



AUTHORIZATION TO PURCHASE AND TRANSPORT OIL FROM LEASE - FORM 8

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

Received

MAR 7 2016

Well File No.	15358
NDIC CTB No.	115358

ND Oil & Gas Division

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

Well Name and Number Lewis & Clark 2-4H	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County McKenzie
Operator RIM Operating, Inc	Telephone Number 303-799-9828		Field Baker		
Address 5 Inverness Drive East	City Englewood		State CO	Zip Code 80112	

Name of First Purchaser Mercuria Energy Trading, Inc.	Telephone Number 832-209-2400	% Purchased 100%	Date Effective March 1, 2016
Principal Place of Business 20 Greenway Plaza, Suite 650	City Houston	State TX	Zip Code 77046
Field Address	City	State	Zip Code
Name of Transporter Rocky Mountain Crude Oil LLC	Telephone Number 877-651-9351	% Transported 100	Date Effective March 1, 2016
Address 490 North 31st Street #2010	City Billings	State MT	Zip Code 59101
The above named producer authorizes the above named purchaser to purchase the percentage of oil stated above which is produced from the lease designated above until further notice. The oil will be transported by the above named transporter.			

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

I hereby swear or affirm that the information provided is true, complete and correct as determined from all available records.		Date March 3, 2016
Signature 	Printed Name Liz Ortiz	Title Engineering Technician

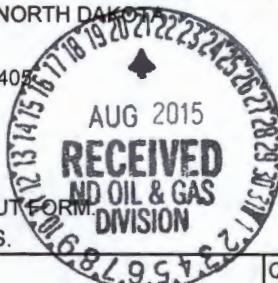
Above Signature Witnessed By	Witness Signature 	Witness Printed Name Ken Kundrik	Witness Title A&D Manager
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FOR STATE USE ONLY		
Date Approved MAR 17 2016		
By 		
Title Erie Polkerson		
Oil & Gas Production Analyst		



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.
15358
NDIC CTB No.
115358

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Well Name and Number Lewis & Clark 2-4H	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County McKenzie
Operator RIM Operating, Inc	Telephone Number 303-799-9828		Field Baker		
Address 5 Inverness Drive East	City Englewood		State CO	Zip Code 80112	

Name of First Purchaser PetroChina International America, Inc.	Telephone Number 832-325-5317	% Purchased 100	Date Effective September 1, 2015
Principal Place of Business 2000 W Sam Houston Parkway South	City Houston	State TX	Zip Code 77042
Field Address	City	State	Zip Code
Name of Transporter Badlands Tank Lines, LLC	Telephone Number 402-281-0646	% Transported 100	Date Effective September 1, 2015
Address 2211 South 156th Circle #2B	City Omaha	State NE	Zip Code 68116
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 August 18, 2015
Signature 	Printed Name Liz Ortiz
	Title Engineering Technician

Above Signature Witnessed By	
Witness Signature 	Witness Printed Name Ken Kundrik
	Witness Title A&D Manager

FOR STATE USE ONLY	
Date Approved AUG 24 2015	
By	
Title 	

Oil & Gas Production Analyst



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/

15358

May 13, 2014

Mr. Jason Rouse
General Representative
Rim Operating, Inc.
5 Inverness Drive East
Englewood, CO 80112

RE: Basic Game And Fish 34-3
SW SW 2-153N-101W
State File No. 11745*

Corps Of Engineers 31-10
NW NE 10-153N-101W
State File No. 11920*

Lewis And Clark 2-4H
SE NE 4-153N-101W
State File No. 15358*

Pederson 5-24
NW SW 24-153N-102W
State File No. 11137*

Skurdal 2-24HR
NE NW 24-153N-102W
State File No. 10681

Skurdal 6-24
SW SE 24-153N-102W
State File No. 13428*

Coulter 1-19
SW NW 19-153N-101W
State File No. 11238

*location impacted by 2014 ice jam flooding

Dear Jason,

Our conversation on May 2, 2014 discussed flood preparations for wells that your company operates near Williston, North Dakota. The Missouri River continues to rise and the possibility of additional flooding from the spring melt and recent rains in the near future exists. I urge you to closely monitor these sites and take the necessary preventative actions to eliminate or mitigate environmental damage if these sites become deluged with flood waters. The following e-mail from Allen Schlag of the National Weather Service also addresses the current situation of the Missouri River in the Williston area:

From: Allen Schlag [mailto:allen.schlag@noaa.gov]
Sent: Monday, May 12, 2014 1:47 PM
To: WILLIAMS; Samuelson, Jerry O.; MCKENZIE; Anton, Amy J.; Ackerman, Laura C.; Engelhardt, Bruce W.; Travnicek, Andrea J.; Johnson, Sean M.
Subject: Missouri River

Greetings everyone

Just a quick note on the Missouri River near Williston forecast site and the prospects for problems as we go forward into latter half of May and early June (by default this also includes the Yellowstone in ND as well). As you may have noticed already, the Missouri River near Williston crossed over into Forecast Issuance Stage this past weekend before falling back below 20 ft. This, is temporary. While the Corps released a statement last week tempering their runoff expectations for the Missouri River overall, the attached graphic of mountain snowpack suggests we still have a pretty strong runoff into the Yellowstone and Missouri Rivers ahead of us.

We will most likely cross over above flood stage as measured at the Lewis and Clark Bridge west of Williston at some point in the next couple of weeks.

What exactly lies in store for the area with respect to eventual river stages is still quite unclear as the overall environment for the melt of the mountain snowpack is too far out. However...there has been a fairly wet pattern in the plains of Montana already this spring, with a mixed bag in the upper elevations of central MT. The region remains well above normal with respect to mountain snowpack, but is also well below where 1997 and 2011 were at this point in time (see the second attached pdf).

If I had to take a wild guess this far in advance, something around the 22.5 to 24.5 ft range is reasonable, with any added big rains this could be expanded quite easily to the 25-26 ft range.

How exactly this will compare to this spring's ice jams and high water is a really good question, which I don't have any easy answers to either. Suffice to say, I think there's a pretty decent chance that we will see water roughly 4-6 ft higher than is currently in northwestern ND along both the Yellowstone and Missouri Rivers with the timing of near the last week of May to about the third week of June. Historically, I know there have been some access issues with oil well sites in the Trenton area with water levels in the 22 ft range at the Lewis and Clark Bridge. How much of this has been mitigated by ring dikes or road raises, again...very good question to which I have no answer.

Of course, if you have any questions or just want to chat about this in greater detail, always feel free to give me a call.

Allen

p.s. And as always, feel free to disseminate as you feel is appropriate.

Allen J. Schlag Service Hydrologist
WFO-Bismarck
National Weather Service
2301 Univ. Drive, Bldg 27
Bismarck, ND 58504 ph. 701-250-4495

If you have question in regards to flood preparation and prevention activities, please feel free to contact me at your convenience. You can reach me at (701) 770-3554 or e-mail at rsdunn@nd.gov. Thank you for your time and consideration.

Sincerely,

A handwritten signature in black ink that reads "Richard S. Dunn / FIP". The signature is fluid and cursive, with "Richard S. Dunn" on the top line and "/FIP" on the bottom line to the right of the name.

Richard S. Dunn
Field Inspector



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
SBN 5698 (03-2000)



Well File No.
15358
NDIC CTB No.
115358

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

Well Name and Number LEWIS & CLARK 2-4H	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County MCKENZIE
Operator RIM OPERATING, INC.	Telephone Number 303-799-9828				Field BAKER
Address 5 INVERNESS DRIVE EAST	City ENGLEWOOD		State CO	Zip Code 80112	

Name of First Purchaser PLAINS MARKETING LP	Telephone Number 713-646-4100	% Purchased 100	Date Effective May 16, 2013
Principal Place of Business P.O. BOX 4648	City HOUSTON	State TX	Zip Code 77210
Field Address 303 6TH AVE NE	City BELFIELD	State ND	Zip Code 58622
Name of Transporter PLAINS MARKETING LP	Telephone Number 701-575-4349	% Transported 100	Date Effective May 16, 2013
Address 303 6TH AVE NE	City BELFIELD	State ND	Zip Code 58622
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 May 23, 2013	
Signature 	Printed Name KEN KUNDRIK	Title OPERATIONS MANAGER

Above Signature Witnessed By	Witness Signature 	Witness Printed Name KIM NEABUHR	Witness Title REVENUE ACCOUNTANT
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FOR STATE USE ONLY	
Date Approved MAY 28 2013	
By 	
Title Erie Peterson	
Oil & Gas Production Analyst	



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

15358

May 24, 2013

Rene Morin
Rim Operating, Inc.
5 Inverness Drive East
Englewood, CO 80112-5519

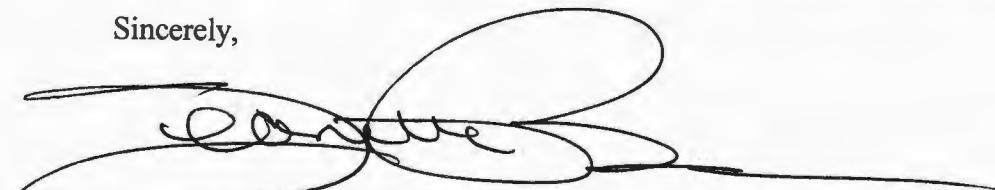
RE: CHANGE OF OPERATOR FROM SM ENERGY COMPANY
TO RIM OPERATING, INC.
15 WELLS

Dear Rene Morin:

Please find enclosed a copy of the approved Form 15, Notice of Transfer of Oil and Gas Wells, in regard to the above-referenced matter. This transfer has now been approved and subject wells are now covered by Bond No. RLB0013610, RLI Insurance Company as Surety.

If you should have any questions, please feel free to contact this office.

Sincerely,



Jeanette Bean
Administrative Assistant

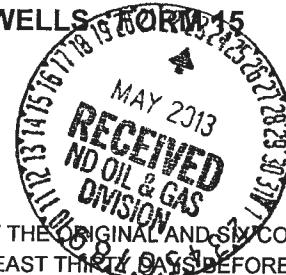
Enclosure

cc: Mark Mueller
SM Energy Company
PO Box 7168
Billings, MT 59103



NOTICE OF TRANSFER OF OIL AND GAS WELLS

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 5762 (03-2000)



FOR STATE USE ONLY

NDIC Bond Number

R 312

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM. PLEASE SUBMIT THE ORIGINAL AND SIX COPIES.
THIS NOTICE ALONG WITH A FEE OF \$25.00 PER WELL SHALL BE FILED AT LEAST THIRTY DAYS BEFORE THE CLOSING DATE OF TRANSFER.

TRANSFERRING OPERATOR

Name of Operator Representative

Mark Mueller

Operator Transferring Oil and/or Gas Wells

SM Energy Company

Address

P.O. Box 7168

City

Billings

State

MT

Telephone Number
406-245-6248

Zip Code
59103

I, the above named representative, acknowledge the transfer of the oil and/or gas wells named below for the purpose of ownership and/or operation to the company named below.

Signature

Title (Must be an officer or power of attorney must be attached)

Sr VP/Regional Manager

Date

5/3/2013

Well File Number	Requested Official Well Name and Number	Location (Qtr-Qtr, S-T-R)	Assignment Date

RECEIVING OPERATOR

Name of Operator Representative

Rene Morin

Operator Receiving Oil and/or Gas Wells

Rim Operating, Inc.

Address

5 Inverness Drive East

City

Englewood

State

CO

Telephone Number
303-799-9828

Zip Code
80112-5519

I, the above named representative, have read the foregoing statement and accept such transfer, also the responsibility of ownership and/or operation of said well or wells, under the said company bond, said bond being tendered to or on file with the Industrial Commission of North Dakota.

Signature

Title (Must be an officer or power of attorney must be attached)

Vice President

Date

5-15-13

SURETY COMPANY

Surety

RLI Insurance Company

Telephone Number

713-961-1300

Amount of Bond
\$ 100,000.00

Address

8 Greenway Plaza, Ste.400

City

Houston

State

TX

Zip Code

77046

Bond Number

RLB0013610

The above named SURETY agrees that such bond shall extend to compliance with Chapter 38-08 of North Dakota Century Code and amendments and the rules and regulations of the Industrial Commission of North Dakota prescribed to govern the production of oil and gas on government and private lands within the State of North Dakota, in relation to the above stated transfer; it being further agreed and understood that the bond sum or amount is not to be considered increased because of such extension.

Signature

Title (Must be an officer or power of attorney must be attached)

Attorney-in-Fact

Date

05-22-13

Printed Name

Robbie Duxbury

FOR STATE USE ONLY

Date Approved

May 24, 2013

By

Bruce E. Duxbury

Title

Assistant Director

Well File No.	Well Name	Gross Acres	Field	County	Sq	Quarter	Section	Township	Range
14792	BOSS 12-17	160	STOCKYARD CREEK	WILLIAMS	ND	SWNW	17	154N	99W
14716	BOSS 41-17	160	STOCKYARD CREEK	WILLIAMS	ND	NENE	17	154N	99W
13556	CHURCH 1-2X ST	320	NAMELESS	MCKENZIE	ND	NENW	2	150N	102W
15358	LEWIS & CLARK 2-4H	604.3	BAKER	MCKENZIE	ND	SENE	4	153N	101W
45	BASIC GAME & FISH 34-3H	320	BAKER	MCKENZIE	ND	SWSW	2	153N	101W
320	CORPS OF ENGINEERS 31-10	320	BAKER	MCKENZIE	ND	NWNE	10	153N	101W
11137	PEDERSON 5-24 (DUP)	160	HARDSCRABBLE	WILLIAMS	ND	NWSW	24	153N	102W
11238	COULTER 1-19	156	INDIAN HILL	WILLIAMS	ND	SWNW	19	153N	101W
11490	CURRAN 1-1	160	DUBLIN	WILLIAMS	ND	NENW	1	157N	100W
9102	CHURCH 1-2S	160	NAMELESS	MCKENZIE	ND	NWNW	2	150N	102W
10681	SKURDAL 2-24HR	640	HARDSCRABBLE	WILLIAMS	ND	NENW	24	153N	102W
8322	LINK 34-1S	160	NAMELESS	MCKENZIE	ND	NESW	34	151N	102W
5856	YELLOWSTONE STATE 1-36	320	YELLOWSTONE	MCKENZIE	ND	NENW	36	150N	104W
13428	SKURDAL 6-24 RR	320	HARDSCRABBLE	WILLIAMS	ND	SWSE	24	153N	102W
9481	LINDECKER 1-35 SWD		UNKNOWN	MCKENZIE	ND	NWSW	35	151N	102W



SUNDRY NOTICE AND REPORTS ON WELLS - FORM A

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.
15358



PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

<input type="checkbox"/> Notice of Intent	Approximate Start Date
<input checked="" type="checkbox"/> Report of Work Done	Date Work Completed July 20, 2012
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date
<input type="checkbox"/> Drilling Prognosis <input type="checkbox"/> Spill Report <input type="checkbox"/> Redrilling or Repair <input type="checkbox"/> Shooting <input type="checkbox"/> Casing or Liner <input type="checkbox"/> Acidizing <input type="checkbox"/> Plug Well <input type="checkbox"/> Fracture Treatment <input type="checkbox"/> Supplemental History <input type="checkbox"/> Change Production Method <input type="checkbox"/> Temporarily Abandon <input type="checkbox"/> Reclamation <input checked="" type="checkbox"/> Other Return to Production	

Well Name and Number

Lewis & Clark 2-4H

Footages 3028 F S L	Qtr-Qtr 332 F E L	SENE	Section 4	Township 153 N	Range 101 W
Field Baker	Pool Madison		County McKenzie		

24-HOUR PRODUCTION RATE

Before	After
Oil	Bbls
Water	Bbls
Gas	MCF

Name of Contractor(s)

Address	City	State	Zip Code
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DETAILS OF WORK

The Lewis & Clark 2-4H was returned to production on 7/20/12 after being SI due to flooding in Baker Field. All oil and water that was transferred off lease to the Fossum 15-35H's (NDIC # 19324) spare tanks on site as slop oil has been returned.

Company SM Energy Company	Telephone Number (406) 245-6248	
Address P.O. Box 7168		
City Billings	State MT	Zip Code 59103
Signature <i>Cris Rogers</i>	Printed Name Cris Rogers	
Title Operations Engineer	Date July 27, 2012	
Email Address croggers@sm-energy.com		

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <i>September 7, 2012</i>	
By <i>J.D. McRae</i>	
Title PETROLEUM ENGINEER	

Industrial Commission of North Dakota
Oil and Gas Division
Spill / Incident Report

Date/Time Reported : Nov 27 2006 / 15:15

State Agency person :

Responsible Party :

Well Operator : NANCE PETROLEUM CORPORATION

Date/Time of Incident : 11/25/2006 12:00:00 AM

NDIC File Number : 15358

Facility Number :

Well or Facility Name : Lewis & Clark 2-4H

Field Name : BAKER

County : McKenzie

Section : 4

Township : 153

Range : 101

Quarter-Quarter : SE

Quarter : NE

Distance to nearest residence : 2 Miles

Distance to nearest water well : 0.25 Miles

Release Oil : 0 barrels

Release Brine : 3 barrels

Release Other : 0 barrels

Recovered Oil : 0 barrels

Recovered Brine : 0 barrels

Recovered Other : 0 barrels

Has/Will the incident be reported to the NRC? : No

Was release contained : Yes - Within Dike

Description of other released substance :

Immediate risk evaluation :

Industrial Commission of North Dakota
Oil and Gas Division
Spill / Incident Report

Date/Time Reported : Jul 21 2005 / 14:23

State Agency person :

Responsible Party :

Well Operator : NANCE PETROLEUM CORPORATION

Date/Time of Incident : 7/20/2005 12:00:00 AM

NDIC File Number : 15358

Facility Number :

Well or Facility Name : Lewis Clark 2-4H

Field Name : BAKER

County : McKenzie

Section : 4

Township : 153

Range : 101

Quarter-Quarter : SE

Quarter : NE

Distance to nearest residence : 2 Miles

Distance to nearest water well : 0.25 Miles

Release Oil : 10 barrels

Release Brine : 30 barrels

Release Other : 0 barrels

Recovered Oil : 10 barrels

Recovered Brine : 30 barrels

Recovered Other : 0 barrels

Has/Will the incident be reported to the NRC? : No

Was release contained : Yes - Within Dike

Description of other released substance :

Immediate risk evaluation :

Industrial Commission of North Dakota
Oil and Gas Division
Spill / Incident Report

Date/Time Reported : Jan 12 2004 / 1636

State Agency person :

Responsible Party :

Well Operator : NANCE PETROLEUM CORPORATION

Date/Time of Incident : 1/4/2004 12:00:00 AM

NDIC File Number : 15358

Facility Number :

Well or Facility Name : Lewis and Clark #2-4H

Field Name : Baker

County : McKenzie

Section : 4

Township : 153

Range : 101

Quarter-Quarter : SE

Quarter : NE

Distance to nearest residence : 1.5 miles

Distance to nearest water well : 0.5 miles

Release Oil : 6 barrels

Release Brine : 0 barrels

Release Other : 0 barrels

Recovered Oil : 0 barrels

Recovered Brine : 0 barrels

Recovered Other : 0 barrels

Has/Will the incident be reported to the NRC? : No

Was release contained : Yes - On Constructed Well Site

Description of other released substance :

Immediate risk evaluation :



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.
15358



PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

<input type="checkbox"/> Notice of Intent	Approximate Start Date
<input checked="" type="checkbox"/> Report of Work Done	Date Work Completed March 21, 2011
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date

<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
<input checked="" type="checkbox"/> Other	SI due to Flooding

Well Name and Number
Lewis and Clark 2-4H

Footages 3028 F S L	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W
Field Baker	Pool Madison	County 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
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DETAILS OF WORK

The Lewis and Clark 2-4H was shut in on 3/21/2011 to prevent a spill due to flooding. The flooding caused some mechanical damage to the surface facilities. Repairs to the surface facilities are in progress and the well is scheduled to be returned to production within 30 days. The well has mechanical integrity and should be capable of producing at the same rate observed prior to shut in.

Company SM Energy Company	Telephone Number (406) 245-6248	
Address P.O. Box 7168		
City Billings	State MT	Zip Code 59103
Signature 	Printed Name Jaime Adkins	
Title Sr. Reservoir Engineer	Date June 11, 2012	
Email Address jadkins@sm-energy.com		

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <i>6-14-12</i>	
By <i>Jamie T. Adkins</i>	
Title <i>Field Supervisor</i>	



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.
15358

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

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<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date
<input type="checkbox"/> Report of Work Done	Date Work Completed
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	
Approximate Start Date	

- | | |
|---|---|
| <input type="checkbox"/> Drilling Prognosis | <input type="checkbox"/> Spill Report |
| <input type="checkbox"/> Redrilling or Repair | <input type="checkbox"/> Shooting |
| <input type="checkbox"/> Casing or Liner | <input type="checkbox"/> Acidizing |
| <input type="checkbox"/> Plug Well | <input type="checkbox"/> Fracture Treatment |
| <input type="checkbox"/> Supplemental History | <input type="checkbox"/> Change Production Method |
| <input type="checkbox"/> Temporarily Abandon | <input type="checkbox"/> Reclamation |
| <input type="checkbox"/> Other | SHUT IN |

Well Name and Number Lewis & Clark 2-4					
Footages 3028 S 2094 E N L		Qtr-Qtr SESE	Section 4	Township 153 N	Range 101 W
Field BAKER	Pool MADISON	County 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

Due to ice jams the above captioned well has been shut in.

All saleable oil has been sold, 222 bbls of oil and water was transferred to Fossum 15-35H's (NDIC # 19324) spare tanks on site as slop oil.

Verbal approval to transport oil was given by John Axtman on February 3, 2012.

Company SM Energy	Telephone Number (406) 245-6248		
Address P O Box 7168			
City Billings		State MT	Zip Code 59103
Signature <i>Lorena Griggs</i>	Printed Name Lorena Griggs		
Title Regulatory & Safety Assistant	Date February 3, 2012		
Email Address rgriggs@sm-energy.com			

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <i>February 22, 2012</i>	
By <i>John Axtman</i>	
Title PETROLEUM ENGINEER	



SUNDRY NOTICES AND REPORTS ON WELLS - FORM

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



Well File No.
15358

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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date
<input type="checkbox"/> Report of Work Done	Date Work Completed
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date

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

Well Name and Number Lewis & Clark 2-4													
Footages 3028 5'				Qtr-Qtr	Section	Township	Range						
2094	F	N	L	332	F	E	L	SENE	4	153	N	101	W
Field Baker				Pool Madison				County 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

3/29/2011 Temporarily Shut In due to Missouri River flooding.

Company SM Energy Co.		Telephone Number
Address P O Box 7168		
City Billings		State MT
Signature 		Printed Name Luke Studer
Title Regulatory & Safety Comp. Spec.		Date March 29, 2011
Email Address		

FOR STATE USE ONLY	
<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date	April 5, 2011
By	Daniel J. McElroy
Title	PETROLEUM ENGINEER

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.	15358
NDIC CTB No.	115358

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

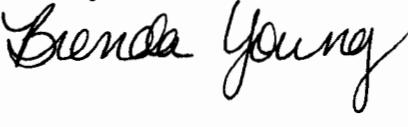
Well Name and Number LEWIS & CLARK 2-4H	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County MCKENZIE
Operator SM ENERGY COMPANY	Telephone # 406-245-6248		Field BAKER		
Address P O BOX 7168	City BILLINGS		State MT	Zip Code 59103-7168	

Name of First Purchaser Plains Marketing-North Dakota, Inc.	Telephone # 303-850-4284	% Purchased 100	Date Effective January 1, 2011
Principal Place of Business 5660 Greenwood Plaza Blvd., #230	City Greenwood Village	State CO	Zip Code 80111
Field Address PO Box 567	City Plentywood	State MT	Zip Code 59254
Name of Transporter Diamond B Trucking Inc. (TR)	Telephone Number 701-245-6423	% Transported 100	Date Effective January 1, 2011
Address PO Box 445	City Westhope	State ND	Zip Code 58793
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.			

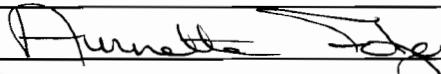
Other First Purchasers Purchasing From This Lease	% Purchased	Date Effective
Other First Purchasers Purchasing From This Lease	% Purchased	Date Effective
Other Transporters Transporting From This Lease	% Transported	Date Effective
Other Transporters Transporting From This Lease	% Transported	Date Effective
Comments Nexen purchased by Plains. Name changed to Plains Marketing-North Dakota, Inc.		

I hereby swear or affirm that the information herein provided is true, complete and correct as determined from all available records.	Date January 19, 2011
---	---------------------------------

Signature 	Printed Name Sherry Karst	Title Production Accountant
---	-------------------------------------	---------------------------------------

Above Signature Witnessed By	Witness Signature 	Witness Printed Name Brenda Young	Witness Title Field Tech Support
------------------------------	---	---	--



FOR STATE USE ONLY	
Date Approved FEB 09 2011	By  Title Oil & Gas Record Analyst



SUNDRY NOTICE AND REPORTS ON WELLS - FORM

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.

15358

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

<input type="checkbox"/> Notice of Intent	Approximate Start Date 	<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input checked="" type="checkbox"/> Report of Work Done	Date Work Completed October 25, 2010	<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.		<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
Approximate Start Date 		<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
		<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
		<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
		<input checked="" type="checkbox"/> Other	Wells Flaring Gas

Well Name and Number See Attached List						
Footages		Qtr-Qtr	Section	Township	Range	
F	L	F	L	N	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

Due to facility work on BearPaw Pipeline infrastructure the attached list of wells were flaring produced gas during October 16th, through October 25th.

