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.dmr.nd.gov/oilgas/

April 6, 2018

Ms. Donna Patocka
Continental Resources, Inc.
P.O. Box 269000
Oklahoma City, OK 73126

RE: Tallahassee #3-16H
SENE Sec. 16, T.153N., R.101W.
McKenzie County, North Dakota
Baker Field
Well File No. 25157
STRIPPER WELL DETERMINATION

Dear Ms. Patocka:

Continental Resources, Inc. (Continental) filed with the North Dakota Industrial Commission – Oil and Gas Division (Commission) on March 9, 2018 an application for a Stripper Well Determination for the above captioned well.

Information contained in the application indicates that the above mentioned well is a stripper well pursuant to statute and rule, and Continental has elected to designate said well as a stripper well. The well produced from a well depth greater than 10000 feet and was completed after June 30, 2013. During the qualifying period, October 1, 2016 through September 30, 2017, the well produced at a maximum efficient rate or was not capable of exceeding the production threshold. The average daily production from the well was 32.0 barrels of oil per day during this period.

It is therefore determined that the above captioned well qualifies as a "Stripper Well" pursuant to Section 57-51.1-01 of the North Dakota Century Code. This determination is applicable only to the Bakken Pool in and under said well.

The Commission shall have continuing jurisdiction, and shall have the authority to review the matter, and to amend or rescind the determination if such action is supported by additional or newly discovered information. If you have any questions, do not hesitate to contact me.

Sincerely,

David J. McCusker
Petroleum Engineer

Cc: ND Tax Department

SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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

Well File No. 25157

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: December 29, 2017	☐ 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 NDAC 43-02-03-49 Compliance	

Well Name and Number					
See Attached					
Footages F L F L	Qtr-Qtr	Section	Township N	Range W	
Field	Pool		County		

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. has inspected all the sites listed on the attached list and all are in compliance with NDAC 43-02-03-49. All sites are in compliance based on the fact that our oil storage tanks, flow-through process vessels, recycle pumps, and load lines are all located within secondary containment.

confirmed per RSD

Company: Continental Resources, Inc.			Telephone Number: (405) 234-9020
Address: PO Box 268870			
City: Oklahoma City		State: OK	Zip Code: 73126
Signature: Robert Sandbo	Printed Name: Robert Sandbo		
Title: Regulatory Compliance Supervisor	Date: February 8, 2018		
Email Address: robert.sandbo@clr.com			

FOR STATE USE ONLY

☐ Received	☒ Approved
Date: 3/22/18	
By: David E. Hunter	
Title: Inspector	

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.dmr.nd.gov/oilgas

August 29, 2017

CONTINENTAL RESOURCES
ATTENTION: BOB SANDBO
P.O. BOX 268870
OKLAHOMA CITY, OK 73126

RE: North Dakota Administrative Code (NDAC) Section 43-02-03-49
Perimeter Berm Requirement

NDIC # Please see attached list of 103 Facilities

Dear Bob Sandbo:

Please be advised that the attached list of facilities require a perimeter berm to be constructed within 180 days of this notice because they have:

1. Storage tanks;
2. Daily throughput of more than one hundred barrels of fluid per day; and
3. Includes production equipment or load lines that are not contained within secondary containment dikes

The berm must be at least six inches in height, constructed of sufficiently impermeable material to provide emergency containment, and must be maintained until the facility is either granted a waiver or the site is reclaimed.

Pursuant to NDAC Section 43-02-03-49 - Within one hundred eighty days from the date the operator is notified by the Commission, a perimeter berm, at least six inches in height, must be constructed of sufficiently impermeable material to provide emergency containment and to divert surface drainage away from the site around all storage facilities and production sites that include storage tanks, have a daily throughput of more than one hundred barrels of fluid per day, and include production equipment or load lines that are not contained within secondary containment dikes. The Director may consider an extension of time to implement these requirements if conditions prevent timely construction, or modification of these requirements if other factors are present that provide sufficient protection from environmental impacts.

This perimeter berm requirement may be modified or waived if the operator can demonstrate that other factors are present that provide sufficient protection from environmental impacts. A Sundry Notice (Form 4) outlining any engineering controls or other factors must be submitted to the Commission for approval of this modification or waiver. Should you have any questions regarding this matter, feel free to contact me at 701-770-3554.

Sincerely,

Richard Dunn
Field Inspector

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

NDIC #		Facility Name	TB/CTB #
19126		LANSING 1-25H	
19578		MISSOULA 1-21H	
19740		SYRACUSE 1-23H	
19858		JAMESTOWN 1-17H	
19915		STEELE 1-24H	
19918		CHARLOTTE 1-22H	
20566		MONTPELIER 1-14H	
20629		PATTERSON 1-13H	
20638		KUHN 1-12H	
20676		NORFOLK 1-1H	
21128		CHARLOTTE 2-22H	
21511		BOULDER 1-4H	
21600		ROCHESTER 1-24H	
22155		LANSING 2-25H	
22158		KUHN 2-12H	
22273		STEELE 2-24H	
22375		CHICAGO 2-26H	
22891		MONROE 1-2H	
23048		CHICAGO 3-26H	
23049		CHICAGO 4-26H	
23050		SYRACUSE 3-23H	
23051		SYRACUSE 4-23H	
23086		NORFOLK 2-1H	
23087		NORFOLK 3-1H	
23351		MISSOULA 2-21H	
23352		MISSOULA 3-21H	
23427		MISSOULA 7-21H	
23428		MISSOULA 6-21H	
23429		MISSOULA 5-21H	
23430		MISSOULA 4-21H	
23477		DURHAM 2-2H	
23608		CHARLOTTE 5-22H	
23609		AKRON 3-27AH	
23610		AKRON 2-27AH	
23611		AKRON 4-34H	
23612		CHARLOTTE 4-22H	
23664		CHARLOTTE 3-22H	
23747		ROCHESTER 3-24H	
23748		ROCHESTER 2-24H	
23749		ROCHESTER 5-24H1	
23750		ROCHESTER 4-24H	
24490		DURHAM 4-2H	
24491		DURHAM 5-2H	
24507		NORFOLK 5-1H	
24508		NORFOLK 4-1H	
24804		WAHPETON 14-16H2	224837-01
24805		WAHPETON 13-16H	
24806		WAHPETON 12-16H3	
24807		WAHPETON 11-16H1	
24808		WAHPETON 10-16H2	
24809		WAHPETON 9-16H	
24810		WAHPETON 8-16H1	

NDIC #		Facility Name	TB/CTB #
24834		DURHAM 3X-2H	
24837		WAHPETON 2-16H2	
24840		WAHPETON 4-16H1	
24842		WAHPETON 5-16H2	
24843		WAHPETON 6-16H	
24844		WAHPETON 7-16H3	
24908		CHARLOTTE 6-22H2	
25116		BJARNE 2-29H	
25117		BJARNE 3-29H	
25156		COLUMBUS FEDERAL 1-16H	
25157		TALLAHASSEE 3-16H	
25158		TALLAHASSEE 2-16H	
25159		COLUMBUS FEDERAL 2-16H	
25160		COLUMBUS FEDERAL 3-16H	
25189		PATTERSON FEDERAL 2-13H	
25190		PATTERSON FEDERAL 3-13H	
25826		AKRON 6-34H1	
25827		AKRON 5-34H1	
26190		MONTPELIER 4-14H	
26191		MONTPELIER 3-14H1	
26420		MONTPELIER 2-14H	
26476		ROCHESTER FEDERAL 6-24H	
26477		ROCHESTER FEDERAL 7-24H1	
26525		JERRY 2-8H	
26526		JERRY 3-8H	
26530		JERRY 5-8H	
26531		JERRY 4-8H	
26535		JERRY 7-8H	
26536		JERRY 6-8H	
27418		GARFIELD FEDERAL 7-5H1	
27419		GARFIELD FEDERAL 6-5H	
27420		GARFIELD FEDERAL 5-5H1	
27421		GARFIELD 4-5H	
27694		BERLAIN 3-30H	
27695		BERLAIN 2-30H	
28202		JAMESTOWN FEDERAL 2-17H	
28203		JAMESTOWN FEDERAL 3-17H1	
28405		HARRISBURG 1-34H	
28604		JAMESTOWN FEDERAL 6-17H	
28605		JAMESTOWN FEDERAL 7-17H	
28735		DURHAM 7-2H	
28736		DURHAM 6-2H1	
28737		UHLMAN 1-7H	
28999		NORFOLK 6-1H1	
29000		NORFOLK 7-1H	
31508		AKRON FEDERAL 7-27H	
31838		CHARLOTTE 7X-22H	
32033		NORFOLK 11-1H	
32034		NORFOLK 10-1H1	
32035		NORFOLK 9-1H	
32036		NORFOLK 8-1H1	

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
OCT 05 2016
ND Oil & Gas Division

Well File No.
25157

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: **August 2, 2016**
- ☐ 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
- ☐ Spill Report
- ☐ Shooting
- ☐ Acidizing
- ☐ Fracture Treatment
- ☑ Change Production Method
- ☐ Reclamation
- ☐ Other

Well Name and Number					
Tallahassee 3-16H					
Footages		Qtr-Qtr	Section	Township	Range
2585 F N L	**268 F E L**	**SENE**	**16**	**153 N**	**101 W**
Field	Pool	County			
Baker	**Bakken**	**McKenzie**			

24-HOUR PRODUCTION RATE

Before			After		
Oil	**41**	Bbls	Oil	**44**	Bbls
Water	**75**	Bbls	Water	**108**	Bbls
Gas	**65**	MCF	Gas	**68**	MCF

Name of Contractor(s)			
Address	City	State	Zip Code

DETAILS OF WORK

Continental Resources, Inc. requests a change in production method on the above mentioned well. The well went from flowing to Rod Pump on 8/2/2016. New Tubing: 1 3/4 Depth: 9928

Company		Telephone Number
Continental Resources		**(405) 234-9688**
Address		
P.O. Box 268870		
City	State	Zip Code
Oklahoma City	**OK**	**73126**
Signature	Printed Name	
	Zach Green	
Title	Date	
Regulatory Specialist	**September 30, 2016**	
Email Address		
Zach.Green@clr.com		

FOR STATE USE ONLY

☑ Received ☐ Approved

Date: 11-2-2016

By: Taylor Roth

Title: TAYLOR ROTH
Engineering Technician

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.
25157
NDIC CTB No.
125157

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

Well Name and Number	Qtr-Qtr	Section	Township	Range	County
Tallahassee 3-16H	SENE	16	153 N	101 W	McKenzie

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	April 10, 2014

Principal Place of Business	City	State	Zip Code
P.O. Box 268870	Oklahoma City	OK	73126

Field Address	City	State	Zip Code

Name of Transporter	Telephone Number	% Transported	Date Effective
Hiland Crude, LLC	580-616-2053		April 10, 2014

Address	City	State	Zip Code
P.O. Box 3886	Enid	Ok	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: April 11, 2014

Signature	Printed Name	Title
Becky Barnes	Becky Barnes	Regulatory Compliance Specialist

Above Signature Witnessed By

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

FOR STATE USE ONLY

Date Approved	MAY 16 2014
By	
Title	Oil & Gas Production Analyst

WELL COMPLETION OR RECOMPLETION REPORT - FORM 6

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

Well File No.
25157

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
Tallahassee 3-16H	**Sec** 4, 9, 16, & 21-153-101
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
2585 F N L 268 F E L	SENE	16	153 N	101 W	McKenzie

Spud Date	Date TD Reached	Drilling Contractor and Rig Number	KB Elevation (Ft)	Graded Elevation (Ft)
8/16/2013	11/21/2013	Cyclone 4	1940	1920

Type of Electric and Other Logs Run (See Instructions)
CBL/GR, Mud Logs, Geological Report

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		101	20				7 yds	
	Surface	9 5/8		1985	13 1/2	36			1008	
	Intermediate	7		10830	8 3/4	26-29			1028	1800
	Liner	4 1/2	10066	18270	6	11.6				
	Tubing	2 7/8			4	6.5				

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	18434	Perforations	10830	18434	10137	1800	11/23/2013			

PRODUCTION

Current Producing Open Hole or Perforated Interval(s), This Completion, Top and Bottom, (MD Ft)	Name of Zone (If Different from Pool Name)
Bakken 10,830'/18,434'	**Three Forks**

Date Well Completed (SEE INSTRUCTIONS)	Producing Method	Pumping-Size & Type of Pump	Well Status (Producing or Shut-In)
4/21/2014	**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
4/23/2014	**24**	**20 /64**		**314**	**261**	**596**	°	**Sold**

Flowing Tubing Pressure (PSI)	Flowing Casing Pressure (PSI)	Calculated 24-Hour Rate	Oil (Bbls)	Gas (MCF)	Water (Bbls)	Gas-Oil Ratio
650			**314**	**261**	**596**	**831**

GEOLOGICAL MARKERS

Formation	MD (Ft)	TVD (Ft)
Greenhorn		4420
Dunham Salt		6682
Pine Salt		7082
Minnekahta		7175
Tyler		7638
Base of Last Salt		8994
Lodgepole		9786
Middle Bakken		10506
Three Forks		10571

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
3/14/2014	Three Forks	10830	18434	24	64952	Barrels

Type Treatment	Acid %	Lbs Proppant	Maximum Treatment Pressure (PSI)	Maximum Treatment Rate (BBLS/Min)
Sand Frac		2829582	8491	31.0

Details

Pumped 89291# 40/70 mesh, 1970321# 20/40 sand and 769970# 20/40 ceramic.

Date Stimulated	Stimulated Formation	Top (Ft)	Bottom (Ft)	Stimulation Stages	Volume	Volume Units

Type Treatment	Acid %	Lbs Proppant	Maximum Treatment Pressure (PSI)	Maximum Treatment Rate (BBLS/Min)

Details

Date Stimulated	Stimulated Formation	Top (Ft)	Bottom (Ft)	Stimulation Stages	Volume	Volume Units

Type Treatment	Acid %	Lbs Proppant	Maximum Treatment Pressure (PSI)	Maximum Treatment Rate (BBLS/Min)

Details

Date Stimulated	Stimulated Formation	Top (Ft)	Bottom (Ft)	Stimulation Stages	Volume	Volume Units

Type Treatment	Acid %	Lbs Proppant	Maximum Treatment Pressure (PSI)	Maximum Treatment Rate (BBLS/Min)

Details

Date Stimulated	Stimulated Formation	Top (Ft)	Bottom (Ft)	Stimulation Stages	Volume	Volume Units

Type Treatment	Acid %	Lbs Proppant	Maximum Treatment Pressure (PSI)	Maximum Treatment Rate (BBLS/Min)

Details

ADDITIONAL INFORMATION AND/OR LIST OF ATTACHMENTS

I hereby swear or affirm that the information provided is true, complete and correct as determined from all available records.	Email Address becky.barnes@clr.com		Date 4/24/2014
Signature Becky Barnes	Printed Name **Becky Barnes**	Title **Regulatory Compliance Specialist**	

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SYNOPSIS

OPERATOR	Continental Resources Inc.
WELL NAME	Tallahassee 3-16H
SURFACE LOCATION	2585' FNL & 268' FEL: Sec 16, T153N, R101W
BOTTOM HOLE LOCATION	232' FSL & 1304' FEL: Sec 21, T153N, R101W
FIELD	Williston
COUNTY/STATE	McKenzie Co., North Dakota
API NUMBER	33-053-04853
NorAm FILE NUMBER	NR2691
ELEVATIONS	**G.L. =** 1920' **K.B. =** 1940'
SPUD DATE	November 8, 2013
T.D. DATE	November 21, 2013
DRILLING CONTRACTOR	Cyclone 4
HOLE SIZE	10 3/4" to 1975', 8 3/4" to 10863 , 6" to 18434'
CASING SIZE & DEPTH	9 5/8" to 1975', 7" to 10829, 5" to
DRILLING MUD COMPANY	GEO Drilling Fluids Inc
DRILLING FLUID TYPE	Invert OBM to 10863', Saltwater Brine to 18434'
DIRECTIONAL COMPANY	Leam Energy Services
WIRELINE LOGGING COMPANY	N/A
LOG RECORD	NorAm Wellsite Services
DRILLING SUPERVISION	Steve Northern, Biggens, Monty Harris
GEOLOGICAL SUPERVISION	R. D. Reinert Jr. & Darcy Klessens
MUDLOGGING COMPANY	NorAm Wellsite Services
TOTAL DEPTH	18434'

FORMATION TOPS (ft)

KB =1940'

GL =1920'

FORMATION	PROGNOSIS			SAMPLES			LOGS		
	MD	TVD	SS	MD	TVD	SS	MD	TVD	SS
Top Charles Salts	-	8329	-6389	8286	8285	-6345	-	-	-
Base Last Salt	-	9025	-7085	8994	8993	-7053	-	-	-
Mission Canyon	-	9250	-7310	9220	9219	-7279	-	-	-
Lodgepole	-	9817	-7877	9786	9785	-7845	-	-	-
False Bakken	-			10536	10483	-8543	-	-	-
Upper Bakken Shale	-	10505	-8565	10548	10490	-8550	-	-	-
Middle Bakken	-	10522	-8582	10578	10506	-8566	-	-	-
Lower Bakken Shale	-	10557	-8617	10650	10539	-8599	-	-	-
Three Forks	-	10583	-8643	10748	10571	-8631	-	-	-

DEVIATION SURVEY RECORD (Teledrift and Wireline Data)

Depth	Incl	Azim	TVD	VS	Coordinates		DLS
(ft)	(?)	(?)	(ft)	(ft)	N/S (ft)	E/W (ft)	(?/100')
1938	0.70	307.10	1937.97	3.52	3.52	-3.92	0.70
2014	0.80	280.20	2013.96	-3.21	3.89	-4.81	0.48
2077	0.90	246.50	2076.96	-2.97	3.77	-5.70	0.80
2170	1.10	238.70	2169.94	-2.03	3.02	-7.13	0.26
2263	1.30	236.50	2262.92	-0.78	1.97	-8.77	0.22
2357	1.80	235.80	2356.89	0.91	0.56	-10.88	0.53
2450	2.40	199.00	2449.83	3.80	-2.11	-12.73	1.55
2543	2.20	181.60	2542.76	7.48	-5.73	-13.41	0.78
2638	1.20	152.80	2637.71	10.11	-8.44	-13.01	1.35
2732	1.00	119.70	2731.70	11.23	-9.72	-11.84	0.70
2825	1.20	134.30	2824.68	12.11	-10.80	-10.44	0.37
2918	1.50	119.20	2917.65	13.14	-12.08	-8.68	0.50
3011	1.80	119.00	3010.62	14.11	-13.38	-6.34	0.32
3105	1.20	84.60	3104.59	14.42	-14.00	-4.07	1.12
3198	1.50	66.70	3197.56	13.57	-13.43	-1.98	0.55
3291	1.10	90.20	3290.54	12.83	-12.95	0.03	0.71
3384	1.10	92.30	3383.52	12.63	-12.99	1.81	0.04
3477	1.00	80.50	3476.50	12.30	-12.89	3.50	0.26
3571	0.90	91.60	3570.49	11.98	-12.78	5.05	0.22
3664	0.70	94.10	3663.48	11.87	-12.84	6.35	0.22
3758	0.60	124.30	3757.48	12.05	-13.16	7.33	0.37
3851	0.50	138.60	3850.47	12.54	-13.74	8.00	0.18
3945	0.40	127.30	3944.47	12.97	-14.24	8.53	0.14
4038	0.40	231.90	4037.47	13.36	-14.64	8.53	0.68
4132	0.30	320.00	4131.47	13.43	-14.65	8.12	0.52
4225	0.10	245.80	4224.47	13.31	-14.50	7.89	0.31
4319	0.10	344.60	4318.47	13.28	-14.45	7.79	0.16
4412	0.30	254.00	4411.47	13.30	-14.44	7.53	0.34
4505	0.10	258.10	4504.46	13.42	-14.53	7.22	0.22
4599	0.40	231.50	4598.46	13.69	-14.75	6.88	0.33
4692	0.30	263.70	4691.46	13.98	-14.98	6.39	0.23
4785	0.30	351.80	4784.46	13.81	-14.76	6.11	0.45
4879	0.50	40.30	4878.46	13.22	-14.21	6.34	0.40
4972	0.40	63.10	4971.46	12.70	-13.75	6.89	0.22
5066	0.80	44.90	5065.45	11.99	-13.14	7.65	0.47
5159	1.10	55.80	5158.44	10.88	-12.18	8.84	0.38
5253	1.10	62.60	5252.42	9.75	-11.25	10.39	0.14
5347	0.90	60.30	5346.41	8.79	-10.47	11.83	0.22
5440	1.10	68.10	5439.39	7.90	-9.78	13.30	0.26
5533	1.20	62.80	5532.37	6.90	-9.00	14.99	0.16
5627	0.90	51.00	5626.36	5.80	-8.08	16.44	0.39

Depth	Incl	Azim	TVD	VS	Coordinates		DLS
(ft)	(?)	(?)	(ft)	(ft)	N/S (ft)	E/W (ft)	(?/100')
5720	0.80	32.60	5719.35	4.68	-7.08	17.36	0.31
5813	0.70	79.50	5812.34	3.91	-6.43	18.27	0.65
5907	1.10	100.90	5906.33	3.78	-6.49	19.72	0.55
6000	0.40	110.60	5999.32	3.90	-6.78	20.90	0.76
6094	0.80	289.50	6093.32	3.84	-6.67	20.59	1.28
6187	0.50	289.20	6186.31	3.63	-6.32	19.59	0.32
6281	0.50	5.70	6280.31	3.14	-5.78	19.24	0.66
6375	0.60	43.10	6374.31	2.33	-5.01	19.62	0.39
6469	0.10	144.00	6468.30	1.99	-4.72	20.01	0.67
6562	1.10	255.60	6561.30	2.38	-5.01	19.19	1.23
6655	1.00	255.60	6654.28	3.02	-5.43	17.54	0.11
6749	1.10	245.80	6748.27	3.81	-6.00	15.92	0.22
6843	1.10	247.20	6842.25	4.74	-6.72	14.27	0.03
6936	1.20	254.60	6935.23	5.58	-7.33	12.50	0.19
7030	1.20	239.50	7029.21	6.58	-8.09	10.71	0.34
7123	1.80	238.60	7122.18	8.10	-9.34	8.62	0.65
7216	1.80	246.30	7215.13	9.78	-10.69	6.04	0.26
7309	1.10	286.60	7308.10	10.41	-11.03	3.84	1.29
7404	1.10	284.30	7403.09	10.16	-10.54	2.09	0.05
7497	1.10	286.70	7496.07	9.92	-10.06	0.37	0.05
7590	1.50	292.50	7589.05	9.47	-9.34	-1.61	0.45
7683	1.60	299.40	7682.01	8.68	-8.24	-3.87	0.23
7777	1.30	305.50	7775.98	7.70	-6.97	-5.88	0.36
7870	1.40	288.80	7868.96	6.99	-5.99	-7.81	0.43
7963	1.10	285.20	7961.93	6.66	-5.39	-9.75	0.33
8056	0.90	279.50	8054.92	6.52	-5.04	-11.33	0.24
8149	0.90	270.00	8147.91	6.59	-4.92	-12.78	0.16
8243	1.00	268.30	8241.90	6.83	-4.94	-14.34	0.11
8336	1.00	272.10	8334.88	7.04	-4.94	-15.96	0.07
8429	0.90	276.50	8427.87	7.14	-4.83	-17.50	0.13
8522	0.90	280.40	8520.86	7.12	-4.61	-18.95	0.07
8616	1.00	257.40	8614.84	7.37	-4.66	-20.47	0.42
8709	1.10	267.20	8707.83	7.81	-4.88	-22.16	0.22
8803	1.00	261.10	8801.81	8.21	-5.05	-23.87	0.16
8896	0.90	264.20	8894.80	8.62	-5.25	-25.40	0.12
8990	0.40	334.00	8988.79	8.52	-5.03	-26.27	0.90
9083	0.80	47.70	9081.79	7.75	-4.30	-25.94	0.85
9176	0.80	63.10	9174.78	6.88	-3.57	-24.88	0.23
9270	0.80	59.10	9268.77	6.10	-2.93	-23.73	0.06
9363	0.50	49.80	9361.77	5.39	-2.34	-22.86	0.34
9457	0.40	48.20	9455.76	4.84	-1.86	-22.30	0.11
9550	0.40	48.60	9548.76	4.35	-1.42	-21.82	0.00

Depth	Incl	Azim	TVD	VS	Coordinates		DLS
(ft)	(?)	(?)	(ft)	(ft)	N/S (ft)	E/W (ft)	(?/100')
9643	0.50	51.70	9641.76	3.81	-0.96	-21.26	0.11
9737	0.40	12.90	9735.76	3.19	-0.38	-20.86	0.33
9830	0.30	351.40	9828.75	2.63	0.17	-20.82	0.18
9923	0.30	308.20	9921.75	2.27	0.56	-21.05	0.24
10019	0.30	299.40	10017.75	2.05	0.84	-21.47	0.05
10112	0.40	325.20	10110.75	1.72	1.23	-21.87	0.20
10143	1.80	252.60	10141.74	1.85	1.17	-22.39	5.56
10174	5.70	242.60	10172.67	2.94	0.32	-24.22	12.71
10205	9.10	239.30	10203.41	5.35	-1.64	-27.70	11.05
10236	12.50	234.40	10233.86	9.18	-4.85	-32.54	11.35
10268	15.70	234.50	10264.89	14.52	-9.38	-38.88	10.00
10299	20.40	232.60	10294.35	21.23	-15.10	-46.59	15.28
10330	25.70	233.30	10322.87	29.77	-22.40	-56.28	17.12
10361	29.90	231.90	10350.29	40.02	-31.19	-67.75	13.71
10392	33.20	231.00	10376.70	51.75	-41.30	-80.43	10.75
10423	36.80	230.80	10402.09	64.71	-52.52	-94.23	11.62
10455	40.00	230.00	10427.16	79.33	-65.19	-109.54	10.12
10485	45.40	229.80	10449.20	94.40	-78.29	-125.09	18.01
10516	49.40	230.00	10470.18	111.31	-92.98	-142.55	12.91
10548	55.00	230.00	10489.79	130.02	-109.23	-161.91	17.50
10579	59.40	230.00	10506.58	149.29	-125.98	-181.86	14.19
10610	61.30	229.80	10521.91	169.26	-143.33	-202.47	6.15
10641	64.30	229.10	10536.08	189.84	-161.25	-223.42	9.88
10672	68.90	227.80	10548.39	211.40	-180.12	-244.70	15.33
10703	72.10	227.70	10558.74	233.77	-199.77	-266.33	10.33
10735	73.90	227.50	10568.09	257.26	-220.40	-288.92	5.66
10766	77.20	227.10	10575.83	280.40	-240.76	-310.98	10.72
10797	82.50	226.10	10581.29	304.15	-261.72	-333.14	17.39
10807	84.20	225.90	10582.45	311.95	-268.62	-340.29	17.12
10889	88.00	222.60	10588.02	377.68	-327.20	-397.35	6.13
10920	89.50	221.30	10588.70	403.30	-350.25	-418.07	6.40
11015	90.90	218.70	10588.37	483.62	-423.02	-479.13	3.11
11110	91.80	214.70	10586.13	566.69	-499.15	-535.87	4.31
11205	89.20	213.60	10585.30	651.76	-577.76	-589.20	2.97
11300	90.00	210.30	10585.96	738.38	-658.35	-639.46	3.57
11395	90.40	207.60	10585.63	826.93	-741.47	-685.44	2.87
11490	90.70	205.30	10584.72	916.89	-826.52	-727.75	2.44
11585	89.90	204.60	10584.22	1007.63	-912.65	-767.82	1.12
11680	89.70	204.50	10584.55	1098.57	-999.06	-807.29	0.24
11775	88.20	202.70	10586.29	1189.92	-1086.09	-845.32	2.47
11870	89.1	201.5	10588.532	1281.92	-1174.09	-881.046	1.57866
11965	90.1	199.4	10589.196	1374.58	-1263.09	-914.235	2.44829

Depth	Incl	Azim	TVD	VS	Coordinates		DLS
(ft)	(?)	(?)	(ft)	(ft)	N/S (ft)	E/W (ft)	(?/100')
12060	89.1	197.6	10589.859	1467.9	-1353.18	-944.377	2.16744
12155	89.7	194.6	10590.854	1561.88	-1444.43	-970.717	3.22025
12250	89.8	191.8	10591.269	1656.43	-1536.91	-992.408	2.94922
12345	90.7	189.4	10590.854	1751.3	-1630.28	-1009.88	2.69806
12440	91.3	186.4	10589.196	1846.28	-1724.36	-1022.94	3.21995
12535	88.8	184.1	10589.113	1941.18	-1818.95	-1031.63	3.57572
12630	89	181.6	10590.937	2035.81	-1913.8	-1036.35	2.6395
12725	90.40	181.80	10591.43	2130.28	-2008.76	-1039.17	1.49
12820	90.90	179.30	10590.36	2224.52	-2103.74	-1040.08	2.68
12915	90.00	179.70	10589.61	2318.54	-2198.73	-1039.25	1.04
13010	89.30	179.00	10590.19	2412.52	-2293.72	-1038.17	1.04
13104	88.80	180.40	10591.75	2505.58	-2387.71	-1037.68	1.58
13199	89.50	180.90	10593.16	2599.85	-2482.69	-1038.76	0.91
13295	90.80	180.90	10592.91	2695.16	-2578.67	-1040.27	1.35
13389	91.50	179.50	10591.02	2788.33	-2672.65	-1040.59	1.66
13484	91.80	180.20	10588.29	2882.39	-2767.61	-1040.35	0.80
13579	89.20	180.00	10587.46	2976.54	-2862.60	-1040.51	2.74
13674	89.00	180.00	10588.95	3070.67	-2957.59	-1040.51	0.21
13769	90.50	179.00	10589.36	3164.68	-3052.58	-1039.68	1.90
13864	89.70	180.40	10589.20	3258.75	-3147.57	-1039.19	1.70
13959	89.10	180.70	10590.19	3353.00	-3242.56	-1040.10	0.71
14054	89.60	179.70	10591.27	3447.17	-3337.56	-1040.43	1.18
14149	89.70	179.70	10591.85	3541.24	-3432.55	-1039.93	0.11
14244	90.90	179.20	10591.35	3635.24	-3527.54	-1039.02	1.37
14339	89.90	179.30	10590.69	3729.20	-3622.53	-1037.78	1.06
14434	90.40	179.00	10590.44	3823.14	-3717.52	-1036.37	0.61
14529	90.3	178.6	10589.86	3916.98	-3812.5	-1034.38	0.434
14624	91.5	178.3	10588.368	4010.73	-3907.45	-1031.81	1.30202
14719	90.9	177.4	10586.378	4104.3	-4002.36	-1028.24	1.13842
14814	90.7	178.5	10585.052	4197.9	-4097.29	-1024.85	1.17677
14909	91.1	179.7	10583.56	4291.82	-4192.26	-1023.35	1.33134
15004	91.1	179.7	10581.736	4385.87	-4287.25	-1022.86	1.5E-06
15099	89.60	179.30	10581.16	4479.88	-4382.24	-1022.03	1.63
15193	89.60	180.20	10581.81	4572.97	-4476.23	-1021.62	0.96
15289	89.20	180.70	10582.82	4668.19	-4572.22	-1022.37	0.67
15383	89.30	181.30	10584.05	4761.53	-4666.20	-1024.01	0.65
15479	90.80	180.20	10583.96	4856.82	-4762.19	-1025.27	1.94
15574	89.90	181.60	10583.38	4951.14	-4857.17	-1026.76	1.75
15668	88.80	182.50	10584.45	5044.67	-4951.10	-1030.12	1.51
15763	90.4	182.7	10585.113	5139.28	-5046	-1034.43	1.69732
15858	88.5	182.8	10586.025	5233.92	-5140.88	-1038.99	2.00277
15953	89.3	182.7	10587.849	5328.54	-5235.75	-1043.55	0.84866

Depth	Incl	Azim	TVD	VS	Coordinates		DLS
(ft)	(?)	(?)	(ft)	(ft)	N/S (ft)	E/W (ft)	(?/100')
16048	90.5	182.5	10588.015	5423.16	-5330.66	-1047.86	1.28058
16143	88.4	182.3	10588.926	5517.74	-5425.56	-1051.83	2.22053
16238	89.40	182.50	10590.75	5612.31	-5520.46	-1055.81	1.07
16333	89.00	182.10	10592.08	5706.87	-5615.37	-1059.62	0.60
16428	89.00	181.80	10593.73	5801.37	-5710.30	-1062.86	0.32
16523	92.90	181.30	10592.16	5895.79	-5805.24	-1065.42	4.14
16618	91.00	180.90	10588.93	5990.10	-5900.16	-1067.25	2.04
16712	92.30	180.20	10586.22	6083.32	-5994.11	-1068.15	1.57
16807	91.10	180.60	10583.40	6177.50	-6089.07	-1068.81	1.33
16902	88.70	179.30	10583.57	6271.61	-6184.06	-1068.73	2.87
16997	92.10	179.50	10582.91	6365.60	-6279.04	-1067.73	3.59
17092	89.20	180.70	10581.83	6459.74	-6374.02	-1067.90	3.30
17187	90.30	180.00	10582.24	6553.95	-6469.02	-1068.48	1.37
17282	90.10	179.20	10581.91	6647.99	-6564.01	-1067.82	0.87
17377	88.00	178.80	10583.49	6741.87	-6658.98	-1066.16	2.25
17472	88.80	179.70	10586.14	6835.79	-6753.93	-1064.92	1.27
17567	90.30	179.20	10586.88	6929.80	-6848.92	-1064.01	1.66
17662	90.60	178.30	10586.14	7023.63	-6943.89	-1061.93	1.00
17757	92.20	179.00	10583.82	7117.41	-7038.84	-1059.70	1.84
17852	90.40	179.00	10581.66	7211.28	-7133.79	-1058.04	1.89
17947	91.00	178.60	10580.50	7305.12	-7228.76	-1056.05	0.76
18042	89.50	177.80	10580.09	7398.80	-7323.71	-1053.07	1.79
18137	90.00	177.60	10580.50	7492.35	-7418.64	-1049.25	0.57
18232	91.00	177.40	10579.67	7585.84	-7513.54	-1045.11	1.07
18327	91.6	177.8	10577.517	7679.33	-7608.43	-1041.1	0.759
18385	92.3	177.6	10575.543	7736.41	-7666.35	-1038.8	1.25514
18434	92.3	177.6	10573.577	7784.61	-7715.27	-1036.8	0

BIT RECORD

BIT #	TYPE	SIZE (IN)	IN (FT)	OUT (FT)	TOTAL (FT)	HOURS DRLG	WOB (K)	RPM
1	Security MM65D	8.75	1975	10064	8089	78.5	40	30-60
2	Security FDX55M	8.75	10064	10863	799	18.5	20-70	0-30
3	Reed SKHE711M	6	10863	18434	7571	130	15-25	40-50

DRILLING FLUID PARAMETERS

DATE	WT	VIS	PV	YP	WL	PH	NaCL	Ca	% SOL
11/09/2013	9.5	57	12	16	-	-	37k	2.9	8.83
11/10/2013	9.6	51	13	14	-	-	41k	3.1	9.59
11/11/2013	9.9	53	15	11	-	-	43k	4.29	10.59
11/12/2013	10.1	56	14	17	-	-	47k	4.68	11.97
11/13/2013	10.2	49	15	11	-	-	42k	3.8	11.97
11/14/2013	10.4	65	15	10	-	-	42k	3.8	13.35
11/15/2013	10.4	65	15	10	-	-	42k	3.8	13.35
11/16/2013	10.4	65	15	10	-	-	42k	3.8	13.35
11/17/2013	9.7	28	1	1	-	7.5	167.5k	30,500	1.39
11/18/2013	9.7	28	1	1	-	7.5	167.5k	30,500	1.39
11/19/2013	9.7	28	1	1	-	7.5	167.5k	30,500	1.39
11/20/2013	9.8	29	1	1	-	9.0	169k	32,000	0.56
11/21/2013	9.8	29	1	1	-	9.0	169k	32,000	0.56
11/22/2013	9.8	29	1	1	-	8.0	162k	30,400	0.54

DAILY DRILLING CHRONOLOGY

DATE (m/d/y)	DEPTH @ 24.00	PROGRESS (ft/24 hours)	BREAKDOWN 00:00 – 24:00	RIG ACTIVITY
11/10/2013	7671	3643	0:00-24:00	Drill 7671-8910
11/11/2013	8910	1239	0:00-24:00	Drill 8910-9856
11/12/2013	9856	946	0:00-4:00	Drill 9856-10064
			4:00-4:30	Problem with drilling assembly, Tag bottom with 20 K, no reactive diff pressure
			4:30-5:30	Circulate bottoms up while building slug
			5:30-10:30	TOOH for Curve Assembly 10064-0
			10:30-12:00	Drain motor, pull MWD tool, Break Bit, Lay down old motor/ pick up new motor, scribe, M/U new Bit. Insert MWD Tool
			12:00-20:30	TIH With Curve Assembly
			20:30-24:00	Build Curve 10064-10157
11/13/2013	10157	301	00:00-16:00	Build Curve 10157-10863
			16:00-24:00	Circulate, Wiper Trip, Circulate, TOOH, Lay Down 5" Drill Pipe
11/14/2013	10863	706	00:00-24:00	Intermediate Casing Operations
11/15/2013	10863	0	00:00-24:00	Intermediate Casing Operations
11/16/2013	10863	0	00:00-01:30	Drill 10' new hole, Fit test at 10873'MD
			01:30-24:00	Drill 10873-12395
11/17/2013	12395	1532	00:00-24:00	Drill 12395-13820
11/18/2013	13820	1425	00:00-24:00	Drill 13820-14868
11/19/2013	14868	1048	00:00-24:00	Drill 14868-16257
11/20/2013	16257	1389	00:00-24:00	Drill 16257-17379
11/21/2013	17379	1122	00:00-18:30	Drill 17379-18434 (TD Well)
			18:30-19:30	Circulate
			19:30-24:00	Wiper Trip, 5" Casing Operations
11/22/2013	18434'	1055		

TOTAL GAS DATA

SHOW INTERVAL FROM – TO (ft)	BKGD UNITS	SHOW UNITS	BRIEF DESCRIPTION (Rock type, porosity, visual show, etc.)
8295-9220	20	40	SALT: clear, translucent, light brown, cream; LIMESTONE: light to medium gray, firm to brown, microcrystalline, moderately silica, argillaceous, trace sandy material; ANHYDRITE: cream to buff
9220-9786	30	56	LIMESTONE: light to medium brown, light to medium gray brown, medium to dark gray, tan, slightly mottled, firm to moderately hard, microcrystalline to cryptocrystalline, earthy, argillaceous
9786-10490	70	240	LIMESTONE: dark to medium gray brown, dark to medium gray, mottled, firm to moderately hard, microcrystalline to cryptocrystalline, moderately silty, argillaceous, trace asphalt staining, earthy texture
10490-10578	250	5023	LIMESTONE: light to medium brown, light to medium grey, tan, mottled, moderately hard, microcrystalline to cryptocrystalline, argillaceous, silty, partly laminated
10578-10650	150	289	DOLOMITE: light to medium gray brown, mottled, medium to firm, microcrystalline to cryptocrystalline, shale, sandy, dull yellow fluorescence, flash yellow to green cut
10650-18434	300	504	DOLOMITE: light brown, tan, light gray, off white, firm to moderately hard, microcrystalline to cryptocrystalline, trace intercrystalline porosity, dull yellow fluorescence, dull yellow diffuse cut; trace SHALE: light gray, off white to cream, dull light green to gray, calcareous

LITHOLOGY

Formation tops Sample Interval (in feet)	SAMPLE DESCRIPTION

30' samples were caught in the vertical and curve, and 50' samples caught in the lateral by NorAm Wellsite Services. Logging began at 8250'MD on November 10, 2013 at 10:06 hours.

