sand: Brown, moist, stiff, variable sand content (CH)									
15.0'				9	3	SB	22	97		
	Shale: Gray & brown, moist, stiff, sand present (CH)	Pierre Shale								
18.0'			V							
20.0'				10	4	SB	33	91		
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 14'	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 WL	N	NO	TYPE	LABORATORY TESTS W	D	LL / PL	QU
0.0'	Grass/weed cover									
	Sand w/clay: Brown, moist, loose, variable clay content (SC), traces of gravel present	Alluvium								
5.0'				9	1	SB	14	105		
10.0'				22	2	SB	4	FR		
	Gravelly Sand: Brown, moist, dense, variable sand content (SW)									
15.0'	obstructed sampler			11	NSR	SB	4	FR		
18.0'	less dense, wet, less gravel		V							
20.0'				4	4	SB	23	109		
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

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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 WL	N	NO	TYPE	LABORATORY TESTS W	D	LL / PL	QU
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		▽	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

GENERAL NOTES

DESCRIPTIVE TERMINOLOGY

Density Term	"N" Value
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 16
Dense	16 - 30
Very Dense	> 30

Consistency Term	"N" Value
Very Soft	0 - 2
Soft	2 - 4
Medium stiff	4 - 8
Stiff	8 - 15
Very stiff	15 - 30
Hard	< 30

RELATIVE SIZES

Boulder		> 12"
Cobble		3" - 12"
Gravel	Coarse	3/4" - 3"
	Fine	#4 - 3/4"
Sand	Coarse	#4 - #10
	Medium	#10 - #40
	Fine	#40 - #200
	Silt & Clay	<#200 (PI)

Term	Range
Trace	0 - 5%
A Little	5 - 15%
Some	15 - 30%
With	30 - 50%

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

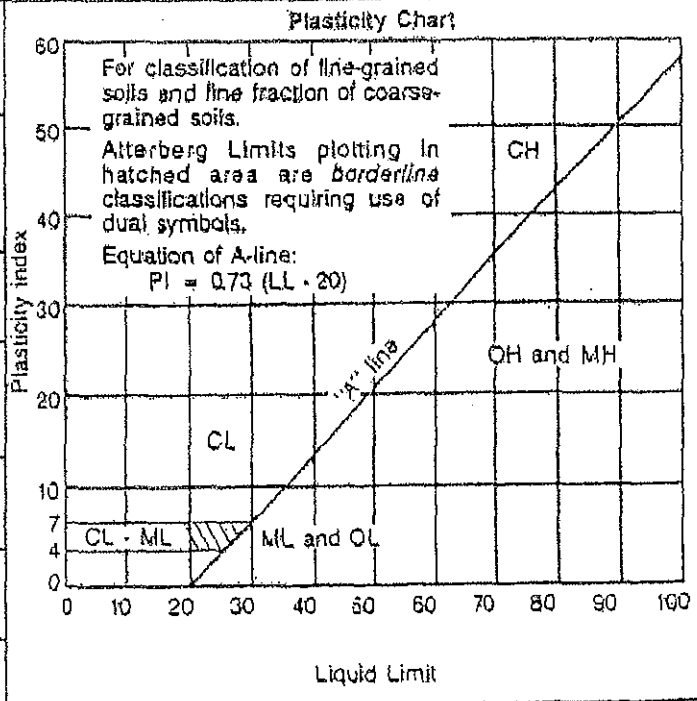
SYMBOL	DEFINITION
W	Moisture Content-Percent of Dry Weight ASTM D2216
D	Dry Density-Pound Per Cubic Foot
LL & PL	Liquid Limit and Plastic Limit ASTM D4318
Qu	Unconfined Compressive Strength
	Pounds Per Square Foot ASTM D2166

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*	Gravels: 50% or more of coarse fraction retained on No. 4 sieve	Clean gravels	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	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	$C_U = \frac{D_{60}}{D_{10}}$ greater than 4; $C_Z = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3	
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines		Not meeting both criteria for GW	
		Gravels with fines	GM	Silty gravels, gravel-sand-silt mixtures		*Atterberg limits below* "A" line or P.I. less than 4	*Atterberg limits plotting* in hatched area are *borderline* classifications requiring use of dual symbols
			GC	Clayey gravels, gravel-sand-clay mixtures		*Atterberg limits above* "A" line with P.I. greater than 7	
	Sands: More than 50% of coarse fraction passes No. 4 sieve	Clean sands	SW	Well-graded sands and gravelly sands, little or no fines		$C_U = \frac{D_{60}}{D_{10}}$ greater than 6; $C_Z = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3	
			SP	Poorly graded sands and gravelly sands, little or no fines		Not meeting both criteria for SW	
		Sands with fines	SM	Silty sands, sand-silt mixtures		*Atterberg limits below* "A" line or P.I. less than 4	Atterberg limits plotting in hatched area are *borderline* classifications requiring use of dual symbols
			SC	Clayey sands, sand-clay mixtures		*Atterberg limits above* "A" line with P.I. greater than 7	
Fine-grained soils: 50% or more passes No. 200 sieve*	Silts and clays: Liquid limit 50% or less		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands			
			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			
	Silts and clays: Liquid limit greater than 50%		MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts			
			CH	Inorganic clays of high plasticity, fat clays			
			OH	Organic clays of medium to high plasticity			
Highly organic soils			Pt	Peat, muck and other highly organic soils			



* Based on the material passing the 3 in. (76 mm) sieve.

AMERICAN TECHNICAL SERVICES, INC.

8105 Black Hawk Rd • PO 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

PROCTOR TEST

MOISTURE DENSITY RELATION

BROSZ ENGINEERING

Attn: Jade

Proctor#: 1 Date:06/11/12

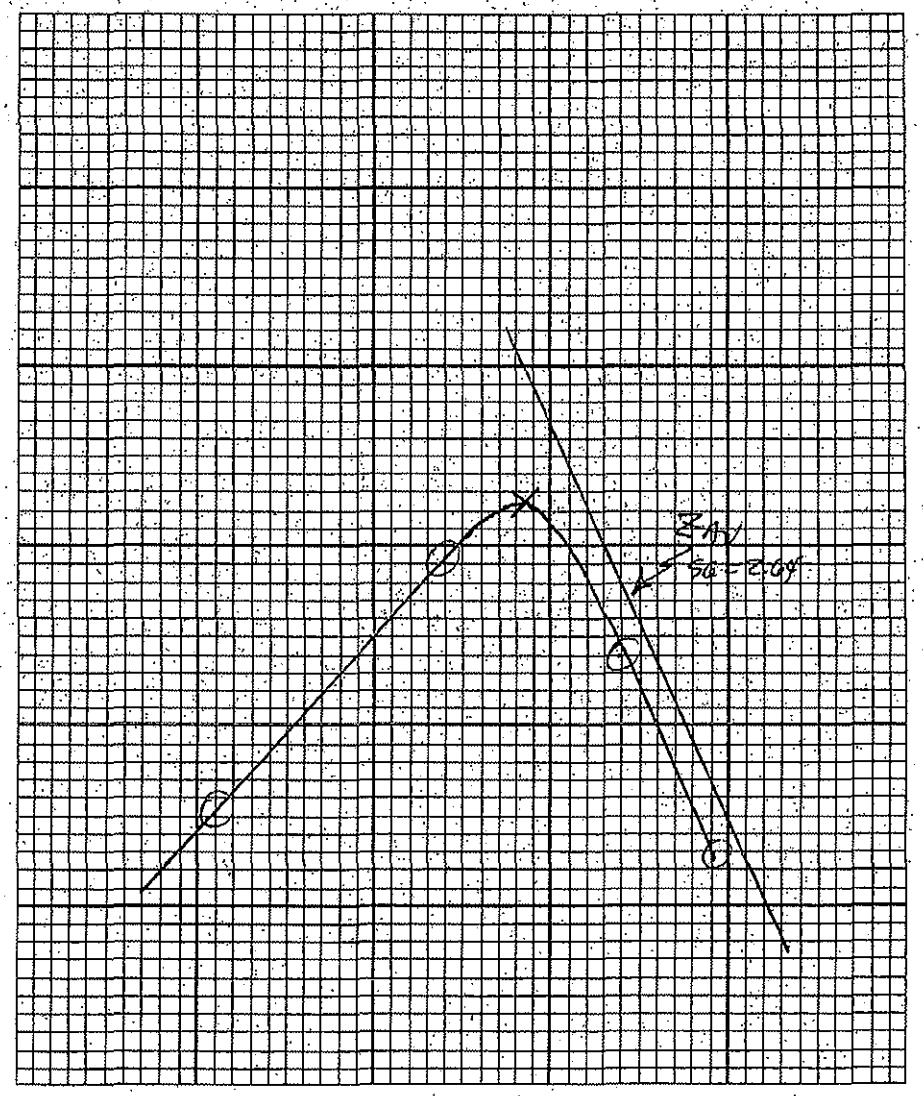
ASTM: 698 Method:A

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

Project: Continental Atlanta Pad, Near Williston, North Dakota

Project Number: 12-12165

MAXIMUM DENSITY: 126.5 pcf **OPTIMUM MOISTURE CONTENT: 9.7%**



Cc:

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PROCTOR TEST

MOISTURE DENSITY RELATION

BROSZ ENGINEERING

Proctor#: 2 Date:06/11/12

ASTM: 698 Method:A

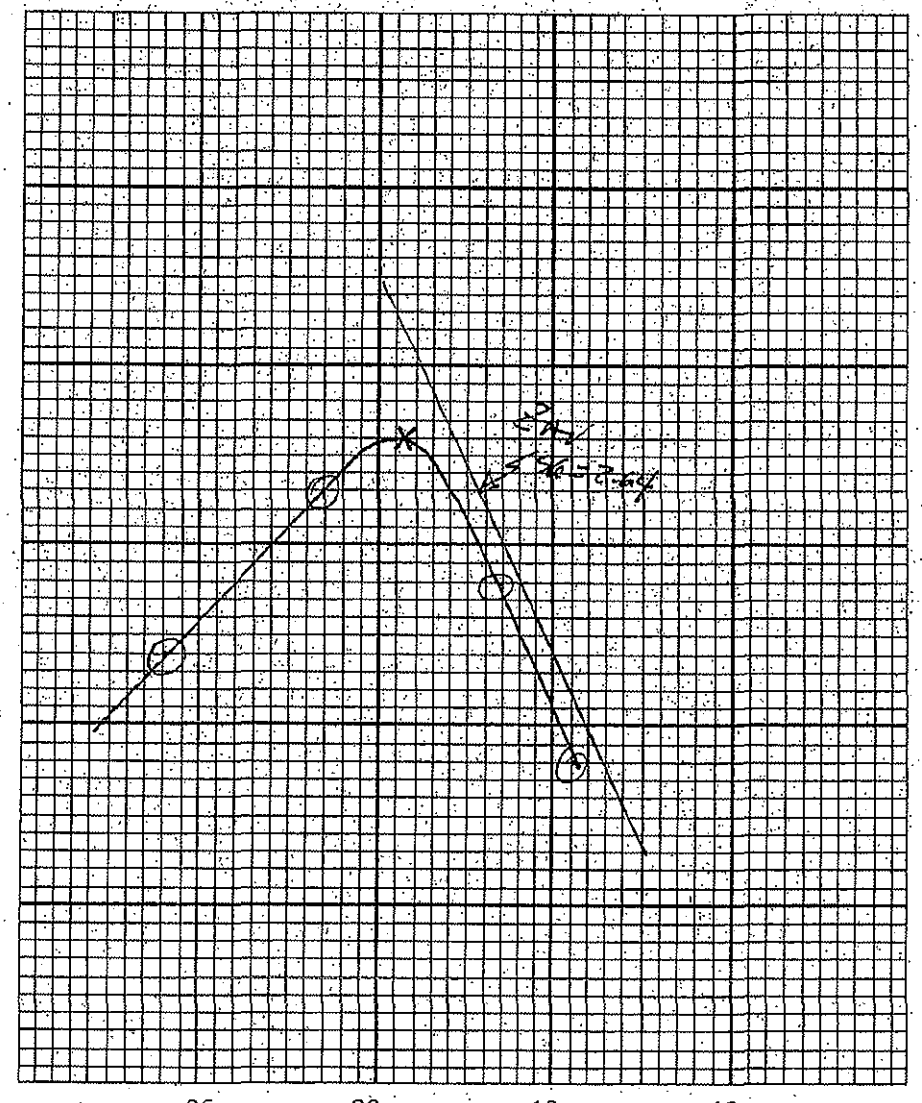
Attn: Jade

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%**



Cc:

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 x 10^-3
Perm. (cm/sec): 9.08 x 10^-6

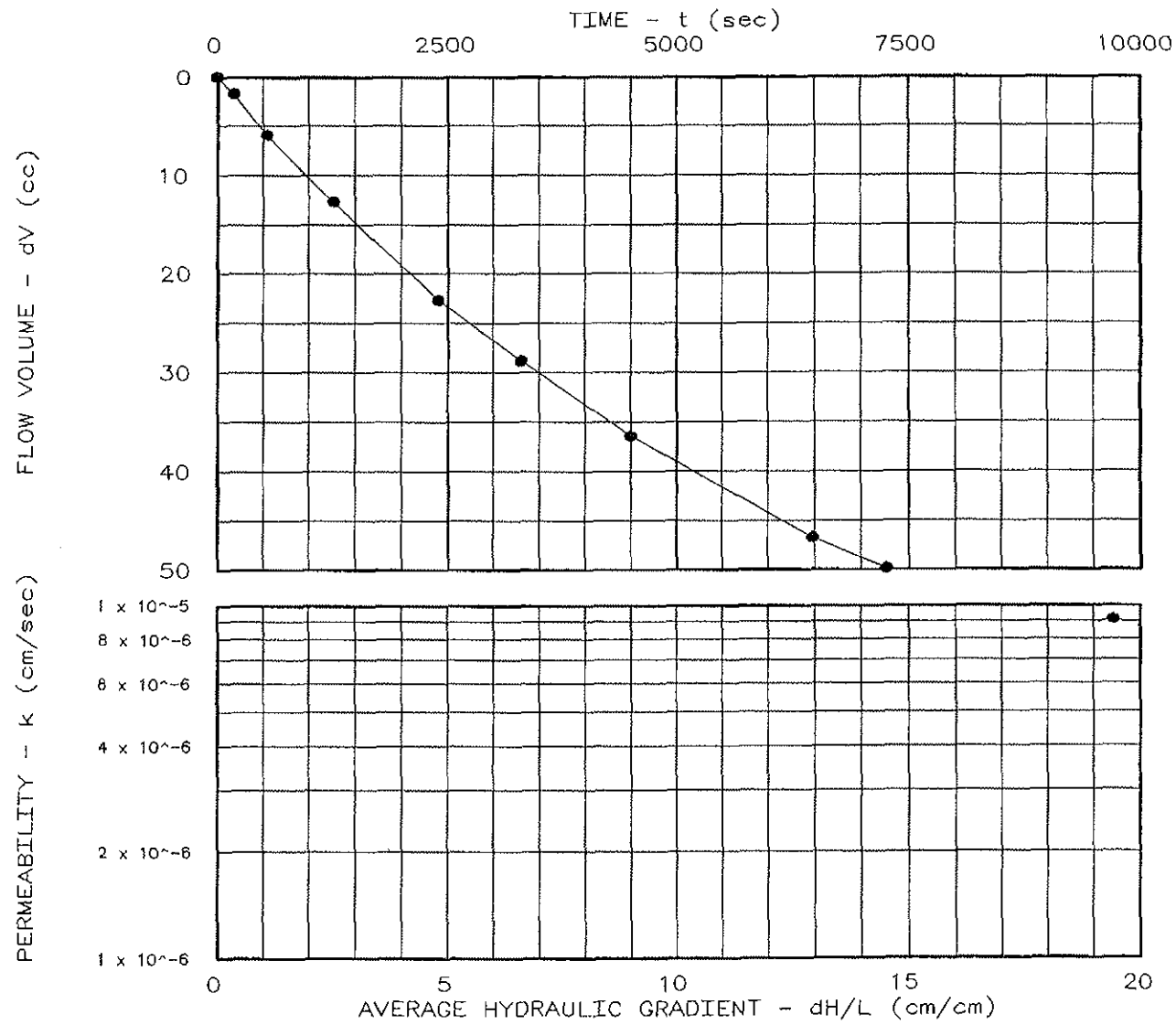
SAMPLE DATA:

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: Flexwall
Sample type: Remolded



Project: Atlanta Site
Location:
Date: 9/10/2012

PERMEABILITY TEST REPORT

TETRA TECH

Project No.: 114-551057
File No.: 258
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 = 116.6 pcf Optimum moisture = 13.8 %	

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

○ **Source of Sample:** Fill No. 3

Remarks:

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 x 10^-2	
Perm. (cm/sec):	2.49 x 10^-5	

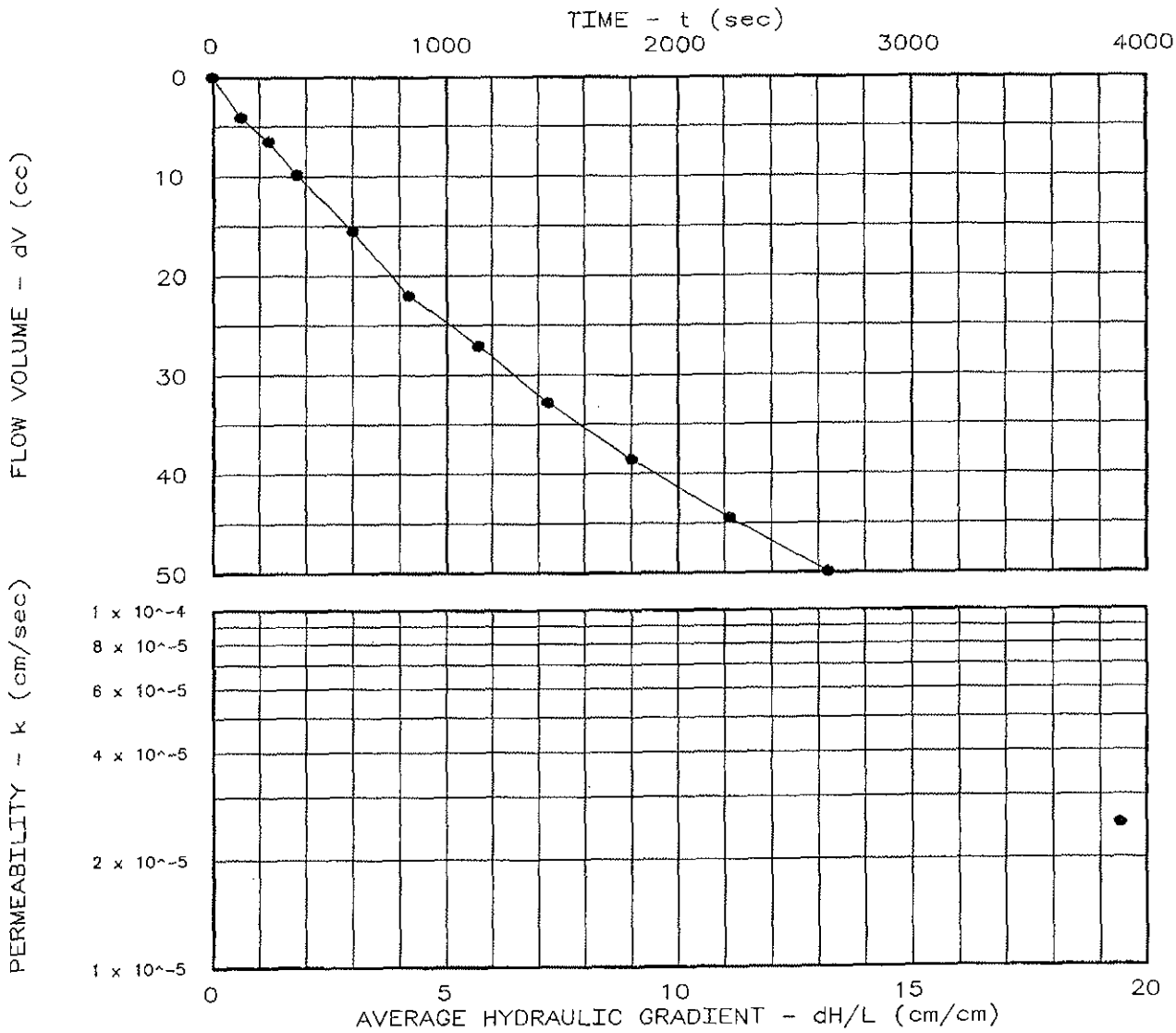
SAMPLE DATA:

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



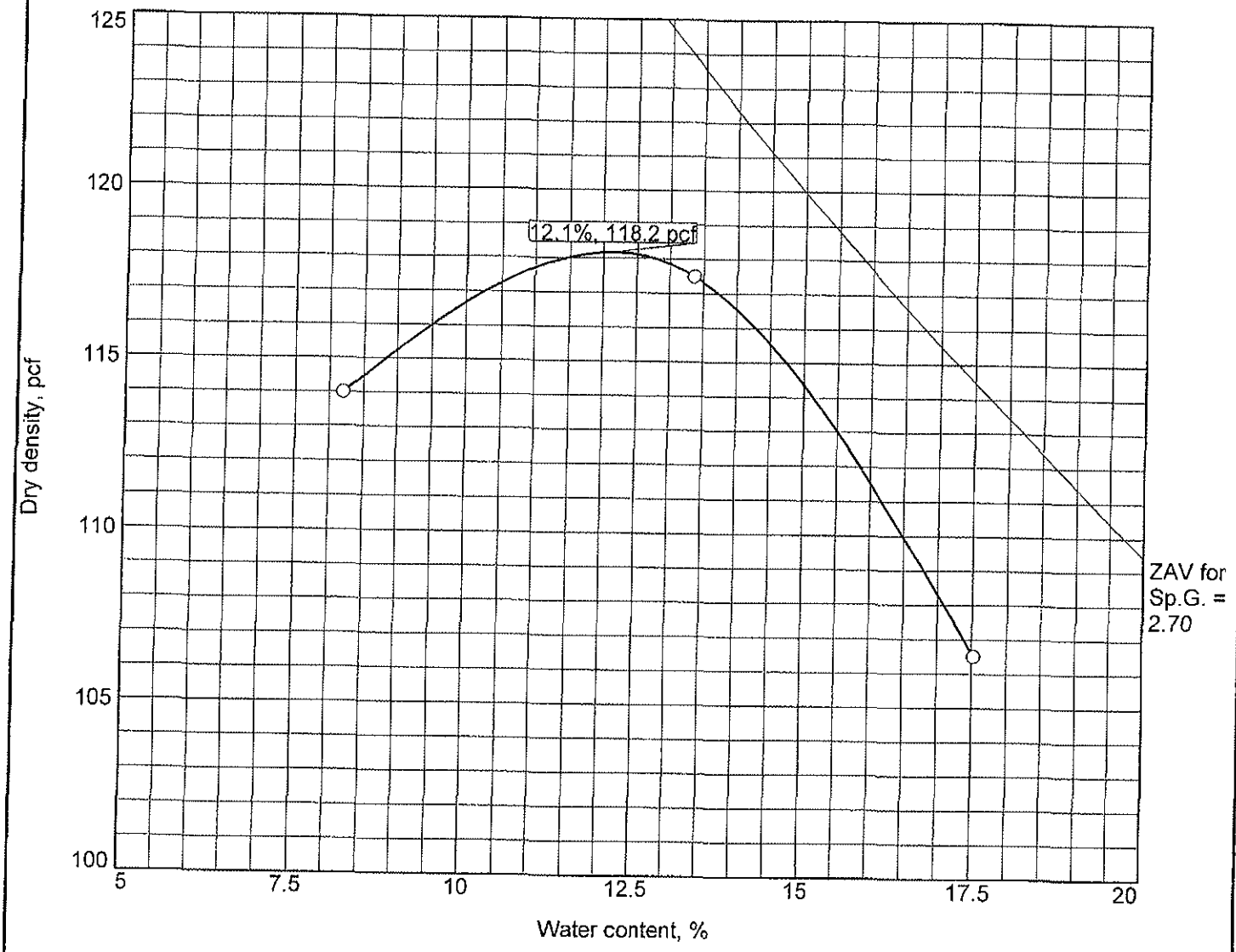
Project: Atlanto Site
Location:
Date: 9/10/2012

PERMEABILITY TEST REPORT

TETRA TECH

Project No.: 114-551057
File No.: 259
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 = 118.2 pcf Optimum moisture = 12.1 %	

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

○ **Source of Sample:** Fill No.1

Tetra Tech, Inc.

Billings, MT

Remarks:

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 x 10^-2	
Perm. (cm/sec):	1.97 x 10^-5	

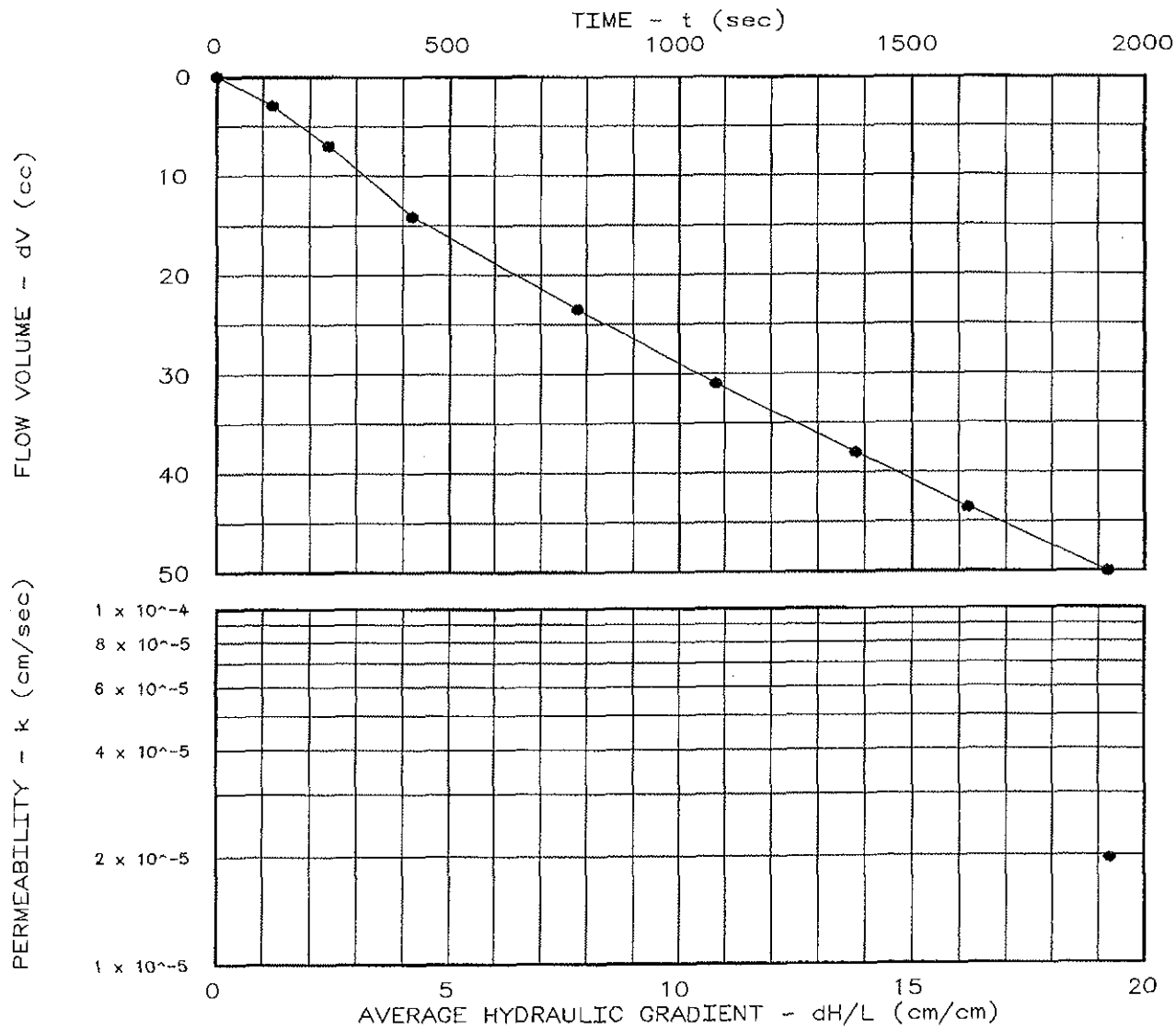
SAMPLE DATA:

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



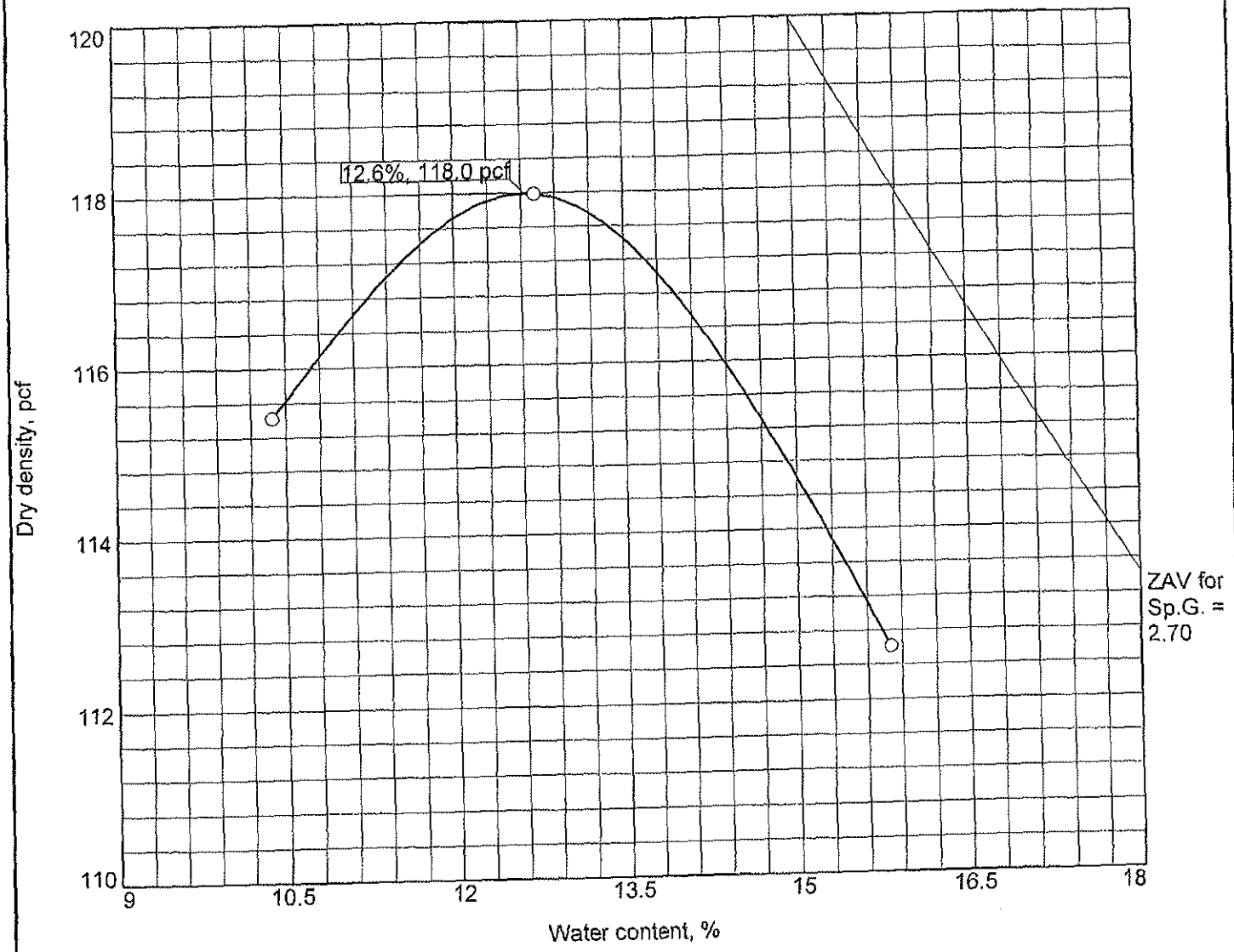
Project: Atlanta Site
Location:
Date: 9/10/2012

PERMEABILITY TEST REPORT

TETRA TECH

Project No.: 114-551057
File No.: 260
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

Maximum dry density = 118.0 pcf

Optimum moisture = 12.6 %

MATERIAL DESCRIPTION

Project No. 114-551057 **Client:** Continental Resources

Project: Atlanta Site

○ **Source of Sample:** Fill No. 2

Remarks:

Tetra Tech, Inc.