Company SM Energy		Telephone Number (406) 245-6248	
Address P O Box 7168			
City Billings		State MT	Zip Code 59103
Signature 		Printed Name Luke Studer	
Title Regulatory and Safety Comp. Spec.		Date October 27, 2010	
Email Address lstuder@sm-energy.com			

FOR STATE USE ONLY	
<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date 10-29-10	
By Original Signed By	
Title GLENN L. WOLLAN	
Field Supervisor	

<u>Pool</u>	<u>Well Name/NO</u>	<u>Field</u>	<u>NDIC No.</u>	<u>Fed Lease No.</u>	<u>Sec.</u>	<u>Township</u>	<u>Range</u>	<u>County</u>
Bakken	Klamm 13-10H	Dimmick Lake	17952		10	150	97	Mckenzie
Bakken	Johnson 16-34	Siverston	18805		34	150	98	Mckenzie
Duperow	BA Green	Sioux Field	11700		5	151	101	Mckenzie
Ratcliff	Willow 1-4	Indian Hill	8957		4	152	101	Mckenzie
Madison	Eckert 2-5HR	Indian Hill	10089		5	152	101	Mckenzie
Ratcliff	Eckert 4-5-3A	Indian Hill	10812		5	152	101	Mckenzie
Mission Canyon	Eckert 5-5-2A	Indian Hill	11070		5	152	101	Mckenzie
Madison	Eckert 5-12-R	Indian Hill	11009		5	152	101	Mckenzie
Madison	Eckert 2-6-2D	Indian Hill	10088		5	152	101	Mckenzie
Madison	Lindvig #10	Camp	11316		10	152	101	Mckenzie
Mission Canyon	Anderson 32-10	Camp	11059		10	152	101	Mckenzie
Madison	M&G 14-2	Baker	11751	NDM82193	2	153	101	Mckenzie
Red River	French Pinney 24-3	Baker	12129	NDM82195	3	153	101	Mckenzie
Madison	Basic Game & Fish 34-3	Baker	11745	NDM82193	3	153	101	Mckenzie
Madison	Lewis & Clark 2-4H	Baker	15358		4	153	101	Mckenzie
Duperow	Corp of Engineers 31-10	Baker	11920	NDM82191	10	153	101	Mckenzie
Red River	Rosebud 22-11	Baker	11549	NDM82190	11	153	101	Mckenzie
Madison	Lindvig 1-11HR	Baker	9309		11	153	101	Mckenzie
Madison	Fredrickson 33-33	Indian Hill	11345		33	153	101	Mckenzie
Madison	Powers 33-23	Indian Hill	11523		33	153	101	Mckenzie
Madison	Canterra St of ND F-1	Indian Hill	11492		33	153	101	Mckenzie
Red River	Rehab 4-33	Indian Hill	15344		33	153	101	Mckenzie
Madison	Canterra St of ND F-2	Indian Hill	11575		34	153	101	Mckenzie
Red River	Barnes 1-2	Indian Hill	15170	NDM88450	2	152	102	Mckenzie
Madison	Boss 12-17	Stockyard Crk	14792		17	154	99	Williams
Madison	Boss 14-17	Stockyard Crk	14716		17	154	99	Williams
Madison	Coulter 1-19	Indian Hill	11238		19	153	101	Williams
Madison	Skurdal 2-24HR	Hardscrabble	10681		24	153	102	Williams
Duperow	Skurdal 3-24-3B	Hardscrabble	11136		24	153	102	Williams
Duperow/BirdBear	Pederson 5-24-4C	Hardscrabble	11137		24	153	102	Williams
Red River/Stnwall	Skurdal 6-24	Hardscrabble	13428		24	153	102	Williams
Madison	Turmoil 10-4	Ft Buford	13457		4	153	102	Williams
Madison	Marley State 1-36	Ft Buford	7503		36	153	104	Williams

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.

15358

NDIC CTB No.

115358

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

Well Name and Number LEWIS & CLARK 2-4H	Unit-Qtr SENE 4	Section 153 N	Township 101 W	Range MCKENZIE
Operator SM ENERGY COMPANY	Telephone # 406-245-6248	Field BAKER		
Address P O BOX 7168	City BILLINGS		State MT	Zip Code 59103-7168

Name of First Purchaser Nexen Marketing USA Inc	Telephone # 303-850-4284	% Purchased 100	Date Effective June 1, 2010
Principal Place of Business 5660 Greenwood Plaza Blvd., #230	City Greenwood Village	State CO	Zip Code 80111
Field Address PO Box 567	City Plentywood	State MT	Zip Code 59254
Name of Transporter Diamond B Trucking Inc. (TR)	Telephone Number 701-245-6423	% Transported 100	Date Effective June 1, 2010
Address PO Box 445	City Westhope	State ND	Zip Code 58793
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 St. Mary Land & Exploration Company name change to SM Energy Company effective 6/1/2010		

I hereby swear or affirm that the information herein provided is true, complete and correct as determined from all available records.	Date June 10, 2010
Signature 	Printed Name Sherry Karst
Title Production Technician	

Above Signature Witnessed By	Witness Signature 	Witness Printed Name Brenda Young	Witness Title Production Technician
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FOR STATE USE ONLY	
Date Approved	JUL 01 2010
By	
Title Jill - Gas Prod Analyst	



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

June 28, 2010

SM Energy Company
Ronald B. Santi
PO Box 7168
Billings, MT 59101

**RE: PRINCIPAL NAME CHANGE FROM
ST MARY LAND & EXPLORATION COMPANY TO
SM ENERGY COMPANY
BOND NOS. 6367113, 6456716, 6041871, 6160846, 6160847, 6160842, AND
6314472
SAFECO INSURANCE COMPANY OF AMERICA
267 WELLS**

Dear Mr. Ronald B. Santi:

This office is in receipt of your request to change the principal name of St. Mary Land & Exploration Company to SM Energy Company.

This letter will verify the principal name change effective June 28, 2010.

Please feel free to contact this office if you should have any questions.

Sincerely,

Evie Roberson
Administrative Assistant

AUTHORIZATION TO PURCHASE AND TRANSPORT OIL FROM LEASE - FORM 8

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 1 405
BISMARCK, ND 58505-0840
SFN 5698 (03-2000)

Well File No.	15358
NDIC CTB No.	115358

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND FOUR COPIES

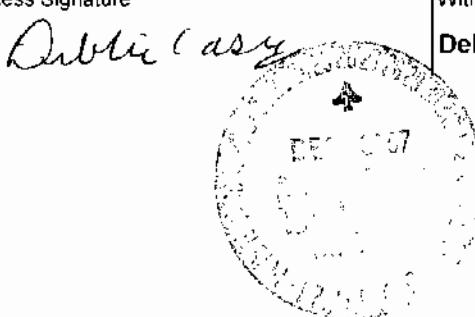
Well Name and Number LEWIS & CLARK 2-4H	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County MCKENZIE
Operator ST MARY LAND & EXPLORATION COMPANY	Telephone # 406-245-6248 Field BAKER				
Address P O BOX 7168	City BILLINGS		State MT	Zip Code 59103-7168	

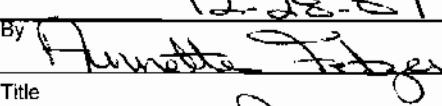
Name of First Purchaser Nexen Marketing USA Inc	Telephone # 303-850-4284	% Purchased 100	Date Effective December 1, 2007
Principal Place of Business 5660 Greenwood Plaza Blvd., #230	City Greenwood Village	State CO	Zip Code 80111
Field Address PO Box 567	City Plentywood	State MT	Zip Code 59254
Name of Transporter Diamond B Trucking Inc. (TR)	Telephone Number 701-245-6423	% Transported 100	Date Effective December 1, 2007
Address PO Box 445	City Westhope	State ND	Zip Code 58793
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	0	

I hereby swear or affirm that the information herein provided is true, complete and correct as determined from all available records.	Date December 17, 2007
---	----------------------------------

Signature 	Printed Name Kari Wheeler	Title Production Assistant
---	-------------------------------------	--------------------------------------

Witness Signature 	Witness Printed Name Debbie Casey	Witness Title Production Supervisor
--	---	---

FOR STATE USE ONLY	
Date Approved 12-28-07	By 
Title Oil + Gas Production Analyst	



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

December 26, 2007

Karin M. Writer
St Mary Land & Exploration Company
1776 Lincoln St Ste 700
Denver CO 80203

**RE: PRINCIPAL NAME CHANGE FROM
NANCE PETROLEUM CORPORATION TO
ST MARY LAND & EXPLORATION COMPANY
7 BONDS**

Dear Ms. Writer:

This office is in receipt of the riders changing the principal name from Nance Petroleum Corporation to St Mary Land & Exploration Company.

This letter will verify the principal name change from Nance Petroleum Corporation to St Mary Land & Exploration Company effective December 26, 2007.

Please feel free to contact this office if you should have any questions.

Sincerely,

Marge Rixen
Legal Assistant

/mr



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

May 10, 2007

Mike Mungas
Nance Petroleum Corp.
PO Box 7168
Billings, MT 59103-7168

RE: Oil and Gas Production Sites

Dear Mr. Mungas:

As we are heading into spring, it is a good time to make improvements on oil and gas production sites and ensure compliance with the Rules and Regulations of the North Dakota Administrative Code. Things that I am currently checking are dead vegetation, dikes, and oil and/or salt saturated soil. These Code requirements are listed below for your reference. As a result of recent inspections, I have noted items on the attached sheet, which require attention.

43-02-03-28 (Safety Regulation) "All vegetation must be removed to a safe distance from any production equipment to eliminate a fire hazard."

43-02-03-49 (Oil Spills, Production Equipment, Dikes and Seals). "Dikes must be constructed of sufficiently impermeable material to provide emergency containment and of sufficient dimension to contain the total capacity of the largest tank plus one day's fluid production."

"At no time shall oil be allowed to flow over or pool on the surface of the land or infiltrate the soil."

Please make certain all of your other sites are also in compliance. If there are any questions, please feel free to contact the Williston office at (701) 774-4380.

Sincerely,

Jennifer Staub
Jennifer Staub
Field Inspector

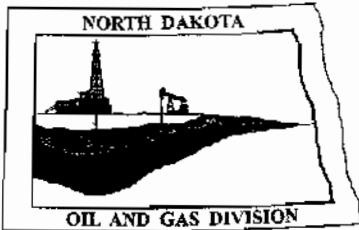
JMS/kl

Mr. Mike Mungas

May 9, 2007

Attachment

File No	Well Name	Date Insp	Inspection Notes
5856	STATE 1-36	02-Apr-07	Increase dikes.
9102	CHURCH 1-2	03-Apr-07	Increase dikes.
9909	BOWLINE 21-7	09-Apr-07	Increase dikes.
10089	ECKERT 2-5HR	22-Mar-07	Increase dikes.
10560	FEDERAL 20-14	04-Apr-07	Increase dikes.
10812	ECKERT 4-5	22-Mar-07	Increase dikes where low.
11130	FLYNN 1	02-Apr-07	Increase dikes.
11151	LINDVIG 1-4	22-Mar-07	Increase dikes.
11214	NORTH BRANCH 22-35	09-Apr-07	Increase dikes.
11359	PIERRE CREEK 41-7	17-Apr-07	Increase dikes where low.
11536	PIERRE CREEK 43-7 SWD	17-Apr-07	Increase dikes.
11751	M AND G 14-2	22-Mar-07	Remove dead vegetation.
11848	PIERRE CREEK 33-31	17-Apr-07	Increase dikes.
12129	FRENCH-PINNEY 24-3	22-Mar-07	Increase dikes where low. Clean up around well head.
12240	HAY DRAW 33-33	17-Apr-07	Increase dikes.
12249	PIERRE CREEK 21-17	17-Apr-07	Clean up oil around well head.
12384	BULL MOOSE 11-23	21-Mar-07	Increase dikes.
12470	BULL MOOSE 22X-32F	21-Mar-07	Site needs reclamation.
12506	HAY DRAW 32-33	17-Apr-07	Increase dikes.
12550	NORTH BRANCH 22X-35	09-Apr-07	Increase dikes. Clean up oil around wellhead.
12555	NORTH BRANCH 34-42F	09-Apr-07	Clean up oil around well head.
12570	PIERRE CREEK 44-7H	17-Apr-07	Increase dikes.
12705	BICENTENNIAL 33-29H	18-Apr-07	Increase dikes.
12708	BICENTENNIAL 42-31H	18-Apr-07	Increase dikes.
12870	BICENTENNIAL FEDERAL 41-11H	18-Apr-07	Increase dikes.
13487	CINNAMON CREEK 14-9HR	23-Apr-07	Increase dikes.
13547	CINNAMON CREEK STATE 12-8H	23-Apr-07	Clean up oil around well head.
13607	CINNAMON CREEK 11-5H	20-Mar-07	Increase dikes. Keep flare lit. Clean up oil-saturated soil within dike, empty catch bbl if needed. Clean up stained soil from pump jack exhaust.
13639	BICENTENNIAL FEDERAL 23-2H	18-Apr-07	Increase dikes.
14692	FEDERAL 9-5	28-Mar-07	Increase dikes. Remove dead vegetation.
14794	STENSRUD 43-14	17-Apr-07	Clean up oil around well head.
14811	MONDAK FEDERAL 1-33	23-Mar-07	Clean up oil around well head.
15030	FEDERAL 3-28HR	23-Mar-07	Increase dikes where low. Clean up oil around well head.
15192	NORTH BRANCH 7-35	09-Apr-07	Increase dikes. Correct permit number on sign.
15358	LEWIS AND CLARK 2-4H	22-Mar-07	Increase dikes. Remove dead vegetation.
90095	MOORE FEDERAL 3-28 SWD	19-Mar-07	Clean up small chemical spill near well head.



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

15358

April 19, 2007

Ms. Maggi Vogl
Nance Petroleum Corporation
P.O. Box 7168, Suite 500
Billings, MT 59101

**RE: Lewis and Clark #2-4H
SENE Sec. 4, T.153N., R.101W.
McKenzie County, North Dakota
Baker Field
Well File No. 15358
STRIPPER WELL DETERMINATION**

Dear Ms. Vogl:

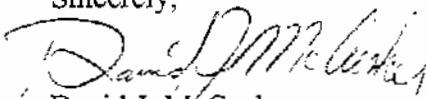
Nance Petroleum Corporation (Nance) filed with the North Dakota Industrial Commission – Oil and Gas Division (Commission) on March 26, 2007 an application for a Stripper Well Property Determination for the above captioned well.

Information contained in the application indicates that the above mentioned well is a property pursuant to statute and rule, and Nance has elected to designate said well as a separate property for stripper well purposes. The well produced from a well depth greater than 10000 feet. During the qualifying period, January 1, 2006 through December 31, 2006 the well produced at a maximum efficient rate and the average daily production from the well was 29.9 barrels of oil per day during this period.

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

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



**Nance Petroleum Corporation
Spill Prevention Measures for Pipelines**

File Number: 15358 Lewis & Clark 2-4H

Schematic on a map showing the location and route of the pipelines:

See attached Site Diagram, indicating the location of the pipelines. At this facility, the "pipelines" are buried flowlines which connect the wellhead to the production facilities (heater treater and storage tanks). All flowlines are located within the boundaries of the well pad. The entire well pad is surrounded by a large dike, and the treater and storage tanks are surrounded by their own dike (see "Dikes and their capacities").

Pipeline Information:

Flow line – (Buried) 3" steel welded fusion bond coated (Schedule 80)
WP – 5,520 psi

Oil Fill line – (Buried) 3" SDR 11 poly
WP – 160 psi

Salt water fill line – (Buried) 3" SDR 11 poly
WP – 160 psi

Recycle line – (Buried) 3" SDR 11 poly
WP – 160 psi

Age: 3 years (completed 6/6/03)

Monitoring Systems installed: None

Surveillance Programs in place: None

Inspection and Maintenance Programs in place:

This is a single wellsite facility. Oil and produced water flow from the well, into and out of pressure vessels and to bulk storage by interconnecting piping. The piping may be either above or below ground, but does not extend past the outer boundaries of the wellsite. Production operations personnel perform routine operational (visual) examinations on above ground interconnecting piping for indication of leaks, abnormalities, or equipment malfunctions during their daily visit to the facility. Below ground flowlines are walked and a visual examination is performed for indications of a leak if a production shortage shows the need. Records of daily checks are recorded on gauge sheets. Periodic, comprehensive flowline inspections are performed by Nance Petroleum personnel and recorded on a well inspection report. These records are maintained at the Nance Petroleum Williston, ND and Billings, MT offices.

**Nance Petroleum Corporation
Spill Prevention Measures for Pipelines**

File Number: 15358 Lewis & Clark 2-4H - continued

Integrity Test Results: None

Dikes and their capacities:

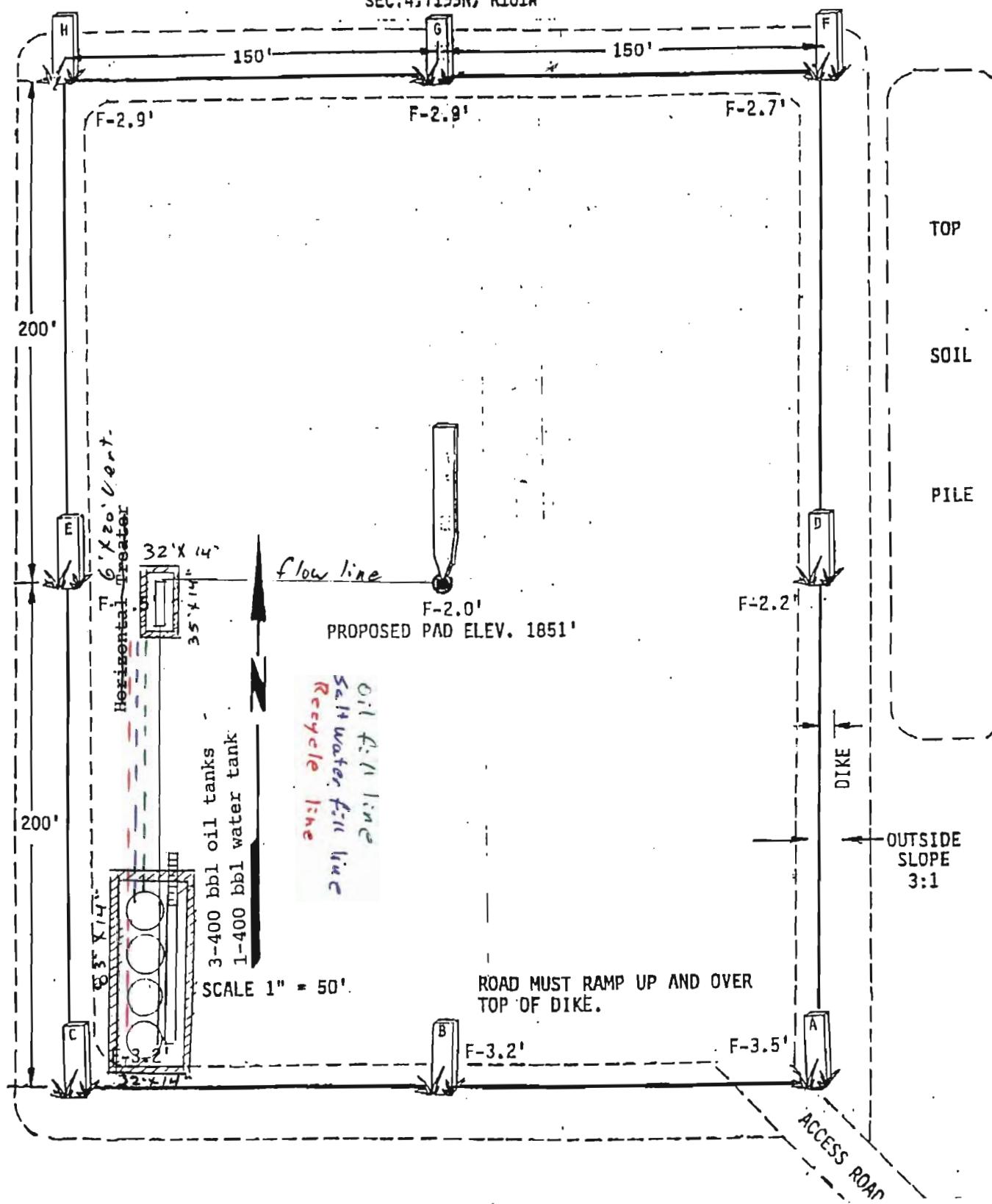
Tank battery dike capacity: 552 barrels

Treater dike capacity: 233 barrels

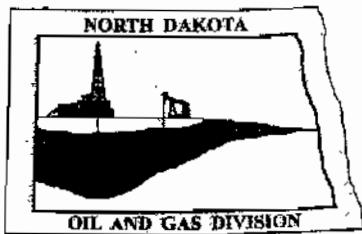
Location dike capacity: 170,970 barrels (based on 400' x 300' x 8')

PAD PLAN VIEW

LEWIS & CLARK #2-4
3028' FSL & 332' FEL
SEC. 4, T.153N, R101W



Zinke & Trumbo, Inc.
Lewis & Clark #2-4
3028' FSL & 332' FEL
Sec. 4, T.153N, R101W
Exhibit G: Production
Equipment Layout



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

15358

July 25, 2006

Mr. Mike Mungas
Nance Petroleum Corp.
PO Box 7168
Billings, MT 59103-7168

RE: Spill Prevention Measures for Pipelines (See Attachment)

Dear Mr. Mungas:

The NDIC Oil and Gas Division is requesting information on spill prevention measures in place for the above referenced facilities. Please provide us with the following:

A schematic on a map showing the location and route of the pipelines.

Information available about the pipelines such as construction material, size, operating pressure rating and age of the pipelines.

A description of any monitoring systems installed, surveillance programs, and inspection and maintenance programs in place.

Results of any integrity tests done on the pipelines.

Dikes and their capacities.

Please contact Mark Bohrer or Glenn Wollan at (701) 328-8020 in our Bismarck office if you have questions.

Sincerely,

John Axtman
John Axtman
Williston District Supervisor

JSA/kl

ATTACHMENT
July 25, 2006

SPILL POTENTIAL WELLS OR FACILITIES

FILE NO.

9102	CHURCH	1-2
9362	BURNING MINE BUTTE	9-21
9481	LINDECKER	1-35-4A
11130	FLYNN	1
11214	NORTH BRANCH	22-35
11549	ROSEBUD	22-11
11745	BASIC GAME AND FISH	34-3
11751	M AND G	14-2
11920	CORPS OF ENGINEERS	31-10
12129	FRENCH-PINNEY	24-3
12566	ELLETSON	33-1
13373	PIERRE CREEK NELSON	44-23HR
13556	CHURCH	1-2X
13681	BRESE	22-32HR
13771	DANIELSON	32-32
14046	PIERRE CREEK NELSON	42-23
14794	STENSRUD	43-14
15344	REHAB	4-33
15358	LEWIS AND CLARK	2-4H
90095	MOORE FEDERAL	3-28 SWD

AUTHORIZATION TO PURCHASE AND TRANSPORT OIL FROM LEASE - FORM 8

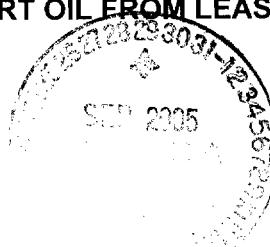
INDUSTRIAL COMMISSION OF NORTH DAKOTA

OIL AND GAS DIVISION

600 EAST BOULEVARD DEPT 405

BISMARCK, ND 58505-0840

SFN 5698 (03-2000)



Well File No.

15358

NDIC CTB No.

115358

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND FOUR COPIES.

Well Name and Number LEWIS & CLARK 2-4H	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County MCKENZIE
Operator NANCE PETROLEUM CORPORATION	Telephone # 406-245-6248		Field BAKER		
Address P O BOX 7168	City BILLINGS		State MT	Zip Code 59103-7168	

Name of First Purchaser Nexen Marketing USA Inc	Telephone # 303-850-4284	% Purchased 100	Date Effective October 1, 2005
Principal Place of Business 5660 Greenwood Plaza Blvd., #230	City Greenwood Village	State CO	Zip Code 80111
Field Address PO Box 567	City Plentywood	State MT	Zip Code 59254
Name of Transporter Diamond B Trucking Inc. (TR)	Telephone Number 701-245-6423	% Transported 100	Date Effective October 1, 2005
Address PO Box 445	City Westhope	State ND	Zip Code 58793
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 CHANGE OF PURCHASER EFFECTIVE 10/1/2005		

I hereby swear or affirm that the information herein provided is true, complete and correct as determined from all available records.	Date October 5, 2005
---	--------------------------------

Signature <i>Amanda Rambur</i>	Printed Name Amanda Rambur	Title Marketing Representative
-----------------------------------	--------------------------------------	--

Above Signature Witnessed By	Witness Signature <i>Terry Holzwarth</i>	Witness Printed Name Terry Holzwarth	Witness Title VP - Business Development
------------------------------	---	--	---

FOR STATE USE ONLY	
Date Approved <i>10-5-05</i>	By <i>Amanda Rambur</i>
Title <i>Oil & Gas Production Analyst</i>	

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.	15358
NDIC CTB No.	115358

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

Well Name and Number LEWIS & CLARK 2-4H	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County MCKENZIE
Operator NANCE PETROLEUM CORPORATION	Telephone # 406-245-6248		Field BAKER		
Address P O BOX 7168	City BILLINGS		State MT	Zip Code 59103-7168	

Name of First Purchaser Eighty-Eight Oil LLC	Telephone # 307-266-0264	% Purchased 100	Date Effective April 1, 2005
Principal Place of Business P O Drawer 2360	City Casper	State WY	Zip Code 82602
Field Address P O Drawer 2360	City Casper	State WY	Zip Code 82602
Name of Transporter Black Hills Trucking	Telephone Number 307-266-0264	% Transported 100	Date Effective April 1, 2005
Address P.O. Drawer 2360	City Casper	State WY	Zip Code 82602
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	0	

I hereby swear or affirm that the information herein provided is true, complete and correct as determined from all available records.	Date March 30, 2005
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Signature <i>Amanda Rambur</i>	Printed Name Amanda Rambur	Title Marketing Representative
-----------------------------------	--------------------------------------	--

Above Signature Witnessed By	Witness Signature <i>Terry Holzwarth</i>	Witness Printed Name Terry Holzwarth	Witness Title VP - Business Development
------------------------------	---	--	---

FOR STATE USE ONLY	
Date Approved By Title	<i>4-6-05</i> <i>Amanda Rambur</i> <i>Oil + Gas Production Analyst</i>

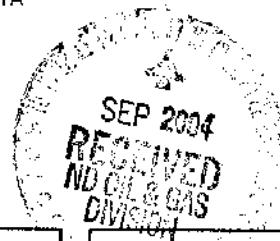


SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 5749 (07-2000)

Well File No.

15358



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

<input type="checkbox"/> Notice of Intent	Approximate Start Date	<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input checked="" type="checkbox"/> Report of Work Done	Date Work Completed May 4, 2004	<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date	<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
		<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
		<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
		<input type="checkbox"/> Temporarily Abandon	<input checked="" type="checkbox"/> Reclamation
		<input type="checkbox"/> Other	

Well Name and Number

LEWIS AND CLARK 2-4

Footages	Qtr-Qtr	Section	Township	Range
2094 F N L	332 F E L	SENE	4	153 N 101 W
Field BAKER	Pool MADISON		County McKENZIE	

24-HOUR PRODUCTION RATE

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

Name of Contractor(s)

D.L. Barkie Construction

Address 3708 2nd Avenue E	City Williston	State ND	Zip Code 58801

DETAILS OF WORK

Nance Petroleum Corporation reclaimed and covered the cuttings catch / drain pit as follows:

Drill cuttings were removed and hauled to Dishon Disposal. Pit was then backfilled on top of the location-wide liner, leveled and contoured.