8250-8280	LIMESTONE: red orange medium gray brown, trace light to medium gray, firm to brown, microcrystalline, moderately silica, argillaceous, trace sandy material
	CHARLES TOP: 8286' MD, 8285' TVD (-6345)
8280-8340	SALT: clear, translucent, LIMESTONE: light to medium gray, firm to brown, microcrystalline, moderately silica, slightly argillaceous
8340-8370	SALT: clear, translucent; LIMESTONE: light to medium gray, firm to brown, microcrystalline, moderately silica, argillaceous, trace sandy material, trace siltstone material; trace ANHYDRITE: cream to buff
8370-8430	SALT: clear, translucent; trace LIMESTONE: light to medium gray, firm to brown, microcrystalline, moderately silica, argillaceous, trace sandy material, trace siltstone material; trace ANHYDRITE: cream to buff
8430-8460	SALT: clear, translucent, brown; LIMESTONE: light to medium gray, friable to firm, microcrystalline, slightly argillaceous, trace silica
8460-8490	SALT: clear, translucent, brown; trace LIMESTONE: light to medium gray, friable to firm, microcrystalline, slightly argillaceous
8490-8520	SALT: clear, translucent, brown; LIMESTONE: light to medium gray, friable to firm, microcrystalline, slightly argillaceous, trace silica
8520-8610	SALT: clear, translucent, light brown, cream, brown; LIMESTONE: light to medium gray, mottled in part, friable to firm, microcrystalline, slightly argillaceous, trace silica
8610-8640	SALT: clear, translucent; LIMESTONE: light to medium gray, firm to brown, microcrystalline, moderately silica, argillaceous, trace sandy material; ANHYDRITE: cream to buff
8640-8670	SALT: clear, translucent, light brown, cream; LIMESTONE: light to medium gray, firm to brown, microcrystalline, moderately silica, argillaceous, trace sandy material; ANHYDRITE: cream to buff

Formation tops Sample Interval (in feet)	SAMPLE DESCRIPTION
8670-8700	LIMESTONE: light gray brown, light to medium gray, firm to brown, microcrystalline, moderately silty, argillaceous, ANHYDRITE: white, soft, amorphous; trace SILTSTONE: red to orange, friable to firm, calcareous, material; SALT: clear, translucent, hard
8700-8790	LIMESTONE: light gray brown, light to medium gray, firm to brown, microcrystalline, moderately silty, argillaceous, ANHYDRITE: white, soft, amorphous; SALT: clear, translucent, hard
8790-8850	ANHYDRITE: white, soft, amorphous; LIMESTONE: light gray brown, light to medium gray, firm to brown, microcrystalline, moderately silty, argillaceous; trace SALT: clear, translucent, hard
8850-8880	ANHYDRITE: white, soft, amorphous; LIMESTONE: medium gray brown, light to medium gray, firm to brown, microcrystalline, moderately silty, argillaceous; trace SALT: clear, translucent, hard
8880-8910	ANHYDRITE: white to gray, soft, amorphous; LIMESTONE: light gray brown, light to medium gray, firm to brown, microcrystalline, moderately silty, argillaceous
8910-8940	LIMESTONE: light gray brown to tan, light gray, firm to brown, microcrystalline, moderately silty, argillaceous, ANHYDRITE: white to gray, soft, amorphous, trace SALT: clear, translucent, hard
8940-9000	SALT: clear, translucent, hard; trace LIMESTONE: medium gray, light to medium gray brown, firm to hard, microcrystalline, moderately silty, trace argillaceous, mottled in part
	BASE LAST SALT: 8994' MD, 8993' TVD (-7053)
9000-9030	SALT: clear, translucent, hard; trace LIMESTONE: light to medium gray, tan to light brown, firm to hard, microcrystalline, moderately silty, trace argillaceous, mottled in part
9030-9060	LIMESTONE: light to medium gray, light brown, tan, off white in part, firm to hard, microcrystalline, silty, trace argillaceous, mottled in part
9060-9090	LIMESTONE: light to medium gray, light brown, tan, off white in part, firm to hard, microcrystalline, silty, trace argillaceous, mottled in part, trace ANHYDRITE: white to gray, soft, amorphous

Formation tops Sample Interval (in feet)	SAMPLE DESCRIPTION
9090-9150	LIMESTONE: medium to dark gray, medium gray brown, off white to cream in part, firm to moderately hard, microcrystalline, silty, argillaceous; ANHYDRITE: white to gray, soft, amorphous
9150-9210	LIMESTONE: light to medium gray, dark gray, light to medium brown, off white to cream in part, firm to moderately hard, microcrystalline to cryptocrystalline, slightly silty, argillaceous; trace ANHYDRITE: white to gray, soft, amorphous, calcareous
	MISSION CANYON: 9220' MD, 9219' TVD (-7279)
9210-9330	LIMESTONE: medium to dark gray, medium to dark gray brown, light to medium brown, firm to hard, microcrystalline to cryptocrystalline, moderately silty, very argillaceous, mottled in part
9330-9390	LIMESTONE: light to medium brown, medium to dark gray brown, tan, firm to hard, microcrystalline to cryptocrystalline, slightly silty, very argillaceous, mottled
9390-9420	LIMESTONE: light to medium brown, dark brown, medium to dark gray to gray brown, tan, slightly mottled, firm, cryptocrystalline, earthy, slightly silty, argillaceous
9420-9480	LIMESTONE: light to medium brown, light to medium gray brown, medium to dark gray, tan, slightly mottled, firm to moderately hard, microcrystalline to cryptocrystalline, earthy, slightly silty, argillaceous
9480-9540	LIMESTONE: light to medium brown, light to medium gray brown, medium to dark gray, tan, slightly mottled, firm to moderately hard, microcrystalline to cryptocrystalline, earthy, argillaceous
9540-9570	LIMESTONE: light to medium brown, tan, off white, light to medium gray brown, firm to moderately hard, microcrystalline to cryptocrystalline, argillaceous, mottled in part, carbonaceous stain
9570-9600	LIMESTONE: light to medium gray brown, medium to dark gray, tan, slightly mottled, firm, cryptocrystalline, earthy, slightly silty, argillaceous
9600-9630	LIMESTONE: cream, tan, off white, light to medium brown, light to medium gray brown, medium gray, slightly mottled, firm, cryptocrystalline, earthy, slightly silty, argillaceous, trace chert

Formation tops Sample Interval (in feet)	SAMPLE DESCRIPTION
9630-9780	LIMESTONE: medium gray brown, light to medium gray, cream to off white in part, firm to hard, microcrystalline to cryptocrystalline, silty, argillaceous in part, earthy texture
	LODGEPOLE 9786' MD, 9785' TVD (-7845)
9780-9870	LIMESTONE: light to medium gray to brown, light brown to tan in part, trace medium to dark gray, mottled in part, firm, microcrystalline to cryptocrystalline, earthy, slightly silty, argillaceous
9870-10020	LIMESTONE: dark to medium gray, light to medium brown, very trace tan in part, mottled in part, firm to hard, microcrystalline to cryptocrystalline, slightly to moderately silty, argillaceous, earthy texture
10020-10440	LIMESTONE: dark to medium gray brown, dark to medium gray, mottled, firm to moderately hard, microcrystalline to cryptocrystalline, moderately silty, argillaceous, trace asphalt staining, earthy texture
10440-10470	LIMESTONE: light to medium gray, light to medium gray brown, tan, mottled, firm to moderately hard, microcrystalline to cryptocrystalline, moderately silty, argillaceous, partly laminated
10470-10500	LIMESTONE: medium to dark grey, light to medium gray to brown, mottled, firm to moderately hard, microcrystalline to cryptocrystalline, moderately silty, argillaceous, partly laminated
10500-10530	LIMESTONE: light to medium brown, light gray, tan, mottled, moderately hard, microcrystalline to cryptocrystalline, slightly argillaceous, laminated; interbedded DOLOMITE: medium to dark grey, mottled, moderately hard, microcrystalline to cryptocrystalline, silty, very argillaceous, partly laminated.
	FALSE BAKKEN 10536' MD, 10483' TVD (-8543)
	UPPER BAKKEN SHALE: 10548' MD, 10490' TVD (-8550)
10530-10560	LIMESTONE: light to medium brown, light to medium grey, tan, mottled, moderately hard, microcrystalline to cryptocrystalline, argillaceous, silty, partly laminated

Formation tops Sample Interval (in feet)	SAMPLE DESCRIPTION
	MIDDLE BAKKEN MEMBER: 10578' MD, 10506' TVD (-8566)
10560-10590	DOLOMITE: light to medium gray brown, light to medium brown, moderately, firm to hard microcrystalline to cryptocrystalline, argillaceous, silty, moderately carbonaceous; SHALE: blue, very laminated, hard, no porosity, dull yellow fluorescence, flash yellow to green cut
10590-10620	DOLOMITE: light to medium gray brown, mottled, medium to firm, microcrystalline to cryptocrystalline, shale, sandy, dull yellow fluorescence, flash yellow to green cut
10620-10650	DOLOMITE: light to medium gray brown, mottled, medium to firm, microcrystalline to cryptocrystalline, shale, sandy, carbonaceous, dull yellow fluorescence, flash yellow to green cut
	LOWER BAKKEN SHALE: 10650'MD, 10539' TVD (-8551)
10650-10680	SHALE: black, firm to medium hard, very laminated, no porosity, dull yellow fluorescence, flash yellow to green cut; LIMESTONE: light to medium grey brown, tan, microcrystalline, cryptocrystalline, carbonaceous, partly lm, dull yellow fluorescence, flash yellow to green cut
10680-10710	LIMESTONE: medium to dark gray, black microcrystalline to cryptocrystalline, shale, pyrite, no porosity, dull yellow fluorescence, fast streaming yellow to green fluorescence cut
10710-10740	DOLOMITE: dark gray, blue, firm to medium hard, microcrystalline cryptocrystalline, no porosity, laminated, silty, dull yellow fluorescence, flash yellow to green cut
	THREE FORKS: 10748' MD, 10571' TVD (-8583)
10740-10770	DOLOMITE: olive gray, tan, light gray, firm, microcrystalline to cryptocrystalline, rare lamination, argillaceous, no porosity, carbonaceous, light yellow fluorescence, light yellow to green flash; interbedded SHALE: blue, firm to hard, calcareous cement, fast streaming yellow to green cut
10770-10830	DOLOMITE: olive gray, tan, pink, blue to grained, firm to moderately hard, microcrystalline to cryptocrystalline, argillaceous, laminated, minor porosity, carbonaceous, pyrite, light to grained dull fluorescence, slow yellow to green flash

Formation tops
Sample Interval
(in feet) SAMPLE DESCRIPTION

10830-10863: DOLOMITE: olive gray, tan, pink, blue to grained, firm to moderately hard, microcrystalline to cryptocrystalline, argillaceous, laminated, minor porosity, carbonaceous, pyrite, dull light green fluorescence, slow yellow to green streaming cut

10863-11200: DOLOMITE: pink to off white, light gray in part, firm to hard, microcrystalline to cryptocrystalline, calcareous, silty, poor intercrystalline porosity, trace spotty brown oil stain, dull yellow fluorescence, slow yellow to green diff cut; SHALE: light blue to green, hard, sub platy

11200-11450 DOLOMITE: pink to off white, tan, light brown, cream, light gray in part, firm to hard, microcrystalline to cryptocrystalline, calcareous, silty, poor intercrystalline porosity, trace dull yellow fluorescence, slow yellow diffuse cut; SHALE: light blue to green, hard, sub platy

11450-11600 DOLOMITE: pink to tan, light brown, cream, microcrystalline to cryptocrystalline, firm to hard, poor intercrystalline porosity, no mineral fluorescence, slow streaming yellow to green cut; SHALE: light blue to green, gray, sub platy

11600-11650 DOLOMITE: pink to tan, light brown to grey, microcrystalline to cryptocrystalline, calcareous, silty, firm to hard, poor intercrystalline porosity, bright yellow to green mineral fluorescence, flash yellow to green cut; SHALE: light blue to green, gray, sub platy

11650-11700 DOLOMITE: pink to tan, light brown to grey, microcrystalline to cryptocrystalline, calcareous, silty, firm to hard, poor intercrystalline porosity, bright yellow to green mineral fluorescence, flash yellow to green cut; SHALE: red, firm to hard, no porosity, argillaceous, calcite cement; SHALE: light blue to green, gray, sub platy

11700-11750 DOLOMITE: pink to tan, light brown to grey, microcrystalline to cryptocrystalline, calcareous, silty, firm to hard, poor intercrystalline porosity, bright yellow to green mineral fluorescence, flash yellow to green cut; SHALE: red, firm to hard, no porosity, argillaceous; SHALE: light blue to green, gray, sub platy

11750-11850 DOLOMITE: tan, light pink to brown, microcrystalline to cryptocrystalline, firm to hard, calcareous, silty, poor intercrystalline porosity, dull yellow mineral fluorescence, slow orange to brown cut

12000-12050 DOLOMITE: tan, light pink to white, microcrystalline to cryptocrystalline, firm to hard, calcareous, intercrystalline porosity, dull yellow mineral fluorescence, no cut; SHALE: light blue to gray to white, firm hard, calcareous, no porosity

Formation tops Sample Interval (in feet)	SAMPLE DESCRIPTION
12050-12150	DOLOMITE: tan, white, microcrystalline to cryptocrystalline, firm to hard, calcareous, intercrystalline porosity, dull yellow mineral fluorescence, very dull orange to yellow cut; SHALE: light blue to gray, firm, calcareous, laminated, no porosity
12150-12200	DOLOMITE: tan, white, microcrystalline to cryptocrystalline, firm to hard, calcareous, intercrystalline porosity, laminated, dull yellow mineral fluorescence, very dull yellow spotted cut, very trace carbonaceous material
12200-12250	DOLOMITE: tan, white, microcrystalline to cryptocrystalline, firm to hard, calcareous, intercrystalline porosity, laminated, dull yellow mineral fluorescence, very dull yellow to green cut
12250-12350	SHALE: medium to light gray, very fine grained, laminated, firm to hard, calcareous, no porosity, no mineral fluorescence, no cut; trace DOLOMITE: pink to tan, off white, microcrystalline to cryptocrystalline, firm to hard, calcareous, scattered dull yellow fluorescence, very dull yellow diff cut
12350-12550	DOLOMITE: pink to tan, off white, microcrystalline to cryptocrystalline, firm to hard, calcareous, scattered dull yellow fluorescence, very dull yellow to green diff cut; SHALE: dull light gray to white, dull light green gray, calcareous, laminated, sub platy in part, no fluorescence, no cut
12550-12700	DOLOMITE: pink to tan, off white, microcrystalline to cryptocrystalline, firm to hard, calcareous, scattered dull yellow fluorescence, very dull yellow to green diff cut; SHALE: dull light gray to white, very trace dull light green gray, calcareous, laminated, sub platy in part, no fluorescence, no cut
12700-12800	DOLOMITE: tan to light brown, off white, microcrystalline to cryptocrystalline, firm to hard, calcareous, scattered dull yellow fluorescence, very dull yellow to green diff cut; SHALE: dull light gray to white, very trace dull light green gray, calcareous, laminated, sub platy in part, no fluorescence, no cut
12800-13000	DOLOMITE: tan to light brown, cream, microcrystalline to cryptocrystalline, firm to hard, calcareous, scattered dull yellow fluorescence, very dull yellow to green diff cut; SHALE: dull light gray, very trace dull light green gray, calcareous, laminated, sub platy in part, no fluorescence, no cut
13000-13050	DOLOMITE: tan to light brown, cream, white, microcrystalline to cryptocrystalline, firm to hard, calcareous, laminated, intercrystalline porosity, dull yellow fluorescence, dull yellow to orange cut; trace SHALE: light gray, calcareous, laminated sub platy, no fluorescence, no cut

Formation tops Sample Interval (in feet)	SAMPLE DESCRIPTION
13050-13100	DOLOMITE: tan to light brown, cream, white, microcrystalline to cryptocrystalline, firm to hard, calcareous, laminated, intercrystalline porosity, dull yellow fluorescence, very dull yellow to orange cut; trace SHALE: light gray, calcareous, laminated sub platy, no fluorescence, no cut
13100-13250	DOLOMITE: tan to light brown, cream, white, microcrystalline to cryptocrystalline, firm to hard, calcareous, laminated, intercrystalline porosity, dull yellow fluorescence, dull yellow to orange cut; trace SHALE: light gray, calcareous, laminated sub platy, no fluorescence, no cut
13250-13300	DOLOMITE: tan to light brown, cream, white, microcrystalline to cryptocrystalline, firm to hard, calcareous, laminated, intercrystalline porosity, scattered dull yellow fluorescence, dull yellow to orange cut; trace SHALE: light gray, calcareous, laminated sub platy, no fluorescence, no cut
13300-13450	DOLOMITE: tan to light brown, cream, white, microcrystalline to cryptocrystalline, laminated in part, intercrystalline porosity, no mineral fluorescence, very dull yellow to green cut; SHALE: light blue to gray, laminated, calcareous, sub platy, no fluorescence, no cut
13450-13550	DOLOMITE: tan to light brown, pink, white, microcrystalline to cryptocrystalline, laminated in part, calcareous, intercrystalline porosity, no mineral fluorescence, no mineral cut; SHALE: blue to gray, laminated, calcareous, silty, sub platy, no fluorescence, no cut
13550-13650	DOLOMITE: tan to light to brown, pink, white, microcrystalline to cryptocrystalline, laminated in part, calcareous, intercrystalline porosity, sample contaminated with lube, no mineral fluorescence, no cut performed; trace SHALE: blue to gray, laminated, calcareous, silty, no fluorescence, no cut
13650-13750	DOLOMITE: white, tan to cream, pink, light gray, microcrystalline to cryptocrystalline, laminated in part, calcareous, intercrystalline porosity, sample contaminated with lube, no mineral fluorescence, no cut; trace SHALE: blue to gray, very calcareous, laminated, no fluorescence, no cut
13750-13850	DOLOMITE: off white to pink, tan to cream, pink, light gray, microcrystalline to cryptocrystalline, laminated in part, calcareous, trace intercrystalline porosity; trace SHALE: dull blue to gray, very calcareous, laminated, sample contaminated with lube

Formation tops Sample Interval (in feet)	SAMPLE DESCRIPTION
13850-14150	DOLOMITE: pink to tan, cream to off white light gray, firm to moderately hard, microcrystalline to cryptocrystalline, laminated in part, calcareous, trace intercrystalline porosity; trace SHALE: dull blue to gray, very calcareous, laminated, sample contaminated with lube
14150-14300	DOLOMITE: tan to light brown, cream to off white, light to medium gray, firm to moderately hard, microcrystalline to cryptocrystalline, laminated in part, calcareous, trace intercrystalline porosity; trace SHALE: dull blue to gray, very calcareous, laminated, sample contaminated with lube
14300-14350	DOLOMITE: clean sample, white, tan, cream, firm to moderately hard, microcrystalline to cryptocrystalline, calcareous, laminated in part, intercrystalline porosity, no mineral fluorescence, very dull green to yellow cut; trace SHALE: dull blue to gray, calcareous, laminated, no apparent porosity, sample contaminated with lube in part
14350-14400	DOLOMITE: clean sample, white, tan, cream, firm to moderately hard, microcrystalline to cryptocrystalline, calcareous, laminated in part, intercrystalline porosity, minor oil staining, no mineral fluorescence, very dull green to yellow cut; trace SHALE: dull blue to gray, calcareous, laminated, no apparent porosity, sample contaminated with lube in part
14400-14500	DOLOMITE: white, tan, cream, firm to moderately hard, microcrystalline to cryptocrystalline, calcareous, laminated in part, intercrystalline porosity, minor oil staining, no mineral fluorescence, very dull green to yellow cut; trace SHALE: dull blue to gray, calcareous, laminated, no apparent porosity, sample contaminated with lube in part
14500-14600	DOLOMITE: white, tan, cream, firm to moderately hard, microcrystalline to cryptocrystalline, calcareous, laminated in part, intercrystalline porosity, minor oil staining, very dull yellow mineral fluorescence, very dull yellow to green cut; trace SHALE: dull blue to gray, calcareous, laminated, sample contaminated with lube in part
14600-14700	DOLOMITE: white, tan, cream, firm to moderately hard, microcrystalline to cryptocrystalline, calcareous, laminated in part, intercrystalline porosity, minor oil staining, very dull yellow mineral fluorescence, very dull yellow to green cut; trace SHALE: blue to gray, light gray, calcareous, laminated, sample contaminated with lube and LCM

Formation tops Sample Interval (in feet)	SAMPLE DESCRIPTION
14700-14750	DOLOMITE: off white to cream, very dull pink to tan firm to moderately hard, microcrystalline to cryptocrystalline, calcareous, laminated in part, trace intercrystalline porosity, spotty light brown oil stain, scattered dull yellow to green fluorescence, yellow to green moderately diff cut; trace SHALE: blue to gray, light gray, calcareous, laminated
14750-14850	DOLOMITE: off white to cream, very dull pink to tan firm to moderately hard, microcrystalline to cryptocrystalline, calcareous, laminated in part, trace intercrystalline porosity, spotty light brown oil stain, scattered green fluorescence, yellow to green moderately fast diff cut; trace SHALE: blue to gray, light gray, calcareous, laminated
14850-15000	DOLOMITE: off white, light to medium gray, dull pink to tan firm to moderately hard, microcrystalline to cryptocrystalline, calcareous, laminated in part, trace intercrystalline porosity, spotty light brown oil stain, scattered green fluorescence, slow to moderately yellow to green streaming cut; trace SHALE: blue to gray, light gray, calcareous, laminated
15000-15050	DOLOMITE: light brown, tan, off white, light gray, firm to moderately hard, microcrystalline to cryptocrystalline, calcareous, trace intercrystalline porosity, spotty light brown oil stain, yellow to green fluorescence, slow to moderately yellow to green streaming cut; trace SHALE: blue to gray, light gray, calcareous, laminated, trace pyrite
15050-15150	DOLOMITE: light to medium gray, light brown, off white, tan, firm to moderately hard, microcrystalline to cryptocrystalline, calcareous, trace intercrystalline porosity, spotty light brown oil stain, scattered green fluorescence, yellow to green slow to moderately streaming cut; trace SHALE: blue to gray, light gray, calcareous, laminated, trace pyrite
15150-15200	DOLOMITE: light brown, tan, off white, light gray, firm to moderately hard, microcrystalline to cryptocrystalline, calcareous, trace intercrystalline porosity, spotty light brown oil stain, scattered yellow to green fluorescence, yellow to green slow to moderately streaming cut; trace SHALE: blue to gray, light gray, calcareous, laminated, trace pyrite
15200-15300	DOLOMITE: tan, white, cream, light gray, firm to moderately hard, microcrystalline to cryptocrystalline, calcareous, very laminated in part, trace intercrystalline porosity, spotty carbonaceous material, scattered yellow to green fluorescence, light yellow cut; SHALE: blue to gray, light gray, calcareous, laminated, no porosity, scattered carbonaceous material, trace pyrite

Formation tops Sample Interval (in feet)	SAMPLE DESCRIPTION
15300-15350	DOLOMITE: white, light pink, tan, cream, light gray, firm to moderately hard, microcrystalline to cryptocrystalline, calcareous, trace intercrystalline porosity, spotty carbonaceous material, trace pyrite, scattered yellow to green fluorescence, light yellow cut; SHALE: blue to gray, light gray, calcareous, laminated, no porosity, scattered carbonaceous material, trace pyrite
15350-15450	DOLOMITE: white, light brown, pink, tan, cream, light gray, firm to moderately hard, microcrystalline to cryptocrystalline, calcareous, laminated in part, trace intercrystalline porosity, spotty carbonaceous material, trace pyrite, dull yellow to green mineral fluorescence, light yellow cut; SHALE: blue to gray, light gray, calcareous, laminated, no porosity, scattered carbonaceous material, trace pyrite
15450-15500	DOLOMITE: light brown, cream, pink, off to white, firm to moderately hard, cryptocrystalline, calcareous, laminated in part, trace intercrystalline porosity, scattered carbonaceous material, yellow mineral fluorescence in part, dull light yellow cut; dolomitic SHALE: blue to gray, light gray, calcareous, laminated, no porosity, scattered carbonaceous material, sample contaminated with lube
15500-15550	DOLOMITE: cream, pink, off to white, firm to moderately hard, cryptocrystalline, calcareous, laminated in part, trace intercrystalline porosity, scattered carbonaceous material, pyrite, yellow mineral fluorescence in part, dull yellow cut; dolomitic SHALE: blue to gray, light gray, calcareous, laminated, no porosity, scattered carbonaceous material
15550-15600	DOLOMITE: cream, pink, off to white, firm to moderately hard, cryptocrystalline, calcareous, laminated in part, cryptic porosity, pyrite, minor carbonaceous material, light yellow mineral fluorescence, cream to white flash cut; SHALE: blue to gray light gray, calcareous, laminated, scattered carbonaceous material, light yellow mineral fluorescence, cream to white flash cut
15600-15650	DOLOMITE: cream, off to white, pink, firm to moderately hard, cryptocrystalline, calcareous, pyrite, intercrystalline porosity, minor carbonaceous material, yellow mineral fluorescence, light yellow fluorescence cut, but sample contaminated with lube; SHALE: blue to gray, light gray, calcareous, laminated, scattered carbonaceous material
15650-15750	DOLOMITE: cream, off to white, light brown, firm to moderately hard, cryptocrystalline, calcareous, pyrite, intercrystalline porosity, minor carbonaceous material, yellow mineral fluorescence, light yellow flash cut; SHALE: blue to gray, light gray, calcareous, laminated, scattered carbonaceous material

Formation tops Sample Interval (in feet)	SAMPLE DESCRIPTION
15750-15800	DOLOMITE: cream, off to white, light brown, firm to moderately hard, cryptocrystalline, calcareous, laminated in part, pyrite, intercrystalline porosity, yellow mineral fluorescence, yellow to cream flash cut; SHALE: blue to gray, light gray, very calcareous, laminated, minor carbonaceous material
15800-15850	DOLOMITE: cream, off to white, light brown, firm to moderately hard, cryptocrystalline, calcareous, laminated in part, pyrite, intercrystalline porosity, yellow mineral fluorescence, yellow to cream flash cut; SHALE: blue to gray, light gray, very calcareous, laminated, minor carbonaceous material
15850-15900	DOLOMITE: cream, off to white, firm to moderately hard, cryptocrystalline, calcareous, laminated in part, pyrite, intercrystalline porosity, yellow mineral fluorescence, yellow to cream flash cut; SHALE: blue to gray, light gray, very calcareous, laminated, minor carbonaceous material
15900-16000	DOLOMITE: white, off to white, tan, firm to moderately hard, cryptocrystalline, laminated in part, minor pyrite, intercrystalline porosity, minor carbonaceous material, light yellow mineral fluorescence, yellow to green flash cut; SHALE: blue to gray, light to gray, very calcareous, laminated, minor carbonaceous material, sample contaminated with lube
16000-16150	DOLOMITE: white, off to white, tan, pink, firm to moderately hard, microcrystalline to cryptocrystalline, minor pyrite, intercrystalline porosity, carbonaceous material, light yellow mineral fluorescence, blue to white flash cut; SHALE: blue to gray, light to gray, very calcareous, laminated, minor carbonaceous material, sample contaminated with lube
16150-16350	DOLOMITE: pink to light brown, cream to white, light gray in part, firm to moderately hard, microcrystalline to cryptocrystalline, very trace pyrite, trace intercrystalline porosity, dull yellow fluorescence, yellow to green moderately streaming cut; SHALE: light blue green to gray, very calcareous, laminated, sample contaminated with lube
16350-16400	DOLOMITE: pink to light brown, cream to white, light gray in part, firm to moderately hard, microcrystalline to cryptocrystalline, very trace pyrite, trace intercrystalline porosity, dull yellow fluorescence, yellow to green moderately streaming cut; trace SHALE: light blue green to gray, very calcareous, laminated, sample contaminated with lube

Formation tops Sample Interval (in feet)	SAMPLE DESCRIPTION
16400-16450	DOLOMITE: pink to light brown, cream to white, light to medium gray in part, firm to moderately hard, microcrystalline to cryptocrystalline, trace intercrystalline porosity, dull yellow fluorescence, scattered dull yellow diffuse cut; trace SHALE: light blue green to gray, very calcareous, laminated, sample contaminated with lube
16450-16550	DOLOMITE: light gray to off white, pink to light brown, firm to moderately hard, microcrystalline to cryptocrystalline, trace intercrystalline porosity, scattered very dull yellow fluorescence, very dull yellow slow diffuse cut; trace SHALE: light gray, off white to cream, dull light green to gray, very calcareous, laminated, sample contaminated with lube
16550-16700	DOLOMITE: light brown, medium brown, tan, off white, firm to moderately hard, microcrystalline to cryptocrystalline, trace intercrystalline porosity, dull yellow fluorescence, dull yellow diffuse cut; trace SHALE: light gray, off white to cream, dull light green to gray, calcareous
16700-16750	DOLOMITE: light brown, medium brown, tan, light gray, off white, firm to moderately hard, microcrystalline to cryptocrystalline, trace intercrystalline porosity, dull yellow fluorescence, dull yellow diffuse cut; trace SHALE: light gray, off white to cream, dull light green to gray, calcareous
16750-16800	DOLOMITE: light brown, tan, light gray, off white, firm to moderately hard, microcrystalline to cryptocrystalline, trace intercrystalline porosity, dull yellow fluorescence, dull yellow diffuse cut; trace SHALE: light gray, off white to cream, dull light green to gray, calcareous
16800-16900	DOLOMITE: light brown, off white, tan, cream, firm to moderately hard, microcrystalline to cryptocrystalline, laminated in part, trace intercrystalline porosity, pyrite, trace carbonaceous material, sample contaminated with lube, no cut taken; SHALE; blue to gray, light gray, laminated, fine grained, very calcareous, cryptic porosity, no cut taken, sample contaminated with lube
16900-17000	DOLOMITE: light pink to cream, tan, off white, microcrystalline to cryptocrystalline, laminated in part, calcareous, intercrystalline porosity, pyrite, trace carbonaceous material, light yellow mineral fluorescence, yellow to cream blooming cut; SHALE: blue to gray, light gray, laminated, fine grained to crystalline, very calcareous, cryptic porosity

Formation tops Sample Interval (in feet)	SAMPLE DESCRIPTION
17000-17050	DOLOMITE: light pink to cream, off white, white, tan, microcrystalline to cryptocrystalline, laminated in part, calcareous, intercrystalline porosity, nodular pyrite, trace carbonaceous material, light yellow mineral fluorescence, light yellow to green flash cut; SHALE: blue to gray, light to gray, laminated, fine grained to crystalline, very calcareous, cryptic porosity
17050-17150	DOLOMITE: light pink to cream, off white, white, tan, microcrystalline to cryptocrystalline, laminated in part, intercrystalline porosity, minor nodular pyrite, trace carbonaceous material, sample contaminated with lube to no cut performed; SHALE: blue to gray, light to gray, laminated, very fine grained to crystalline, very calcareous, intercrystalline porosity
17150-17200	DOLOMITE: light pink to cream, off white, white, tan, microcrystalline to cryptocrystalline, laminated in part, intercrystalline porosity, minor nodular pyrite, trace carbonaceous material, very light yellow mineral fluorescence, light yellow slow cut; SHALE: blue to gray, light to gray, laminated, very fine grained to crystalline, very calcareous, intercrystalline porosity
17200-17250	DOLOMITE: light pink to cream, off white, tan, microcrystalline to cryptocrystalline, intercrystalline porosity, minor nodular pyrite, light yellow mineral fluorescence, cream to blue flash cut; SHALE: blue to gray, light gray, laminated in part, very fine grained to crystalline, very calcareous, intercrystalline porosity
17250-17300	DOLOMITE: light pink to cream, off white, tan, microcrystalline to cryptocrystalline, intercrystalline porosity, nodular pyrite, light yellow mineral fluorescence, cream to blue flash cut; SHALE: blue to gray, light to gray, laminated in part, very fine grained to crystalline, very calcareous, intercrystalline porosity
17300-17400	DOLOMITE: light brown, medium brown, tan, off white, firm to moderately hard, microcrystalline to cryptocrystalline, trace intercrystalline porosity, dull yellow fluorescence, dull yellow diffuse cut; trace SHALE: light gray, off white to cream, dull light green to gray, calcareous
17400-17550	DOLOMITE: pink to light brown, tan, off white, firm to moderately hard, microcrystalline to cryptocrystalline, trace intercrystalline porosity, scattered dull yellow fluorescence, dull yellow to green diffuse cut; trace SHALE: light green to gray, calcareous, laminated

Formation tops Sample Interval (in feet)	SAMPLE DESCRIPTION
17550-17750	DOLOMITE: light brown, tan, off white, firm to moderately hard, microcrystalline to cryptocrystalline, trace intercrystalline porosity, scattered dull yellow fluorescence, dull yellow to green diffuse cut; trace SHALE: light green to gray, calcareous
17750-17850	DOLOMITE: light brown, medium brown, tan, off white, firm to moderately hard, microcrystalline to cryptocrystalline, trace intercrystalline porosity, dull yellow fluorescence, dull yellow diffuse cut; trace SHALE: light gray, off white to cream, dull light green to gray, calcareous
17850-17950	DOLOMITE: light brown, medium brown, tan, trace off white, firm to moderately hard, microcrystalline to cryptocrystalline, trace intercrystalline porosity, dull yellow fluorescence, dull yellow diffuse cut; trace SHALE: light to medium gray, blue to green, off white to cream, dull light green to gray, calcareous
17950-18000	DOLOMITE: cream, light to pink, off white, firm to moderately hard, calcareous, microcrystalline to cryptocrystalline, intercrystalline porosity, no mineral fluorescence, no cut; trace SHALE: light to gray, blue to gray, laminated in part, calcareous, cryptic porosity
18000-18400	DOLOMITE: cream, light to pink, off white, firm to moderately hard, clean dolomite, microcrystalline to cryptocrystalline, intercrystalline porosity, no mineral fluorescence, no cut; trace SHALE: light to gray, blue to gray, laminated in part, calcareous, cryptic porosity
18400-18434	DOLOMITE: cream, light to pink, off white, firm to moderately hard, clean dolomite, microcrystalline to cryptocrystalline, intercrystalline porosity, no mineral fluorescence, no cut; SHALE: light to gray, blue to gray, laminated in part, calcareous, cryptic porosity

GEOLOGICAL SUMMARY & CONCLUSIONS

Continental Resources, Inc drilled the south bearing Tallahasse 3-16H in Sections 16, and 21 of Township 153N, Range 101W into the First Bench of the Three Forks Member. Cyclone 4 spud the Tallahassee 3-16H Well on November 8th, 2013 from its surface hole location of 2585' FNL & 268' FEL Section 16, Township 153N, Range 101W.

The surface was pre-drilled with 9 inch surface casing set at 1975' MD. From there the 8 3/4" vertical portion was drilled to 10064' MD where the motor had failed. After TOOH for the curve assembly, the well bore rotated to the kick off point of 10137' MD. LEAM provided Directional Drilling as well as the Measurement While Drilling (MWD) services during the entire course of the Well. NorAm Wellsite Services provided both Mud Logging and Geosteering Services.

The curve portion of the Tallahassee 3-16H well bore began on November 12, 2013 5:30 hrs at a kick off point of 10137' MD. The three forks member was intercepted at 10748' MD, 10571' TVD, (-8583SS) and final landing point of 10863' MD, 10586' TVD placed the bit 15' into formation. The curve was completed in roughly 34.5 hrs ending at 10863' MD, 10586' TVD on November 13th, 2013 16:03 hrs.

The Lateral portion of the Tallahassee 3-16H well bore began at 1:57hrs on November 16, 2013 after intermediate 7 inch casing was set at 10829' MD. The Tallahassee 3-16H reached it's total depth (TD) of 18434' MD, 10573.62' TVD on November 21, 2013 at 18:35 hours. The entire lateral portion of the Tallahassee 3-16H well bore was completed in roughly 136.5 hrs with an overall dip of 90.1 degrees. Tallahassee 3-16H bottom hole location is 232' FSL & 1304' FEL Section 21, T153N, R101W. No trips were necessary in the Lateral.

NEWSCO
International Energy Services Inc.

Continental Resources	33326	8/17/2013
Company	Job Number	Date
Cyclone 4	Tallahassee 3-16H	McKenzie Co., ND
Rig	Well Name	County & State

Surveyed from depth of: Surface to 1937'

GL to KB: 20'

Type of Survey: Nvader/MWD

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 coodinates are calculated using minimum curvature .

Certified by:

Joshua Mahoney

NEWSCO
Directional Services U.S.A.

CLIENT:	Continental	NEWSCO JOB :	33326
DATE:	8/17/2013	WELL NAME:	Tallahassee 3-16H
STATE:	North Dakota	RIG:	Cyclone 4
FIELD:	Baker	County:	Mckenzie

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:	47.00
KB TO GL :	6.00
Cyclone 4 KB:	20.00

All depths are measured from survey tool to Big Rigs KB

#	DEPTH	INC	AZM	CRSL	TVD	VS	+N/S-	+E/W-	DLS	/100 FEET VBUR	WALK	TF
1	142.00	0.20	34.30	142.00	142.00	0.20	0.20	0.14	0.14	0.14	24.15	MAG
2	220.00	0.20	301.80	78.00	220.00	0.39	0.39	0.10	0.37	0.00	-118.59	MAG
3	301.00	0.20	286.00	81.00	301.00	0.50	0.50	-0.16	0.07	0.00	-19.51	MAG
4	381.00	0.30	299.30	80.00	381.00	0.64	0.64	-0.47	0.14	0.13	16.63	MAG
5	470.00	0.10	206.20	89.00	470.00	0.69	0.69	-0.71	0.36	-0.22	-104.61	MAG
6	561.00	0.20	231.20	91.00	561.00	0.52	0.52	-0.87	0.13	0.11	27.47	MAG
7	656.00	0.30	249.80	95.00	656.00	0.33	0.33	-1.23	0.13	0.11	19.58	MAG
8	748.00	0.40	267.40	92.00	747.99	0.23	0.23	-1.78	0.16	0.11	19.13	MAG
9	841.00	0.40	285.70	93.00	840.99	0.30	0.30	-2.41	0.14	0.00	19.68	MAG
10	934.00	0.40	282.20	93.00	933.99	0.46	0.46	-3.04	0.03	0.00	-3.76	MAG
11	1028.00	0.50	310.60	94.00	1027.99	0.80	0.80	-3.68	0.26	0.11	30.21	MAG
12	1122.00	0.10	267.80	94.00	1121.99	1.06	1.06	-4.07	0.46	-0.43	-45.53	MAG
13	1216.00	0.20	28.70	94.00	1215.99	1.20	1.20	-4.07	0.28	0.11	128.62	MAG
14	1309.00	0.20	202.70	93.00	1308.99	1.19	1.19	-4.06	0.43	0.00	187.10	MAG
15	1404.00	0.20	276.90	95.00	1403.99	1.06	1.06	-4.29	0.25	0.00	78.11	MAG
16	1496.00	0.20	288.10	92.00	1495.98	1.13	1.13	-4.60	0.04	0.00	12.17	MAG
17	1587.00	0.50	60.30	91.00	1586.98	1.37	1.37	-4.40	0.72	0.33	145.27	MAG
18	1678.00	0.60	17.80	91.00	1677.98	2.03	2.03	-3.91	0.45	0.11	-46.70	MAG
19	1773.00	0.20	55.40	95.00	1772.98	2.59	2.59	-3.63	0.48	-0.42	39.58	MAG
20	1865.00	0.40	351.80	92.00	1864.98	3.00	3.00	-3.54	0.39	0.22	-69.13	MAG
21	1937.00	0.70	307.10	72.00	1936.97	3.52	3.52	-3.93	0.70	0.42	-62.08	MAG
22												
23												
24												
25												
26												
27												
28												

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

LEAM Drilling Systems LLC

Survey Certification Sheet

Continental Resources	20131228D-ND	12/04/2013
Company	Job Number	Date
Sec. 16-T153N-R101W	Tallahassee 3-16H	McKenzie County/ ND
Lease	Well Name	County & State

Enclosed, please find the survey performed on the referenced well by Leam Drilling Systems, LLC. Other information required by your office is as follows:

Name & Title Of Surveyor	Drainhole Number	Surveyed Depths	Dates Performed	Type of Survey
Randy W. Rakowitz	OH	2,014'- 18,434'	11/08/2013-11/21/2013	MWD

The data and calculations for this survey have been checked and conform to the standards and procedures set forth by LEAM Drilling Systems, LLC. This report represents a true and correct Survey of this well, to the best of our knowledge, based on the original data obtained at the well site.