Billings, MT

Figure

PERMEABILITY TEST REPORT

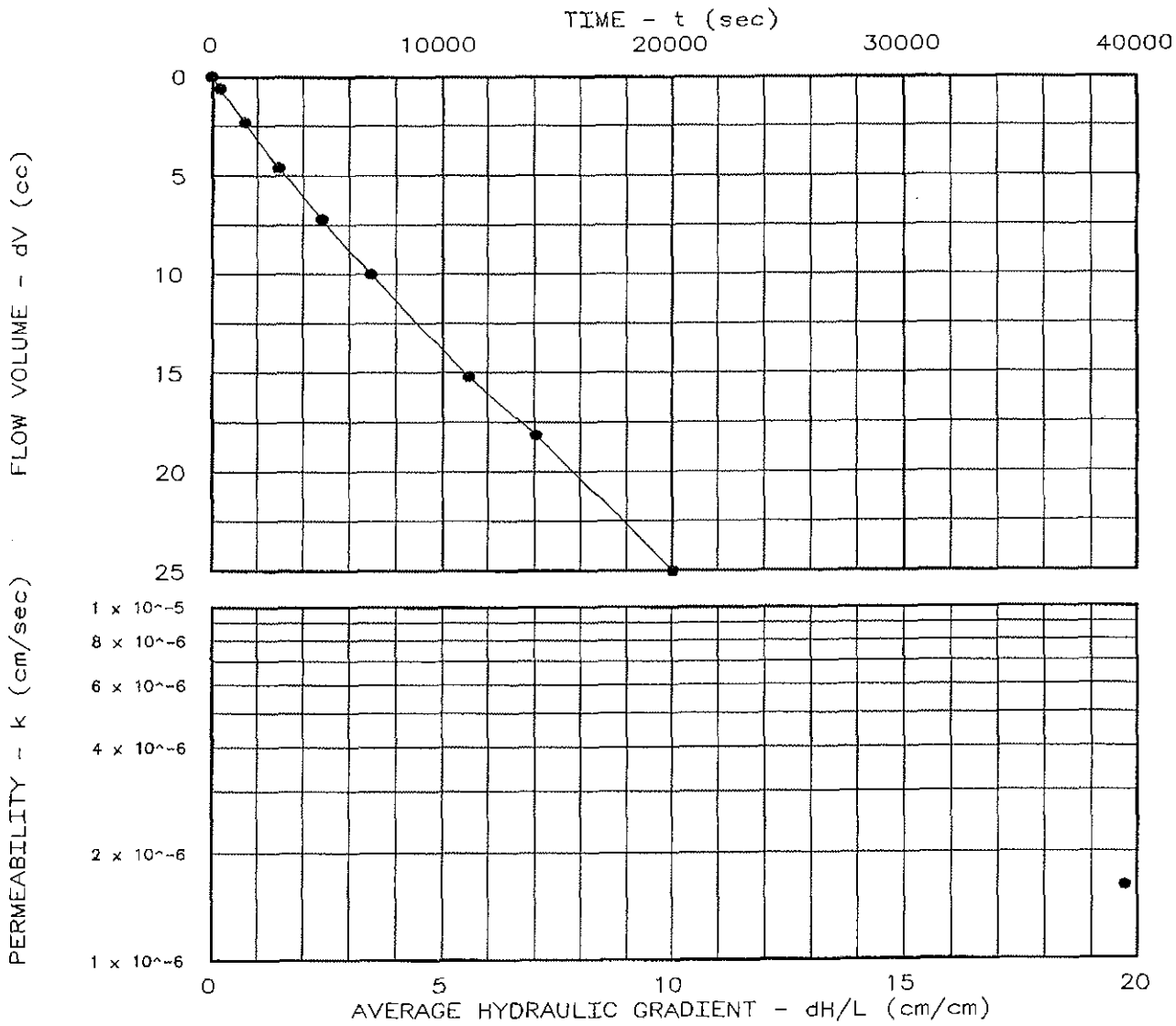
TEST DATA:
Specimen Height (cm): 7.50
Specimen Diameter (cm): 7.07
Dry Unit Weight (pcf): 98.6
Moisture Before Test (%): 19.0
Moisture After Test (%): 0.0
Run Number: 1 ● 2 ▲
Cell Pressure (psi): 65.0
Test Pressure(psi): 60.0
Back Pressure(psi): 57.9
Diff. Head (psi): 2.1
Flow Rate (cc/sec): 1.25 x 10^-3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



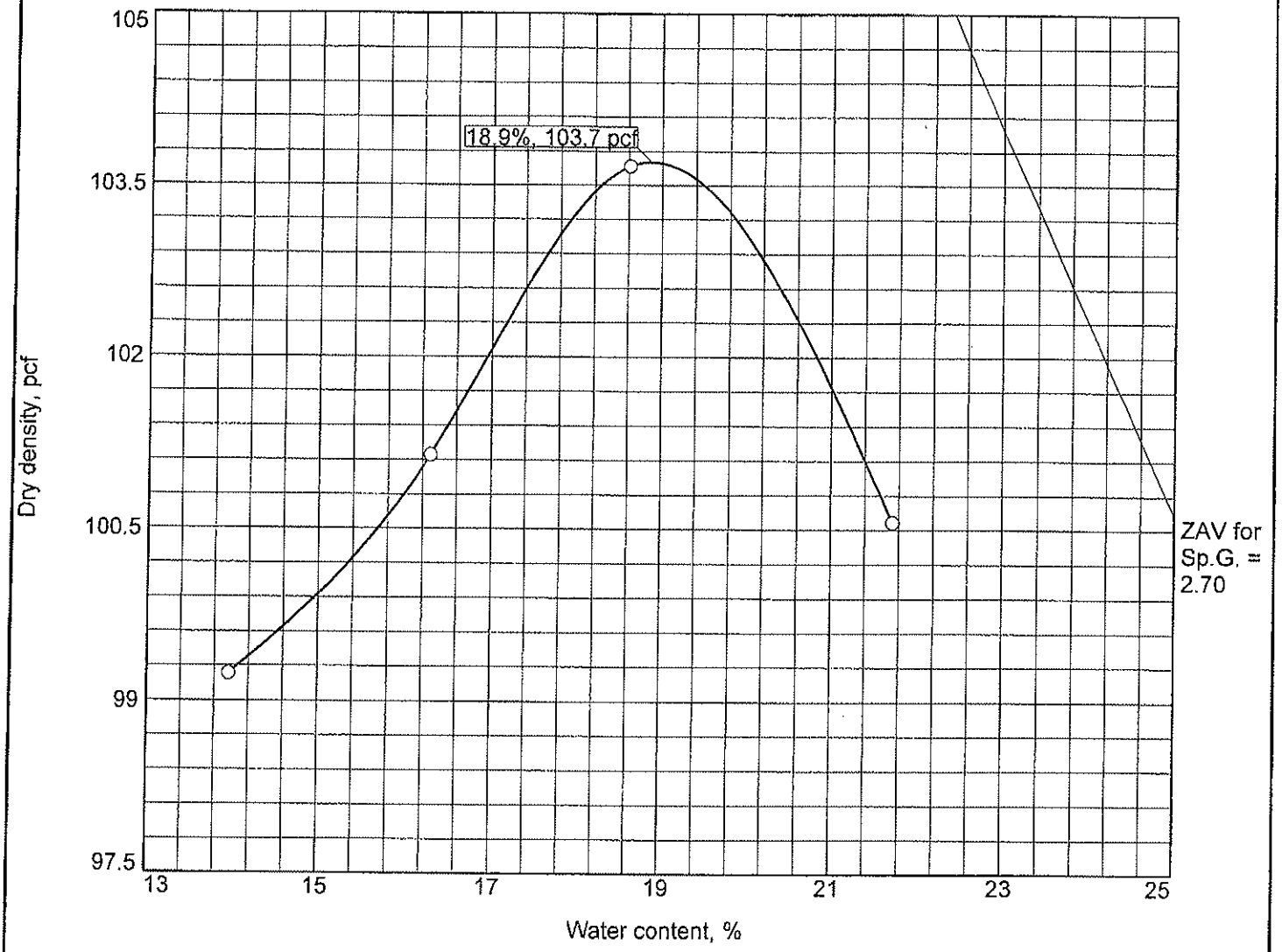
Project: Atlanta Site
Location:
Date: 9/12/2012

PERMEABILITY TEST REPORT

TETRA TECH

Project No.: 114-551057
File No.: 261
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 = 103.7 pcf Optimum moisture = 18.9 %	
Project No. 114-551057 **Client:** Continental Resources **Project:** Atlanta Site ○ **Source of Sample:** Cement No.1	**Remarks:**
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 x 10^-2	
Perm. (cm/sec):	6.51 x 10^-5	

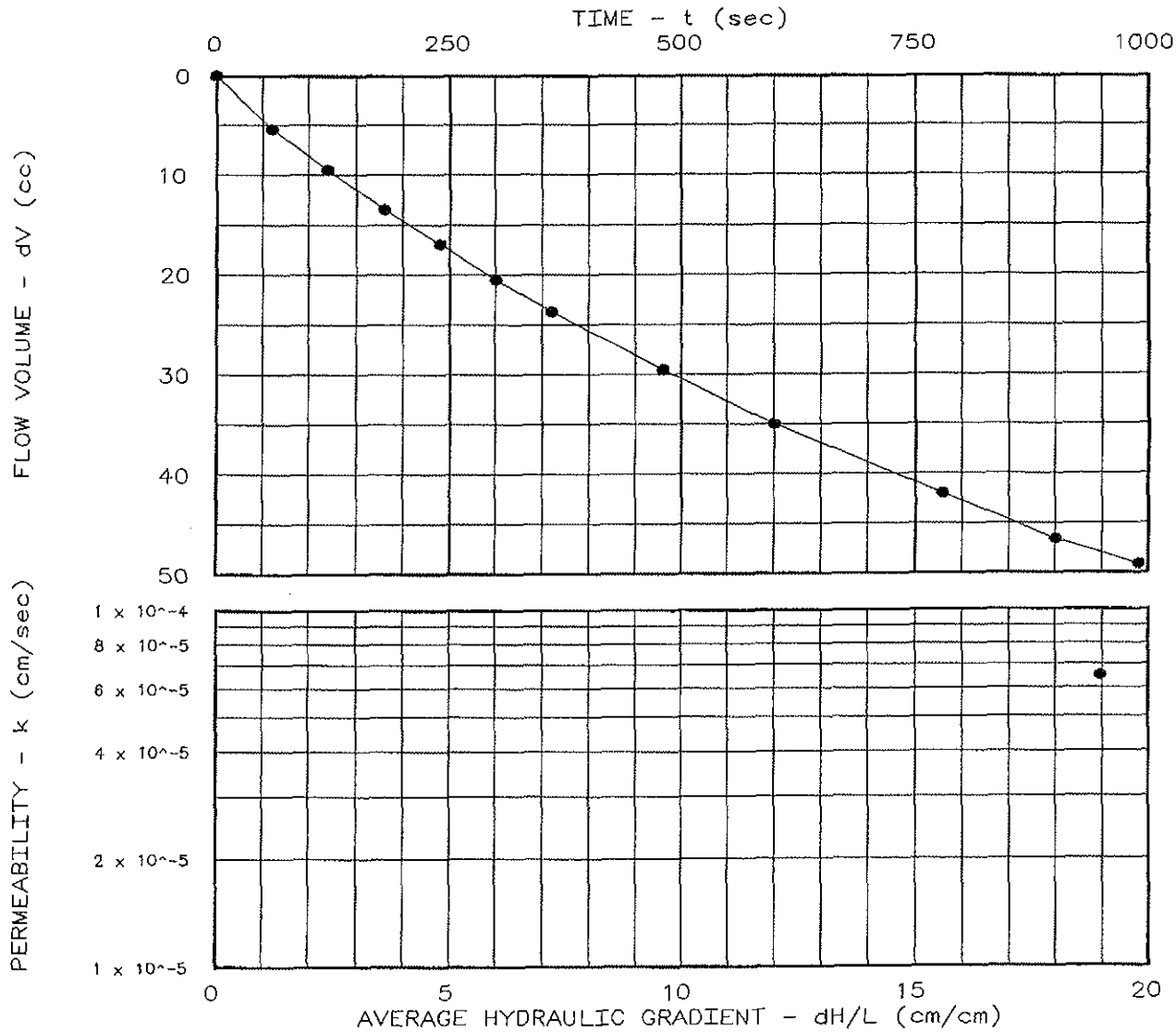
SAMPLE DATA:

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



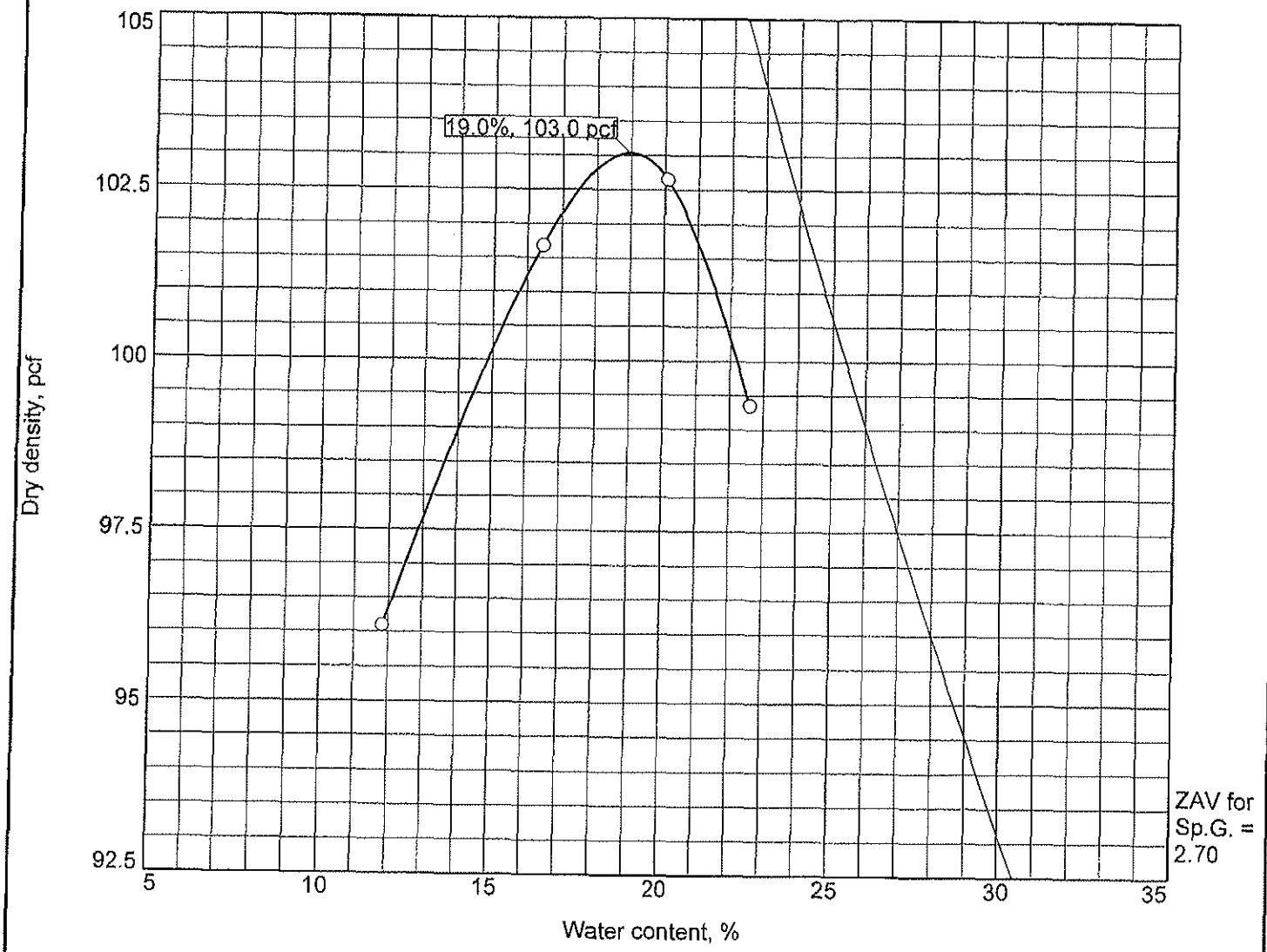
Project: Atlanta Site
Location:
Date: 9/12/12

PERMEABILITY TEST REPORT

TETRA TECH

Project No.: 114-551057
File No.: 262
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 = 103.0 pcf Optimum moisture = 19.0 %	
Project No. 114-551057 **Client:** Continental Resources **Project:** Atlanta Site ○ **Source of Sample:** Cement No. 3 **Tetra Tech, Inc.** **Billings, MT**	**Remarks:** **Figure**

PERMEABILITY TEST REPORT

TEST DATA:

Specimen Height (cm): 7.50
Specimen Diometer (cm): 7.07
Dry Unit Weight (pcf): 102.4
Moisture Before Test (%): 16.7
Moisture After Test (%): 0.0

Run Number:	1 ●	2 ▲
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 x 10^-2	
Perm. (cm/sec):	4.90 x 10^-5	

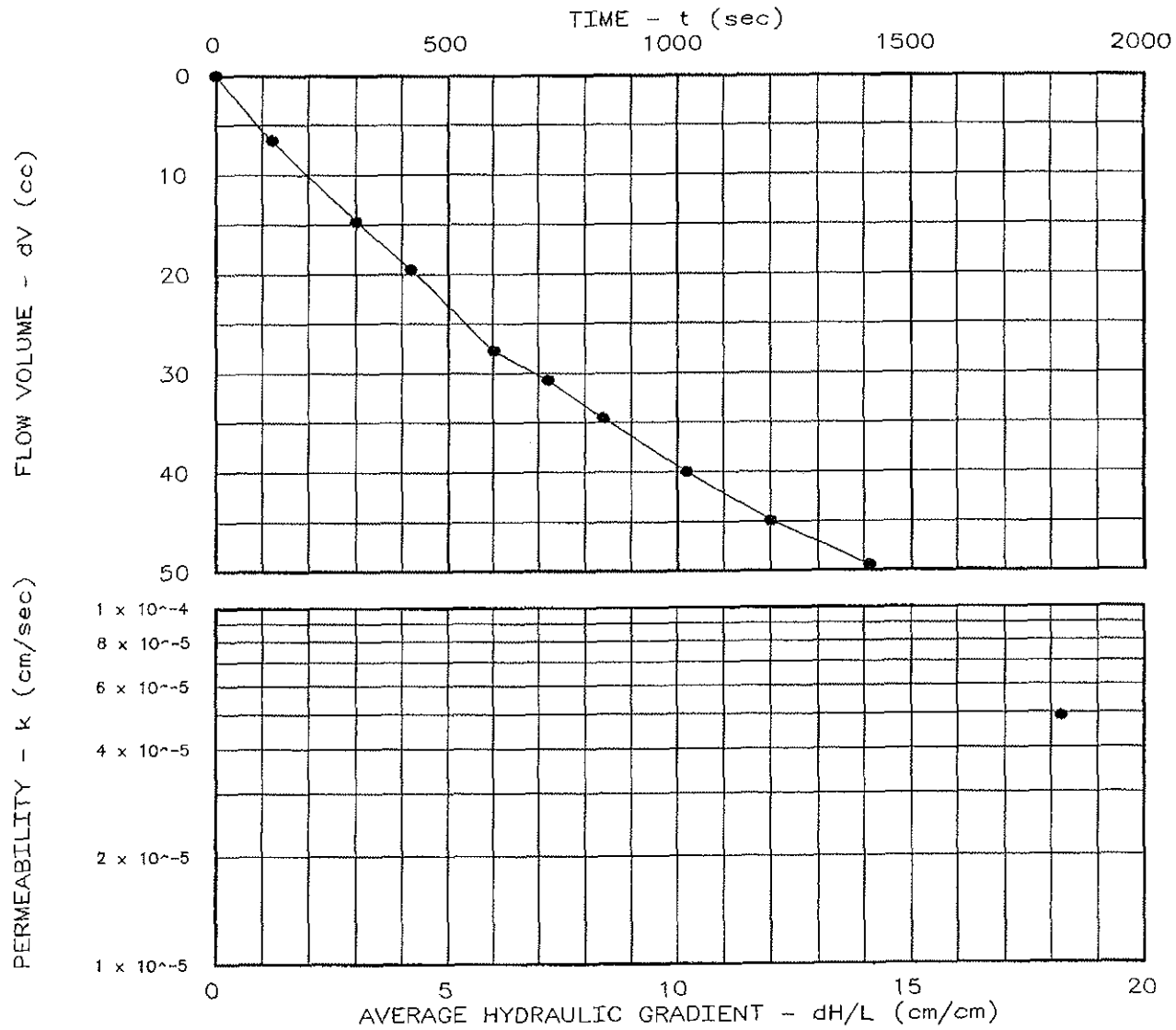
SAMPLE DATA:

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



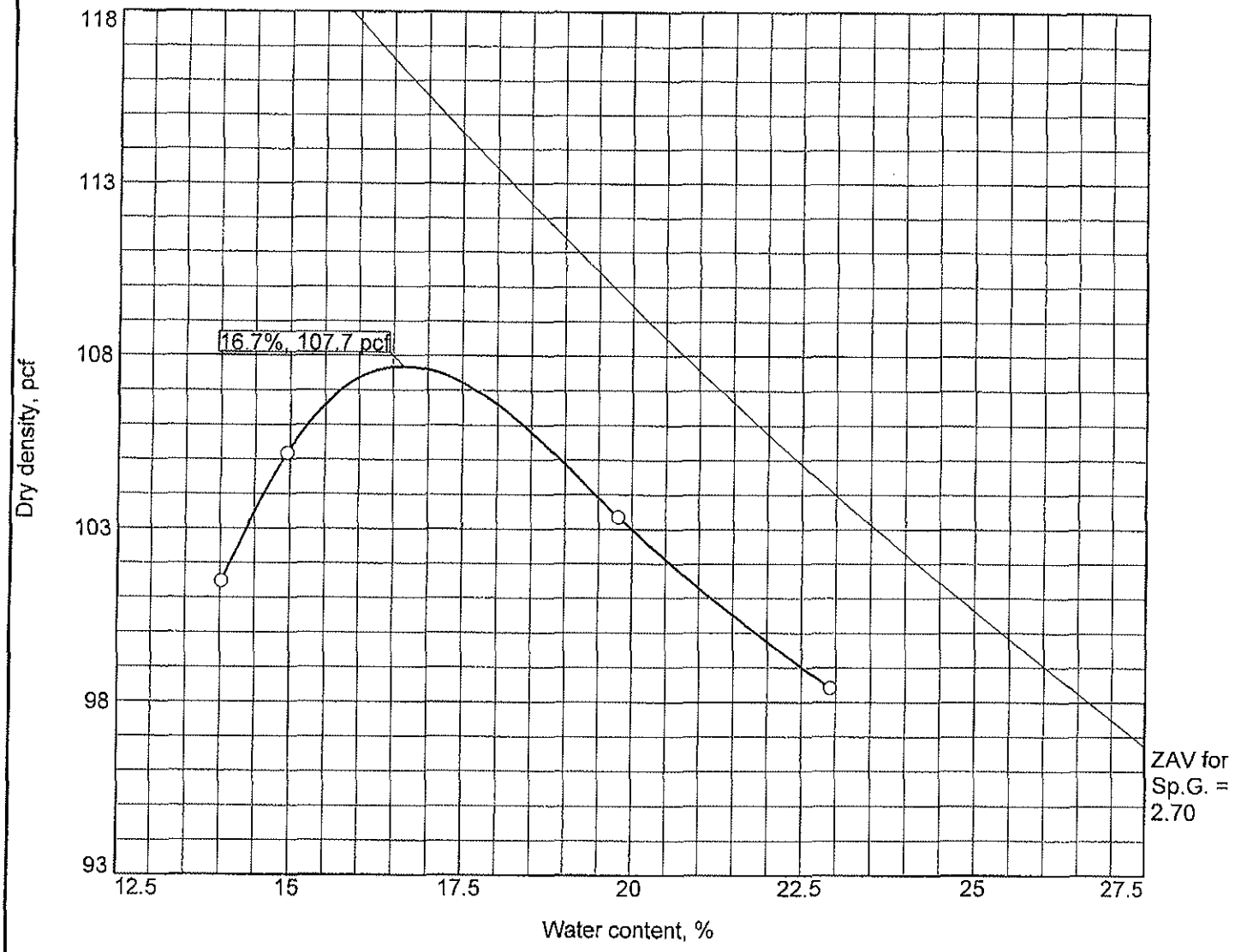
Project: Atlanta Site
Location:
Date: 9/12/12

PERMEABILITY TEST REPORT

TETRA TECH

Project No.: 114-551057
File No.: 263
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 = 107.7 pcf Optimum moisture = 16.7 %	

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

○ **Source of Sample:** Cement No. 2

Tetra Tech, Inc.