Pit reclamation work was done on May 4, 2004.

Company NANCE PETROLEUM CORPORATION	Telephone Number 406-245-6248	
Address P.O. BOX 7168		
City BILLINGS	State MT	Zip Code 59103-7168
Signature <i>Mike Mungas</i>	Printed Name Mike Mungas	
Title Regulatory and Safety Engineer	Date September 10, 2004	

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <i>9-21-04</i>	
By <i>Glen T. Miller</i>	
Title Field Supervisor	



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 (07-2000)

Well File No.

15358



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

<input type="checkbox"/> Notice of Intent	Approximate Start Date
<input type="checkbox"/> Report of Work Done	Date Work Completed
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date

<input type="checkbox"/> Drilling Program	<input type="checkbox"/> Spill Report
<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
<input checked="" type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
<input checked="" type="checkbox"/> Other reporting previous IP data	

Well Name and Number Lewis & Clark 2-4H				
Footages 2094 F N L	332 F E L	Qtr-Qtr se ne	Section 4	Township 153 N
Range 101 W				
Field Baker	Pool Madison		County 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
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DETAILS OF WORK

The purpose of this sundry is to report IP data that was not previously reported. Nance Petroleum reports all IP data as the first ten-day average after all load water has been recovered.

With the first lateral still below an RBP, the second lateral leg was put on production on November 15, 2003. All load water was recovered before putting the well on production. The ten-day average on November 24, 2003 was 8 bopd, 35 bwpd, 0 mcfpd.

The second leg was later acidized and produced alone until February 20, 2004. Production data from after the acid frac was previously reported.

The two lateral legs were commingled on February 20, 2004. The ten-day average on March 4, 2004 was 211 bopd, 175 bwpd, 81 mcfpd.

Company NANCE PETROLEUM CORPORATION	Telephone Number 406-245-6248
Address P.O. BOX 7168	
City BILLINGS	State MT
Signature 	Printed Name John Steele
Title Operations Engineer	Date May 26, 2004

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date 4-1-04	
By 	
Title GLENN L. WOLLAN	

Field Supervisor

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)

MAR 2004

DIVISION

Well File No.

15358

NDIC CTB No.

115358

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

Well Name and Number LEWIS & CLARK 2-4H	Qtr-Qtr SENE 4	Section 153 N	Township 101 W	Range MCKENZIE
Operator NANCE PETROLEUM CORPORATION	Telephone # 406-245-6248 Field BAKER			
Address P O BOX 7168	City BILLINGS		State MT	Zip Code 59103-7168

Name of First Purchaser Tesoro Refining & Marketing Company	Telephone # 403-699-4059	% Purchased 100	Date Effective April 1, 2004
Principal Place of Business 1225 17th St., Ste. 1800	City Denver	State CO	Zip Code 80202
Field Address HC 56 Box 605 1A	City Sidney	State MT	Zip Code 59270
Name of Transporter Tesoro Refining & Marketing Company (TR)	Telephone Number 720-258-0611	% Transported 100	Date Effective April 1, 2004
Address 1225 17th St., Ste 1800	City Denver	State CO	Zip Code 80202
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	0	

I hereby swear or affirm that the information herein provided is true, complete and correct as determined from all available records.	Date March 24, 2004	
Signature <i>Amanda Rambur</i>	Printed Name Amanda Rambur	Title Marketing Representative

Above Signature Witnessed By

Witness Signature <i>Terry Holzwarth</i>	Witness Printed Name Terry Holzwarth	Witness Title VP - Acquisitions
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FOR STATE USE ONLY

Date Approved 3/31/04
By <i>Annette Fong</i>
Title Oil + Gas Lead Analyst



SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 5749 (07-2000)



Well File No.
15358

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.
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<input type="checkbox"/> Notice of Intent	Approximate Start Date	<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input checked="" type="checkbox"/> Report of Work Done	Date Work Completed February 20, 2004	<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date	<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
		<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
		<input checked="" type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
		<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
		<input checked="" type="checkbox"/> Other <u>pull RBP, commingle laterals</u>	

Well Name and Number

Lewis & Clark 2-4H

Footage	2094 F N L	Qtr-Qtr se ne	Section 4	Township 153 N	Range 101 W
Field	Baker	Pool Madison		County McKenzie	

24-HOUR PRODUCTION RATE

	Before	After
Oil	15 Bbls	Oil
Water	65 Bbls	Water
Gas	MCF	Gas

Name of Contractor(s)

Rig: Key Tools: Baker

Address	City Williston	State ND	Zip Code
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DETAILS OF WORK

MIRU service rig 2/18/04. POOH w/ pump and rods, POOH w/ tubing. TIH w/ retrieving head on tubing, retrieved RBP above west lateral at 8983'. POOH w/ RBP on tubing. TIH w/ tubing for production, set AC 8546', SN 8508', EOT 8581'. Ran 2" RHBM pump and rods. Returned well to production 2/20/04, both east and west laterals together. RDMO service rig 2/23/04. See attached wellbore schematic.

Company NANCE PETROLEUM CORPORATION	Telephone Number 406-245-6248	
Address P.O. BOX 7168		
City BILLINGS	State MT	Zip Code 59103-7168
Signature 	Printed Name John Steele	
Title Operations Engineer	Date February 23, 2004	

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date 3-01-04	
By JRC	
Title Sr. Pet. Eng.	

NANCE PETROLEUM CORPORATION

WELL:	LEWIS & CLARK 2-4H	FIELD:	BAKER
LOCATION:	SENE Sec 4 T153N R101W 2094' FNL & 332' FEL, SEC 4 T153N R101W CSG POINT 9224' MD, 9085' TVD: 1846' FNL & 371' FEL of SEC 4, T153N R101W END OF NW LATERAL 1, 11805' MD, 9161' TVD: 863' FNL & 2042' FEL OF SEC 4 END OF NW SIDETRACK 1, 13755' MD, 9136' TVD: 744' FNL & 1117' FEL OF SEC 4 END OF NE LATERAL 1, 9803' MD, 9138' TVD: 1392' FNL & 26' FEL OF SEC 4 END OF NE SIDETRACK 1, 12797' MD, 9154' TVD: 1524' FNL & 2783' FWL OF SEC 3		

3008'

10 3/4"

4910'

TOC

ACCTG CODE:	61180	STATUS:	Pumping oil producer
ELEVATION:	KB - 1872' GL - 1651' (21' KB)	STATE FILE NO. 15358	
SPUD DATE:	3/13/03	COMP DATE:	6/6/03
ROTARY TD:	HORIZONTAL LATERAL 13755' MD, 19138' TVD		
SURF CSG:	10 3/4" 40.54 J-55 SET @ 3008'. CMT W/ 610 SX MIDCON II & 200 SX PREM PLUS		
PROD CSG:	7" & 7 5/8" 29, 32 & 47.1 #/FT SET @ 9224' MD, 9096' TVD. CMT IN ONE STAGE, W/ 290 SX PREM LITE, THEN 500SX PREM CASING SHOE IS AT 67 DEGREES.		

<u>TUBING & BHA</u>	<u>RODS & PUMP</u>
268 ft 2 7/8" L-80 tubing	1 1/2" x 30' polish rod
SS MSN w/ 1 1/4" x 30' diptube - 8508'	1" x 6'8" pony rods (14')
6' perforated sub	130 - 1" Norris 97 rods (3250')
1 jt 2 7/8" L-80 tubing	108 - 7/8" Norris 97 rods (2700')
7" Basin TAC w/ TC slips - 8549'	75 - 3/4" Norris 97 rods (1875')
1 jt 2 7/8" L-80 tubing	23 - 1" scriprd D rods (675')
bull plug - EOT 8581'	2 1/2" x 2" x 30' x 30.5' RHBM pump w/ brs ncrb bbl, TC B&S, mpp

8508'

SN

216" SL - 6.8 SPM	7" & 7 5/8"	Depth	
	ID 6.278", Drift 6.151" 26# HCL-80,LTC	0-8517'	
	ID 6.094", Drift 6.00" 32# HCL-80,LTC	8517-7130'	
	26# HCL-80,LTC	7130-8118'	
SALT	DEPTH	ID 6.375", Drift 6.25" 7 5/8" 47.1# Q-125,LTC	8119-8957'
DUNHAM	6628'	26# HCL-80,LTC	8957-8998'
PINE	6986' - 7036'	BAKER SLOPE NIPPLE	8999'-9008'
CHARLES	6252' - 8921'	26# HCL-80,LTC	9006-9224'

8549'

AC

WELLHEAD:	CSGHD CIW 11" 3M X 10 3/4" SOW.
PUMP UNIT:	Lufkin M1280-427-216 w/ Ajax DP-115 engine w/ 33" PU and 22" engine sheave.

8575'

KOP (BUILD RATE 10 TO 19 DEG/100')

8581'

EOT

HORIZONTAL LATERALS ARE IN THE NESSION FORMATION

Window 8966-8974'

4 3/4" open hole

Side-track 1 - Begin 9193', TD 12797'

9193'

NORTHEAST LATERAL

RBP 8963'

Lateral not in zone - TD 9803'

7" & 7 5/8" CSG @ 9224' MD, 9085' TVD (IN MIDALE) SET @ 67 DEG.

Open hole bit size: 6"

HORIZONTAL SIDETRACK 1 BEGIN 10350', END 13755' MD, 9136' TVD

NORTHWEST LATERAL

9375' MD, FIRST PENETRATION OF NESSION

HORIZONTAL LATERAL 1 END 11805' MD, 9161' TVD

5821' OF OPEN HOLE LATERAL

PREPARED BY: GARY L. EVERTZ
Updated by: John Steele

DATE: 02/20/04
LEWIS & CLARK 2-4H.XLS

8999'-9006'
SLOPE NIPPLE
(unusable)

9224'



SUNDRY NOTICES AND REPORTS ON WELLS

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 5749 (07-2000)



Well File No.
15358

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.
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<input type="checkbox"/> Notice of Intent	Approximate Start Date	<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input checked="" type="checkbox"/> Report of Work Done	Date Work Completed February 4, 2004	<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date	<input type="checkbox"/> Casing or Liner	<input checked="" type="checkbox"/> Acidizing
		<input type="checkbox"/> Plug Well	<input checked="" type="checkbox"/> Fracture Treatment
		<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
		<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
		<input type="checkbox"/> Other	

Well Name and Number
Lewis & Clark 2-4H

Footages 2094 F N L	Qtr-Qtr 332 F E L	Section se ne	Township 4	Range 153 N	101 W
Field Baker	Pool Madison		County McKenzie		

24-HOUR PRODUCTION RATE

	Before	After
Oil	8 Bbls	Oil 27 Bbls
Water	35 Bbls	Water 120 Bbls
Gas	MCF	Gas MCF

Name of Contractor(s)

Rig: Key Tools: Baker Acid: Halliburton

Address	City Williston	State ND	Zip Code
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DETAILS OF WORK

MIRU service rig 1/13/04. POOH w/ pump and rods, POOH w/ tubing. TIH w/ tubing to 11794', POOH. TIH w/ cup-type packer on tubing, placed packer 11514', EOT 11545'. Acidized lower end of east lateral w/ 12000 gal 15% HCl and 12000 gal gelled water, flushed w/ 7400 gal fresh water, 14 bpm, 3900 psi. Pulled tubing out of lateral, left EOT 8970' in 7" casing. Swabbed 7 days, 20 bph, 10% oil. POOH w/ tubing. TIH w/ tubing for production, set AC 8546', SN 8508', EOT 8581'. Ran 2" RHBM pump and rods. Returned well to production 2/4/04, east lateral only. RDMO service rig 2/4/04. See attached wellbore schematic.

Company NANCE PETROLEUM CORPORATION	Telephone Number 406-245-6248	
Address P.O. BOX 7168		
City BILLINGS	State MT	Zip Code 59103-7168
Signature 	Printed Name John Steele	
Title Operations Engineer	Date February 11, 2004	

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date 2-18-04	
By JRL	
Title Sr. Petro. Eng.	

NANCE PETROLEUM CORPORATION

WELL:

LEWIS & CLARK 2-4H

FIELD:

BAKER

3008'

10 3/4"

LOCATION: SENE Sec 4 T153N R101W
 2094' FNL & 332' FEL, SEC 4 T153N R101W
 CSG POINT 9224' MD, 9085' TVD: 1845' FNL & 371' FEL of SEC 4, T153N R101W
 END OF NW LATERAL 1, 11605' MD, 9161' TVD: 863' FNL & 2042' FEL OF SEC 4
 END OF NW SIDETRACK 1, 13755' MD, 9138' TVD: 744' FNL & 1117' FEL OF SEC 4
 END OF NE LATERAL 1, 9803' MD, 9138' TVD: 1392' FNL & 25' FEL OF SEC 4
 END OF NE SIDETRACK 1, 12797' MD, 9154' TVD: 1524' FNL & 2783' FWL OF SEC 3

4910'

TOC

ACCTG CODE: 61180 STATUS: Pumping oil producer

ELEVATION: KB - 1872' GL - 1851' (21' KB) STATE FILE NO. 15358

SPUD DATE: 3/13/03 COMP DATE: 6/6/03

ROTARY TD: HORIZONTAL LATERAL 13755' MD, 9136' TVD

SURF CSG: 10 3/4" 40.5# J-55 SET @ 3008'. CMT W/ 610 SX MIDCON II & 200 SX PREM PLUS

PROD CSG: 7" & 7 5/8" 29, 32 & 47.1 #/FT SET @ 9224' MD, 9085' TVD.
 CMT IN ONE STAGE, W/ 290 SX PREM LITE, THEN 500SX PREM
 CASING SHOE IS AT 67 DEGREES.

TUBING & BHA

268 ft 2 7/8" L-80 tubing 1 1/2" x 30' polish rod
 88 MSN w/ 1 1/4" x 30' diptube - 8508' 1" x 8', 8' pony rods (14")
 6' perforated sub 130 - 1" Norris 97 rods (3250')
 1 ft 2 7/8" L-80 tubing 108 - 7/8" Norris 97 rods (2700')
 7" Basin TAC w/ TC slips - 8549' 75 - 3 1/4" Norris 97 rods (1875')
 1 ft 2 7/8" L-80 tubing 23 - 1" scriprd D rods (575')
 bull plug - EOT 8581' 2 1/2" x 2" x 30' x 30.5" RHBM pump
 w/ brs ncrl bbl, TC B&S, mpp

RODS & PUMP

8508'

SN

216" SL - 6.8 SPM

		Z" & 7 5/8"	
SALI	DEPTH	ID 6.278", Drift 6.151" 26# HCL-80,LTC	Depth
DUNHAM	6628'	ID 6.094", Drift 6.00" 32# HCL-80,LTC	0-6517'
PINE	6988' - 7036'	26# HCL-80,LTC	6517-7130'
CHARLES	8252' - 8921'	BAKER SLOPE NIPPLE	7130-8119'
		26# HCL-80,LTC	8119-8957'
			8957-8999'
			8999-9006'
			9006-9224'

8549'

AC

WELLHEAD: CSGHD CIW 11" 3M X 10 3/4" SOW.

PUMP UNIT: Lufkin M1280-427-216 w/ Ajax DP-115 engine
 w/ 33" PU and 22" engine sheave.

8575'

KOP (BUILD RATE 10 TO 19 DEG/100')

8581'

EOT

HORIZONTAL LATERALS ARE IN THE NESSON FORMATION

Window 8966-8974'

Sidetrack 1 - Begin 9193', TD 12797'

NORTHEAST LATERAL

4 3/4" open hole

9193'

Lateral not in zone - TD 9803'

RBP 8983'

7" & 7 5/8" CSG @ 9224' MD, 9085' TVD (IN MIDALE) SET @ 67 DEG.

8999-9006'
 SLOPE NIPPLE
 (unusable)

9224'

Open hole bit size: 6"

HORIZONTAL SIDETRACK 1 BEGIN 10350', END 13755' MD, 9136' TVD

NORTHWEST LATERAL

9375' MD, FIRST PENETRATION OF NESSION

HORIZONTAL LATERAL 1 END 11605' MD, 9161' TVD

5821' OF OPEN HOLE LATERAL

PREPARED BY: GARY L. EVERTZ
 Updated by: John SteeleDATE: 02/04/04
 LEWIS & CLARK 2-4H.XLS

North Dakota Industrial Commission Spill Report

Well File No.

15358

Operator Nance Petroleum Corporation								Telephone Number (406) 245-8248			
Address P.O. Box 7168								City Billings	State MT	Zip Code 59103-7168	
Well Name and Number or Facility Name Lewis and Clark 2-4H								Field Baker			
Location of Well or Facility	Footages 3028 F S L	Qtr-Qtr 332 F E L	Section SENE 4	Township 153 N	Range 101 W	County McKenzie					
Description of Spill Location if not on Well or Facility Site and/or Distance and Direction from Well On site											
Directions to Site 6.2 mi SE from US 2 & US 85 junction (10 mi. SW of Williston, ND)											
Release Discovered By Mike Iverson		Date Release Discovered January 5, 2004		Time Release Discovered 8 : 30 AM		Date Release Controlled January 5, 2004		Time Release Controlled 8 : 35 AM			
Company Personnel Notified Mike Mungas		How Notified Fax				Date Notified January 12, 2004		Time Notified 5 : 12 PM			
Distance to Nearest Residence or Occupied Building 3 Miles				Distance to Nearest Fresh Water Well 3 Miles				Type of Incident Tank Overflow			
Describe Other Type of Incident											
Piping Specifics (If Applicable)		Size (Decimal Format) "		Type		Location of Piping					
Volume of Release		Oil 6.00 Barrels		Saltwater		Other					
Volume of Release Recovered		Oil 6.00 Barrels		Saltwater		Other 4.00 Barrels					
Description of Other Released Substance				Was Release Contained Within Dike Yes				If No, Was Release Contained on Well Site			
Areal Extent of Release if not Within Dike				Affected Medium Well/Facility Soil				Land Use Well/Facility Site			
Describe Cause of Release or Fire Oil storage tank overflow. Pumper had been gauging wrong storage tank causing actual storage tank that was receiving oil to overflow. Spill was contained within tank dike.											
Action Taken to Control Release and Clean up Action Undertaken Switched valves to stop tank from overflowing. Cleaned up tank exterior and affected area with steam truck and sucked up with vac truck on January 13, 2004. Used 30 bbls FW for cleanup. Recovered total of 40 bbls liquid (including appx. 4 bbls of snowmelt which is listed as "other recovered").											
Potential Environmental Impacts Negligible oil stain on ground inside tank dike.											
Planned Future Action and/or Action Taken to Prevent Reoccurrence Pumper will pay closer attention to valves at the tank battery.											
Where Were Recovered Liquids Disposed LandTech Disposal.					Where Were Recovered Solids Disposed No solids recovered.						
Weather Conditions	Wind Speed 0 MPH	Wind Direction	Temperature -20 ° F	Skies cloudy	Estimated Cleanup Cost \$ 3,500.00			Damage Value \$ 0.00			
Regulatory Agencies/Others Notified NDIC/NDDH		Person Notified Online		Date Notified January 12, 2004	Time Notified 4 : 36 PM		Notified By Lynette Watts				
Surface Owner		Corps, not notified			:						
					:						
					:						
					:						
Report Originator Mike Mungas		Title Regulatory and Safety Engineer		Date January 15, 2004							
Reviewed By		Title		Date							



SUNDRY NOTICES AND REPORTS ON WELLS
 INDUSTRIAL COMMISSION OF NORTH DAKOTA
 OIL AND GAS DIVISION
 600 EAST BOULEVARD DEPT 405
 BISMARCK, ND 58505-0840
 SFN 5749 (07-2000)



Well File No.
15358

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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date January 13, 2004	<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input type="checkbox"/> Report of Work Done	Date Work Completed	<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date	<input type="checkbox"/> Casing or Liner	<input checked="" type="checkbox"/> Acidizing
		<input type="checkbox"/> Plug Well	<input checked="" type="checkbox"/> Fracture Treatment
		<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
		<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
		<input type="checkbox"/> Other	

Well Name and Number
Lewis & Clark 2-4H

Footages	Qtr-Qtr	Section	Township	Range
2094 F N L	332 F E L	se ne	4	153 N
Field	Pool		County	
Baker	Madison		McKenzie	

24-HOUR PRODUCTION RATE

	Before	After
Oil	8 Bbls	Oil
Water	35 Bbls	Water
Gas	MCF	Gas

Name of Contractor(s)
To be determined

Address	City	State	Zip Code
	Williston	ND	

DETAILS OF WORK

Nance proposes to acid frac the east lateral in this well. See attached procedure and wellbore schematic.

Company NANCE PETROLEUM CORPORATION	Telephone Number 406-245-6248	
Address P.O. BOX 7168		
City BILLINGS	State MT	Zip Code 59103-7168
Signature 	Printed Name John Steele	
Title Operations Engineer	Date January 14, 2004	

FOR STATE USE ONLY

<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date	1-20-04
By	
Title	Sr. Petrol. Engr.

NANCE PETROLEUM CORPORATION

Lewis & Clark 2-4H
Sec 4 - T153N - R101W
Baker Field - McKenzie County, ND
GL - 1851' KB - 1872' (21' kb)
Accounting Code # 61180

ACIDIZING PROCEDURE

AFE # 1034

Current Condition

Producing from east lateral leg in Nesson, from window at 8966' to 12797' TD. Current production is 8 bopd, 38 bwpd. There is an RBP below the window at 8983', isolating the west lateral.

Purpose

Stimulate east lateral below 11200' with acid frac treatment. Swab to clean up and evaluate. Return well to production. Swab results will determine which legs will be put on production.

Proposed Procedure

1. MIRU service rig. POOH with pump and rods. ND wellhead, NU BOPE. POOH with tubing.
2. TIH with inline shod joint of bent tubing on bottom of 2 7/8" tubing string. TIH and tag end of east lateral. POOH.
3. TIH with inflatable packer on tubing, with bent joint below packer. Hydrotest in hole to 7000 psi, below slips. Set inflatable at 11200'. Swab to test fluid entry.
4. Pump acid frac treatment through tubing. Pump treatment at 5-6 bpm with anticipated wellhead treating pressure of 6000 psi. Pump treatment as follows.
 - 1) 2000 gal 15% HCl
 - 2) 5000 gal treated fresh water
 - 3) 4000 gal gelled 15% HCl with 2 lb/gal rock salt in last 1000 gal
 - 4) 500 gal 15% HCl (not gelled) with 0.5 lb/gal fine salt
 - Note: All remaining acid stages should contain 0.5 lb/gal fine salt
 - 5) 4000 gal gelled 15% HCl with 2 lb/gal rock salt in last 1000 gal
 - 6) 500 gal 15% HCl (not gelled)
 - 7) 4000 gal gelled 15% HCl with 2 lb/gal rock salt in last 1000 gal
 - 8) 500 gal 15% HCl (not gelled)
 - 9) 4000 gal gelled 15% HCl with 2 lb/gal rock salt in last 1000 gal
 - 10) 500 gal 15% HCl (not gelled)
 - 11) 5000 gal treated fresh water overflush
 - 12) 4200 gal treated fresh water flush (flush to end of lateral)

Total volumes:	16,000 gal gelled 15% HCl
	4,000 gal 15% HCl (not gelled)
	14,200 gal treated fresh water
	8,000 lb rock salt
	7,000 lb fine salt

Note: All acid should contain non-emulsifier, iron control for sour conditions (4000 ppm H₂S), and corrosion inhibitor for 230° F. Gelled acid should contain 20 gal/M SGA-HT gelling agent.

5. Swab to clean up and evaluate. POOH with inflatable packer. Return well to production, based on swab results.

NANCE PETROLEUM CORPORATION

WELL:	LEWIS & CLARK 2-4H	FIELD:	BAKER		
3008'	10 3/4"	LOCATION:	SENE Sec 4 T153N R101W 2094' FNL & 332' FEL, SEC 4 T153N R101W CSG POINT 9224' MD, 9085' TVD: 1845' FNL & 371' FEL of SEC 4, T153N R101W END OF NW LATERAL 1, 11605' MD, 9161' TVD: 863' FNL & 2042' FEL OF SEC 4 END OF NW SIDETRACK 1, 13755' MD, 9136' TVD: 744' FNL & 1117' FEL OF SEC 4 END OF NE LATERAL 1, 9803' MD, 9138' TVD: 1392' FNL & 25' FEL OF SEC 4 END OF NE SIDETRACK 1, 12797' MD, 9154' TVD: 1524' FNL & 2783' FWL OF SEC 3		

4910'	TOC	ACCTG CODE: 61180	STATUS: Pumping oil producer
		ELEVATION: KB - 1872' GL - 1851' (21' KB)	STATE FILE NO. 15358
		SPUD DATE: 3/13/03	COMP DATE: 6/6/03
		ROTARY TD: HORIZONTAL LATERAL 13755' MD, 19138' TVD	
		SURF CSG: 10 3/4" 40.5# J-55 SET @ 3008'. CMT W/ 610 SX MIDCON II & 200 SX PREM PLUS	
		PROD CSG: 7" & 7 5/8" 29, 32 & 47.1 #FT SET @ 9224' MD, 9096' TVD. CMT IN ONE STAGE, W/ 290 SX PREM LITE, THEN 500SX PREM CASING SHOE IS AT 67 DEGREES.	