Nora Tucker
Well Planner

Physical & Mailing: 2010 East Davis, Conroe, TX 77301

(936) 756-7577 • (936) 756-7595 Fax • 1 (800) 756-7504

LEAM Drilling Systems, Inc.
2027A Airport Rd.
Conroe, TX 77301
(936) 569-1315

Survey Certification Form

State of North Dakota
McKenzie County

I, Randy W. Rakowitz, an employee of LEAM Drilling Systems, Inc., hereby certify that on the dates beginning on 11/8/2013 and ending on 11/21/2013, I conducted or supervised the taking of an MWD Survey from a beginning depth of 2,014' ft. MD to an ending depth of 18,434' ft. MD; that the depth is true, correct, complete, and within the limitations of the tools as set forth by LEAM Drilling Systems, Inc., that I am authorized and qualified to make this report; that this survey was conducted in reference to True North with a declination of 8.52° with respect to the well Tallahassee 3-16H located in McKenzie County, North Dakota as requested by Continental Resources.

Randy W. Rakowitz
Sr. MWD Operations Coordinator

LEAM Drilling Systems LLC

Survey Report

Company:	Continental Resources	**Local Co-ordinate Reference:**	Well 3-16H
Project:	McKenzie County, ND	**TVD Reference:**	GL 1920+KB 20 @ 1940.00usft (Cyclone 4)
Site:	Tallahassee 3	**MD Reference:**	GL 1920+KB 20 @ 1940.00usft (Cyclone 4)
Well:	3-16H	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Multi User DB

Project McKenzie County, ND

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	North Dakota Northern Zone		

Site Tallahassee 3, Sec. 16 - T153N R-101W

Site Position:		**Northing:**	408,123.52 usft	**Latitude:**	48° 4' 30.494 N
From:	Lat/Long	**Easting:**	1,193,773.27 usft	**Longitude:**	103° 40' 12.019 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	0 "	**Grid Convergence:**	-2.36 °

Well 3-16H

Well Position	**+N/-S**	0.00 usft	**Northing:**	408,123.52 usft	**Latitude:**	48° 4' 30.494 N
	+E/-W	0.00 usft	**Easting:**	1,193,773.27 usft	**Longitude:**	103° 40' 12.019 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	1,920.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	10/11/13	8.52	72.97	56,411

Design OH

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	187.73

Survey Program **Date** 12/04/13

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
143.00	1,938.00	Survey #1 - NEWSCO (OH)	MWD-ISCWSA	MWD - Standard
2,014.00	18,385.00	Survey #2 (OH)	LEAM MWD-ADJ	MWD - Standard
18,434.00	18,434.00	Survey #3 (OH)	Project	Projection

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,938.00	0.70	307.10	1,937.97	3.52	-3.92	-2.96	0.70	0.42	-62.08
2,014.00	0.80	280.20	2,013.97	3.89	-4.82	-3.21	0.48	0.13	-35.39
2,077.00	0.90	246.50	2,076.96	3.77	-5.70	-2.97	0.80	0.16	-53.49
2,170.00	1.10	238.70	2,169.95	3.02	-7.14	-2.03	0.26	0.22	-8.39
2,263.00	1.30	236.50	2,262.93	1.97	-8.78	-0.77	0.22	0.22	-2.37
2,357.00	1.80	235.80	2,356.89	0.55	-10.89	0.92	0.53	0.53	-0.74
2,450.00	2.40	199.00	2,449.83	-2.11	-12.73	3.80	1.55	0.65	-39.57
2,543.00	2.20	181.60	2,542.76	-5.74	-13.42	7.49	0.78	-0.22	-18.71
2,638.00	1.20	152.80	2,637.72	-8.44	-13.01	10.12	1.35	-1.05	-30.32

Company:	Continental Resources	**Local Co-ordinate Reference:**	Well 3-16H
Project:	McKenzie County, ND	**TVD Reference:**	GL 1920+KB 20 @ 1940.00usft (Cyclone 4)
Site:	Tallahassee 3	**MD Reference:**	GL 1920+KB 20 @ 1940.00usft (Cyclone 4)
Well:	3-16H	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Multi User DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,732.00	1.00	119.70	2,731.70	-9.72	-11.85	11.23	0.70	-0.21	-35.21
2,825.00	1.20	134.30	2,824.68	-10.81	-10.45	12.11	0.37	0.22	15.70
2,918.00	1.50	119.20	2,917.66	-12.08	-8.69	13.14	0.50	0.32	-16.24
3,011.00	1.80	119.00	3,010.62	-13.38	-6.35	14.12	0.32	0.32	-0.22
3,105.00	1.20	84.60	3,104.59	-14.01	-4.08	14.43	1.12	-0.64	-36.60
3,198.00	1.50	66.70	3,197.56	-13.43	-1.99	13.58	0.55	0.32	-19.25
3,291.00	1.10	90.20	3,290.54	-12.95	0.02	12.83	0.71	-0.43	25.27
3,384.00	1.10	92.30	3,383.52	-12.99	1.81	12.63	0.04	0.00	2.26
3,477.00	1.00	80.50	3,476.51	-12.90	3.50	12.31	0.26	-0.11	-12.69
3,571.00	0.90	91.60	3,570.49	-12.78	5.05	11.99	0.22	-0.11	11.81
3,664.00	0.70	94.10	3,663.48	-12.84	6.34	11.87	0.22	-0.22	2.69
3,758.00	0.60	124.30	3,757.48	-13.16	7.32	12.06	0.37	-0.11	32.13
3,851.00	0.50	138.60	3,850.47	-13.74	7.99	12.54	0.18	-0.11	15.38
3,945.00	0.40	127.30	3,944.47	-14.25	8.52	12.97	0.14	-0.11	-12.02
4,038.00	0.40	231.90	4,037.47	-14.64	8.53	13.36	0.68	0.00	112.47
4,132.00	0.30	320.00	4,131.47	-14.66	8.11	13.43	0.52	-0.11	93.72
4,225.00	0.10	245.80	4,224.47	-14.50	7.88	13.31	0.31	-0.22	-79.78
4,319.00	0.10	344.60	4,318.47	-14.46	7.78	13.28	0.16	0.00	105.11
4,412.00	0.30	254.00	4,411.47	-14.45	7.53	13.30	0.34	0.22	-97.42
4,505.00	0.10	258.10	4,504.47	-14.53	7.21	13.43	0.22	-0.22	4.41
4,599.00	0.40	231.50	4,598.47	-14.75	6.88	13.69	0.33	0.32	-28.30
4,692.00	0.30	263.70	4,691.47	-14.98	6.38	13.99	0.23	-0.11	34.62
4,785.00	0.30	351.80	4,784.46	-14.77	6.11	13.81	0.45	0.00	94.73
4,879.00	0.50	40.30	4,878.46	-14.21	6.34	13.23	0.40	0.21	51.60
4,972.00	0.40	63.10	4,971.46	-13.75	6.89	12.70	0.22	-0.11	24.52
5,066.00	0.80	44.90	5,065.45	-13.14	7.64	11.99	0.47	0.43	-19.36
5,159.00	1.10	55.80	5,158.44	-12.18	8.84	10.88	0.38	0.32	11.72
5,253.00	1.10	62.60	5,252.42	-11.26	10.39	9.76	0.14	0.00	7.23
5,347.00	0.90	60.30	5,346.41	-10.47	11.83	8.79	0.22	-0.21	-2.45
5,440.00	1.10	68.10	5,439.40	-9.78	13.29	7.90	0.26	0.22	8.39
5,533.00	1.20	62.80	5,532.38	-9.00	14.99	6.90	0.16	0.11	-5.70
5,627.00	0.90	51.00	5,626.36	-8.09	16.44	5.80	0.39	-0.32	-12.55
5,720.00	0.80	32.60	5,719.35	-7.08	17.35	4.68	0.31	-0.11	-19.78
5,813.00	0.70	79.50	5,812.34	-6.43	18.26	3.92	0.65	-0.11	50.43
5,907.00	1.10	100.90	5,906.33	-6.50	19.71	3.79	0.55	0.43	22.77
6,000.00	0.40	110.60	5,999.32	-6.78	20.89	3.91	0.76	-0.75	10.43
6,094.00	0.80	289.50	6,093.32	-6.68	20.58	3.85	1.28	0.43	190.32
6,187.00	0.50	289.20	6,186.32	-6.33	19.59	3.63	0.32	-0.32	-0.32
6,281.00	0.50	5.70	6,280.31	-5.78	19.24	3.14	0.66	0.00	81.38
6,375.00	0.60	43.10	6,374.31	-5.02	19.62	2.33	0.39	0.11	39.79
6,469.00	0.10	144.00	6,468.31	-4.72	20.00	1.99	0.67	-0.53	107.34
6,562.00	1.10	255.60	6,561.30	-5.01	19.18	2.38	1.23	1.08	120.00
6,655.00	1.00	255.60	6,654.29	-5.43	17.53	3.03	0.11	-0.11	0.00

Company:	Continental Resources	**Local Co-ordinate Reference:**	Well 3-16H
Project:	McKenzie County, ND	**TVD Reference:**	GL 1920+KB 20 @ 1940.00usft (Cyclone 4)
Site:	Tallahassee 3	**MD Reference:**	GL 1920+KB 20 @ 1940.00usft (Cyclone 4)
Well:	3-16H	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Multi User DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,749.00	1.10	245.80	6,748.27	-6.01	15.92	3.81	0.22	0.11	-10.43
6,843.00	1.10	247.20	6,842.25	-6.73	14.26	4.75	0.03	0.00	1.49
6,936.00	1.20	254.60	6,935.23	-7.33	12.50	5.58	0.19	0.11	7.96
7,030.00	1.20	239.50	7,029.21	-8.09	10.70	6.58	0.34	0.00	-16.06
7,123.00	1.80	238.60	7,122.18	-9.35	8.62	8.10	0.65	0.65	-0.97
7,216.00	1.80	246.30	7,215.14	-10.70	6.03	9.79	0.26	0.00	8.28
7,309.00	1.10	286.60	7,308.11	-11.03	3.84	10.41	1.29	-0.75	43.33
7,404.00	1.10	284.30	7,403.09	-10.54	2.08	10.17	0.05	0.00	-2.42
7,497.00	1.10	286.70	7,496.07	-10.07	0.36	9.92	0.05	0.00	2.58
7,590.00	1.50	292.50	7,589.05	-9.34	-1.62	9.48	0.45	0.43	6.24
7,683.00	1.60	299.40	7,682.01	-8.24	-3.87	8.69	0.23	0.11	7.42
7,777.00	1.30	305.50	7,775.98	-6.98	-5.89	7.70	0.36	-0.32	6.49
7,870.00	1.40	288.80	7,868.96	-6.00	-7.82	6.99	0.43	0.11	-17.96
7,963.00	1.10	285.20	7,961.94	-5.40	-9.76	6.66	0.33	-0.32	-3.87
8,056.00	0.90	279.50	8,054.92	-5.04	-11.34	6.52	0.24	-0.22	-6.13
8,149.00	0.90	270.00	8,147.91	-4.92	-12.79	6.60	0.16	0.00	-10.22
8,243.00	1.00	268.30	8,241.90	-4.95	-14.35	6.83	0.11	0.11	-1.81
8,336.00	1.00	272.10	8,334.88	-4.94	-15.97	7.04	0.07	0.00	4.09
8,429.00	0.90	276.50	8,427.87	-4.83	-17.51	7.14	0.13	-0.11	4.73
8,522.00	0.90	280.40	8,520.86	-4.61	-18.95	7.12	0.07	0.00	4.19
8,616.00	1.00	257.40	8,614.85	-4.66	-20.48	7.37	0.42	0.11	-24.47
8,709.00	1.10	267.20	8,707.83	-4.88	-22.16	7.82	0.22	0.11	10.54
8,803.00	1.00	261.10	8,801.82	-5.05	-23.87	8.22	0.16	-0.11	-6.49
8,896.00	0.90	264.20	8,894.80	-5.25	-25.40	8.62	0.12	-0.11	3.33
8,990.00	0.40	334.00	8,988.80	-5.03	-26.28	8.52	0.90	-0.53	74.26
9,083.00	0.80	47.70	9,081.79	-4.30	-25.94	7.75	0.85	0.43	79.25
9,176.00	0.80	63.10	9,174.78	-3.57	-24.88	6.88	0.23	0.00	16.56
9,270.00	0.80	59.10	9,268.78	-2.94	-23.73	6.10	0.06	0.00	-4.26
9,363.00	0.50	49.80	9,361.77	-2.34	-22.87	5.40	0.34	-0.32	-10.00
9,457.00	0.40	48.20	9,455.77	-1.86	-22.31	4.84	0.11	-0.11	-1.70
9,550.00	0.40	48.60	9,548.76	-1.43	-21.82	4.35	0.00	0.00	0.43
9,643.00	0.50	51.70	9,641.76	-0.96	-21.26	3.81	0.11	0.11	3.33
9,737.00	0.40	12.90	9,735.76	-0.39	-20.87	3.19	0.33	-0.11	-41.28
9,830.00	0.30	351.40	9,828.76	0.17	-20.83	2.63	0.18	-0.11	-23.12
9,923.00	0.30	308.20	9,921.76	0.56	-21.06	2.28	0.24	0.00	-46.45
10,019.00	0.30	299.40	10,017.75	0.84	-21.47	2.06	0.05	0.00	-9.17
10,112.00	0.40	325.20	10,110.75	1.23	-21.87	1.73	0.20	0.11	27.74
10,143.00	1.80	252.60	10,141.75	1.17	-22.40	1.85	5.56	4.52	-234.19
10,174.00	5.70	242.60	10,172.68	0.32	-24.23	2.95	12.71	12.58	-32.26
10,205.00	9.10	239.30	10,203.41	-1.65	-27.71	5.36	11.05	10.97	-10.65
10,236.00	12.50	234.40	10,233.86	-4.85	-32.54	9.18	11.35	10.97	-15.81
10,268.00	15.70	234.50	10,264.89	-9.38	-38.88	14.53	10.00	10.00	0.31
10,299.00	20.40	232.60	10,294.36	-15.10	-46.60	21.23	15.28	15.16	-6.13

LEAM Drilling Systems LLC

Survey Report

Company:	Continental Resources	**Local Co-ordinate Reference:**	Well 3-16H
Project:	McKenzie County, ND	**TVD Reference:**	GL 1920+KB 20 @ 1940.00usft (Cyclone 4)
Site:	Tallahassee 3	**MD Reference:**	GL 1920+KB 20 @ 1940.00usft (Cyclone 4)
Well:	3-16H	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Multi User DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,330.00	25.70	233.30	10,322.87	-22.41	-56.28	29.77	17.12	17.10	2.26
10,361.00	29.90	231.90	10,350.29	-31.19	-67.76	40.03	13.71	13.55	-4.52
10,392.00	33.20	231.00	10,376.70	-41.31	-80.44	51.75	10.75	10.65	-2.90
10,423.00	36.80	230.80	10,402.09	-52.52	-94.23	64.72	11.62	11.61	-0.65
10,455.00	40.00	230.00	10,427.17	-65.19	-109.54	79.33	10.12	10.00	-2.50
10,485.00	45.40	229.80	10,449.21	-78.29	-125.10	94.41	18.01	18.00	-0.67
10,516.00	49.40	230.00	10,470.19	-92.99	-142.55	111.32	12.91	12.90	0.65
10,548.00	55.00	230.00	10,489.79	-109.23	-161.91	130.02	17.50	17.50	0.00
10,579.00	59.40	230.00	10,506.58	-125.98	-181.87	149.30	14.19	14.19	0.00
10,610.00	61.30	229.80	10,521.92	-143.33	-202.48	169.26	6.15	6.13	-0.65
10,641.00	64.30	229.10	10,536.08	-161.26	-223.42	189.84	9.88	9.68	-2.26
10,672.00	68.90	227.80	10,548.39	-180.12	-244.70	211.40	15.33	14.85	-4.13
10,703.00	72.10	227.70	10,558.74	-199.77	-266.33	233.78	10.33	10.32	-0.32
10,735.00	73.90	227.50	10,568.09	-220.40	-288.93	257.26	5.66	5.63	-0.63
10,766.00	77.20	227.10	10,575.83	-240.76	-310.99	280.40	10.72	10.65	-1.29
10,797.00	82.50	226.10	10,581.29	-261.72	-333.15	304.15	17.39	17.10	-3.23
10,807.00	84.20	225.90	10,582.45	-268.62	-340.29	311.95	17.12	17.00	-2.00
10,889.00	88.00	222.60	10,588.03	-327.21	-397.36	377.68	6.13	4.63	-4.02
10,920.00	89.50	221.30	10,588.70	-350.25	-418.07	403.30	6.40	4.84	-4.19
11,015.00	90.90	218.70	10,588.37	-423.02	-479.13	483.62	3.11	1.47	-2.74
11,110.00	91.80	214.70	10,586.13	-499.15	-535.88	566.69	4.31	0.95	-4.21
11,205.00	89.20	213.60	10,585.30	-577.76	-589.20	651.76	2.97	-2.74	-1.16
11,300.00	90.00	210.30	10,585.97	-658.35	-639.46	738.38	3.57	0.84	-3.47
11,395.00	90.40	207.60	10,585.63	-741.47	-685.44	826.93	2.87	0.42	-2.84
11,490.00	90.70	205.30	10,584.72	-826.52	-727.75	916.90	2.44	0.32	-2.42
11,585.00	89.90	204.60	10,584.23	-912.65	-767.83	1,007.64	1.12	-0.84	-0.74
11,680.00	89.70	204.50	10,584.56	-999.06	-807.30	1,098.57	0.24	-0.21	-0.11
11,775.00	88.20	202.70	10,586.30	-1,086.10	-845.32	1,189.93	2.47	-1.58	-1.89
11,870.00	89.10	201.50	10,588.54	-1,174.09	-881.05	1,281.93	1.58	0.95	-1.26
11,965.00	90.10	199.40	10,589.20	-1,263.10	-914.24	1,374.59	2.45	1.05	-2.21
12,060.00	89.10	197.60	10,589.86	-1,353.18	-944.38	1,467.91	2.17	-1.05	-1.89
12,155.00	89.70	194.60	10,590.86	-1,444.44	-970.72	1,561.88	3.22	0.63	-3.16
12,250.00	89.80	191.80	10,591.27	-1,536.92	-992.41	1,656.44	2.95	0.11	-2.95
12,345.00	90.70	189.40	10,590.86	-1,630.29	-1,009.89	1,751.31	2.70	0.95	-2.53
12,440.00	91.30	186.40	10,589.20	-1,724.36	-1,022.94	1,846.28	3.22	0.63	-3.16
12,535.00	88.80	184.10	10,589.12	-1,818.95	-1,031.63	1,941.18	3.58	-2.63	-2.42
12,630.00	89.00	181.60	10,590.94	-1,913.81	-1,036.35	2,035.81	2.64	0.21	-2.63
12,725.00	90.40	181.80	10,591.44	-2,008.76	-1,039.17	2,130.28	1.49	1.47	0.21
12,820.00	90.90	179.30	10,590.36	-2,103.74	-1,040.08	2,224.52	2.68	0.53	-2.63
12,915.00	90.00	179.70	10,589.61	-2,198.73	-1,039.26	2,318.54	1.04	-0.95	0.42
13,010.00	89.30	179.00	10,590.19	-2,293.72	-1,038.18	2,412.52	1.04	-0.74	-0.74
13,104.00	88.80	180.40	10,591.75	-2,387.71	-1,037.69	2,505.58	1.58	-0.53	1.49

Company:	Continental Resources	**Local Co-ordinate Reference:**	Well 3-16H
Project:	McKenzie County, ND	**TVD Reference:**	GL 1920+KB 20 @ 1940.00usft (Cyclone 4)
Site:	Tallahassee 3	**MD Reference:**	GL 1920+KB 20 @ 1940.00usft (Cyclone 4)
Well:	3-16H	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Multi User DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,199.00	89.50	180.90	10,593.16	-2,482.69	-1,038.76	2,599.85	0.91	0.74	0.53
13,295.00	90.80	180.90	10,592.91	-2,578.68	-1,040.27	2,695.17	1.35	1.35	0.00
13,389.00	91.50	179.50	10,591.02	-2,672.65	-1,040.60	2,788.33	1.66	0.74	-1.49
13,484.00	91.80	180.20	10,588.29	-2,767.61	-1,040.35	2,882.40	0.80	0.32	0.74
13,579.00	89.20	180.00	10,587.46	-2,862.60	-1,040.52	2,976.54	2.74	-2.74	-0.21
13,674.00	89.00	180.00	10,588.95	-2,957.59	-1,040.52	3,070.67	0.21	-0.21	0.00
13,769.00	90.50	179.00	10,589.37	-3,052.58	-1,039.69	3,164.69	1.90	1.58	-1.05
13,864.00	89.70	180.40	10,589.20	-3,147.58	-1,039.19	3,258.75	1.70	-0.84	1.47
13,959.00	89.10	180.70	10,590.20	-3,242.57	-1,040.10	3,353.00	0.71	-0.63	0.32
14,054.00	89.60	179.70	10,591.27	-3,337.56	-1,040.43	3,447.17	1.18	0.53	-1.05
14,149.00	89.70	179.70	10,591.85	-3,432.56	-1,039.94	3,541.24	0.11	0.11	0.00
14,244.00	90.90	179.20	10,591.36	-3,527.55	-1,039.02	3,635.25	1.37	1.26	-0.53
14,339.00	89.90	179.30	10,590.69	-3,622.54	-1,037.78	3,729.20	1.06	-1.05	0.11
14,434.00	90.40	179.00	10,590.44	-3,717.52	-1,036.37	3,823.14	0.61	0.53	-0.32
14,529.00	90.30	178.60	10,589.86	-3,812.50	-1,034.38	3,916.99	0.43	-0.11	-0.42
14,624.00	91.50	178.30	10,588.37	-3,907.45	-1,031.81	4,010.73	1.30	1.26	-0.32
14,719.00	90.90	177.40	10,586.38	-4,002.36	-1,028.25	4,104.30	1.14	-0.63	-0.95
14,814.00	90.70	178.50	10,585.06	-4,097.29	-1,024.85	4,197.91	1.18	-0.21	1.16
14,909.00	91.10	179.70	10,583.56	-4,192.27	-1,023.36	4,291.82	1.33	0.42	1.26
15,004.00	91.10	179.70	10,581.74	-4,287.25	-1,022.86	4,385.87	0.00	0.00	0.00
15,099.00	89.60	179.30	10,581.16	-4,382.24	-1,022.03	4,479.89	1.63	-1.58	-0.42
15,193.00	89.60	180.20	10,581.82	-4,476.24	-1,021.62	4,572.97	0.96	0.00	0.96
15,289.00	89.20	180.70	10,582.82	-4,572.23	-1,022.38	4,668.19	0.67	-0.42	0.52
15,383.00	89.30	181.30	10,584.05	-4,666.20	-1,024.02	4,761.54	0.65	0.11	0.64
15,479.00	90.80	180.20	10,583.97	-4,762.19	-1,025.27	4,856.82	1.94	1.56	-1.15
15,574.00	89.90	181.60	10,583.39	-4,857.18	-1,026.77	4,951.14	1.75	-0.95	1.47
15,668.00	88.80	182.50	10,584.45	-4,951.11	-1,030.13	5,044.67	1.51	-1.17	0.96
15,763.00	90.40	182.70	10,585.12	-5,046.00	-1,034.44	5,139.29	1.70	1.68	0.21
15,858.00	88.50	182.80	10,586.03	-5,140.89	-1,038.99	5,233.92	2.00	-2.00	0.11
15,953.00	89.30	182.70	10,587.85	-5,235.76	-1,043.55	5,328.54	0.85	0.84	-0.11
16,048.00	90.50	182.50	10,588.02	-5,330.66	-1,047.86	5,423.16	1.28	1.26	-0.21
16,143.00	88.40	182.30	10,588.93	-5,425.57	-1,051.84	5,517.74	2.22	-2.21	-0.21
16,238.00	89.40	182.50	10,590.75	-5,520.46	-1,055.82	5,612.31	1.07	1.05	0.21
16,333.00	89.00	182.10	10,592.08	-5,615.38	-1,059.63	5,706.87	0.60	-0.42	-0.42
16,428.00	89.00	181.80	10,593.74	-5,710.31	-1,062.86	5,801.38	0.32	0.00	-0.32
16,523.00	92.90	181.30	10,592.16	-5,805.24	-1,065.43	5,895.79	4.14	4.11	-0.53
16,618.00	91.00	180.90	10,588.93	-5,900.16	-1,067.25	5,990.10	2.04	-2.00	-0.42
16,712.00	92.30	180.20	10,586.22	-5,994.12	-1,068.15	6,083.32	1.57	1.38	-0.74
16,807.00	91.10	180.60	10,583.41	-6,089.07	-1,068.82	6,177.50	1.33	-1.26	0.42
16,902.00	88.70	179.30	10,583.57	-6,184.06	-1,068.73	6,271.62	2.87	-2.53	-1.37
16,997.00	92.10	179.50	10,582.91	-6,279.04	-1,067.74	6,365.60	3.59	3.58	0.21
17,092.00	89.20	180.70	10,581.83	-6,374.02	-1,067.91	6,459.74	3.30	-3.05	1.26
17,187.00	90.30	180.00	10,582.25	-6,469.02	-1,068.49	6,553.95	1.37	1.16	-0.74

Company:	Continental Resources	**Local Co-ordinate Reference:**	Well 3-16H
Project:	McKenzie County, ND	**TVD Reference:**	GL 1920+KB 20 @ 1940.00usft (Cyclone 4)
Site:	Tallahassee 3	**MD Reference:**	GL 1920+KB 20 @ 1940.00usft (Cyclone 4)
Well:	3-16H	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Multi User DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,282.00	90.10	179.20	10,581.91	-6,564.01	-1,067.82	6,647.99	0.87	-0.21	-0.84
17,377.00	88.00	178.80	10,583.49	-6,658.98	-1,066.17	6,741.88	2.25	-2.21	-0.42
17,472.00	88.80	179.70	10,586.14	-6,753.93	-1,064.92	6,835.80	1.27	0.84	0.95
17,567.00	90.30	179.20	10,586.89	-6,848.92	-1,064.01	6,929.80	1.66	1.58	-0.53
17,662.00	90.60	178.30	10,586.14	-6,943.90	-1,061.94	7,023.63	1.00	0.32	-0.95
17,757.00	92.20	179.00	10,583.82	-7,038.84	-1,059.70	7,117.41	1.84	1.68	0.74
17,852.00	90.40	179.00	10,581.67	-7,133.80	-1,058.04	7,211.28	1.89	-1.89	0.00
17,947.00	91.00	178.60	10,580.50	-7,228.77	-1,056.05	7,305.12	0.76	0.63	-0.42
18,042.00	89.50	177.80	10,580.09	-7,323.72	-1,053.07	7,398.81	1.79	-1.58	-0.84
18,137.00	90.00	177.60	10,580.50	-7,418.64	-1,049.26	7,492.36	0.57	0.53	-0.21
18,232.00	91.00	177.40	10,579.68	-7,513.54	-1,045.11	7,585.84	1.07	1.05	-0.21
18,327.00	91.60	177.80	10,577.52	-7,608.44	-1,041.14	7,679.33	0.76	0.63	0.42
18,385.00	92.30	177.60	10,575.55	-7,666.35	-1,038.81	7,736.41	1.26	1.21	-0.34
18,434.00	92.30	177.60	10,573.58	-7,715.27	-1,036.76	7,784.61	0.00	0.00	0.00
Projection to Bit									

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
SEP 2013
ND OIL & GAS DIVISION

Well File No.
25157

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

☑ Notice of Intent	Approximate Start Date: August 21, 2013	☐ 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: Cement to surface	

Well Name and Number					
Tallahassee 3-16H					
Footages		Qtr-Qtr	Section	Township	Range
2585 F N L	268 F E L	SENE	16	153 N	101 W
Field	Pool	County			
Baker	Bakken	McKenzie			

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

During the cement job on the Tallahassee 3-16H, we had returns the entire time until the last 9bbls. Cement was not returned to surface. A CBL was scheduled the morning of Monday, August 19th. Cement will be brought to surface on the intermediate casing string.

A 1" top job was performed. We got 1" pipe 200' deep. We got cement to surface and continued pumping and then staging to make sure the cement would not drop.

*The Operator is to maintain a pressure gauge on the 9-5/8" X 7" annulus for continuous monitoring and to report any pressure development or pressure management events.

Company		Telephone Number
Continental Resources, Inc.		(405) 234-9000
Address		
P.O. Box 268870		
City	State	Zip Code
Oklahoma City	OK	73126
Signature: Becky Barnes	Printed Name: Becky Barnes	
Title: Regulatory Compliance Specialist	Date: August 22, 2013	
Email Address: becky.barnes@clr.com		

FOR STATE USE ONLY

☒ Received	☐ Approved
Date: 9-16-2013	
By:	
Title: 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 (03-2004)

SEP 2013
RECEIVED
ND OIL & GAS DIVISION

Well File No.
25157

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

- [x] Notice of Intent — Approximate Start Date: **October 14, 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
- [ ] Spill Report
- [ ] Shooting
- [ ] Acidizing
- [ ] Fracture Treatment
- [ ] Change Production Method
- [ ] Reclamation
- [x] Other **Flow back exemption**

Well Name and Number					
Tallahassee 3-16H					
Footages	Qtr-Qtr	Section	Township	Range	
2585 F N L 268 F E L	**SENE**	**16**	**153 N**	**101 W**	
Field	Pool	County			
Baker	**Bakken**	**McKenzie**			

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	**August 29, 2013**		

FOR STATE USE ONLY

- [ ] Received
- [x] Approved

Date: September 4, 2013
By:
Title: PETROLEUM ENGINEER

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 JUL 2013

Well File No. 25157

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

- [x] Notice of Intent — Approximate Start Date: August 14, 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
- [ ] Spill Report
- [ ] Shooting
- [ ] Acidizing
- [ ] Fracture Treatment
- [ ] Change Production Method
- [ ] Reclamation
- [x] Other: Spud with Small Rig

Well Name and Number: Tallahassee 3-16H

Footages	Qtr-Qtr	Section	Township	Range
2585 F N L 268 F E L	SENE	16	153 N	101 W

Field	Pool	County
Bakker	Bakken	McKenzie

24-HOUR PRODUCTION RATE

Before		After	
Oil	Bbls	Oil	Bbls
Water	Bbls	Water	Bbls
Gas	MCF	Gas	MCF

Name of Contractor(s): Advanced Energy Services, LLC

Address	City	State	Zip Code
P.O. Box 85	South Boardman	Michigan	49680-0085

DETAILS OF WORK

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

(RT must notify NDIC Inspector - Richard Dunn 701-770-3554 with spud dt)

Company	Telephone Number
Continental Resources, Inc.	(405) 234-9000

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

Signature	Printed Name
	Becky Barnes
Title: Regulatory Compliance Specialist	Date: July 30, 2013
Email Address: becky.barnes@clr.com	

FOR STATE USE ONLY

- [ ] Received
- [x] Approved

Date: 8-02-2013
By:
Title: David Burns Engineering Tech.

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.dmr.nd.gov/oilgas

25157

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

Date: **3/18/2013**

RE: CORES AND SAMPLES

Well Name: **TALLAHASSEE 3-16H** Well File No.: **25157**
Location: **SENE 16-153-101** County: MCKENZIE
Permit Type: **Development - HORIZONTAL**
Field: **BAKER** Target Horizon: THREE FORKS

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
JUN 2012
ND OIL & GAS DIVISION

Well File No. 25157

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
- ☐ 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
- ☐ Spill Report
- ☐ Shooting
- ☐ Acidizing
- ☐ Fracture Treatment
- ☐ Change Production Method
- ☐ Reclamation
- ☑ Other **Open Hole Log Waiver**

Well Name and Number: **Tallahassee 3-16H**

Footages	Qtr-Qtr	Section	Township	Range
2585 F N L 268 F E L	SENE	16	153 N	101 W

Field	Pool	County
	Bakken	McKenzie

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 theNance Petroleum, Corps of Engineers 31-10, Sec 10-153N-101W, McKenzie 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.

* Approved per loss run on # 10710 - Novak 1-9-3A.

Company	Telephone Number
Continental Resources, Inc.	580-233-8955

Address		
P.O. Box 1032		
City: Enid	State: OK	Zip Code: 73702

Signature	Printed Name
Terry L. Olson	Terry L. Olson
Title: Regulatory Compliance Specialist	Date: June 12, 2012
Email Address: Terry.Olson@clr.com	

FOR STATE USE ONLY

☐ Received ☒ Approved

Date: 3/11/2013

By:

Title: Richard A. Suggs
Geologist

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

March 11, 2013

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

RE: HORIZONTAL WELL
TALLAHASSEE 3-16H
SENE Section 16-153N-101W
McKenzie County
Well File # 25157

Dear Terry:

Pursuant to Commission Order No. 21551, 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 **200' setback** from the north & south boundaries and **500' setback** from the east & west boundaries within the 2560 acre spacing unit consisting of Sections 4, 9, 16, & 21-T153N-R101W. **Tool error is not required pursuant to order.**

PERMIT STIPULATIONS: The mouse and rat hole must be cemented. A liner must be placed under the location. A spill contingency plan must be in place prior to spudding the wells. No Drilling Pit will be allowed. Due to surficial water adjacent to the well site, a dike is required surrounding the entire location. One horizontal well shall be drilled and completed in the standup 1280-acre spacing unit decribed as Sections 4 and 9, T153N-R101W, McKenzie County, north Dakota, prior to completing any horizontal well in the 2560-acre spacing unit described as Sections 4, 9, 16, and 21-T153N-R101W McKenzie County, North Dakota. Continental must drill the Columbus Federal 2-16H, 3-16H and Tallahassee 2-16H, 3-16H back to back. CONTINENTAL RESOURCES must contact NDIC Field Inspector Richard Dunn at 701-770-3554 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: 232' W. Also, based on the azimuth of the proposed lateral the maximum legal coordinate from the well head is: 7751' S and a minimum legal coordinate from the well head of 232' W.

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,

David Tabor
Engineering Technician IV

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 / 16 / 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
TALLAHASSEE	**3-16H**

Surface Footages	Qtr-Qtr	Section	Township	Range	County
2585 F **N** L **268** F **E** L	**SENE**	**16**	**153 N**	**101 W**	**McKenzie**
Longstring Casing Point Footages	Qtr-Qtr	Section	Township	Range	County
2676 F **S** L **598** F **E** L	**NESE**	**16**	**153 N**	**101 W**	**McKenzie**
Longstring Casing Point Coordinates From Well Head	Azimuth	Longstring Total Depth			
290 S From WH **330 W** From WH	**229 °**	**10857** Feet MD	**10607** Feet TVD		
Bottom Hole Footages From Nearest Section Line	Qtr-Qtr	Section	Township	Range	County
204 F **S** L **1320** F **E** L	**SESE**	**21**	**153 N**	**101 W**	**McKenzie**
Bottom Hole Coordinates From Well Head	KOP Lateral 1	Azimuth Lateral 1	Estimated Total Depth Lateral 1		
7747 S From WH **1052 W** From WH	**10166** Feet MD	**180 °**	**18535** Feet MD	**10632** Feet TVD	

Latitude of Well Head	Longitude of Well Head	NAD Reference	Description of (Subject to NDIC Approval)
48 ° 04 ' 30.49 "	**-103 ° 40 ' 12.02 "**	**NAD83**	**Spacing Unit: Sec 4, 9, 16, & 21 153 101**

Ground Elevation	Acres in Spacing/Drilling Unit	Spacing/Drilling Unit Setback Requirement	Industrial Commission Order
1924 Feet Above S.L.	**2560**	**200** Feet N/S **500** Feet E/W	**21551**

North Line of Spacing/Drilling Unit	South Line of Spacing/Drilling Unit	East Line of Spacing/Drilling Unit	West Line of Spacing/Drilling Unit
5279 Feet	**5300** Feet	**20988** Feet	**20969** Feet

Objective Horizons	Pierre Shale Top
Three Forks	**1841**

Proposed Surface Casing	Size	Weight	Depth	Cement Volume	
	9 - 5/8 "	**36** Lb./Ft.	**1940** Feet	**732** Sacks	**NOTE: Surface hole must be drilled with fresh water and surface casing must be cemented back to surface.**

Proposed Longstring Casing	Size	Weight(s)	Longstring Total Depth		Cement Volume	Cement Top	Top Dakota Sand
	7 - "	**26-32** Lb./Ft.	**10857** Feet MD	**10607** Feet TVD	**859** Sacks	**0** Feet	**4826** Feet

Base Last Charles Salt (If Applicable)	
9031 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	**LEAM Drilling Services**

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

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 6 / 12 / 2012
ePermit	Printed Name Terry L. Olson	Title Regulatory Compliance Specialist

FOR STATE USE ONLY

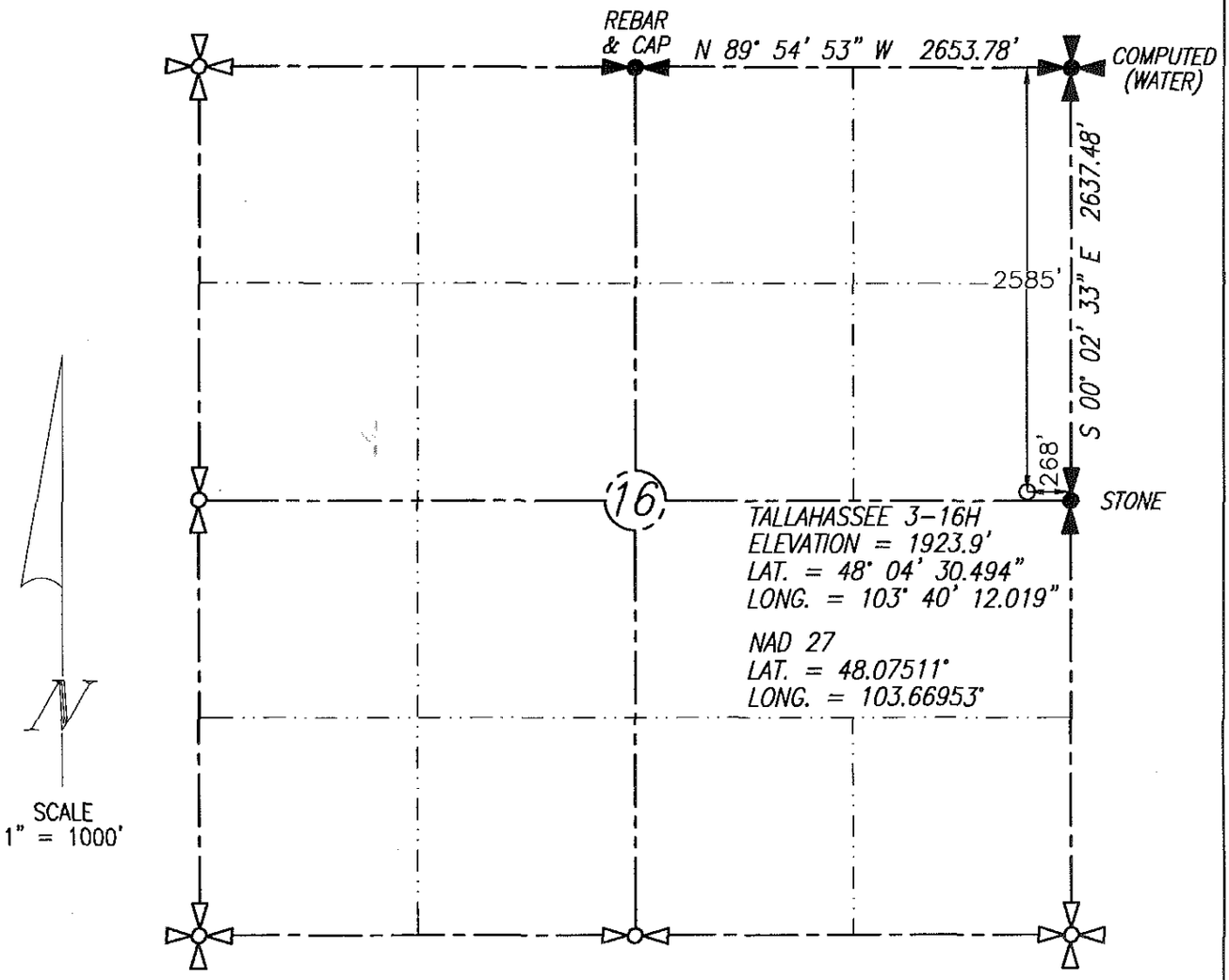
Permit and File Number 25157	API Number 33 - 053 - 04853
Field BAKER	
Pool BAKKEN	Permit Type DEVELOPMENT

FOR STATE USE ONLY

Date Approved 3 / 11 / 2013
By David Tabor
Title Engineering Technician IV

REVISED: 4-16-2012

WELL LOCATION PLAT
CONTINENTAL RESOURCES INC.
TALLAHASSEE 3-16H
SECTION 16, T153N, R101W
MCKENZIE COUNTY, NORTH DAKOTA
2585' FNL & 268' FEL



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 4-16-12

JOHN PAULSON R.L.S. 3366

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

DATE STAKED: 1-4-2012

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

GEOLOGIC PROGNOSIS

Well Name: Tallahassee 3-16H
Rig: Cyclone 20
Prospect: Williston
Target: Three Forks
Spacing: 1280

☐ Pre-Staked
☑ Staked

SHL: 2585' FNL & 268' FEL
Sec. 16 - 153N - 101W
McKenzie , ND

BHL: 200' FSL & 1320' FEL
Sec. 21 - 153N - 101W
McKenzie , ND

Rig Grade Elevation: 1920'
KB: **21'**
RKB: **1941'**

	FORMATION	SUBSEA	TVD	
	Pierre Shale	100	**1,841**	
	Greenhorn	-2,484	**4,425**	
	Dakota Group (fka Mowry)	-2,885	**4,826**	
	Base of Dakota Sand	-3,764	**5,705**	
	Dunham Salt Top	-4,792	**6,733**	
	Dunham Salt Base	-4,852	**6,793**	
	Pine Salt Top	-5,162	**7,103**	
	Pine Salt Base	-5,218	**7,159**	
	Minnekahta	-5,244	**7,185**	
	Opeche Salt Top	NA		
	Opeche Salt Base	NA		
	Minnelusa Group	-5,530	**7,471**	
	Tyler	-5,686	**7,627**	
	Kibbey	-6,238	**8,179**	
	Top Charles	-6,392	**8,333**	
	Base Last Charles Salt	-7,090	**9,031**	
	Mission Canyon	-7,314	**9,255**	
	Lodgepole	-7,880	**9,821**	
	Upper Bakken Shale	-8,570	**10,511**	
	Middle Bakken Member	-8,587	**10,528**	
	Lower Bakken Shale	-8,629	**10,570**	
	Three Forks	-8,646	**10,587**	
==>	Three Forks Target	-8,666	**10,607**	20' into 3forks
	End of Lateral	-8,691	**10,632**	25' Higher

DRILLING PROGRAM

06/08/12

Lease and Well No. Tallahassee 3-16H

MUD PROGRAM

Depth	Type	Weight	Remarks
0 ' - 1940 '	Fresh water	8.4-8.8	Add Soap Sticks for Mud Rings
1940 ' - 6500 '	Invert	9.3-9.5	35-50 sec, 10-30 cc's
6500 ' - 10857 '	Invert	9.6-10.0	40-55 sec, 10-15 cc's O/W 70/30 to 80/20
10857 ' - 18535 '	Brine	8.7-10.0	Cuttings pit

TUBULAR PROGRAM

String Type	Hole Size	Depth	Feet	Casing Diameter	Weight, Grade, Connection	ERW/ Seamless	Critical Inspection
Surf	13 1/2 "	1940 '	1940 '	9 5/8 "	9-5/8", 36 #, J-55, STC	ERW	BCI & Drift
	Float shoe, shoe joint & float collar. Centralize bottom 3 jts and every 4th jt to surface.						
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
		8130 '	4130 '	7 "	7", 29#, P-110 IC, LTC	ERW	BCI & Drift
		9230 '	1100 '	7 "	7", 32#, P-110 IC, LTC	ERW	BCI & Drift
		10857 '	1627 '	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 "	18535 '	8369 '	4 1/2 "	4-1/2", 11.6 #, P-110, BTC		
Tubing		10170 '	10170 '	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	1360 '	0 '	431	35/65 Poz/Class "C", 3% CaCl, 12% gel	2.39	12
Surf	1940	Tail	1940 '	1360 '	301	Class "C", 2% CaCl	1.46	14.3
(Basis: Gauge hole + 55% excess, tail 30% of length, lead to surface.)								
Int	10857	Lead	7830 '	0 '	473	35/65 Poz/Class "C", 3% KCl, 5 #/sk Silica	3.21	11.3
		Tail	10857 '	7830 '	386	Class "G", 3% KCl, 35% Silica	1.59	15.6
(Basis: Gauge hole + 35% excess, Tail to 500 ft above top of Charles Salt, Lead to Surface)								

BOP PROGRAM

Hole Size	Configuration	Pressure Rating	BOP Test Press	Casing Test Press
13 1/2 "	Circulate Conductor			
8 3/4 "	RRA	5M	5000	
6 "	RRA	5M	5000	
	Utilize commercial testers every 30 days.			