Billings, MT

Remarks:

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 x 10^-5	
Perm. (cm/sec):	6.35 x 10^-8	

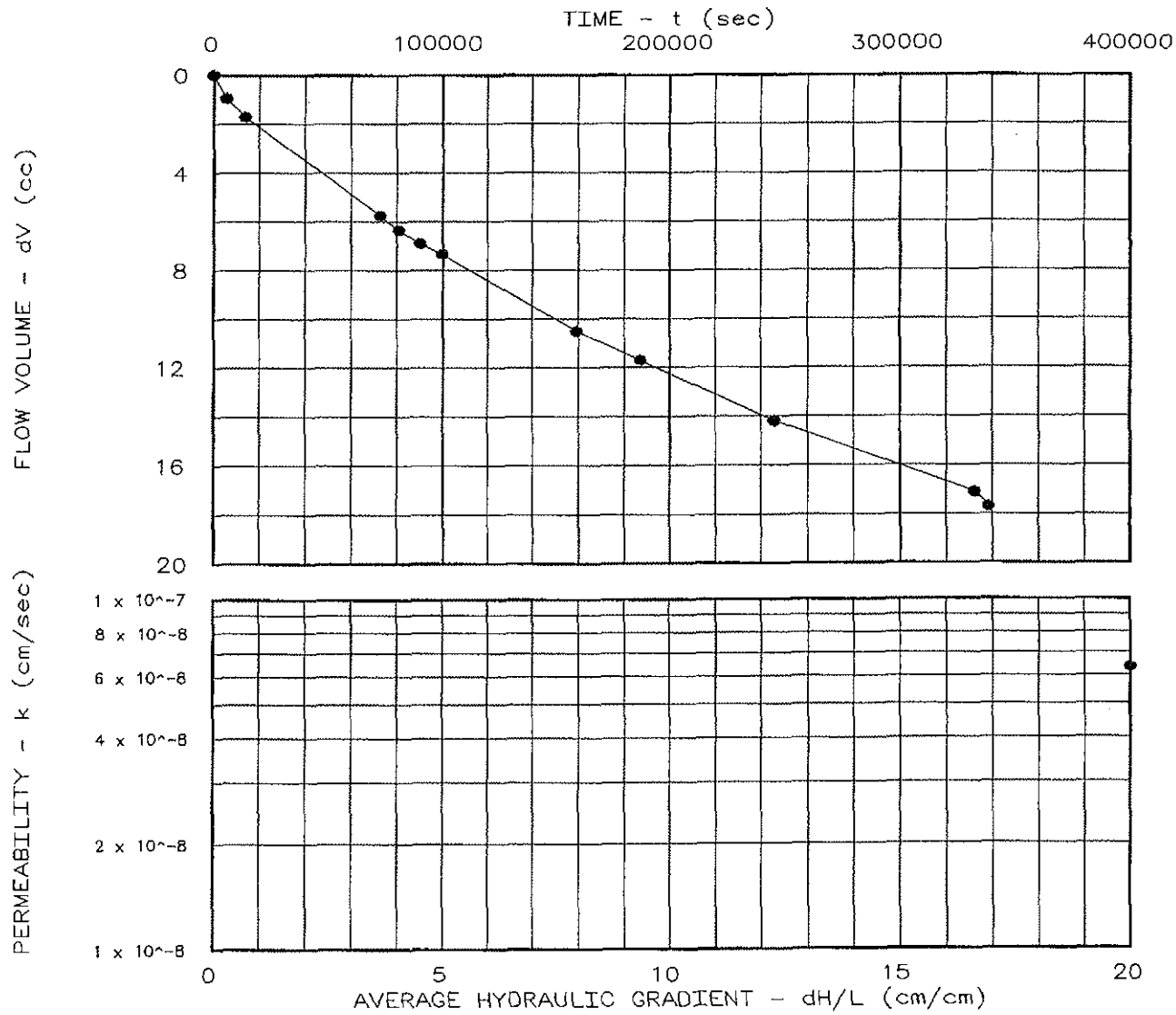
SAMPLE DATA:

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



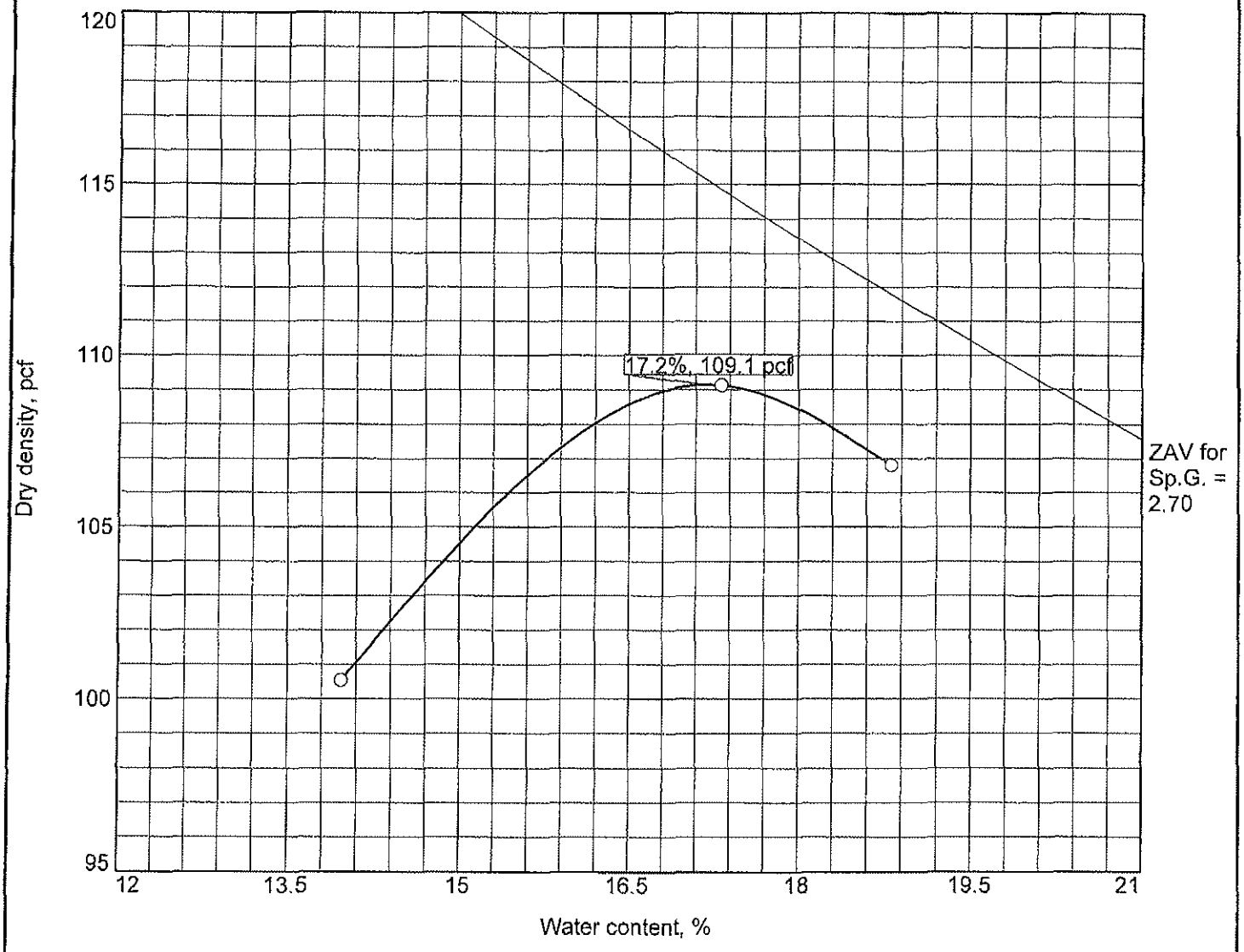
Project: Atlanto Site
Location:
Date: 9/14/2012

PERMEABILITY TEST REPORT

TETRA TECH

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

○ **Source of Sample:** Fill No. 4

Remarks:

Tetra Tech, Inc.

Billings, MT

Figure

ENERGY LABORATORIES
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Analytical Excellence Since 1952
Helena, MT 877-472-0711 • Billings, MT 800-735-4489 • Casper, WY 888-235-0515
Gillette, WY 866-686-7175 • Rapid City, SD 888-672-1225 • College Station, TX 800-868-7218

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:

Joyce Mallett

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client:	Continental Resources		
Project:	Atlanta Site	Report Date:	09/06/12
Client Sample ID:	Original Material, From Cut	Collection Date:	08/29/12 19:00
Location:	E-1180177.20, N-421287.75, Elv. 1940.40	Date Received:	08/30/12
Lab ID:	B12082786-001	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 / rlh
Magnesium, sat. paste	29.5	meq/L		SW6010B	09/05/12 13:07 / rlh
Sodium, sat. paste	18.7	meq/L	D	SW6010B	09/05/12 13:07 / rlh
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 / rlh

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	**Report Date:**	09/06/12
Project:	Atlanta Site	**Collection Date:**	08/29/12 19:00
Client Sample ID:	Fill #1	**Date Received:**	08/30/12
Location:	E-1179926.05, N-421267.60, Elv. 1937.65	**Sampled By:**	Spencer Ingalls
Lab ID:	B12082786-002		

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

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	Report Date:	09/06/12
Client Sample ID:	Fill #2	Collection Date:	08/29/12 19:00
Location:	E-1179924.40, N-421196.70, Elv. 1937.95	Date Received:	08/30/12
Lab ID:	B12082786-003	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 / rlh
Magnesium, sat. paste	8.07	meq/L		SW6010B	09/05/12 13:28 / rlh
Sodium, sat. paste	3.40	meq/L		SW6010B	09/05/12 13:28 / rlh
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 / rlh

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	**Report Date:**	09/06/12
Client Sample ID:	Fill #3	**Collection Date:**	08/29/12 19:00
Location:	E-1179963.65, N-421120.95, Elv. 1937.90	**Date Received:**	08/30/12
Lab ID:	B12082786-004	**Sampled By:**	Spencer Ingalls

Analyses	Result	Units	Qualifier	Method	Analysis Date / By
SATURATED PASTE					
pH, sat. paste	7.9	s.u.		ASAM10-3.	09/06/12 16:30 / srm
Conductivity, sat. paste	4.5	mmhos/cm		ASA10-3	09/06/12 16:30 / srm
Calcium, sat. paste	25.1	meq/L		SW6010B	09/05/12 13:32 / rlh
Magnesium, sat. paste	36.7	meq/L		SW6010B	09/05/12 13:32 / rlh
Sodium, sat. paste	11.5	meq/L	D	SW6010B	09/05/12 13:32 / rlh
Sodium Adsorption Ratio (SAR)	2.07	unitless		Calculation	09/06/12 16:30 / srm
CHEMICAL CHARACTERISTICS					
Cation Exchange Capacity	16.4	meq/100g	D	SW6010B	09/06/12 15:29 / rlh

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.

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Continental Resources
Project: Atlanta Site

Report Date: 09/06/12
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				Run: MISC-SOIL_120906B			09/06/12 16:30	
Conductivity, sat. paste	4.86	mmhos/cm	0.10				1.2	30	
Sample ID: LCS-1209061630	Laboratory Control Sample				Run: MISC-SOIL_120906B			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
Project: Atlanta Site

Report Date: 09/06/12
Work Order: B12082786

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: *ASAM10-3.2*									Batch: R191314
Sample ID: B12082786-001A DUP	Sample Duplicate				Run: MISC-SOIL_120906B				09/06/12 16:30
pH, sat. paste	7.60	s.u.	0.10				2.6	10	
Sample ID: LCS-1209061630	Laboratory Control Sample				Run: MISC-SOIL_120906B				09/06/12 16:30
pH, sat. paste	7.00	s.u.	0.10	99	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Continental Resources
Project: Atlanta Site

Report Date: 09/06/12
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)	3.85	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
Project: Allanta Site

Report Date: 09/06/12
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 name: Hand Del

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

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.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT- Provide as much information as possible.

Company Name: Continental Resources	Project Name, PWS, Permit, Etc.: Atlanta Site		Sample Origin State: ND	EPA/State Compliance: Yes ☒ No ☐
Report Mail Address: PO Box 268870 Oklahoma City, OK 73126	Contact Name: Chad Newby	Phone/Fax: 405-574-2172	Email: chad.newby@clr.com	Sampler: (Please Print) Spencer Ingalls
Invoice Address: PO Box 268870 Oklahoma City, OK 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:

☐ DW ☐ A2LA
☐ GSA ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format: ______
☐ State: ______ ☐ LEVEL IV
☐ Other: ______ ☐ NELAC

Number of Containers / Sample Type: A W S V B O / Air Water Soils/Solids Vegetation Bioassay Other

ANALYSIS REQUESTED

SEE ATTACHED

Normal Turnaround (TAT)

RUSH — Contact ELI prior to RUSH sample submittal for charges and scheduling – See Instruction Page

Comments:
E-1180177.20
N-421287.75
Elv. 1940.40

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	EC	SAR	CEC	pH	Perc					SEE ATTACHED	Normal Turnaround (TAT)	RUSH	Comments	LABORATORY USE ONLY
1 Original Material (From Cut)	8-29-12	7:00pm	1-S	✓	X	X	X	✓							X		B12082781-001
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Shipped by: Hand
Cooler ID(s):
Receipt Temp: 24.6 °C
On Ice: Yes (No)
Custody Seal Y N
Intact Y (N)
Signature Match Y N

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
Mick Albright	8-30-12 9:00 Am	[signature]			
Mick Albright	8-30-12 305	[signature]			
Sample Disposal: Return to Client: ______ Lab Disposal: X			Received by Laboratory: [signature]	8/30/12 305	[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 notated 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

Page 1 of 1

PLEASE PRINT- Provide as much information as possible.

Company Name: Continental Resources	Project Name, PWS, Permit, Etc.: Atlanta Site	Sample Origin State: ND	EPA/State Compliance: Yes ☒ No ☐
Report Mail Address: PO Box 268870 Oklahoma City, OK 73126	Contact Name: Chad Newbry Phone/Fax: 405-574-2172 Email: chad.newbry@clr.com		Sampler: (Please Print) Spencer Ingalls
Invoice Address: PO Box 268870 Oklahoma City, OK 73126	Invoice Contact & Phone: Chad Newbry 405-574-2172	Purchase Order: Chad Newbry	Quote/Bottle Order: Unknown

Special Report/Formats – ELI must be notified prior to sample submittal for the following:

☐ DW ☐ A2LA
☐ GSA ☐ EDD/EDT (Electronic Data) Format: _____
☐ POTW/WWTP ☐ LEVEL IV
☐ State: _____ ☐ NELAC
☐ Other: _____

R U S H — Contact ELI prior to RUSH sample submittal for charges and scheduling – See Instruction Page

Comments: E-1179926.05 N-421267.60 Elv. 1937.65

Shipped by: HAND

Cooler ID(s):

Receipt Temp: 24.6 °C

On Ice: Yes (No)

Custody Seal Intact: Y (N) Signature Match: Y N

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Sample Type: A W S V B O; Air Water Soils/Solids Vegetation Bioassay Other)	EC	SAR	CEC	PH	Paste	SEE ATTACHED	Normal Turnaround (TAT)	R	Comments
1 Fill #1	8-29-12	7:00PM	I-S	X	X	X	X	X			X	$1208780-002
2												
3												
4												
5												
6												
7												
8												
9												
10												

LABORATORY USE ONLY

Custody Record MUST be Signed

Relinquished by (print): Mick Albright	Date/Time: 8-30-12 9:00AM	Signature:	Received by (print): / Date/Time: / Signature:
Relinquished by (print): Mick Albright	Date/Time: 8-30-12 305	Signature:	Received by (print): / Date/Time: / Signature:
Sample Disposal: Return to Client: _____	Lab Disposal:		Received by Laboratory: BROOKE 8/30/12 305

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 notated on your analytical report.
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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, PWS, Permit, Etc.: Atlanta Site	Sample Origin State: ND	EPA/State Compliance: Yes ☒ No ☐
Report Mail Address: PO Box 268870 Oklahoma City, OK 73126	Contact Name: Chad Newby Phone/Fax: 405-574-2172 Email: chad.newby@clr.com		Sampler: (Please Print) Spencer Ingalls
Invoice Address: PO Box 268870 Oklahoma City, OK 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:

☐ DW ☐ GSA ☐ POTW/WWTP ☐ State: _____ ☐ Other: _____

☐ A2LA ☐ EDD/EDT (Electronic Data) Format: _____ ☐ LEVEL IV ☐ NELAC

Number of Containers
Sample Type: A Air W Water S Soils/Solids V Vegetation B Bioassay O Other

ANALYSIS REQUESTED

SEE ATTACHED

Normal Turnaround (TAT)

R U S H

Contact ELI prior to RUSH sample submittal for charges and scheduling – See Instruction Page

Comments: E-1179924.40 N-421196.70 Elv. 1937.95

Shipped by:

Cooler ID(s):

Receipt Temp: 24.1 °C

On Ice: Yes (No)

Custody Seal Intact Y N Signature Match Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	EC	SAR	CEC	pH	Perm.								
1	Fill #2	8-29-12	7:00pm	F-S	X	X	X	X	X							X	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

LABORATORY USE ONLY

Custody Record MUST be Signed

Relinquished by (print): Mark Albright	Date/Time: 8-30-12 9:40AM	Signature:	Received by (print):	Date/Time:	Signature:
Relinquished by (print): Mick Albright	Date/Time: 8-30-12 305	Signature:	Received by (print):	Date/Time:	Signature:
Sample Disposal: Return to Client:	Lab Disposal:		Received by Laboratory:	Date/Time: 8/30/12 3057	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 notated on your analytical report.

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Chain of Custody and Analytical Request Record

PLEASE PRINT- Provide as much information as possible.

Company Name: Continental Resources	Project Name, PWS, Permit, Etc. Atlanta Site	Sample Origin State: ND	EPA/State Compliance: Yes ☒ No ☐
Report Mail Address: PO Box 268870 Oklahoma City, OK 73126	Contact Name: Chad Newby Phone/Fax: 405-574-2172 Email: chad.newby@clr.com		Sampler: (Please Print) Spencer Ingalls
Invoice Address: PO Box 268870 Oklahoma City, OK 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:

- ☐ DW
- ☐ GSA
- ☐ POTW/WWTP
- ☐ State: ________
- ☐ Other: ________
- ☐ A2LA
- ☐ EDD/EDT (Electronic Data) Format: ________
- ☐ LEVEL IV
- ☐ NELAC

Number of Containers / Sample Type: A W S V B O / Air Water Soils/Solids Vegetation Bioassay Other

ANALYSIS REQUESTED: EC, SAR, CEC, PH, Perc

SEE ATTACHED — Normal Turnaround (TAT) — RUSH

Contact ELI prior to RUSH sample submittal for charges and scheduling – See Instruction Page

Comments: E. 1179963.65 N. 421120.95 Elv. 1937.90

#	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	EC	SAR	CEC	PH	Perc					SEE ATTACHED	Normal TAT	RUSH
1	Fill #3	8-29-12	7:00pm	1-S	x	x	x	x	x							x
2																
3																
4																
5																
6																
7																
8																
9																
10																

LABORATORY USE ONLY: Shipped by: Hand; Cooler ID(s): ; Receipt Temp: 24.6 °C; On Ice: Yes (No); Custody Seal Intact Y N; Signature Match Y N; B12082786-004

Custody Record MUST be Signed

Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
Mick Albright	8-30-12 9:00Am	[signature]			
Mick Albright	8 30 12 305	[signature]			
Sample Disposal: Return to Client:	Lab Disposal: ✓		Received by Laboratory: [signature]	8/30/12 3:05P	[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 notated on your analytical report.

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AMERICAN TECHNICAL SERVICES, INC.

8105 Black Hawk Rd • PO 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

PROCTOR TEST

MOISTURE DENSITY RELATION

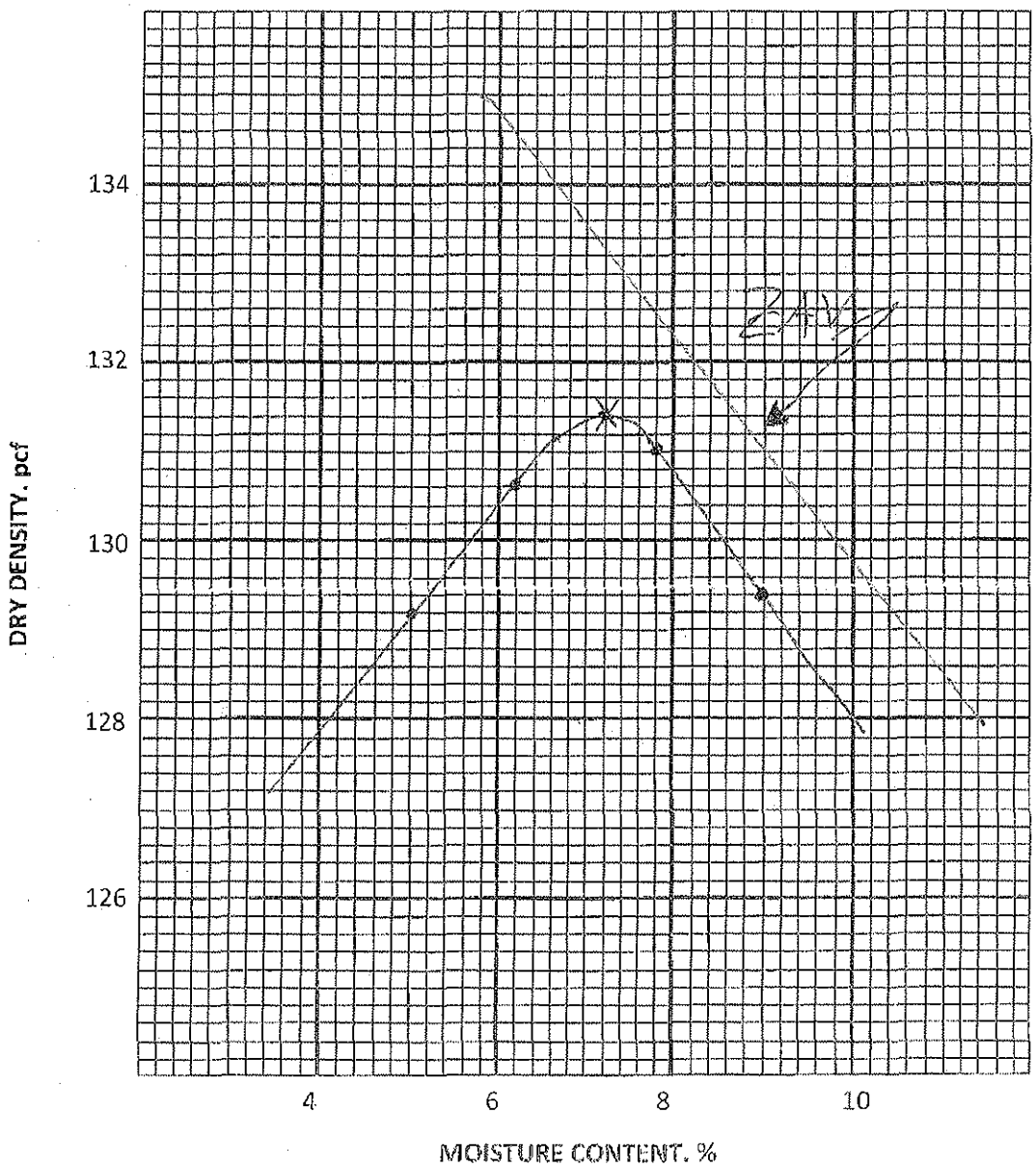
CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
Attn: Project Manager

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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TECHNICAL
SERVICES, INC.

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

PROCTOR TEST

MOISTURE DENSITY RELATION

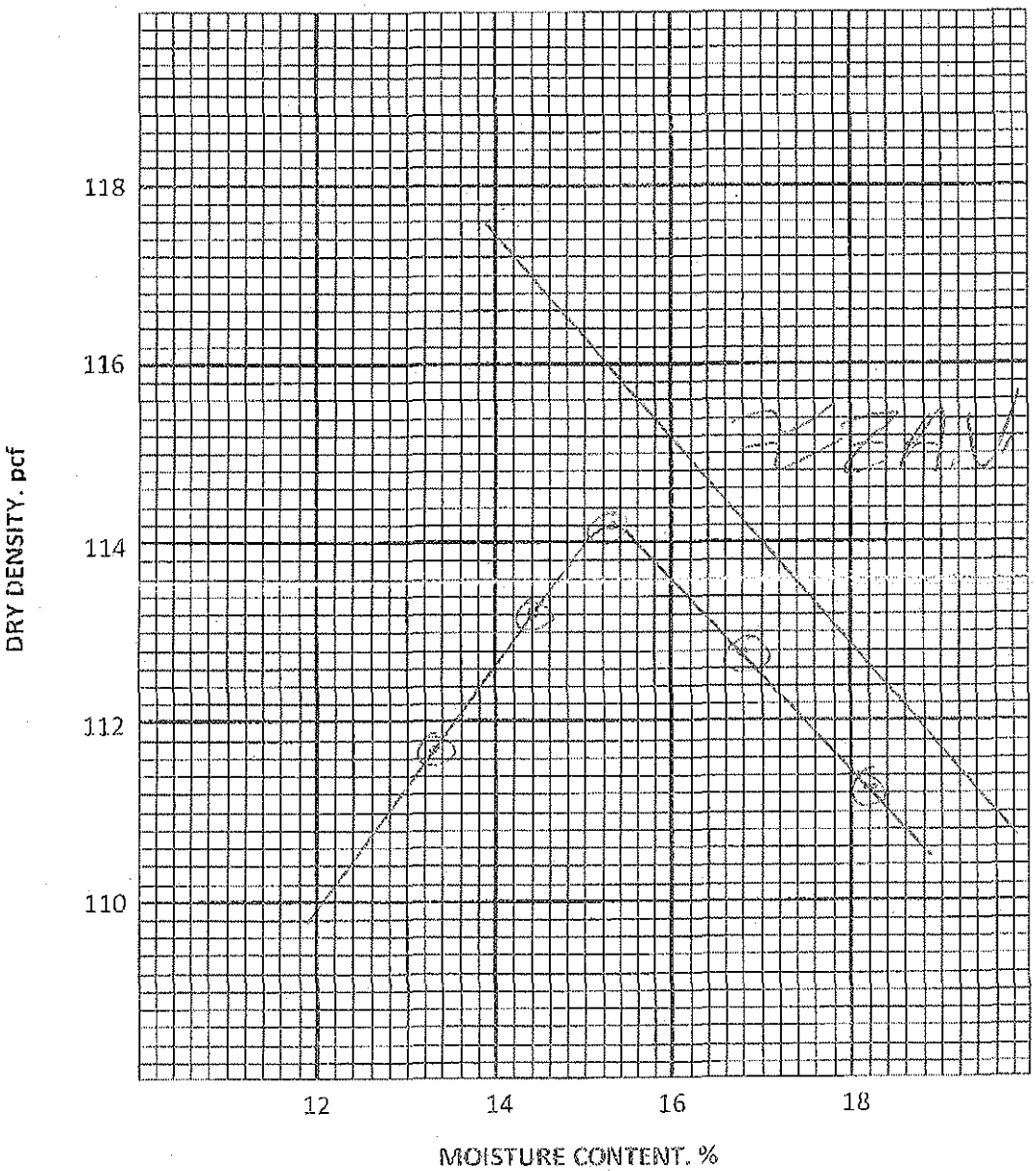
CONTINENTAL RESOURCES, INC.
PO Box 268836
Oklahoma City, OK 73126
Attn: Project Manager

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

Project: Atlanta Drill Pad, Williston, North Dakota

Project Number: 12-12165

MAXIMUM DENSITY: 114.2 pcf **OPTIMUM MOISTURE CONTENT: 15.3%**



Cc:

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

REPORT OF EXCAVATION OBSERVATIONS

CONTINENTAL RESOURCES **September 7, 2012**
P.O. Box 268836
Oklahoma City, OK 73126

Attn: Project Manager

Subj: Report of Excavation Observations ATS No. 12-12165
Drill Pad Spillage Line Construction
Atlanta Drill Pad
Williston, North Dakota

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.

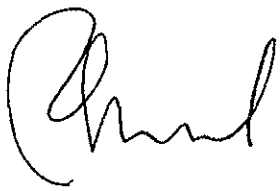
CONCLUSIONS AND RECOMMENDATIONS

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

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Engineering • Environmental • Drilling • Materials
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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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% MOIST	DRY DENSITY	% MOISTURE	DRY DENSITY	% COMPACTION	SPEC MOISTURE %	SPEC COMPACTION	PASS
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

cc:

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: 07/30/12
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
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:

cc:

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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: 07/30/12
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
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:

cc:

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AMERICAN TECHNICAL SERVICES, INC

AMERICAN TECHNICAL SERVICES, INC.
ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
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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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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:

RESPECTFULLY SUBMITTED

AMERICAN TECHNICAL SERVICES, INC.

cc:

AMERICAN TECHNICAL SERVICES, INC.
ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
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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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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:

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 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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% MOIST	DRY DENSITY	% MOISTURE	DRY DENSITY	% COMPACTION	SPEC MOISTURE %	SPEC COMPACTION	PASS
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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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: 08/01/12
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
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:

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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: 08/03/12
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
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 421100.20, 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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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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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: 08/07/12
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
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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% MOIST	DRY DENSITY	% MOISTURE	DRY DENSITY	% COMPACTION	SPEC MOISTURE %	SPEC COMPACTION	PASS
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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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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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 57718-0558

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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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		

NOTES:

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

CLIENT:	CONTINENTAL RESOURCES, INC.	ATS #:	12-12165
	PO Box 268836	DATE:	08/15/12
	Oklahoma City, OK 73126	ATS TECH:	Russell Harwood
ATTENTION:	Project Manager	GAGE #:	2
PROJECT:	Atlanta Drill Site	BENCHMARK:	

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% MOIST	DRY DENSITY	% MOISTURE	DRY DENSITY	% COMPACTION	SPEC MOISTURE %	SPEC COMPACTION	PASS
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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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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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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AMERICAN TECHNICAL SERVICES, INC.

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AMERICAN TECHNICAL SERVICES, INC.
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8105 Black Hawk Rd • PO Box 559
Black Hawk, SD 57718-0559

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: 08/15/12
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
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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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: 08/15/12
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
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:

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Black Hawk, SD 57718-0558

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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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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

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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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% MOIST	DRY DENSITY	% MOISTURE	DRY DENSITY	% COMPACTION	SPEC MOISTURE %	SPEC COMPACTION	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

cc:

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AMERICAN TECHNICAL SERVICES, INC

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: 08/17/12
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
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

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Black Hawk, SD 57718-0558

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GAGE #: 2
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			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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

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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
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

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Black Hawk, SD 57718-0558

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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
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

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810S 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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% MOIST	DRY DENSITY	% MOISTURE	DRY DENSITY	% COMPACTION	SPEC MOISTURE %	SPEC COMPACTION	PASS
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

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

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			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% MOIST	DRY DENSITY	% MOISTURE	DRY DENSITY	% COMPACTION	SPEC MOISTURE %	SPEC COMPACTION	PASS
128	08/17/12	#1	9.7	126.5	10.3	126.5	100	+/-2%	95	PASS
129	08/17/12	#1	9.7	126.5	9.3	124.1	98	+/-2%	95	PASS
130	08/17/12	#1	9.7	126.5	10.2	124.2	98	+/-2%	95	PASS
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 1179371.90	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

cc:

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GAGE # : 2
BENCHMARK:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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.

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			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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

cc:

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TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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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TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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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AMERICAN TECHNICAL SERVICES, INC.

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			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% MOIST	DRY DENSITY	% MOISTURE	DRY DENSITY	% COMPACTION	SPEC MOISTURE %	SPEC COMPACTION	PASS
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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DATE: 08/23/12
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GAGE # : 2
BENCHMARK:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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:

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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: 08/28/12
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
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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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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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		

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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

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% MOIST	DRY DENSITY	% MOISTURE	DRY DENSITY	% COMPACTION	SPEC MOISTURE %	SPEC COMPACTION	PASS
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		

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5105 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: South Road Culvert Back Fill

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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		

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

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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:

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Black Hawk, SD 57718-0558

REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

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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

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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:

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9105 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

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

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

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

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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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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: East Valley Fill

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% MOIST	DRY DENSITY	% MOISTURE	DRY DENSITY	% COMPACTION	SPEC MOISTURE %	SPEC COMPACTION	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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REPORT OF SOIL DENSITY TESTING - NUCLEAR METHOD

ASTM D6938

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ATTENTION: Project Manager
PROJECT: Atlanta Drill Site

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

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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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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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% MOIST	DRY DENSITY	% MOISTURE	DRY DENSITY	% COMPACTION	SPEC MOISTURE %	SPEC COMPACTION	PASS
202	08/30/12	#2	8.3	123.2	9.7	122.5	99	+/-2%	95	PASS
203	08/30/12	#3	15.3	114.2	13.4	115.7	101	+/-2%	95	PASS
204	08/30/12	#3	15.3	114.2	13.6	113.0	99	+/-2%	95	PASS
205	08/30/12	#3	15.3	114.2	13.5	113.4	99	+/-2%	95	PASS
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

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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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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

cc:

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AMERICAN TECHNICAL SERVICES, INC.

AMERICAN TECHNICAL SERVICES, INC.
ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
5105 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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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

cc:

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AMERICAN TECHNICAL SERVICES, INC.

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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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:

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AMERICAN TECHNICAL SERVICES, INC.