TUBING & BHA	RODS & PUMP
269 jt 2 7/8" L-80 tubing	1 1/2" x 30' polish rod
MSN w/ 1 1/4" x 30' diptube - 8505'	1" x 6', 8' pony rods (14')
6' perforated sub	130 - 1" Norris 97 rods (3250')
1 jt 2 7/8" L-80 tubing	108 - 7/8" Norris 97 rods (2700')
7" Basin TAC w/ TC slips - 8543'	75 - 3/4" Norris 97 rods (1875')
1 jt 2 7/8" L-80 tubing	23 - 1" scrpd D rods (575')
bull plug - EOT 8577'	1" x 1 1/2" x 30' x 30.5' RHBM pump w/ brs nrb bbl, TC B&S, mpp

216" SL - 6.8 SPM	7" & 7 5/8"	Depth
	ID 8.276", Drift 6.151" 26# HCL-80,LTC	0-6517'
	ID 6.094", Drift 6.00" 32# HCL-80,LTC	6517-7130'
	26# HCL-80,LTC	7130-8119'
SALT	DEPTH	
DUNHAM	6626'	8119-8957'
PINE	6986' - 7036'	8957-8999'
CHARLES	8252' - 8921'	8999'-9006'
		9006-9224'
8505'	SN	WELLHEAD: CSGHD CIW 11" 3M X 10 3/4" SOW.
8543'	AC	PUMP UNIT: LuSkin M1280-427-216 w/ Ajax DP-115 engine w/ 33" PU and 22" engine sheave.
8575'		KOP (BUILD RATE 10 TO 19 DEG/100')
8577'	EOT	HORIZONTAL LATERALS ARE IN THE NESSON FORMATION

Window 8966-8974'

Sidetrack 1 - Begin 9193', TD 12797'

NORTHEAST LATERAL

9193'

Lateral not in zone - TD 9803'

RBP 8983'

7" & 7 5/8" CSG @ 9224' MD, 9085' TVD (IN MIDALE) SET @ 67 DEG.

Open hole bit size: 6"

HORIZONTAL SIDETRACK 1 BEGIN 10350', END 13755' MD, 9136' TVD

NORTHWEST LATERAL

9375' MD, FIRST PENETRATION OF NESSON

HORIZONTAL LATERAL 1 END 11605' MD, 9161' TVD

5621' OF OPEN HOLE LATERAL

PREPARED BY: GARY L. EVERETZ
Updated by: John Steele

DATE: 11/12/03
LEWIS & CLARK 2-4H.XLS

8999-9006'
SLOPE NIPPLE
(unusable)

9224'



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 (03-2000)

Well File No.

15358



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

Designate Type of Completion				Well Name and Number		
<input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Recompletion <input type="checkbox"/> SWD Well <input type="checkbox"/> EOR Well <input type="checkbox"/> Deepened Well <input type="checkbox"/> Water Supply Well				LEWIS & CLARK 2-4H Spacing Unit Description N/2 Sec 3, N/2 Sec 4 - T153N-R101W, ICD 9448		
Operator Nance Petroleum Corporation		Telephone Number (406) 245-6248		Field Baker		
Address PO Box 7168				Pool Madison		
City Billings		State MT	Zip Code 59103	Permit Type <input type="checkbox"/> Wildcat	<input checked="" type="checkbox"/> Development	<input type="checkbox"/> Extension

LOCATION OF WELL

At Surface 2094 F N L		Qtr-Qtr se ne	Section 4	Township 153 N	Range 101 W	County McKenzie
At Top Producing Interval, Reported Below 1825 F N L		Qtr-Qtr se ne	Section 4	Township 153 N	Range 101 W	Number of DSTs Run (See Back) none
At Total Depth 1524 F N L		Qtr-Qtr sw ne	Section 3	Township 153 N	Range 101 W	Directional Survey Run? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Spud Date <i>September 17, 2003</i>	Date TD Reached October 18, 2003	Drilling Contractor and Rig Number Key # 439			KB Elevation 1872	Total Depth (Feet) 12797 MD 9154 TVD
Producing Interval(s), This Completion, Top, Bottom, Name (MD and TVD) SECOND LATERAL - CUT WINDOW 8966-8974', DRILLED LATERAL TO 12797' MD					Plug Back TD (Feet) (See Back) MD TVD	
Type of Electric and Other Logs Run (See Instructions) None on this lateral			Was Well Cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes			List Intervals:

CASING RECORD (Report all strings set in well)

Casing Size (Inches)	Measured Depth Set (Feet)	Hole Size (Inches)	Weight (Lbs/Ft)	Sacks Cement	Top of Cement
10 3/4	3008	13 3/4	40.5	810	surface
7	9224	9 7/8	26-32	790	4910 (CBL)
7 5/8			47.1		

LINER RECORD

Liner Size (Inches)	Hole Size (Inches)	Top (MD) (Feet)	Bottom (MD) (Feet)	Sacks Cement	Size (Inches)	Depth Set (MD) (Ft)	Anchor Set (MD) (Ft)	Packer Set (MD) (Ft)
					2 7/8	8577	8543	

TUBING RECORD

Interval (MD)	Holes Per Foot	Potential (Oil/Water)	Acid, Frac, Sqz, Etc.	Amount and Kind of Material Used
No perfs			acidized	14,050 gal 20% HCl in eight stages
Open hole lateral in Nesson (second lateral)				job pumped after drig, with drig rig still on location
				3.3-4.9 bpm, 1420-1890 psi

PERFORATION RECORD

Date of First Production Through Permanent Wellhead	Producing Method (Flowing, Gas Lift, Pumping - Size & Type of Pump)	Well Status (Producing or Shut-In)
June 6, 2003	2 1/4" tubing barrel pump	producing
Date of Test June 26, 2003	Hours Tested 240	Choke Size
		Production for Test
		Oil (Bbls) 2334
		Gas (MCF) 610
		Water (Bbls) 1651
		Oil Gravity - API (Corr.) 38.6 °

Flowing Tubing Pressure (PSI)	Casing Pressure (PSI)	Calculated 24-Hour Rate	Oil (Bbls)	Gas (MCF)	Water (Bbls)	Gas-Oil Ratio
			233	61	165	262

Test Witnessed By
Dan's Production Oil Purchaser
Nexen Marketing Oil Transporter
Diamond B Trucking Disposition of Gas
Bear Paw

orig

GEOLOGICAL MARKERS

PLUG BACK INFORMATION

DRILL STEM TEST DATA, ADDITIONAL INFORMATION, AND/OR LIST OF ATTACHMENTS

This is the second lateral in this well. Difficulties were encountered in entering into the desired zone, so the well was sidetracked.

The initial lateral on this attempt was TD'd as follows:

The initial lateral on this attempt was 1D d as follows:

9803 MD, 9138 TVD, 1392' ENL - 25' FFI see no Section 4-T1E3N 101W

The hole was then sidetracked from 9193' to the TD at 12797'; as reported on the first page of this form.

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

Date
November 21, 2003

Signature

Printed Name

John Steele

Title

Operations Engineer

Above Signature Witnessed By

Above Signature

Wastewater Treatment

— 1 —

Production Assistant

NANCE PETROLEUM CORPORATION

WELL:	LEWIS & CLARK 2-4H	FIELD:	BAKER
LOCATION:	SENE Sec 4 T153N R101W 2094' FNL & 332' FEL, SEC 4 T153N R101W CSG POINT 9224' MD, 9085' TVD: 1845' FNL & 371' FEL of SEC 4, T153N R101W END OF NW LATERAL 1, 11605' MD, 9161' TVD: 863' FNL & 2042' FEL OF SEC 4 END OF NW SIDETRACK 1, 13755' MD, 9136' TVD: 744' FNL & 1117' FEL OF SEC 4 END OF NE LATERAL 1, 9803' MD, 9138' TVD: 1392' FNL & 25' FEL OF SEC 4 END OF NE SIDETRACK 1, 12797' MD, 9154' TVD: 1524' FNL & 2783' FWL OF SEC 3		

3008'	10 3/4"		
4910'	TOC	ACCTG CODE: 61180	STATUS: Pumping oil producer
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		PROD CSG: 7" & 7 5/8" 29, 32 & 47.1 #/FT SET @ 9224' MD, 9096' TVD. CMT IN ONE STAGE, W/ 290 SX PREM LITE, THEN 500SX PREM CASING SHOE IS AT 67 DEGREES.	
		<u>TUBING & BHA</u>	<u>RODS & PUMP</u>
		269 jt 2 7/8" L-80 tubing	1 1/2" x 30' polish rod
		MSN w/ 1 1/4" x 30' diptube - 8505'	1" x 6' 8" pony rods (14')
		6' perforated sub	130 - 1" Norris 97 rods (3250')
		1 jt 2 7/8" L-80 tubing	108 - 7/8" Norris 97 rods (2700')
		7" Basin TAC w/ TC slips - 8543'	75 - 3 1/4" Norris 97 rods (1875')
		1 jt 2 7/8" L-80 tubing	23 - 1" scrprd D rods (575')
		bull plug - EOT 8577'	1" x 1 1/2" x 30' x 30.5' RHBM pump w/ brs ncrb bbl, TC B&S, mpp
		216" SL - 6.8 SPM	7" & 7 5/8"
		ID 6.276", Drift 6.151" 26# HCL-80,LTC	Depth 0-6517'
		ID 6.094", Drift 6.00" 32# HCL-80,LTC	6517-7130'
		26# HCL-80,LTC	7130-8119'
		<u>SALT</u> DEPTH ID 6.375", Drift 6.25" 7 5/8" 47.1# Q-126,LTC	8119-8957'
		DUNHAM 8626' 26# HCL-80,LTC	8957-8999'
		PINE 8988' - 7036' BAKER SLOPE NIPPLE	8999'-9006'
		CHARLES 8252' - 8921' 26# HCL-80,LTC	9006-9224'
8505'	SN	WELLHEAD: CSGHD CIW 11" 3M X 10 3/4" SOW.	
8543'	AC	PUMP UNIT: Lufkin M1280-427-216 w/ Ajax DP-115 engine w/ 33" PU and 22" engine sheave.	
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Window 8966-8974'

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NORTHEAST LATERAL

9193'

Lateral not in zone - TD 9803'

RBP 8983'

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Open hole bit size: 6"

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9375' MD, FIRST PENETRATION OF NESSON

HORIZONTAL LATERAL 1 END 11605" MD, 9161' TVD

5821' OF OPEN HOLE LATERAL

PREPARED BY: GARY L. EVERTZ
Updated by: John Steele

DATE: 11/12/03
LEWIS & CLARK 2-4H.XLS



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 (07-2000)

Well File No.
15358



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

<input type="checkbox"/> Notice of Intent	Approximate Start Date
<input checked="" type="checkbox"/> Report of Work Done	Date Work Completed November 12, 2003
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date

- | | |
|---|---------------------------------|
| <input type="checkbox"/> Drilling Program | Spill Report |
| <input type="checkbox"/> Redrilling or Repair | Shooting |
| <input type="checkbox"/> Casing or Liner | Acidizing |
| <input type="checkbox"/> Plug Well | Fracture Treatment |
| <input type="checkbox"/> Supplemental History | Change Production Method |
| <input type="checkbox"/> Temporarily Abandon | Reclamation |
| <input checked="" type="checkbox"/> Other | <u>completed second lateral</u> |

Well Name and Number

Lewis & Clark 2-4H

Footages	Qtr-Qtr	Section	Township	Range
2094 F N L	332 F E L	se ne	4	153 N 101 W
Field Baker	Pool Madison		County McKenzie	

24-HOUR PRODUCTION RATE

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

Name of Contractor(s)

Drilling: Key Acidizing: Halliburton Completion rig: Key

Address	City Williston	State ND	Zip Code
---------	--------------------------	--------------------	----------

DETAILS OF WORK

As reported on Form 6 Completion Report: Drilled second lateral in Nesson to 12797' MD TD. Acidized with 14,050 gal 20% HCl. Recovered whipstock tool. Set RBP at 6630' via wireline. Released drilling rig 10/25/03.

MIRU completion rig 10/29/03. TIH with tubing, retrieved RBP, POOH. TIH with packer on tubing, set packer 8095'. Swabbed seven days. POOH with packer and tubing. Ran tubing for production, set TAC 8543', SN 8505', EOT 8577'. Ran 1 1/2" pump and rods. RDMO completion rig 11/12/03. Set pumping unit. Starting well on production from second lateral leg on 11/15/03. Note: Well is producing from second lateral only. RBP set at 8983' isolates first lateral. (See attached wellbore schematic).

Company NANCE PETROLEUM CORPORATION	Telephone Number 406-245-6248
Address P.O. BOX 7168	
City BILLINGS	State MT
Signature 	Printed Name John Steele
Title Operations Engineer	Date November 21, 2003

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date 12-3-03	
By 	Title GLENN L. WOLLAN
Field Supervisor	

15358



NANCE PETROLEUM CORPORATION

LEWIS and CLARK 2-4H (Sidetrack-2/3)

SENE SEC.4, T153N, R101W
MCKENZIE COUNTY, NORTH DAKOTA

Wellsite Geologist's Report

Matthew E. Walto, Geologist

P.L.S., Inc.
12301 58th St. NW
Epping, ND 58843
(701) 859-4145

TABLE OF CONTENTS

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PLATE 1 (Plan view plot of the wellbore).....	In Pocket
PLATE 2 (Plot of lateral wellbore along vertical section).....	In Pocket
PLATE 3 (MD, Gamma, Total Gas, Drill Rate Plot).....	In Pocket

WELL DATA

Operator: NANCE PETROLEUM CORP
550 North 31st Street, Suite 500
Billings, MT 59101

Well Name: Lewis and Clark 2-4H (Sidetrack-2/3)

Field: Baker

Surface Location: 2094' FNL, 332' FEL
SENE SEC.4, T153N, R101W

County: McKenzie

State: North Dakota

API Number: 33-053-02556 (original)

Elevations: GL: 1851'
KB: 1872'

Total Depth: 12797' MD (driller)

Spud Date: September 17, 2003

Drilling Completed: October 18, 2003

Hole Size: 9179'-12797': 4.75"

Casing Run: 10.75" set @ 3018'
7" set @ 9224'

Bottom Hole Formation: Open hole completion

Drilling Foreman: Nesson Porosity

Nance Geologist: Mike Roberts

Nance Geologist: Mike Bryant

Well-site Geologist:	Matthew E. Walto; P.L.S., Inc. Paul Jeffcot-Sakko
Logger:	Alan Biwer; P.L.S., Inc.
Drilling Company:	Key Energy Rig #439
Toolpusher:	Eric Leininger
Gas Detection:	P.L.S., Inc.
Drill Stem Tests:	None
Testing Company:	None
Testers:	None
Cores:	None
Drilling Fluid Company:	Anchor Drilling Fluids
Drilling Fluid Engineer:	Wes Erickson
Mud Type:	Fresh Water
Directional Company:	Baker/Hughes/Inteq
Directional Crew:	Bob Johnson, Roland Fuhrer
MWD Company:	Baker/Hughes/Inteq
MWD Crew:	Hampton Ledet, Chris Larson

DAILY CHRONOLOGY

- 9/17/2003 Rigged up Key Rig # 439 on Nance Petroleum Corporation Lewis and Clark 2-4H, Baker Field, McKenzie County, North Dakota.
- 9/18/2003 Drilling hours: 0; Footage: 0'; Depth: 9460'. Set up "closed" mud system. Fabricated choke and gas buster lines. Pressure tested BOP equipment, choke manifold and safety valves. Tested annular. Drilled mousehole. Picked up casing drift tool prior to running close tolerance whipstock tools. Tripped in hole to 6516' KBM, drift tools stopped abruptly. Pulled out of hole and picked up 6.125' drill string and tapered mills to further check close tolerance ID situation. Tripped back in the hole.
- 9/19/2003 Drilling hours: 0; Footage: 0'; Depth: 9460'. Tagged the top of the 7" casing at 6516'. Milled 8' in 1.5 hours. Pumped with no returns. Pulled out of hole due to slow progress. Picked up jetting sub and tripped in the hole to jet cement off SLOPE nipple at 8999'-9006'. Worked jetting sub through slope nipple zone for 45 minutes at 4.5 bpm with no returns. Pulled out of the hole. Picked up Baker Lock-Set packer equipped with bridge plug conversion. Tripped in the hole and set bridge plug at 9119' (bottom)/9110' (top). Pulled out to 8975' and filled the hole. Pumped 6300 gallons and established circulation. Tested plug and tripped out of the hole.
- 9/20/2003 Drilling hours: 0; Footage: 0'. Picked up SLOPE locator tool and MWD equipment. Adjusted and calibrated tools on surface. Tripped in and attempted to latched into SLOPE nipple. Locator would not latch into nipple. Checked depth. Pulled out of hole after repeatedly working tool with no success. Laid down SLOPE BHA.
- 9/21/2003 Drilling hours: 0; Footage: 0'. Laid down SLOPE tools. Picked up packer retrieving tools and tripped into the hole to recover and reset the Baker packer/bridge plug. Moved the packer up hole and reset it at 8983'. Pressure tested the packer and tripped out of the hole. Picked up whipstock milling assembly and tripped back in the hole. Orientated the whipstock using Gyrodata. Set anchor. Pulled out Gyrodata tools. Sheared whipstock bolt and began milling window.
- 9/22/2003 Drilling hours: 0; Footage: 0'. Milled casing window to 8974' and cut open hole to 8977'. Pulled out of the hole due to extreme torque. Inspected and laid down mills. Picked up new mills. Tripped back in the hole and drilled to 8979' and circulated the hole clean.
- 9/23/2003 Drilling hours: 2.5; Footage: 11'; Depth: 8991'. Tripped out and laid down all milling tools. Picked up curve building assembly and all MWD tools. Tripped in the hole and started building the curve.
- 9/24/2003 Drilling hours: 23; Footage: 189'; Depth: 9180'. Drilled and surveyed.
- 9/25/2003 Drilling hours: 2.5; Footage: 20'; Depth: 9200'. Survey data indicated an azimuth increase and an inclination build rate different than expected. Pulled out of the

hole to check MWD and motor assembly. Found no MWD or motor problems but change them out anyway. Tripped back in the hole.

9/26/2003 Drilling hours: 23; Footage: 260'; Depth: 9460'. Drilled and surveyed.

9/27/2003 Drilling hours: 10.5; Footage: 140'; Depth: 9600'. Drilled and surveyed to 9595'. MWD tool failed. Tripped out of the hole and discovered a faulty battery pack. Replaced entire MWD, changed out the bit and tripped back in the hole. Drilled to 9600' at report time (6:00 AM).

9/28/2003 Drilling hours: 24; Footage: 180'; Depth 9780'. Drilled and surveyed. Encountered hard siliceous layer on top of Nesson. Slid down at 180 degrees to try to penetrate hard cap.

9/29/2003 Drilling hours: 6.5; Footage: 5'; Depth 9308'. Drilled to 9802'. Failed to penetrate top of Nesson. Pulled out of hole to enter Nesson at steeper angle. Made up a new bit and tripped back in the hole. Orientated tool and commenced time drilling.

9/30/2003 Drilling hours: 24; Footage: 21'; Depth: 9326'. Time drilled to start new sidetrack. Started time drilling at 9305'. Checked ledge development at 9315'. Ledge would not take weight. Continued time drilling.

10/1/2003 Drilling hours: 24; Footage: 21'; Depth: 9343'. Attempted to drill sidetrack to 9331'. Sidetrack unsuccessful. Tripped out of the hole, changed angle on mud motor to 2.1 degrees and checked MWD. Tripped back in the hole and started sidetrack again at 9336'.

10/2/2003 Drilling hours: 24; Footage: 43'; Depth: 9384'. Time drilled from 9343'-9384'. Sidetrack unsuccessful. Conditioning hole for trip.

10/3/2003 Drilling hours: 2; Footage: 2'; Depth 9195'. Tripped out of the hole. Changed out mud motor. Set motor angle at 3.20 degrees. Tripped in the hole. Orientated tool face and built trough. Drilled sidetrack from 9193'-9195'.

10/4/2003 Drilling hours: 21.5; Footage: 30'; Depth: 9225'. Cut sidetrack from 9193'-9225'. Pumped sweep and tripped out of the hole to change the bottom hole assembly.

10/5/2003 Drilling hours: 11.5; Footage: 107'; Depth 9332'. Change bottom hole assembly from a 3.2 degree mud motor to a 2.1 degree mud motor. Tripped back in the hole. Orientated tool face and built curve. Drilled into the pay zone.

10/6/2003 Drilling hours: 24; Footage: 502'; Depth: 9834'. Drilled and surveyed. No fluid losses.

10/7/2003 Drilling hours: 23; Footage: 383'; Depth 10217'. Drilled and surveyed.

Started turn to the east. No down hole fluid losses during last 24 hours.

10/8/2003 Drilling hours: 2.5; Footage: 54'; Depth: 10271'. Tripped out of the hole for a bit at 10241'. Changed motor angle to 1.5 degrees. Checked the MWD. Drilled ahead to 10271'. MWD quit. Tripped out of the hole.

10/9/2003 Drilling hours: 14; Footage: 219'; Depth: 10490'. Tripped in the hole with bit #8. Drilled and surveyed to 10490'. MWD failed. Tripped out of the hole.

10/10/2003 Drilling hours: 11; Footage: 186'; Depth: 10676'. Changed out mud motor and MWD. Tripped in the hole. Drilled ahead and surveyed. No down hole fluid losses during the last 24 hours.

10/11/2003 Drilling hours: 24; Footage: 384'; Depth: 11060'. Drilled and surveyed from 10676'-11060'. No down hole fluid losses during the last 24 hours.

10/12/2003 Drilling hours: 19.5; Footage: 241'; Depth: 11301'. Drilled and surveyed from 11060'-11301'. Hole angle becoming hard to control. Tripped out of the hole for a bit and BHA check. Down hole fluid loss approximately 40 barrels during last 24 hours.

10/13/2003 Drilling hours: 4.5; Footage: 21; Depth: 11322'. Checked MWD equipment. Tripped back in the hole. Orientated tool and drilled ahead to 11322'. Tool face showed 180 degrees, but check shots calculated out to 45R. Worked pipe, but could not get correct tool face. Tripped out of the hole and replace the MWD.

10/14/2003 Drilling hours: 19; Footage: 88'; Depth: 11410'. Tripped in the hole. Orientated the tool face to 180 degrees and slid from 11318' to 11350'. Drilled and surveyed to 11410'. Down hole fluid loss approximately 60 barrels during last 24 hours.

10/15/2003 Drilling hours: 20; Footage: 215'; Depth: 11625'. Drilled and surveyed. Direction and angle becoming increasingly hard to control. Down hole fluid loss approximately 40 barrels during last 24 hours.

10/16/2003 Drilling hours: 6; Footage: 84'; Depth 11709'. Drilled and surveyed to 11709'. Hole angle and direction difficult to control. Trip out of the hole for a BHA change. Reamed last 12 joints to bottom.

10/17/2003 Drilling hours: 19.5; Footage: 316'; Depth: 12025'. Drilled and surveyed. Down hole fluid loss approximately 30 barrels during the last 24 hours.

10/18/2003 Drilling hours: 24; Footage: 525'; Depth: 12550'. Drilled and surveyed. No down hole water loss during last 24 hours.

10/19/2003 Depth: 12797'. Drilled and surveyed. Reached TD of 12797'. Circulated the hole clean. P.L.S., Inc. released.

FORMATION DATA

Lewis and Clark 2-4H Sidetrack-2/3						KB= 1872			10/23/2003 21:12	
Formation/Zone	Direction	MD	TVD	SUBSEA	INC	AZ	V.S.	N(+)/S(-)	E(+)/W(-)	APP. DIP
Sidetrack-2										
Ratcliffe	Down	9097.5	9043.28	-7171.28	45.477	30.04	-21.47	128.04	-32.6	
Lower Midale Gamma Marker	Down	9384.00	9139.04	-7267.04	85.54	28.94	171.55	320.69	144.53	
Lower Midale Gamma Marker	Down	9750.00	9143.13	-7271.13	93.10	34.64	327.50	662.35	271.58	89.357
Sidetrack-3										
Lower Midale Gamma Marker	Down	9279.00	9136.82	-7264.82	74.91	32.22	89.94	241.83	69.42	
Nesson Top	Down	9310.00	9142.49	-7270.49	82.58	27.13	107.14	268.33	84.39	
Nesson Top	Up	9891.00	9148.12	-7276.12	89.73	35.20	414.52	784.75	348.37	89.444
Nesson Top	Down	9929.00	9149.39	-7277.39	86.73	38.11	439.71	815.22	371.03	
Nesson Top	Up	10369.00	9151.09	-7279.09	91.58	87.63	827.25	1024.29	741.97	89.631
Nesson Top	Down	10475.00	9150.01	-7278.01	89.30	95.20	932.36	1020.36	847.81	
Nesson Top	Up	10790.00	9145.63	-7273.63	90.38	103.60	1230.69	947.06	1153.56	90.747
Nesson Top	Down	10818.00	9145.88	-7273.88	88.78	104.03	1257.21	940.41	1180.76	
Nesson Top	Up	10922.00	9145.70	-7273.70	92.36	104.98	1354.87	913.34	1281.12	
Nesson Top	Down	11048.00	9146.02	-7274.02	87.64	103.58	1473.92	882.63	1403.26	
Nesson Top	Up	11112.00	9146.03	-7274.03	92.30	104.30	1534.47	867.24	1465.36	
Nesson Top	Down	11152.00	9146.62	-7274.62	87.51	105.90	1572.00	856.77	1503.93	
Nesson Top	Up	11240.00	9146.22	-7274.22	93.21	108.19	1653.82	831.68	1588.22	
Nesson Top	Down	11490.00	9146.76	-7274.76	86.55	104.91	1883.59	754.65	1825.49	
Nesson Top	Up	11796.00	9146.87	-7274.87	89.83	103.18	2174.69	686.86	2123.52	
Nesson Top	Down	12001.00	9147.95	-7275.95	89.30	100.93	2370.20	642.33	2323.60	
Nesson Top	Up	12049.00	9147.80	-7275.80	91.06	100.14	2416.43	633.47	2370.76	89.901
Nesson Top	Down	12106.00	9148.81	-7276.81	88.94	98.30	2471.79	624.80	2427.08	
Nesson Top	Up	12175.00	9150.17	-7278.17	88.33	96.73	2539.11	615.55	2495.44	
Nesson Top	Down	12726.00	9155.40	-7283.40	89.74	90.79	3081.91	570.47	3044.15	89.356

Above formation tops/zones picked from MWD gamma log from Baker/Hughes/Inteq.