LOGGING PROGRAM

FROM	TO	TOOLS
BLS	TD	2 man mud logger trailer, 30 ft samples
Surf csg	TD	MWD Surveys, 90 ft & 30 ft thru curve
KOP	TD	MWD Gamma Ray
Surface	DDO	CBL, CCL, Gr

Remarks: 4 1/2 inch Liner to be run. Liner Top @ KOP (10166 ft TVD) and 29 swell packers to be run with liner.
Liner top to be tested successfully to 4500 psi prior to riggging down.
Casing Caliper to be run to determine if a frac string is needed.

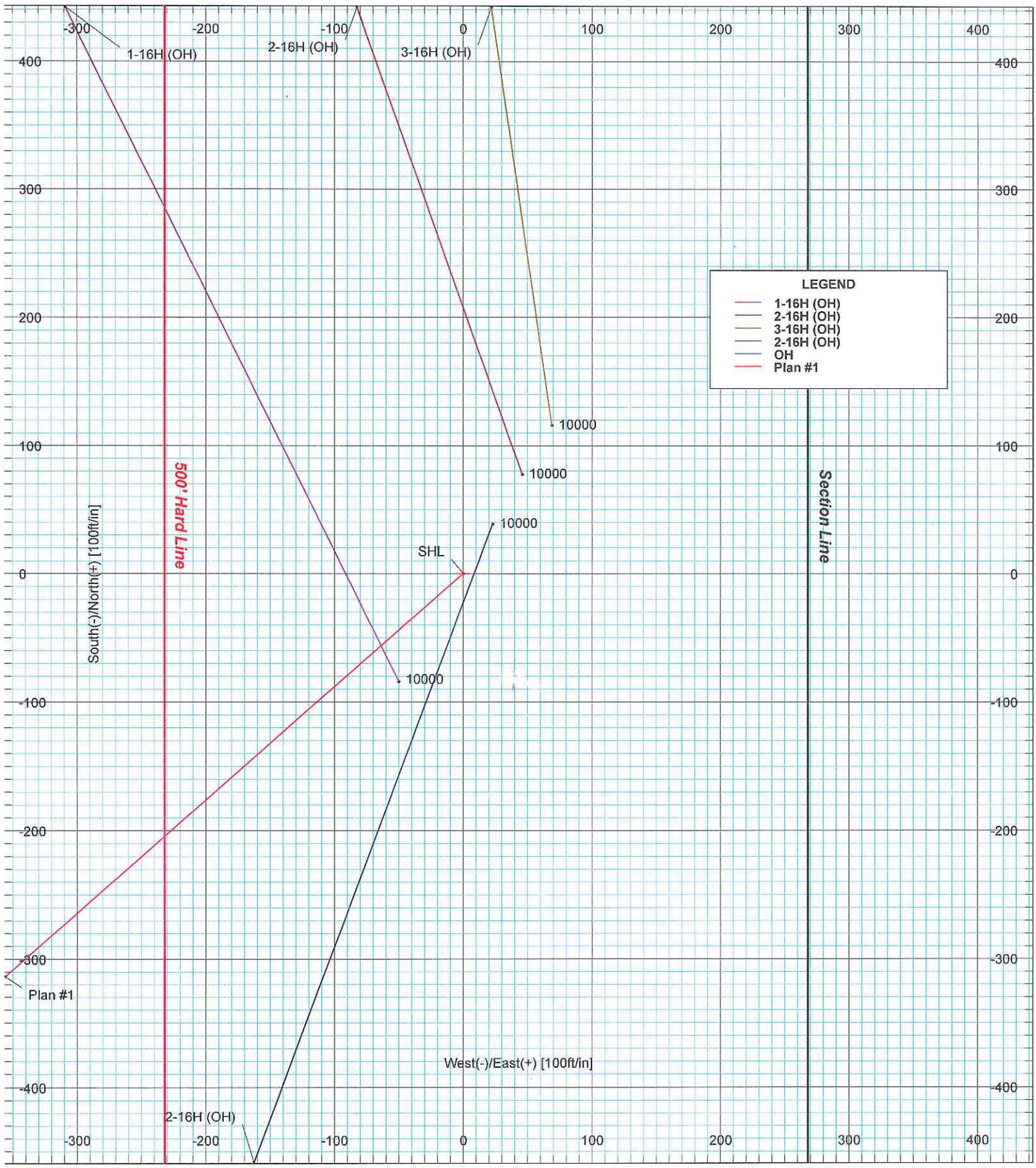
Prepared By: Pat McCollom Date: 04/17/12

Continental Resources

Field: McKenzie County, ND
Site: Tallahassee 3
Well: 3-16H
Wellpath: OH
Plan: Plan #1

Azimuths to True North
Magnetic North: 8.65°

Magnetic Field
Strength: 56675nT
Dip Angle: 73.09°
Date: 04/19/2012
Model: IGRF2010



LEAM DRILLING SYSTEMS, INC.
2010 East Davis Conroe, Texas 77301
Phone: 936-756-7577 Fax: 936-756-7595

Plan: Plan #1 (3-16H/OH)
Created By: Justin Andoe Date: 04/23/2012
Checked: _____ Date: _____
Reviewed: _____ Date: _____

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

---

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

Field: McKenzie County, ND
Site: Tallahassee 3
Well: 3-16H
Wellpath: OH
Plan: Plan #1

SITE DETAILS

Tallahassee 3
Sec. 16 - T153N R-101W
SHL 2585' FNL & 268' FEL
PBHL 200' FSL & 1320' FEL of Sec. 21

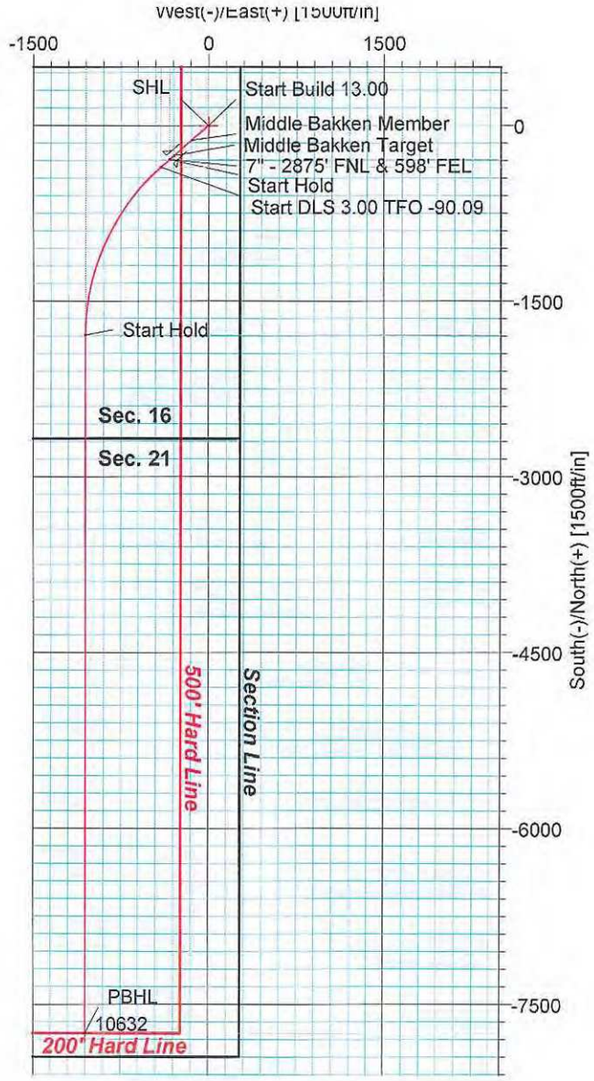
Latitude: 48°04'30.494N
Longitude: 103°40'12.019W

Ground Level: 1920.00
KB: 21.00

Azimuths to True North
Magnetic North: 8.65°

Magnetic Field
Strength: 56675nT
Dip Angle: 73.09°
Date: 04/19/2012
Model: IGRF2010

Continental RESOURCES



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SHL	0.00	0.00	0.00	408124.35	1193775.66	48°04'30.494N	103°40'12.019W	Point
PBHL	10632.00	-7747.00	-1052.00	400427.21	1192405.69	48°03'14.039N	103°40'27.505W	Point

SECTION DETAILS

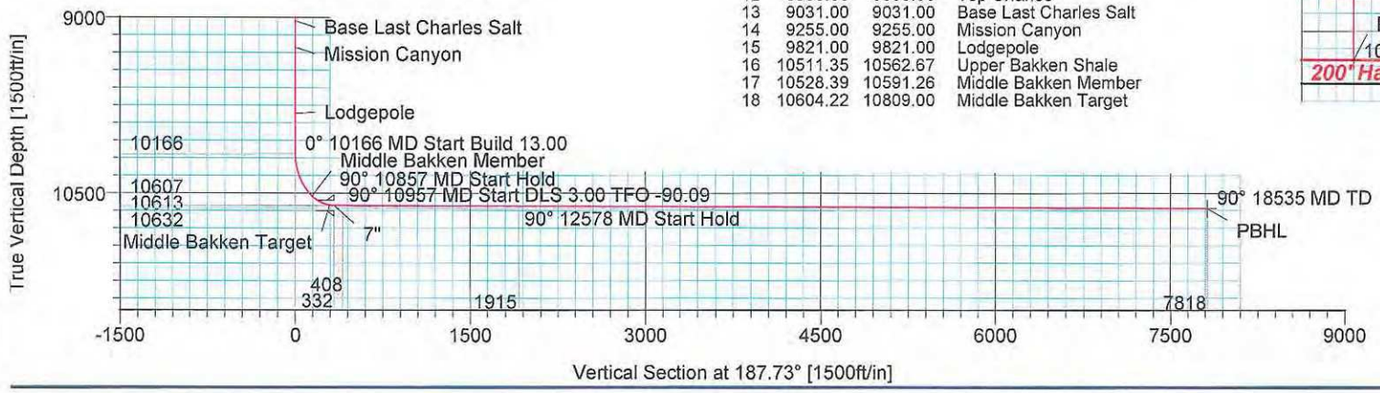
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.00	
2	10166.27	0.00	0.00	10166.27	0.00	0.00	0.00	0.00	-0.00	
3	10857.19	89.82	228.62	10607.00	-290.44	-329.66	13.00	228.62	332.14	
4	10957.19	89.82	228.62	10607.32	-356.55	-404.69	0.00	0.00	407.74	
5	12577.81	89.82	180.00	10612.81	-1789.55	-1052.00	3.00	-90.09	1914.79	
6	18535.29	89.82	180.00	10632.00	-7747.00	-1052.00	0.00	0.00	7818.10	PBHL

CASING DETAILS

No.	TVD	MD	Name	Size
1	10607.00	10857.19	7"	7.00

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	1841.00	1841.00	Pierre Shale
2	4425.00	4425.00	Greenhorn
3	4826.00	4826.00	Dakota Group
4	5705.00	5705.00	Base of Dakota Sand
5	6733.00	6733.00	Dunham Salt Top
6	6793.00	6793.00	Dunham Salt Base
7	7103.00	7103.00	Pine Salt Top
8	7159.00	7159.00	Pine Salt Base
9	7185.00	7185.00	Minnekahta
10	7471.00	7471.00	Minnelusa Group
11	8179.00	8179.00	Kibbey
12	8333.00	8333.00	Top Charles
13	9031.00	9031.00	Base Last Charles Salt
14	9255.00	9255.00	Mission Canyon
15	9821.00	9821.00	Lodgepole
16	10511.35	10562.67	Upper Bakken Shale
17	10528.39	10591.26	Middle Bakken Member
18	10604.22	10809.00	Middle Bakken Target



LEAM DRILLING SYSTEMS, INC.
2010 East Davis, Conroe, Texas 77301
Phone: 936-756-7577 Fax: 936-756-7595

Plan: Plan #1 (3-16H/OH)
Created By: Justin Andoe Date: 04/23/2012
Checked: _____ Date: _____
Reviewed: _____ Date: _____

LEAM Drilling Systems, Inc.
Planning Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:16:30	**Page:**	1
Field:	McKenzie County, ND	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Site:	Tallahassee 3	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Well:	3-16H	**Section (VS) Reference:**	Well (0.00N,0.00E,187.73Azi)		
Wellpath:	OH	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Adapti

Field: McKenzie County, ND

Map System:	US State Plane Coordinate System 1983	**Map Zone:**	North Dakota, Northern Zone
Geo Datum:	GRS 1980	**Coordinate System:**	Well Centre
Sys Datum:	Mean Sea Level	**Geomagnetic Model:**	IGRF2010

Site: Tallahassee 3
Sec. 16 - T153N R-101W
2585' FNL & 268' FEL

Site Position:		**Northing:**	408124.35 ft	**Latitude:**	48	4	30.494 N
From:	Geographic	**Easting:**	1193775.66 ft	**Longitude:**	103	40	12.019 W
Position Uncertainty:	0.00 ft			**North Reference:**			True
Ground Level:	1920.00 ft			**Grid Convergence:**			-2.36 deg

Well: 3-16H **Slot Name:**

Well Position:	+N/-S	0.00 ft	**Northing:**	408124.35 ft	**Latitude:**	48	4	30.494 N
	+E/-W	0.00 ft	**Easting :**	1193775.66 ft	**Longitude:**	103	40	12.019 W
Position Uncertainty:		0.00 ft						

Wellpath: OH

				Drilled From:	Surface
				Tie-on Depth:	0.00 ft
Current Datum:	GL 1920+KB 41	**Height**	1941.00 ft	**Above System Datum:**	Mean Sea Level
Magnetic Data:	04/19/2012			**Declination:**	8.65 deg
Field Strength:	56675 nT			**Mag Dip Angle:**	73.09 deg

Vertical Section:	**Depth From (TVD)** ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
	0.00	0.00	0.00	187.73

Plan: Plan #1 **Date Composed:** 04/23/2012
Version: 1
Principal: Yes **Tied-to:** User Defined

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10166.27	0.00	0.00	10166.27	0.00	0.00	0.00	0.00	0.00	0.00	
10857.19	89.82	228.62	10607.00	-290.44	-329.66	13.00	13.00	0.00	228.62	
10957.19	89.82	228.62	10607.32	-356.55	-404.69	0.00	0.00	0.00	0.00	
12577.81	89.82	180.00	10612.81	-1789.55	-1052.00	3.00	0.00	-3.00	-90.09	
18535.29	89.82	180.00	10632.00	-7747.00	-1052.00	0.00	0.00	0.00	0.00	PBHL

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
10166.27	0.00	0.00	10166.27	0.00	0.00	-0.00	0.00	0.00	0.00	
10175.00	1.13	228.62	10175.00	-0.06	-0.06	0.07	13.00	13.00	0.00	
10200.00	4.38	228.62	10199.97	-0.85	-0.97	0.98	13.00	13.00	0.00	
10225.00	7.63	228.62	10224.83	-2.58	-2.93	2.95	13.00	13.00	0.00	
10250.00	10.88	228.62	10249.50	-5.24	-5.95	5.99	13.00	13.00	0.00	
10275.00	14.13	228.62	10273.90	-8.82	-10.01	10.09	13.00	13.00	0.00	
10300.00	17.38	228.62	10297.96	-13.31	-15.11	15.22	13.00	13.00	0.00	
10325.00	20.63	228.62	10321.59	-18.69	-21.22	21.38	13.00	13.00	0.00	
10350.00	23.88	228.62	10344.72	-24.95	-28.32	28.53	13.00	13.00	0.00	
10375.00	27.13	228.62	10367.28	-32.07	-36.40	36.67	13.00	13.00	0.00	
10400.00	30.38	228.62	10389.20	-40.02	-45.42	45.76	13.00	13.00	0.00	
10425.00	33.63	228.62	10410.39	-48.78	-55.36	55.78	13.00	13.00	0.00	
10450.00	36.88	228.62	10430.80	-58.32	-66.19	66.69	13.00	13.00	0.00	
10475.00	40.13	228.62	10450.36	-68.61	-77.87	78.46	13.00	13.00	0.00	
10500.00	43.38	228.62	10469.01	-79.61	-90.36	91.04	13.00	13.00	0.00	

LEAM Drilling Systems, Inc.
Planning Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:16:30	**Page:**	2
Field:	McKenzie County, ND	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Site:	Tallahassee 3	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Well:	3-16H	**Section (VS) Reference:**	Well (0.00N,0.00E,187.73Azi)		
Wellpath:	OH	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Adapti

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
10525.00	46.63	228.62	10486.68	-91.30	-103.63	104.41	13.00	13.00	0.00	
10550.00	49.88	228.62	10503.32	-103.63	-117.62	118.51	13.00	13.00	0.00	
10562.67	51.53	228.62	10511.35	-110.11	-124.98	125.92	13.00	13.00	0.00	Upper Bakken Shale
10575.00	53.13	228.62	10518.88	-116.56	-132.30	133.30	13.00	13.00	0.00	
10591.26	55.25	228.62	10528.39	-125.28	-142.19	143.27	13.00	13.00	0.00	Middle Bakken Member
10600.00	56.38	228.62	10533.30	-130.06	-147.62	148.73	13.00	13.00	0.00	
10625.00	59.63	228.62	10546.55	-144.07	-163.53	164.76	13.00	13.00	0.00	
10650.00	62.88	228.62	10558.57	-158.56	-179.97	181.33	13.00	13.00	0.00	
10675.00	66.13	228.62	10569.32	-173.48	-196.90	198.39	13.00	13.00	0.00	
10700.00	69.38	228.62	10578.78	-188.77	-214.26	215.88	13.00	13.00	0.00	
10725.00	72.63	228.62	10586.92	-204.40	-232.00	233.75	13.00	13.00	0.00	
10750.00	75.88	228.62	10593.70	-220.30	-250.05	251.93	13.00	13.00	0.00	
10775.00	79.13	228.62	10599.11	-236.44	-268.36	270.38	13.00	13.00	0.00	
10800.00	82.38	228.62	10603.12	-252.75	-286.87	289.04	13.00	13.00	0.00	
10809.00	83.55	228.62	10604.22	-258.65	-293.57	295.79	13.00	13.00	0.00	Middle Bakken Target
10825.00	85.63	228.62	10605.73	-269.18	-305.53	307.83	13.00	13.00	0.00	
10850.00	88.88	228.62	10606.92	-285.69	-324.26	326.71	13.00	13.00	0.00	
10857.19	89.82	228.62	10607.00	-290.44	-329.66	332.14	13.00	13.00	0.00	7" - 2875' FNL & 598
10900.00	89.82	228.62	10607.14	-318.74	-361.78	364.50	0.00	0.00	0.00	
10957.19	89.82	228.62	10607.32	-356.55	-404.69	407.74	0.00	0.00	0.00	
11000.00	89.82	227.33	10607.45	-385.20	-436.49	440.41	3.00	0.00	-3.00	
11100.00	89.81	224.33	10607.78	-454.87	-508.21	519.09	3.00	0.00	-3.00	
11200.00	89.81	221.33	10608.10	-528.19	-576.19	600.89	3.00	0.00	-3.00	
11300.00	89.81	218.33	10608.44	-604.97	-640.24	685.59	3.00	0.00	-3.00	
11400.00	89.80	215.33	10608.78	-685.00	-700.19	772.95	3.00	0.00	-3.00	
11500.00	89.80	212.33	10609.12	-768.05	-755.86	862.74	3.00	0.00	-3.00	
11600.00	89.80	209.33	10609.46	-853.91	-807.11	954.71	3.00	0.00	-3.00	
11700.00	89.80	206.33	10609.81	-942.33	-853.80	1048.61	3.00	0.00	-3.00	
11800.00	89.80	203.33	10610.16	-1033.07	-895.79	1144.17	3.00	0.00	-3.00	
11900.00	89.80	200.33	10610.51	-1125.89	-932.98	1241.15	3.00	0.00	-3.00	
12000.00	89.80	197.33	10610.86	-1220.52	-965.26	1339.26	3.00	0.00	-3.00	
12100.00	89.80	194.33	10611.20	-1316.71	-992.54	1438.25	3.00	0.00	-3.00	
12200.00	89.80	191.33	10611.55	-1414.20	-1014.75	1537.84	3.00	0.00	-3.00	
12300.00	89.81	188.33	10611.89	-1512.72	-1031.83	1637.76	3.00	0.00	-3.00	
12400.00	89.81	185.33	10612.23	-1612.00	-1043.73	1737.74	3.00	0.00	-3.00	
12500.00	89.81	182.33	10612.56	-1711.76	-1050.41	1837.50	3.00	0.00	-3.00	
12577.81	89.82	180.00	10612.81	-1789.55	-1052.00	1914.79	3.00	0.00	-3.00	
12600.00	89.82	180.00	10612.88	-1811.74	-1052.00	1936.78	0.00	0.00	0.00	
12700.00	89.82	180.00	10613.20	-1911.74	-1052.00	2035.87	0.00	0.00	0.00	
12800.00	89.82	180.00	10613.52	-2011.74	-1052.00	2134.96	0.00	0.00	0.00	
12900.00	89.82	180.00	10613.85	-2111.74	-1052.00	2234.05	0.00	0.00	0.00	
13000.00	89.82	180.00	10614.17	-2211.74	-1052.00	2333.14	0.00	0.00	0.00	
13100.00	89.82	180.00	10614.49	-2311.74	-1052.00	2432.23	0.00	0.00	0.00	
13200.00	89.82	180.00	10614.81	-2411.74	-1052.00	2531.32	0.00	0.00	0.00	
13300.00	89.82	180.00	10615.13	-2511.74	-1052.00	2630.41	0.00	0.00	0.00	
13400.00	89.82	180.00	10615.46	-2611.74	-1052.00	2729.50	0.00	0.00	0.00	
13500.00	89.82	180.00	10615.78	-2711.74	-1052.00	2828.60	0.00	0.00	0.00	
13600.00	89.82	180.00	10616.10	-2811.74	-1052.00	2927.69	0.00	0.00	0.00	
13700.00	89.82	180.00	10616.42	-2911.74	-1052.00	3026.78	0.00	0.00	0.00	
13800.00	89.82	180.00	10616.75	-3011.74	-1052.00	3125.87	0.00	0.00	0.00	
13900.00	89.82	180.00	10617.07	-3111.74	-1052.00	3224.96	0.00	0.00	0.00	
14000.00	89.82	180.00	10617.39	-3211.74	-1052.00	3324.05	0.00	0.00	0.00	
14100.00	89.82	180.00	10617.71	-3311.73	-1052.00	3423.14	0.00	0.00	0.00	

LEAM Drilling Systems, Inc.
Planning Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:16:30	**Page:**	3
Field:	McKenzie County, ND	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Site:	Tallahassee 3	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Well:	3-16H	**Section (VS) Reference:**	Well (0.00N,0.00E,187.73Azi)		
Wellpath:	OH	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Adapti

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
14200.00	89.82	180.00	10618.03	-3411.73	-1052.00	3522.23	0.00	0.00	0.00	
14300.00	89.82	180.00	10618.36	-3511.73	-1052.00	3621.32	0.00	0.00	0.00	
14400.00	89.82	180.00	10618.68	-3611.73	-1052.00	3720.41	0.00	0.00	0.00	
14500.00	89.82	180.00	10619.00	-3711.73	-1052.00	3819.50	0.00	0.00	0.00	
14600.00	89.82	180.00	10619.32	-3811.73	-1052.00	3918.59	0.00	0.00	0.00	
14700.00	89.82	180.00	10619.64	-3911.73	-1052.00	4017.68	0.00	0.00	0.00	
14800.00	89.82	180.00	10619.97	-4011.73	-1052.00	4116.78	0.00	0.00	0.00	
14900.00	89.82	180.00	10620.29	-4111.73	-1052.00	4215.87	0.00	0.00	0.00	
15000.00	89.82	180.00	10620.61	-4211.73	-1052.00	4314.96	0.00	0.00	0.00	
15100.00	89.82	180.00	10620.93	-4311.73	-1052.00	4414.05	0.00	0.00	0.00	
15200.00	89.82	180.00	10621.26	-4411.73	-1052.00	4513.14	0.00	0.00	0.00	
15300.00	89.82	180.00	10621.58	-4511.73	-1052.00	4612.23	0.00	0.00	0.00	
15400.00	89.82	180.00	10621.90	-4611.73	-1052.00	4711.32	0.00	0.00	0.00	
15500.00	89.82	180.00	10622.22	-4711.73	-1052.00	4810.41	0.00	0.00	0.00	
15600.00	89.82	180.00	10622.54	-4811.73	-1052.00	4909.50	0.00	0.00	0.00	
15700.00	89.82	180.00	10622.87	-4911.73	-1052.00	5008.59	0.00	0.00	0.00	
15800.00	89.82	180.00	10623.19	-5011.73	-1052.00	5107.68	0.00	0.00	0.00	
15900.00	89.82	180.00	10623.51	-5111.73	-1052.00	5206.77	0.00	0.00	0.00	
16000.00	89.82	180.00	10623.83	-5211.72	-1052.00	5305.86	0.00	0.00	0.00	
16100.00	89.82	180.00	10624.15	-5311.72	-1052.00	5404.96	0.00	0.00	0.00	
16200.00	89.82	180.00	10624.48	-5411.72	-1052.00	5504.05	0.00	0.00	0.00	
16300.00	89.82	180.00	10624.80	-5511.72	-1052.00	5603.14	0.00	0.00	0.00	
16400.00	89.82	180.00	10625.12	-5611.72	-1052.00	5702.23	0.00	0.00	0.00	
16500.00	89.82	180.00	10625.44	-5711.72	-1052.00	5801.32	0.00	0.00	0.00	
16600.00	89.82	180.00	10625.77	-5811.72	-1052.00	5900.41	0.00	0.00	0.00	
16700.00	89.82	180.00	10626.09	-5911.72	-1052.00	5999.50	0.00	0.00	0.00	
16800.00	89.82	180.00	10626.41	-6011.72	-1052.00	6098.59	0.00	0.00	0.00	
16900.00	89.82	180.00	10626.73	-6111.72	-1052.00	6197.68	0.00	0.00	0.00	
17000.00	89.82	180.00	10627.05	-6211.72	-1052.00	6296.77	0.00	0.00	0.00	
17100.00	89.82	180.00	10627.38	-6311.72	-1052.00	6395.86	0.00	0.00	0.00	
17200.00	89.82	180.00	10627.70	-6411.72	-1052.00	6494.95	0.00	0.00	0.00	
17300.00	89.82	180.00	10628.02	-6511.72	-1052.00	6594.04	0.00	0.00	0.00	
17400.00	89.82	180.00	10628.34	-6611.72	-1052.00	6693.14	0.00	0.00	0.00	
17500.00	89.82	180.00	10628.66	-6711.72	-1052.00	6792.23	0.00	0.00	0.00	
17600.00	89.82	180.00	10628.99	-6811.72	-1052.00	6891.32	0.00	0.00	0.00	
17700.00	89.82	180.00	10629.31	-6911.72	-1052.00	6990.41	0.00	0.00	0.00	
17800.00	89.82	180.00	10629.63	-7011.72	-1052.00	7089.50	0.00	0.00	0.00	
17900.00	89.82	180.00	10629.95	-7111.72	-1052.00	7188.59	0.00	0.00	0.00	
18000.00	89.82	180.00	10630.28	-7211.71	-1052.00	7287.68	0.00	0.00	0.00	
18100.00	89.82	180.00	10630.60	-7311.71	-1052.00	7386.77	0.00	0.00	0.00	
18200.00	89.82	180.00	10630.92	-7411.71	-1052.00	7485.86	0.00	0.00	0.00	
18300.00	89.82	180.00	10631.24	-7511.71	-1052.00	7584.95	0.00	0.00	0.00	
18400.00	89.82	180.00	10631.56	-7611.71	-1052.00	7684.04	0.00	0.00	0.00	
18500.00	89.82	180.00	10631.89	-7711.71	-1052.00	7783.13	0.00	0.00	0.00	
18535.29	89.82	180.00	10632.00	-7747.00	-1052.00	7818.10	0.00	0.00	0.00	

Targets

Name	Description Dip.	Dir.	TVD	+N/-S	+E/-W	Map Northing	Map Easting	<---- Latitude ----> Deg Min Sec	<--- Longitude ---> Deg Min Sec

LEAM Drilling Systems, Inc.
Planning Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:16:30	**Page:**	4
Field:	McKenzie County, ND	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Site:	Tallahassee 3	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Well:	3-16H	**Section (VS) Reference:**	Well (0.00N,0.00E,187.73Azi)		
Wellpath:	OH	**Survey Calculation Method:**	Minimum Curvature	**Db:**	Adapti

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
10857.19	10607.00	7.00	8.50	7"

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
1841.00	1841.00	Pierre Shale		0.00	0.00
4425.00	4425.00	Greenhorn		0.00	0.00
4826.00	4826.00	Dakota Group		0.00	0.00
5705.00	5705.00	Base of Dakota Sand		0.00	0.00
6733.00	6733.00	Dunham Salt Top		0.00	0.00
6793.00	6793.00	Dunham Salt Base		0.00	0.00
7103.00	7103.00	Pine Salt Top		0.00	0.00
7159.00	7159.00	Pine Salt Base		0.00	0.00
7185.00	7185.00	Minnekahta		0.00	0.00
7471.00	7471.00	Minnelusa Group		0.00	0.00
8179.00	8179.00	Kibbey		0.00	0.00
8333.00	8333.00	Top Charles		0.00	0.00
9031.00	9031.00	Base Last Charles Salt		0.18	180.00
9255.00	9255.00	Mission Canyon		0.18	180.00
9821.00	9821.00	Lodgepole		0.18	180.00
10562.67	10511.35	Upper Bakken Shale		0.18	180.00
10591.26	10528.39	Middle Bakken Member		0.18	180.00
10809.00	10604.22	Middle Bakken Target		0.18	180.00

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	1
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

NO GLOBAL SCAN: Using user defined selection & scan criteria

Interpolation Method:	MD + Stations **Interval:** 100.00 ft	**Reference:**	Plan: Plan #1
Depth Range:	0.00 to 18535.29 ft	**Error Model:**	ISCWSA Ellipse
Maximum Radius:	10000.00 ft	**Scan Method:**	Closest Approach 3D
		Error Surface:	Ellipse

Plan:	Plan #1	**Date Composed:**	04/23/2012
		Version:	1
Principal:	Yes	**Tied-to:**	User Defined

Summary

<-- Offset Wellpath --> Site	Well	Wellpath	Reference MD ft	Offset MD ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
Columbus Federal 1	1-16H	OH V3 Plan: Plan #2 V1	10350.00	10343.75	51.75	25.43	1.97	
Columbus Federal 2	2-16H	OH V3 Plan: Plan #1 V1	10166.27	10166.27	90.00	63.44	3.39	
Columbus Federal 3	3-16H	OH V1 Plan: Plan #1 V1	10100.00	10100.00	134.95	108.56	5.11	
Tallahassee 2	2-16H	OH V4 Plan: Plan #1 V1	10300.00	10312.48	22.68	-3.27	0.87	Level 1

Site: Columbus Federal 1
Well: 1-16H
Wellpath: OH V3 Plan: Plan #2 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	210.72	-84.00	-49.91	97.71			No Data
100.00	100.00	100.00	100.00	0.00	0.21	210.72	-84.00	-49.91	97.71	97.50	471.98	
200.00	200.00	200.00	200.00	0.00	0.47	210.72	-84.00	-49.91	97.71	97.24	208.42	
300.00	300.00	300.00	300.00	0.00	0.73	210.72	-84.00	-49.91	97.71	96.98	133.74	
400.00	400.00	400.00	400.00	0.00	0.99	210.72	-84.00	-49.91	97.71	96.72	98.46	
500.00	500.00	500.00	500.00	0.00	1.25	210.72	-84.00	-49.91	97.71	96.46	77.90	
600.00	600.00	600.00	600.00	0.00	1.52	210.72	-84.00	-49.91	97.71	96.19	64.45	
700.00	700.00	700.00	700.00	0.00	1.78	210.72	-84.00	-49.91	97.71	95.93	54.96	
800.00	800.00	800.00	800.00	0.00	2.04	210.72	-84.00	-49.91	97.71	95.67	47.91	
900.00	900.00	900.00	900.00	0.00	2.30	210.72	-84.00	-49.91	97.71	95.41	42.46	
1000.00	1000.00	1000.00	1000.00	0.00	2.56	210.72	-84.00	-49.91	97.71	95.15	38.12	
1100.00	1100.00	1100.00	1100.00	0.00	2.82	210.72	-84.00	-49.91	97.71	94.88	34.59	
1200.00	1200.00	1200.00	1200.00	0.00	3.09	210.72	-84.00	-49.91	97.71	94.62	31.65	
1300.00	1300.00	1300.00	1300.00	0.00	3.35	210.72	-84.00	-49.91	97.71	94.36	29.18	
1400.00	1400.00	1400.00	1400.00	0.00	3.61	210.72	-84.00	-49.91	97.71	94.10	27.06	
1500.00	1500.00	1500.00	1500.00	0.00	3.87	210.72	-84.00	-49.91	97.71	93.84	25.23	
1600.00	1600.00	1600.00	1600.00	0.00	4.13	210.72	-84.00	-49.91	97.71	93.58	23.64	
1700.00	1700.00	1700.00	1700.00	0.00	4.40	210.72	-84.00	-49.91	97.71	93.31	22.23	
1800.00	1800.00	1800.00	1800.00	0.00	4.66	210.72	-84.00	-49.91	97.71	93.05	20.98	
1900.00	1900.00	1900.00	1900.00	0.00	4.92	210.72	-84.00	-49.91	97.71	92.79	19.86	
2000.00	2000.00	2000.00	2000.00	0.00	5.18	210.72	-84.00	-49.91	97.71	92.53	18.86	
2100.00	2100.00	2100.00	2100.00	0.00	5.44	210.72	-84.00	-49.91	97.71	92.27	17.95	
2200.00	2200.00	2200.00	2200.00	0.00	5.70	210.72	-84.00	-49.91	97.71	92.01	17.13	
2300.00	2300.00	2300.00	2300.00	0.00	5.97	210.72	-84.00	-49.91	97.71	91.74	16.38	
2400.00	2400.00	2400.00	2400.00	0.00	6.23	210.72	-84.00	-49.91	97.71	91.48	15.69	
2500.00	2500.00	2500.00	2500.00	0.00	6.49	210.72	-84.00	-49.91	97.71	91.22	15.05	
2600.00	2600.00	2600.00	2600.00	0.00	6.75	210.72	-84.00	-49.91	97.71	90.96	14.47	
2700.00	2700.00	2700.00	2700.00	0.00	7.01	210.72	-84.00	-49.91	97.71	90.70	13.93	
2800.00	2800.00	2800.00	2800.00	0.00	7.28	210.72	-84.00	-49.91	97.71	90.43	13.43	
2900.00	2900.00	2900.00	2900.00	0.00	7.54	210.72	-84.00	-49.91	97.71	90.17	12.96	
3000.00	3000.00	3000.00	3000.00	0.00	7.80	210.72	-84.00	-49.91	97.71	89.91	12.53	
3100.00	3100.00	3100.00	3100.00	0.00	8.06	210.72	-84.00	-49.91	97.71	89.65	12.12	
3200.00	3200.00	3200.00	3200.00	0.00	8.32	210.72	-84.00	-49.91	97.71	89.39	11.74	
3300.00	3300.00	3300.00	3300.00	0.00	8.58	210.72	-84.00	-49.91	97.71	89.13	11.38	
3400.00	3400.00	3400.00	3400.00	0.00	8.85	210.72	-84.00	-49.91	97.71	88.86	11.05	