AMERICAN TECHNICAL SERVICES, INC.
ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
9105 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: 09/07/12
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
223	09/04/12	#3	15.3	114.2	13.6	110.4	97	+/-2%	95	PASS
224	09/04/12	#3	15.3	114.2	13.4	110.8	97	+/-2%	95	PASS
225	09/04/12	#3	15.3	114.2	13.7	111.2	97	+/-2%	95	PASS
226	09/04/12	#3	15.3	114.2	13.3	115.9	101	+/-2%	95	PASS
227	09/04/12	#1	9.7	126.5	10.2	121.0	96	+/-2%	95	PASS
228	09/04/12	#1	9.7	126.5	10.1	121.1	96	+/-2%	95	PASS
229	09/04/12	#1	9.7	126.5	9.3	120.6	95	+/-2%	95	PASS
230	09/04/12	#3	15.3	114.2	13.8	115.6	101	+/-2%	95	PASS
231	09/04/12	#3	15.3	114.2	14.4	111.7	98	+/-2%	95	PASS
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:

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AMERICAN TECHNICAL SERVICES, INC.

AMERICAN TECHNICAL SERVICES, INC.
ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
9105 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: 09/07/12
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
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

cc:

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AMERICAN TECHNICAL SERVICES, INC.

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ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
5105 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 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:

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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: Easr Berm

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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: 09/18/12
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
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

cc:

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AMERICAN TECHNICAL SERVICES, INC.

AMERICAN TECHNICAL SERVICES, INC.
ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
9105 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: 09/18/12
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
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.

AMERICAN TECHNICAL SERVICES, INC.
ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
5105 Bart. 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: 09/25/12
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
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:

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

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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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AMERICAN TECHNICAL SERVICES, INC

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

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% MOIST	DRY DENSITY	% MOISTURE	DRY DENSITY	% COMPACTION	SPEC MOISTURE %	SPEC COMPACTION	PASS
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:

cc:

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AMERICAN TECHNICAL SERVICES, INC.

AMERICAN TECHNICAL SERVICES, INC.
ENGINEERING • ENVIRONMENTAL • DRILLING • MATERIALS
6105 Black Hawk Rd. • PO Box 558
Black Hawk, SD 57718-0558

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

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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:

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AMERICAN TECHNICAL SERVICES, INC.

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

			LABORATORY		FIELD			SPECIFICATIONS		
TEST #	DATE	PROCTOR # / CLASSIFICATION	% 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.

23360

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

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

Date: **7/23/2012**

RE: **CORES AND SAMPLES**

Well Name: **ATLANTA 13-6H** Well File No.: **23360**
Location: **NENW 6-153-101** County: WILLIAMS
Permit Type: **Development - HORIZONTAL**
Field: **BAKER** Target Horizon: MIDDLE 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)

RECEIVED
MAY 2012
ND OIL & GAS DIVISION

Well File No. 23360

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

☐ Notice of Intent	Approximate Start Date	☐ Drilling Prognosis	☐ Spill Report
☐ Report of Work Done	Date Work Completed	☐ Redrilling or Repair	☐ Shooting
☐ 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	☐ Casing or Liner	☐ Acidizing
		☐ Plug Well	☐ Fracture Treatment
		☐ Supplemental History	☐ Change Production Method
		☐ Temporarily Abandon	☐ Reclamation
		☑ Other	Open Hole Log Waiver

Well Name and Number					
Atlanta 13-6H					
Footages		Qtr-Qtr	Section	Township	Range
495 F N L	1440 F W L	NENW	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	Telephone Number
Continental Resources, Inc.	580-233-8955
Address	
P.O. Box 1032	
City / State / Zip Code	
Enid / OK / 73702	
Signature	Printed Name
Terry L. Olson	Terry L. Olson
Title	Date
Regulatory Compliance Specialist	May 8, 2012
Email Address	
Terry.Olson@clr.com	

FOR STATE USE ONLY

☐ Received	☒ Approved
Date	7-20-2012
By	
Title	Richard A. Suggs Geologist

Approved
David Tabor
7-20-2012

Continental
RESOURCES

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.

Becky Barnes
Notary Public

Garfield County, Oklahoma

My Commission Expires: 7/5/2015

Commission No.: 11006023

BECKY BARNES NOTARY # 11006023 EXP. 7/5/2015 PUBLIC STATE OF OKLAHOMA

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

NORTH DAKOTA
OIL AND GAS DIVISION

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 13-6H
NENW Section 6-153N-101W
Williams County
Well File # 23360

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: 8870E.

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	Type of Well	Approximate Date Work Will Start	Confidential Status
New Location	**Oil & Gas**	**6 / 1 / 2012**	**Yes**

Operator	Telephone Number
CONTINENTAL RESOURCES, INC.	**580-233-8955**

Address	City	State	Zip Code
P.O. Box 1032	**Enid**	**OK**	**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	Well Number
ATLANTA	**13-6H**

Surface Footages	Qtr-Qtr	Section	Township	Range	County
495 F **N** L **1440** F **W** L	**NENW**	**6**	**153 N**	**101 W**	**Williams**
Longstring Casing Point Footages	Qtr-Qtr	Section	Township	Range	County
573 F **N** L **2006** F **W** L	**NENW**	**6**	**153 N**	**101 W**	**Williams**
Longstring Casing Point Coordinates From Well Head	Azimuth	Longstring Total Depth			
78 S From WH **566 E** From WH	**98 °**	**10856** Feet MD	**10530** Feet TVD		
Bottom Hole Footages From Nearest Section Line	Qtr-Qtr	Section	Township	Range	County
1711 F **N** L **203** F **E** L	**SENE**	**5**	**153 N**	**101 W**	**McKenzie**
Bottom Hole Coordinates From Well Head	KOP Lateral 1	Azimuth Lateral 1	Estimated Total Depth Lateral 1		
1216 S From WH **8867 E** From WH	**9957** Feet MD	**98 °**	**19234** Feet MD	**10547** Feet TVD	
Latitude of Well Head	Longitude of Well Head	NAD Reference	Description of (Subject to NDIC Approval)		
48 ° 06 ' 33.65 "	**-103 ° 43 ' 39.72 "**	**NAD83**	**Spacing Unit: Sec 5, 6, 7 & 8 T153N R101W**		
Ground Elevation	Acres in Spacing/Drilling Unit	Spacing/Drilling Unit Setback Requirement		Industrial Commission Order	
1946 Feet Above S.L.	**2560**	Feet N/S	Feet E/W	**19840**	
North Line of Spacing/Drilling Unit	South Line of Spacing/Drilling Unit	East Line of Spacing/Drilling Unit		West Line of Spacing/Drilling Unit	
10517 Feet	**10511** Feet	**10422** Feet		**10368** Feet	
Objective Horizons				Pierre Shale Top	
Middle Bakken				**1867**	

Proposed	Size	Weight	Depth	Cement Volume	
Surface Casing	**9 - 5/8 "**	**36** Lb./Ft.	**1970** Feet	**743** Sacks	**NOTE: Surface hole must be drilled with fresh water and surface casing must be cemented back to surface.**

Proposed	Size	Weight(s)	Longstring Total Depth		Cement Volume	Cement Top	Top Dakota Sand
Longstring Casing	**7 - "**	**26-32** Lb./Ft.	**10856** Feet MD	**10530** Feet TVD	**833** Sacks	**0** Feet	**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)	Drilling Mud Type (Lateral)
Invert	**Brine**

Survey Type in Vertical Portion of Well	Survey Frequency: Build Section	Survey Frequency: Lateral	Survey Contractor
MWD Every 100 Feet	**30** Feet	**90** Feet	**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 / 8 / 2012
ePermit	Printed Name Terry L. Olson	Title Regulatory Compliance Specialist

FOR STATE USE ONLY

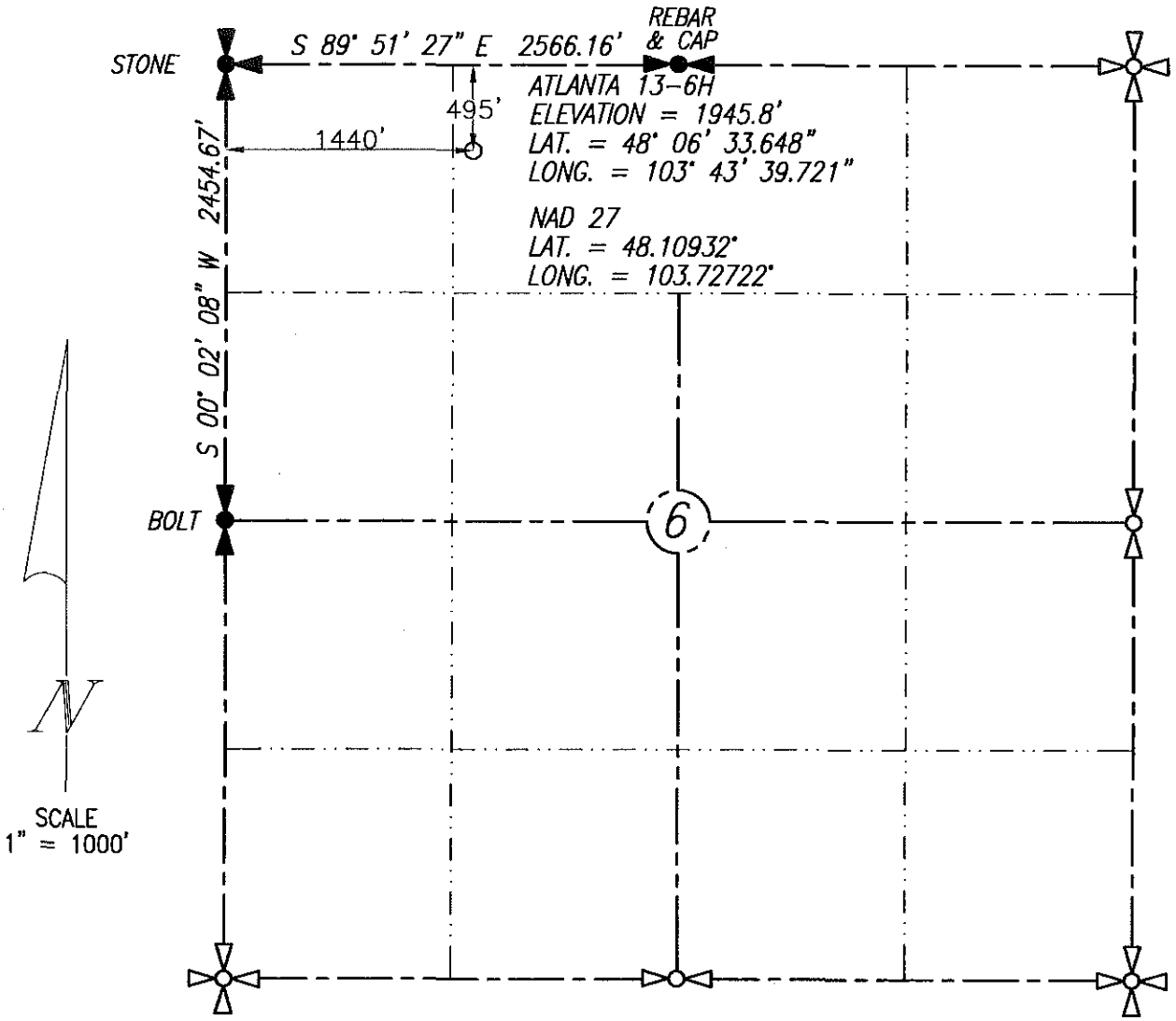
Permit and File Number 23360	API Number 33 - 105 - 02720
Field BAKER	
Pool BAKKEN	Permit Type DEVELOPMENT

FOR STATE USE ONLY

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

REVISED: 4-23-2012

WELL LOCATION PLAT
CONTINENTAL RESOURCES INC.
ATLANTA 13-6H
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA
495' FNL & 1440' 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 PAULSON 4-23-12

JOHN PAULSON R.L.S. 3366

REGISTERED LAND SURVEYOR L.S. 3366 NORTH DAKOTA

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

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 B. Newby

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.

Becky Barnes

Notary Public

Garfield County, Oklahoma

My Commission Expires: 7/5/2015

Commission No.: 11006023

BECKY BARNES NOTARY # 11006023 EXP. 7/5/2015 PUBLIC STATE OF OKLAHOMA

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 Compny 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

PRELIMINARY DRILLING PROGRAM

5/7/2012

Lease and Well No. Atlanta 13-6H

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 ' -	10856 '	Invert	9.6-10.0	40-55 sec, 10-15 cc's O/W 70/30 to 80/20
10856 ' -	*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
		10856 '	1646 '	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 "	19050 '	9130 '	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: Guage 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: Guage hole + 55% excess, tail 30% of length, lead to surface.)								
Int	10856	Lead	7800 '	0 '	457	35/65 Poz/Class "C", 3% KCl, 5 #/sk Silica	3.21	11.3
		Tail	10856 '	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)								

5/7/2012

GEOLOGIC PROGNOSIS

Well Name: Atlanta 13-6H
Rig: Cyclone 02
Prospect: Williston
Target: Middle Bakken
Spacing: 2560

☐ Pre-Staked
☑ Staked

SHL: 495' FNL & 1440' FWL
Sec. 6 - 153N - 101W
Williams , ND

BHL: 1711' FNL & 200' FEL
Sec. 5 - 153N - 101W
Williams , ND

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	-8,580	**10,547**

Continental
RESOURCES

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

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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

302 N. Independence
P. O. Box 1032 Enid, Oklahoma 73702
(580) 233-8955

CONTINENTAL RESOURCES

Location: NORTH DAKOTA Slot: SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)
Field: WILLIAMS COUNTY Well: ATLANTA 13-6H
Facility: SEC.06-T153N-R101W Wellbore: ATLANTA 13-6H PWB

Plot reference wellpath is ATLANTA 13-6H (REV-D.0) PWP

True vertical depths are referenced to CYCLONE 2 (RKB)	Grid System: NAD83 / Lambert North Dakota SP, Northern Zone (3301), US feet
Measured depths are referenced to CYCLONE 2 (RKB)	North Reference: True north
CYCLONE 2 (RKB) to Mean Sea Level: 1967 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: palesdr on 5/7/2012

Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.06-T153N-R101W			1179034.199	421169.095	48°00'33.379"N	103°43'58.880"W
Slot	**Local N (ft)**	**Local E (ft)**	**Grid East (US ft)**	**Grid North (US ft)**	**Latitude**	**Longitude**
SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)	27.30	1169.93	1180204.171	421177.266	48°00'33.646"N	103°43'39.721"W

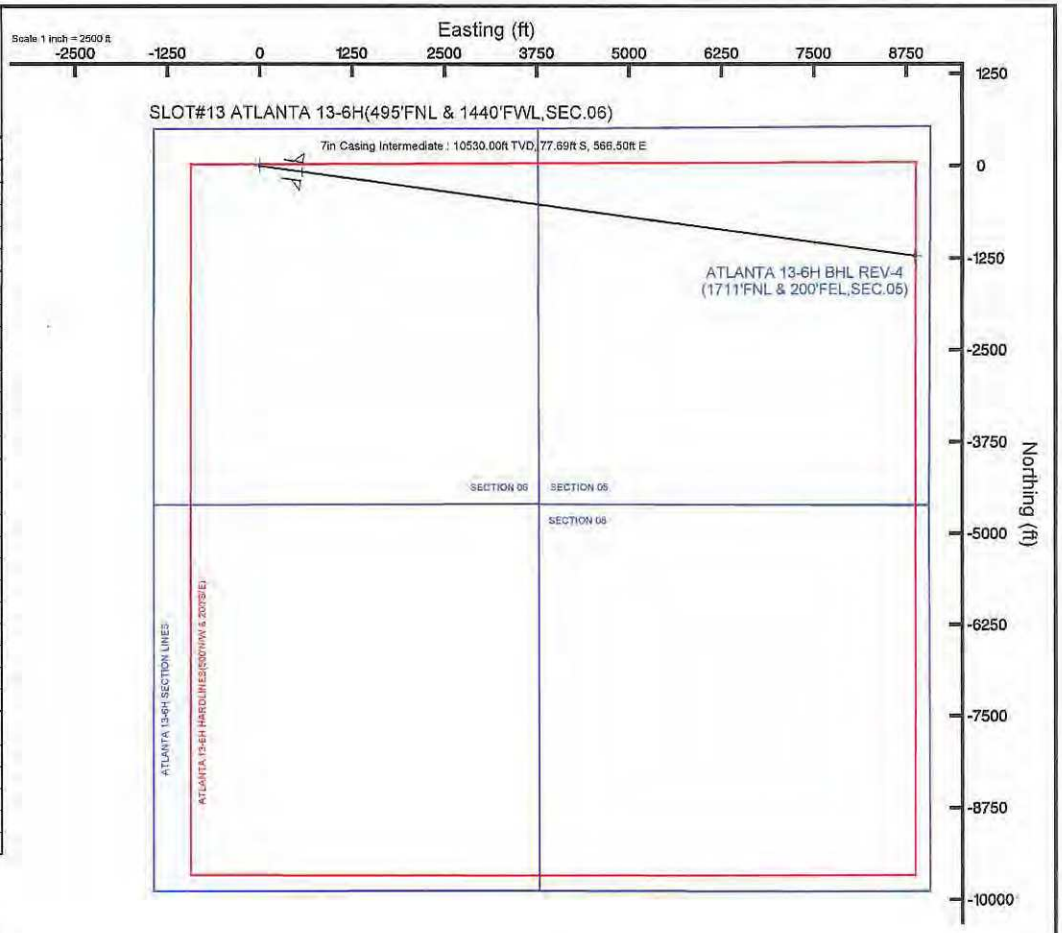
CYCLONE 2 (RKB) to Mud line (At Slot: SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06))	1967ft
Mean Sea Level to Mud line (At Slot: SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06))	0ft
CYCLONE 2 (RKB) to Mean Sea Level	1967ft

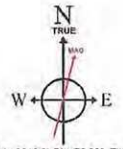
Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
ATLANTA 13-6H SECTION 05		0.00	0.00	0.00	1180204.17	421177.27	48°00'33.646"N	103°43'39.721"W
ATLANTA 13-6H SECTION 06		0.00	0.00	0.00	1180204.17	421177.27	48°00'33.646"N	103°43'39.721"W
ATLANTA 13-6H SECTION 08		0.00	0.00	0.00	1180204.17	421177.27	48°00'33.646"N	103°43'39.721"W
ATLANTA 13-6H SECTION LINES		0.00	0.00	0.00	1180204.17	421177.27	48°00'33.646"N	103°43'39.721"W
ATLANTA 13-6H BHL ON PLAT REV-1(1711'FNL & 200'FEL,SEC.05)		10533.00	181762.27	8820.04	1196433.65	602426.82	48°03'27.406"N	103°41'31.465"W
ATLANTA 13-6H BHL REV-2(1711'FNL & 200'FEL,SEC.05)		10533.00	-1216.04	8800.00	1189064.78	419558.58	48°00'21.627"N	103°41'28.293"W
ATLANTA 13-6H BHL REV-3(1711'FNL & 200'FEL,SEC.05)		10547.00	-1216.00	8855.90	1189000.75	419561.31	48°00'21.628"N	103°41'29.236"W
ATLANTA 13-6H BHL REV-4(1711'FNL & 200'FEL,SEC.05)	19234.09	10547.00	-1216.00	8867.00	1189011.64	419560.84	48°00'21.628"N	103°41'29.074"W
ATLANTA 13-6H HARDLINES(500'NW & 200'S/E)		10547.00	19.95	0.00	1180205.01	421197.21	48°00'33.645"N	103°43'39.721"W

Well Profile Data

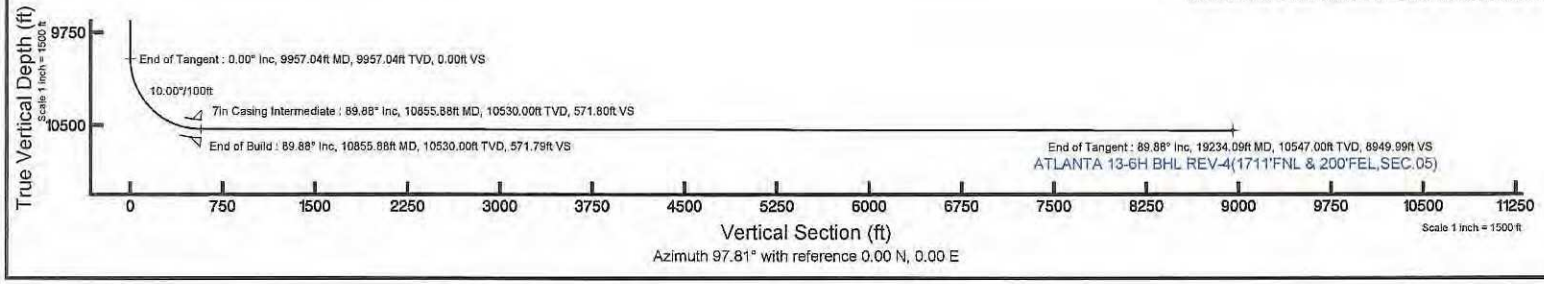
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	22.00	0.000	97.809	22.00	0.00	0.00	0.00	0.00
End of Tangent	9957.04	0.000	97.809	9957.04	0.00	0.00	0.00	0.00
End of Build	10855.88	89.884	97.809	10530.00	-77.69	566.49	10.00	571.79
End of Tangent	19234.09	89.884	97.809	10547.00	-1216.00	8867.00	0.00	8949.99





BGGM (1945.0 to 2013.0) Dip: 73.08° Field: 56635.5 nT
Magnetic North is 8.76 degrees East of True North (at 2/10/2012)

To correct azimuth from Magnetic to True add 8.76 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the True North Azimuth = 90 + 8.76 = 98.76



Planned Wellpath Report

ATLANTA 13-6H (REV-D.0) PWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	**CONTINENTAL RESOURCES**	Slot	**SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)**
Area	**NORTH DAKOTA**	Well	**ATLANTA 13-6H**
Field	**WILLIAMS COUNTY**	Wellbore	**ATLANTA 13-6H 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	**5/7/2012 at 10:52:11 AM**
Convergence at slot	**2.40° West**	Database/Source file	**WA_Denver/ATLANTA_13-6H_PWB.xml**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[US ft]**	**Northing[US ft]**	**Latitude**	**Longitude**
Slot Location	27.30	1169.93	1180204.17	421177.27	**48°06'33.648"N**	**103°43'39.721"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#13 ATLANTA 13-6H(495'FNL & 1440'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	**97.81°**

Planned Wellpath Report

ATLANTA 13-6H (REV-D.0) PWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	CONTINENTAL RESOURCES	Slot	SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)
Area	NORTH DAKOTA	Well	ATLANTA 13-6H
Field	WILLIAMS COUNTY	Wellbore	ATLANTA 13-6H PWB
Facility	SEC.06-T153N-R101W		

WELLPATH DATA (197 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	97.809	0.00	0.00	0.00	0.00	0.00	
22.00	0.000	97.809	22.00	0.00	0.00	0.00	0.00	Tie On
122.00†	0.000	97.809	122.00	0.00	0.00	0.00	0.00	
222.00†	0.000	97.809	222.00	0.00	0.00	0.00	0.00	
322.00†	0.000	97.809	322.00	0.00	0.00	0.00	0.00	
422.00†	0.000	97.809	422.00	0.00	0.00	0.00	0.00	
522.00†	0.000	97.809	522.00	0.00	0.00	0.00	0.00	
622.00†	0.000	97.809	622.00	0.00	0.00	0.00	0.00	
722.00†	0.000	97.809	722.00	0.00	0.00	0.00	0.00	
822.00†	0.000	97.809	822.00	0.00	0.00	0.00	0.00	
922.00†	0.000	97.809	922.00	0.00	0.00	0.00	0.00	
1022.00†	0.000	97.809	1022.00	0.00	0.00	0.00	0.00	
1122.00†	0.000	97.809	1122.00	0.00	0.00	0.00	0.00	
1222.00†	0.000	97.809	1222.00	0.00	0.00	0.00	0.00	
1322.00†	0.000	97.809	1322.00	0.00	0.00	0.00	0.00	
1422.00†	0.000	97.809	1422.00	0.00	0.00	0.00	0.00	
1522.00†	0.000	97.809	1522.00	0.00	0.00	0.00	0.00	
1622.00†	0.000	97.809	1622.00	0.00	0.00	0.00	0.00	
1722.00†	0.000	97.809	1722.00	0.00	0.00	0.00	0.00	
1822.00†	0.000	97.809	1822.00	0.00	0.00	0.00	0.00	
1922.00†	0.000	97.809	1922.00	0.00	0.00	0.00	0.00	
2022.00†	0.000	97.809	2022.00	0.00	0.00	0.00	0.00	
2122.00†	0.000	97.809	2122.00	0.00	0.00	0.00	0.00	
2222.00†	0.000	97.809	2222.00	0.00	0.00	0.00	0.00	
2322.00†	0.000	97.809	2322.00	0.00	0.00	0.00	0.00	
2422.00†	0.000	97.809	2422.00	0.00	0.00	0.00	0.00	
2522.00†	0.000	97.809	2522.00	0.00	0.00	0.00	0.00	
2622.00†	0.000	97.809	2622.00	0.00	0.00	0.00	0.00	
2722.00†	0.000	97.809	2722.00	0.00	0.00	0.00	0.00	
2822.00†	0.000	97.809	2822.00	0.00	0.00	0.00	0.00	

Continental RESOURCES

Planned Wellpath Report

ATLANTA 13-6H (REV-D.0) PWP

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	CONTINENTAL RESOURCES	Slot	SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)
Area	NORTH DAKOTA	Well	ATLANTA 13-6H
Field	WILLIAMS COUNTY	Wellbore	ATLANTA 13-6H PWB
Facility	SEC.06-T153N-R101W		

WELLPATH DATA (197 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
2922.00†	0.000	97.809	2922.00	0.00	0.00	0.00	0.00	
3022.00†	0.000	97.809	3022.00	0.00	0.00	0.00	0.00	
3122.00†	0.000	97.809	3122.00	0.00	0.00	0.00	0.00	
3222.00†	0.000	97.809	3222.00	0.00	0.00	0.00	0.00	
3322.00†	0.000	97.809	3322.00	0.00	0.00	0.00	0.00	
3422.00†	0.000	97.809	3422.00	0.00	0.00	0.00	0.00	
3522.00†	0.000	97.809	3522.00	0.00	0.00	0.00	0.00	
3622.00†	0.000	97.809	3622.00	0.00	0.00	0.00	0.00	
3722.00†	0.000	97.809	3722.00	0.00	0.00	0.00	0.00	
3822.00†	0.000	97.809	3822.00	0.00	0.00	0.00	0.00	
3922.00†	0.000	97.809	3922.00	0.00	0.00	0.00	0.00	
4022.00†	0.000	97.809	4022.00	0.00	0.00	0.00	0.00	
4122.00†	0.000	97.809	4122.00	0.00	0.00	0.00	0.00	
4222.00†	0.000	97.809	4222.00	0.00	0.00	0.00	0.00	
4322.00†	0.000	97.809	4322.00	0.00	0.00	0.00	0.00	
4422.00†	0.000	97.809	4422.00	0.00	0.00	0.00	0.00	
4522.00†	0.000	97.809	4522.00	0.00	0.00	0.00	0.00	
4622.00†	0.000	97.809	4622.00	0.00	0.00	0.00	0.00	
4722.00†	0.000	97.809	4722.00	0.00	0.00	0.00	0.00	
4822.00†	0.000	97.809	4822.00	0.00	0.00	0.00	0.00	
4922.00†	0.000	97.809	4922.00	0.00	0.00	0.00	0.00	
5022.00†	0.000	97.809	5022.00	0.00	0.00	0.00	0.00	
5122.00†	0.000	97.809	5122.00	0.00	0.00	0.00	0.00	
5222.00†	0.000	97.809	5222.00	0.00	0.00	0.00	0.00	
5322.00†	0.000	97.809	5322.00	0.00	0.00	0.00	0.00	
5422.00†	0.000	97.809	5422.00	0.00	0.00	0.00	0.00	
5522.00†	0.000	97.809	5522.00	0.00	0.00	0.00	0.00	
5622.00†	0.000	97.809	5622.00	0.00	0.00	0.00	0.00	
5722.00†	0.000	97.809	5722.00	0.00	0.00	0.00	0.00	
5822.00†	0.000	97.809	5822.00	0.00	0.00	0.00	0.00	

Continental RESOURCES

Planned Wellpath Report

ATLANTA 13-6H (REV-D.0) PWP

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	CONTINENTAL RESOURCES	Slot	SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)
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Field	WILLIAMS COUNTY	Wellbore	ATLANTA 13-6H PWB
Facility	SEC.06-T153N-R101W		

WELLPATH DATA (197 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
5922.00†	0.000	97.809	5922.00	0.00	0.00	0.00	0.00	
6022.00†	0.000	97.809	6022.00	0.00	0.00	0.00	0.00	
6122.00†	0.000	97.809	6122.00	0.00	0.00	0.00	0.00	
6222.00†	0.000	97.809	6222.00	0.00	0.00	0.00	0.00	
6322.00†	0.000	97.809	6322.00	0.00	0.00	0.00	0.00	
6422.00†	0.000	97.809	6422.00	0.00	0.00	0.00	0.00	
6522.00†	0.000	97.809	6522.00	0.00	0.00	0.00	0.00	
6622.00†	0.000	97.809	6622.00	0.00	0.00	0.00	0.00	
6722.00†	0.000	97.809	6722.00	0.00	0.00	0.00	0.00	
6822.00†	0.000	97.809	6822.00	0.00	0.00	0.00	0.00	
6922.00†	0.000	97.809	6922.00	0.00	0.00	0.00	0.00	
7022.00†	0.000	97.809	7022.00	0.00	0.00	0.00	0.00	
7122.00†	0.000	97.809	7122.00	0.00	0.00	0.00	0.00	
7222.00†	0.000	97.809	7222.00	0.00	0.00	0.00	0.00	
7322.00†	0.000	97.809	7322.00	0.00	0.00	0.00	0.00	
7422.00†	0.000	97.809	7422.00	0.00	0.00	0.00	0.00	
7522.00†	0.000	97.809	7522.00	0.00	0.00	0.00	0.00	
7622.00†	0.000	97.809	7622.00	0.00	0.00	0.00	0.00	
7722.00†	0.000	97.809	7722.00	0.00	0.00	0.00	0.00	
7822.00†	0.000	97.809	7822.00	0.00	0.00	0.00	0.00	
7922.00†	0.000	97.809	7922.00	0.00	0.00	0.00	0.00	
8022.00†	0.000	97.809	8022.00	0.00	0.00	0.00	0.00	
8122.00†	0.000	97.809	8122.00	0.00	0.00	0.00	0.00	
8222.00†	0.000	97.809	8222.00	0.00	0.00	0.00	0.00	
8322.00†	0.000	97.809	8322.00	0.00	0.00	0.00	0.00	
8422.00†	0.000	97.809	8422.00	0.00	0.00	0.00	0.00	
8522.00†	0.000	97.809	8522.00	0.00	0.00	0.00	0.00	
8622.00†	0.000	97.809	8622.00	0.00	0.00	0.00	0.00	
8722.00†	0.000	97.809	8722.00	0.00	0.00	0.00	0.00	
8822.00†	0.000	97.809	8822.00	0.00	0.00	0.00	0.00	