HORIZONTAL SURVEYS (Sidetrack-2)

BAKER HUGHES	Company: NANCE PETROLEUM	Job Number: 463600	Calculation Method	Minimum Curvature									
	Field: MCKENZIE	Magnetic Decl.: 10.15	Proposed Azimuth 85.07										
	Cty/Bld/Par: NORTH DEKOTA	Grid Corr.: 	Depth Reference Slips										
INTEQ	Well Name: LEWIS & CLARK 2-4H	Total Survey Corr.: 10.15	Tie Into EMS	DIP 73.55									
	Rig: KEY 439	Target Info: TGT TVD - 9146											
No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates N/S (ft)	E/W (ft)	DLS (°/100')	Bld Rate (*'/100')	Wlk Rate (*'/100')	Remarks
0	MWD	8980	40.74	0.33		8956.13	-45.69	52.24 N	50.37 W				TIE IN TO MWD
1	MWD	8989	41.00	0.33	9	8962.94	-45.15	58.13 N	50.34 W	2.89	2.9	0.0	mag interference
2	MWD	9019	41.40	7.60	30	8985.52	-42.10	77.81 N	48.97 W	16.01	1.3	24.2	mag interference
3	MWD	9051	41.90	15.80	32	9009.45	-36.02	98.60 N	44.65 W	17.09	1.6	25.6	mag interference
4	MWD	9083	43.70	24.10	32	9032.95	-26.86	118.99 N	37.22 W	18.49	5.6	25.9	mag interference
5	MWD	9114	47.50	36.80	31	9054.68	-14.03	137.96 N	25.98 W	31.69	12.3	41.0	DIP -73.65
6	MWD	9146	55.20	46.60	32	9074.67	4.02	156.65 N	9.48 W	32.22	24.1	27.5	DIP -73.34
7	MWD	9177	62.20	53.30	31	9090.79	25.55	173.79 N	10.65 E	30.97	22.6	24.8	DIP -73.34
8	MWD	9194	65.50	51.50	17	9098.28	38.39	183.10 N	22.74 E	21.61	19.4	-10.6	
9	MWD	9208	68.30	49.42	14	9103.77	48.99	191.30 N	32.67 E	24.22	20.0	-14.9	
10	MWD	9240	73.50	47.00	32	9114.24	73.16	211.45 N	55.20 E	17.75	16.3	-7.6	
11	MWD	9272	77.50	42.70	32	9122.25	96.80	233.41 N	77.03 E	18.04	12.5	-13.4	
12	MWD	9303	79.90	39.90	31	9128.33	118.75	256.25 N	97.08 E	11.76	7.7	-9.0	
13	MWD	9333	81.60	39.90	30	9133.15	139.62	278.96 N	116.08 E	5.67	5.7	0.0	
14	MWD	9364	83.60	33.20	31	9137.15	159.97	303.64 N	134.37 E	22.38	6.5	-21.6	
15	MWD	9395	86.60	26.60	31	9139.80	177.59	330.40 N	149.75 E	23.31	9.7	-21.3	
16	MWD	9426	87.00	20.20	31	9141.53	192.27	358.79 N	162.04 E	20.65	1.3	-20.6	
17	MWD	9439	86.20	17.80	13	9142.30	197.54	371.06 N	166.26 E	19.43	-6.2	-18.5	
18	MWD	9458	86.60	17.10	19	9143.49	204.76	389.15 N	171.95 E	4.24	2.1	-3.7	
19	MWD	9489	89.30	16.00	31	9144.60	216.10	418.85 N	180.77 E	9.40	8.7	-3.5	
20	MWD	9521	92.50	16.40	32	9144.10	227.63	449.57 N	189.70 E	10.08	10.0	1.3	
21	MWD	9552	91.30	16.40	31	9143.07	238.90	479.29 N	198.45 E	3.87	-3.9	0.0	
22	MWD	9582	88.20	16.00	30	9143.20	249.71	508.10 N	206.81 E	10.42	-10.3	-1.3	
23	MWD	9613	87.30	19.20	31	9144.42	261.58	537.62 N	216.18 E	10.72	-2.9	10.3	
24	MWD	9643	89.40	20.20	30	9145.28	274.08	565.85 N	226.29 E	7.75	7.0	3.3	
25	MWD	9675	90.80	21.30	32	9145.23	287.94	595.77 N	237.62 E	5.56	4.4	3.4	

BAKER HUGHES	Company: <u>NANCE PETROLEUM</u>	Job Number: <u>463600</u>	Calculation Method	Minimum Curvature
	Field: <u>MCKENZIE</u>	Magnetic Decl.: <u>10.15</u>	Proposed Azimuth <u>85.07</u>	
INTEQ	Cty/Blk/Par: <u>NORTH DEKOTA</u>	Grid Corr.: <u></u>	Depth Reference <u>Slips</u>	
	Well Name: <u>LEWIS & CLARK 2-4H</u>	Total Survey Corr.: <u>10.15</u>	Tie Into EMS	DIP 73.55
	Rig: <u>KEY 439</u>	Target Info: <u>TGT TVD - 9146</u>		

Tool No.	Survey Type	Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates		DLS (°/100')	Sld Rate ('/100')	Wlk Rate ('/100')	Remarks	
								N/S (ft)	E/W (ft)					
26	MWD	9706	91.50	25.50	31	9144.61	302.65	624.21	N	249.93	E	13.73	2.3	13.5
27	MWD	9738	91.90	31.50	32	9143.66	320.26	652.31	N	265.18	E	18.78	1.3	18.8
28	MWD	9769	95.00	39.60	31	9141.79	340.33	677.46	N	283.16	E	27.93	10.0	26.1
29	P	9803	98.50	49.00	34	9137.78	365.86	701.60	N	306.70	E	29.32	10.3	27.6 PROJECTION
30														

HORIZONTAL SURVEYS (Side-track-3)

BAKER HUGHES	Company: NANCE PETROLEUM	Job Number: 463600	Calculation Method	Minimum Curvature									
	Field: MCKENZIE	Magnetic Decl.: 10.15	Proposed Azimuth 85.07										
	Cty/Blk/Par: NORTH DAKOTA	Grid Corr.: 	Depth Reference Slips										
INTEQ	Well Name: LEWIS & CLARK 2-4H ST-1	Total Survey Corr.: 10.15	Tie Into MWD SURVEY										
	Rig: KEY #439	Target Info: 											
No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates		DLS (°/100')	Bld Rate (/100')	Wlk Rate (/100')	Remarks
0	Tie in	9177	62.20	53.30		9090.79	25.55	173.79 N	10.65 E				
1	MWD	9193	63.30	51.20	16	9098.12	37.50	182.50 N	21.90 E	13.54	6.9	-13.1	
2	MWD	9209	58.60	45.90	16	9105.89	48.74	191.74 N	32.38 E	41.24	-29.4	-33.1	
3	MWD	9224	57.70	39.60	15	9113.81	58.15	201.09 N	41.02 E	36.17	-6.0	-42.0	
4	MWD	9240	60.50	35.70	16	9122.03	67.43	211.96 N	49.40 E	27.27	17.5	-24.4	
5	MWD	9255	66.00	33.90	15	9128.78	75.99	222.95 N	57.04 E	38.20	36.7	-12.0	
6	MWD	9272	72.20	33.20	17	9134.84	85.86	236.18 N	65.81 E	36.67	36.5	-4.1	
7	MWD	9287	78.00	31.10	15	9138.69	94.60	248.45 N	73.52 E	40.96	38.7	-14.0	
8	MWD	9303	81.60	27.60	16	9141.53	103.46	262.17 N	81.23 E	31.14	22.5	-21.9	
9	MWD	9318	83.70	26.60	15	9143.45	111.35	275.42 N	88.01 E	15.48	14.0	-6.7	
10	MWD	9333	85.50	26.20	15	9144.86	119.11	288.79 N	94.65 E	12.29	12.0	-2.7	
11	MWD	9364	86.50	26.20	31	9147.02	135.10	316.54 N	108.30 E	3.23	3.2	0.0	
12	MWD	9395	90.70	26.60	31	9147.78	151.21	344.29 N	122.08 E	13.61	13.5	1.3	
13	MWD	9427	91.90	26.60	32	9147.05	167.94	372.90 N	136.40 E	3.75	3.8	0.0	
14	MWD	9458	89.00	25.90	31	9146.81	183.99	400.70 N	150.11 E	9.62	-9.4	-2.3	
15	MWD	9490	88.40	27.30	32	9147.53	200.72	429.30 N	164.43 E	4.76	-1.9	4.4	
16	MWD	9521	85.60	27.60	31	9149.16	217.30	456.77 N	178.70 E	9.08	-9.0	1.0	
17	MWD	9552	87.20	26.20	31	9151.10	233.61	484.36 N	192.70 E	6.85	5.2	-4.5	
18	MWD	9582	91.20	24.80	30	9151.52	248.80	511.43 N	205.61 E	14.13	13.3	-4.7	
19	MWD	9613	92.80	25.50	31	9150.44	264.33	539.47 N	218.78 E	5.63	5.2	2.3	
20	MWD	9643	90.20	25.20	30	9149.65	279.45	566.57 N	231.62 E	8.72	-8.7	-1.0	
21	MWD	9674	86.60	24.50	31	9150.52	294.84	594.69 N	244.64 E	11.83	-11.6	-2.3	
22	MWD	9706	88.10	25.20	32	9152.00	310.71	623.69 N	258.07 E	5.17	4.7	2.2	
23	MWD	9738	93.00	26.60	32	9151.69	327.11	652.47 N	272.04 E	15.92	15.3	4.4	
24	MWD	9769	91.30	26.20	31	9150.53	343.21	680.21 N	285.81 E	5.63	-5.5	-1.3	
25	MWD	9801	90.10	29.30	32	9150.14	360.49	708.53 N	300.71 E	10.39	-3.8	9.7	

BAKER HUGHES INTEQ

Company: NANCE PETROLEUM
 Field: MCKENZIE
 Cty/Blk/Par: NORTH DAKOTA
 Well Name: LEWIS & CLARK 2-4H ST-1 Total Survey Corr.: 10.15
 Rig: KEY #439

Job Number: 463600 Calculation Method Minimum Curvature
 Magnetic Decl.: 10.15 Proposed Azimuth 85.07
 Grid Corr.: Depth Reference Slips
 Tie Into MWD SURVEY

Target Info:

No.	Tool Type	Survey Depth (ft)	Incl. (°)	Azimuth (°)	Course Lgh (ft)	TVD (ft)	VS (ft)	Coordinates		DLS ('/100')	Bid Rate ('/100')	Wilk Rate ('/100')	Remarks	
26	MWD	9832	92.00	30.80	31	9149.57	378.26	735.35	N	316.23	E	7.81	6.1	4.8
27	MWD	9863	91.90	33.30	31	9148.52	396.89	761.61	N	332.67	E	8.07	-0.3	8.1
28	MWD	9894	89.50	35.40	31	9148.14	416.51	787.20	N	350.16	E	10.29	-7.7	6.8
29	MWD	9925	86.70	37.80	31	9149.16	437.05	812.07	N	368.63	E	11.89	-9.0	7.7
30	MWD	9957	86.90	40.30	32	9150.95	459.24	836.88	N	388.75	E	7.83	0.6	7.8
31	MWD	9987	88.20	43.80	30	9152.23	481.15	859.13	N	408.83	E	12.44	4.3	11.7
32	MWD	10018	88.70	45.60	31	9153.07	504.75	881.16	N	430.62	E	6.02	1.6	5.8
33	MWD	10050	89.40	47.30	32	9153.60	529.75	903.20	N	453.81	E	5.74	2.2	5.3
34	MWD	10081	88.80	51.20	31	9154.09	554.88	923.43	N	477.29	E	12.73	-1.9	12.6
35	MWD	10113	89.90	55.40	32	9154.45	582.08	942.55	N	502.94	E	13.57	3.4	13.1
36	MWD	10144	91.10	59.30	31	9154.18	609.51	959.27	N	529.03	E	13.16	3.9	12.6
37	MWD	10176	91.80	63.50	32	9153.37	638.80	974.58	N	557.11	E	13.30	2.2	13.1
38	MWD	10208	91.00	67.40	32	9152.59	668.93	987.87	N	586.20	E	12.44	-2.5	12.2
39	MWD	10238	89.70	70.20	30	9152.41	697.73	998.71	N	614.17	E	10.29	-4.3	9.3
40	MWD	10270	89.00	74.00	32	9152.77	728.90	1008.55	N	644.61	E	12.07	-2.2	11.9
41	MWD	10301	90.90	78.30	31	9152.80	759.52	1015.97	N	674.70	E	15.16	6.1	13.9
42	MWD	10332	91.60	82.50	31	9152.12	790.40	1021.13	N	705.26	E	13.73	2.3	13.5
43	MWD	10364	91.60	87.00	32	9151.23	822.38	1024.06	N	737.10	E	14.06	0.0	14.1
44	MWD	10395	91.50	90.90	31	9150.39	853.29	1024.63	N	768.08	E	12.58	-0.3	12.6
45	MWD	10426	90.00	93.00	31	9149.98	884.06	1023.57	N	799.06	E	8.32	-4.8	6.8
46	MWD	10457	90.20	93.70	31	9149.93	914.74	1021.76	N	830.00	E	2.35	0.6	2.3
47	MWD	10487	88.70	96.20	30	9150.22	944.29	1019.17	N	859.89	E	9.72	-5.0	8.3
48	MWD	10519	88.00	99.70	32	9151.14	975.47	1014.75	N	891.56	E	11.15	-2.2	10.9
49	MWD	10550	89.30	103.20	31	9151.87	1005.20	1008.60	N	921.93	E	12.04	4.2	11.3
50	MWD	10580	90.10	106.70	30	9152.03	1033.40	1000.86	N	950.91	E	11.97	2.7	11.7

BAKER HUGHES	Company: <u>NANCE PETROLEUM</u>	Job Number: <u>463600</u>	Calculation Method	Minimum Curvature
INTEQ	Field: <u>MCKENZIE</u>	Magnetic Decl.: <u>10.15</u>	Proposed Azimuth <u>85.07</u>	
	Cty/Blk/Par: <u>NORTH DAKOTA</u>	Grid Corr.: <u></u>	Depth Reference <u>Slips</u>	
	Well Name: <u>LEWIS & CLARK 2-4H ST-1</u>	Total Survey Corr.: <u>10.15</u>	Tie Into <u>MWD SURVEY</u>	
	Rig: <u>KEY #439</u>	Target Info: <u></u>		

No.	Tool Type	Survey Depth (ft)	Incl. (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates		DLS (°/100')	Bld Rate ('/100')	Wlk Rate ('/100')	Remarks	
51	MWD	10612	91.90	107.10	32	9151.47	1063.10	991.56	N	981.52	E	5.76	5.6	1.2
52	MWD	10643	92.80	106.00	31	9150.20	1091.92	982.74	N	1011.21	E	4.58	2.9	-3.5
53	MWD	10673	92.30	105.00	30	9148.86	1120.01	974.73	N	1040.09	E	3.72	-1.7	-3.3
54	MWD	10705	91.60	103.20	32	9147.77	1150.24	966.94	N	1071.11	E	6.03	-2.2	-5.6
55	MWD	10737	91.20	103.60	32	9146.99	1180.61	959.52	N	1102.23	E	1.77	-1.2	1.2
56	MWD	10767	92.10	103.60	30	9146.13	1209.04	952.47	N	1131.37	E	3.00	3.0	0.0
57	MWD	10799	89.70	103.60	32	9145.62	1239.38	944.95	N	1162.47	E	7.50	-7.5	0.0
58	MWD	10830	88.20	104.30	31	9146.19	1268.70	937.48	N	1192.55	E	5.34	-4.8	2.3
59	MWD	10861	88.90	106.40	31	9146.98	1297.77	929.27	N	1222.43	E	7.14	2.3	6.8
60	MWD	10892	91.80	104.60	31	9146.79	1326.81	920.99	N	1252.30	E	11.01	9.4	-5.8
61	MWD	10924	92.40	105.00	32	9145.61	1356.92	912.82	N	1283.22	E	2.25	1.9	1.3
62	MWD	10955	91.20	105.00	31	9144.64	1386.04	904.80	N	1313.14	E	3.87	-3.9	0.0
63	MWD	10986	89.70	103.90	31	9144.40	1415.29	897.07	N	1343.16	E	6.00	-4.8	-3.5
64	MWD	11018	88.30	103.20	32	9144.96	1445.63	889.57	N	1374.27	E	4.89	-4.4	-2.2
65	MWD	11050	87.60	103.60	32	9146.10	1475.99	882.16	N	1405.37	E	2.52	-2.2	1.2
66	MWD	11080	90.10	103.90	30	9146.70	1504.40	875.03	N	1434.51	E	8.39	8.3	1.0
67	MWD	11112	92.30	104.30	32	9146.03	1534.64	867.24	N	1465.53	E	6.99	6.9	1.2
68	MWD	11143	87.10	105.70	31	9146.19	1563.77	859.22	N	1495.47	E	17.37	-16.8	4.5
69	MWD	11174	88.50	106.40	31	9147.38	1592.70	850.65	N	1525.23	E	5.05	4.5	2.3
70	MWD	11205	91.00	106.00	31	9147.52	1621.61	842.01	N	1555.00	E	8.17	8.1	-1.3
71	MWD	11236	93.00	108.10	31	9146.44	1650.33	832.92	N	1584.62	E	9.35	6.5	6.8
72	MWD	11268	94.70	108.80	32	9144.29	1679.64	822.82	N	1614.90	E	5.74	5.3	2.2
73	MWD	11299	95.80	110.90	31	9141.45	1707.67	812.34	N	1643.94	E	7.62	3.5	6.8
74	MWD	11331	89.90	109.90	32	9139.86	1736.54	801.20	N	1673.88	E	18.70	-18.4	-3.1
75	MWD	11362	87.30	107.80	31	9140.62	1764.90	791.19	N	1703.20	E	10.78	-8.4	-6.8

BAKER HUGHES	Company: <u>NANCE PETROLEUM</u>	Job Number: <u>463600</u>	Calculation Method	Minimum Curvature
INTEQ	Field: <u>MCKENZIE</u>	Magnetic Decl.: <u>10.15</u>	Proposed Azimuth	<u>85.07</u>
	Cty/Blk/Par: <u>NORTH DAKOTA</u>	Grid Corr.:	Depth Reference	<u>Slips</u>
	Well Name: <u>LEWIS & CLARK 2-4H ST-1</u>	Total Survey Corr.: <u>10.15</u>	Tie Into	<u>MWD SURVEY</u>
	Rig: <u>KEY #439</u>	Target Info:		

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates		DLS ('/100')	Bid Rate ('/100')	Wlk Rate ('/100')	Remarks	
76	MWD	11393	87.60	107.80	31	9142.00	1793.46	781.73	N	1732.69	E	0.97	1.0	0.0
77	MWD	11424	87.20	106.70	31	9143.41	1822.14	772.54	N	1762.26	E	3.77	-1.3	-3.5
78	MWD	11456	87.30	105.70	32	9144.94	1851.95	763.62	N	1792.96	E	3.14	0.3	-3.1
79	MWD	11488	86.60	105.00	32	9146.64	1881.92	755.17	N	1823.77	E	3.09	-2.2	-2.2
80	MWD	11519	85.80	103.60	31	9148.70	1911.13	747.53	N	1853.74	E	5.19	-2.6	-4.5
81	MWD	11550	86.60	103.60	31	9150.75	1940.46	740.25	N	1883.81	E	2.58	2.6	0.0
82	MWD	11582	87.90	102.50	32	9152.29	1970.86	733.04	N	1914.95	E	5.32	4.1	-3.4
83	MWD	11613	89.40	101.80	31	9153.02	2000.48	726.51	N	1945.24	E	5.34	4.8	-2.3
84	MWD	11645	91.70	102.20	32	9152.71	2031.09	719.86	N	1976.54	E	7.30	7.2	1.3
85	MWD	11676	92.40	102.90	31	9151.60	2060.64	713.13	N	2006.78	E	3.19	2.3	2.3
86	MWD	11705	94.10	101.80	29	9149.96	2088.28	706.94	N	2035.06	E	6.98	5.9	-3.8
87	MWD	11736	92.10	102.90	31	9148.28	2117.84	700.32	N	2065.30	E	7.36	-6.5	3.5
88	MWD	11767	91.70	102.90	31	9147.25	2147.33	693.40	N	2095.50	E	1.29	-1.3	0.0
89	MWD	11798	89.70	103.20	31	9146.87	2176.82	686.40	N	2125.69	E	6.52	-6.5	1.0
90	MWD	11829	90.30	103.60	31	9146.87	2206.24	679.22	N	2155.85	E	2.33	1.9	1.3
91	MWD	11860	89.30	102.90	31	9146.98	2235.70	672.11	N	2186.02	E	3.94	-3.2	-2.3
92	MWD	11889	90.00	103.20	29	9147.16	2263.28	665.56	N	2214.27	E	2.63	2.4	1.0
93	MWD	11921	89.90	102.50	32	9147.19	2293.75	658.45	N	2245.47	E	2.21	-0.3	-2.2
94	MWD	11952	89.40	101.80	31	9147.38	2323.38	651.92	N	2275.78	E	2.77	-1.6	-2.3
95	MWD	11983	89.30	101.10	31	9147.73	2353.12	645.77	N	2306.16	E	2.28	-0.3	-2.3
96	MWD	12014	89.30	100.80	31	9148.11	2382.94	639.88	N	2336.59	E	0.97	0.0	-1.0
97	MWD	12045	91.50	100.40	31	9147.89	2412.80	634.18	N	2367.06	E	7.21	7.1	-1.3
98	MWD	12077	88.00	98.30	32	9148.03	2443.81	628.98	N	2398.63	E	12.75	-10.9	-6.6
99	MWD	12108	89.00	98.30	31	9148.84	2473.97	624.51	N	2429.29	E	3.23	3.2	0.0
100	MWD	12139	89.00	97.90	31	9149.38	2504.17	620.14	N	2459.98	E	1.29	0.0	-1.3

BAKER HUGHES	Company: <u>NANCE PETROLEUM</u>	Job Number: <u>463600</u>	Calculation Method	Minimum Curvature
	Field: <u>MCKENZIE</u>	Magnetic Decl.: <u>10.15</u>	Proposed Azimuth	<u>85.07</u>
	City/Blk/Par: <u>NORTH DAKOTA</u>	Grid Corr.:		
INTEQ	Well Name: <u>LEWIS & CLARK 2-4H ST-1</u>	Total Survey Corr.: <u>10.15</u>	Depth Reference	<u>Slips</u>
	Rig: <u>KEY #439</u>	Target Info:	Tie Into <u>MWD SURVEY</u>	

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates		DLS (/100')	Bld Rate (/100')	Wlk Rate (/100')	Remarks	
101	MWD	12170	88.60	96.90	31	9150.03	2534.45	616.15	N	2490.71	E	3.47	-1.3	-3.2
102	MWD	12202	86.90	95.80	32	9151.29	2565.80	612.61	N	2522.49	E	6.33	-5.3	-3.4
103	MWD	12233	87.20	96.20	31	9152.88	2596.20	609.38	N	2553.28	E	1.61	1.0	1.3
104	MWD	12264	90.90	97.30	31	9153.40	2626.55	605.73	N	2584.05	E	12.45	11.9	3.5
105	MWD	12295	91.90	96.90	31	9152.64	2656.86	601.90	N	2614.81	E	3.47	3.2	-1.3
106	MWD	12326	90.60	96.20	31	9151.96	2687.23	598.37	N	2645.60	E	4.76	-4.2	-2.3
107	MWD	12358	88.90	96.20	32	9152.10	2718.63	594.91	N	2677.41	E	5.31	-5.3	0.0
108	MWD	12389	88.20	95.80	31	9152.89	2749.06	591.67	N	2708.23	E	2.60	-2.3	-1.3
109	MWD	12420	90.20	95.80	31	9153.32	2779.51	588.54	N	2739.06	E	6.45	6.5	0.0
110	MWD	12452	91.40	95.50	32	9152.87	2810.96	585.39	N	2770.90	E	3.87	3.8	-0.9
111	MWD	12483	90.00	94.80	31	9152.50	2841.48	582.61	N	2801.78	E	5.05	-4.5	-2.3
112	MWD	12514	88.70	94.40	31	9152.85	2872.05	580.12	N	2832.67	E	4.39	-4.2	-1.3
113	MWD	12546	88.10	93.40	32	9153.74	2903.66	577.95	N	2864.59	E	3.64	-1.9	-3.1
114	MWD	12577	89.30	93.40	31	9154.44	2934.32	576.11	N	2895.52	E	3.87	3.9	0.0
115	MWD	12609	89.60	93.00	32	9154.75	2966.00	574.32	N	2927.47	E	1.56	0.9	-1.3
116	MWD	12640	89.40	92.30	31	9155.02	2996.73	572.89	N	2958.44	E	2.35	-0.6	-2.3
117	MWD	12671	89.80	91.60	31	9155.24	3027.50	571.83	N	2989.42	E	2.60	1.3	-2.3
118	MWD	12701	89.90	91.60	30	9155.32	3057.31	571.00	N	3019.41	E	0.33	0.3	0.0
119	MWD	12732	89.70	90.60	31	9155.43	3088.13	570.40	N	3050.40	E	3.29	-0.6	-3.2
120	MWD	12763	91.90	90.60	31	9154.99	3118.99	570.08	N	3081.39	E	7.10	7.1	0.0
121	BIT	12797	90.00	90.60	34	9154.43	3152.82	569.72	N	3115.39	E	5.59	-5.6	0.0
122														
123														
124														
125														

Bit Record and Deviation Surveys

BIT NO.	SIZE	MAKE	TYPE	JETS 32ND INCH	SERIAL	DEPTH FEET	HOURS	ACCUM	WT	RPM	VERT	PUMP	PUMP	SPM		MUD			
														1	2	WT.	VIS	W.L.	
														HRS	LBS				
1	4 3/4"	HUGHES	STX-30	OPEN	5034301	9180	200	25.5	200	5K	110	60	1000	1	70		8.3	26	nc
2	4 3/4"	REED	SL53AKPR	OPEN	NY3915	9595	415	34	615	5K-10K	110/40	85	1300	1	70		8.6	27	nc
3	4 3/4"	HUGHES	STX-30	OPEN	5035511	9803	208	28.5	823	5K	110	90	1400	1	70		8.6	27	nc
4	4 3/4"	REED	SL53AKPR	OPEN	PA9631	9333	30	27	853	1K-2K	110	82	1400	1	70		8.6	27	nc
5	4 3/4"	REED	SL53AKPR	OPEN	PA9634	9384	51	31.5	904	1K-2K	110	83	1400	1	70		8.5	26	nc
6	4 3/4"	HUGHES	STX-30	OPEN	5037243	9225	32	23.5	936	1K-3K	110	80	1400	1	70		8.5	27	nc
7	4 3/4"	HUGHES	STX-30	OPEN	5039716	10241	1016	60.5	1952	5K-10K	110/50	90	1550	1	70		8.5	27	nc
8	4 3/4"	HUGHES	STX-30	OPEN	5039634	11301	1060	70.5	3012	8K-15K	110/50	90	1850	1	70		8.7	27	nc
9	4 3/4"	REED	SL53AKPR	OPEN	PA9633	11709	408	50	3420	8K-15K	110/40	90	1900	1	70		8.7	27	nc
10	4 3/4"	HUGHES	STX-30	OPEN	5039870	12797	1088	52	403	8K-15K	110/40	90	1900	1	70		8.7	27	nc

SAMPLE DESCRIPTIONS

Samples lagged and caught by the rig crew. Sample quality satisfactory unless otherwise noted.