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	2
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Columbus Federal 1
Well: 1-16H
Wellpath: OH V3 Plan: Plan #2 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
3500.00	3500.00	3500.00	3500.00	0.00	9.11	210.72	-84.00	-49.91	97.71	88.60	10.73	
3600.00	3600.00	3600.00	3600.00	0.00	9.37	210.72	-84.00	-49.91	97.71	88.34	10.43	
3700.00	3700.00	3700.00	3700.00	0.00	9.63	210.72	-84.00	-49.91	97.71	88.08	10.14	
3800.00	3800.00	3800.00	3800.00	0.00	9.89	210.72	-84.00	-49.91	97.71	87.82	9.88	
3900.00	3900.00	3900.00	3900.00	0.00	10.16	210.72	-84.00	-49.91	97.71	87.55	9.62	
4000.00	4000.00	4000.00	4000.00	0.00	10.42	210.72	-84.00	-49.91	97.71	87.29	9.38	
4100.00	4100.00	4100.00	4100.00	0.00	10.68	210.72	-84.00	-49.91	97.71	87.03	9.15	
4200.00	4200.00	4200.00	4200.00	0.00	10.94	210.72	-84.00	-49.91	97.71	86.77	8.93	
4300.00	4300.00	4300.00	4300.00	0.00	11.20	210.72	-84.00	-49.91	97.71	86.51	8.72	
4400.00	4400.00	4400.00	4400.00	0.00	11.46	210.72	-84.00	-49.91	97.71	86.25	8.52	
4500.00	4500.00	4500.00	4500.00	0.00	11.73	210.72	-84.00	-49.91	97.71	85.98	8.33	
4600.00	4600.00	4600.00	4600.00	0.00	11.99	210.72	-84.00	-49.91	97.71	85.72	8.15	
4700.00	4700.00	4700.00	4700.00	0.00	12.25	210.72	-84.00	-49.91	97.71	85.46	7.98	
4800.00	4800.00	4800.00	4800.00	0.00	12.51	210.72	-84.00	-49.91	97.71	85.20	7.81	
4900.00	4900.00	4900.00	4900.00	0.00	12.77	210.72	-84.00	-49.91	97.71	84.94	7.65	
5000.00	5000.00	5000.00	5000.00	0.00	13.03	210.72	-84.00	-49.91	97.71	84.67	7.50	
5100.00	5100.00	5100.00	5100.00	0.00	13.30	210.72	-84.00	-49.91	97.71	84.41	7.35	
5200.00	5200.00	5200.00	5200.00	0.00	13.56	210.72	-84.00	-49.91	97.71	84.15	7.21	
5300.00	5300.00	5300.00	5300.00	0.00	13.82	210.72	-84.00	-49.91	97.71	83.89	7.07	
5400.00	5400.00	5400.00	5400.00	0.00	14.08	210.72	-84.00	-49.91	97.71	83.63	6.94	
5500.00	5500.00	5500.00	5500.00	0.00	14.34	210.72	-84.00	-49.91	97.71	83.37	6.81	
5600.00	5600.00	5600.00	5600.00	0.00	14.61	210.72	-84.00	-49.91	97.71	83.10	6.69	
5700.00	5700.00	5700.00	5700.00	0.00	14.87	210.72	-84.00	-49.91	97.71	82.84	6.57	
5800.00	5800.00	5800.00	5800.00	0.00	15.13	210.72	-84.00	-49.91	97.71	82.58	6.46	
5900.00	5900.00	5900.00	5900.00	0.00	15.39	210.72	-84.00	-49.91	97.71	82.32	6.35	
6000.00	6000.00	6000.00	6000.00	0.00	15.65	210.72	-84.00	-49.91	97.71	82.06	6.24	
6100.00	6100.00	6100.00	6100.00	0.00	15.91	210.72	-84.00	-49.91	97.71	81.79	6.14	
6200.00	6200.00	6200.00	6200.00	0.00	16.18	210.72	-84.00	-49.91	97.71	81.53	6.04	
6300.00	6300.00	6300.00	6300.00	0.00	16.44	210.72	-84.00	-49.91	97.71	81.27	5.94	
6400.00	6400.00	6400.00	6400.00	0.00	16.70	210.72	-84.00	-49.91	97.71	81.01	5.85	
6500.00	6500.00	6500.00	6500.00	0.00	16.96	210.72	-84.00	-49.91	97.71	80.75	5.76	
6600.00	6600.00	6600.00	6600.00	0.00	17.22	210.72	-84.00	-49.91	97.71	80.49	5.67	
6700.00	6700.00	6700.00	6700.00	0.00	17.49	210.72	-84.00	-49.91	97.71	80.22	5.59	
6800.00	6800.00	6800.00	6800.00	0.00	17.75	210.72	-84.00	-49.91	97.71	79.96	5.51	
6900.00	6900.00	6900.00	6900.00	0.00	18.01	210.72	-84.00	-49.91	97.71	79.70	5.43	
7000.00	7000.00	7000.00	7000.00	0.00	18.27	210.72	-84.00	-49.91	97.71	79.44	5.35	
7100.00	7100.00	7100.00	7100.00	0.00	18.53	210.72	-84.00	-49.91	97.71	79.18	5.27	
7200.00	7200.00	7200.00	7200.00	0.00	18.79	210.72	-84.00	-49.91	97.71	78.92	5.20	
7300.00	7300.00	7300.00	7300.00	0.00	19.06	210.72	-84.00	-49.91	97.71	78.65	5.13	
7400.00	7400.00	7400.00	7400.00	0.00	19.32	210.72	-84.00	-49.91	97.71	78.39	5.06	
7500.00	7500.00	7500.00	7500.00	0.00	19.58	210.72	-84.00	-49.91	97.71	78.13	4.99	
7600.00	7600.00	7600.00	7600.00	0.00	19.84	210.72	-84.00	-49.91	97.71	77.87	4.92	
7700.00	7700.00	7700.00	7700.00	0.00	20.10	210.72	-84.00	-49.91	97.71	77.61	4.86	
7800.00	7800.00	7800.00	7800.00	0.00	20.37	210.72	-84.00	-49.91	97.71	77.34	4.80	
7900.00	7900.00	7900.00	7900.00	0.00	20.63	210.72	-84.00	-49.91	97.71	77.08	4.74	
8000.00	8000.00	8000.00	8000.00	0.00	20.89	210.72	-84.00	-49.91	97.71	76.82	4.68	
8100.00	8100.00	8100.00	8100.00	0.00	21.15	210.72	-84.00	-49.91	97.71	76.56	4.62	
8200.00	8200.00	8200.00	8200.00	0.00	21.41	210.72	-84.00	-49.91	97.71	76.30	4.56	
8300.00	8300.00	8300.00	8300.00	0.00	21.67	210.72	-84.00	-49.91	97.71	76.04	4.51	
8400.00	8400.00	8400.00	8400.00	0.00	21.94	210.72	-84.00	-49.91	97.71	75.77	4.45	
8500.00	8500.00	8500.00	8500.00	0.00	22.20	210.72	-84.00	-49.91	97.71	75.51	4.40	

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	3
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Columbus Federal 1
Well: 1-16H
Wellpath: OH V3 Plan: Plan #2 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
8600.00	8600.00	8600.00	8600.00	0.00	22.46	210.72	-84.00	-49.91	97.71	75.25	4.35	
8700.00	8700.00	8700.00	8700.00	0.00	22.72	210.72	-84.00	-49.91	97.71	74.99	4.30	
8800.00	8800.00	8800.00	8800.00	0.00	22.98	210.72	-84.00	-49.91	97.71	74.73	4.25	
8900.00	8900.00	8900.00	8900.00	0.00	23.25	210.72	-84.00	-49.91	97.71	74.46	4.20	
9000.00	9000.00	9000.00	9000.00	0.00	23.51	210.72	-84.00	-49.91	97.71	74.20	4.16	
9100.00	9100.00	9100.00	9100.00	0.00	23.77	210.72	-84.00	-49.91	97.71	73.94	4.11	
9200.00	9200.00	9200.00	9200.00	0.00	24.03	210.72	-84.00	-49.91	97.71	73.68	4.07	
9300.00	9300.00	9300.00	9300.00	0.00	24.29	210.72	-84.00	-49.91	97.71	73.42	4.02	
9400.00	9400.00	9400.00	9400.00	0.00	24.55	210.72	-84.00	-49.91	97.71	73.16	3.98	
9500.00	9500.00	9500.00	9500.00	0.00	24.82	210.72	-84.00	-49.91	97.71	72.89	3.94	
9600.00	9600.00	9600.00	9600.00	0.00	25.08	210.72	-84.00	-49.91	97.71	72.63	3.90	
9700.00	9700.00	9700.00	9700.00	0.00	25.34	210.72	-84.00	-49.91	97.71	72.37	3.86	
9800.00	9800.00	9800.00	9800.00	0.00	25.60	210.72	-84.00	-49.91	97.71	72.11	3.82	
9900.00	9900.00	9900.00	9900.00	0.00	25.86	210.72	-84.00	-49.91	97.71	71.85	3.78	
10000.00	10000.00	10000.00	10000.00	0.00	26.12	210.72	-84.00	-49.91	97.71	71.58	3.74	
10100.00	10100.00	10100.00	10100.00	0.00	26.39	210.72	-84.00	-49.91	97.71	71.32	3.70	
10166.27	10166.27	10174.42	10174.10	0.00	26.58	213.71	-78.71	-52.52	94.95	68.44	3.58	
10175.00	10175.00	10184.05	10183.58	0.00	26.61	345.94	-77.21	-53.26	94.11	67.59	3.55	
10200.00	10199.97	10211.05	10209.94	0.00	26.68	348.88	-72.02	-55.81	90.40	63.86	3.41	
10225.00	10224.83	10236.96	10234.87	0.00	26.75	352.80	-65.68	-58.94	84.96	58.38	3.20	
10250.00	10249.50	10261.54	10258.10	0.00	26.81	358.04	-58.46	-62.49	78.12	51.45	2.93	
10275.00	10273.90	10284.60	10279.44	0.00	26.87	5.04	-50.65	-66.34	70.38	43.58	2.63	
10300.00	10297.96	10306.02	10298.84	0.00	26.93	14.22	-42.50	-70.36	62.49	35.57	2.32	
10325.00	10321.59	10325.74	10316.28	0.00	26.98	25.68	-34.26	-74.42	55.69	28.81	2.07	
10350.00	10344.72	10343.75	10331.85	0.00	27.03	38.67	-26.12	-78.43	51.75	25.43	1.97	
10375.00	10367.28	10360.10	10345.64	0.00	27.07	51.49	-18.25	-82.30	52.60	27.52	2.10	
10400.00	10389.20	10374.82	10357.78	0.00	27.11	62.42	-10.78	-85.99	59.06	35.36	2.49	
10425.00	10410.39	10388.01	10368.40	0.00	27.15	70.64	-3.78	-89.43	70.35	47.59	3.09	
10450.00	10430.80	10399.74	10377.66	0.00	27.18	76.23	2.69	-92.62	85.11	62.78	3.81	
10475.00	10450.36	10410.10	10385.67	0.00	27.20	79.57	8.58	-95.52	102.25	80.03	4.60	
10500.00	10469.01	10419.19	10392.57	0.00	27.23	81.08	13.89	-98.14	121.02	98.76	5.44	
10525.00	10486.68	10427.09	10398.47	0.00	27.25	81.08	18.60	-100.46	140.96	118.57	6.30	
10550.00	10503.32	10433.88	10403.47	0.00	27.27	79.82	22.74	-102.50	161.77	139.22	7.17	
10575.00	10518.88	10439.65	10407.65	0.00	27.29	77.46	26.29	-104.25	183.21	160.48	8.06	
10600.00	10533.30	10444.45	10411.09	0.00	27.30	74.17	29.29	-105.73	205.14	182.21	8.95	
10625.00	10546.55	10448.35	10413.86	0.00	27.31	70.08	31.76	-106.94	227.43	204.29	9.83	
10650.00	10558.57	10451.41	10416.02	0.00	27.32	65.37	33.71	-107.90	249.96	226.61	10.71	
10675.00	10569.32	10453.68	10417.61	0.00	27.32	60.24	35.16	-108.62	272.66	249.10	11.57	
10700.00	10578.78	10455.19	10418.66	0.00	27.33	54.90	36.13	-109.10	295.43	271.66	12.43	
10725.00	10586.92	10455.99	10419.22	0.00	27.33	49.56	36.65	-109.35	318.23	294.25	13.27	
10750.00	10593.70	10456.12	10419.31	0.00	27.33	44.41	36.73	-109.39	340.97	316.78	14.10	
10775.00	10599.11	10455.58	10418.94	0.00	27.33	39.56	36.38	-109.22	363.62	339.23	14.91	
10800.00	10603.12	10454.42	10418.13	0.00	27.33	35.11	35.63	-108.85	386.11	361.52	15.70	
10825.00	10605.73	10452.65	10416.89	0.00	27.32	31.07	34.50	-108.29	408.39	383.61	16.48	
10850.00	10606.92	10450.28	10415.22	0.00	27.31	27.46	32.98	-107.54	430.42	405.46	17.24	
10857.19	10607.00	10449.49	10414.67	0.00	27.31	26.50	32.48	-107.30	436.71	411.69	17.45	
10900.00	10607.14	10444.69	10411.26	0.00	27.30	25.32	29.45	-105.80	474.47	449.17	18.76	
10957.19	10607.32	10438.45	10406.78	0.00	27.28	23.81	25.55	-103.88	526.02	500.44	20.56	
11000.00	10607.45	10433.71	10403.34	0.00	27.27	19.95	22.63	-102.44	565.31	539.56	21.95	
11100.00	10607.78	10421.68	10394.44	0.00	27.24	9.62	15.37	-98.87	658.94	632.91	25.32	
11200.00	10608.10	10408.60	10384.52	0.00	27.20	358.11	7.72	-95.10	754.08	727.90	28.80	

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	4
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Columbus Federal 1
Well: 1-16H
Wellpath: OH V3 Plan: Plan #2 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
11300.00	10608.44	10394.80	10373.79	0.00	27.16	346.56	-0.06	-91.27	849.92	823.63	32.33	
11400.00	10608.78	10380.60	10362.46	0.00	27.13	336.03	-7.75	-87.48	945.91	919.57	35.90	
11500.00	10609.12	10366.29	10350.77	0.00	27.09	327.07	-15.16	-83.83	1041.74	1015.36	39.49	
11600.00	10609.46	10352.11	10338.94	0.00	27.05	319.72	-22.16	-80.38	1137.16	1110.76	43.07	
11700.00	10609.81	10338.28	10327.16	0.00	27.01	313.78	-28.66	-77.18	1232.00	1205.59	46.65	
11800.00	10610.16	10325.00	10315.64	0.00	26.98	308.96	-34.58	-74.26	1326.14	1299.72	50.21	
11900.00	10610.51	10312.19	10304.34	0.00	26.94	305.02	-39.99	-71.59	1419.47	1393.06	53.74	
12000.00	10610.86	10300.00	10293.43	0.00	26.91	301.75	-44.87	-69.19	1511.90	1485.49	57.25	
12100.00	10611.20	10288.78	10283.26	0.00	26.88	298.99	-49.12	-67.09	1603.37	1576.96	60.73	
12200.00	10611.55	10275.00	10270.61	0.00	26.85	296.81	-54.02	-64.68	1693.80	1667.39	64.14	
12300.00	10611.89	10268.27	10264.37	0.00	26.83	294.61	-56.28	-63.57	1783.12	1756.72	67.56	
12400.00	10612.23	10259.08	10255.79	0.00	26.80	292.85	-59.24	-62.11	1871.28	1844.89	70.91	
12500.00	10612.56	10250.00	10247.25	0.00	26.78	291.32	-61.99	-60.75	1958.22	1931.83	74.21	
12577.81	10612.81	10250.00	10247.25	0.00	26.78	289.96	-61.99	-60.75	2025.00	1998.64	76.80	
12600.00	10612.88	10242.71	10240.34	0.00	26.76	290.29	-64.10	-59.72	2043.94	2017.55	77.48	
12700.00	10613.20	10235.57	10233.54	0.00	26.74	290.62	-66.05	-58.75	2130.08	2103.70	80.75	
12800.00	10613.52	10225.00	10223.42	0.00	26.71	291.10	-68.77	-57.42	2217.32	2190.93	84.02	
12900.00	10613.85	10225.00	10223.42	0.00	26.71	291.10	-68.77	-57.42	2305.51	2279.13	87.41	
13000.00	10614.17	10225.00	10223.42	0.00	26.71	291.10	-68.77	-57.42	2394.62	2368.26	90.83	
13100.00	10614.49	10212.96	10211.80	0.00	26.68	291.66	-71.59	-56.02	2484.43	2458.05	94.17	
13200.00	10614.81	10208.45	10207.43	0.00	26.67	291.86	-72.58	-55.54	2574.99	2548.60	97.60	
13300.00	10615.13	10200.00	10199.20	0.00	26.65	292.25	-74.32	-54.68	2666.21	2639.81	100.99	
13400.00	10615.46	10200.00	10199.20	0.00	26.65	292.25	-74.32	-54.68	2757.97	2731.58	104.50	
13500.00	10615.78	10200.00	10199.20	0.00	26.65	292.25	-74.32	-54.68	2850.29	2823.90	108.02	
13600.00	10616.10	10200.00	10199.20	0.00	26.65	292.25	-74.32	-54.68	2943.11	2916.73	111.56	
13700.00	10616.42	10190.47	10189.89	0.00	26.62	292.69	-76.11	-53.80	3036.30	3009.91	115.03	
13800.00	10616.75	10187.59	10187.05	0.00	26.62	292.83	-76.61	-53.55	3129.93	3103.53	118.57	
13900.00	10617.07	10184.88	10184.40	0.00	26.61	292.95	-77.07	-53.32	3223.93	3197.53	122.11	
14000.00	10617.39	10175.00	10174.67	0.00	26.58	293.41	-78.63	-52.56	3318.32	3291.90	125.59	
14100.00	10617.71	10175.00	10174.67	0.00	26.58	293.41	-78.63	-52.56	3412.94	3386.52	129.18	
14200.00	10618.03	10175.00	10174.67	0.00	26.58	293.41	-78.63	-52.56	3507.86	3481.44	132.79	
14300.00	10618.36	10175.00	10174.67	0.00	26.58	293.41	-78.63	-52.56	3603.05	3576.63	136.40	
14400.00	10618.68	10175.00	10174.67	0.00	26.58	293.41	-78.63	-52.56	3698.49	3672.08	140.03	
14500.00	10619.00	10175.00	10174.67	0.00	26.58	293.41	-78.63	-52.56	3794.17	3767.76	143.66	
14600.00	10619.32	10175.00	10174.67	0.00	26.58	293.41	-78.63	-52.56	3890.07	3863.66	147.30	
14700.00	10619.64	10175.00	10174.67	0.00	26.58	293.41	-78.63	-52.56	3986.17	3959.77	150.95	
14800.00	10619.97	10175.00	10174.67	0.00	26.58	293.41	-78.63	-52.56	4082.46	4056.05	154.61	
14900.00	10620.29	10165.06	10164.85	0.00	26.56	293.86	-79.99	-51.89	4178.82	4152.40	158.18	
15000.00	10620.61	10163.60	10163.40	0.00	26.55	293.93	-80.18	-51.79	4275.42	4249.00	161.83	
15100.00	10620.93	10162.20	10162.01	0.00	26.55	294.00	-80.35	-51.71	4372.16	4345.74	165.49	
15200.00	10621.26	10160.87	10160.69	0.00	26.55	294.06	-80.51	-51.63	4469.04	4442.62	169.15	
15300.00	10621.58	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	4566.14	4539.71	172.72	
15400.00	10621.90	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	4663.26	4636.82	176.39	
15500.00	10622.22	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	4760.49	4734.06	180.07	
15600.00	10622.54	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	4857.84	4831.40	183.76	
15700.00	10622.87	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	4955.29	4928.85	187.45	
15800.00	10623.19	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	5052.84	5026.41	191.14	
15900.00	10623.51	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	5150.49	5124.05	194.84	
16000.00	10623.83	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	5248.22	5221.79	198.54	
16100.00	10624.15	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	5346.04	5319.61	202.25	
16200.00	10624.48	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	5443.94	5417.50	205.95	

LEAM Drilling Systems, Inc.

Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	5
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Columbus Federal 1
Well: 1-16H
Wellpath: OH V3 Plan: Plan #2 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
16300.00	10624.80	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	5541.91	5515.48	209.66	
16400.00	10625.12	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	5639.95	5613.52	213.37	
16500.00	10625.44	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	5738.06	5711.63	217.09	
16600.00	10625.77	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	5836.24	5809.81	220.81	
16700.00	10626.09	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	5934.47	5908.04	224.53	
16800.00	10626.41	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	6032.77	6006.34	228.25	
16900.00	10626.73	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	6131.12	6104.69	231.97	
17000.00	10627.05	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	6229.52	6203.09	235.70	
17100.00	10627.38	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	6327.97	6301.54	239.43	
17200.00	10627.70	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	6426.47	6400.04	243.16	
17300.00	10628.02	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	6525.02	6498.59	246.89	
17400.00	10628.34	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	6623.61	6597.18	250.62	
17500.00	10628.66	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	6722.24	6695.81	254.35	
17600.00	10628.99	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	6820.91	6794.48	258.09	
17700.00	10629.31	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	6919.61	6893.19	261.83	
17800.00	10629.63	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	7018.36	6991.93	265.57	
17900.00	10629.95	10150.00	10149.91	0.00	26.52	294.56	-81.68	-51.05	7117.14	7090.71	269.31	
18000.00	10630.28	10138.59	10138.55	0.00	26.49	295.08	-82.66	-50.57	7215.82	7189.39	273.02	
18100.00	10630.60	10138.11	10138.07	0.00	26.49	295.11	-82.69	-50.56	7314.66	7288.23	276.76	
18200.00	10630.92	10137.64	10137.60	0.00	26.49	295.13	-82.73	-50.54	7413.52	7387.09	280.50	
18300.00	10631.24	10137.19	10137.15	0.00	26.48	295.15	-82.76	-50.52	7512.42	7485.99	284.25	
18400.00	10631.56	10136.75	10136.71	0.00	26.48	295.17	-82.79	-50.51	7611.34	7584.91	287.99	
18500.00	10631.89	10136.32	10136.28	0.00	26.48	295.19	-82.82	-50.49	7710.29	7683.86	291.73	
18535.29	10632.00	10136.17	10136.13	0.00	26.48	295.20	-82.83	-50.49	7745.22	7718.79	293.06	

Site: Columbus Federal 2
Well: 2-16H
Wellpath: OH V3 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	30.67	77.41	45.90	90.00			No Data
100.00	100.00	100.00	100.00	0.00	0.21	30.67	77.41	45.90	90.00	89.79	434.74	
200.00	200.00	200.00	200.00	0.00	0.47	30.67	77.41	45.90	90.00	89.53	191.97	
300.00	300.00	300.00	300.00	0.00	0.73	30.67	77.41	45.90	90.00	89.27	123.18	
400.00	400.00	400.00	400.00	0.00	0.99	30.67	77.41	45.90	90.00	89.01	90.69	
500.00	500.00	500.00	500.00	0.00	1.25	30.67	77.41	45.90	90.00	88.75	71.76	
600.00	600.00	600.00	600.00	0.00	1.52	30.67	77.41	45.90	90.00	88.49	59.37	
700.00	700.00	700.00	700.00	0.00	1.78	30.67	77.41	45.90	90.00	88.22	50.62	
800.00	800.00	800.00	800.00	0.00	2.04	30.67	77.41	45.90	90.00	87.96	44.13	
900.00	900.00	900.00	900.00	0.00	2.30	30.67	77.41	45.90	90.00	87.70	39.11	
1000.00	1000.00	1000.00	1000.00	0.00	2.56	30.67	77.41	45.90	90.00	87.44	35.11	
1100.00	1100.00	1100.00	1100.00	0.00	2.82	30.67	77.41	45.90	90.00	87.18	31.86	
1200.00	1200.00	1200.00	1200.00	0.00	3.09	30.67	77.41	45.90	90.00	86.91	29.16	
1300.00	1300.00	1300.00	1300.00	0.00	3.35	30.67	77.41	45.90	90.00	86.65	26.88	
1400.00	1400.00	1400.00	1400.00	0.00	3.61	30.67	77.41	45.90	90.00	86.39	24.93	
1500.00	1500.00	1500.00	1500.00	0.00	3.87	30.67	77.41	45.90	90.00	86.13	23.24	
1600.00	1600.00	1600.00	1600.00	0.00	4.13	30.67	77.41	45.90	90.00	85.87	21.77	
1700.00	1700.00	1700.00	1700.00	0.00	4.40	30.67	77.41	45.90	90.00	85.61	20.47	
1800.00	1800.00	1800.00	1800.00	0.00	4.66	30.67	77.41	45.90	90.00	85.34	19.32	
1900.00	1900.00	1900.00	1900.00	0.00	4.92	30.67	77.41	45.90	90.00	85.08	18.30	

LEAM Drilling Systems, Inc.

Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	6
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Columbus Federal 2
Well: 2-16H
Wellpath: OH V3 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
2000.00	2000.00	2000.00	2000.00	0.00	5.18	30.67	77.41	45.90	90.00	84.82	17.37	
2100.00	2100.00	2100.00	2100.00	0.00	5.44	30.67	77.41	45.90	90.00	84.56	16.54	
2200.00	2200.00	2200.00	2200.00	0.00	5.70	30.67	77.41	45.90	90.00	84.30	15.78	
2300.00	2300.00	2300.00	2300.00	0.00	5.97	30.67	77.41	45.90	90.00	84.03	15.08	
2400.00	2400.00	2400.00	2400.00	0.00	6.23	30.67	77.41	45.90	90.00	83.77	14.45	
2500.00	2500.00	2500.00	2500.00	0.00	6.49	30.67	77.41	45.90	90.00	83.51	13.87	
2600.00	2600.00	2600.00	2600.00	0.00	6.75	30.67	77.41	45.90	90.00	83.25	13.33	
2700.00	2700.00	2700.00	2700.00	0.00	7.01	30.67	77.41	45.90	90.00	82.99	12.83	
2800.00	2800.00	2800.00	2800.00	0.00	7.28	30.67	77.41	45.90	90.00	82.73	12.37	
2900.00	2900.00	2900.00	2900.00	0.00	7.54	30.67	77.41	45.90	90.00	82.46	11.94	
3000.00	3000.00	3000.00	3000.00	0.00	7.80	30.67	77.41	45.90	90.00	82.20	11.54	
3100.00	3100.00	3100.00	3100.00	0.00	8.06	30.67	77.41	45.90	90.00	81.94	11.16	
3200.00	3200.00	3200.00	3200.00	0.00	8.32	30.67	77.41	45.90	90.00	81.68	10.81	
3300.00	3300.00	3300.00	3300.00	0.00	8.58	30.67	77.41	45.90	90.00	81.42	10.48	
3400.00	3400.00	3400.00	3400.00	0.00	8.85	30.67	77.41	45.90	90.00	81.15	10.17	
3500.00	3500.00	3500.00	3500.00	0.00	9.11	30.67	77.41	45.90	90.00	80.89	9.88	
3600.00	3600.00	3600.00	3600.00	0.00	9.37	30.67	77.41	45.90	90.00	80.63	9.61	
3700.00	3700.00	3700.00	3700.00	0.00	9.63	30.67	77.41	45.90	90.00	80.37	9.34	
3800.00	3800.00	3800.00	3800.00	0.00	9.89	30.67	77.41	45.90	90.00	80.11	9.10	
3900.00	3900.00	3900.00	3900.00	0.00	10.16	30.67	77.41	45.90	90.00	79.85	8.86	
4000.00	4000.00	4000.00	4000.00	0.00	10.42	30.67	77.41	45.90	90.00	79.58	8.64	
4100.00	4100.00	4100.00	4100.00	0.00	10.68	30.67	77.41	45.90	90.00	79.32	8.43	
4200.00	4200.00	4200.00	4200.00	0.00	10.94	30.67	77.41	45.90	90.00	79.06	8.23	
4300.00	4300.00	4300.00	4300.00	0.00	11.20	30.67	77.41	45.90	90.00	78.80	8.03	
4400.00	4400.00	4400.00	4400.00	0.00	11.46	30.67	77.41	45.90	90.00	78.54	7.85	
4500.00	4500.00	4500.00	4500.00	0.00	11.73	30.67	77.41	45.90	90.00	78.27	7.68	
4600.00	4600.00	4600.00	4600.00	0.00	11.99	30.67	77.41	45.90	90.00	78.01	7.51	
4700.00	4700.00	4700.00	4700.00	0.00	12.25	30.67	77.41	45.90	90.00	77.75	7.35	
4800.00	4800.00	4800.00	4800.00	0.00	12.51	30.67	77.41	45.90	90.00	77.49	7.19	
4900.00	4900.00	4900.00	4900.00	0.00	12.77	30.67	77.41	45.90	90.00	77.23	7.05	
5000.00	5000.00	5000.00	5000.00	0.00	13.03	30.67	77.41	45.90	90.00	76.97	6.90	
5100.00	5100.00	5100.00	5100.00	0.00	13.30	30.67	77.41	45.90	90.00	76.70	6.77	
5200.00	5200.00	5200.00	5200.00	0.00	13.56	30.67	77.41	45.90	90.00	76.44	6.64	
5300.00	5300.00	5300.00	5300.00	0.00	13.82	30.67	77.41	45.90	90.00	76.18	6.51	
5400.00	5400.00	5400.00	5400.00	0.00	14.08	30.67	77.41	45.90	90.00	75.92	6.39	
5500.00	5500.00	5500.00	5500.00	0.00	14.34	30.67	77.41	45.90	90.00	75.66	6.27	
5600.00	5600.00	5600.00	5600.00	0.00	14.61	30.67	77.41	45.90	90.00	75.40	6.16	
5700.00	5700.00	5700.00	5700.00	0.00	14.87	30.67	77.41	45.90	90.00	75.13	6.05	
5800.00	5800.00	5800.00	5800.00	0.00	15.13	30.67	77.41	45.90	90.00	74.87	5.95	
5900.00	5900.00	5900.00	5900.00	0.00	15.39	30.67	77.41	45.90	90.00	74.61	5.85	
6000.00	6000.00	6000.00	6000.00	0.00	15.65	30.67	77.41	45.90	90.00	74.35	5.75	
6100.00	6100.00	6100.00	6100.00	0.00	15.91	30.67	77.41	45.90	90.00	74.09	5.66	
6200.00	6200.00	6200.00	6200.00	0.00	16.18	30.67	77.41	45.90	90.00	73.82	5.56	
6300.00	6300.00	6300.00	6300.00	0.00	16.44	30.67	77.41	45.90	90.00	73.56	5.47	
6400.00	6400.00	6400.00	6400.00	0.00	16.70	30.67	77.41	45.90	90.00	73.30	5.39	
6500.00	6500.00	6500.00	6500.00	0.00	16.96	30.67	77.41	45.90	90.00	73.04	5.31	
6600.00	6600.00	6600.00	6600.00	0.00	17.22	30.67	77.41	45.90	90.00	72.78	5.23	
6700.00	6700.00	6700.00	6700.00	0.00	17.49	30.67	77.41	45.90	90.00	72.52	5.15	
6800.00	6800.00	6800.00	6800.00	0.00	17.75	30.67	77.41	45.90	90.00	72.25	5.07	
6900.00	6900.00	6900.00	6900.00	0.00	18.01	30.67	77.41	45.90	90.00	71.99	5.00	
7000.00	7000.00	7000.00	7000.00	0.00	18.27	30.67	77.41	45.90	90.00	71.73	4.93	

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	7
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Columbus Federal 2
Well: 2-16H
Wellpath: OH V3 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
7100.00	7100.00	7100.00	7100.00	0.00	18.53	30.67	77.41	45.90	90.00	71.47	4.86	
7200.00	7200.00	7200.00	7200.00	0.00	18.79	30.67	77.41	45.90	90.00	71.21	4.79	
7300.00	7300.00	7300.00	7300.00	0.00	19.06	30.67	77.41	45.90	90.00	70.94	4.72	
7400.00	7400.00	7400.00	7400.00	0.00	19.32	30.67	77.41	45.90	90.00	70.68	4.66	
7500.00	7500.00	7500.00	7500.00	0.00	19.58	30.67	77.41	45.90	90.00	70.42	4.60	
7600.00	7600.00	7600.00	7600.00	0.00	19.84	30.67	77.41	45.90	90.00	70.16	4.54	
7700.00	7700.00	7700.00	7700.00	0.00	20.10	30.67	77.41	45.90	90.00	69.90	4.48	
7800.00	7800.00	7800.00	7800.00	0.00	20.37	30.67	77.41	45.90	90.00	69.64	4.42	
7900.00	7900.00	7900.00	7900.00	0.00	20.63	30.67	77.41	45.90	90.00	69.37	4.36	
8000.00	8000.00	8000.00	8000.00	0.00	20.89	30.67	77.41	45.90	90.00	69.11	4.31	
8100.00	8100.00	8100.00	8100.00	0.00	21.15	30.67	77.41	45.90	90.00	68.85	4.26	
8200.00	8200.00	8200.00	8200.00	0.00	21.41	30.67	77.41	45.90	90.00	68.59	4.20	
8300.00	8300.00	8300.00	8300.00	0.00	21.67	30.67	77.41	45.90	90.00	68.33	4.15	
8400.00	8400.00	8400.00	8400.00	0.00	21.94	30.67	77.41	45.90	90.00	68.06	4.10	
8500.00	8500.00	8500.00	8500.00	0.00	22.20	30.67	77.41	45.90	90.00	67.80	4.05	
8600.00	8600.00	8600.00	8600.00	0.00	22.46	30.67	77.41	45.90	90.00	67.54	4.01	
8700.00	8700.00	8700.00	8700.00	0.00	22.72	30.67	77.41	45.90	90.00	67.28	3.96	
8800.00	8800.00	8800.00	8800.00	0.00	22.98	30.67	77.41	45.90	90.00	67.02	3.92	
8900.00	8900.00	8900.00	8900.00	0.00	23.25	30.67	77.41	45.90	90.00	66.76	3.87	
9000.00	9000.00	9000.00	9000.00	0.00	23.51	30.67	77.41	45.90	90.00	66.49	3.83	
9100.00	9100.00	9100.00	9100.00	0.00	23.77	30.67	77.41	45.90	90.00	66.23	3.79	
9200.00	9200.00	9200.00	9200.00	0.00	24.03	30.67	77.41	45.90	90.00	65.97	3.75	
9300.00	9300.00	9300.00	9300.00	0.00	24.29	30.67	77.41	45.90	90.00	65.71	3.70	
9400.00	9400.00	9400.00	9400.00	0.00	24.55	30.67	77.41	45.90	90.00	65.45	3.67	
9500.00	9500.00	9500.00	9500.00	0.00	24.82	30.67	77.41	45.90	90.00	65.18	3.63	
9600.00	9600.00	9600.00	9600.00	0.00	25.08	30.67	77.41	45.90	90.00	64.92	3.59	
9700.00	9700.00	9700.00	9700.00	0.00	25.34	30.67	77.41	45.90	90.00	64.66	3.55	
9800.00	9800.00	9800.00	9800.00	0.00	25.60	30.67	77.41	45.90	90.00	64.40	3.52	
9900.00	9900.00	9900.00	9900.00	0.00	25.86	30.67	77.41	45.90	90.00	64.14	3.48	
10000.00	10000.00	10000.00	10000.00	0.00	26.12	30.67	77.41	45.90	90.00	63.88	3.44	
10100.00	10100.00	10100.00	10100.00	0.00	26.39	30.67	77.41	45.90	90.00	63.61	3.41	
10166.27	10166.27	10166.27	10166.27	0.00	26.56	30.67	77.41	45.90	90.00	63.44	3.39	
10175.00	10175.00	10173.99	10173.98	0.00	26.58	162.02	77.48	45.88	90.13	63.55	3.39	
10200.00	10199.97	10195.99	10195.96	0.00	26.64	161.71	78.36	45.57	91.96	65.34	3.46	
10225.00	10224.83	10217.65	10217.54	0.00	26.69	161.05	80.24	44.91	95.92	69.30	3.60	
10250.00	10249.50	10238.76	10238.43	0.00	26.75	160.12	83.03	43.93	101.99	75.38	3.83	
10275.00	10273.90	10259.09	10258.40	0.00	26.80	158.98	86.60	42.67	110.09	83.52	4.14	
10300.00	10297.96	10278.47	10277.26	0.00	26.85	157.71	90.82	41.18	120.16	93.65	4.53	
10325.00	10321.59	10296.78	10294.88	0.00	26.90	156.33	95.51	39.53	132.08	105.65	5.00	
10350.00	10344.72	10313.91	10311.17	0.00	26.95	154.87	100.52	37.76	145.73	119.40	5.53	
10375.00	10367.28	10329.80	10326.07	0.00	26.99	153.32	105.71	35.94	160.97	134.74	6.14	
10400.00	10389.20	10344.41	10339.60	0.00	27.03	151.65	110.92	34.11	177.67	151.54	6.80	
10425.00	10410.39	10357.74	10351.77	0.00	27.06	149.82	116.03	32.30	195.66	169.64	7.52	
10450.00	10430.80	10369.80	10362.64	0.00	27.09	147.78	120.96	30.57	214.82	188.90	8.29	
10475.00	10450.36	10380.62	10372.26	0.00	27.12	145.44	125.62	28.93	235.01	209.17	9.10	
10500.00	10469.01	10390.23	10380.71	0.00	27.15	142.71	129.94	27.40	256.08	230.32	9.94	
10525.00	10486.68	10398.69	10388.06	0.00	27.17	139.45	133.89	26.01	277.93	252.23	10.81	
10550.00	10503.32	10406.04	10394.39	0.00	27.19	135.48	137.43	24.76	300.42	274.77	11.71	
10575.00	10518.88	10412.35	10399.76	0.00	27.21	130.56	140.55	23.67	323.45	297.84	12.63	
10600.00	10533.30	10417.66	10404.24	0.00	27.22	124.40	143.23	22.72	346.93	321.33	13.55	
10625.00	10546.55	10422.02	10407.90	0.00	27.23	116.64	145.46	21.94	370.74	345.15	14.49	