Planned Wellpath Report

ATLANTA 13-6H (REV-D.0) PWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	CONTINENTAL RESOURCES	Slot	SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)
Area	NORTH DAKOTA	Well	ATLANTA 13-6H
Field	WILLIAMS COUNTY	Wellbore	ATLANTA 13-6H PWB
Facility	SEC.06-T153N-R101W		

WELLPATH DATA (197 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
8922.00†	0.000	97.809	8922.00	0.00	0.00	0.00	0.00	
9022.00†	0.000	97.809	9022.00	0.00	0.00	0.00	0.00	
9122.00†	0.000	97.809	9122.00	0.00	0.00	0.00	0.00	
9222.00†	0.000	97.809	9222.00	0.00	0.00	0.00	0.00	
9322.00†	0.000	97.809	9322.00	0.00	0.00	0.00	0.00	
9422.00†	0.000	97.809	9422.00	0.00	0.00	0.00	0.00	
9522.00†	0.000	97.809	9522.00	0.00	0.00	0.00	0.00	
9622.00†	0.000	97.809	9622.00	0.00	0.00	0.00	0.00	
9722.00†	0.000	97.809	9722.00	0.00	0.00	0.00	0.00	
9822.00†	0.000	97.809	9822.00	0.00	0.00	0.00	0.00	
9922.00†	0.000	97.809	9922.00	0.00	0.00	0.00	0.00	
9957.04	0.000	97.809	9957.04	0.00	0.00	0.00	0.00	End of Tangent
10022.00†	6.496	97.809	10021.86	3.68	-0.50	3.64	10.00	
10122.00†	16.496	97.809	10119.73	23.58	-3.20	23.36	10.00	
10222.00†	26.496	97.809	10212.66	60.18	-8.18	59.62	10.00	
10322.00†	36.496	97.809	10297.82	112.36	-15.27	111.32	10.00	
10422.00†	46.496	97.809	10372.62	178.53	-24.26	176.88	10.00	
10522.00†	56.496	97.809	10434.80	256.69	-34.88	254.31	10.00	
10622.00†	66.496	97.809	10482.46	344.45	-46.80	341.26	10.00	
10722.00†	76.496	97.809	10514.16	439.16	-59.67	435.09	10.00	
10822.00†	86.496	97.809	10528.93	537.94	-73.09	532.95	10.00	
10855.88	89.884	97.809	10530.00	571.79	-77.69	566.49	10.00	End of Build
10922.00†	89.884	97.809	10530.13	637.92	-86.67	632.00	0.00	
11022.00†	89.884	97.809	10530.33	737.92	-100.26	731.07	0.00	
11122.00†	89.884	97.809	10530.54	837.92	-113.84	830.15	0.00	
11222.00†	89.884	97.809	10530.74	937.92	-127.43	929.22	0.00	
11322.00†	89.884	97.809	10530.94	1037.92	-141.02	1028.29	0.00	
11422.00†	89.884	97.809	10531.15	1137.92	-154.60	1127.36	0.00	
11522.00†	89.884	97.809	10531.35	1237.92	-168.19	1226.44	0.00	
11622.00†	89.884	97.809	10531.55	1337.92	-181.78	1325.51	0.00	

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Planned Wellpath Report

ATLANTA 13-6H (REV-D.0) PWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	CONTINENTAL RESOURCES	Slot	SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)
Area	NORTH DAKOTA	Well	ATLANTA 13-6H
Field	WILLIAMS COUNTY	Wellbore	ATLANTA 13-6H PWB
Facility	SEC.06-T153N-R101W		

WELLPATH DATA (197 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
11722.00†	89.884	97.809	10531.75	1437.92	-195.36	1424.58	0.00	
11822.00†	89.884	97.809	10531.96	1537.92	-208.95	1523.66	0.00	
11922.00†	89.884	97.809	10532.16	1637.92	-222.54	1622.73	0.00	
12022.00†	89.884	97.809	10532.36	1737.92	-236.12	1721.80	0.00	
12122.00†	89.884	97.809	10532.57	1837.92	-249.71	1820.87	0.00	
12222.00†	89.884	97.809	10532.77	1937.91	-263.30	1919.95	0.00	
12322.00†	89.884	97.809	10532.97	2037.91	-276.88	2019.02	0.00	
12422.00†	89.884	97.809	10533.18	2137.91	-290.47	2118.09	0.00	
12522.00†	89.884	97.809	10533.38	2237.91	-304.06	2217.16	0.00	
12622.00†	89.884	97.809	10533.58	2337.91	-317.64	2316.24	0.00	
12722.00†	89.884	97.809	10533.78	2437.91	-331.23	2415.31	0.00	
12822.00†	89.884	97.809	10533.99	2537.91	-344.82	2514.38	0.00	
12922.00†	89.884	97.809	10534.19	2637.91	-358.40	2613.45	0.00	
13022.00†	89.884	97.809	10534.39	2737.91	-371.99	2712.53	0.00	
13122.00†	89.884	97.809	10534.60	2837.91	-385.58	2811.60	0.00	
13222.00†	89.884	97.809	10534.80	2937.91	-399.16	2910.67	0.00	
13322.00†	89.884	97.809	10535.00	3037.91	-412.75	3009.74	0.00	
13422.00†	89.884	97.809	10535.20	3137.91	-426.34	3108.82	0.00	
13522.00†	89.884	97.809	10535.41	3237.91	-439.92	3207.89	0.00	
13622.00†	89.884	97.809	10535.61	3337.91	-453.51	3306.96	0.00	
13722.00†	89.884	97.809	10535.81	3437.91	-467.10	3406.03	0.00	
13822.00†	89.884	97.809	10536.02	3537.91	-480.68	3505.11	0.00	
13922.00†	89.884	97.809	10536.22	3637.91	-494.27	3604.18	0.00	
14022.00†	89.884	97.809	10536.42	3737.91	-507.86	3703.25	0.00	
14122.00†	89.884	97.809	10536.63	3837.91	-521.44	3802.32	0.00	
14222.00†	89.884	97.809	10536.83	3937.91	-535.03	3901.40	0.00	
14322.00†	89.884	97.809	10537.03	4037.91	-548.61	4000.47	0.00	
14422.00†	89.884	97.809	10537.23	4137.91	-562.20	4099.54	0.00	
14522.00†	89.884	97.809	10537.44	4237.91	-575.79	4198.61	0.00	
14622.00†	89.884	97.809	10537.64	4337.91	-589.37	4297.69	0.00	

Continental RESOURCES

Planned Wellpath Report

ATLANTA 13-6H (REV-D.0) PWP

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	CONTINENTAL RESOURCES	Slot	SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)
Area	NORTH DAKOTA	Well	ATLANTA 13-6H
Field	WILLIAMS COUNTY	Wellbore	ATLANTA 13-6H PWB
Facility	SEC.06-T153N-R101W		

WELLPATH DATA (197 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
14722.00†	89.884	97.809	10537.84	4437.91	-602.96	4396.76	0.00	
14822.00†	89.884	97.809	10538.05	4537.91	-616.55	4495.83	0.00	
14922.00†	89.884	97.809	10538.25	4637.91	-630.13	4594.90	0.00	
15022.00†	89.884	97.809	10538.45	4737.91	-643.72	4693.98	0.00	
15122.00†	89.884	97.809	10538.65	4837.91	-657.31	4793.05	0.00	
15222.00†	89.884	97.809	10538.86	4937.91	-670.89	4892.12	0.00	
15322.00†	89.884	97.809	10539.06	5037.91	-684.48	4991.19	0.00	
15422.00†	89.884	97.809	10539.26	5137.91	-698.07	5090.27	0.00	
15522.00†	89.884	97.809	10539.47	5237.91	-711.65	5189.34	0.00	
15622.00†	89.884	97.809	10539.67	5337.91	-725.24	5288.41	0.00	
15722.00†	89.884	97.809	10539.87	5437.91	-738.83	5387.48	0.00	
15822.00†	89.884	97.809	10540.08	5537.91	-752.41	5486.56	0.00	
15922.00†	89.884	97.809	10540.28	5637.91	-766.00	5585.63	0.00	
16022.00†	89.884	97.809	10540.48	5737.91	-779.59	5684.70	0.00	
16122.00†	89.884	97.809	10540.68	5837.91	-793.17	5783.77	0.00	
16222.00†	89.884	97.809	10540.89	5937.91	-806.76	5882.85	0.00	
16322.00†	89.884	97.809	10541.09	6037.91	-820.35	5981.92	0.00	
16422.00†	89.884	97.809	10541.29	6137.91	-833.93	6080.99	0.00	
16522.00†	89.884	97.809	10541.50	6237.91	-847.52	6180.06	0.00	
16622.00†	89.884	97.809	10541.70	6337.91	-861.11	6279.14	0.00	
16722.00†	89.884	97.809	10541.90	6437.91	-874.69	6378.21	0.00	
16822.00†	89.884	97.809	10542.10	6537.91	-888.28	6477.28	0.00	
16922.00†	89.884	97.809	10542.31	6637.91	-901.87	6576.35	0.00	
17022.00†	89.884	97.809	10542.51	6737.91	-915.45	6675.43	0.00	
17122.00†	89.884	97.809	10542.71	6837.90	-929.04	6774.50	0.00	
17222.00†	89.884	97.809	10542.92	6937.90	-942.63	6873.57	0.00	
17322.00†	89.884	97.809	10543.12	7037.90	-956.21	6972.64	0.00	
17422.00†	89.884	97.809	10543.32	7137.90	-969.80	7071.72	0.00	
17522.00†	89.884	97.809	10543.53	7237.90	-983.39	7170.79	0.00	
17622.00†	89.884	97.809	10543.73	7337.90	-996.97	7269.86	0.00	

Continental RESOURCES

Planned Wellpath Report

ATLANTA 13-6H (REV-D.0) PWP

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	CONTINENTAL RESOURCES	Slot	SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)
Area	NORTH DAKOTA	Well	ATLANTA 13-6H
Field	WILLIAMS COUNTY	Wellbore	ATLANTA 13-6H PWB
Facility	SEC.06-T153N-R101W		

WELLPATH DATA (197 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
17722.00†	89.884	97.809	10543.93	7437.90	-1010.56	7368.93	0.00	
17822.00†	89.884	97.809	10544.13	7537.90	-1024.15	7468.01	0.00	
17922.00†	89.884	97.809	10544.34	7637.90	-1037.73	7567.08	0.00	
18022.00†	89.884	97.809	10544.54	7737.90	-1051.32	7666.15	0.00	
18122.00†	89.884	97.809	10544.74	7837.90	-1064.90	7765.22	0.00	
18222.00†	89.884	97.809	10544.95	7937.90	-1078.49	7864.30	0.00	
18322.00†	89.884	97.809	10545.15	8037.90	-1092.08	7963.37	0.00	
18422.00†	89.884	97.809	10545.35	8137.90	-1105.66	8062.44	0.00	
18522.00†	89.884	97.809	10545.55	8237.90	-1119.25	8161.51	0.00	
18622.00†	89.884	97.809	10545.76	8337.90	-1132.84	8260.59	0.00	
18722.00†	89.884	97.809	10545.96	8437.90	-1146.42	8359.66	0.00	
18822.00†	89.884	97.809	10546.16	8537.90	-1160.01	8458.73	0.00	
18922.00†	89.884	97.809	10546.37	8637.90	-1173.60	8557.80	0.00	
19022.00†	89.884	97.809	10546.57	8737.90	-1187.18	8656.88	0.00	
19122.00†	89.884	97.809	10546.77	8837.90	-1200.77	8755.95	0.00	
19222.00†	89.884	97.809	10546.98	8937.90	-1214.36	8855.02	0.00	
19234.09	89.884	97.809	10547.00[1]	8949.99	-1216.00	8867.00	0.00	End of Tangent

HOLE & CASING SECTIONS - Ref Wellbore: ATLANTA 13-6H PWB Ref Wellpath: ATLANTA 13-6H (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	10855.88	10833.88	22.00	10530.00	0.00	0.00	-77.69	566.50

Continental RESOURCES

Planned Wellpath Report

ATLANTA 13-6H (REV-D.0) PWP

BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	CONTINENTAL RESOURCES	Slot	SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)
Area	NORTH DAKOTA	Well	ATLANTA 13-6H
Field	WILLIAMS COUNTY	Wellbore	ATLANTA 13-6H 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 13-6H SECTION 05		0.00	0.00	0.00	1180204.17	421177.27	48°06'33.648"N	103°43'39.721"W	polygon
ATLANTA 13-6H SECTION 06		0.00	0.00	0.00	1180204.17	421177.27	48°06'33.648"N	103°43'39.721"W	polygon
ATLANTA 13-6H SECTION 08		0.00	0.00	0.00	1180204.17	421177.27	48°06'33.648"N	103°43'39.721"W	polygon
ATLANTA 13-6H SECTION LINES		0.00	0.00	0.00	1180204.17	421177.27	48°06'33.648"N	103°43'39.721"W	polygon
ATLANTA 13-6H BHL ON PLAT REV-1 (1711'FNL & 500'FEL,SEC.05)		10533.00	181782.27	8620.04	1196433.65	602426.62	48°36'27.406"N	103°41'31.465"W	point
ATLANTA 13-6H BHL REV-2(1711'FNL & 200'FEL,SEC.05)		10533.00	-1216.04	8920.00	1189064.79	419588.58	48°06'21.627"N	103°41'28.293"W	point
ATLANTA 13-6H BHL REV-3(1711'FNL & 200'FEL,SEC.05)		10547.00	-1216.00	8855.90	1189000.75	419591.31	48°06'21.628"N	103°41'29.238"W	point
1) ATLANTA 13-6H BHL REV-4 (1711'FNL & 200'FEL,SEC.05)	19234.09	10547.00	-1216.00	8867.00	1189011.84	419590.84	48°06'21.628"N	103°41'29.074"W	point
ATLANTA 13-6H HARDLINES(500'N/W & 200'S/E)		10547.00	19.96	0.00	1180205.01	421197.21	48°06'33.845"N	103°43'39.721"W	polygon

SURVEY PROGRAM - Ref Wellbore: ATLANTA 13-6H PWB Ref Wellpath: ATLANTA 13-6H (REV-D.0) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
22.00	21000.00	NaviTrak (Standard)		ATLANTA 13-6H PWB

Continental RESOURCES

Planned Wellpath Report

ATLANTA 13-6H (REV-D.0) PWP

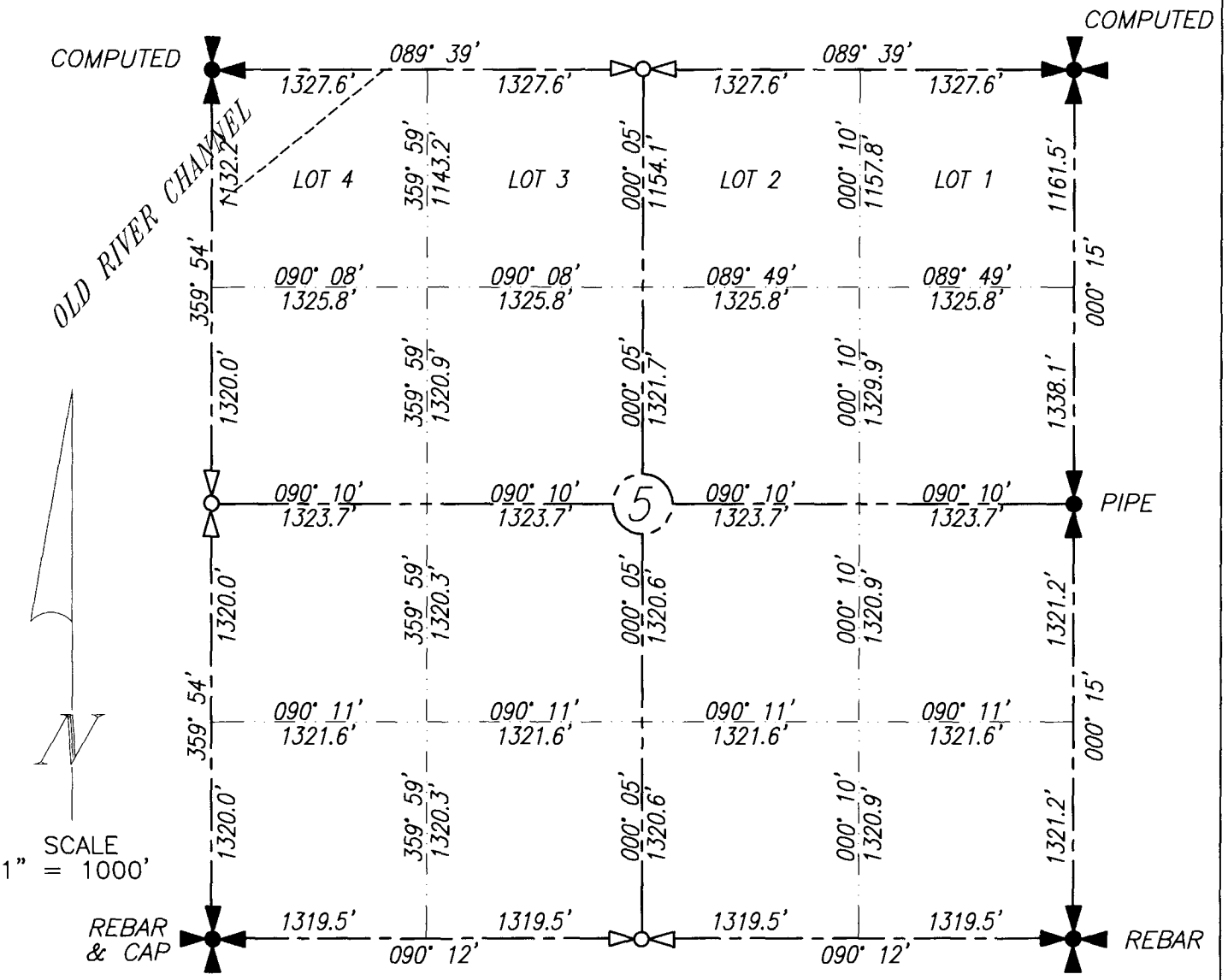
BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	**CONTINENTAL RESOURCES**	Slot	**SLOT#13 ATLANTA 13-6H(495'FNL & 1440'FWL,SEC.06)**
Area	**NORTH DAKOTA**	Well	**ATLANTA 13-6H**
Field	**WILLIAMS COUNTY**	Wellbore	**ATLANTA 13-6H PWB**
Facility	**SEC.06-T153N-R101W**		

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
22.00	0.000	97.809	22.00	Tie On
9957.04	0.000	97.809	9957.04	End of Tangent
10855.88	89.884	97.809	10530.00	End of Build
19234.09	89.884	97.809	10547.00	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.

JOHN PAULSON
REGISTERED LAND SURVEYOR
L.S. 3366

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

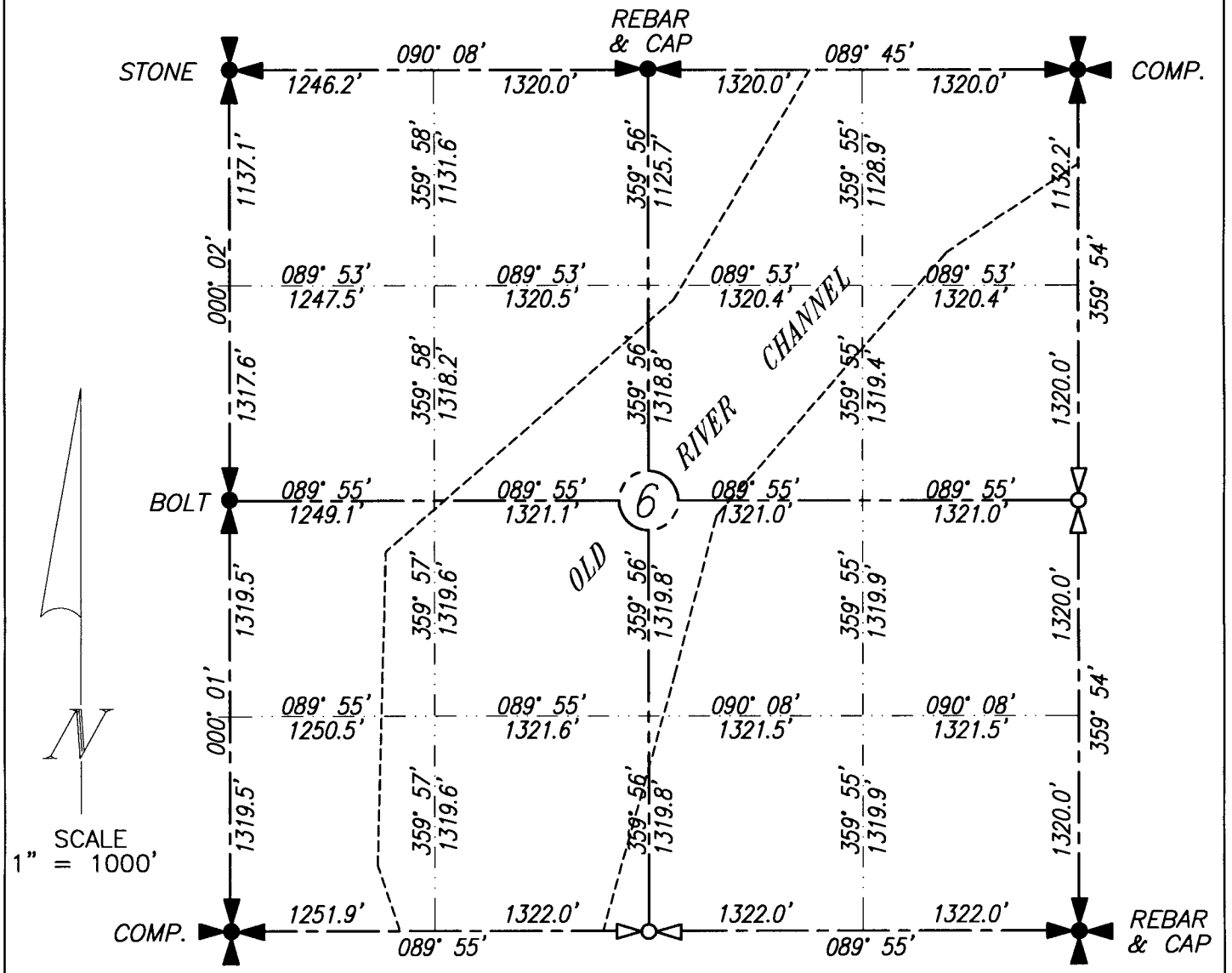
11-12

JOHN PAULSON, 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.

JOHN PAULSON
REGISTERED
3366
NORTH DAKOTA

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.

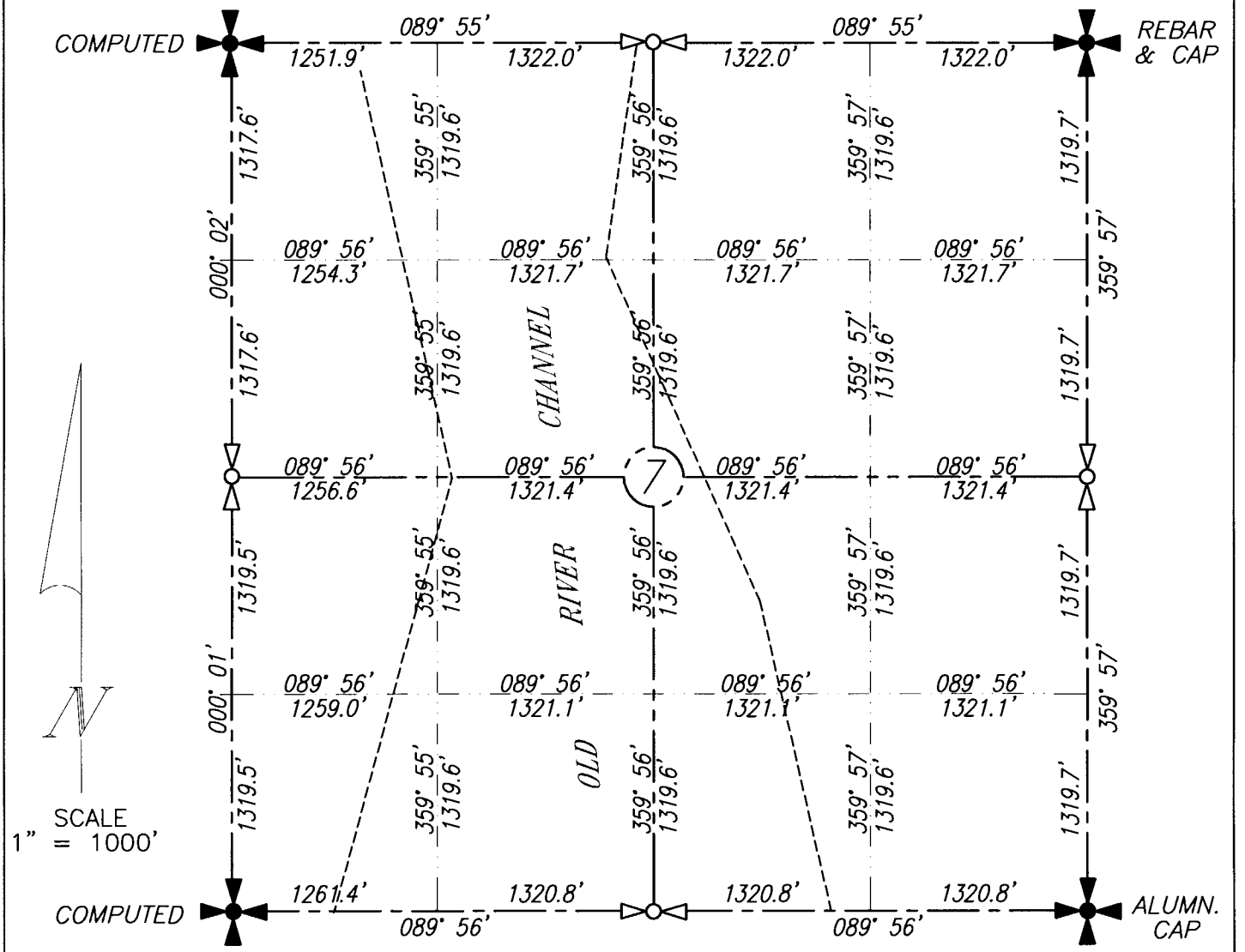
12-12

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 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.

JOHN PAULSON REGISTERED LAND SURVEYOR L.S. 3366 NORTH DAKOTA

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.