Formation tops noted below picked from drill-time data.

- | | |
|-----------|--|
| 9010-9020 | Cement (90); very light brown with black specks. Limestone (10); light to medium gray brown to tan, firm, microcrystalline to cryptocrystalline, chalky to anhydritic in part, occasionally limy, generally tight, occasional dull yellow green fluorescence, no stain or cut. |
| 9020-9030 | Cement (90); very light brown with black specks. Limestone (10); light to medium gray brown to tan, firm, microcrystalline to cryptocrystalline, chalky to anhydritic in part, occasionally limy, generally tight, occasional dull yellow green fluorescence, no stain or cut. |
| 9030-9040 | Limestone (60); medium to light gray brown and brown, occasional medium gray to cream, firm to friable, microcrystalline to cryptocrystalline, occasional limy, slightly anhydritic in part, occasional fossil fragments, tight, occasional dull yellow to orange fluorescence, no cuts. Cement (40); very light brown with black specks. |
| 9040-9050 | Limestone (80); light to medium gray brown, medium brown to cream, friable to firm, microcrystalline to occasional cryptocrystalline, slightly argillaceous in part, occasional fossil fragments, generally less limy, occasional dull yellow green to yellow orange fluorescence, no cuts. Cement (20); very light brown with black specks. |
| 9050-9060 | Limestone (90); light medium gray brown, medium brown, occasional medium gray to light gray, firm, occasionally very firm, occasionally friable, microcrystalline to cryptocrystalline, occasional limy, very slightly anhydritic in part, occasionally fragmental, trace fossil fragments, rare stylolites, no stain or cut. Cement (10); very light brown with black specks. |
| 9060-9070 | Limestone (95); cream, light to medium brown, firm, cryptocrystalline to microcrystalline, dense, occasional fragmental appearance, in part micrite, occasional fossil fragments, very slightly argillaceous, rare peloid inclusions, trace pinpoint porosity, generally tight, occasional bright yellow fluorescence, <u>poor yellow green bleeding cut</u> . Anhydrite (5); brown, firm, translucent in part, massive. |

- 9070-9080 Limestone (95); medium to light brown, cream, firm to occasionally very firm, cryptocrystalline to microcrystalline, dense to fragmental, in part micrite, occasional fossil fragments, occasional anhydrite inclusions, very slightly argillaceous, tight pinpoint porosity, generally tight, scattered bright yellow to yellow green fluorescence, poor yellow white bleeding cut. Anhydrite (5); white to brown, firm, in part translucent, massive.
- 9080-9090 Limestone (100); light to medium brown, cream, firm to soft, microcrystalline to occasionally cryptocrystalline, dense to fragmental, occasionally very fine granular, common fossil fragments, rare stylolites, slightly argillaceous, trace anhydrite laminations, rare peloid inclusions, trace pinpoint porosity, occasional poor intercrystalline/intergranular porosity, spotty dark stain (possibly contamination), common yellow green to bright yellow fluorescence, very poor yellow white diffuse cut.
- 9090-9100 Limestone (100); light to medium brown, cream, firm to soft, microcrystalline to occasionally cryptocrystalline, dense to fragmental, occasionally very fine granular, common fossil fragments, rare stylolites, slightly argillaceous, trace anhydrite laminations, rare peloid inclusions, trace pinpoint porosity, occasional poor intercrystalline/intergranular porosity, spotty dark stain (possibly contamination), common yellow green to bright yellow fluorescence, very poor yellow white diffuse cut.

Ratcliffe @ 9097.50' MD (9043.28' TVD).

- 9100-9110 Limestone (90); light to medium brown, medium gray brown, cream, firm to very firm, occasionally soft, microcrystalline to cryptocrystalline, occasionally very fine granular, dense to fragmental, occasional fossil fragments, slightly argillaceous, occasional anhydrite laminations, occasional vuggy porosity, poor intercrystalline/intergranular porosity, trace black asphaltic residue, trace dark spotty stain (possibly contamination), common yellow green to bright yellow fluorescence, very poor yellow white diffuse cut. Anhydrite (10); white to cream, firm, massive.
- 9110-9120 Limestone (100); cream to light brown, occasionally medium brown to medium gray brown, firm, microcrystalline to cryptocrystalline, dense to occasionally fragmental, occasionally granular, trace microsucrosic, occasional fossil fragments (in part Bryozoan), slightly argillaceous, trace peloids, trace vuggy porosity, poor intercrystalline porosity, generally tight, common yellow green fluorescence, very poor very slow blue white diffuse cut.

- 9120-9130 Limestone (100); cream to light brown, occasionally medium brown to medium gray brown, firm, microcrystalline to cryptocrystalline, dense to occasionally fragmental, occasionally granular, trace microsucrosic, occasional fossil fragments (in part Bryozoan), slightly argillaceous, trace peloids, trace vuggy porosity, poor intercrystalline porosity, generally tight, common yellow green fluorescence, poor slow blue white diffuse cut.
- 9130-9140 Limestone (95); cream to light brown to tan, firm to soft, microcrystalline, occasionally cryptocrystalline, dense to sub-chalky to occasionally fragmental, trace granular, occasional fossil fragments, slightly argillaceous, tight, occasional yellow green fluorescence, no stain or cut. Anhydrite (5); white to cream, very fine crystalline.
- 9140-9150 Limestone (95); cream to light brown to tan, firm to soft, microcrystalline, occasionally cryptocrystalline, dense to sub-chalky to occasionally fragmental, trace granular, occasional fossil fragments, slightly argillaceous, tight, occasional yellow green fluorescence, no stain or cut. Anhydrite (5); white to cream, very fine crystalline.
- 9150-9160 Limestone (100); medium to dark brown, medium to light gray brown, cream, firm to very firm, predominantly microcrystalline to cryptocrystalline, dense to fragmental, occasionally fine granular, occasional fossil fragments, slightly argillaceous, predominantly tight, occasional pinpoint vugs, trace yellow green fluorescence, no stain or cut.
- 9160-9170 Limestone (100); medium to dark brown, medium to light gray brown, cream, firm to very firm, predominantly microcrystalline to cryptocrystalline, dense to fragmental, occasionally fine granular, occasional fossil fragments, slightly argillaceous, predominantly tight, occasional pinpoint vugs, trace yellow green fluorescence, no stain or cut.
- 9170-9178 No sample recovered.
- 9178-9190 Limestone (90); tan, medium to dark gray brown and brown, firm, microcrystalline to occasionally cryptocrystalline, occasionally very fine crystalline, predominantly dense, occasionally fragmental, trace granular, slightly argillaceous, occasional fossil fragments, rare oolites, generally very tight, rare poor intercrystalline porosity, no fluorescence, trace black asphaltic residue, no stain or cut. Dolomite (10); light brown to tan to cream, firm, microcrystalline to microsucrosic, occasionally cryptocrystalline, occasional pinpoint vugs, bright yellow to yellow green fluorescence, trace poor slow blue white diffuse cut.

- 9190-9200 Limestone (90); tan, medium to dark gray brown and brown, firm, microcrystalline to occasionally cryptocrystalline, occasionally very fine crystalline, predominantly dense, occasionally fragmental, trace granular, slightly argillaceous, occasional fossil fragments, rare oolites, generally very tight, rare poor intercrystalline porosity, no fluorescence, trace black asphaltic residue, no stain or cut. Dolomite (10); light brown to tan to cream, firm, microcrystalline to microsucrosic, occasionally cryptocrystalline, occasional pinpoint vugs, bright yellow to yellow green fluorescence, trace poor slow blue white diffuse cut.
- 9200-9210 Limestone (100); medium gray brown, medium to dark brown, cream, medium to light gray, firm to very firm, microcrystalline to cryptocrystalline, occasionally fragmental, trace granular, dense, occasional fossil fragments, very slightly argillaceous, trace disseminated pyrite, rare poorly developed stylolites, occasionally slightly dolomitic, predominantly tight, trace poor intercrystalline porosity, trace yellow green fluorescence, no shows.
- 9210-9220 Limestone (100); medium gray brown, medium to dark brown, tan, occasionally cream to light gray, firm, microcrystalline to occasionally cryptocrystalline, common fragmental appearance, dense, trace fossil fragments, trace stylolites, commonly slightly dolomitic, no visible intercrystalline porosity, trace pinpoint vuggy porosity, trace yellow green fluorescence, trace black asphaltic residue on possible fracture surfaces, no shows.
- 9220-9230 Limestone (100); light to medium gray, medium to dark gray brown and brown, firm, occasionally very firm, microcrystalline to occasionally cryptocrystalline, commonly fragmental, occasionally micritic, dense, trace fossil fragments, very slightly argillaceous, trace disseminated pyrite, predominantly tight, rare poor intercrystalline porosity, trace black asphaltic residue, trace yellow green fluorescence, no stain or cut.
- 9230-9240 Limestone (100); medium to dark gray brown and brown, occasionally cream and light gray, firm to soft, occasionally very firm, microcrystalline to occasionally cryptocrystalline, commonly fragmental, dense, trace sub-chalky to chalky, trace fossil fragments, slightly argillaceous, in part siliceous, trace disseminated pyrite, trace stylolites, tight, trace black asphaltic residue, trace yellow green fluorescence, no shows.
- 9240-9250 Limestone (100); medium to dark brown and gray brown, trace light gray and cream, firm to very firm, trace hard, fragmental, dense, trace fossil fragments, slightly argillaceous, commonly siliceous, tight, no

fluorescence, no stain or cut.

- 9250-9260 Limestone (100); medium to light brown, occasionally light gray to cream, occasionally dark brown, firm to very firm, microcrystalline to cryptocrystalline, sub-chalky to dense, occasionally fragmental, slightly argillaceous, occasionally shaly, trace fossil fragments, in part siliceous, trace disseminated pyrite, rare oolites in a cream cryptocrystalline matrix, tight, no fluorescence, no stain or cut.
- 9260-9270 Limestone (100); medium to light brown, occasionally light gray to cream, occasionally dark brown, firm to very firm, microcrystalline to cryptocrystalline, sub-chalky to dense, occasionally fragmental, slightly argillaceous, occasionally shaly, occasional fossil fragments, trace stylolites, in part siliceous, trace disseminated pyrite, tight, no fluorescence, no stain or cut.
- 9270-9280 Limestone (100); medium to dark gray brown, medium to light to medium gray brown, trace cream, firm to very firm, microcrystalline to cryptocrystalline, dense, slightly argillaceous, occasional fossil fragments (trace bryozoan), rare oolites, trace disseminated pyrite, trace siliceous, no visible porosity, trace pinpoint vuggy porosity, no fluorescence, no stain or cut.
- 9280-9290 Limestone (100); medium to dark gray brown, medium brown gray, occasionally cream, firm to very firm, microcrystalline to cryptocrystalline, dense, moderately argillaceous, occasional fossil fragments, trace siliceous, no visible intercrystalline porosity, rare vugs, no fluorescence, no stain or cut.
- 9290-9300 Limestone (100); medium to light gray brown, medium brown gray, occasionally medium gray to cream, firm to very firm, occasionally friable, microcrystalline to cryptocrystalline, dense, argillaceous to shaly in part, trace fossil fragments, siliceous in part, no visible intercrystalline porosity, no fluorescence, no stain or cut.
- 9300-9310 Limestone (100); medium to dark gray brown, dark brown gray, occasionally cream, firm, microcrystalline to cryptocrystalline, occasional fragmental appearance, siliceous in part, slightly argillaceous, generally tight, no visible intercrystalline porosity, no fluorescence, no stain or cut.
- 9310-9320 Limestone (100); dark brown gray to medium gray brown, occasionally medium brown to cream, firm to friable, microcrystalline, occasionally cryptocrystalline, occasional fragmental appearance, siliceous in part, slightly argillaceous, generally tight, no visible intercrystalline porosity, no fluorescence, no stain or cut.

- 9320-9330 Limestone (100); medium to dark gray brown, occasionally cream to medium gray, firm to friable, microcrystalline, occasionally cryptocrystalline, some fragmental appearance, siliceous in part, slightly argillaceous, generally tight, no visible intercrystalline or vuggy porosity, no fluorescence, no stain or cut.
- 9330-9340 Limestone (100); medium to light gray brown and brown gray, occasional tan to cream, firm to friable, microcrystalline, occasionally cryptocrystalline, occasional fragmental appearance, dense, slightly argillaceous, trace fossil fragments, siliceous in part, trace disseminated pyrite, tight, no fluorescence, no stain or cut.
- 9340-9350 Limestone (100); medium to light gray brown and brown gray, occasional tan to cream, firm to friable, microcrystalline, occasionally cryptocrystalline, occasional fragmental appearance, dense, slightly argillaceous, trace fossil fragments, siliceous in part, trace disseminated pyrite, tight, occasional dull yellow green fluorescence, no stain or cut.
- 9350-9360 Limestone (100); medium to dark gray brown, medium brown, cream, firm to soft, occasionally very firm, microcrystalline to cryptocrystalline, dense, occasionally sub-chalky, trace fragmental, common fossil fragments, slightly to moderately argillaceous, rare pyrite, trace siliceous, tight, trace yellow green fluorescence, no stain or cut.
- 9360-9370 Limestone (100); medium to dark gray brown, medium gray, medium brown, occasionally cream, firm to very firm, microcrystalline to cryptocrystalline, dense, trace fragmental, occasional fossil fragments, slightly to moderately argillaceous, trace pyrite, occasionally siliceous with trace light chert, tight, trace dull yellow green fluorescence, no stain or cut.
- 9370-9380 Limestone (100); medium to dark gray brown, medium gray, medium brown, occasionally cream, firm to very firm, microcrystalline to cryptocrystalline, dense, occasionally sub-chalky, trace fragmental, occasional fossil fragments, slightly to moderately argillaceous, occasionally siliceous with trace light chert, tight, trace dull yellow green fluorescence, no stain or cut.
- 9380-9390 Limestone (100); medium brown, medium gray brown, tan, occasionally cream, firm to occasionally very firm, microcrystalline to cryptocrystalline, dense to fragmental, trace granular, trace fossil fragments, moderately argillaceous, in part siliceous, no visible intercrystalline porosity, rare pinpoint vuggy porosity, trace yellow green fluorescence, no stain or cut.

- 9390-9400 Limestone (100); medium to light gray brown and brown, occasionally medium gray, occasionally tan to cream, firm to very firm, microcrystalline to cryptocrystalline, commonly fragmental, dense, trace fossil fragments, slightly to moderately argillaceous in part, in part siliceous, tight, no visible porosity, trace dull yellow green fluorescence, no stain or cut.
- 9400-9410 Limestone (100); medium to dark gray brown and brown, occasionally cream, firm to very firm, occasionally hard, microcrystalline to cryptocrystalline, dense to fragmental, occasional fossil fragments, slightly argillaceous to shaly, trace pyrite, commonly siliceous, trace oolites, tight, no fluorescence, no stain or cut.
- 9410-9420 Limestone (100); medium to dark gray brown and brown, occasionally cream, firm to very firm, occasionally hard, microcrystalline to cryptocrystalline, dense to fragmental, occasional fossil fragments, slightly argillaceous to shaly, trace pyrite, commonly siliceous, tight, no fluorescence, no stain or cut.
- 9420-9430 Limestone (100); medium to dark gray brown and brown, occasionally cream, firm to very firm, occasionally hard, microcrystalline to cryptocrystalline, dense to fragmental, occasional fossil fragments, slightly argillaceous to shaly, trace pyrite, commonly siliceous, tight, no fluorescence, no stain or cut.
- 9430-9440 Limestone (100); medium to light gray brown, medium brown, light gray, firm to very firm, microcrystalline to cryptocrystalline, dense to fragmental, trace granular, trace fossil fragments, slightly argillaceous, commonly siliceous with occasional light chert, trace pyrite, trace oolites, tight, occasional yellow and yellow green fluorescence, no stain or cut.
- 9440-9450 Limestone (100); medium to dark brown gray and brown, trace tan to cream, firm to very firm to hard, microcrystalline to cryptocrystalline, fragmental, trace granular, dense, slightly to moderately argillaceous, trace fossil fragments, commonly siliceous with occasional light chert, tight, no fluorescence, no stain or cut.
- 9450-9460 Limestone (100); medium to dark brown gray and brown, trace tan to cream, firm to very firm to hard, microcrystalline to cryptocrystalline, fragmental, trace granular, dense, slightly to moderately argillaceous, trace fossil fragments, commonly siliceous with occasional light chert, occasional pyrite, tight, no fluorescence, no stain or cut.
- 9460-9470 Limestone (100); medium to dark brown gray and brown, cream, firm

to very firm to hard, microcrystalline to cryptocrystalline, dense, trace fragmental, slightly to moderately argillaceous, trace fossil fragments, commonly siliceous, trace pyrite, trace micro-peloids, tight, occasional yellow green fluorescence, no stain or cut.

- 9470-9480 Limestone (100); medium to dark brown gray and brown, cream, firm to very firm to hard, microcrystalline to cryptocrystalline, dense, trace fragmental, slightly to moderately argillaceous, trace fossil fragments, commonly siliceous, trace pyrite, tight, occasional yellow green fluorescence, no stain or cut.
- 9480-9490 Limestone (100); medium to dark brown gray and brown, cream, firm to very firm to hard, microcrystalline to cryptocrystalline, dense, trace fragmental, slightly to moderately argillaceous, trace fossil fragments, commonly siliceous, trace pyrite, tight, occasional yellow green fluorescence, no stain or cut.
- 9490-9500 Limestone (100); tan, medium to light brown, occasionally cream, firm to very firm, cryptocrystalline to microcrystalline, dense, trace fragmental, slightly argillaceous, trace fossil fragments, in part siliceous, rare oolites, tight, trace yellow green fluorescence, no stain or cut.
- 9500-9510 Limestone (100); tan, medium to light brown, occasionally cream, firm to very firm, cryptocrystalline to microcrystalline, dense, trace fragmental, slightly argillaceous, trace fossil fragments, in part siliceous, tight, trace yellow green fluorescence, no stain or cut.
- 9510-9520 Limestone (100); tan to medium brown to light brown, cream, firm, occasionally very firm, cryptocrystalline to microcrystalline, dense, slightly argillaceous, siliceous in part, trace fossil fragments, tight, trace yellow green fluorescence, no stain or cut.
- 9520-9550 Limestone (100); tan to medium brown to light brown, cream, firm, occasionally very firm, cryptocrystalline to microcrystalline, dense, slightly argillaceous, siliceous in part, trace fossil fragments, tight, trace yellow green fluorescence, no stain or cut.
- 9550-9570 Limestone (100); tan to dark brown gray to medium to dark brown, cream, firm to very firm, microcrystalline to cryptocrystalline, trace fragmental, dense, argillaceous in part, siliceous, trace fossil fragments, no fluorescence, no stain or cut.
- 9570-9600 Limestone (100); medium to dark gray brown and gray, occasionally cream to tan, firm, occasionally very firm to hard, microcrystalline to cryptocrystalline, trace fragmental, trace fossil fragments, rare oolites,

- slightly to moderately argillaceous/shaly, trace siliceous, tight, no fluorescence, no stain or cut.
- 9600-9630 Limestone (100); medium to dark gray brown and gray, occasionally tan, trace cream, firm to very firm, trace hard, microcrystalline to cryptocrystalline, dense to fragmental, commonly argillaceous/shaly, trace fossil fragments, trace siliceous, tight, no fluorescence, no stain or cut.
- 9630-9660 Limestone (100); medium to dark gray brown, dark gray, tan to cream, firm to very firm, trace hard, microcrystalline to cryptocrystalline, dense, occasionally fragmental, moderately argillaceous/shaly, trace fossil fragments, tight, no fluorescence, no stain or cut.
- 9660-9690 Limestone (100); medium to dark gray brown and brown gray, occasionally gray to tan to cream, firm to very firm, occasionally hard, microcrystalline to cryptocrystalline, dense, moderately argillaceous, shaly, siliceous in part, trace fossil fragments, tight, no fluorescence, no stain or cut.
- 9690-9720 Limestone (100); medium to dark gray brown and gray, occasionally tan to cream, firm to very firm, trace hard, microcrystalline, occasionally cryptocrystalline, moderately argillaceous/shaly, dense, trace disseminated pyrite, trace fossil fragments, siliceous in part, tight, no fluorescence, no stain or cut.
- 9720-9750 Limestone (100) *sample recovered from the end of the shaker, oil contamination*; medium to dark brown, occasionally gray brown, trace cream, firm to very firm, microcrystalline, fragmental, dense, trace fossil fragments, trace peloids, in part shaly, in part siliceous, occasional anhydrite laminations, tight, common yellow white fluorescence, common poor blue white bleeding/streaming cut (most likely contamination).
- 9750-9770 Limestone (100) *sample recovered from the end of the shaker, oil contamination*; medium to dark brown, occasionally gray brown, trace cream, firm to very firm, microcrystalline, fragmental, dense, trace fossil fragments, trace peloids, in part shaly, in part siliceous, occasional anhydrite laminations, tight, common yellow white fluorescence, common poor blue white bleeding/streaming cut (most likely contamination).
- 9770-9790 Limestone (100) medium to dark brown, medium gray, occasionally light gray, trace cream, firm to very firm, trace hard, microcrystalline to cryptocrystalline, dense to fragmental, occasional Brachiopod remnants, slightly argillaceous, occasionally siliceous, trace clear to

- light brown chert, trace anhydrite, tight, common dull green to trace yellow green fluorescence, trace poor slow yellow green bleeding cut.
- 9790-9803 *No sample recovered.*
- Failure to penetrate siliceous cap rock on Nesson Porosity. Pull back to 9305' MD to start sidetrack-3.***
- 9305-9320 Limestone (100); medium to dark brown, medium to dark gray brown, occasionally tan, trace cream, firm to very firm, occasionally hard, microcrystalline to occasionally cryptocrystalline, dense, trace fragmental, trace fossil fragments, trace peloids, trace pyrite, occasionally siliceous, tight, occasional dull green fluorescence, no stain or cut.
- 9320-9330 Limestone (100); dark gray and gray brown, occasionally dark brown, hard to very firm to occasionally firm, microcrystalline to cryptocrystalline, very dense, fragmental appearance in part, trace fossil fragments, slightly to moderately argillaceous/shaly in part, commonly siliceous, tight, occasional dull green fluorescence, no show.
- 9330-9345 Limestone (100); dark gray brown and gray, hard to very firm to firm, microcrystalline to cryptocrystalline, very dense, fragmental appearance in part, trace peloids, commonly very siliceous grading to cherty, no visible porosity, trace dull yellow green fluorescence, no shows.
- 9345-9360 Limestone (100); dark brown and gray brown, occasionally medium brown and gray brown, in part translucent, hard to very firm, occasionally firm, very dense microcrystalline, occasional fragmental fracture appearance, trace fossil fragments, trace peloids, slightly argillaceous, commonly very siliceous grading to cherty, trace pyrite, tight, occasional dull green fluorescence, no shows.
- 9360-9370 Limestone (100); light to medium brown, tan, occasionally dark brown to dark gray brown, occasionally light gray, translucent to clear in part, firm to very firm to hard, microcrystalline to cryptocrystalline, dense, occasionally sub-chalky to fragmental, trace fossil fragments, slightly argillaceous, trace pyrite, in part siliceous, tight, common dull green to dull greenish white fluorescence, no show.
- 9370-9380 *No sample recovered.*
- Failure to kick off for initial attempt to Sidetrack-3. Pull back to 9193' MD to initiate second attempt.***

- 9193-9196 Limestone (100); medium to light brown, occasionally cream, in part mottled, firm, occasionally very firm, microcrystalline to cryptocrystalline, dense, common fragmental fracture appearance, trace fossil fragments (in part Brachiopod spines), slightly argillaceous, rare oolites in a cream translucent cryptocrystalline matrix, commonly dolomitic, very tight, common dull green fluorescence, no shows.
- 9196-9200 Limestone (100); light to medium brown, tan, cream, trace dark gray brown, firm, occasionally soft, microcrystalline, fragmental to occasionally sub-chalky, generally dense, trace fossil fragments, rare stylolites, slightly argillaceous, trace shaly, trace pyrite, tight, no fluorescence, no stain or cut.
- 9200-9211 Limestone (100); light gray brown, light to medium brown, cream, firm, trace very firm, microcrystalline, dense to fragmental, trace sub-chalky, occasional fossil fragments, very slightly argillaceous, generally tight, no fluorescence, no stain or cut.
- 9211-9225 *No sample. No cuttings return.*
- 9225-9240 *No sample. No cuttings return.*
- 9240-9250 Limestone (100); light to medium brown gray, medium brown, cream, firm to soft, microcrystalline to cryptocrystalline, fragmental to sub-chalky, occasionally dense, trace fossil fragments, slightly argillaceous, rare pyrite, tight, occasional yellow green fluorescence, no shows.
- 9250-9260 *No sample. No cuttings return.*
- 9260-9270 Limestone (100); light to medium brown gray, medium to dark brown, occasionally, firm to very firm, fragmental to dense microcrystalline, occasionally cryptocrystalline, trace fossil fragments, trace peloids, slightly argillaceous, in part shaly, trace siliceous, tight, occasional yellow green mineral fluorescence, no shows.
- 9270-9280 Limestone (100); medium to light gray brown, medium to dark brown, trace cream, firm to very firm to hard, fragmental to dense microcrystalline to cryptocrystalline, slightly argillaceous, trace shaly, trace fossil fragments, trace peloids, commonly siliceous with trace chert, trace black asphaltic residue, tight, trace bright yellow white fluorescence, poor blue white diffuse cut.
- 9280-9290 Limestone (100); medium to light gray brown, dirty cream, medium to dark brown, in part mottled, very firm to hard, occasionally firm, fragmental to dense microcrystalline, trace fossil fragments, slightly to moderately argillaceous, commonly very siliceous with occasional

chert, trace pyrite, trace calcite, tight, dull green fluorescence, no stain or cut.

9290-9300 Limestone (100); medium to dark brown and gray brown, occasionally light gray brown to cream, very firm to firm, occasionally hard, fragmental to dense microcrystalline, trace fine crystalline, occasional fossil fragments, increasingly peloidal, slightly to moderately argillaceous, occasionally siliceous, occasional calcite, predominantly tight, occasional dull green fluorescence, no stain or cut.

9300-9310 Limestone (100); tan, cream, light to medium brown gray, in part mottled, firm to occasionally very firm, fragmental to dense microcrystalline, occasionally cryptocrystalline, occasional fossil fragments (in part Brachiopod), slightly argillaceous, trace siliceous, occasional peloids/fragments in a tan cryptocrystalline matrix, occasional calcite druses, rare stylolites, predominantly tight, occasional yellow green fluorescence, trace poor blue white streaming cut.