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	8
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Columbus Federal 2
Well: 2-16H
Wellpath: OH V3 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
10650.00	10558.57	10425.48	10410.79	0.00	27.24	106.98	147.27	21.30	394.82	369.22	15.42	
10675.00	10569.32	10428.09	10412.96	0.00	27.25	95.40	148.64	20.82	419.06	393.44	16.36	
10700.00	10578.78	10429.89	10414.45	0.00	27.25	82.47	149.59	20.48	443.40	417.76	17.29	
10725.00	10586.92	10430.92	10415.30	0.00	27.26	69.38	150.14	20.29	467.76	442.08	18.22	
10750.00	10593.70	10431.22	10415.54	0.00	27.26	57.40	150.30	20.23	492.08	466.35	19.13	
10775.00	10599.11	10430.81	10415.21	0.00	27.26	47.27	150.08	20.31	516.28	490.51	20.03	
10800.00	10603.12	10429.73	10414.31	0.00	27.25	39.10	149.50	20.51	540.32	514.49	20.92	
10825.00	10605.73	10428.00	10412.88	0.00	27.25	32.63	148.59	20.84	564.12	538.24	21.79	
10850.00	10606.92	10425.64	10410.93	0.00	27.24	27.50	147.35	21.27	587.65	561.70	22.65	
10857.19	10607.00	10424.86	10410.27	0.00	27.24	26.23	146.94	21.42	594.36	568.39	22.89	
10900.00	10607.14	10420.09	10406.29	0.00	27.23	25.21	144.47	22.29	634.36	608.30	24.34	
10957.19	10607.32	10413.96	10401.12	0.00	27.21	23.93	141.36	23.38	688.24	662.07	26.30	
11000.00	10607.45	10409.43	10397.28	0.00	27.20	19.42	139.10	24.18	728.89	702.65	27.78	
11100.00	10607.78	10398.54	10387.94	0.00	27.17	7.67	133.82	26.04	824.81	798.46	31.30	
11200.00	10608.10	10387.43	10378.27	0.00	27.14	355.03	128.67	27.85	921.50	895.08	34.88	
11300.00	10608.44	10375.00	10367.28	0.00	27.11	342.73	123.17	29.79	1018.48	992.00	38.47	
11400.00	10608.78	10365.36	10358.66	0.00	27.08	331.89	119.12	31.22	1115.40	1088.89	42.09	
11500.00	10609.12	10354.71	10349.02	0.00	27.05	322.84	114.84	32.72	1212.03	1185.50	45.69	
11600.00	10609.46	10344.46	10339.64	0.00	27.03	315.52	110.93	34.10	1308.19	1281.65	49.29	
11700.00	10609.81	10334.68	10330.61	0.00	27.00	309.66	107.40	35.34	1403.73	1377.18	52.88	
11800.00	10610.16	10325.00	10321.59	0.00	26.98	304.96	104.09	36.51	1498.53	1471.97	56.43	
11900.00	10610.51	10316.70	10313.80	0.00	26.95	301.09	101.40	37.46	1592.48	1565.93	59.97	
12000.00	10610.86	10308.54	10306.08	0.00	26.93	297.92	98.89	38.34	1685.51	1658.95	63.47	
12100.00	10611.20	10300.00	10297.96	0.00	26.91	295.34	96.41	39.22	1777.51	1750.95	66.92	
12200.00	10611.55	10293.82	10292.05	0.00	26.89	293.05	94.71	39.81	1868.42	1841.86	70.35	
12300.00	10611.89	10287.23	10285.72	0.00	26.88	291.14	92.98	40.42	1958.16	1931.60	73.73	
12400.00	10612.23	10275.00	10273.90	0.00	26.85	289.82	90.00	41.47	2046.69	2020.11	77.02	
12500.00	10612.56	10275.00	10273.90	0.00	26.85	288.10	90.00	41.47	2133.84	2107.28	80.34	
12577.81	10612.81	10275.00	10273.90	0.00	26.85	286.93	90.00	41.47	2200.74	2174.19	82.89	
12600.00	10612.88	10275.00	10273.90	0.00	26.85	286.93	90.00	41.47	2219.73	2193.19	83.62	
12700.00	10613.20	10265.45	10264.62	0.00	26.82	287.36	87.90	42.21	2305.94	2279.39	86.83	
12800.00	10613.52	10261.09	10260.36	0.00	26.81	287.56	87.00	42.53	2393.20	2366.65	90.12	
12900.00	10613.85	10250.00	10249.50	0.00	26.78	288.07	84.90	43.27	2481.45	2454.87	93.36	
13000.00	10614.17	10250.00	10249.50	0.00	26.78	288.07	84.90	43.27	2570.43	2543.86	96.74	
13100.00	10614.49	10250.00	10249.50	0.00	26.78	288.07	84.90	43.27	2660.20	2633.64	100.14	
13200.00	10614.81	10250.00	10249.50	0.00	26.78	288.07	84.90	43.27	2750.68	2724.12	103.57	
13300.00	10615.13	10250.00	10249.50	0.00	26.78	288.07	84.90	43.27	2841.80	2815.24	107.02	
13400.00	10615.46	10250.00	10249.50	0.00	26.78	288.07	84.90	43.27	2933.49	2906.94	110.49	
13500.00	10615.78	10238.79	10238.47	0.00	26.75	288.58	83.03	43.93	3025.58	2999.01	113.88	
13600.00	10616.10	10236.44	10236.14	0.00	26.74	288.68	82.67	44.05	3118.22	3091.65	117.36	
13700.00	10616.42	10234.24	10233.97	0.00	26.74	288.78	82.35	44.17	3211.29	3184.72	120.85	
13800.00	10616.75	10225.00	10224.83	0.00	26.71	289.20	81.10	44.61	3304.81	3278.22	124.28	
13900.00	10617.07	10225.00	10224.83	0.00	26.71	289.20	81.10	44.61	3398.62	3372.03	127.82	
14000.00	10617.39	10225.00	10224.83	0.00	26.71	289.20	81.10	44.61	3492.77	3466.18	131.37	
14100.00	10617.71	10225.00	10224.83	0.00	26.71	289.20	81.10	44.61	3587.23	3560.65	134.93	
14200.00	10618.03	10225.00	10224.83	0.00	26.71	289.20	81.10	44.61	3681.99	3655.41	138.50	
14300.00	10618.36	10225.00	10224.83	0.00	26.71	289.20	81.10	44.61	3777.02	3750.44	142.08	
14400.00	10618.68	10225.00	10224.83	0.00	26.71	289.20	81.10	44.61	3872.30	3845.72	145.68	
14500.00	10619.00	10225.00	10224.83	0.00	26.71	289.20	81.10	44.61	3967.81	3941.23	149.28	
14600.00	10619.32	10225.00	10224.83	0.00	26.71	289.20	81.10	44.61	4063.54	4036.96	152.88	
14700.00	10619.64	10225.00	10224.83	0.00	26.71	289.20	81.10	44.61	4159.46	4132.89	156.50	

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	9
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Columbus Federal 2
Well: 2-16H
Wellpath: OH V3 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
14800.00	10619.97	10225.00	10224.83	0.00	26.71	289.20	81.10	44.61	4255.58	4229.00	160.12	
14900.00	10620.29	10225.00	10224.83	0.00	26.71	289.20	81.10	44.61	4351.87	4325.29	163.75	
15000.00	10620.61	10214.65	10214.55	0.00	26.69	289.67	79.92	45.02	4448.21	4421.62	167.31	
15100.00	10620.93	10213.61	10213.52	0.00	26.68	289.72	79.81	45.06	4544.79	4518.21	170.94	
15200.00	10621.26	10212.61	10212.53	0.00	26.68	289.77	79.71	45.10	4641.52	4614.93	174.58	
15300.00	10621.58	10211.66	10211.58	0.00	26.68	289.81	79.62	45.13	4738.38	4711.79	178.22	
15400.00	10621.90	10210.75	10210.67	0.00	26.68	289.85	79.53	45.16	4835.37	4808.78	181.86	
15500.00	10622.22	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	4932.57	4905.97	185.43	
15600.00	10622.54	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	5029.77	5003.17	189.08	
15700.00	10622.87	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	5127.08	5100.48	192.74	
15800.00	10623.19	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	5224.49	5197.89	196.41	
15900.00	10623.51	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	5322.00	5295.40	200.07	
16000.00	10623.83	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	5419.59	5392.99	203.74	
16100.00	10624.15	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	5517.28	5490.68	207.42	
16200.00	10624.48	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	5615.04	5588.44	211.10	
16300.00	10624.80	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	5712.88	5686.28	214.78	
16400.00	10625.12	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	5810.80	5784.20	218.46	
16500.00	10625.44	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	5908.78	5882.18	222.14	
16600.00	10625.77	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	6006.83	5980.23	225.83	
16700.00	10626.09	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	6104.95	6078.35	229.52	
16800.00	10626.41	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	6203.12	6176.52	233.21	
16900.00	10626.73	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	6301.35	6274.75	236.91	
17000.00	10627.05	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	6399.64	6373.04	240.61	
17100.00	10627.38	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	6497.98	6471.38	244.30	
17200.00	10627.70	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	6596.37	6569.77	248.00	
17300.00	10628.02	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	6694.80	6668.21	251.71	
17400.00	10628.34	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	6793.29	6766.69	255.41	
17500.00	10628.66	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	6891.81	6865.21	259.12	
17600.00	10628.99	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	6990.38	6963.78	262.82	
17700.00	10629.31	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	7088.99	7062.39	266.53	
17800.00	10629.63	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	7187.63	7161.04	270.24	
17900.00	10629.95	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	7286.32	7259.72	273.95	
18000.00	10630.28	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	7385.04	7358.44	277.67	
18100.00	10630.60	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	7483.79	7457.19	281.38	
18200.00	10630.92	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	7582.58	7555.98	285.10	
18300.00	10631.24	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	7681.39	7654.80	288.81	
18400.00	10631.56	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	7780.24	7753.64	292.53	
18500.00	10631.89	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	7879.12	7852.52	296.25	
18535.29	10632.00	10200.00	10199.97	0.00	26.65	290.34	78.63	45.48	7914.01	7887.42	297.56	

Site: Columbus Federal 3
Well: 3-16H
Wellpath: OH V1 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	30.71	116.02	68.92	134.95			No Data
100.00	100.00	100.00	100.00	0.00	0.21	30.71	116.02	68.92	134.95	134.74	651.86	
200.00	200.00	200.00	200.00	0.00	0.47	30.71	116.02	68.92	134.95	134.48	287.85	
300.00	300.00	300.00	300.00	0.00	0.73	30.71	116.02	68.92	134.95	134.22	184.70	
400.00	400.00	400.00	400.00	0.00	0.99	30.71	116.02	68.92	134.95	133.96	135.98	

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	10
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Columbus Federal 3
Well: 3-16H
Wellpath: OH V1 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
500.00	500.00	500.00	500.00	0.00	1.25	30.71	116.02	68.92	134.95	133.69	107.60	
600.00	600.00	600.00	600.00	0.00	1.52	30.71	116.02	68.92	134.95	133.43	89.02	
700.00	700.00	700.00	700.00	0.00	1.78	30.71	116.02	68.92	134.95	133.17	75.91	
800.00	800.00	800.00	800.00	0.00	2.04	30.71	116.02	68.92	134.95	132.91	66.16	
900.00	900.00	900.00	900.00	0.00	2.30	30.71	116.02	68.92	134.95	132.65	58.64	
1000.00	1000.00	1000.00	1000.00	0.00	2.56	30.71	116.02	68.92	134.95	132.39	52.65	
1100.00	1100.00	1100.00	1100.00	0.00	2.82	30.71	116.02	68.92	134.95	132.12	47.77	
1200.00	1200.00	1200.00	1200.00	0.00	3.09	30.71	116.02	68.92	134.95	131.86	43.72	
1300.00	1300.00	1300.00	1300.00	0.00	3.35	30.71	116.02	68.92	134.95	131.60	40.30	
1400.00	1400.00	1400.00	1400.00	0.00	3.61	30.71	116.02	68.92	134.95	131.34	37.38	
1500.00	1500.00	1500.00	1500.00	0.00	3.87	30.71	116.02	68.92	134.95	131.08	34.85	
1600.00	1600.00	1600.00	1600.00	0.00	4.13	30.71	116.02	68.92	134.95	130.82	32.64	
1700.00	1700.00	1700.00	1700.00	0.00	4.40	30.71	116.02	68.92	134.95	130.55	30.70	
1800.00	1800.00	1800.00	1800.00	0.00	4.66	30.71	116.02	68.92	134.95	130.29	28.97	
1900.00	1900.00	1900.00	1900.00	0.00	4.92	30.71	116.02	68.92	134.95	130.03	27.43	
2000.00	2000.00	2000.00	2000.00	0.00	5.18	30.71	116.02	68.92	134.95	129.77	26.05	
2100.00	2100.00	2100.00	2100.00	0.00	5.44	30.71	116.02	68.92	134.95	129.51	24.79	
2200.00	2200.00	2200.00	2200.00	0.00	5.70	30.71	116.02	68.92	134.95	129.24	23.66	
2300.00	2300.00	2300.00	2300.00	0.00	5.97	30.71	116.02	68.92	134.95	128.98	22.62	
2400.00	2400.00	2400.00	2400.00	0.00	6.23	30.71	116.02	68.92	134.95	128.72	21.67	
2500.00	2500.00	2500.00	2500.00	0.00	6.49	30.71	116.02	68.92	134.95	128.46	20.79	
2600.00	2600.00	2600.00	2600.00	0.00	6.75	30.71	116.02	68.92	134.95	128.20	19.99	
2700.00	2700.00	2700.00	2700.00	0.00	7.01	30.71	116.02	68.92	134.95	127.94	19.24	
2800.00	2800.00	2800.00	2800.00	0.00	7.28	30.71	116.02	68.92	134.95	127.67	18.55	
2900.00	2900.00	2900.00	2900.00	0.00	7.54	30.71	116.02	68.92	134.95	127.41	17.90	
3000.00	3000.00	3000.00	3000.00	0.00	7.80	30.71	116.02	68.92	134.95	127.15	17.30	
3100.00	3100.00	3100.00	3100.00	0.00	8.06	30.71	116.02	68.92	134.95	126.89	16.74	
3200.00	3200.00	3200.00	3200.00	0.00	8.32	30.71	116.02	68.92	134.95	126.63	16.21	
3300.00	3300.00	3300.00	3300.00	0.00	8.58	30.71	116.02	68.92	134.95	126.36	15.72	
3400.00	3400.00	3400.00	3400.00	0.00	8.85	30.71	116.02	68.92	134.95	126.10	15.25	
3500.00	3500.00	3500.00	3500.00	0.00	9.11	30.71	116.02	68.92	134.95	125.84	14.82	
3600.00	3600.00	3600.00	3600.00	0.00	9.37	30.71	116.02	68.92	134.95	125.58	14.40	
3700.00	3700.00	3700.00	3700.00	0.00	9.63	30.71	116.02	68.92	134.95	125.32	14.01	
3800.00	3800.00	3800.00	3800.00	0.00	9.89	30.71	116.02	68.92	134.95	125.06	13.64	
3900.00	3900.00	3900.00	3900.00	0.00	10.16	30.71	116.02	68.92	134.95	124.79	13.29	
4000.00	4000.00	4000.00	4000.00	0.00	10.42	30.71	116.02	68.92	134.95	124.53	12.95	
4100.00	4100.00	4100.00	4100.00	0.00	10.68	30.71	116.02	68.92	134.95	124.27	12.64	
4200.00	4200.00	4200.00	4200.00	0.00	10.94	30.71	116.02	68.92	134.95	124.01	12.33	
4300.00	4300.00	4300.00	4300.00	0.00	11.20	30.71	116.02	68.92	134.95	123.75	12.05	
4400.00	4400.00	4400.00	4400.00	0.00	11.46	30.71	116.02	68.92	134.95	123.48	11.77	
4500.00	4500.00	4500.00	4500.00	0.00	11.73	30.71	116.02	68.92	134.95	123.22	11.51	
4600.00	4600.00	4600.00	4600.00	0.00	11.99	30.71	116.02	68.92	134.95	122.96	11.26	
4700.00	4700.00	4700.00	4700.00	0.00	12.25	30.71	116.02	68.92	134.95	122.70	11.02	
4800.00	4800.00	4800.00	4800.00	0.00	12.51	30.71	116.02	68.92	134.95	122.44	10.79	
4900.00	4900.00	4900.00	4900.00	0.00	12.77	30.71	116.02	68.92	134.95	122.18	10.56	
5000.00	5000.00	5000.00	5000.00	0.00	13.03	30.71	116.02	68.92	134.95	121.91	10.35	
5100.00	5100.00	5100.00	5100.00	0.00	13.30	30.71	116.02	68.92	134.95	121.65	10.15	
5200.00	5200.00	5200.00	5200.00	0.00	13.56	30.71	116.02	68.92	134.95	121.39	9.95	
5300.00	5300.00	5300.00	5300.00	0.00	13.82	30.71	116.02	68.92	134.95	121.13	9.76	
5400.00	5400.00	5400.00	5400.00	0.00	14.08	30.71	116.02	68.92	134.95	120.87	9.58	
5500.00	5500.00	5500.00	5500.00	0.00	14.34	30.71	116.02	68.92	134.95	120.60	9.41	

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	11
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Columbus Federal 3
Well: 3-16H
Wellpath: OH V1 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
5600.00	5600.00	5600.00	5600.00	0.00	14.61	30.71	116.02	68.92	134.95	120.34	9.24	
5700.00	5700.00	5700.00	5700.00	0.00	14.87	30.71	116.02	68.92	134.95	120.08	9.08	
5800.00	5800.00	5800.00	5800.00	0.00	15.13	30.71	116.02	68.92	134.95	119.82	8.92	
5900.00	5900.00	5900.00	5900.00	0.00	15.39	30.71	116.02	68.92	134.95	119.56	8.77	
6000.00	6000.00	6000.00	6000.00	0.00	15.65	30.71	116.02	68.92	134.95	119.30	8.62	
6100.00	6100.00	6100.00	6100.00	0.00	15.91	30.71	116.02	68.92	134.95	119.03	8.48	
6200.00	6200.00	6200.00	6200.00	0.00	16.18	30.71	116.02	68.92	134.95	118.77	8.34	
6300.00	6300.00	6300.00	6300.00	0.00	16.44	30.71	116.02	68.92	134.95	118.51	8.21	
6400.00	6400.00	6400.00	6400.00	0.00	16.70	30.71	116.02	68.92	134.95	118.25	8.08	
6500.00	6500.00	6500.00	6500.00	0.00	16.96	30.71	116.02	68.92	134.95	117.99	7.96	
6600.00	6600.00	6600.00	6600.00	0.00	17.22	30.71	116.02	68.92	134.95	117.73	7.83	
6700.00	6700.00	6700.00	6700.00	0.00	17.49	30.71	116.02	68.92	134.95	117.46	7.72	
6800.00	6800.00	6800.00	6800.00	0.00	17.75	30.71	116.02	68.92	134.95	117.20	7.60	
6900.00	6900.00	6900.00	6900.00	0.00	18.01	30.71	116.02	68.92	134.95	116.94	7.49	
7000.00	7000.00	7000.00	7000.00	0.00	18.27	30.71	116.02	68.92	134.95	116.68	7.39	
7100.00	7100.00	7100.00	7100.00	0.00	18.53	30.71	116.02	68.92	134.95	116.42	7.28	
7200.00	7200.00	7200.00	7200.00	0.00	18.79	30.71	116.02	68.92	134.95	116.15	7.18	
7300.00	7300.00	7300.00	7300.00	0.00	19.06	30.71	116.02	68.92	134.95	115.89	7.08	
7400.00	7400.00	7400.00	7400.00	0.00	19.32	30.71	116.02	68.92	134.95	115.63	6.99	
7500.00	7500.00	7500.00	7500.00	0.00	19.58	30.71	116.02	68.92	134.95	115.37	6.89	
7600.00	7600.00	7600.00	7600.00	0.00	19.84	30.71	116.02	68.92	134.95	115.11	6.80	
7700.00	7700.00	7700.00	7700.00	0.00	20.10	30.71	116.02	68.92	134.95	114.85	6.71	
7800.00	7800.00	7800.00	7800.00	0.00	20.37	30.71	116.02	68.92	134.95	114.58	6.63	
7900.00	7900.00	7900.00	7900.00	0.00	20.63	30.71	116.02	68.92	134.95	114.32	6.54	
8000.00	8000.00	8000.00	8000.00	0.00	20.89	30.71	116.02	68.92	134.95	114.06	6.46	
8100.00	8100.00	8100.00	8100.00	0.00	21.15	30.71	116.02	68.92	134.95	113.80	6.38	
8200.00	8200.00	8200.00	8200.00	0.00	21.41	30.71	116.02	68.92	134.95	113.54	6.30	
8300.00	8300.00	8300.00	8300.00	0.00	21.67	30.71	116.02	68.92	134.95	113.27	6.23	
8400.00	8400.00	8400.00	8400.00	0.00	21.94	30.71	116.02	68.92	134.95	113.01	6.15	
8500.00	8500.00	8500.00	8500.00	0.00	22.20	30.71	116.02	68.92	134.95	112.75	6.08	
8600.00	8600.00	8600.00	8600.00	0.00	22.46	30.71	116.02	68.92	134.95	112.49	6.01	
8700.00	8700.00	8700.00	8700.00	0.00	22.72	30.71	116.02	68.92	134.95	112.23	5.94	
8800.00	8800.00	8800.00	8800.00	0.00	22.98	30.71	116.02	68.92	134.95	111.97	5.87	
8900.00	8900.00	8900.00	8900.00	0.00	23.25	30.71	116.02	68.92	134.95	111.70	5.81	
9000.00	9000.00	9000.00	9000.00	0.00	23.51	30.71	116.02	68.92	134.95	111.44	5.74	
9100.00	9100.00	9100.00	9100.00	0.00	23.77	30.71	116.02	68.92	134.95	111.18	5.68	
9200.00	9200.00	9200.00	9200.00	0.00	24.03	30.71	116.02	68.92	134.95	110.92	5.62	
9300.00	9300.00	9300.00	9300.00	0.00	24.29	30.71	116.02	68.92	134.95	110.66	5.56	
9400.00	9400.00	9400.00	9400.00	0.00	24.55	30.71	116.02	68.92	134.95	110.39	5.50	
9500.00	9500.00	9500.00	9500.00	0.00	24.82	30.71	116.02	68.92	134.95	110.13	5.44	
9600.00	9600.00	9600.00	9600.00	0.00	25.08	30.71	116.02	68.92	134.95	109.87	5.38	
9700.00	9700.00	9700.00	9700.00	0.00	25.34	30.71	116.02	68.92	134.95	109.61	5.33	
9800.00	9800.00	9800.00	9800.00	0.00	25.60	30.71	116.02	68.92	134.95	109.35	5.27	
9900.00	9900.00	9900.00	9900.00	0.00	25.86	30.71	116.02	68.92	134.95	109.09	5.22	
10000.00	10000.00	10000.00	10000.00	0.00	26.12	30.71	116.02	68.92	134.95	108.82	5.17	
10100.00	10100.00	10100.00	10100.00	0.00	26.39	30.71	116.02	68.92	134.95	108.56	5.11	
10166.27	10166.27	10153.72	10153.60	0.00	26.53	29.93	118.99	68.50	137.88	111.45	5.22	
10175.00	10175.00	10160.65	10160.48	0.00	26.55	161.06	119.84	68.37	138.82	112.40	5.25	
10200.00	10199.97	10180.24	10179.84	0.00	26.60	160.24	122.83	67.94	143.01	116.64	5.42	
10225.00	10224.83	10199.26	10198.48	0.00	26.65	159.31	126.54	67.41	149.38	123.09	5.68	
10250.00	10249.50	10217.53	10216.22	0.00	26.69	158.28	130.85	66.79	157.86	131.68	6.03	

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	12
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	***Co-ordinate(NE) Reference:***	*Well: 3-16H, True North*		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Columbus Federal 3
Well: 3-16H
Wellpath: OH V1 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
10275.00	10273.90	10234.89	10232.90	0.00	26.74	157.17	135.62	66.10	168.34	142.28	6.46	
10300.00	10297.96	10251.23	10248.41	0.00	26.78	155.99	140.70	65.37	180.70	154.78	6.97	
10325.00	10321.59	10266.46	10262.69	0.00	26.82	154.71	145.95	64.61	194.79	169.02	7.56	
10350.00	10344.72	10280.53	10275.71	0.00	26.86	153.32	151.22	63.85	210.47	184.85	8.22	
10375.00	10367.28	10293.40	10287.47	0.00	26.89	151.78	156.41	63.10	227.58	202.12	8.94	
10400.00	10389.20	10305.08	10298.00	0.00	26.92	150.03	161.40	62.38	245.99	220.67	9.71	
10425.00	10410.39	10315.58	10307.35	0.00	26.95	148.03	166.13	61.70	265.53	240.34	10.54	
10450.00	10430.80	10324.92	10315.57	0.00	26.98	145.67	170.52	61.07	286.08	261.00	11.41	
10475.00	10450.36	10333.15	10322.74	0.00	27.00	142.83	174.53	60.49	307.48	282.51	12.31	
10500.00	10469.01	10340.32	10328.91	0.00	27.02	139.37	178.12	59.98	329.63	304.74	13.24	
10525.00	10486.68	10346.46	10334.15	0.00	27.03	135.07	181.28	59.52	352.40	327.57	14.19	
10550.00	10503.32	10351.63	10338.54	0.00	27.05	129.62	184.00	59.13	375.67	350.89	15.16	
10575.00	10518.88	10355.89	10342.12	0.00	27.06	122.67	186.28	58.80	399.35	374.60	16.14	
10600.00	10533.30	10359.28	10344.95	0.00	27.07	113.82	188.12	58.54	423.33	398.60	17.12	
10625.00	10546.55	10361.85	10347.10	0.00	27.08	102.80	189.52	58.33	447.54	422.81	18.10	
10650.00	10558.57	10363.64	10348.59	0.00	27.08	89.85	190.51	58.19	471.87	447.14	19.07	
10675.00	10569.32	10364.71	10349.47	0.00	27.08	76.02	191.11	58.10	496.27	471.51	20.04	
10700.00	10578.78	10365.09	10349.79	0.00	27.08	62.85	191.32	58.07	520.65	495.85	21.00	
10725.00	10586.92	10364.82	10349.56	0.00	27.08	51.51	191.17	58.10	544.94	520.10	21.93	
10750.00	10593.70	10363.93	10348.82	0.00	27.08	42.33	190.67	58.17	569.09	544.19	22.86	
10775.00	10599.11	10362.45	10347.60	0.00	27.08	35.13	189.86	58.28	593.02	568.07	23.76	
10800.00	10603.12	10360.42	10345.91	0.00	27.07	29.51	188.74	58.45	616.70	591.67	24.64	
10825.00	10605.73	10357.85	10343.76	0.00	27.06	25.09	187.34	58.65	640.05	614.95	25.50	
10850.00	10606.92	10354.78	10341.19	0.00	27.06	21.57	185.68	58.89	663.03	637.85	26.34	
10857.19	10607.00	10353.81	10340.37	0.00	27.05	20.69	185.16	58.96	669.56	644.37	26.57	
10900.00	10607.14	10350.00	10337.16	0.00	27.04	20.14	183.14	59.25	708.55	683.24	28.00	
10957.19	10607.32	10340.64	10329.18	0.00	27.02	18.84	178.29	59.95	761.12	735.65	29.89	
11000.00	10607.45	10335.29	10324.58	0.00	27.00	15.09	175.59	60.34	800.84	775.28	31.34	
11100.00	10607.78	10325.00	10315.64	0.00	26.98	5.90	170.55	61.07	894.75	869.04	34.80	
11200.00	10608.10	10311.11	10303.38	0.00	26.94	355.83	164.09	62.00	989.64	963.80	38.29	
11300.00	10608.44	10300.00	10293.43	0.00	26.91	346.04	159.19	62.70	1085.04	1059.10	41.83	
11400.00	10608.78	10288.88	10283.35	0.00	26.88	336.87	154.55	63.37	1180.58	1154.57	45.40	
11500.00	10609.12	10275.00	10270.61	0.00	26.85	328.82	149.10	64.16	1276.00	1249.92	48.91	
11600.00	10609.46	10269.03	10265.08	0.00	26.83	321.58	146.88	64.48	1371.07	1344.97	52.52	
11700.00	10609.81	10260.04	10256.69	0.00	26.81	315.55	143.68	64.94	1465.66	1439.53	56.07	
11800.00	10610.16	10250.00	10247.25	0.00	26.78	310.58	140.30	65.43	1559.63	1533.45	59.57	
11900.00	10610.51	10250.00	10247.25	0.00	26.78	305.80	140.30	65.43	1652.87	1626.71	63.18	
12000.00	10610.86	10236.64	10234.57	0.00	26.74	302.58	136.14	66.03	1745.18	1718.97	66.58	
12100.00	10611.20	10225.00	10223.42	0.00	26.71	299.79	132.83	66.50	1836.60	1810.35	69.95	
12200.00	10611.55	10225.00	10223.42	0.00	26.71	296.82	132.83	66.50	1926.93	1900.69	73.44	
12300.00	10611.89	10225.00	10223.42	0.00	26.71	294.27	132.83	66.50	2016.20	1989.98	76.89	
12400.00	10612.23	10212.70	10211.55	0.00	26.68	292.68	129.64	66.96	2104.16	2077.90	80.11	
12500.00	10612.56	10200.00	10199.20	0.00	26.65	291.34	126.70	67.38	2190.96	2164.64	83.26	
12577.81	10612.81	10200.00	10199.20	0.00	26.65	290.00	126.70	67.38	2257.46	2231.15	85.82	
12600.00	10612.88	10200.00	10199.20	0.00	26.65	290.00	126.70	67.38	2276.34	2250.04	86.54	
12700.00	10613.20	10200.00	10199.20	0.00	26.65	290.00	126.70	67.38	2362.13	2335.84	89.84	
12800.00	10613.52	10200.00	10199.20	0.00	26.65	290.00	126.70	67.38	2449.01	2422.72	93.18	
12900.00	10613.85	10200.00	10199.20	0.00	26.65	290.00	126.70	67.38	2536.84	2510.57	96.56	
13000.00	10614.17	10188.43	10187.88	0.00	26.62	290.50	124.33	67.73	2625.40	2599.09	99.78	
13100.00	10614.49	10185.38	10184.89	0.00	26.61	290.64	123.75	67.81	2714.80	2688.48	103.14	
13200.00	10614.81	10175.00	10174.67	0.00	26.58	291.09	121.95	68.07	2804.97	2778.61	106.40	

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	13
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Columbus Federal 3
Well: 3-16H
Wellpath: OH V1 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
13300.00	10615.13	10175.00	10174.67	0.00	26.58	291.09	121.95	68.07	2895.66	2869.31	109.86	
13400.00	10615.46	10175.00	10174.67	0.00	26.58	291.09	121.95	68.07	2986.95	2960.60	113.34	
13500.00	10615.78	10175.00	10174.67	0.00	26.58	291.09	121.95	68.07	3078.78	3052.43	116.84	
13600.00	10616.10	10175.00	10174.67	0.00	26.58	291.09	121.95	68.07	3171.11	3144.76	120.35	
13700.00	10616.42	10175.00	10174.67	0.00	26.58	291.09	121.95	68.07	3263.88	3237.54	123.89	
13800.00	10616.75	10175.00	10174.67	0.00	26.58	291.09	121.95	68.07	3357.08	3330.73	127.44	
13900.00	10617.07	10175.00	10174.67	0.00	26.58	291.09	121.95	68.07	3450.65	3424.31	131.00	
14000.00	10617.39	10175.00	10174.67	0.00	26.58	291.09	121.95	68.07	3544.57	3518.23	134.58	
14100.00	10617.71	10163.70	10163.50	0.00	26.55	291.58	120.25	68.31	3638.67	3612.30	137.98	
14200.00	10618.03	10162.15	10161.96	0.00	26.55	291.65	120.04	68.34	3733.18	3706.80	141.55	
14300.00	10618.36	10160.67	10160.50	0.00	26.55	291.71	119.85	68.37	3827.95	3801.58	145.13	
14400.00	10618.68	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	3923.09	3896.68	148.55	
14500.00	10619.00	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	4018.33	3991.92	152.16	
14600.00	10619.32	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	4113.80	4087.39	155.78	
14700.00	10619.64	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	4209.48	4183.07	159.41	
14800.00	10619.97	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	4305.35	4278.94	163.04	
14900.00	10620.29	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	4401.41	4375.00	166.68	
15000.00	10620.61	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	4497.64	4471.23	170.33	
15100.00	10620.93	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	4594.03	4567.63	173.99	
15200.00	10621.26	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	4690.57	4664.17	177.65	
15300.00	10621.58	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	4787.26	4760.85	181.31	
15400.00	10621.90	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	4884.08	4857.67	184.98	
15500.00	10622.22	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	4981.02	4954.62	188.65	
15600.00	10622.54	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	5078.08	5051.68	192.33	
15700.00	10622.87	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	5175.26	5148.85	196.02	
15800.00	10623.19	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	5272.54	5246.14	199.70	
15900.00	10623.51	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	5369.92	5343.52	203.39	
16000.00	10623.83	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	5467.39	5440.99	207.09	
16100.00	10624.15	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	5564.96	5538.55	210.79	
16200.00	10624.48	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	5662.60	5636.20	214.49	
16300.00	10624.80	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	5760.33	5733.93	218.19	
16400.00	10625.12	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	5858.14	5831.74	221.90	
16500.00	10625.44	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	5956.02	5929.62	225.61	
16600.00	10625.77	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	6053.97	6027.57	229.32	
16700.00	10626.09	10150.00	10149.91	0.00	26.52	292.18	118.58	68.56	6151.98	6125.58	233.04	
16800.00	10626.41	10138.58	10138.54	0.00	26.49	292.67	117.50	68.71	6249.91	6223.50	236.64	
16900.00	10626.73	10138.05	10138.01	0.00	26.49	292.69	117.46	68.72	6348.03	6321.62	240.35	
17000.00	10627.05	10137.53	10137.49	0.00	26.49	292.72	117.42	68.72	6446.21	6419.80	244.06	
17100.00	10627.38	10137.03	10136.99	0.00	26.48	292.74	117.38	68.73	6544.45	6518.03	247.78	
17200.00	10627.70	10136.54	10136.51	0.00	26.48	292.76	117.34	68.73	6642.73	6616.32	251.50	
17300.00	10628.02	10136.07	10136.03	0.00	26.48	292.78	117.30	68.74	6741.07	6714.66	255.22	
17400.00	10628.34	10125.00	10124.99	0.00	26.45	293.26	116.60	68.84	6839.58	6813.16	258.83	
17500.00	10628.66	10125.00	10124.99	0.00	26.45	293.26	116.60	68.84	6938.00	6911.58	262.55	
17600.00	10628.99	10125.00	10124.99	0.00	26.45	293.26	116.60	68.84	7036.47	7010.04	266.28	
17700.00	10629.31	10125.00	10124.99	0.00	26.45	293.26	116.60	68.84	7134.97	7108.55	270.01	
17800.00	10629.63	10125.00	10124.99	0.00	26.45	293.26	116.60	68.84	7233.52	7207.10	273.74	
17900.00	10629.95	10125.00	10124.99	0.00	26.45	293.26	116.60	68.84	7332.11	7305.68	277.47	
18000.00	10630.28	10125.00	10124.99	0.00	26.45	293.26	116.60	68.84	7430.73	7404.31	281.20	
18100.00	10630.60	10125.00	10124.99	0.00	26.45	293.26	116.60	68.84	7529.39	7502.97	284.94	
18200.00	10630.92	10125.00	10124.99	0.00	26.45	293.26	116.60	68.84	7628.09	7601.67	288.67	
18300.00	10631.24	10125.00	10124.99	0.00	26.45	293.26	116.60	68.84	7726.82	7700.39	292.41	

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	14
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Columbus Federal 3
Well: 3-16H
Wellpath: OH V1 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
18400.00	10631.56	10125.00	10124.99	0.00	26.45	293.26	116.60	68.84	7825.58	7799.16	296.15	
18500.00	10631.89	10125.00	10124.99	0.00	26.45	293.26	116.60	68.84	7924.37	7897.95	299.88	
18535.29	10632.00	10125.00	10124.99	0.00	26.45	293.26	116.60	68.84	7959.24	7932.82	301.20	

Site: Tallahassee 2
Well: 2-16H
Wellpath: OH V4 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	30.67	38.71	22.95	45.00			No Data
100.00	100.00	100.00	100.00	0.00	0.21	30.67	38.71	22.95	45.00	44.79	217.37	
200.00	200.00	200.00	200.00	0.00	0.47	30.67	38.71	22.95	45.00	44.53	95.99	
300.00	300.00	300.00	300.00	0.00	0.73	30.67	38.71	22.95	45.00	44.27	61.59	
400.00	400.00	400.00	400.00	0.00	0.99	30.67	38.71	22.95	45.00	44.01	45.34	
500.00	500.00	500.00	500.00	0.00	1.25	30.67	38.71	22.95	45.00	43.75	35.88	
600.00	600.00	600.00	600.00	0.00	1.52	30.67	38.71	22.95	45.00	43.48	29.68	
700.00	700.00	700.00	700.00	0.00	1.78	30.67	38.71	22.95	45.00	43.22	25.31	
800.00	800.00	800.00	800.00	0.00	2.04	30.67	38.71	22.95	45.00	42.96	22.06	
900.00	900.00	900.00	900.00	0.00	2.30	30.67	38.71	22.95	45.00	42.70	19.55	
1000.00	1000.00	1000.00	1000.00	0.00	2.56	30.67	38.71	22.95	45.00	42.44	17.56	
1100.00	1100.00	1100.00	1100.00	0.00	2.82	30.67	38.71	22.95	45.00	42.18	15.93	
1200.00	1200.00	1200.00	1200.00	0.00	3.09	30.67	38.71	22.95	45.00	41.91	14.58	
1300.00	1300.00	1300.00	1300.00	0.00	3.35	30.67	38.71	22.95	45.00	41.65	13.44	
1400.00	1400.00	1400.00	1400.00	0.00	3.61	30.67	38.71	22.95	45.00	41.39	12.46	
1500.00	1500.00	1500.00	1500.00	0.00	3.87	30.67	38.71	22.95	45.00	41.13	11.62	
1600.00	1600.00	1600.00	1600.00	0.00	4.13	30.67	38.71	22.95	45.00	40.87	10.89	
1700.00	1700.00	1700.00	1700.00	0.00	4.40	30.67	38.71	22.95	45.00	40.60	10.24	
1800.00	1800.00	1800.00	1800.00	0.00	4.66	30.67	38.71	22.95	45.00	40.34	9.66	
1900.00	1900.00	1900.00	1900.00	0.00	4.92	30.67	38.71	22.95	45.00	40.08	9.15	
2000.00	2000.00	2000.00	2000.00	0.00	5.18	30.67	38.71	22.95	45.00	39.82	8.69	
2100.00	2100.00	2100.00	2100.00	0.00	5.44	30.67	38.71	22.95	45.00	39.56	8.27	
2200.00	2200.00	2200.00	2200.00	0.00	5.70	30.67	38.71	22.95	45.00	39.30	7.89	
2300.00	2300.00	2300.00	2300.00	0.00	5.97	30.67	38.71	22.95	45.00	39.03	7.54	
2400.00	2400.00	2400.00	2400.00	0.00	6.23	30.67	38.71	22.95	45.00	38.77	7.23	
2500.00	2500.00	2500.00	2500.00	0.00	6.49	30.67	38.71	22.95	45.00	38.51	6.93	
2600.00	2600.00	2600.00	2600.00	0.00	6.75	30.67	38.71	22.95	45.00	38.25	6.66	
2700.00	2700.00	2700.00	2700.00	0.00	7.01	30.67	38.71	22.95	45.00	37.99	6.42	
2800.00	2800.00	2800.00	2800.00	0.00	7.28	30.67	38.71	22.95	45.00	37.72	6.19	
2900.00	2900.00	2900.00	2900.00	0.00	7.54	30.67	38.71	22.95	45.00	37.46	5.97	
3000.00	3000.00	3000.00	3000.00	0.00	7.80	30.67	38.71	22.95	45.00	37.20	5.77	
3100.00	3100.00	3100.00	3100.00	0.00	8.06	30.67	38.71	22.95	45.00	36.94	5.58	
3200.00	3200.00	3200.00	3200.00	0.00	8.32	30.67	38.71	22.95	45.00	36.68	5.41	
3300.00	3300.00	3300.00	3300.00	0.00	8.58	30.67	38.71	22.95	45.00	36.42	5.24	
3400.00	3400.00	3400.00	3400.00	0.00	8.85	30.67	38.71	22.95	45.00	36.15	5.09	
3500.00	3500.00	3500.00	3500.00	0.00	9.11	30.67	38.71	22.95	45.00	35.89	4.94	
3600.00	3600.00	3600.00	3600.00	0.00	9.37	30.67	38.71	22.95	45.00	35.63	4.80	
3700.00	3700.00	3700.00	3700.00	0.00	9.63	30.67	38.71	22.95	45.00	35.37	4.67	
3800.00	3800.00	3800.00	3800.00	0.00	9.89	30.67	38.71	22.95	45.00	35.11	4.55	
3900.00	3900.00	3900.00	3900.00	0.00	10.16	30.67	38.71	22.95	45.00	34.85	4.43	
4000.00	4000.00	4000.00	4000.00	0.00	10.42	30.67	38.71	22.95	45.00	34.58	4.32	