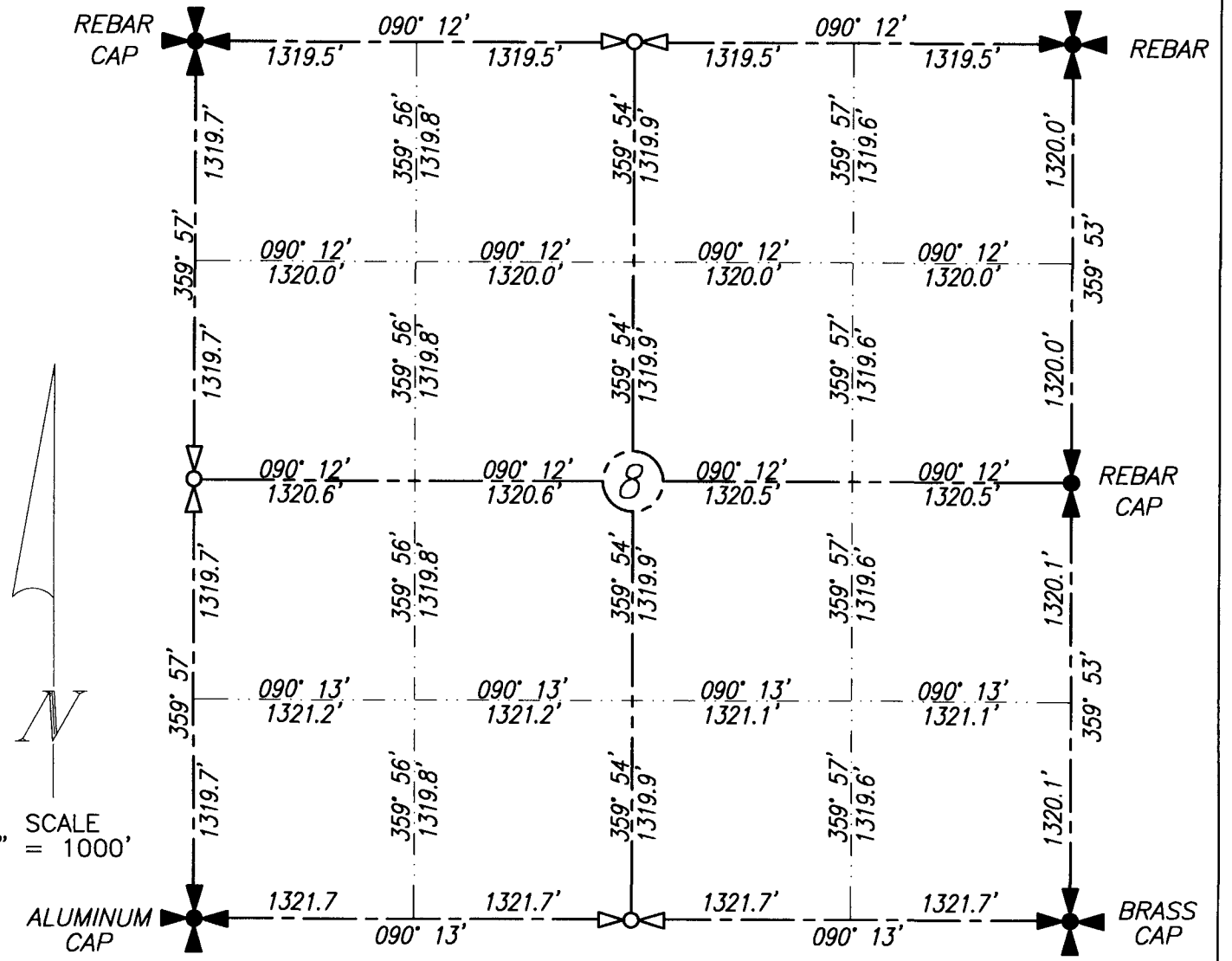
JOHN PAULSON R.L.S. 3366

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

PROJECT NO. 12-10

REVISED: 5-2-2012

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

JOHN PAULSON REGISTERED LAND SURVEYOR L.S. 3366 5-3-12 NORTH DAKOTA

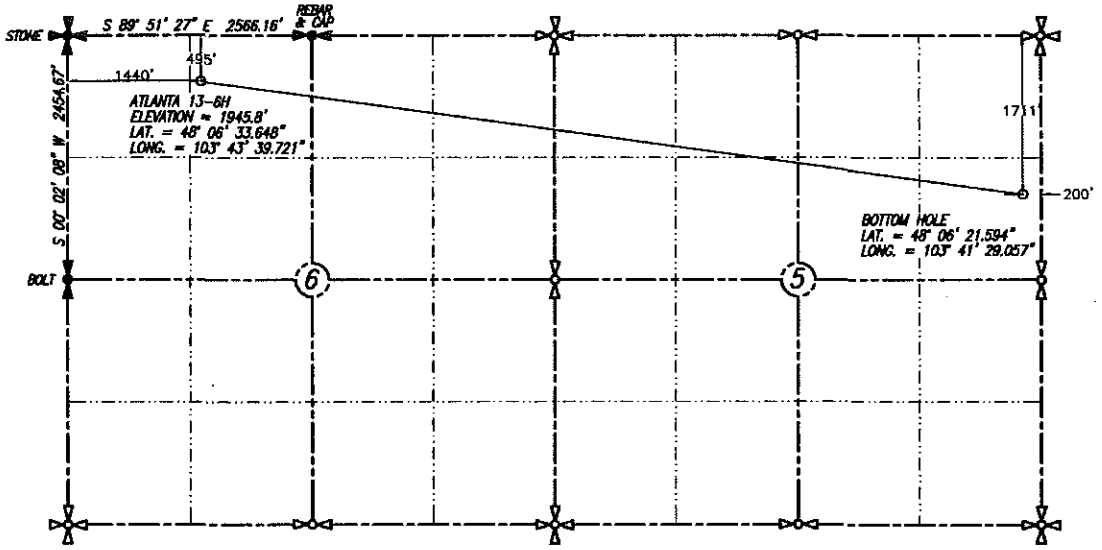
JOHN PAULSON R.L.S. 3366

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

PROJECT NO. 12-10

REVISED: 5-4-2012

BOTTOM HOLE LOCATION PLAT
CONTINENTAL RESOURCES INC.
ATLANTA 13-6H
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA
495' FNL & 1440' FWL



N

SCALE
1" = 2000'

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 PAULSON 5-4-12

JOHN PAULSON P.L.S. 3366

JOHN PAULSON
REGISTERED
LAND
SURVEYOR
L.S. 3366
NORTH DAKOTA

DATE STAKED: 2-9-2012

BASIS OF VERTICAL DATUM:
NAVD 1988 GEOID 09

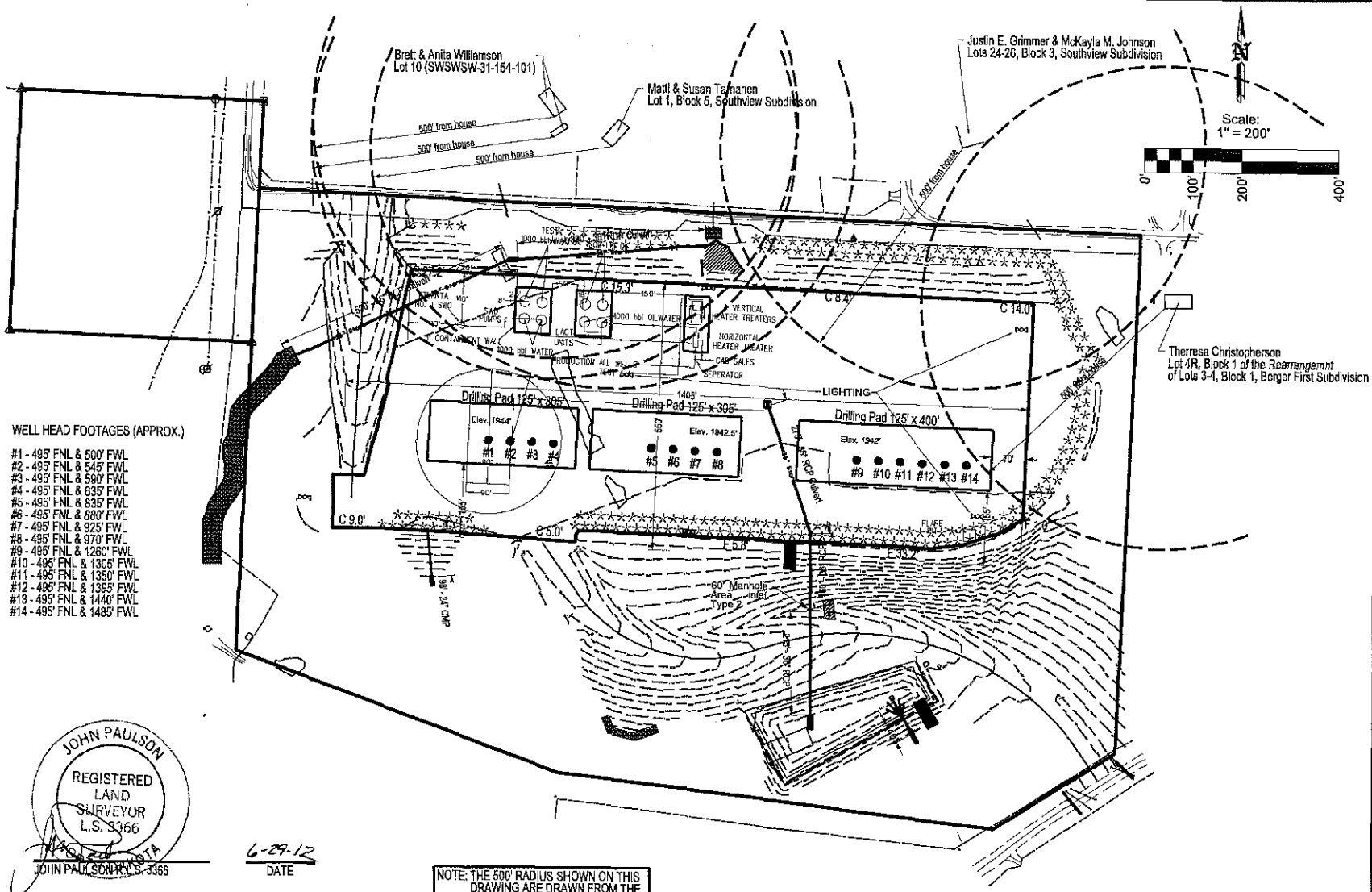
PERSON AUTHORIZING SURVEY;
CHAD NEWBY

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



DESIGNED BY: JWH
DRAWN BY:
DATE PRINTED: 5/16/12

REVISION	DATE
	6/29/12

SHEET DESCRIPTION: Production Facility Layout
PROJECT NAME: Atlanta Site
PROJECT NO.: N12B10

Brosz
ENGINEERING, INC.
ARCHITECTURE ENGINEERING SURVEYING
519 S. Main, Box 357
Bowman, ND 58623
PH: 701.523.3340

Spill Trail[illegible]nventory

(To be Checked After Each Use)

Supplies	Quantity	Actual
Personal Protection		
Trauma/1st Aid Kit	1	
Eye Wash	1	
Hand Cleaner	2	
Nitrile Gloves (L & XL Case)	2	
FRC Rain Coat - Extra Large	3	
FRC Rain Coat - Large	3	
Rubber Safety Toed Boots - Size 10	2	
Rubber Safety Toed Boots - Size 11	2	
Rubber Safety Toed Boots - Size 12	2	
FRC Tyvex Suits - Case XL	1	
Neoprene Chest Waders - L	1	
Neoprene Chest Waders - L	1	
Containment		
Absorbent (sphag)	10	
Absorbent Boom 3" x 10'	2	
Absorbent Boom 5" x 10'	10	
Absorbent Boom 8" x 10'	8	
Containment Boom - Fast Water	3	
Absorbent Pads (Hydrocarbon)	10	
Absorbent Pads (Universal)	5	
Absorbent Pillows 18" x 18" box	3	
Absorbent Pom Pom Cube	7	
Absorbent Sweep - 16" x 100' - Bag	5	
Miscellaneous		
Antifreeze	2	
Push Broom	2	
Shovels	2	
Rake	5	
Squeegees	2	
Scoop	2	
Spark Resistant Scoop	1	

Supplies	Quantity	Actual
Miscellaneous		
EnviroClean (5-gal units of concentrate)	2	
Duct Tape (Case)	3	
Flashlights	6	
Flood Lights	2	
Extension Cord 50' 12-gauge	5	
55-gal. Drums w/lids	2	
Large Trash Cans	2	
HD Drum Liners - boxes	2	
Hoses - Kit (Blue & Green)	5	
Plastic Buckets	5	
Propane Cylinders - 20-lb.	2	
Propane Weed Burner W/Hose	1	
Pump - Trash	2	
Pump - 115V Water Transfer	2	
Gas Powered Generator (3-5K Watt)	1	
Misc. Ratchet Straps	6	
Rope 1/2" x 100'	2	
Rope 1/4" x 50'	4	
Rope 3/8" x 100'	2	
Shop Towels - box	2	
Caulking Gun	2	
Silicon Tubes	10	
Metal Stakes/Spikes	8	
Metal T-Posts	6	
Bungee Cords	3	
Wire - 25' roll - smooth	1	
Fire Extinguisher	1	
Equipment Hooks	6	
Shelving	4	
Drawers	1	
Misc. Building Supplies	1	

Tabor, David

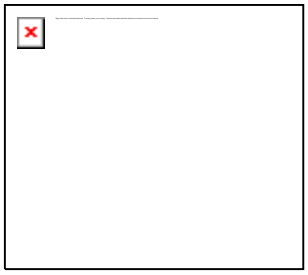
From: Becky Barnes <Becky.Barnes@clr.com>
Sent: Wednesday, June 06, 2012 1:46 PM
To: Tabor, David
Subject: Atlanta Pad Wells

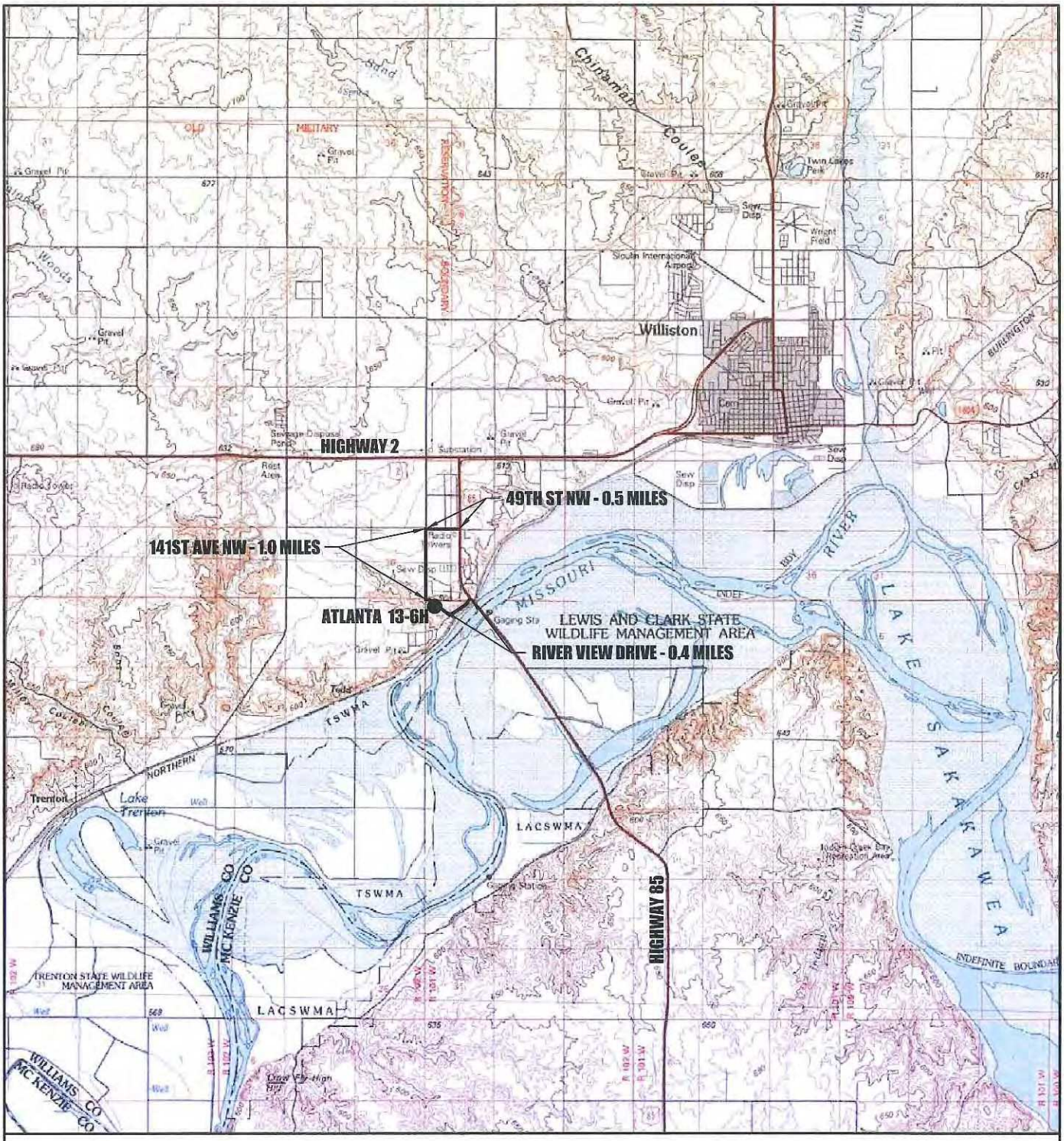
All cuttings for the Atlanta Pad wells will be hauled to the Tioga Prairie disposal.

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



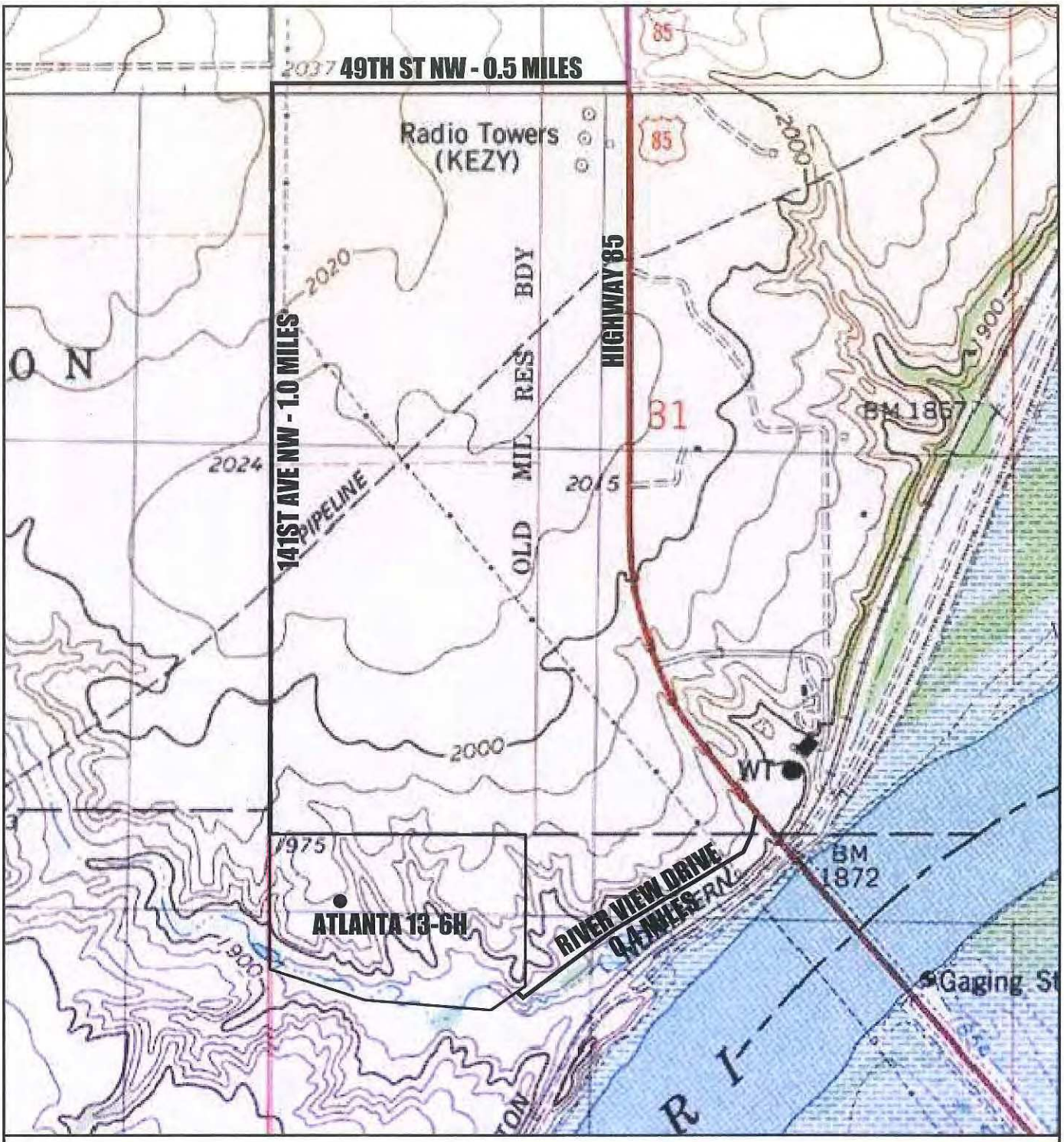


CONTINENTAL RESOURCES INC.

EXHIBIT 1

VICINITY MAP
PROPOSED ACCESS ROUTE

ATLANTA 13-6H
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA



CONTINENTAL RESOURCES INC.

EXHIBIT 2

QUAD ACCESS

ATLANTA 13-6H
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA

N

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.

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 21st day of November 2011, 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, 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.

Notary Public

Garfield County, Oklahoma

My Commission Expires: 7/5/2015

Commission No.: 11006023

BECKY BARNES NOTARY # 11006023 EXP. 7/5/2015 PUBLIC STATE OF OKLAHOMA

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 M. Williamson
Brett M. Williamson

Affiant:

x Anita J. 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

MICHAEL J. KUHN
Notary Public
State of North Dakota
My Commission Expires Oct. 4, 2017

640.825

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

SPRING CHASTEEN
NOTARY PUBLIC - MINNESOTA
MY COMMISSION EXPIRES 01/31/16

651.825

Continental
RESOURCES

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.

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

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.

Notary Public

Garfield County, Oklahoma

My Commission Expires: 7/5/2015

Commission No.: 11006023

BECKY BARNES NOTARY # 11006023 EXP. 7/5/2015 PUBLIC STATE OF OKLAHOMA

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 safety 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	WILLIAMS COUNTY
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	McKenzie COUNTY
AMBULANCE	911
FIRE	911
POLICE	911 OR 701-842-2400
McKenzie COUNTY SHERIFF DISPATCH	911

BUREAU OF LAND MANAGEMENT	DICKINSON, ND
OFFICE REPRESENTATIVE	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 (S02), 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:	The Chances for Life are:
1 Minute	98 out of 100
2 Minutes	92 out of 100
3 Minutes	72 out of 100
4 Minutes	50 out of 100
5 Minutes	25 out of 100 *
6 Minutes	11 out of 100 *
7 Minutes	8 out of 100 *
8 Minutes	5 out of 100 *
9 Minutes	2 out of 100 *
10 Minutes	1 out of 100 *
11 Minutes	1 out of 1,000 *
12 Minutes	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,UOO psi and hardness up to Rc22 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

GRADE	H2S SERVICE
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

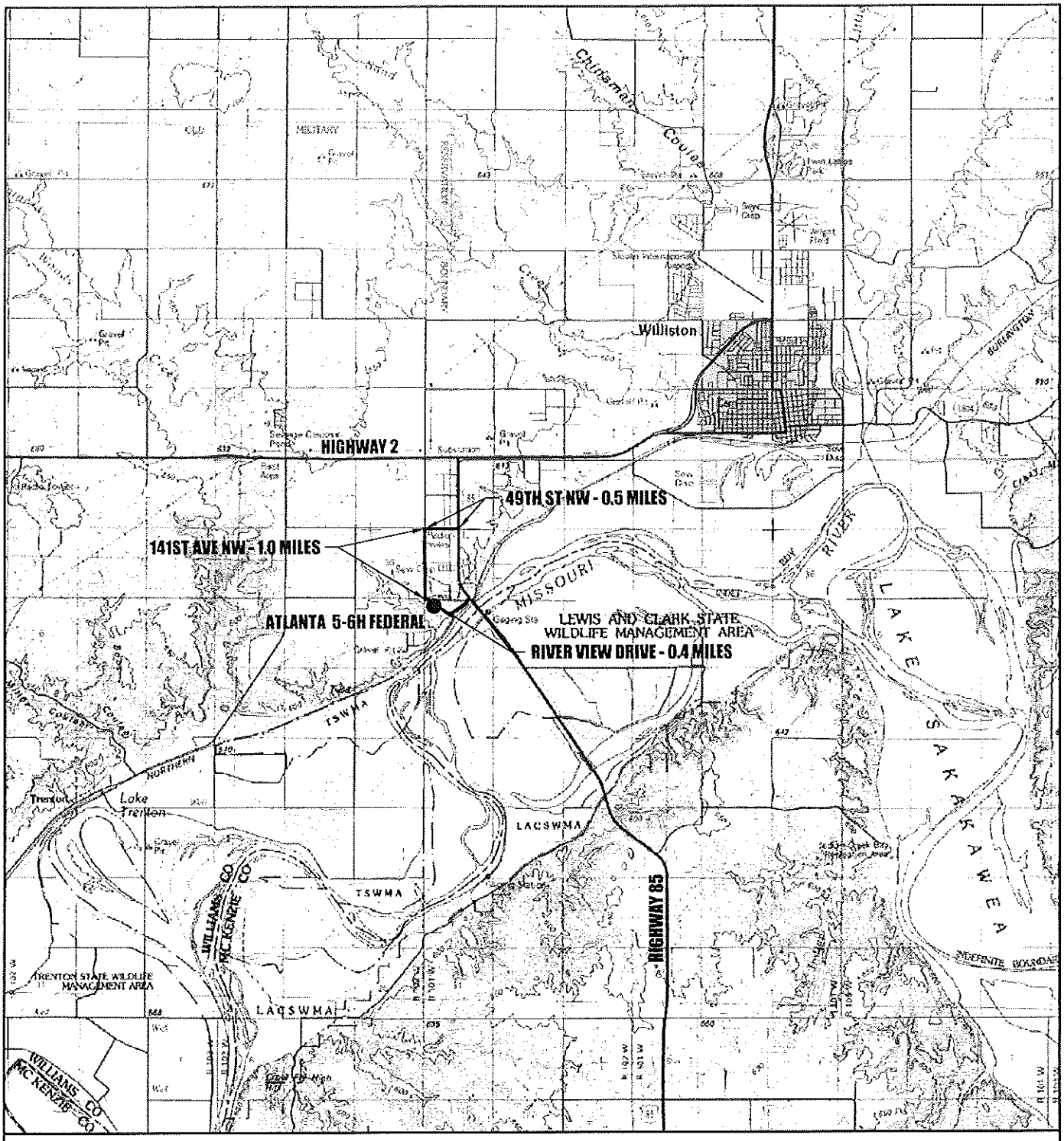
An overbalanced mud should be used to drill potential pay zone with necessary additives for all stabilization.

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.

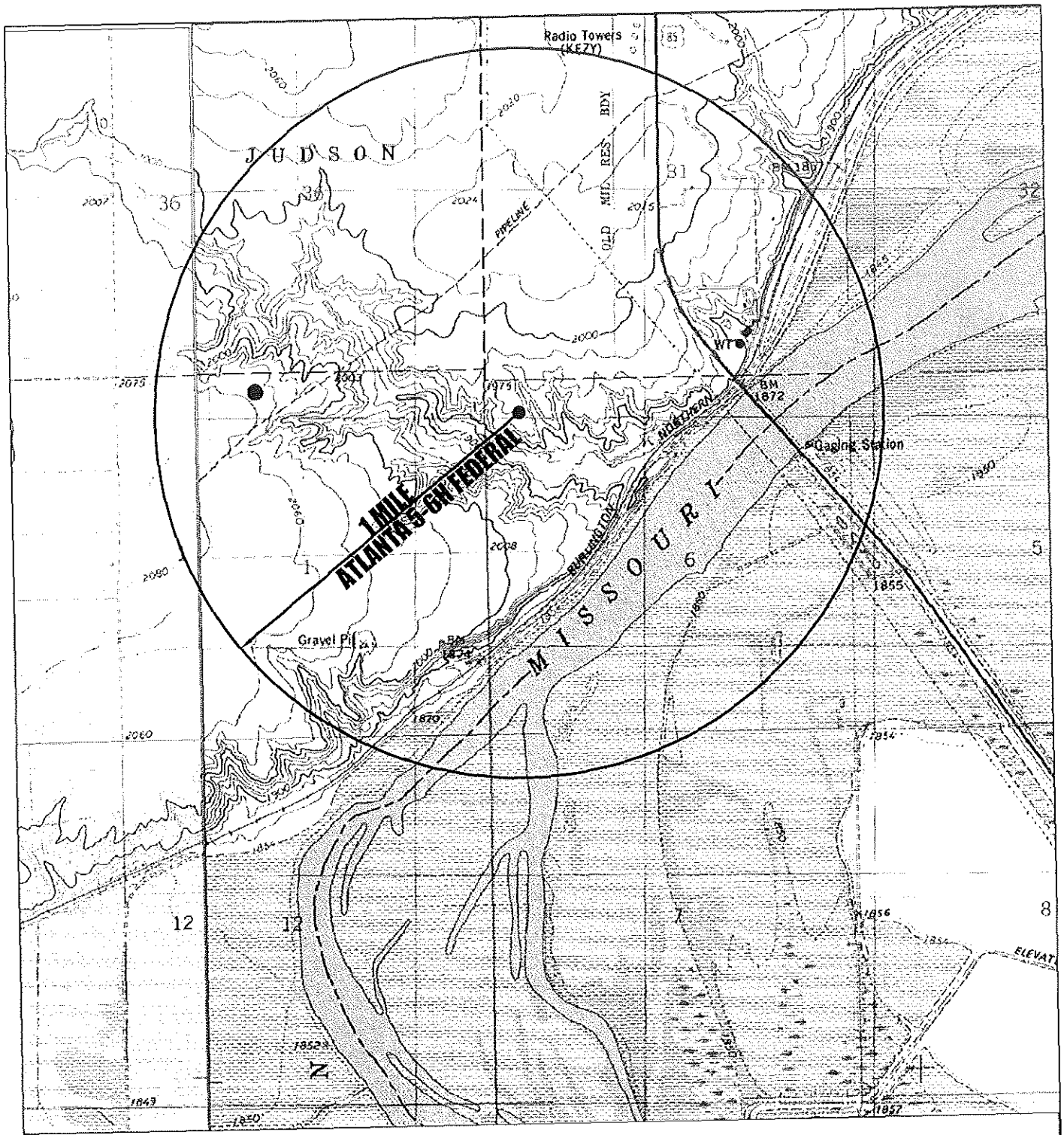


CONTINENTAL RESOURCES INC.

EXHIBIT 1

VICINITY MAP
PROPOSED ACCESS ROUTE

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



● = OIL WELL

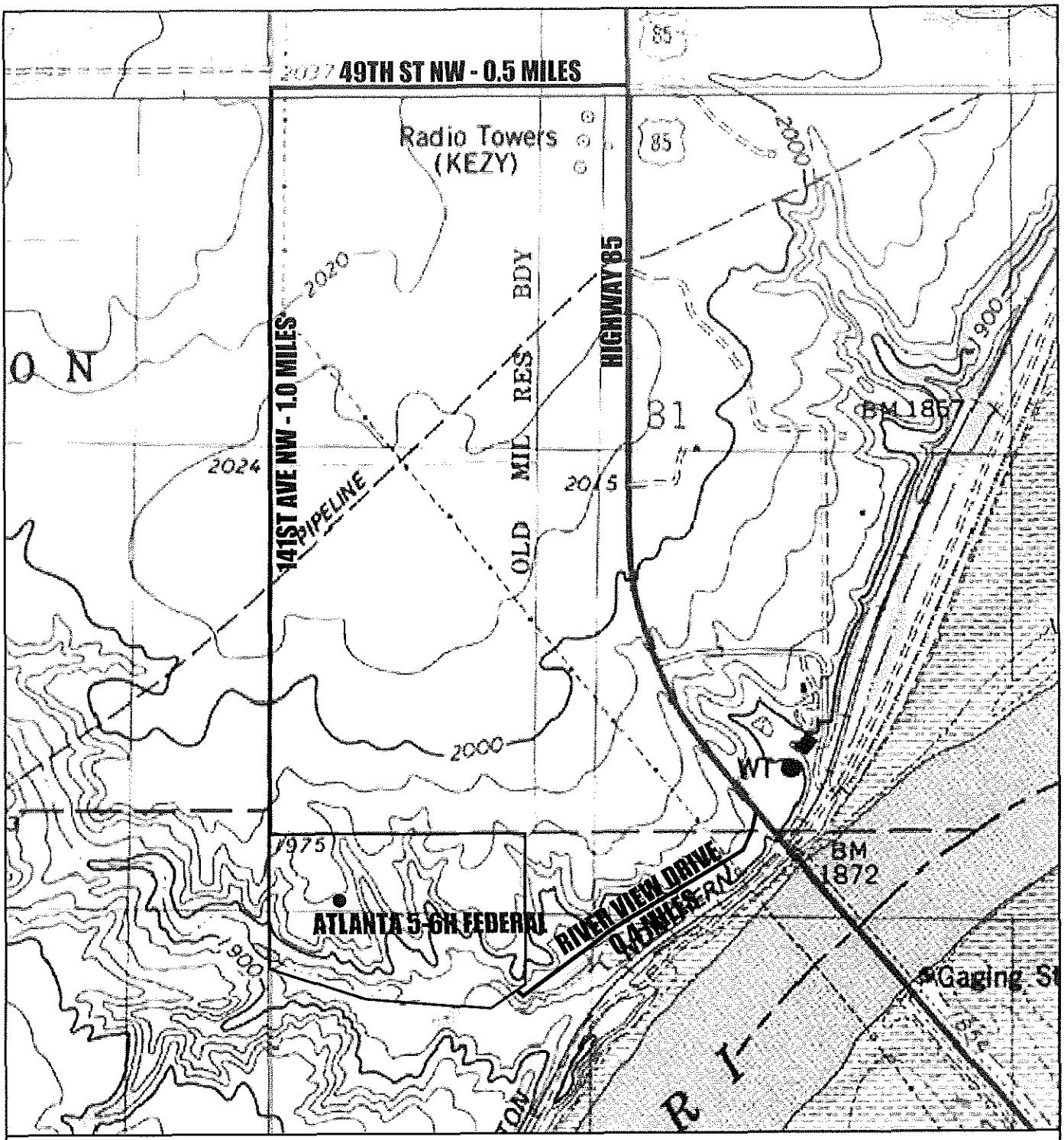
N

CONTINENTAL RESOURCES INC.