Nesson Top @ 9310' MD (9142.49' TVD).

9310-9320 Limestone (100); tan, light to medium brown, light brown gray, occasionally dark brown, firm to very firm, fragmental to dense microcrystalline, trace very fine crystalline, slightly argillaceous, trace siliceous, occasional fossil fragments, occasional peloids/fragments in a tan cryptocrystalline matrix, occasional clear to white calcite druses implying porosity, trace fracture surfaces with black asphaltic residue, trace pinpoint vuggy porosity, occasional yellow green fluorescence, trace poor blue white streaming cut.

9320-9330 Limestone (100); tan, light to medium brown, light brown gray, occasionally dark brown, firm to very firm, fragmental to dense microcrystalline, trace very fine crystalline, slightly argillaceous, trace siliceous, occasional fossil fragments, occasional peloids/fragments in a tan cryptocrystalline matrix, occasional clear to white calcite druses implying porosity, trace fracture surfaces with black asphaltic residue, trace pinpoint vuggy porosity, occasional yellow green fluorescence, trace poor blue white streaming cut.

9330-9340 Limestone (100); tan to light gray brown, occasionally medium to dark brown, firm to very firm, cryptocrystalline to microcrystalline, rare fossil fragments, common peloids/fragments in a light to medium brown micrite matrix, occasional pinpoint vugs, common calcite druses, trace black asphaltic residue, poor intergranular porosity, occasional dull green to dull yellow green fluorescence, poor slow yellow green bleeding cut.

- 9340-9350 Limestone (100); medium to dark brown, commonly tan, firm to very firm, dense microcrystalline, common peloids/grains in a light to medium brown micrite matrix, occasional poor vuggy porosity, common calcite druses implying porosity, poor intergranular porosity, occasional dull green and yellow green fluorescence, poor slow yellow green bleeding cut.
- 9350-9360 Limestone (100); tan to light brown, occasionally medium to dark gray brown, very firm to firm, granular, dense microcrystalline to cryptocrystalline, occasional peloids/oolites/grains in a micrite matrix, occasional pinpoint vugs, trace poor intergranular porosity, trace yellow green to greenish white fluorescence, occasional calcite druses, trace black asphaltic residue, trace very poor yellow green bleeding cut.
- 9360-9370 Limestone (100); tan, light to occasionally medium brown, occasionally medium to dark gray brown, very firm to firm, dense microcrystalline to cryptocrystalline, fragmental to garn, occasional grains/peloids/oolites in a cryptocrystalline matrix, occasional calcite druses, occasional pinpoint vugs and poor to fair vuggy porosity, trace poor intergranular porosity, trace black asphaltic residue, occasional yellow green fluorescence, trace bright yellow fluorescence, trace very poor yellow green bleeding cut.
- 9370-9380 Limestone (100); tan, light to occasionally medium brown, occasionally medium to dark gray brown, very firm to firm, dense microcrystalline to cryptocrystalline, fragmental to garn, occasional grains/peloids/oolites in a cryptocrystalline matrix, occasional calcite druses, occasional pinpoint vugs and poor to fair vuggy porosity, trace poor intergranular porosity, trace black asphaltic residue, occasional yellow green fluorescence, trace bright yellow fluorescence, trace very poor yellow green bleeding cut.
- 9380-9390 Limestone (100); tan, light brown, occasionally medium brown, firm to very firm, occasionally friable, dense microcrystalline to cryptocrystalline, occasional grains/peloids/oolites in a cryptocrystalline matrix, trace siliceous, common pinpoint vugs and poor to fair vuggy porosity, common calcite crystals and druses implying porosity, trace black asphaltic residue, occasional yellow green to yellow fluorescence, trace very poor yellow green bleeding cut.
- 9390-9400 Limestone (100); tan, light brown, occasionally medium brown, firm to very firm, occasionally friable, dense microcrystalline to cryptocrystalline, occasional grains/peloids/oolites in a cryptocrystalline matrix, common pinpoint vugs and poor to fair vuggy

porosity, common calcite crystals and druses implying porosity, trace black asphaltic residue, occasional yellow green to yellow fluorescence, trace very poor yellow green bleeding cut.

- 9400-9430 Limestone (100); tan to light brown, occasionally medium brown to dirty cream, firm to very firm, dense microcrystalline to cryptocrystalline, occasional grains/peloids/oolites in a micrite cryptocrystalline matrix, common pinpoint vugs and occasional poor to fair vuggy porosity, common calcite crystals and druses, occasional dull yellow green to yellow fluorescence, trace very poor very slow yellow green bleeding cut.
- 9430-9460 Limestone (100); tan to light to medium brown, occasionally cream to dark brown, firm to very firm, occasionally friable, dense microcrystalline to cryptocrystalline, occasional grains/peloids/oolites in a micrite cryptocrystalline matrix, occasional pinpoint and poor to fair druses, trace black asphaltic stain, trace disseminated pyrite, occasional yellow green fluorescence, poor blue white bleeding to streaming cut.
- 9460-9490 Limestone (100); tan, light brown to dirty cream, occasionally dark brown to cream, trace dark gray, firm to hard, occasionally friable, dense microcrystalline to cryptocrystalline, common grains/peloids/oolites in a micrite matrix, occasional pinpoint vugs, occasional poor to fair vuggy porosity, common calcite crystals and druses, trace black asphaltic stain, common dull yellow to yellow green fluorescence, poor blue white diffuse cut.
- 9490-9520 Limestone (100); tan, light brown to dirty cream, occasionally dark brown to cream, trace dark gray, firm to hard, occasionally friable, dense microcrystalline to cryptocrystalline, common grains/peloids/oolites in a micrite matrix, occasional pinpoint vugs, occasional poor to fair vuggy porosity, common calcite crystals and druses, common dull yellow to yellow green fluorescence, occasional chip with poor to fair blue/white diffuse to streaming cut.
- 9520-9550 Limestone (100); tan, light to medium brown, occasionally cream, firm to very firm, dense microcrystalline to cryptocrystalline, occasionally peloidal/granular, common clear to white calcite crystals and druses, occasional pinpoint vugs and poor to fair vuggy porosity, trace black asphaltic residue, occasional yellow green fluorescence, no shows.
- 9550-9580 Limestone (100); tan, light brown, occasionally medium brown, occasionally cream, firm to very firm, occasionally friable, dense microcrystalline to cryptocrystalline, occasionally peloidal/oolitic, trace fossil fragments, occasional white calcite, trace vuggy porosity, trace

- asphaltic residue, occasional green to dull green fluorescence, no shows.
- 9580-9610 Limestone (100); tan, medium brown, occasionally light brown to cream, firm to very firm, dense microcrystalline to cryptocrystalline, trace peloidal/oolitic, trace fossil fragments, occasional white to clear calcite crystals and druses, trace pinpoint vugs, trace black asphaltic residue, green to dull yellow green fluorescence, poor blue white diffuse cut.
- 9610-9640 Limestone (100); tan to light brown, occasionally medium brown, firm to very firm, trace friable, dense microcrystalline to cryptocrystalline, in part fragmental, trace peloidal/oolitic, common clear to white calcite crystals and druses, trace siliceous, occasional pinpoint vuggy porosity, trace black asphaltic residue, green to dull yellow green fluorescence, poor blue white diffuse cut.
- 9640-9670 Limestone (100); tan to medium brown, occasionally light brown, trace cream, firm to very firm, dense microcrystalline to cryptocrystalline, occasionally peloidal/oolitic, in part fragmental, trace siliceous, occasional clear to white calcite, trace pinpoint vugs, trace black asphaltic residue, green to dull yellow green fluorescence, poor blue white diffuse cut.
- 9670-9700 Limestone (100); medium brown to tan, occasionally light brown, trace cream, firm to very firm, dense microcrystalline to cryptocrystalline, trace peloidal/fragmental, occasional clear to white calcite, trace siliceous, poor visible porosity, dull green fluorescence, poor blue white diffuse cut.
- 9700-9730 Limestone (100); light to medium brown, buff, firm to very firm, commonly fragmental/peloidal/oolitic, occasional white calcite, slightly siliceous, trace pinpoint vugs, trace black asphaltic residue, dull green to scattered yellow fluorescence, very poor yellow green bleeding cut in part.
- 9730-9760 Limestone (100); tan to light gray brown to light brown, firm to very firm, dense microcrystalline to cryptocrystalline, very fine fragmental to occasionally peloidal/oolitic, occasional white to clear calcite, trace siliceous, common pinpoint vugs, dull green to scattered yellow fluorescence, very poor yellow green bleeding cut in part.
- 9760-9790 Limestone (100); tan to light gray brown to light brown, firm to very firm, dense microcrystalline to cryptocrystalline, very fine fragmental to occasionally peloidal/oolitic, occasional white to clear calcite crystals and druses, trace siliceous, common pinpoint vugs, dull green

to scattered yellow fluorescence, trace very poor yellow green bleeding cut.

- 9790-9820 Limestone (100); tan, light to medium brown, firm to very firm, microcrystalline to cryptocrystalline, dense, common peloids/oolites in a tan cryptocrystalline matrix, common clear to white calcareous crystals and druses, trace siliceous, common pinpoint vugs and poor to fair vuggy porosity, trace black asphaltic residue, trace yellow white fluorescence, no shows.
- 9820-9850 Limestone (100); tan, light to medium brown, firm to very firm, microcrystalline to cryptocrystalline, dense, common peloids/oolites in a tan cryptocrystalline matrix, occasional clear to white calcareous crystals and druses, trace siliceous, trace pinpoint vugs and poor to fair vuggy porosity, trace black asphaltic residue, scattered yellow white fluorescence, no shows.
- 9850-9880 Limestone (100); tan to light to medium brown, occasionally light gray brown to cream, firm to very firm, microcrystalline to cryptocrystalline, occasional peloids/oolites in a cryptocrystalline matrix, occasional white/clear calcite crystals/druses, rare black asphaltic stain, trace pinpoint vugs, scattered yellow green fluorescence, no stain or cut.
- 9880-9910 Limestone (100); tan to light to medium brown, occasionally light gray brown to cream, firm to very firm, microcrystalline to cryptocrystalline, occasional peloids/oolites in a cryptocrystalline matrix, occasional white/clear calcite crystals/druses, rare black asphaltic stain, trace pinpoint vugs, scattered yellow green fluorescence, no stain or cut.
- 9910-9940 Limestone (100); tan, light to medium brown, firm to very firm, dense microcrystalline, commonly microfragmental to micropeloidal, trace oolites, trace fossil fragments, common white to clear calcite, trace pinpoint vuggy porosity, scattered yellow white fluorescence, trace poor yellow white bleeding cut.
- 9940-9970 Limestone (100); light to medium brown, occasionally cream to light gray brown, firm to very firm, dense microcrystalline to cryptocrystalline, microfragmental to micropeloidal, rare oolites, occasional white to clear calcite, trace pinpoint vugs, scattered yellow white fluorescence, no shows.
- 9970-10000 Limestone (100); tan, light gray brown, occasionally cream, firm, dense microcrystalline to cryptocrystalline, occasionally microfragmental, trace peloidal, trace fossil fragments, trace sparite, common white to occasionally clear calcite, generally tight, scattered bright yellow fluorescence, poor yellow white streaming cut.

- 10000-10030 Limestone (100); light to medium brown, cream, firm, dense microcrystalline to cryptocrystalline, occasionally microfragmental to micropeloidal, trace fossil fragments, common clear to white calcite crystals and druses implying porosity, common dull yellow green to bright yellow fluorescence, poor blue white streaming cut.
- 10030-10060 Limestone (100); medium to light brown, cream, firm, dense microcrystalline to cryptocrystalline, increasingly fragmental to peloidal, trace fossil fragments, trace oolites, common clear to white calcite crystals and druses implying porosity, common dull yellow green to bright yellow fluorescence, poor oil show.
- 10060-10090 Limestone (100); medium to light brown, cream, firm, dense microcrystalline to cryptocrystalline, microfragmental, trace peloidal/oolitic, trace fossil fragments, rare stylolites, abundant clear to white calcite crystals and fragments implying porosity, dull green to dull yellow green fluorescence, poor oil show.
- 10090-10120 Limestone (100); medium to light brown, cream, firm, dense microcrystalline to cryptocrystalline, microfragmental, trace peloidal/oolitic, trace fossil fragments, rare stylolites, abundant clear to white calcite crystals and fragments implying porosity, dull green to dull yellow green fluorescence, very poor diffuse cut.
- 10120-10150 Limestone (100); medium to light brown, tan, occasionally cream, firm to very firm, microcrystalline to cryptocrystalline, dense, occasionally microfragmental to micropeloidal, trace oolitic, common clear to white calcite, trace pinpoint vuggy porosity, dull blue white fluorescence, no show.
- 10150-10180 Limestone (100); medium to light brown, tan, occasionally cream, firm to very firm, microcrystalline to cryptocrystalline, dense, occasionally microfragmental to micropeloidal, trace oolitic, common clear to white calcite fragments, trace pinpoint vugs, trace black asphaltic residue, scattered yellow fluorescence, trace poor blue white diffuse cut.
- 10180-10210 Limestone (100); tan, light to medium gray brown, occasionally cream, firm, dense microcrystalline to cryptocrystalline, microfragmental in part, occasionally peloidal, trace oolitic, occasional clear to white calcite fragments, trace pinpoint vugs, occasional black asphaltic residue, scattered yellow to yellow green fluorescence, trace poor blue white streaming cut.
- 10210-10240 No Sample

- 10240-10270 Limestone (100); tan to light to medium gray brown, occasionally cream, firm to very firm, dense microcrystalline to cryptocrystalline, occasional oolitic/peloidal, occasional clear to white calcite fragments, rare black asphaltic residue, trace pinpoint vugs, scattered yellow to yellow green fluorescence, no cut.
- 10270-10300 Limestone (100); tan, light to medium gray brown, occasionally medium brown to cream, firm, dense microcrystalline to cryptocrystalline, microfragmental in part, occasionally peloidal/oolitic, occasional white to clear calcite crystals, scattered yellow green fluorescence, no stain or cut.
- 10300-10330 Limestone (100); tan, light to medium gray brown, occasionally medium brown to cream, firm, dense microcrystalline to cryptocrystalline, microfragmental in part, occasionally peloidal/oolitic, occasional white to clear calcite crystals, rare black asphaltic residue, scattered yellow green fluorescence, very poor light blue diffuse cut.
- 10330-10360 Limestone (100); tan to medium to light gray brown and light brown, occasional cream, firm to very firm, dense microcrystalline to cryptocrystalline, occasionally microfragmental, occasional oolites, peloids, occasional white to clear calcite crystals, rare pinpoint vugs, scattered yellow green fluorescence, occasional chips with poor streaming to bleeding light blue cut.
- 10360-10390 Limestone (100); tan, occasionally light to medium brown, trace cream, firm to very firm, microcrystalline to cryptocrystalline, dense, occasionally fragmental, trace peloidal/oolitic, trace fossil fragments, occasional calcite crystals and trace druses, trace pinpoint vugs, trace black asphaltic residue, dull green fluorescence, trace poor blue white diffuse cut.
- 10390-10420 Limestone (100); tan, medium to light brown and gray brown, firm to occasionally friable, fragmental, occasionally dense microcrystalline, occasional peloids/oolites, occasional clear calcite crystals and druses, abundant pinpoint vuggy porosity, trace black asphaltic residue, dull yellow green fluorescence, rare bright yellow pinpoints, trace fast blue white streaming cut.
- 10420-10450 Limestone (100); tan, medium to light brown and gray brown, firm to occasionally friable, fragmental, occasionally dense microcrystalline, occasional peloids/oolites, occasional clear calcite crystals and druses, abundant pinpoint vuggy porosity, trace black asphaltic residue, dull yellow green fluorescence, rare bright yellow pinpoints, occasional poor blue white streaming cut.

- 10450-10480 Limestone (100); light to medium brown to tan, occasionally cream, firm, dense microcrystalline to cryptocrystalline, trace fragmental, trace peloid inclusions, occasional clear calcite, trace druses, occasional pinpoint vuggy porosity, trace black asphaltic residue, scattered yellow green fluorescence, occasional chips with yellow green bleeding cuts.
- 10480-10490 No sample recovered.
- 10490-10510 Limestone (100); tan, occasionally cream, firm to very firm, dense microcrystalline to cryptocrystalline, microfragmental, trace peloids/oolites, occasional calcite, occasional pinpoint vuggy porosity, trace black asphaltic residue, no shows.
- 10510-10540 Limestone (100); tan, light to medium gray brown, firm to very firm, dense microcrystalline to cryptocrystalline, occasionally fragmental, occasional white to clear calcite, trace peloid/oolite inclusions, trace brown anhydrite laminations, occasional poor to fair pinpoint vuggy porosity, trace black asphaltic residue, trace brown stain in vugs, dull green to yellow green fluorescence, poor yellow white bleeding cut.
- 10540-10570 Limestone (100); tan, light to medium gray brown, firm to very firm, dense microcrystalline to cryptocrystalline, occasionally fragmental, occasional white to clear calcite, trace peloid/oolite inclusions, trace brown anhydrite laminations, occasional poor to fair pinpoint vuggy porosity, trace black asphaltic residue, trace brown stain in vugs, dull green to yellow green fluorescence, poor to fair yellow white bleeding cut.
- 10570-10600 Limestone (100); light brown to light gray brown to cream, occasionally medium brown, firm to very firm, microcrystalline to cryptocrystalline, dense, occasionally microfragmental, trace peloid inclusions, trace clear to white calcite, trace pinpoint vugs, trace black asphaltic residue, dull green fluorescence, scattered yellow fluorescence, no shows.
- 10600-10630 Limestone (100); light brown to light gray brown to cream, occasionally medium brown, firm to very firm, microcrystalline to cryptocrystalline, dense, occasionally microfragmental, trace peloid inclusions, trace clear to white calcite, trace pinpoint vugs, trace black asphaltic residue, dull green fluorescence, scattered yellow fluorescence, no shows.
- 10630-10660 Limestone (100); tan to medium brown, occasionally cream, firm to very firm, dense microcrystalline to cryptocrystalline, occasionally microfragmental, trace peloid inclusions, occasional white to clear

calcite, trace black asphaltic residue and stain in occasional pinpoint vugs, dull green to trace yellow fluorescence, trace blue white bleeding cut.

- 10660-10690 Limestone (100); tan to medium brown, occasionally cream, firm to very firm, dense microcrystalline to cryptocrystalline, occasionally microfragmental, trace peloid inclusions, occasional white to clear calcite, trace black asphaltic residue and stain in occasional pinpoint vugs, dull green to trace yellow fluorescence, trace blue white bleeding cut.
- 10690-10720 Limestone (100); tan to medium brown, occasionally cream, firm to very firm, dense microcrystalline to cryptocrystalline, occasionally microfragmental, trace peloid inclusions, occasional white to clear calcite, trace siliceous, trace black asphaltic residue and stain in occasional pinpoint vugs, dull green to trace yellow fluorescence, trace blue white bleeding cut.
- 10720-10750 Limestone (100); buff to tan, occasionally medium brown to cream, firm to very firm, dense microcrystalline to cryptocrystalline, occasionally microfragmental, peloidal to occasionally oolitic, occasional white to clear calcite crystals, trace black asphaltic residue, rare pinpoint vugs, trace yellow green to yellow fluorescence, poor blue white diffuse cut.
- 10750-10780 Limestone (100); buff to tan, occasionally medium brown to cream, firm to very firm, dense microcrystalline to cryptocrystalline, occasionally microfragmental, peloidal to occasionally oolitic, occasional white to clear calcite crystals, trace black asphaltic residue, rare pinpoint vugs, trace yellow green to yellow fluorescence, poor blue white diffuse cut.
- 10780-10810 Limestone (100); buff to tan, medium brown to cream, firm, dense microcrystalline to cryptocrystalline, occasionally microfragmental, peloidal, oolitic in part, slightly siliceous in part, trace clear to white calcite crystals, trace black asphaltic residue, trace brown oil stain, trace yellow green fluorescence, trace yellow green bleeding cut.
- 10810-10840 Limestone (100); buff, tan to medium brown to cream, firm, dense microcrystalline to cryptocrystalline, occasionally microfragmental, peloidal, oolitic in part, trace clear to white calcite crystals, slightly siliceous in part, trace pinpoint vugs, trace black asphaltic residue, scattered brown oil stain, common yellow green to yellow fluorescence, poor to fair blue white bleeding cut.
- 10840-10870 Limestone (100); buff to cream, occasionally medium gray brown to

- medium brown, microfragmental to fragmental, dense microcrystalline, trace fossil fragments, trace calcite, slightly siliceous in part, occasional pinpoint vugs, trace black asphaltic residue, dull green fluorescence, poor yellow green diffuse cut.
- 10870-10900 Limestone (100); light brown to tan, buff to cream, microfragmental to fragmental, sub-chalky, occasionally dense microcrystalline, trace fossil fragments, trace peloids, trace calcite, slightly siliceous in part, occasional pinpoint vugs, trace black asphaltic residue, dull green to trace yellow green fluorescence, poor yellow green diffuse cut.
- 10900-10930 Limestone (100); light to medium brown and gray brown, tan, occasionally cream, microfragmental to fragmental, dense microcrystalline, trace fossil fragments, slightly siliceous in part, trace pinpoint vugs, trace black asphaltic residue, scattered brown oil stain, common yellow green fluorescence, poor to trace fair yellow green streaming cut.
- 10930-10960 Limestone (100); medium to light brown, tan, occasionally cream, firm, dense microcrystalline, occasionally fragmental, occasionally sub-chalky, trace peloids, trace fossil fragments, slightly siliceous in part, trace pinpoint vugs, trace black asphaltic residue, occasional yellow green fluorescence, poor yellow green diffuse cut.
- 10960-10990 Limestone (100); medium gray brown and brown, occasionally cream and light brown, in part mottled, firm to very firm, trace hard, dense microcrystalline to cryptocrystalline, in part fragmental, trace fossil fragments, slightly siliceous in part, trace stylolites, trace black asphaltic residue, trace pinpoint vugs, dull green to scattered yellow fluorescence, occasional very poor yellow green bleeding cut.
- 10990-11020 Limestone (100); medium to dark brown and gray brown, occasionally light brown to cream, trace mottled, firm to very firm, trace hard, fragmental to dense microcrystalline, occasionally cryptocrystalline, occasional fossil fragments, trace stylolites, moderately argillaceous, siliceous in part, tight, trace black asphaltic residue, occasional dull green fluorescence, no shows.
- 11020-11050 Limestone (100); medium to dark brown and gray brown, occasionally light brown to cream, trace mottled, firm to very firm, trace hard, fragmental to dense microcrystalline, occasionally cryptocrystalline, occasional fossil fragments, trace stylolites, moderately argillaceous, siliceous in part, trace pinpoint vugs, trace black asphaltic residue, no fluorescence, trace poor yellow green bleeding cut.
- 11050-11080 Limestone (100); buff to light gray brown, occasionally dark brown to

- buff, occasionally cream, firm to very firm, trace hard, dense microcrystalline, occasionally cryptocrystalline, occasional fossil fragments, trace siliceous, slightly argillaceous, rare black asphaltic stain, no visible porosity, scattered dull yellow green fluorescence, trace poor blue white diffuse cut.
- 11080-11110 Limestone (100); buff to light gray brown, occasionally light to medium brown to cream, firm to very firm, occasionally hard, dense microcrystalline to cryptocrystalline, occasionally fragmental, trace siliceous, rare calcite crystals, rare pinpoint vugs, trace yellow fluorescence, trace very poor blue white diffuse cut.
- 11110-11140 Limestone (100); light gray brown to buff to cream, dense microcrystalline to cryptocrystalline, occasionally fragmental to sub-chalky, occasional fossil fragments, rare stylolites, very slightly siliceous, trace pinpoint vugs, trace black asphaltic residue, dull green fluorescence, very poor very slow blue white diffuse cut.
- 11140-11170 Limestone (100); tan, occasionally medium brown, occasionally cream, dense microcrystalline to cryptocrystalline, trace fragmental, occasional fossil fragments, very slightly siliceous, tight, dull green with scattered yellow green fluorescence, trace poor to fair blue white bleeding and streaming cut.
- 11170-11200 Limestone (100); light to medium gray brown, occasionally tan, occasionally cream, firm, dense microcrystalline to cryptocrystalline, trace fragmental, occasional fossil fragments, very slightly siliceous, increasing pinpoint vuggy porosity, trace black asphaltic residue, dull green with trace yellow green fluorescence, trace poor to fair streaming cut.
- 11200-11230 Limestone (100); light to medium brown, occasionally buff to cream, firm, dense microcrystalline, occasionally cryptocrystalline, fragmental, trace fossil fragments, very slightly siliceous, rare pinpoint vugs, trace black asphaltic residue, dull green fluorescence, no shows.
- 11230-11260 Limestone (100); buff to very light brown, cream, firm to soft, cryptocrystalline to microcrystalline, dense, occasional fossil fragments, occasionally siliceous, tight, trace black asphaltic residue, dull green well trace yellow green fluorescence, no shows.
- 11260-11290 Limestone (100); light to medium gray brown, buff, occasionally cream, trace dark gray brown, in part mottled, firm, trace very firm to hard, microcrystalline to cryptocrystalline, dense, fragmental to microfragmental, trace fossil fragments (in part Bryozoan), slightly argillaceous, very slightly siliceous, occasional pinpoint vuggy