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	15
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Tallahassee 2
Well: 2-16H
Wellpath: OH V4 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
4100.00	4100.00	4100.00	4100.00	0.00	10.68	30.67	38.71	22.95	45.00	34.32	4.21	
4200.00	4200.00	4200.00	4200.00	0.00	10.94	30.67	38.71	22.95	45.00	34.06	4.11	
4300.00	4300.00	4300.00	4300.00	0.00	11.20	30.67	38.71	22.95	45.00	33.80	4.02	
4400.00	4400.00	4400.00	4400.00	0.00	11.46	30.67	38.71	22.95	45.00	33.54	3.93	
4500.00	4500.00	4500.00	4500.00	0.00	11.73	30.67	38.71	22.95	45.00	33.27	3.84	
4600.00	4600.00	4600.00	4600.00	0.00	11.99	30.67	38.71	22.95	45.00	33.01	3.75	
4700.00	4700.00	4700.00	4700.00	0.00	12.25	30.67	38.71	22.95	45.00	32.75	3.67	
4800.00	4800.00	4800.00	4800.00	0.00	12.51	30.67	38.71	22.95	45.00	32.49	3.60	
4900.00	4900.00	4900.00	4900.00	0.00	12.77	30.67	38.71	22.95	45.00	32.23	3.52	
5000.00	5000.00	5000.00	5000.00	0.00	13.03	30.67	38.71	22.95	45.00	31.97	3.45	
5100.00	5100.00	5100.00	5100.00	0.00	13.30	30.67	38.71	22.95	45.00	31.70	3.38	
5200.00	5200.00	5200.00	5200.00	0.00	13.56	30.67	38.71	22.95	45.00	31.44	3.32	
5300.00	5300.00	5300.00	5300.00	0.00	13.82	30.67	38.71	22.95	45.00	31.18	3.26	
5400.00	5400.00	5400.00	5400.00	0.00	14.08	30.67	38.71	22.95	45.00	30.92	3.20	
5500.00	5500.00	5500.00	5500.00	0.00	14.34	30.67	38.71	22.95	45.00	30.66	3.14	
5600.00	5600.00	5600.00	5600.00	0.00	14.61	30.67	38.71	22.95	45.00	30.39	3.08	
5700.00	5700.00	5700.00	5700.00	0.00	14.87	30.67	38.71	22.95	45.00	30.13	3.03	
5800.00	5800.00	5800.00	5800.00	0.00	15.13	30.67	38.71	22.95	45.00	29.87	2.97	
5900.00	5900.00	5900.00	5900.00	0.00	15.39	30.67	38.71	22.95	45.00	29.61	2.92	
6000.00	6000.00	6000.00	6000.00	0.00	15.65	30.67	38.71	22.95	45.00	29.35	2.87	
6100.00	6100.00	6100.00	6100.00	0.00	15.91	30.67	38.71	22.95	45.00	29.09	2.83	
6200.00	6200.00	6200.00	6200.00	0.00	16.18	30.67	38.71	22.95	45.00	28.82	2.78	
6300.00	6300.00	6300.00	6300.00	0.00	16.44	30.67	38.71	22.95	45.00	28.56	2.74	
6400.00	6400.00	6400.00	6400.00	0.00	16.70	30.67	38.71	22.95	45.00	28.30	2.69	
6500.00	6500.00	6500.00	6500.00	0.00	16.96	30.67	38.71	22.95	45.00	28.04	2.65	
6600.00	6600.00	6600.00	6600.00	0.00	17.22	30.67	38.71	22.95	45.00	27.78	2.61	
6700.00	6700.00	6700.00	6700.00	0.00	17.49	30.67	38.71	22.95	45.00	27.51	2.57	
6800.00	6800.00	6800.00	6800.00	0.00	17.75	30.67	38.71	22.95	45.00	27.25	2.54	
6900.00	6900.00	6900.00	6900.00	0.00	18.01	30.67	38.71	22.95	45.00	26.99	2.50	
7000.00	7000.00	7000.00	7000.00	0.00	18.27	30.67	38.71	22.95	45.00	26.73	2.46	
7100.00	7100.00	7100.00	7100.00	0.00	18.53	30.67	38.71	22.95	45.00	26.47	2.43	
7200.00	7200.00	7200.00	7200.00	0.00	18.79	30.67	38.71	22.95	45.00	26.21	2.39	
7300.00	7300.00	7300.00	7300.00	0.00	19.06	30.67	38.71	22.95	45.00	25.94	2.36	
7400.00	7400.00	7400.00	7400.00	0.00	19.32	30.67	38.71	22.95	45.00	25.68	2.33	
7500.00	7500.00	7500.00	7500.00	0.00	19.58	30.67	38.71	22.95	45.00	25.42	2.30	
7600.00	7600.00	7600.00	7600.00	0.00	19.84	30.67	38.71	22.95	45.00	25.16	2.27	
7700.00	7700.00	7700.00	7700.00	0.00	20.10	30.67	38.71	22.95	45.00	24.90	2.24	
7800.00	7800.00	7800.00	7800.00	0.00	20.37	30.67	38.71	22.95	45.00	24.63	2.21	
7900.00	7900.00	7900.00	7900.00	0.00	20.63	30.67	38.71	22.95	45.00	24.37	2.18	
8000.00	8000.00	8000.00	8000.00	0.00	20.89	30.67	38.71	22.95	45.00	24.11	2.15	
8100.00	8100.00	8100.00	8100.00	0.00	21.15	30.67	38.71	22.95	45.00	23.85	2.13	
8200.00	8200.00	8200.00	8200.00	0.00	21.41	30.67	38.71	22.95	45.00	23.59	2.10	
8300.00	8300.00	8300.00	8300.00	0.00	21.67	30.67	38.71	22.95	45.00	23.33	2.08	
8400.00	8400.00	8400.00	8400.00	0.00	21.94	30.67	38.71	22.95	45.00	23.06	2.05	
8500.00	8500.00	8500.00	8500.00	0.00	22.20	30.67	38.71	22.95	45.00	22.80	2.03	
8600.00	8600.00	8600.00	8600.00	0.00	22.46	30.67	38.71	22.95	45.00	22.54	2.00	
8700.00	8700.00	8700.00	8700.00	0.00	22.72	30.67	38.71	22.95	45.00	22.28	1.98	
8800.00	8800.00	8800.00	8800.00	0.00	22.98	30.67	38.71	22.95	45.00	22.02	1.96	
8900.00	8900.00	8900.00	8900.00	0.00	23.25	30.67	38.71	22.95	45.00	21.76	1.94	
9000.00	9000.00	9000.00	9000.00	0.00	23.51	30.67	38.71	22.95	45.00	21.49	1.91	
9100.00	9100.00	9100.00	9100.00	0.00	23.77	30.67	38.71	22.95	45.00	21.23	1.89	

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	16
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Tallahassee 2
Well: 2-16H
Wellpath: OH V4 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
9200.00	9200.00	9200.00	9200.00	0.00	24.03	30.67	38.71	22.95	45.00	20.97	1.87	
9300.00	9300.00	9300.00	9300.00	0.00	24.29	30.67	38.71	22.95	45.00	20.71	1.85	
9400.00	9400.00	9400.00	9400.00	0.00	24.55	30.67	38.71	22.95	45.00	20.45	1.83	
9500.00	9500.00	9500.00	9500.00	0.00	24.82	30.67	38.71	22.95	45.00	20.18	1.81	
9600.00	9600.00	9600.00	9600.00	0.00	25.08	30.67	38.71	22.95	45.00	19.92	1.79	
9700.00	9700.00	9700.00	9700.00	0.00	25.34	30.67	38.71	22.95	45.00	19.66	1.78	
9800.00	9800.00	9800.00	9800.00	0.00	25.60	30.67	38.71	22.95	45.00	19.40	1.76	
9900.00	9900.00	9900.00	9900.00	0.00	25.86	30.67	38.71	22.95	45.00	19.14	1.74	
10000.00	10000.00	10000.00	10000.00	0.00	26.12	30.67	38.71	22.95	45.00	18.88	1.72	
10100.00	10100.00	10100.00	10100.00	0.00	26.39	30.67	38.71	22.95	45.00	18.61	1.71	
10166.27	10166.27	10172.81	10172.51	0.00	26.58	32.12	33.43	20.98	39.96	13.66	1.52	
10175.00	10175.00	10182.25	10181.81	0.00	26.60	164.08	31.93	20.42	38.59	12.35	1.47	Level 3
10200.00	10199.97	10209.05	10208.01	0.00	26.67	166.81	26.65	18.45	34.61	8.56	1.33	Level 3
10225.00	10224.83	10235.50	10233.48	0.00	26.74	171.58	19.98	15.97	30.68	4.86	1.19	Level 2
10250.00	10249.50	10261.56	10258.12	0.00	26.81	179.07	12.03	13.00	27.05	1.42	1.06	Level 2
10275.00	10273.90	10287.23	10281.85	0.00	26.88	189.99	2.88	9.58	24.16	-1.46	0.94	Level 1
10300.00	10297.96	10312.48	10304.60	0.00	26.94	204.32	-7.37	5.76	22.68	-3.27	0.87	Level 1
10325.00	10321.59	10337.31	10326.32	0.00	27.01	220.30	-18.63	1.55	23.26	-3.28	0.88	Level 1
10350.00	10344.72	10361.71	10346.99	0.00	27.07	235.05	-30.79	-2.98	26.10	-0.89	0.97	Level 1
10375.00	10367.28	10385.69	10366.56	0.00	27.14	246.79	-43.77	-7.83	30.88	3.75	1.14	Level 2
10400.00	10389.20	10409.25	10385.02	0.00	27.20	255.46	-57.47	-12.94	37.11	10.05	1.37	Level 3
10425.00	10410.39	10432.40	10402.38	0.00	27.26	261.77	-71.81	-18.29	44.37	17.48	1.65	
10450.00	10430.80	10455.14	10418.63	0.00	27.33	266.42	-86.72	-23.86	52.41	25.70	1.96	
10475.00	10450.36	10477.50	10433.79	0.00	27.39	269.94	-102.12	-29.60	61.05	34.52	2.30	
10500.00	10469.01	10499.49	10447.86	0.00	27.45	272.67	-117.95	-35.51	70.18	43.79	2.66	
10525.00	10486.68	10521.13	10460.87	0.00	27.51	274.87	-134.15	-41.56	79.72	53.43	3.03	
10550.00	10503.32	10542.45	10472.83	0.00	27.57	276.69	-150.67	-47.72	89.60	63.38	3.42	
10575.00	10518.88	10563.45	10483.78	0.00	27.63	278.23	-167.46	-53.99	99.78	73.60	3.81	
10600.00	10533.30	10584.16	10493.73	0.00	27.68	279.58	-184.48	-60.34	110.21	84.03	4.21	
10625.00	10546.55	10604.62	10502.70	0.00	27.74	280.77	-201.70	-66.77	120.86	94.65	4.61	
10650.00	10558.57	10624.84	10510.72	0.00	27.80	281.85	-219.09	-73.25	131.69	105.43	5.02	
10675.00	10569.32	10644.84	10517.82	0.00	27.86	282.84	-236.61	-79.79	142.67	116.33	5.42	
10700.00	10578.78	10664.66	10524.00	0.00	27.92	283.76	-254.25	-86.38	153.77	127.34	5.82	
10725.00	10586.92	10684.32	10529.29	0.00	27.97	284.63	-271.99	-93.00	164.96	138.41	6.21	
10750.00	10593.70	10703.84	10533.70	0.00	28.03	285.44	-289.81	-99.64	176.22	149.54	6.61	
10775.00	10599.11	10723.26	10537.25	0.00	28.09	286.22	-307.69	-106.32	187.51	160.70	6.99	
10800.00	10603.12	10742.59	10539.94	0.00	28.15	286.96	-325.62	-113.01	198.82	171.86	7.37	
10825.00	10605.73	10761.87	10541.79	0.00	28.21	287.66	-343.60	-119.72	210.12	183.00	7.75	
10850.00	10606.92	10781.12	10542.80	0.00	28.26	288.33	-361.60	-126.44	221.38	194.10	8.11	
10857.19	10607.00	10786.65	10542.94	0.00	28.28	288.52	-366.79	-128.37	224.61	197.28	8.22	
10900.00	10607.14	10823.03	10542.91	0.00	28.39	287.11	-400.87	-141.09	244.07	216.49	8.85	
10957.19	10607.32	10873.45	10542.75	0.00	28.55	285.51	-448.11	-158.72	270.28	242.39	9.69	
11000.00	10607.45	10911.42	10542.62	0.00	28.67	284.36	-483.68	-172.00	289.58	261.49	10.31	
11100.00	10607.78	11001.76	10542.32	0.00	28.96	282.34	-568.32	-203.58	331.60	303.08	11.63	
11200.00	10608.10	11094.22	10542.01	0.00	29.27	280.96	-654.95	-235.91	369.09	340.18	12.77	
11300.00	10608.44	11188.55	10541.70	0.00	29.59	279.98	-743.32	-268.89	401.87	372.59	13.72	
11400.00	10608.78	11268.37	10541.43	0.00	29.87	279.33	-818.56	-295.51	431.44	401.85	14.58	
11500.00	10609.12	11346.19	10541.17	0.00	30.14	278.79	-892.92	-318.42	459.96	430.08	15.40	
11600.00	10609.46	11423.35	10540.91	0.00	30.41	278.34	-967.52	-338.14	487.38	457.23	16.16	
11700.00	10609.81	11500.00	10540.64	0.00	30.68	277.96	-1042.35	-354.72	513.68	483.24	16.88	
11800.00	10610.16	11575.91	10540.39	0.00	30.94	277.63	-1117.05	-368.17	538.80	508.09	17.55	

LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	17
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Tallahassee 2
Well: 2-16H
Wellpath: OH V4 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	Offset Location TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
11900.00	10610.51	11651.38	10540.13	0.00	31.21	277.34	-1191.80	-378.59	562.71	531.74	18.17	
12000.00	10610.86	11726.38	10539.87	0.00	31.47	277.10	-1266.42	-386.02	585.38	554.15	18.75	
12100.00	10611.20	11800.00	10539.62	0.00	31.73	276.89	-1339.90	-390.45	606.78	575.30	19.28	
12200.00	10611.55	11875.10	10539.37	0.00	31.99	276.70	-1414.97	-392.05	626.87	595.14	19.75	
12300.00	10611.89	11972.60	10539.04	0.00	32.36	276.54	-1512.48	-392.05	643.91	611.81	20.06	
12400.00	10612.23	12071.87	10538.70	0.00	32.74	276.45	-1611.75	-392.05	655.81	623.32	20.18	
12500.00	10612.56	12171.64	10538.37	0.00	33.12	276.43	-1711.51	-392.05	662.53	629.65	20.15	
12577.81	10612.81	12249.42	10538.11	0.00	33.43	276.46	-1789.30	-392.05	664.16	630.97	20.01	
12600.00	10612.88	12271.61	10538.03	0.00	33.52	276.47	-1811.49	-392.05	664.18	630.90	19.96	
12700.00	10613.20	12371.61	10537.69	0.00	33.92	276.53	-1911.49	-392.05	664.26	630.58	19.72	
12800.00	10613.52	12471.61	10537.36	0.00	34.33	276.58	-2011.48	-392.05	664.33	630.25	19.49	
12900.00	10613.85	12571.61	10537.02	0.00	34.74	276.64	-2111.48	-392.05	664.41	629.91	19.26	
13000.00	10614.17	12671.60	10536.68	0.00	35.16	276.70	-2211.48	-392.05	664.48	629.57	19.03	
13100.00	10614.49	12771.60	10536.34	0.00	35.58	276.75	-2311.48	-392.05	664.56	629.23	18.81	
13200.00	10614.81	12871.60	10536.01	0.00	36.01	276.81	-2411.47	-392.05	664.64	628.88	18.59	
13300.00	10615.13	12971.60	10535.67	0.00	36.44	276.87	-2511.47	-392.05	664.72	628.53	18.37	
13400.00	10615.46	13071.59	10535.33	0.00	36.88	276.92	-2611.47	-392.05	664.80	628.17	18.15	
13500.00	10615.78	13171.59	10534.99	0.00	37.32	276.98	-2711.46	-392.05	664.88	627.81	17.94	
13600.00	10616.10	13271.59	10534.66	0.00	37.77	277.04	-2811.46	-392.05	664.96	627.44	17.73	
13700.00	10616.42	13371.59	10534.32	0.00	38.22	277.09	-2911.46	-392.05	665.04	627.08	17.52	
13800.00	10616.75	13471.59	10533.98	0.00	38.68	277.15	-3011.46	-392.05	665.12	626.70	17.31	
13900.00	10617.07	13571.58	10533.64	0.00	39.14	277.20	-3111.45	-392.05	665.20	626.33	17.11	
14000.00	10617.39	13671.58	10533.31	0.00	39.60	277.26	-3211.45	-392.04	665.29	625.95	16.91	
14100.00	10617.71	13771.58	10532.97	0.00	40.06	277.32	-3311.45	-392.04	665.37	625.57	16.72	
14200.00	10618.03	13871.58	10532.63	0.00	40.53	277.37	-3411.45	-392.04	665.46	625.19	16.53	
14300.00	10618.36	13971.58	10532.29	0.00	41.01	277.43	-3511.44	-392.04	665.54	624.80	16.34	
14400.00	10618.68	14071.57	10531.96	0.00	41.48	277.49	-3611.44	-392.04	665.63	624.41	16.15	
14500.00	10619.00	14171.57	10531.62	0.00	41.96	277.54	-3711.44	-392.04	665.71	624.02	15.97	
14600.00	10619.32	14271.57	10531.28	0.00	42.45	277.60	-3811.43	-392.04	665.80	623.63	15.79	
14700.00	10619.64	14371.57	10530.94	0.00	42.93	277.65	-3911.43	-392.04	665.89	623.23	15.61	
14800.00	10619.97	14471.56	10530.61	0.00	43.42	277.71	-4011.43	-392.04	665.98	622.83	15.44	
14900.00	10620.29	14571.56	10530.27	0.00	43.91	277.77	-4111.43	-392.04	666.07	622.43	15.27	
15000.00	10620.61	14671.56	10529.93	0.00	44.40	277.82	-4211.42	-392.04	666.16	622.03	15.10	
15100.00	10620.93	14771.56	10529.59	0.00	44.90	277.88	-4311.42	-392.04	666.25	621.63	14.93	
15200.00	10621.26	14871.56	10529.26	0.00	45.40	277.94	-4411.42	-392.04	666.34	621.22	14.77	
15300.00	10621.58	14971.55	10528.92	0.00	45.90	277.99	-4511.41	-392.04	666.43	620.81	14.61	
15400.00	10621.90	15071.55	10528.58	0.00	46.41	278.05	-4611.41	-392.04	666.52	620.40	14.45	
15500.00	10622.22	15171.55	10528.24	0.00	46.91	278.10	-4711.41	-392.04	666.61	619.99	14.30	
15600.00	10622.54	15271.55	10527.91	0.00	47.42	278.16	-4811.41	-392.04	666.71	619.58	14.15	
15700.00	10622.87	15371.54	10527.57	0.00	47.93	278.22	-4911.40	-392.04	666.80	619.17	14.00	
15800.00	10623.19	15471.54	10527.23	0.00	48.44	278.27	-5011.40	-392.04	666.90	618.75	13.85	
15900.00	10623.51	15571.54	10526.89	0.00	48.96	278.33	-5111.40	-392.04	666.99	618.34	13.71	
16000.00	10623.83	15671.54	10526.56	0.00	49.47	278.38	-5211.40	-392.04	667.09	617.92	13.57	
16100.00	10624.15	15771.54	10526.22	0.00	49.99	278.44	-5311.39	-392.04	667.18	617.50	13.43	
16200.00	10624.48	15871.53	10525.88	0.00	50.51	278.50	-5411.39	-392.04	667.28	617.08	13.29	
16300.00	10624.80	15971.53	10525.54	0.00	51.03	278.55	-5511.39	-392.04	667.38	616.66	13.16	
16400.00	10625.12	16071.53	10525.21	0.00	51.56	278.61	-5611.38	-392.04	667.48	616.24	13.03	
16500.00	10625.44	16171.53	10524.87	0.00	52.08	278.66	-5711.38	-392.04	667.58	615.81	12.90	
16600.00	10625.77	16271.53	10524.53	0.00	52.61	278.72	-5811.38	-392.04	667.68	615.39	12.77	
16700.00	10626.09	16371.52	10524.19	0.00	53.14	278.78	-5911.38	-392.04	667.78	614.96	12.64	
16800.00	10626.41	16471.52	10523.86	0.00	53.67	278.83	-6011.37	-392.04	667.88	614.54	12.52	

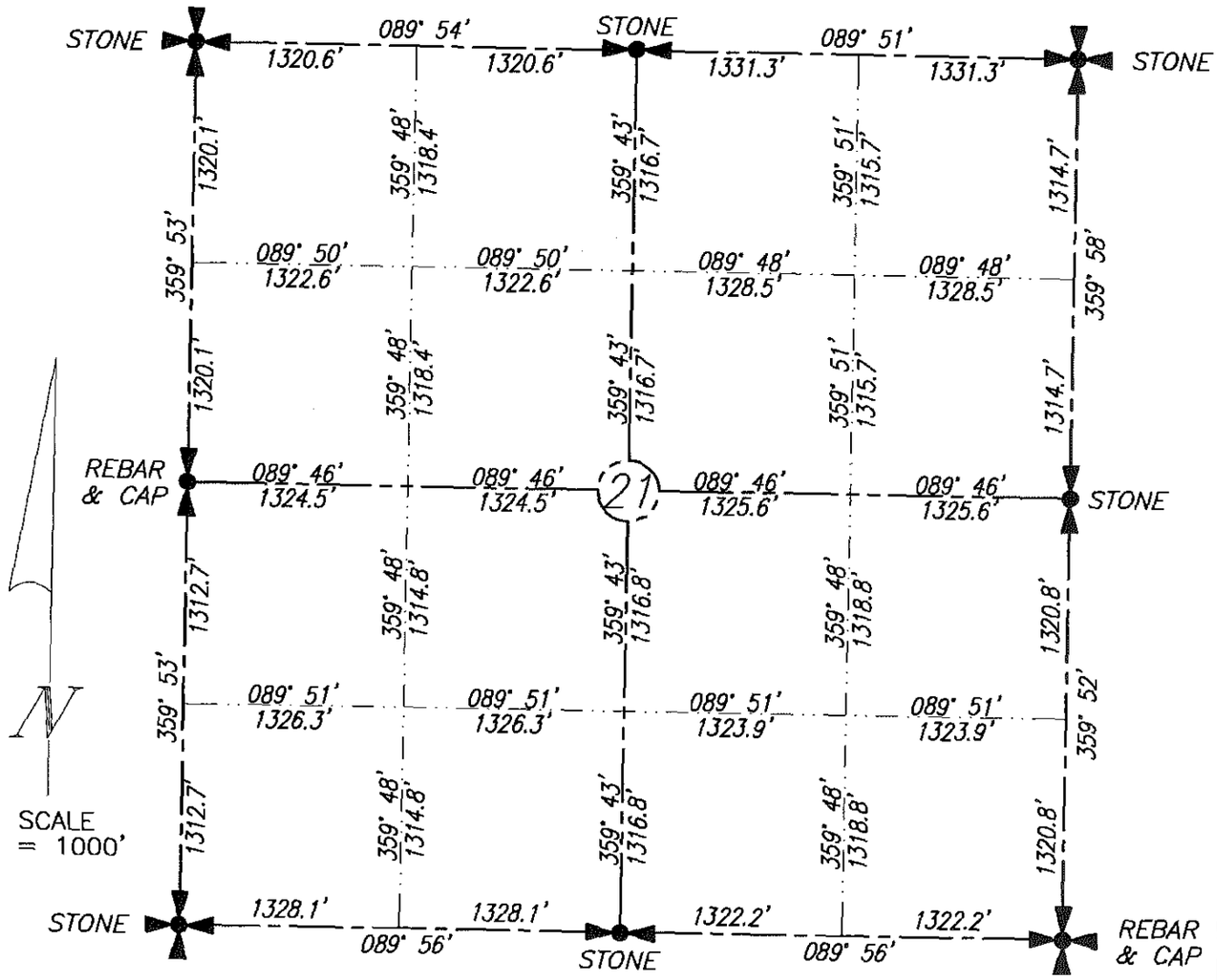
LEAM Drilling Systems, Inc.
Anticollision Report

Company:	Continental Resources	**Date:** 04/23/2012	**Time:** 17:17:28	**Page:**	18
Field:	McKenzie County, ND				
Reference Site:	Tallahassee 3	**Co-ordinate(NE) Reference:**	Well: 3-16H, True North		
Reference Well:	3-16H	**Vertical (TVD) Reference:**	GL 1920+KB 41 1941.0		
Reference Wellpath:	OH			**Db:**	Adapti

Site: Tallahassee 2
Well: 2-16H
Wellpath: OH V4 Plan: Plan #1 V1 **Inter-Site Error:** 0.00 ft

Reference MD ft	Reference TVD ft	Offset MD ft	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
16900.00	10626.73	16571.52	10523.52	0.00	54.20	278.89	-6111.37	-392.04	667.98	614.11	12.40	
17000.00	10627.05	16671.52	10523.18	0.00	54.73	278.94	-6211.37	-392.04	668.08	613.69	12.28	
17100.00	10627.38	16771.51	10522.84	0.00	55.26	279.00	-6311.37	-392.04	668.19	613.26	12.16	
17200.00	10627.70	16871.51	10522.51	0.00	55.80	279.06	-6411.36	-392.04	668.29	612.83	12.05	
17300.00	10628.02	16971.51	10522.17	0.00	56.34	279.11	-6511.36	-392.04	668.39	612.40	11.94	
17400.00	10628.34	17071.51	10521.83	0.00	56.87	279.17	-6611.36	-392.04	668.50	611.97	11.83	
17500.00	10628.66	17171.51	10521.49	0.00	57.41	279.22	-6711.35	-392.04	668.61	611.54	11.72	
17600.00	10628.99	17271.50	10521.16	0.00	57.95	279.28	-6811.35	-392.04	668.71	611.11	11.61	
17700.00	10629.31	17371.50	10520.82	0.00	58.49	279.34	-6911.35	-392.04	668.82	610.68	11.50	
17800.00	10629.63	17471.50	10520.48	0.00	59.04	279.39	-7011.35	-392.04	668.93	610.25	11.40	
17900.00	10629.95	17571.50	10520.14	0.00	59.58	279.45	-7111.34	-392.04	669.03	609.82	11.30	
18000.00	10630.28	17671.49	10519.81	0.00	60.13	279.50	-7211.34	-392.04	669.14	609.38	11.20	
18100.00	10630.60	17771.49	10519.47	0.00	60.67	279.56	-7311.34	-392.04	669.25	608.95	11.10	
18200.00	10630.92	17871.49	10519.13	0.00	61.22	279.61	-7411.34	-392.04	669.36	608.52	11.00	
18300.00	10631.24	17971.49	10518.79	0.00	61.77	279.67	-7511.33	-392.04	669.47	608.08	10.91	
18400.00	10631.56	18071.49	10518.46	0.00	62.31	279.73	-7611.33	-392.04	669.58	607.65	10.81	
18500.00	10631.89	18171.48	10518.12	0.00	62.86	279.78	-7711.33	-392.04	669.70	607.22	10.72	
18535.29	10632.00	18206.77	10518.00	0.00	63.06	279.80	-7746.61	-392.04	669.74	607.06	10.69	

HORIZONTAL SECTION PLAT
CONTINENTAL RESOURCES INC.
TALLAHASSEE 3-16H
SECTION 21, 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.

JOHN PAULSON
REGISTERED
3366
NORTH DAKOTA

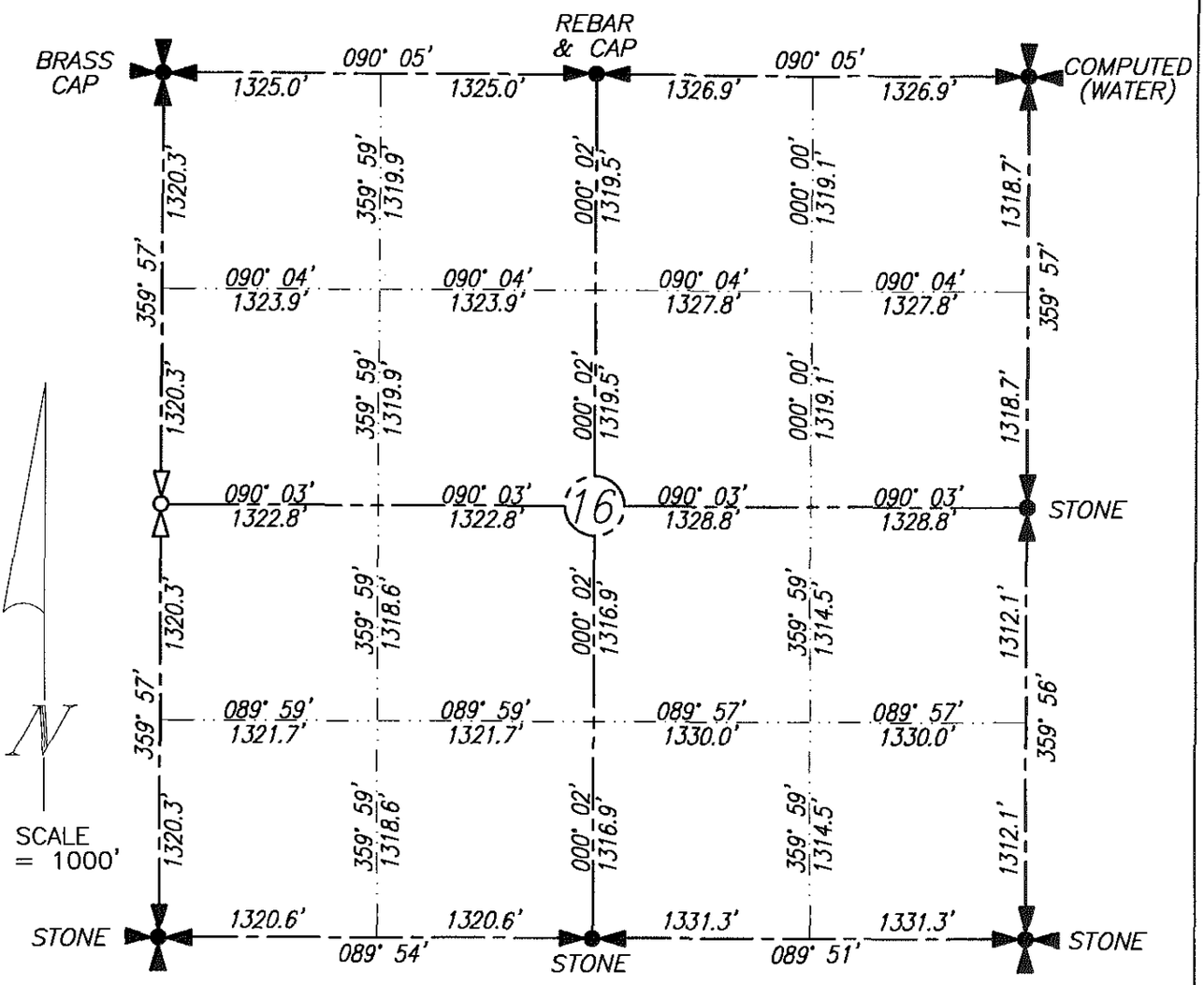
I CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS WORK PERFORMED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF

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.
TALLAHASSEE 3-16H
SECTION 16, 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.

JOHN PAULSON
REGISTERED
LAND
SURVEYOR
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

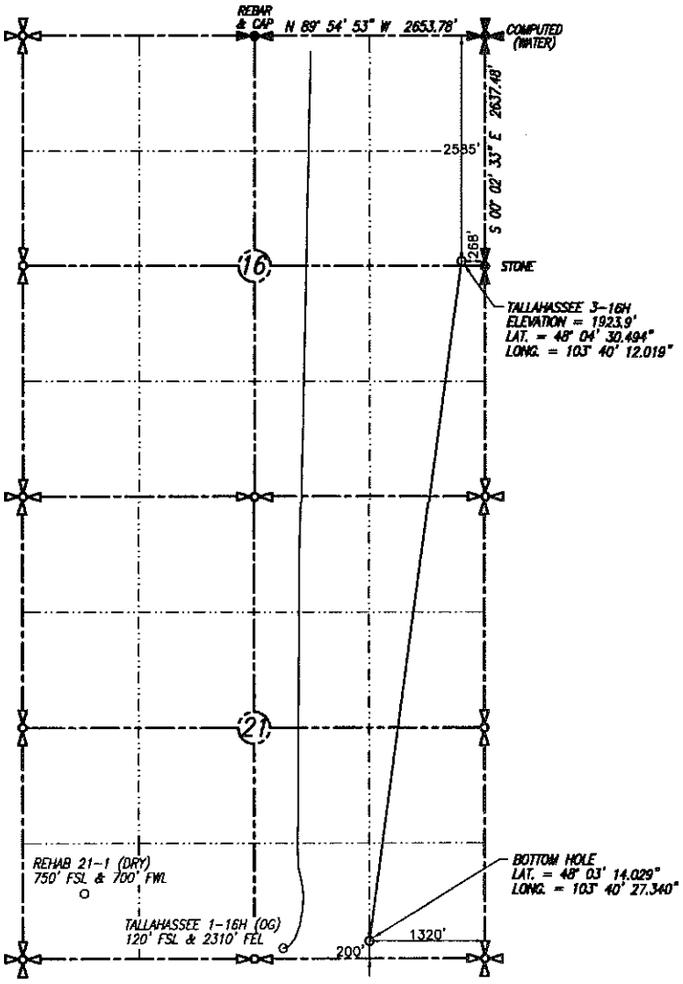
JOHN PAULSON R.L.S. 3366

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

PROJECT NO. 12-10

REVISED: 4-16-2012

BOTTOM HOLE LOCATION PLAT
CONTINENTAL RESOURCES INC.
TALLAHASSEE 3-16H
SECTION 16, T153N, R101W
MCKENZIE COUNTY, NORTH DAKOTA
2585' FNL & 268' FEL



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 4-16-12

JOHN PAULSON, R.L.S. 3366

REGISTERED LAND SURVEYOR L.S. 3366 NORTH DAKOTA

DATE STAKED: 1-4-2012

BASIS OF VERTICAL DATUM: NAVD 1988 GEOID 09

PERSON AUTHORIZING SURVEY: CHAD NEWBY

EXPLANATION AREA: NAD83(CORS96)

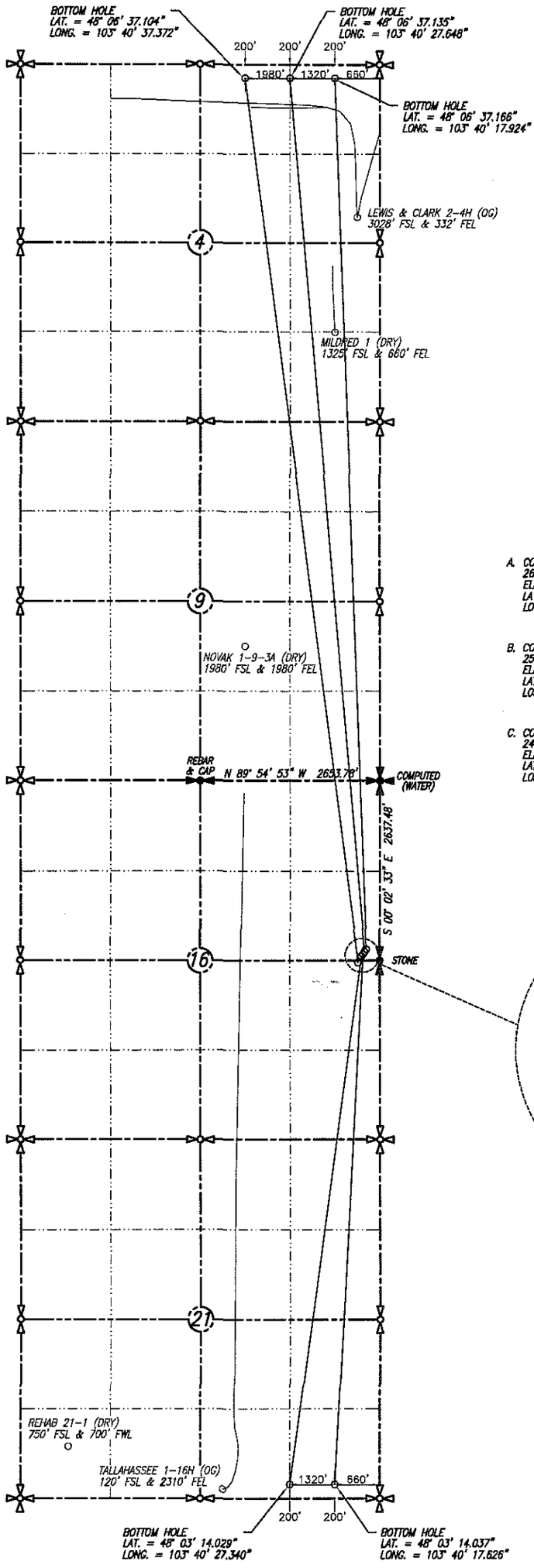
BASIS OF BEARING: TRUE NORTH

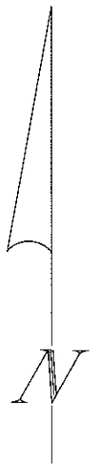
BROSZ ENGINEERING INC.
BOX 357
BOWMAN, N.D. 58623
PHONE: 701-523-3340
FAX: 701-523-5243

PROJECT NO. 12-10

REVISED: 4-16-2012

BOTTOM HOLE LOCATION PLAT
CONTINENTAL RESOURCES INC.
COLUMBUS FEDERAL 1, 2, & 3 – TALLAHASSEE 2 & 3 ECO PAD
SECTION 16, T153N, R101W
MCKENZIE COUNTY, NORTH DAKOTA





SCALE
1" = 2000'

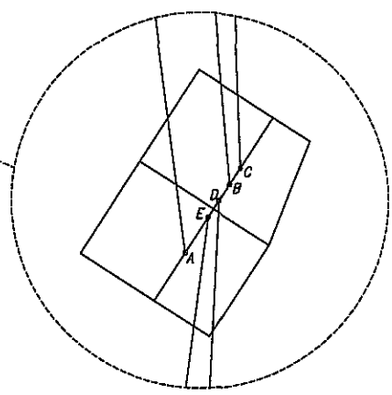
A. COLUMBUS FEDERAL 1-16H
2669' FNL & 318' FEL
ELEVATION = 1927.5'
LAT. = 48° 04' 29.665"
LONG. = 103° 40' 12.754"

B. COLUMBUS FEDERAL 2-16H
2508' FNL & 222' FEL
ELEVATION = 1921.0'
LAT. = 48° 04' 31.258"
LONG. = 103° 40' 11.343"

C. COLUMBUS FEDERAL 3-16H
2469' FNL & 199' FEL
ELEVATION = 1920.0'
LAT. = 48° 04' 31.639"
LONG. = 103° 40' 11.004"

D. TALLAHASSEE 2-16H
2547' FNL & 245' FEL
ELEVATION = 1921.7'
LAT. = 48° 04' 30.876"
LONG. = 103° 40' 11.681"

E. TALLAHASSEE 3-16H
2585' FNL & 268' FEL
ELEVATION = 1923.9'
LAT. = 48° 04' 30.494"
LONG. = 103° 40' 12.019"



PERSON AUTHORIZING SURVEY;
CHAD NEWBY

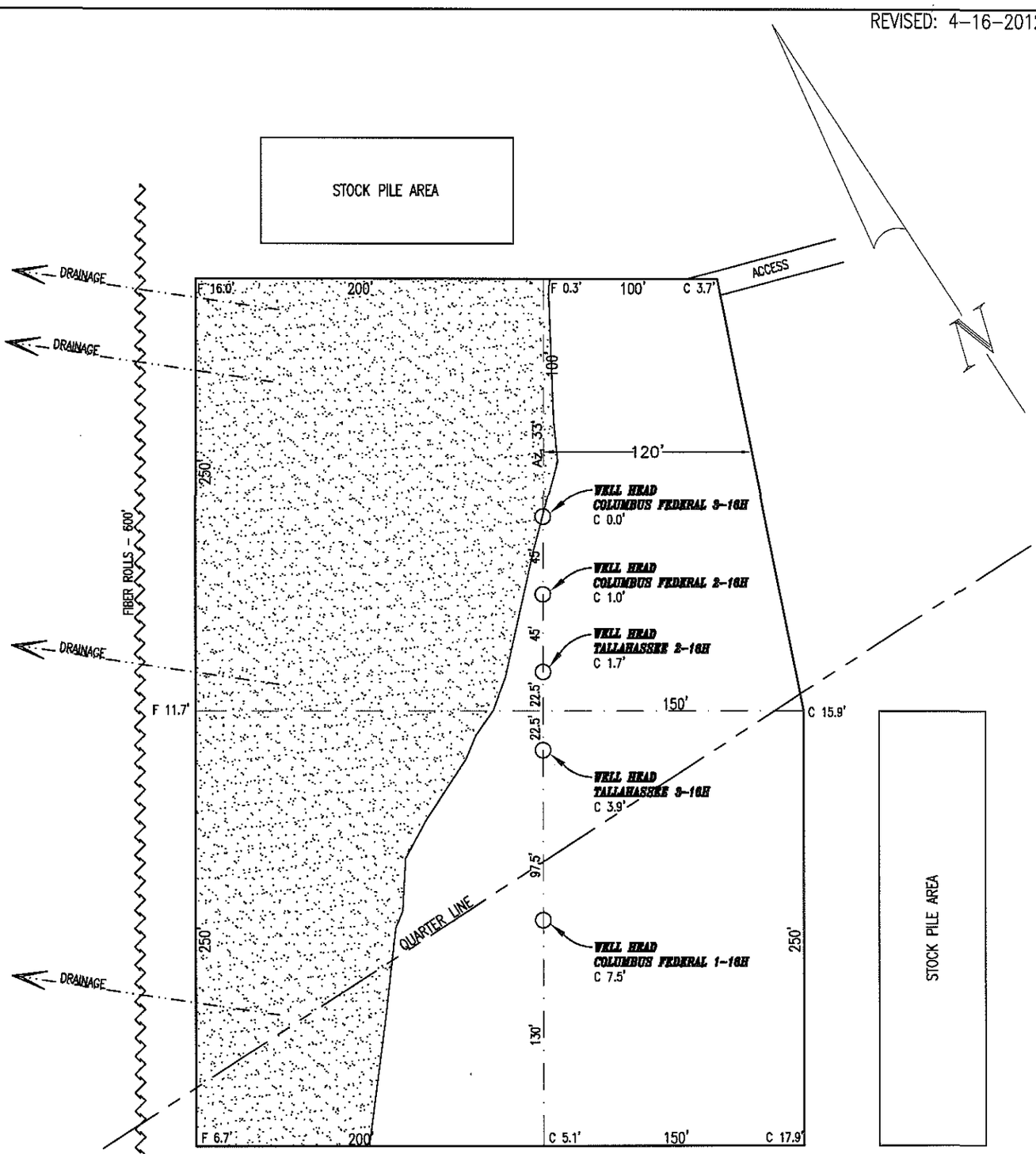
EXPLANATION AREA: NAD83(CORS96)

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

REVISED: 4-16-2012



CONTINENTAL RESOURCES INC.
PO BOX 1032
ENID, OKLAHOMA 73702

DRILLING RIG LAYOUT
TALLAHASSEE 3-16H
SECTION 16, T153N, R101W
MCKENZIE COUNTY, NORTH DAKOTA

ESTIMATED EARTH QUANTITIES

TOP-SOIL:	3,125	CUBIC YARDS
SUB-SOIL:	28,719	CUBIC YARDS
TOTAL CUT:	31,844	CUBIC YARDS
TOTAL FILL:	27,716	CUBIC YARDS

Use excess materials in access road fill

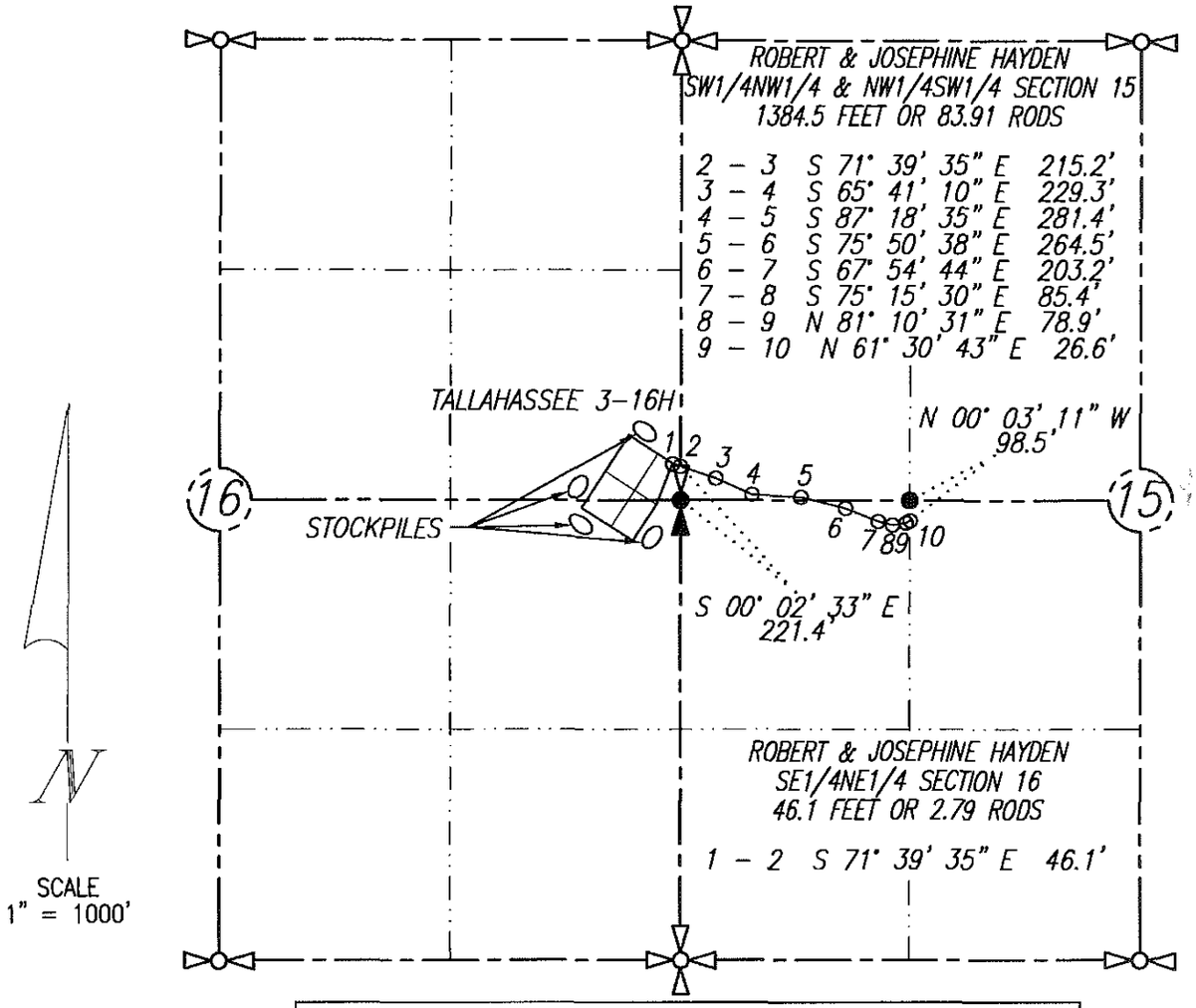
ALL INDICATED CUTS & FILLS ARE STAKED GRADE ELEVATIONS.