EXHIBIT 3

ONE-MILE RADIUS MAP

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



CONTINENTAL RESOURCES INC.

EXHIBIT 2

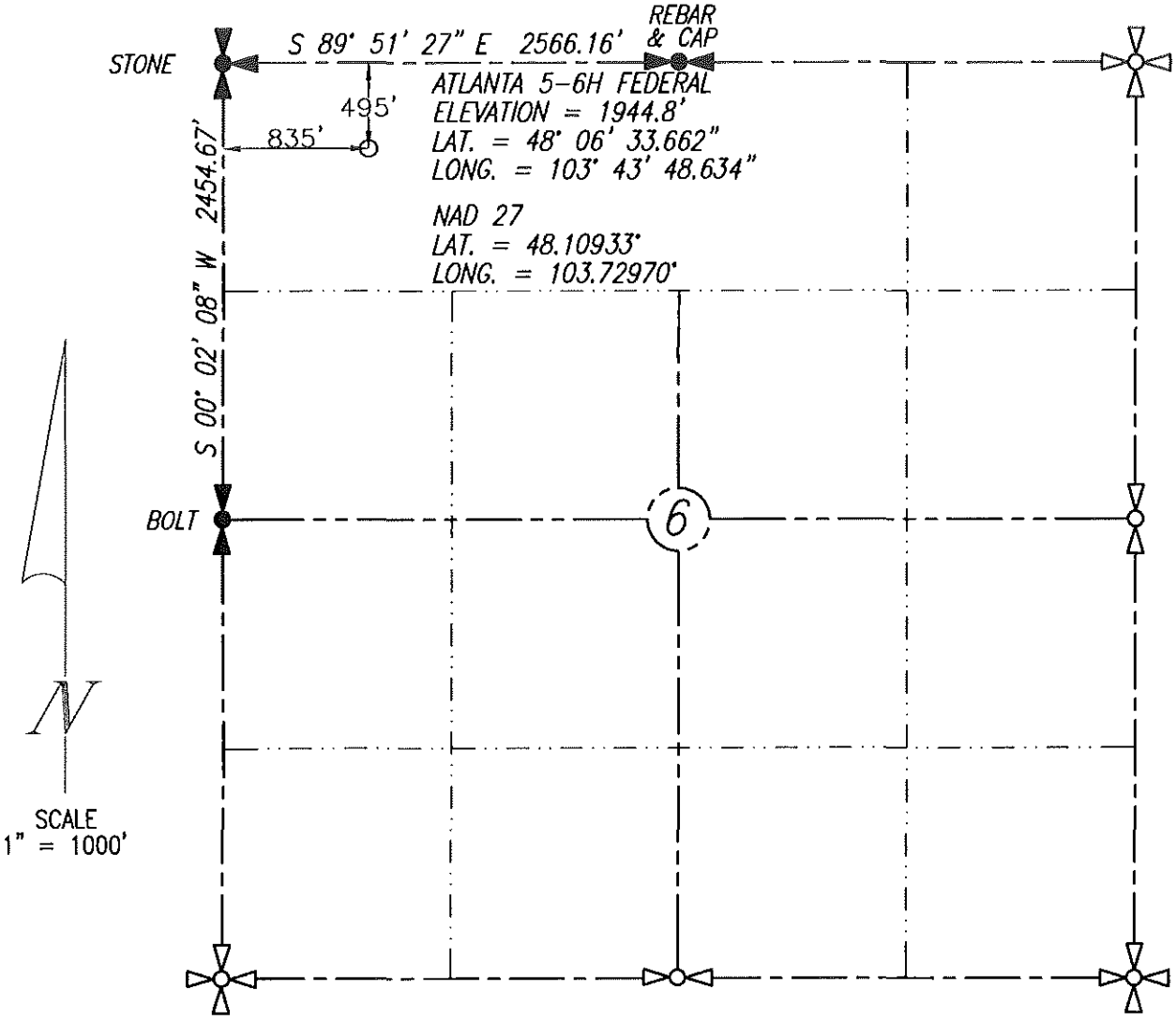
QUAD ACCESS

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

N

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

JOHN A. LESON REGISTERED LAND SURVEYOR L.S. 3366 NORTH DAKOTA

4-23-12

JOHN A. LESON R.L.S. 3366

DATE STAKED: 2-9-2012

BASIS OF VERTICAL DATUM: NAVD 1988 GEOID 09

PERSON AUTHORIZING SURVEY: CHAD NEWBY

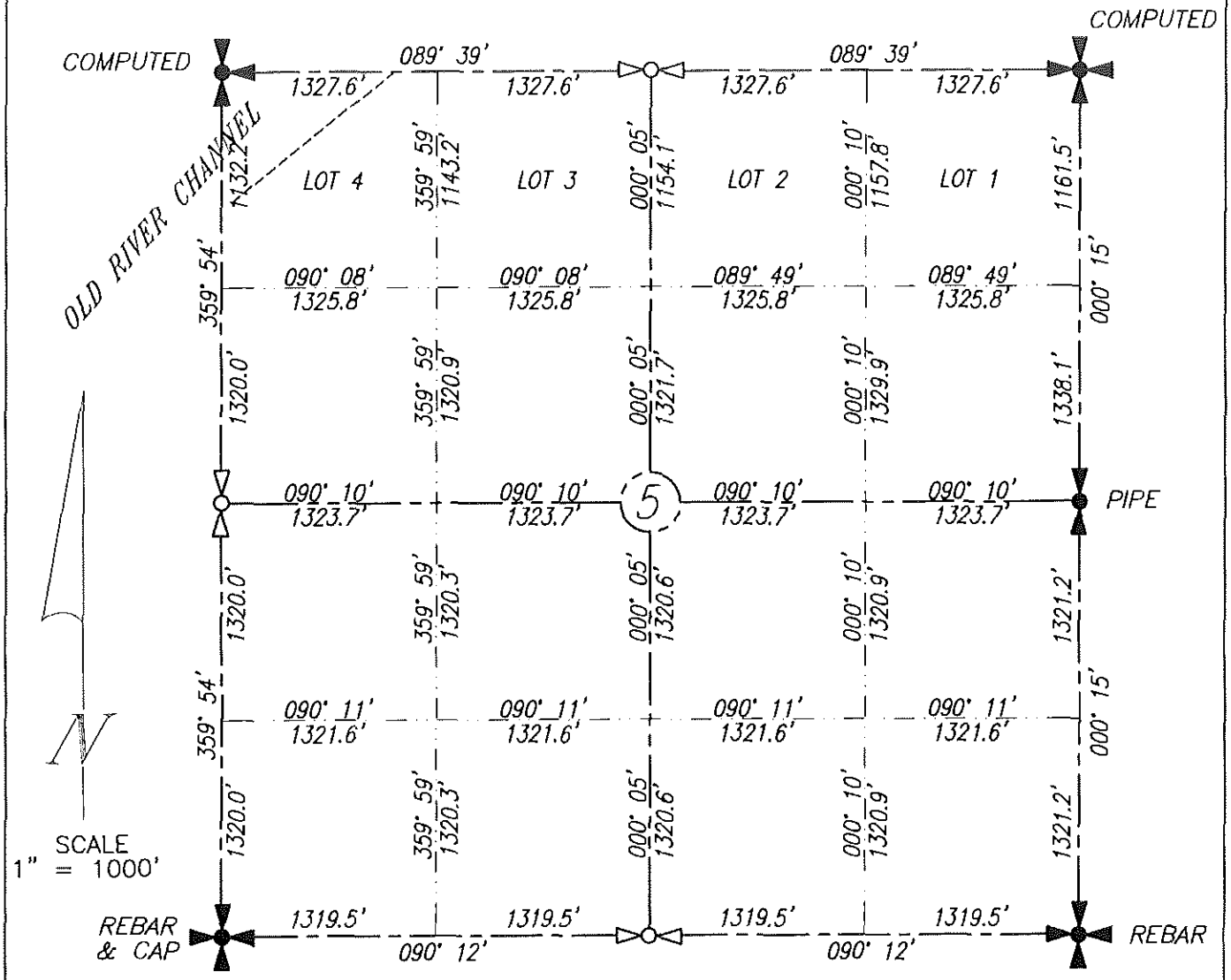
EXPLANATION AREA: NAD83(CORS96)

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 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 PAULSON REGISTERED SURVEYOR L.S. 3366 NORTH DAKOTA

4-9-12

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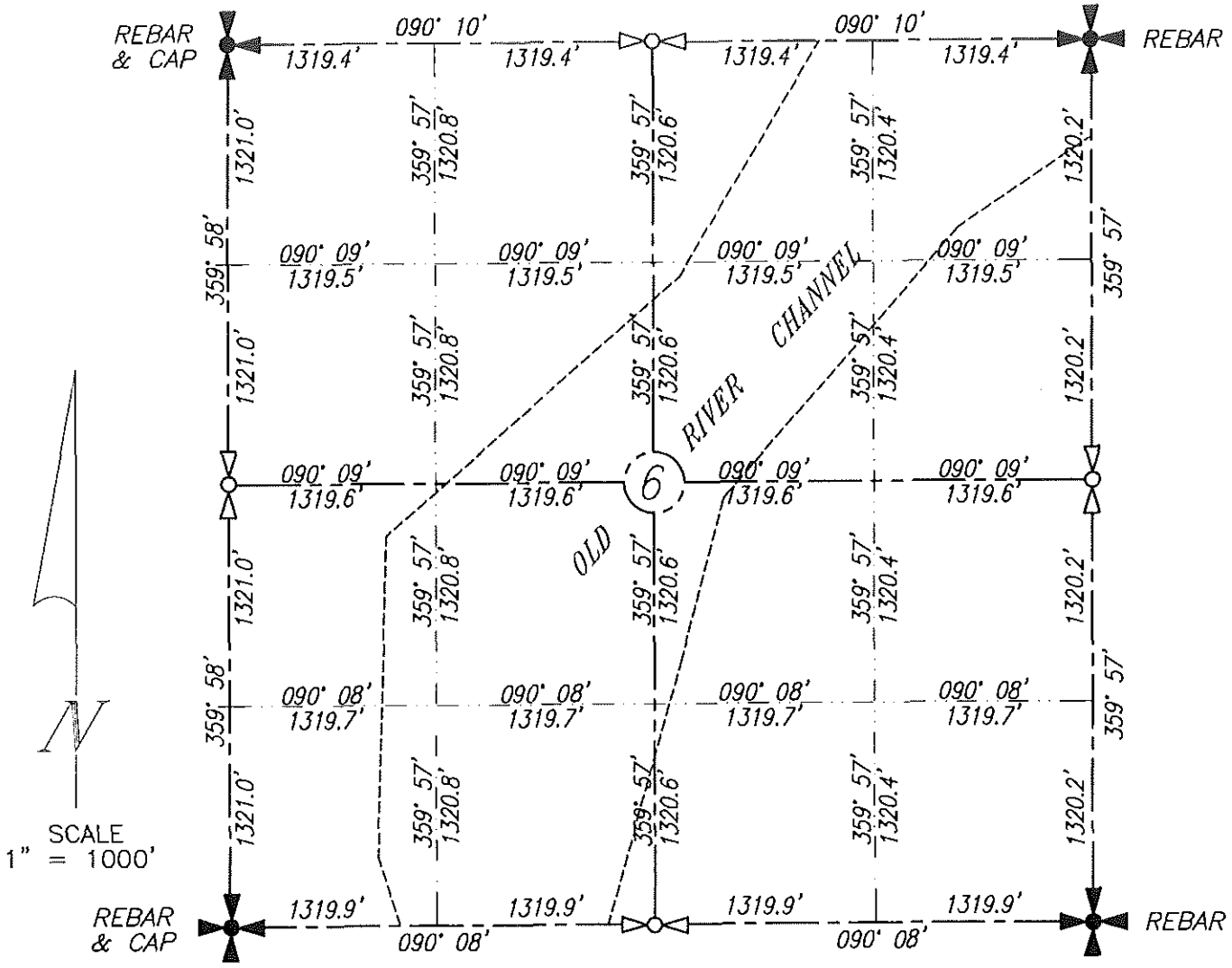
HORIZONTAL SECTION PLAT
CONTINENTAL RESOURCES INC.
ATLANTA 5-6H FEDERAL
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA
MCKENZIE COUNTY, NORTH DAKOTA



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.

JOHN PAULSON
REGISTERED
L.S. 3366
NORTH DAKOTA

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4-9-12

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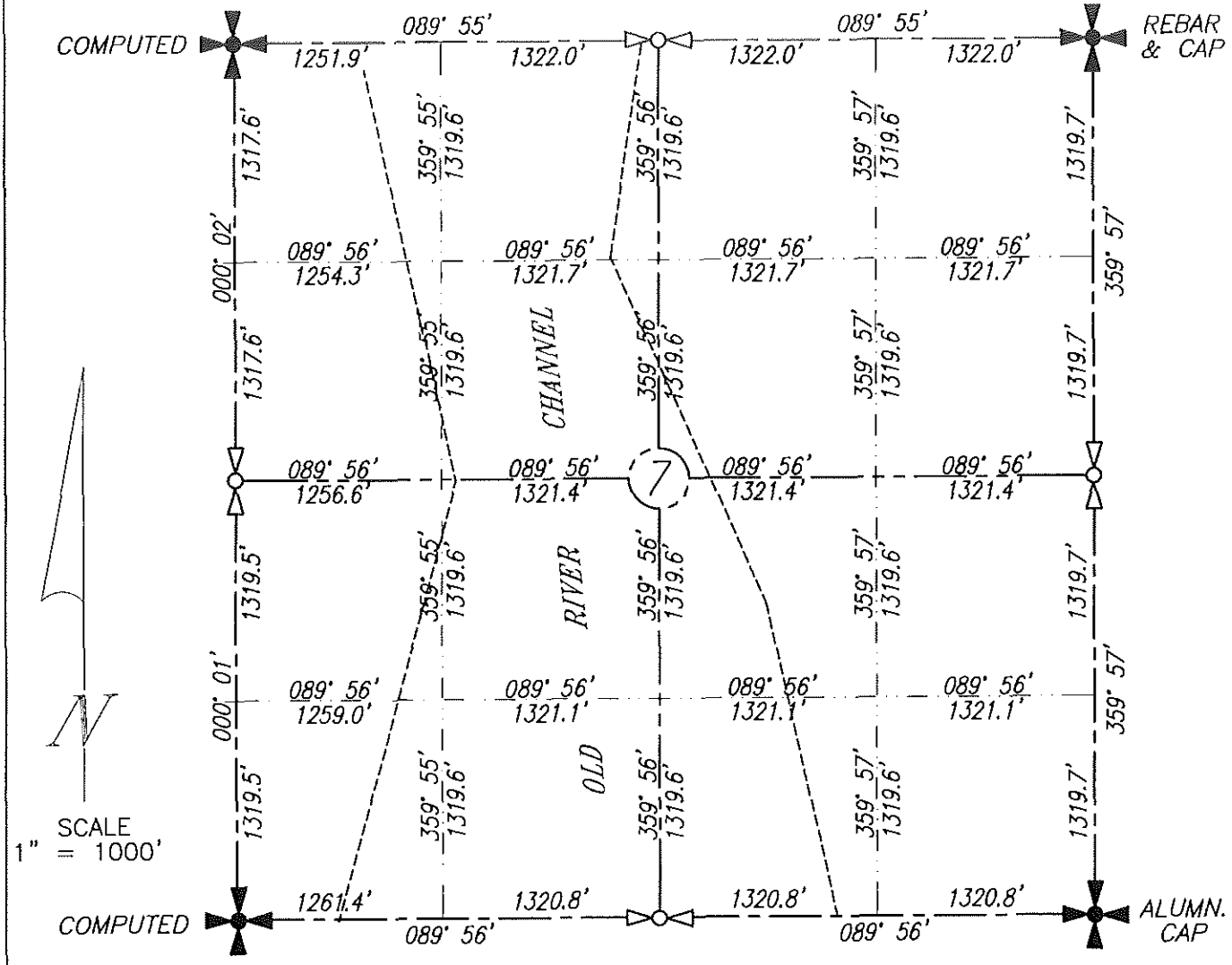
BOX 357
BOWMAN, N.D. 58623
PHONE: 701-523-3340
FAX: 701-523-5243

PROJECT NO. 12-10

HORIZONTAL SECTION PLAT
CONTINENTAL RESOURCES INC.
ATLANTA 5-6H FEDERAL
SECTION 7, T153N, R101W
MCKENZIE COUNTY, NORTH DAKOTA



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JOHN PAULSON
REGISTERED
3366
NORTH DAKOTA

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4-9-12

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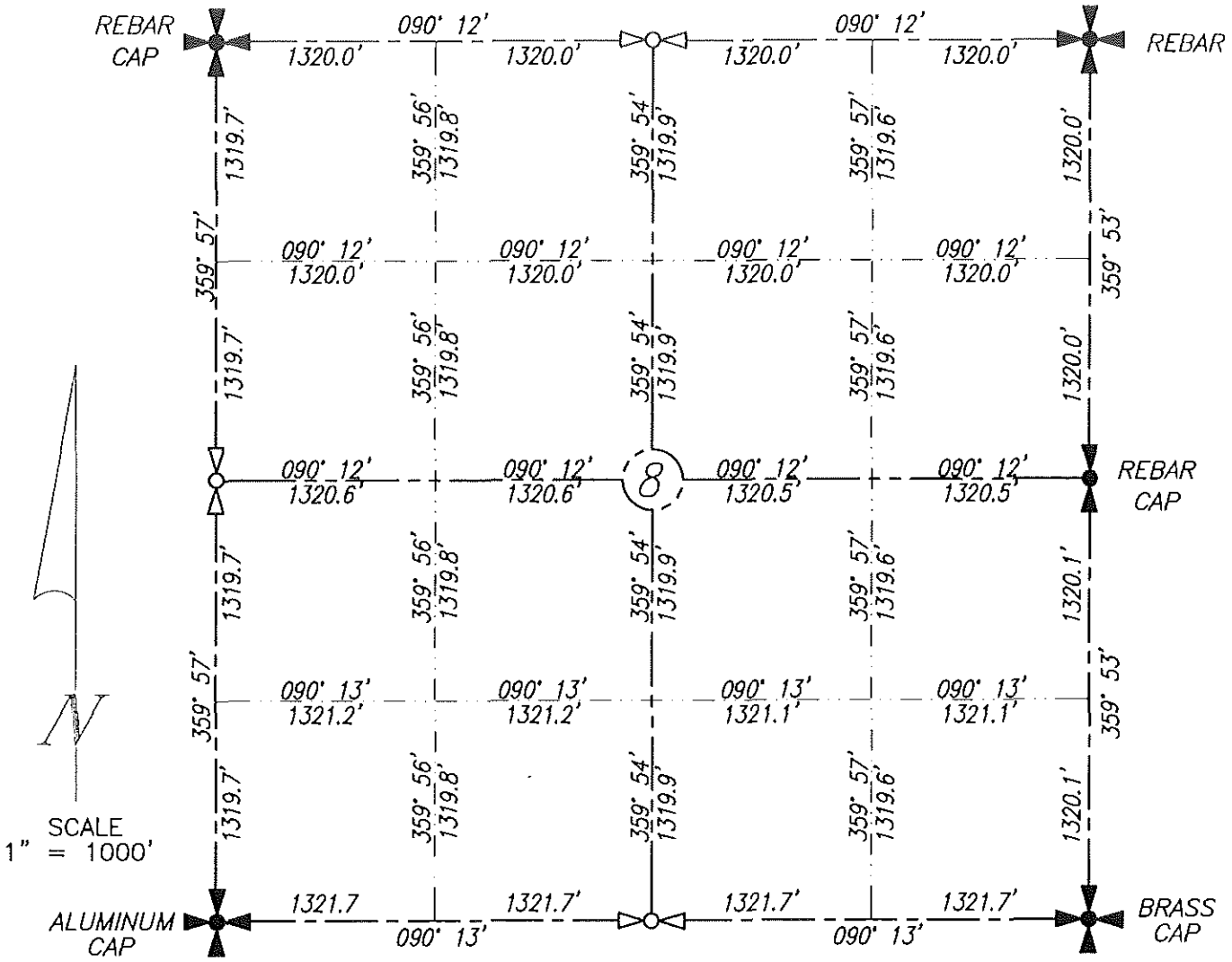
PROJECT NO. 12-10

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



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JOHN PAULSON
REGISTERED LAND SURVEYOR
L.S. 3366

4-9-12

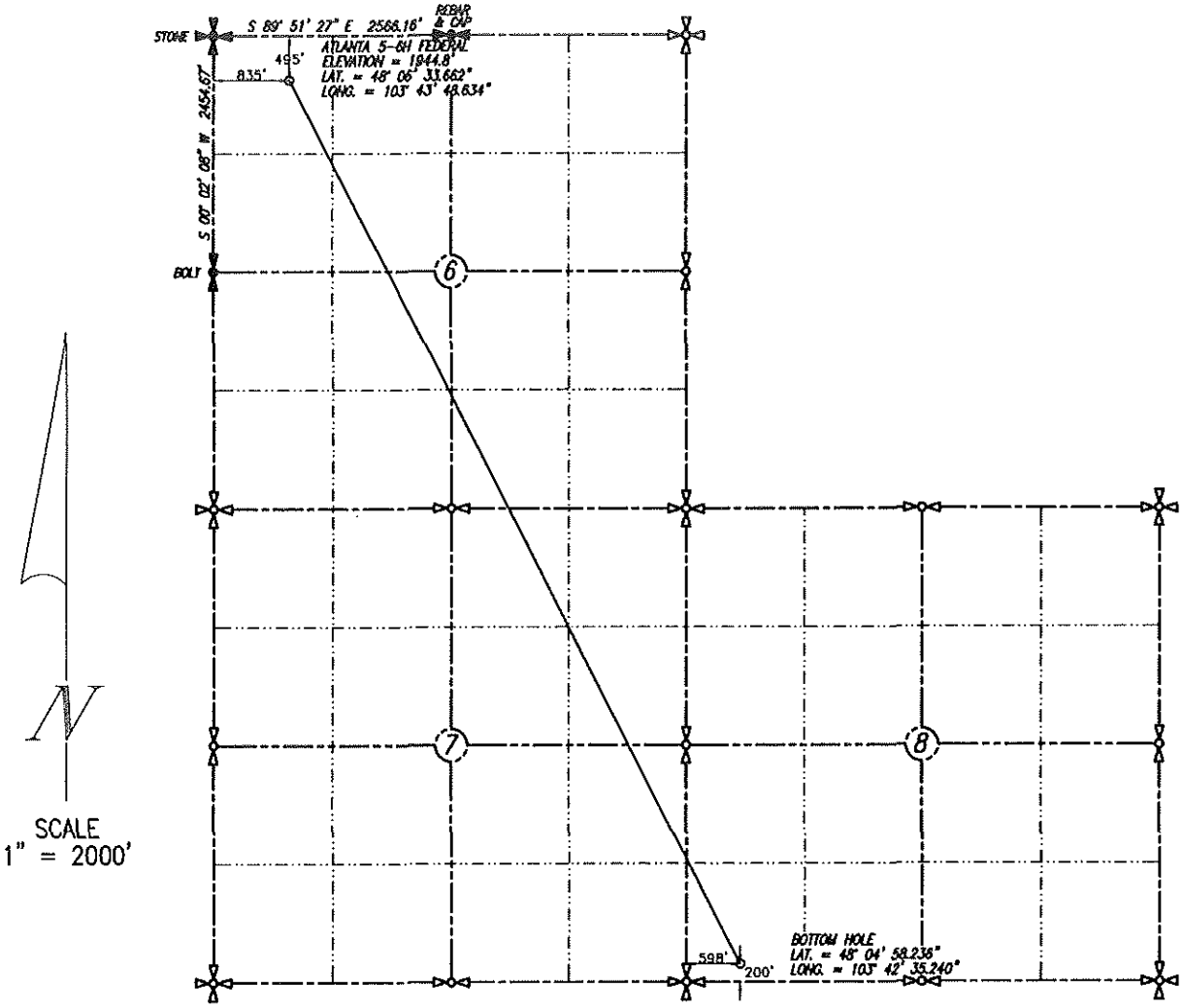
JOHN PAULSON, R.L.S. #3366
NORTH DAKOTA

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

PROJECT NO. 12-10

REVISED: 4-23-2012

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



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4-23-12

JOHN PAULSON R.L.S. 3366

JOHN PAULSON
REGISTERED
LAND
SURVEYOR
L.S. 3366
NORTH DAKOTA

DATE STAKED: 2-9-2012

BASIS OF VERTICAL DATUM:
NAVD 1988 GEOID 09

PERSON AUTHORIZING SURVEY;
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EXPLANATION AREA: NAD83(CORS96)

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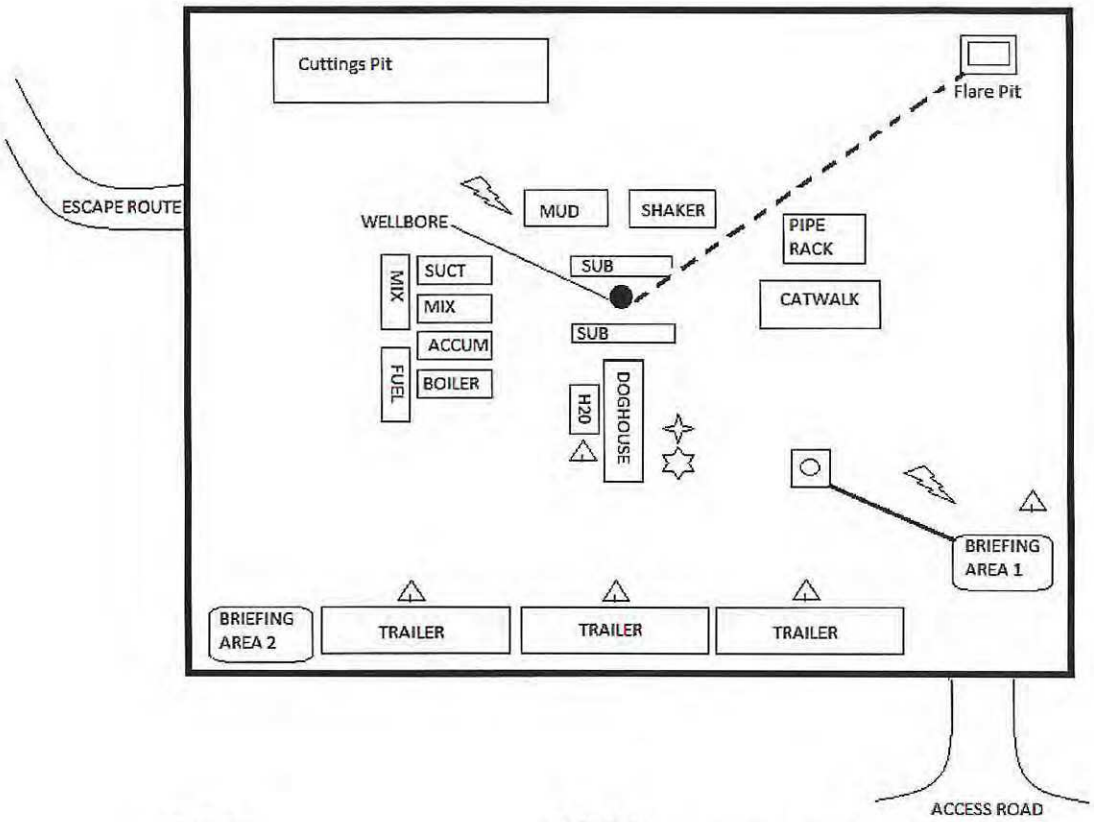
FAX: 701-523-5243

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: Continous 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 Location: Sec 6-T153N-R101W State: ND County: Williams	Site Plan of Safety Equipment

Continental
RESOURCES

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)
)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.