BACKSLOPES ASSUMED AT 1 1/2 : 1 %

Ground Elevation at Well Head: 1923.9 ft. ASL
Finished Rig Grade Elevation: 1920.0 ft. ASL

DRAFT: HEDGE	SCALE 1" = 80'	DATE: 1-4-2012	PROJECT NO. 12-10

DRILL SITE LOCATION & ROAD LOCATION PLAT
CONTINENTAL RESOURCES INC.
TALLAHASSEE 3-16H
SECTIONS 15 & 16, T153N, R101W
MCKENZIE COUNTY, NORTH DAKOTA



NOTE: THERE IS A PIPELINE AND POWERLINE EASEMENT LYING ON BOTH SIDES OF THE WELL ROAD EASEMENT.

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 P.L.S. 3366

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

DATE STAKED: 1-4-2012

PERSON AUTHORIZING SURVEY;
CHAD NEWBY

BASIS OF BEARING: TRUE NORTH

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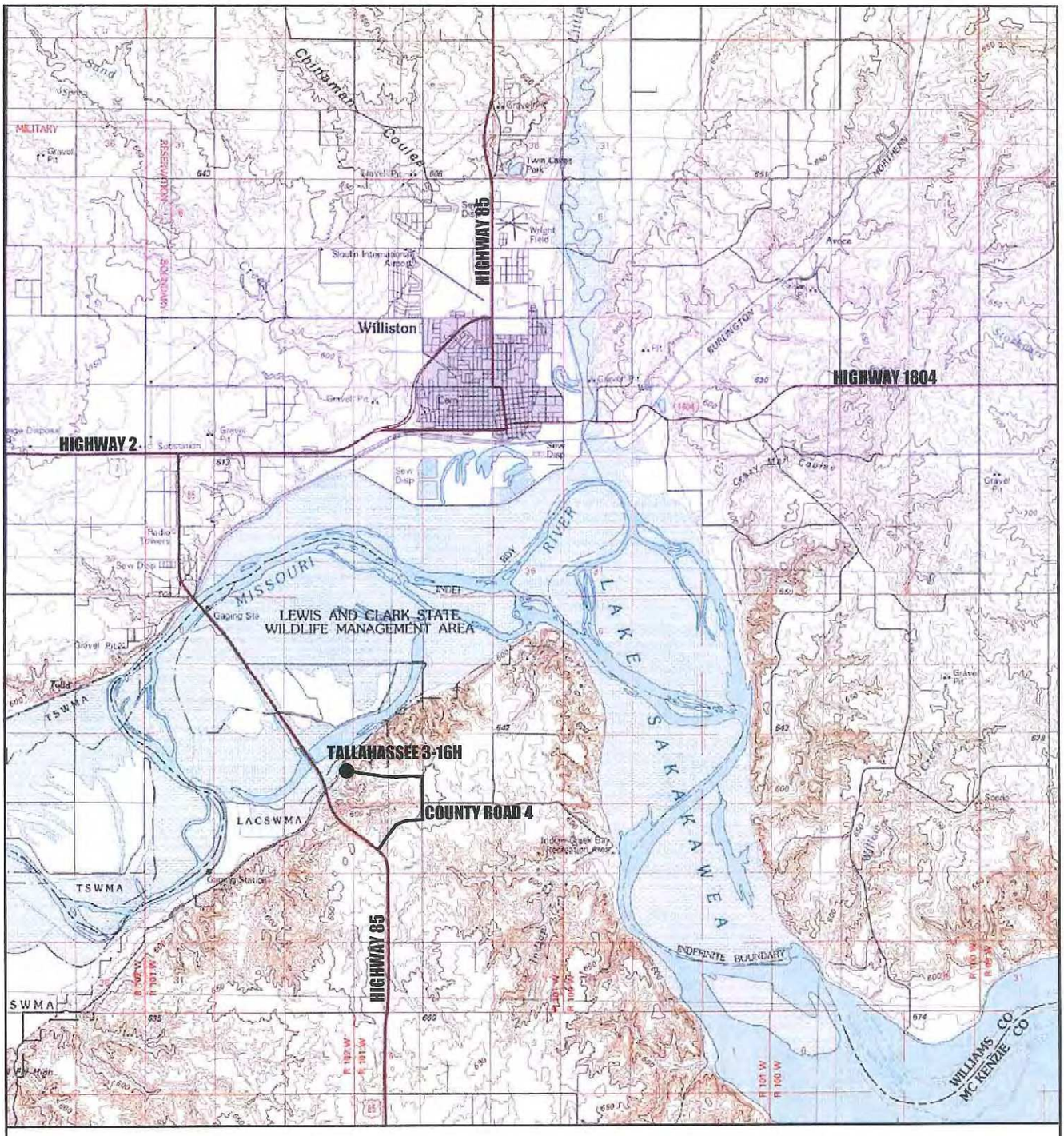
PROJECT NO. 12-10

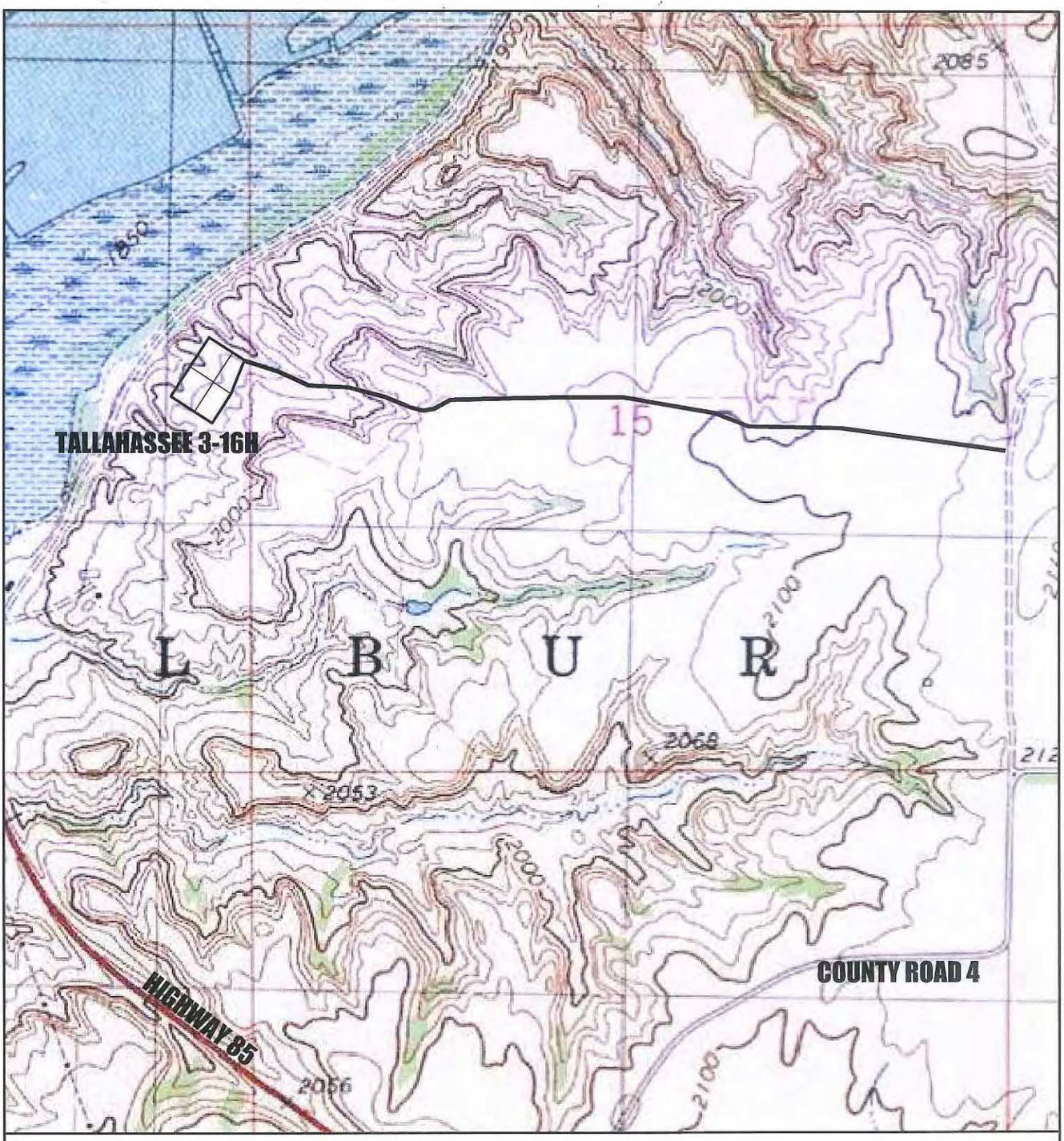


CONTINENTAL RESOURCES INC.

VICINITY MAP

N

TALLAHASSEE 3-16H
SECTION 16, T153N, R101W
MCKENZIE COUNTY, NORTH DAKOTA



CONTINENTAL RESOURCES INC.

WELL LOCATION

TALLAHASSEE 3-16H
SECTION 16, T153N, R101W
MCKENZIE COUNTY, NORTH DAKOTA

N

Tabor, David

From: Tabor, David
Sent: Wednesday, March 06, 2013 2:25 PM
To: Tabor, David
Subject: FW: Columbus Federal 3-16H and pad.

From: Robert Sandbo [mailto:Robert.Sandbo@clr.com]
Sent: Friday, March 01, 2013 4:48 PM
To: Tabor, David
Subject: RE: Columbus Federal 3-16H and pad.

Thanks David. I got the email. Here is our schedule for the pad as of right now:

Columbus Federal 1-16H to spud on 3/24/2013 (may spud with the small rig around one week earlier if possible). We had planned on drilling the Columbus 1-16H first and then come back in a year or so and drill the other 4 but if we get the permits for all and the order on the 1280 allows us to drill them all back to back, we will most likely go ahead and drill them all at once. We will take a look at the 1280 order that covers the Columbus 1-16H and see if we can batch drill them.

You should have everything on the 3-16H and the affidavit sometime Monday.

Thanks for the help,

Bob Sandbo
Regulatory Compliance Supervisor

Continental Resources, Inc.
20 N. Broadway
OKC, OK 73102
P: 405-234-9020
F: 405-234-9562
C: 405-708-0691
robert.sandbo@clr.com
www.**clr**.com

Continental
RESOURCES

March 7, 2013

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 Columbus Federal 1-16H, 2-16H & 3-16H1, and the Tallahassee 2-21H & 3-21H1

Township 153N, Range 101W
Section 16, NE/4 SE/4 & SE/4 NE/4 McKenzie County, North Dakota.

The Columbus Federal and Tallahassee well(s) are located in an environmentally sensitive area in close proximity to the Missouri River. Therefore, Continental Resources Inc. would like to propose the following automatic shut down equipment and level sensing monitoring equipment be deployed on the site to aid in the prevention of any accidental release or safety issue. A schematic diagram and pictures of an existing tank battery with emergency shutdown equipment has been included with this affidavit.

1) Tank Side (oil & water tanks)
    a. ABB Levelmaster dual float
    b. High level switch as backup
    c. Battery box with solar backup

2) Treater & Separator
    a. Temperature device in each vessel
    b. Pressure transducer in each vessel
    c. Level switch in each vessel
    d. Battery box with solar backup

3) Wellhead
    a. TotalFlow Controller
    b. Emergency Shutdown Valve Package
    c. Battery box with solar backup
    d. Pressure transducer on casing & tubing

4) Flare
    a. Scrubber pot high level switch
    b. Monitoring flare for low temp output – alarm if flare goes out

5) 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.

Don Kennedy

Don Kennedy, Sr. Production Engineer
Continental Resources, Inc.

STATE OF OKLAHOMA)
)ss:
COUNTY OF OKLAHOMA)

On the 7th day of March, 2013, before me, a Notary Public in and for said County and State, personally appeared **Don Kennedy**, known to me to be the Sr. Production Engineer 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

Oklahoma County, Oklahoma

My Commission Expires: 7/5/2015

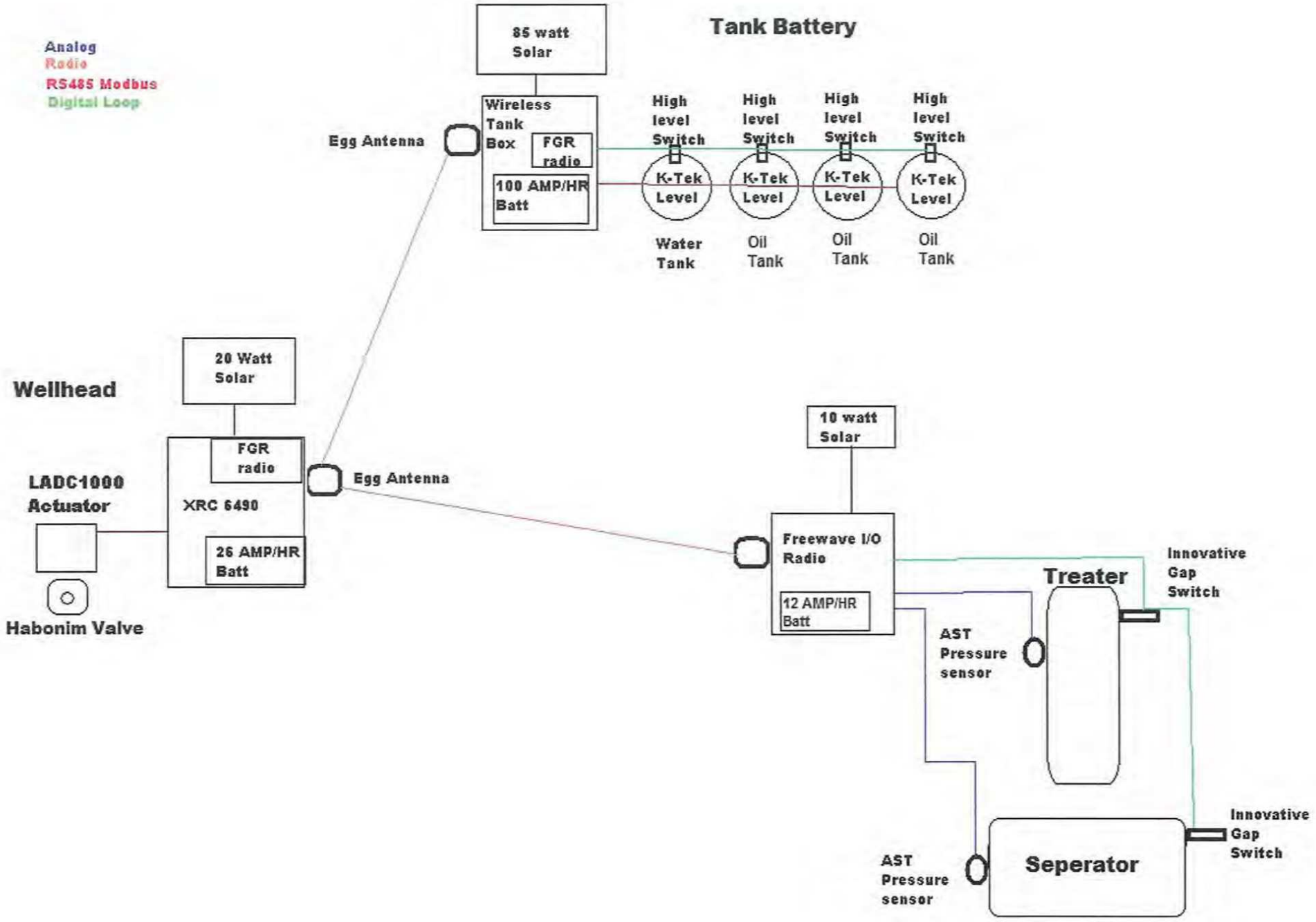
Commission No.: 11006023

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

Sincerely,

CONTINENTAL RESOURCES, INC.

Becky Barnes
Regulatory Compliance Specialist


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

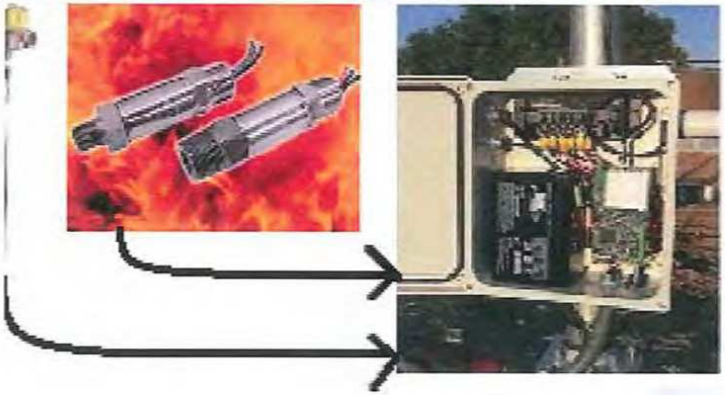
U003 Gap Switch and AST 4600 Transducer monitor pressures and liquid content of Flare and Sales Lines, transmitted to XRC via FreeWave Radio.

ABB TotalFlow XRC 6490

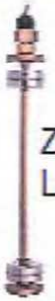
All well information is passed to your SCADA system via FreeWave Network (Future)

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

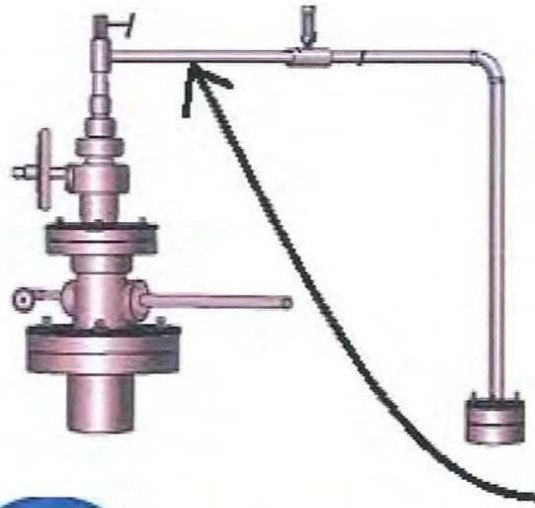
Tank Level information is passed from Tank Battery to XRC via FreeWave Radio



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.

Continental Resources, Inc. (CRI) respectfully submits the following information concerning the prevention of a wellbore collision while drilling the Columbus Federal 3-16H, SENE of Sec. 16, T153N, R101W, Dunn County, North Dakota.

The Mildred 1, NDIC File No. 12306, is a plugged and abandoned, Red River formation, directional well with a SHL of 1325' FSL, 660' FEL of Sec. 4, T153N, R101W. The directional wellbore lies approximately 660' FEL of Sec. 4, T153N, R101W, terminating at a BHL 769' N. of SHL, 2094' FSL of Sec. 4, T153N, R101W. Bottom hole TVD of the existing directional well is 13451'. The deepest casing string is 8-5/8" set at a depth of 3035' TVD.

The proposed Columbus Federal 3-16H is a horizontal well targeting the Middle Bakken formation. Surface hole location for the Columbus Federal 3-16H is 2469' FSL and 199' FEL of Sec. 16, T153N, R101W. The majority of the Columbus Federal 3-16H lateral will lie 760' FEL in order to avoid the existing Mildred 1 wellbore by approximately 100'. The lateral will taper back to 660' FEL, at 10155' N. of SHL, after adequately clearing the segment of the Mildred 1 wellbore within this Baker-Bakken pool.

The Baker-Bakken pool, as defined by NDIC Order No. 21551, is the interval from 50 feet above the top of the Bakken Formation to above the top of the Birdbear Formation. CRI has assessed the geology of the area and has determined this Bakken interval to be approximately 10461' TVD to 10,771' TVD. On the surface planar, the Mildred 1 wellbore exist in this interval for approximately 38', from 1874' FSL to 1912' FSL of Sec. 4, T153N, R94W.

The completion of the Columbus Federal 3-16H will protect the integrity of the Mildred 1 wellbore. Stimulation plans will be made to include a buffer zone with swell packers of a minimum 500' from either side of the Mildred 1 wellbore existing within the Baker-Bakken pool. This zone will not be perforated or completed.

CRI believes adequate precautions have been taken to prevent the possibility of a wellbore collision and accepts all responsibility should such a collision occur.

Sarah Madden, PD Engineer
Continental Resources, Inc.

STATE OF OKLAHOMA)
)ss:
COUNTY OF OKLAHOMA)

On the 6th day of March 2013, before me, a Notary Public in and for said County and State, personally appeared **Sarah Madden**, known to me to be a PD Engineer 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

Oklahoma County, Oklahoma

My Commission Expires: 7/5/2015

Commission No.: 11006023

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

CLR Spill Trailer Inventory

(To be Checked After Each Use)

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

Continental Resources, Inc. (CRI) respectfully submits the following information concerning the drilling of the Columbus Federal 1-16H, 2-16H and 3-16H and the Tallahassee 2-16H and 3-16H, Sec. 16, T153N, R101W, Williams County, North Dakota.

CRI would like to propose the following safeguards and precautions to be taken while drilling the Columbus Federal-Tallahassee wells to prevent any contamination to freshwater sources during the drilling and completion of the wells:

1) During construction of the location, the entire location will be constructed per NDIC permit stipulations, ensuring any spills or runoff which occur on location do not penetrate the fresh ground water and are contained on the surface of the location. These modifications include, but are not limited to, the inclusion of a liner being placed under the location, and cementing of the rathole and mousehole.
2) Drainage will be re-routed to avoid the location, and erosion controls will be employed, as appropriate, around the site to reduce erosion and the resulting 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 1940', 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 rig specific Spill Prevention Containment and Countermeasure Plan to prepare for any event which may occur during drilling and completion operations. A spill trailer will be located on location for spill response, if necessary.

CRI believes adequate planning and precautions are being taken to prevent any contamination to ground water and surface waters.

Sarah Madden, Project Development Engineer
Continental Resources, Inc.

STATE OF OKLAHOMA)
)ss:
COUNTY OF OKLAHOMA)

On the 7th day of March 2013, before me, a Notary Public in and for said County and State, personally appeared **Sarah Madden**, known to me to be a Project Development Engineer 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

Oklahoma County, Oklahoma

My Commission Expires: 7/5/2015

Commission No.: 11006023

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

SPILL PREVENTION CONTAINMENT

AND COUNTERMEASURE PLAN

FOR

CYCLONE DRILLING, INC.
P.O. BOX 908
GILLETTE, WYOMING 82717-908

PREPARED BY;

TOP LINE ENGINEERING, LLC
12635 HWY 200, P.O. BOX 884
SIDNEY, MONTANA 59270
PH; (701)570-2844

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APPENDIX

TYPICAL DRILL RIG LOCATION PLAN

DISCHARGE REPORTING FORM

DISCHARGE SOURCE INSPECTION RECORD

SPILL PREVENTION CONTAINMENT
AND COUNTERMEASURE PLAN (SPCC)

PER 40 CFR 112.7 DATED: SEPTEMBER 14, 2012

This plan will follow the guidelines and format of 40 CFR part 112.7 and will replace the self-certified plan currently in affect.

112.7(a)(1) Discussion of facilities' conformance with the requirements listed in this part. The storage tanks on site store petroleum based drilling mud, diesel fuel, the invert tanks being the base for the drilling mud, salt water tanks, fresh water tanks, crude oil storage tanks and empty tanks for emergency storage. In addition to the storage tanks, other operations that can produce contaminants are the drilling operation itself and the cuttings drying operation. It is the purpose of this plan to define the prevention containment and countermeasure plan for discharges from any of these sources on the site. All the actions taken in this regard are per approved policies of this part of 40 CFR 112. Universally and in setting up the drilling operation on the site prevention measures are taken by grading the site to contain discharges, building in effective valves and other related operational and control mechanisms to prevent discharges. This equipment is installed and tested prior to beginning drilling operations. The tanks and equipment are installed within secondary containment berms and containment trenches and sumps are installed around the facilities prior to beginning drilling operations with capacity to contain with freeboard a rupture of the largest vessel associated with the containment. In the event of a discharge the sites are equipped with vacuums that are capable of picking up the spilled material and loading it into containers where it can be transferred to an approved disposal location. In the event of a discharge larger than can be handled by Cyclone and other manpower on location or that leaks offsite and potentially into navigable waters of the US, the operator, under his directions will arrange for trained contract personnel to immediately contain and clean-up the discharge.

112.7(a)(2) This plan will comply with all applicable items of this part. With no deviations anticipated.

112.7(a)(3) The attached sketch shows a typical layout of the drill rig sites depicting the location, size and contents of the tanks. There are no underground tanks nor are there any mobile or portable containers associated with these drilling locations. The site is prepared in advance of the drill rig coming onto the site. The sites are designed and constructed to contain spills and tank ruptures on the site. The drill rig and associated tanks and equipment are laid out in an efficient and effective manner to streamline the drilling operation. Frack tanks are located in such a manner that they have easy access to the mud tanks with valves located on both ends of transfer lines. The drilling mud tanks are plumbed to the drill rig with valves appropriately located to

stop flow from the tanks to the rig or from the rig to the tanks. The cuttings from the drilling operation are screened from the recycled drilling mud and directed to a container were they are dried using fly ash or some other equally effective absorbent material and are then transferred to the lined cuttings disposal pit onsite. The fuel tank is tied into the fuel lines providing fuel flow to the generators. Blowout preventers are placed over the drill hole casing and tested prior to beginning the drilling.

112.7(a)(3)(i) The type of oil in each fixed container and its storage capacity. No mobile or portable containers anticipated.

SOURCE	MAJOR TYPE OF FAILURE	TOTAL CAP. (BBLS.) (Type Fluid)	RATE (BBLS/MIN)	DIRECTION OF FLOW	SECONDARY CONTAINMENT
Diesel Fuel Tank	Leak or rupture	14,000 Maximum (Diesel)	Depends on size	Dams and/or Trenches	Site Perimeter Containment
Pumps & Engines	Leakage	½ - gal/hr. (lube oil)	½ - 1 gal/hr.	Drip Pans or Trenches	Site Perimeter Containment
Crude Oil Tanks	Rupture or Leak	400 BBLS	Depends on Type of Failure	Contained within Berm	Tank Battery Berm
Mud Tanks, Vibrator Rotary Hoses	Leak or rupture	450 BBLS Maximum per tank (Petroleum based drilling fluid)	Varies	Drip Pans for Hoses, Trench & Sump or Berms for Tanks	Site Perimeter Containment
Wellhead Blowout Preventer	Blowout or kicking well	Depends on severity (Well bore fluids)	Will vary	Away from well head to Trench and Sump	Site Perimeter Containment

112.7(a)(3)(ii) Discharge Prevention Measures including procedures for routine handling of products (loading, unloading and facility transfers, etc.); Before the drill rig moves on, the site is prepared for discharges associated with tank ruptures, as the site is graded to contain all discharges and storm runoff. When the rig is moved onto the site and set up additional discharge prevention and containment measures are taken. Equipment inspection records

are reviewed and the equipment is inspected following written procedures, the written procedures are attached in the appendix of the plan. A dated record of the inspection, signed by the appropriate supervisor or inspector is recorded and filed with time sheets or safety meeting minutes, when the drill rig changes locations and notes of deficiencies or acceptance are included. Operation and maintenance of equipment is designed to prevent discharges. Personnel are trained and made aware of the discharge prevention procedures and applicable pollution control laws, rules and regulations. The tool pusher in charge of the drill rig will have in his possession a copy of the Cyclone Drilling SPCC Plan and it is his responsibility to instruct the employees and make them aware of the discharge prevention measures contained in the plan. Scheduled briefings and refreshers are to be conducted with all the employees prior to and during rig up operations, such briefings are to be held during regularly scheduled safety meetings.

Employees are assigned to make routine inspections of valves, hose connections and other fluid connections for leaks. These inspections are made and documented on a monthly basis at a minimum. These leaks are provided drip pans and reported to the appropriate personnel for repair. If repairs cannot be readily made then regular emptying of the drip pans is required until the repairs can be made. Inspections of trenches and sumps are made on a regular basis to insure that they are free flowing and functional. The containment berms are also inspected periodically to insure their stability and function.

112.7(a)(3)(iii) Discharge or drainage controls such as secondary containment around containers and other structures, equipment, and procedures for the control of the discharge; Containment berms are placed around the tanks containing crude oil, the invert drilling fluid, salt water tanks and the empty tanks to be used for emergency storage, as secondary containment. The containment berms are of adequate height to contain a rupture and total failure of the largest tank contained within it amounting to 400 BBLS requiring a containment capacity of 3,000 cu. ft. Similarly, berms are built around the crude oil storage tanks on the site and requiring the same containment volume. Berms or trenches and sumps are constructed around the drill rig itself, the drilling mud tanks and diesel fuel tank, the sumps and trenches are sized to contain the volume of the largest tank in the case of a rupture and complete failure. Additionally, drip pans are placed under leaking valves, hose joints and other sources of small leaks until the item can be replaced or repaired to not leak. Regular inspections of these facilities are made to insure that they will function per plan.

112.7(a)(3)(iv) Countermeasures for discharge discovery, response, and cleanup (both the facility's capability and those that might be required of a contractor); Regular inspections may reveal a discharge such as a leaking valve or hose joint. These instances can readily be cleaned up by employees of Cyclone Drilling using on site vacuums and containers. Larger spills up to and

beyond the reporting limits can also be handled by Cyclone Drilling employees. Spills that exceed the limitations of the onsite cleanup equipment or in the event of a spill migrating offsite, will require the tool pushers' notification of the operator/owner of the site and they will contact the clean-up contractor thay have contracted with to contain and clean-up such events.

112.7(a)(3)(v) Methods of disposal of recovered materials in accordance with applicable legal requirements: When spills occur the fluids will be either soaked up with absorptive material and placed in a container for transporting to an approved disposal site or vacuumed up and placed in a storage container for transportation to an approved disposal site. It is understood by all Cyclone Drilling employees that there is not an approved disposal site on or around the drilling rig to dispose of these recovered materials or fluids, other than drying drilling cuttings and disposing of them in the cuttings pit.

112.7(a)(3)(vi) Contact list and phone numbers for the facility response coordinator, National Response Center, cleanup contractors with whom operator has an agreement for response, and all appropriate Federal, State, and local agencies who must be contacted in the event of a discharge as described in § 112.1(b). Facility Response Coordinator for Cyclone Drilling HSE Dept. (Ph. 307-682-4161) is responsible for contacting the operators environmental group so they can contact the appropriate Federal, State and Local personnel in the event of a discharge as described in § 112.1(b).

112.7(a)(4) Information and procedures to enable a person reporting a discharge as described in § 112.1(b) to relate information on the exact address or location and phone number of the facility; the date and time of the discharge, the type of material discharged; estimates of the total quantity discharged; estimates of the quantity discharged as described in § 112.1(b); the source of the discharge: a description of all affected media; the cause of the discharge; any damages or injuries caused by the discharge; actions being used to stop, remove, and mitigate the effects of the discharge; whether an evacuation may be needed; and, the names of individuals and/or organizations who have also been contacted. In the event of a discharge as described in §112.1(b) it is the responsibility of the tool pusher to relate the above information to the operators environmental group so they can contact, any emergency organizations and provide the reporting necessary to the Federal, State and Local agencies that require reporting of such a discharge. The tool pusher on the rig is the person in charge and either he or the drilling superintendent have the responsibility of reporting the answers to the above questions. These questions are spelled out on a "Discharge Reporting Form" that each has at his disposal in the appendix of "Cyclone Drilling Oil Spill Contingency Plan" In reporting a discharge a list of all individuals and or organizations that received the report will be listed.

112.7(a)(5) Plan procedures to be used when a discharge occurs:

1) Immediately extinguish any heater or fire that may ignite the spill.
2) No smoking during spill control operations.
3) Close all associated valves.
4) Direct discharge to ditches or drains that will carry the discharge to a safe holding sump or reserve pit.
5) Distribute hill, fibertex, gel, barite, or any other absorptive material available as required to contain the discharge not entering the ditch, sump or reserve pit.
6) Inspect area to ensure that all of the discharge is contained in ditches, sumps or reserve pits. Add ditches or diversion structures as required to contain the discharge onsite.
7) Start jet or sump pumps and transfer discharged material from sumps to reserve pit or holding tanks.
8) After discharge is stopped, collect all used hulls, fibertex and similar absorptive material for disposal per instruction from the drilling superintendent or the tool pusher. No oil is to remain in the ditches or sumps that may create a fire hazard.
9) Hold collected discharged material for hauling and disposal in an approved location.
10) If discharge migrates from the drill rig location Cyclone Drilling personnel will use these same procedures stop and recover the discharge. Additionally the tool pusher will notify the owners representative to notify the contract clean-up company for clean-up and mitigation of the offsite discharge migration.
11) Fill out Site Discharge Reporting Form and distribute to appropriate agencies and personnel. (Form included in Appendix of Plan)

112.7(a)(5)(b) Flow diagram of potential discharges from significant sources as a result of facilities failure: Flow diagrams and quantities included in appendix of the plan.

112.7(a)(5)(c) Site discharge containment system: The site discharge containment system for the Cyclone Drilling Rigs is a combination of containment berms, confinement trenches, sumps and reserve pits. Drip pans will be used for small discharges until repairs are make or equipment replaced. (See typical site plan included in appendix.)

112.7(a)(5)(d) Not applicable as all measures spelled out in this part are practical as describe in each section.

112.7(a)(5)(e) Inspections, tests and records: Written procedures are provided on the "Discharge Source Inspection Record", these inspections are recorded at least on a monthly basis or whenever a leak or discharge is detected and reported, using the "Discharge Source Inspection Record" in the appendix. These records are signed by the tool pusher onsite and maintained by Cyclone Drilling for a period of 3 years.

112.7(a)(5)(f) Personnel Training and Discharge Prevention Procedures: The personnel working on the drilling crews are trained in the maintenance and operation of all the equipment to prevent discharges, the discharge procedures and general facility operations. They are also made aware of the contents of the SPCC Plan. The tool pusher on each crew is the person on the location who is accountable for discharge prevention and who reports to the Cyclone Drilling Management. The tool pusher is responsible for conducting discharge prevention briefings and assuring an adequate understanding of the Cyclone Drilling SPCC Plan for the facility and any recent developments of new precautionary measures due to failures or malfunctions are implemented.

112.7(a)(5)(g) Site Security: All persons entering the site are required to check in with the tool pusher of the on duty crew. Unauthorized persons are not allowed on the site. Unauthorized visitors are easily detected, questioned regarding there presents and appropriately escorted to take care of their business.

112.7(a)(5)(h) Facility Tank Truck Loading/Unloading: The tank truck loading and unloading areas on the Cyclone Drilling Sites are located adjacent to the frack tank or crude oil tank batteries the area adjacent to the tank battery, where tank trucks are loaded and unloaded will be graded to drain into the containment trenches and associated sump, surrounding the drill rig, mud tanks, fuel tank, etc. Wheel chocks are used to prevent the truck from moving while connected to the tanks during loading/unloading operations. Before departure the vehicle is inspected for leaks in the lowermost drains and outlets and if they are any detected the associated valves are tightened or adjusted to prevent discharge while in transit. All above ground containers are checked and evaluated for risk of discharge or failure and as necessary appropriate action shall be taken.

APPENDIX

Continental
RESOURCES

June 12, 2012

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

Re: Tallahassee 3-16H

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