Becky Barnes
Notary Public

Garfield County, Oklahoma

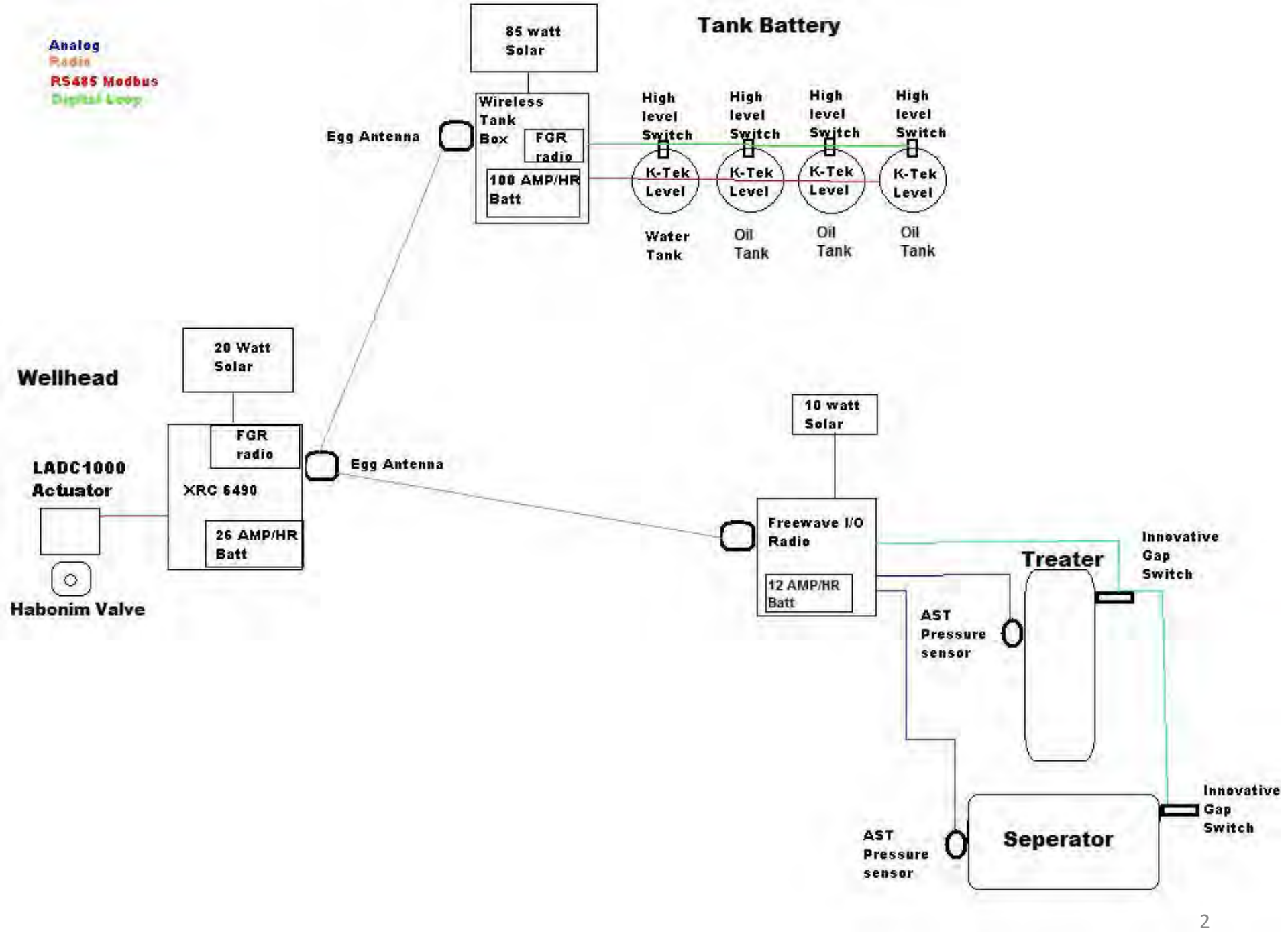
My Commission Expires: 7/5/2015

Commission No.: 11006023

BECKY BARNES NOTARY # 11006023 EXP. 11006023 PUBLIC STATE OF OKLAHOMA

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

Continental Resources Wellhead Automation


Analog
Radio
RS485 Modbus
Digital Loop
85 watt Solar
Tank Battery
Wireless Tank Box
FGR radio
100 AMP/HR Batt
Egg Antenna
High level Switch
High level Switch
High level Switch
High level Switch
K-Tek Level
K-Tek Level
K-Tek Level
K-Tek Level
Water Tank
Oil Tank
Oil Tank
Oil Tank
Wellhead
20 Watt Solar
FGR radio
XRC 6490
26 AMP/HR Batt
LADC1000 Actuator
Habonim Valve
Egg Antenna
10 watt Solar
Freewave I/O Radio
12 AMP/HR Batt
Treater
Innovative Gap Switch
AST Pressure sensor
Seperator
Innovative Gap Switch
AST Pressure sensor

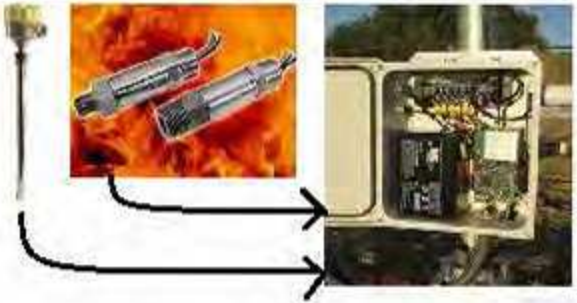
U003 Gap Switch and AST 4600 Transducer monitor pressures and liquid content of Flare and Sales Lines, transmitted to XRC via FreeWave Radio.

ABB TotalFlow XRC 6490

All well information is passed to your SCADA system via FreeWave Network (Future)

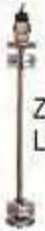
Winn-Marion's Well Head Kit with FGRIO Radio and DC Power Supply

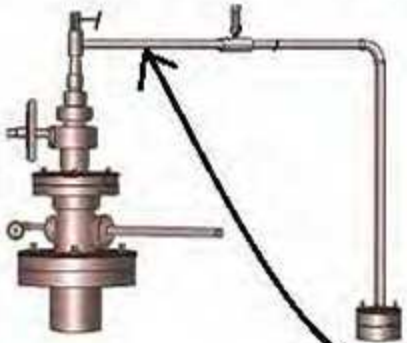
Tank Level information is passed from Tank Battery to XRC via FreeWave Radio



K-Tek MT5100 Guided Wave Radar

Z-Bend High Level Switch





ESD Valve Package
Standard Port Ball Valve rated to 6000 psi topped with a 12 VDC Actuator w/ Battery Backup

Winn-Marion, Inc.

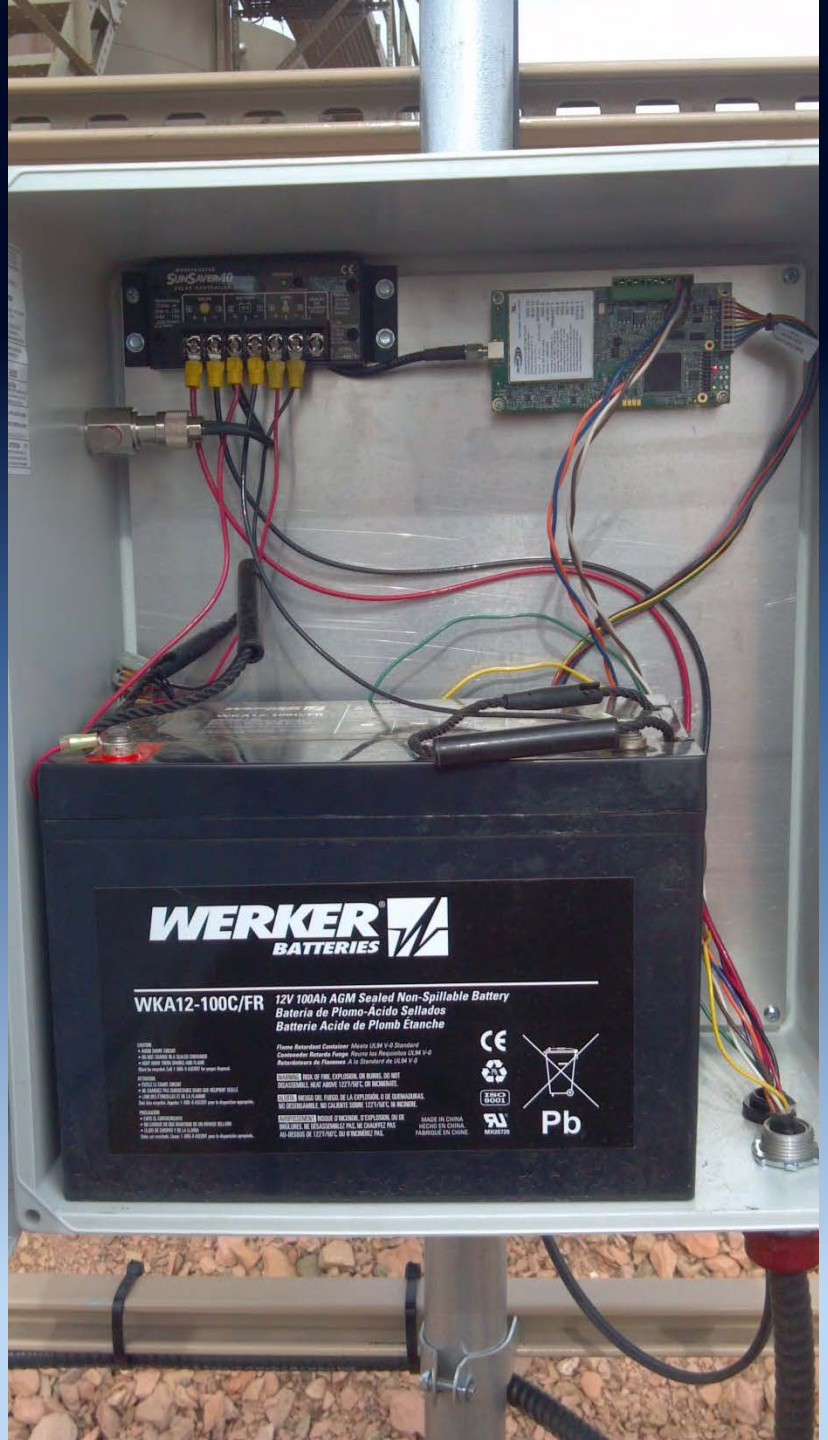
Tank Side

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

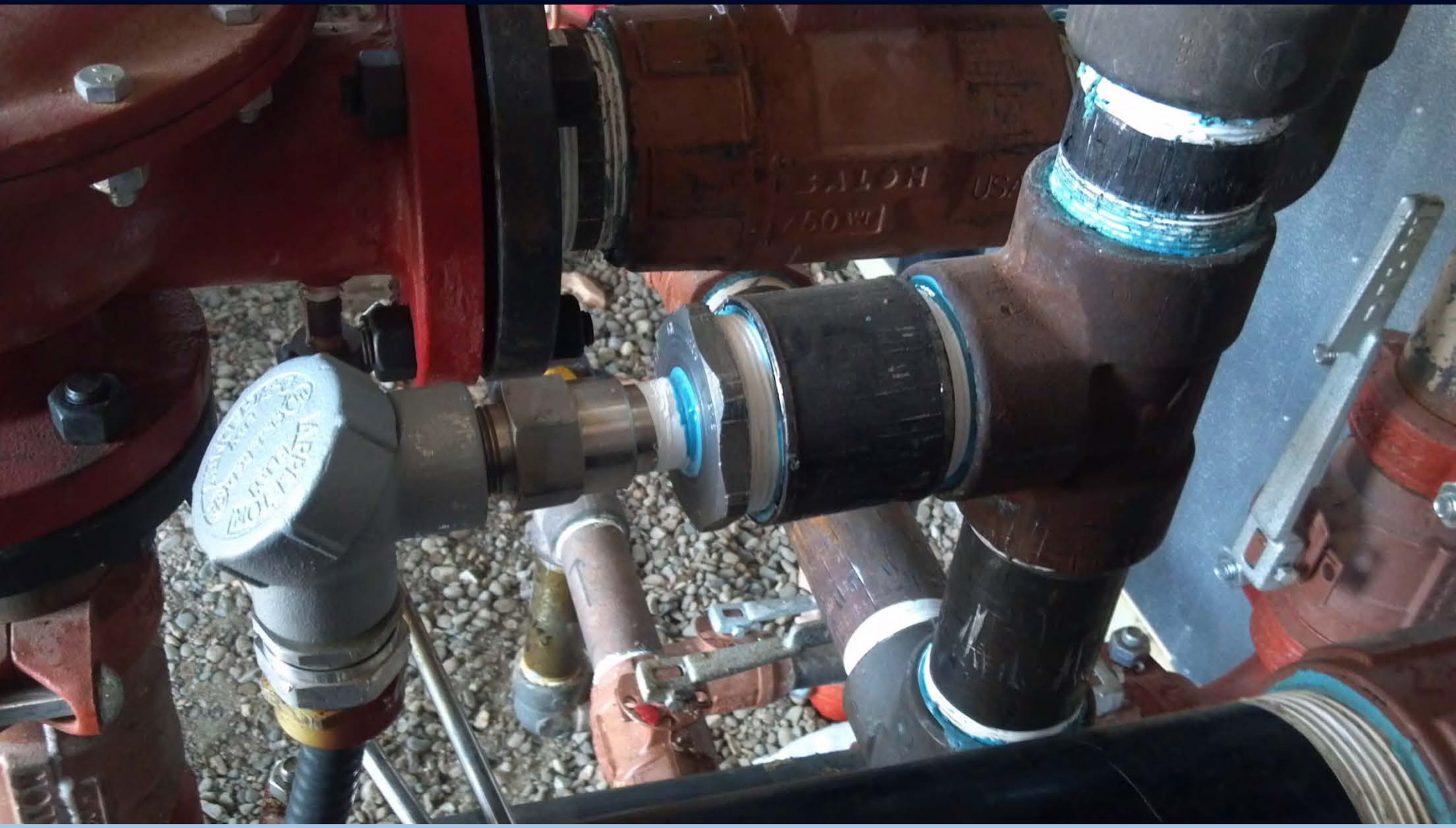
WM Automation Service, LLC

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

WM Automation Service, LLC

Wellhead

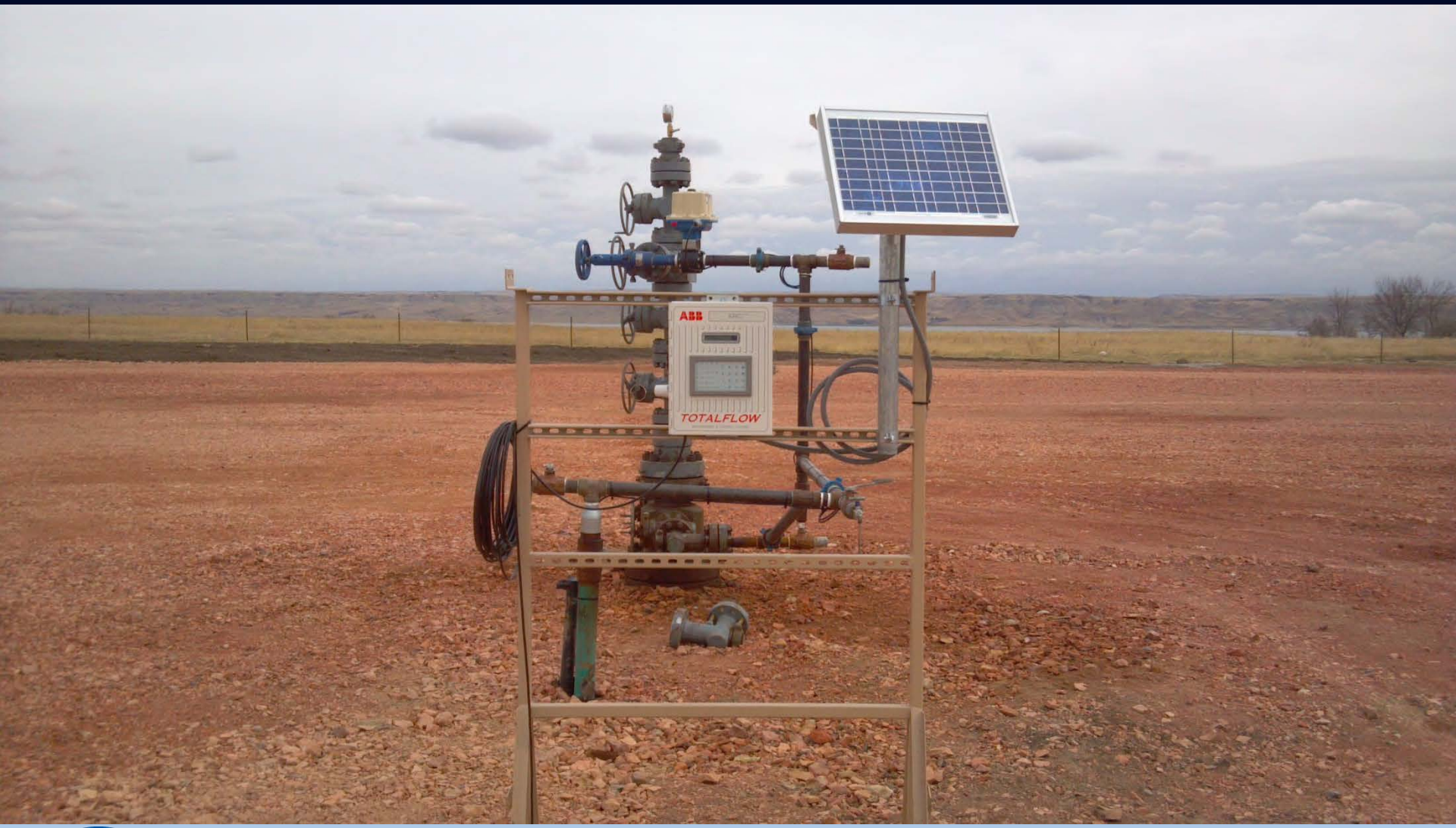
Contains the following Equipment

-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



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

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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

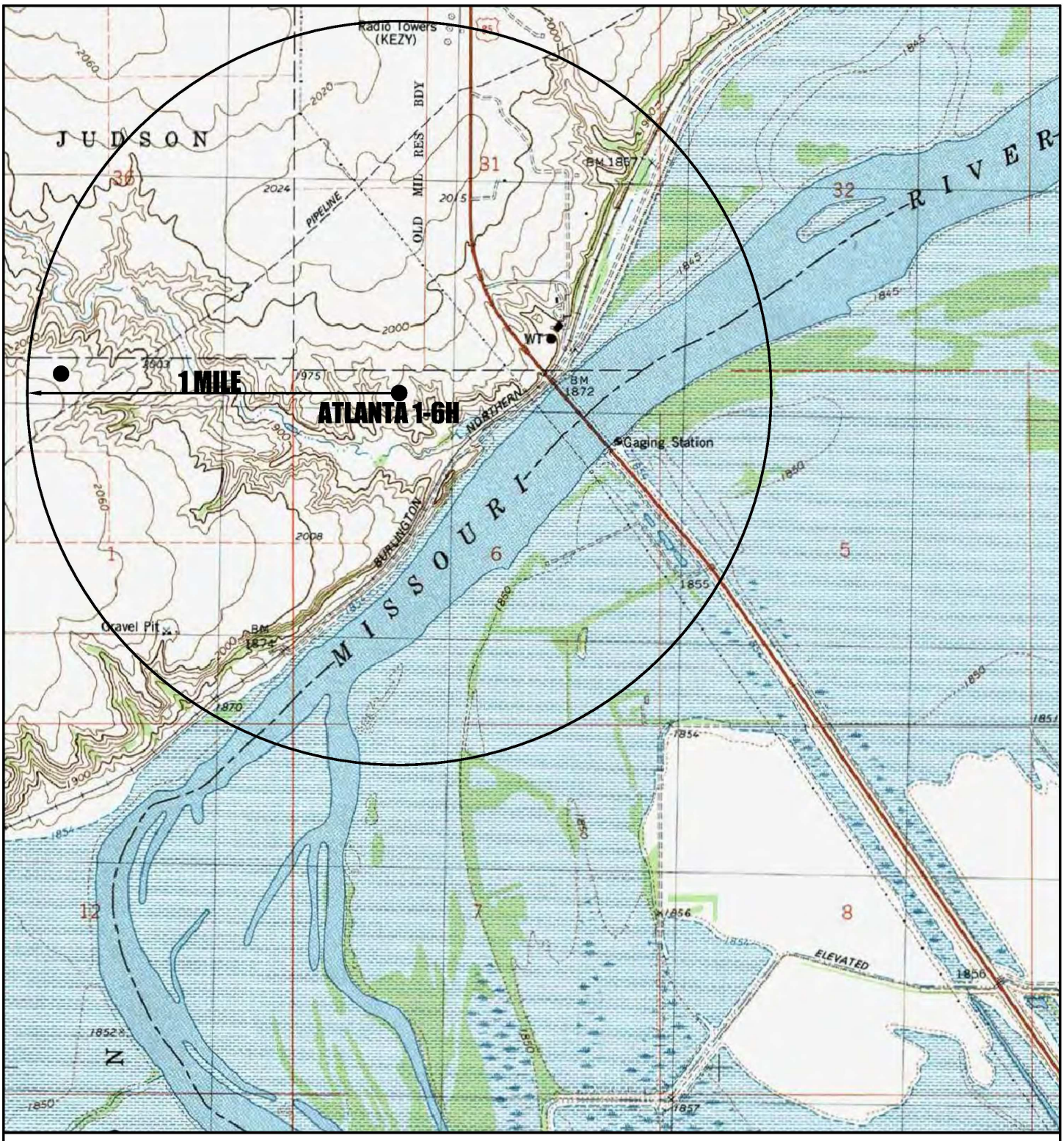
2.2 Proximity of Rigs to Navigable Waters. According to 40 CFR 112.7(e)(6)(i), mobile drilling equipment should be positioned or located so as to prevent spilled oil from reaching navigable waters. Depending on the location, catch basins or diversion structures may be necessary to intercept and contain 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.



● = OIL WELL

N

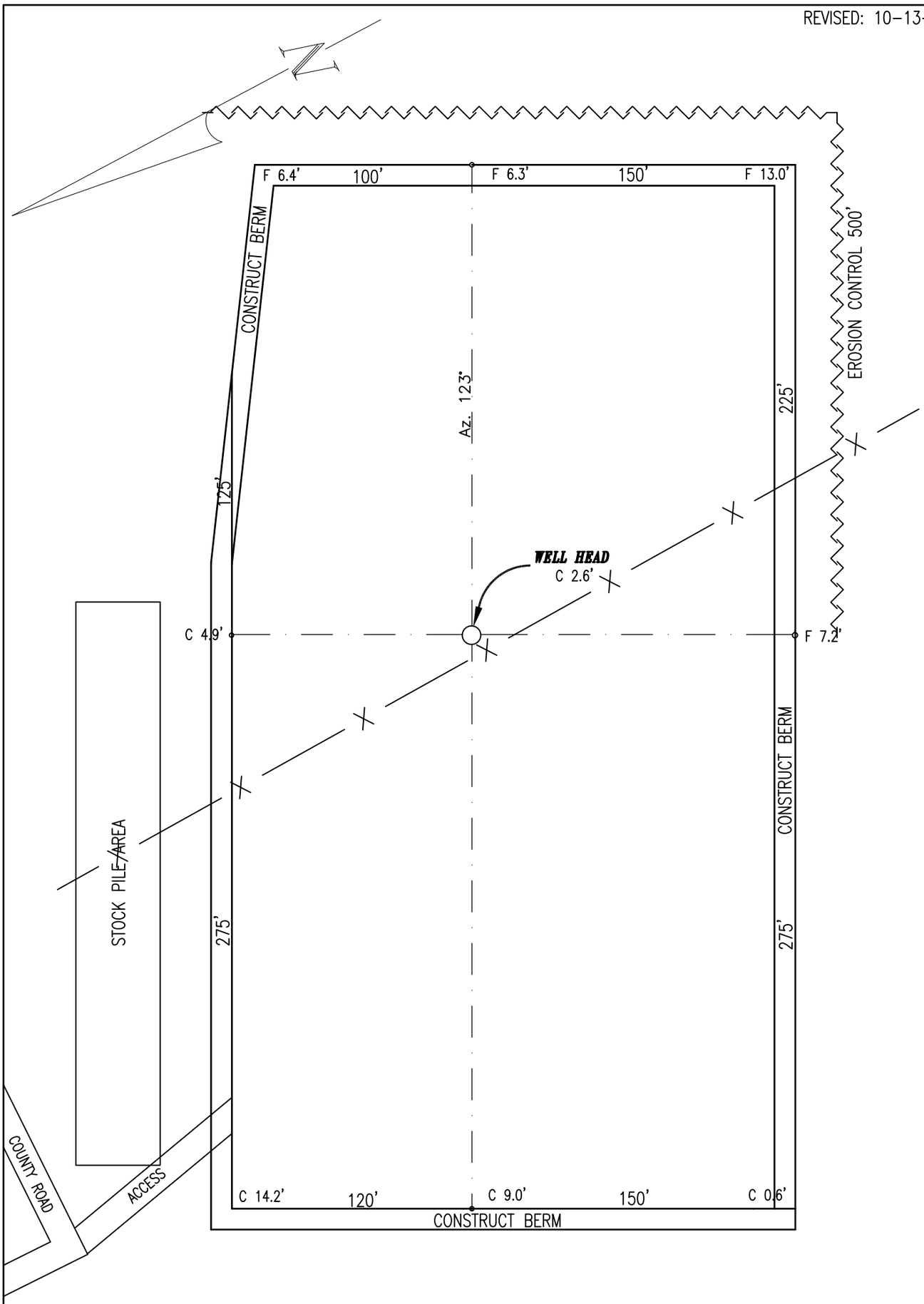
SCALE 1" = 2000'

CONTINENTAL RESOURCES INC.

ONE-MILE RADIUS MAP

ATLANTA 1-6H
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA

REVISED: 10-13-2011



CONTINENTAL RESOURCES INC.
PO BOX 1032
ENID, OKLAHOMA 73702

DRILLING RIG LAYOUT
ATLANTA 1-6H
SECTION 6, T153N, R101W
WILLIAMS COUNTY, NORTH DAKOTA

ESTIMATED EARTH QUANTITIES

TOP-SOIL:	2,500	CUBIC YARDS
SUB-SOIL:	14,531	CUBIC YARDS
TOTAL CUT:	17,031	CUBIC YARDS
TOTAL FILL:	12,769	CUBIC YARDS

Use excess materials in acess road fill

ALL INDICATED CUTS & FILLS ARE STAKED GRADE ELEVATIONS.

BACKSLOPES ASSUMED AT 1 1/2 : 1 %

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

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:

- 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.

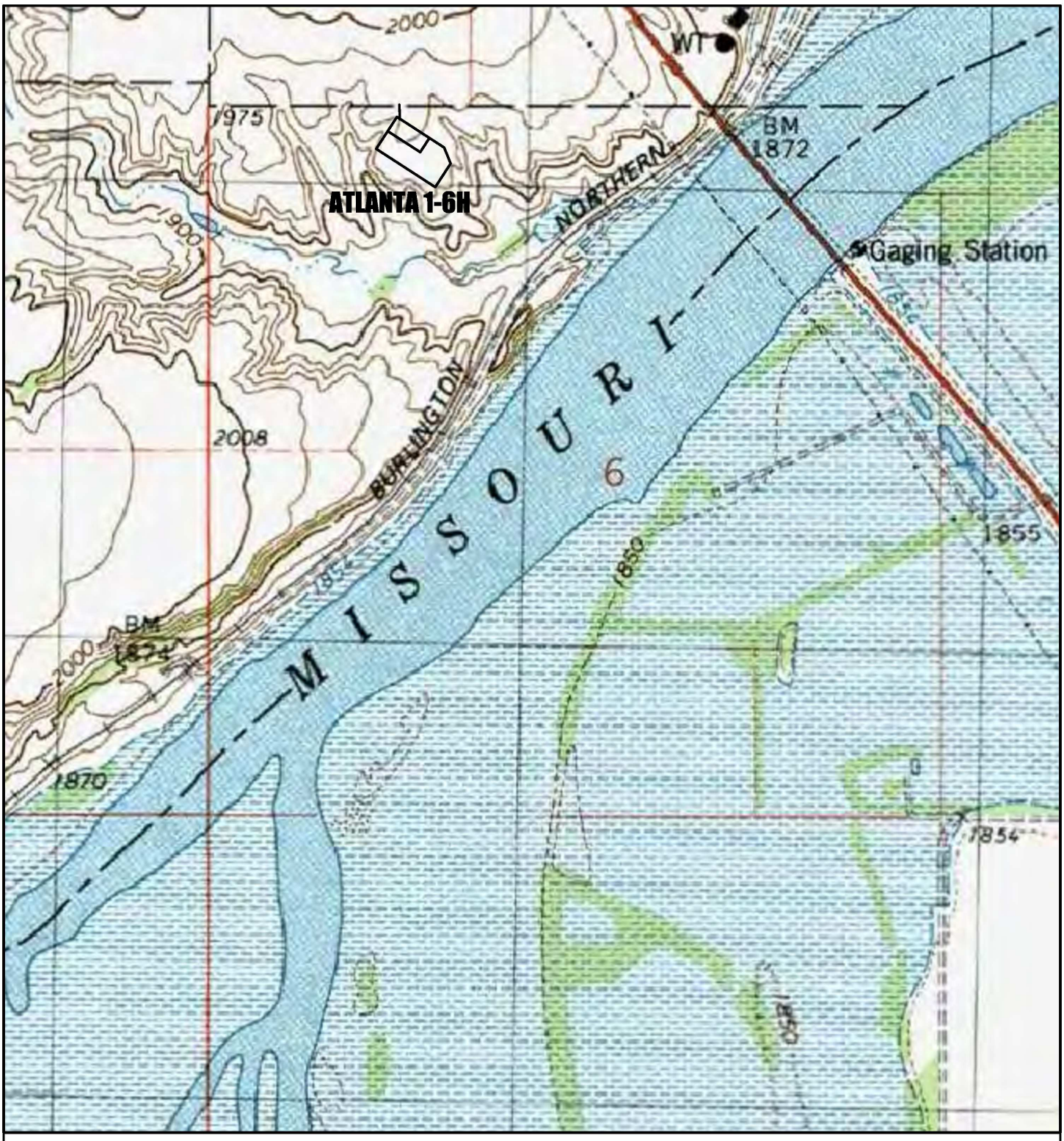
3.6 Truck Loading/Unloading Areas. Cyclone personnel will use spill containment booms to contain a release from a truck during loading/unloading operations or hand shovels and containment booms to direct the release to a containment trench or pit. Collected oil from such a release will be pumped into 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

N

ATLANTA 1-6H
SECTION 6, T153N, R101W
WILLIAMS CO., 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

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.

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 Continental's Environmental Specialist with details regarding the spill so that official notifications can be made to the National Response Center.

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.

(Signature)

Ryan Nelson Drilling Engineer

(Name and Title - Please Print)

Continental
RESOURCES

May 8, 2012

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

Re: Atlanta 13-6H

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

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