- porosity, predominantly very tight, trace black asphaltic residue, dull green fluorescence, very poor very slow blue white diffuse cut.
- 11290-11301 Limestone (100); light to medium gray brown, buff, occasionally cream, trace dark gray brown, in part mottled, firm, trace very firm to hard, microcrystalline to cryptocrystalline, dense, fragmental to microfragmental, trace fossil fragments (in part Bryozoan), slightly argillaceous, very slightly siliceous, occasional pinpoint vuggy porosity, predominantly very tight, trace black asphaltic residue, dull green fluorescence, very poor very slow blue white diffuse cut.
- 11301-11320 Limestone: brown, dark brown; microcrystalline; detrital fossiliferous Mudstone/Wackstone; clear to milky white Anhydrite inclusions, some probably burrow fill; slightly argillaceous; trace cloudy to honey brown Chert; little visible porosity; 15% of sample is very dark brown limy Shale with trace Pyrite; no show.
- 11320-11350 Limestone as next above, with > 20% dark limy Shale.
- 11350-11380 Limestone: tan, brown, dark brown; microcrystalline; detrital fossiliferous Mudstone/Wackstone; clear to white Anhydrite inclusions, some probably burrow fill; trace cloudy Chert; slightly to moderately argillaceous; little visible porosity trace asphaltic stain; no show.
- 11380-11410 Limestone: brown, dark brown, minor tan; microcrystalline; fossiliferous Mudstone; slightly argillaceous to shaly; siliceous; minor dark brown to cloudy Chert; some Anhydrite inclusions; little visible porosity; no show.
- 11410-11440 Limestone: brown, dark brown, minor tan; microcrystalline; fossiliferous Wackstone/Mudstone; slightly argillaceous; siliceous; minor dark brown to cloudy Chert; some Anhydrite inclusions; little visible porosity; no show.
- 11440-11470 Limestone: brown, dark brown, minor grey-tan; microcrystalline; fossiliferous detrital Wackstone/Packstone; some argillaceous; usually siliceous; some Anhydrite inclusions; minor dark brown Chert; little visible porosity; no show.
- 11470-11500 Limestone: cream, light grey-tan; microcrystalline; fossiliferous Mudstone, but rare chip cream pelletal Packstone; very slightly argillaceous; rare stylolite; trace dark brown Chert and white Anhydrite; little visible porosity; no show.
- 11500-11530 Cream, light grey-tan, minor dark brown; microcrystalline; usually Wackstone, but dark brown rock is detrital fossil debris Packstone;

- slightly argillaceous; some fossil debris is pyritised; little visible porosity.
- 11530-11560 Limestone: light grey-tan; microcrystalline; fossiliferous detrital Packstone/Wackstone; very slightly argillaceous; few small vugs; spotty brown stain; bleeding cut.
- 11560-11590 Limestone: light grey-tan to cream; microcrystalline; vuggy fossiliferous coated grain Packstone; fair vug enhanced intercrystalline porosity; no visible stain; no cut.
- 11590-11620 Limestone: light grey-tan to cream; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; fair vug enhanced intercrystalline porosity; no visible stain; no cut.
- 11620-11650 Limestone: light grey-tan to cream, minor brown; microcrystalline; vuggy detrital fossiliferous Wackstone/Packstone; brown is usually fossiliferous detrital Packstone with pyritised fossil debris; fair vug enhanced intercrystalline porosity; rare asphalt stain; no show; 5% of sample is white Anhydrite.
- 11650-11680 Limestone: light grey-tan, cream, white; microcrystalline; vuggy fossiliferous Packstone/Wackstone with clear Anhydrite inclusions, minor fossiliferous Mudstone; fair intercrystalline porosity; no show; 5% of sample is white Anhydrite.
- 11680-11710 Limestone: light grey-tan, cream, white; microcrystalline; vuggy fossiliferous Packstone/Wackstone with clear Anhydrite inclusions, minor fossiliferous Mudstone; fair intercrystalline porosity; no show.
- 11710-11740 Limestone: as next above, but colors more at grey-tan with some brown; first sample after trip, lots of slough; fair to good porosity; flash cut.
- 11740-11770 Limestone: grey-tan, minor cream; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; fair to good vug enhanced intercrystalline porosity; even fluorescence; flash cut; some oil washed away during sample prep.
- 11770-11800 Limestone: grey-tan, minor cream; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; fair to good vug enhanced intercrystalline porosity; even fluorescence; flash cut; some oil washed away during sample prep.
- 11800-11830 Limestone: grey-tan, minor cream; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; minor white Anhydrite (<5%); fair

- to good vug enhanced intercrystalline porosity; strong oil odor; even fluorescence; flash cut; some oil washed away during sample prep.
- 11830-11860 Limestone: grey-tan, some cream, minor grey; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; minor white Anhydrite (<5%); fair to good vug enhanced intercrystalline porosity; strong oil odor; even fluorescence; flash cut; some oil washed away during sample prep.
- 11860-11890 Limestone: grey-tan, some cream, minor grey; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; minor white Anhydrite (<5%); fair to good vug enhanced intercrystalline porosity; strong oil odor; even fluorescence; flash cut; some oil washed away during sample prep.
- 11890-11920 Limestone: grey-tan, some cream, minor grey; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; fair to good vug enhanced intercrystalline porosity; strong oil odor; even fluorescence; flash cut; some oil washed away during sample prep.
- 11920-11950 Limestone: grey-tan, some cream, minor grey; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; fair to good vug enhanced intercrystalline porosity; slight oil odor; even fluorescence; flash cut; some oil washed away during sample prep; some oil at possum-belly.
- 11950-11980 Limestone: grey-tan, some cream, minor grey; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; minor white Anhydrite; fair to good vug enhanced intercrystalline porosity; slight oil odor; even fluorescence; streaming cut; some oil washed away during sample prep; some oil at possum-belly.
- 11980-12010 Limestone: grey-tan, some cream, minor grey; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; minor white Anhydrite; fair to good vug enhanced intercrystalline porosity; slight oil odor; spotty fluorescence; bleeding cut; some oil washed away during sample prep; some oil at possum-belly.
NOTE: Samples ground quite fine; I am sure of color, but Dunham classification may not be correct.
- 12010-12040 Limestone: grey-tan, some cream, minor grey, minor white; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; fair to good vug enhanced intercrystalline porosity; slight oil odor; even fluorescence; flash cut; some oil washed away during sample prep; some oil at possum-belly
- 12040-12070 Limestone: grey-tan, some cream, minor grey, minor white;

- microcrystalline; vuggy detrital fossiliferous coated grain Packstone; fair to good vug enhanced intercrystalline porosity; slight oil odor; even fluorescence; flash cut; some oil washed away during sample prep; some oil at possum-belly.
- 12070-12100 Limestone: very light grey-tan, cream, off white; microcrystalline; Wackstone/Mudstone ?; clear calcite inclusions; few vugs; little visible porosity; mineral fluorescence only; no show
- 12100-12130 Limestone: very light grey-tan, cream, off white; microcrystalline; Wackstone/Mudstone ?; clear calcite inclusions; few vugs; little visible porosity; mineral fluorescence only; no show
- 12130-12160 Limestone: very light grey-tan, cream, off white; microcrystalline; detrital coated grain Packstone; minor fossil debris; few vugs; little visible porosity; mineral fluorescence only; no show.
- 12160-12190 Limestone: very light grey-tan, cream, off white; microcrystalline; detrital coated grain Packstone; minor fossil debris; few vugs; little visible porosity; mineral fluorescence only; no show.
- 12190-12220 Limestone: light grey-tan, cream, off white; microcrystalline; detrital coated grain Packstone; minor fossil debris; minor brown microcrystalline Mudstone; few vugs; little visible porosity; mineral fluorescence only; no show.
- 12220-12250 Limestone: light grey-tan, cream, off white; microcrystalline; detrital coated grain Packstone; minor fossil debris; minor brown microcrystalline Mudstone; few vugs; little visible porosity; mineral fluorescence only; no show.
- 12250-12280 Limestone: light grey-tan, cream, off white; microcrystalline; detrital coated grain Packstone; minor fossil debris; minor brown microcrystalline Mudstone; few vugs; little visible porosity; spotty fluorescence; trace asphalt stain; milky cut.
- 12280-12310 Limestone: light grey-tan, cream, minor off white; microcrystalline; detrital coated grain Packstone; minor fossil debris; minor brown microcrystalline Mudstone; few vugs; little visible porosity; spotty fluorescence; trace asphalt stain; milky cut.
- 12310-12340 Limestone: grey-tan, some cream, minor grey, minor white; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; fair to good vug enhanced intercrystalline porosity; spotty fluorescence; milky cut.

- 12340-12370 Limestone: grey-tan, some cream, minor grey, minor white; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; fair to good vug enhanced intercrystalline porosity; slight oil odor; spotty fluorescence; milky cut.
- 12370-12400 Limestone: grey-tan, some cream, minor white; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; fair to good vug enhanced intercrystalline porosity; slight oil odor; spotty fluorescence; milky cut.
- 12400-12430 Limestone: grey-tan, some cream, minor white; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; fair to good vug enhanced intercrystalline porosity; very faint oil odor; spotty fluorescence; milky cut.
- 12430-12460 Limestone: grey-tan, some cream, minor white; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; vugs usually filled with clear calcite; minor brown Mudstone; fair to good intercrystalline porosity; very faint oil odor; spotty fluorescence; milky to bleeding cut.
- 12460-12490 Limestone: grey-tan, some cream, minor white; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; vugs usually spar filled; minor brown Mudstone; fair to good intercrystalline porosity; very faint oil odor; spotty fluorescence; milky to bleeding cut.
- 12490-12520 Limestone: tan, grey-tan, minor cream; microcrystalline; vuggy detrital fossiliferous coated grain Packstone; vugs usually spar filled; minor brown Mudstone; little visible porosity; very faint oil odor; spotty fluorescence; milky cut.
NOTE: Most of this sample washed through screen.
- 12520-12550 Limestone: tan, light grey-tan, cream, off white; microcrystalline; vuggy fossiliferous detrital coated grain Packstone; minor brown microcrystalline Mudstone; few vugs filled with sparry calcite; fair to good vug enhanced intercrystalline porosity; spotty fluorescence; milky cut.
- 12550-12580 Limestone: tan, light grey-tan, cream, off white; microcrystalline; vuggy fossiliferous detrital coated grain Packstone; minor brown microcrystalline Mudstone; few vugs filled with sparry calcite; fair to good vug enhanced intercrystalline porosity; spotty fluorescence; milky cut.
- 12580-12610 Limestone: tan, light grey-tan, cream, off white; microcrystalline; vuggy fossiliferous detrital coated grain Packstone; few vugs filled with sparry calcite; fair to good vug enhanced intercrystalline porosity; spotty fluorescence; streaming cut.

- 12610-12640 Limestone: tan, light grey-tan, cream, off white; microcrystalline; fossiliferous detrital coated grain Packstone; fair to good intercrystalline porosity; spotty fluorescence; milky cut.
- 12640-12670 Limestone: tan, light grey-tan, off white; microcrystalline; fossiliferous detrital coated grain Packstone; fair to good intercrystalline porosity; spotty fluorescence; streaming cut.
- 12670-12700 Limestone: tan, light grey-tan, off white; microcrystalline; fossiliferous detrital coated grain Packstone; fair to good intercrystalline porosity; spotty fluorescence; milky cut.
- 12700-12730 Limestone: tan, light grey-tan, off white; microcrystalline; fossiliferous detrital coated grain Packstone; fair to good intercrystalline porosity; spotty fluorescence; milky cut.
- 12730-12760 Limestone: tan, light grey-tan, off white; microcrystalline; fossiliferous detrital coated grain Packstone; fair to good intercrystalline porosity; spotty fluorescence; milky cut.
- 12760-12797 Limestone: tan, light grey-tan, off white; microcrystalline; fossiliferous detrital coated grain Packstone; trace spar filled voids; fair to good intercrystalline porosity; spotty fluorescence; milky cut.

TD (driller) @ 12797' MD.

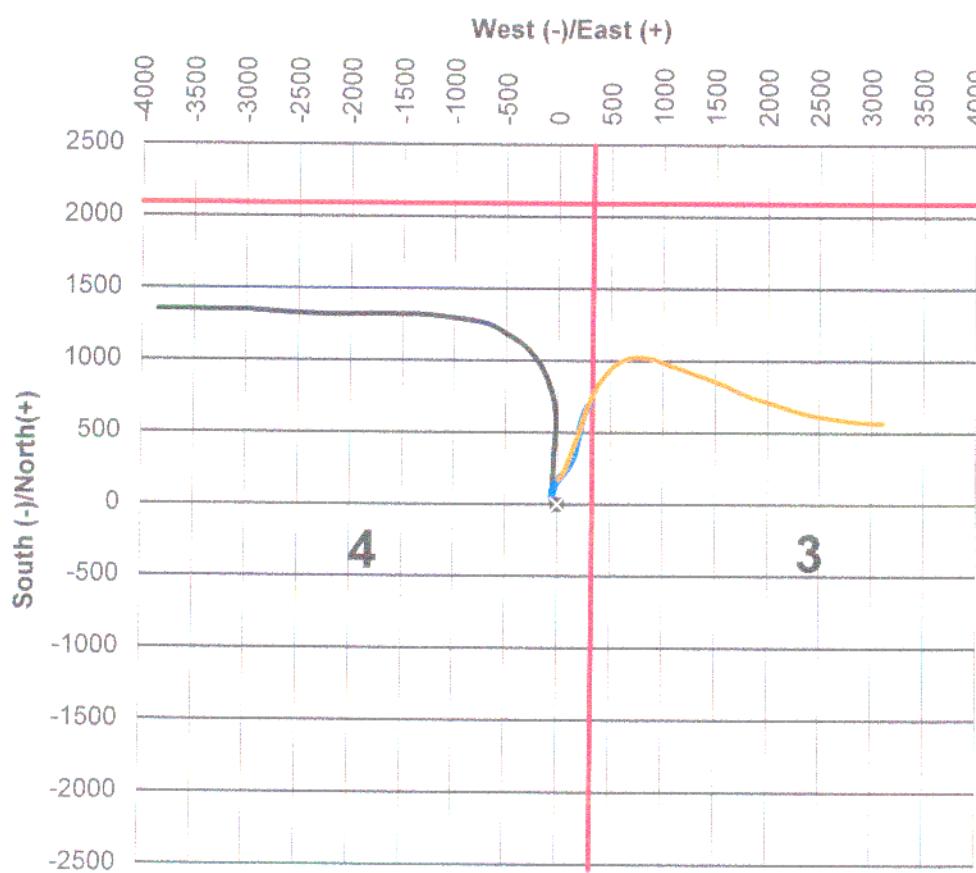
15358

Nance Petroleum Corporation
Lewis & Clark 2-4H (E&W Lateral)
McKenzie County, North Dakota

Distances are relative to the wellhead, in feet.

- ✖ Lewis and Clark 2-4H
- North line, Section 3&4
- East Line, Section 4
- West Lateral (Sidetrack-1)
- East Lateral (Sidetrack-2)
- East Lateral (Sidetrack-3)

Plan View

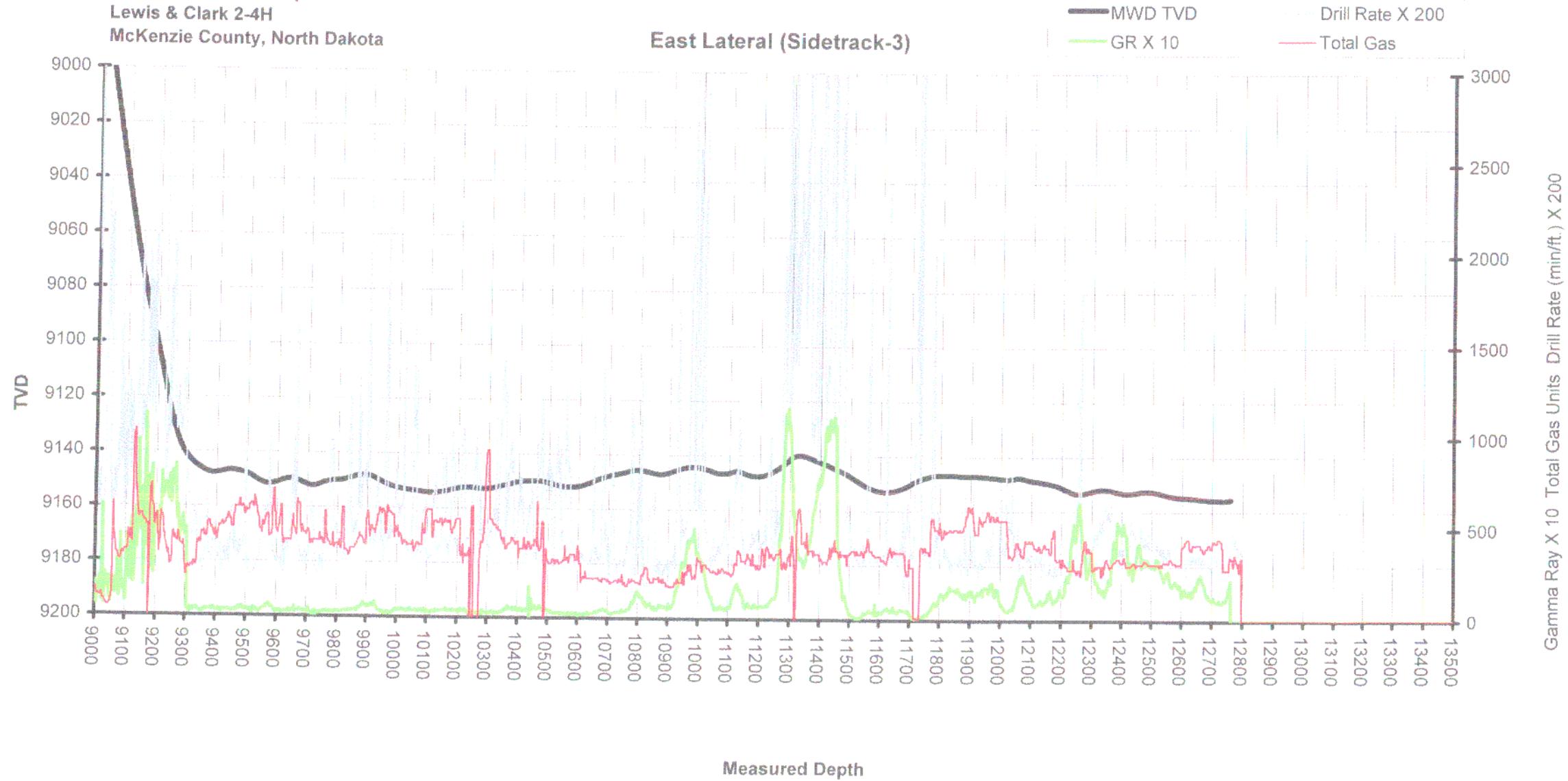


15358

Nance Petroleum Corporation
Lewis & Clark 2-4H (Sidetrack-2/3)
McKenzie County, North Dakota



Nance Petroleum Corporation
Lewis & Clark 2-4H
McKenzie County, North Dakota



15358



**CORE AND SAMPLE VERIFICATION
NORTH DAKOTA GEOLOGICAL SURVEY
SFN 17300 (1-90)**

Name of operator:	Nance Petroleum		Date:	11/06/2003
Address:	City:	State:	Zip code:	

The cores/samples for the following well have been received by the North Dakota Geological Survey.

Well name:	Lewis & Clark 2-4H	Location	SENE 4-153-101	NDGS Well Number:	15358.0
Comments:	Samples Received:	8900	--	13755	DC
--					
--					
--					
--					
--					
--					

Received by:

Signature

Kent Hollands

Print Name

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

Lynn D. Helms
DIRECTOR

<http://explorer.ndic.state.nd.us>

Bruce E. Hicks
ASSISTANT DIRECTOR

September 4, 2003

Mr. Gary Evertz
Nance Petroleum Corp.
P. O. Box 7168
Billings, MT 59103

RE: HORIZONTAL RE-ENTRY
Lewis & Clark 2-4H
SE NE 4-153N-101W
McKenzie Co.
Baker Field
Well File #15358

Dear Mr. Evertz:

Pursuant to Commission Order No. 9468, approval to deviate the well bore of 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 500 feet from the spacing unit consisting of the N2 of Sec. 3 and the N2 of Sec. 4-153N-101W. Inaccuracy of the survey equipment must be considered when determining compliance with setbacks.

A directional survey of the well showing the location of the well bore shall be filed with the Industrial Commission within 30 days after completion of the well. Such survey must be certified by a representative of the survey contractor and mailed directly to us by the contractor. Survey points shall be of such frequency to accurately determine the entire location of the well bore.

Sincerely,



Kelly Triplett
Horizontal Drilling Supervisor

KT/db
Enc.



SUNDRY NOTICES AND REPORTS ON WELLS - FORM 15358

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 5749 (07-2000)



Well File No.
15358

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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date September 25, 2003
<input type="checkbox"/> Report of Work Done	Date Work Completed
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	
Approximate Start Date	

<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
<input checked="" type="checkbox"/> Other	CHANGE TD ON 2ND LATERAL

Well Name and Number

LEWIS AND CLARK 2-4H

Footages	Qtr-Qtr	Section	Township	Range
2094 F N L	332 F E L	SENE	4	153 N 101 W
Field	Pool		County	MCKENZIE
BAKER	MADISON			

24-HOUR PRODUCTION RATE

Before	After
Oil	Bbls
Water	Bbls
Gas	MCF

Name of Contractor(s)

Address	City	State	Zip Code
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DETAILS OF WORK

Nance Petroleum Corporation requests approval to revise the drilling program for our second lateral. The second lateral will exit the casing to the NE and turn to an azimuth of 105 degrees. The entire lateral will be within the legal set back of 500'. Proposed BHL is 1800' FNL and 2200' FEL.

See attached plan.

Company NANCE PETROLEUM CORPORATION	Telephone Number 406-245-6248	
Address P.O. BOX 7168		
City BILLINGS	State MT	Zip Code 59103-7168
Signature <i>Gary L Evertz</i>	Printed Name Gary L Evertz	
Title VP Operations	Date August 29, 2003	

FOR STATE USE ONLY

<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date SEP 04 2003	
By <i>Kelly R. Stoll</i>	
Title Horizontal Drilling Supervisor	



INTEQ

NANCE PETROLEUM CORPORATION

Location: NORTH DAKOTA
 Field: MCKENZIE COUNTY
 Installation: SEC.4-T153N-R101W

Slot: Slot #1 LEWIS & CLARK
 Well: LEWIS & CLARK 2-4H

Created by : Planner
 Date plotted : 26-Aug-2003
 Plot reference is LEWIS & CLARK 2-4H (PWP#1).
 Coordinates are in feet reference Slot #1 LEWIS & CLARK.
 True Vertical Depths are reference Rig Datum.
 Measured Depths are reference Rig Datum.
 Rig Datum: Datum #1
 Rig Datum to Mean Sea Level: 0.00.
 Plot North is aligned to TRUE North.

Scale 1 cm = 250 ft

East (feet) ->

-2500 -2000 -1500 -1000 -500 0 500 1000 1500 2000 2500 3000 3500 4000

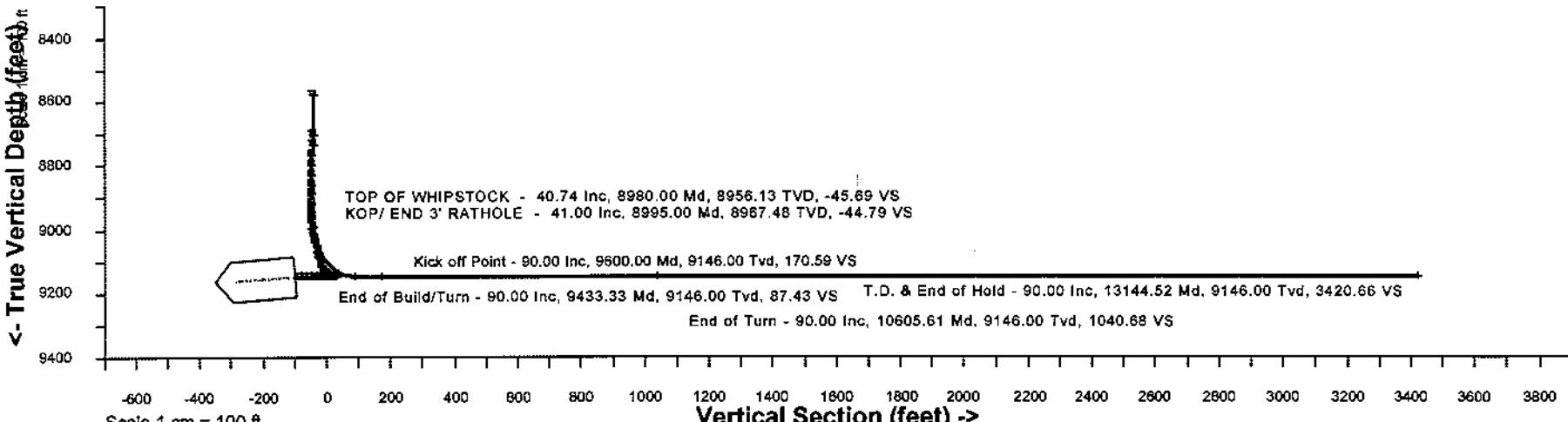
<. North(feet) 1 cm = 250 ft

WELL PROFILE DATA									
Point	MD	Inc	Dir	TVD	North	East	deg/100ft	V. Sect	
Tie on	8980.00	40.74	0.33	8958.13	52.24	-50.37	0.00	-45.69	
KOP	8995.00	41.00	0.32	8987.48	62.06	-50.31	1.71	-44.79	
Target	9433.33	90.00	25.00	9146.00	431.63	50.52	12.18	87.43	
KOP	9600.00	90.00	25.00	9146.00	582.68	120.96	0.00	170.59	
End of Turn	10805.61	90.00	105.45	9146.00	970.32	960.84	8.00	1040.68	
T.D. & Target	13144.52	90.00	105.45	9146.00	294.00	3408.00	0.00	3420.66	

End of Turn - 9146.00 Tvd, 970.32 N 960.84 E
 End of Turn - 9146.00 Tvd, 431.63 N 50.52 E
 T.D. & End of Hold - 9146.00 Tvd, 294.00 N 3408.00 E
 Surface 0.00 N, 0.00 E

SHL -2094'FNL & 332' FEL SEC 4
 BHL - 2200'FEL & 1800'FNL -

Sec3



Azimuth 85.07 with reference 0.00 N, 0.00 E from Slot #1 LEWIS & CLARK

NANCE PETROLEUM CORPORATION,Slot
 #1 LEWIS & CLARK
 SEC.4-T153N-R101W,
 MCKENZIE COUNTY,NORTH DAKOTA

Wellbore: LEWIS & CLARK 2-4H (PWB)
 East lateral
 Wellpath: LEWIS & CLARK 2-4H (PWP#1)
 Last Revised: 26-Aug-2003



Wellbore

Name	Created	Last Revised
LEWIS & CLARK 2-4H (PWB) East lateral	26-Aug-2003	26-Aug-2003

Well

Name	Government ID	Last Revised
LEWIS & CLARK 2-4H		19-Feb-2003

Slot

Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot#1 LEWIS & CLARK	421880.7886	1190660.8303	N48 6 44.8812	W103 416.1923	3028.00N	332.00W

Installation

Name	Eastings	Northings	Coord System Name	North Alignment
SEC.4-T153N-R101W	1190867.365	418841.853	ND83-NF on NORTH AMERICAN DATUM 1983 datum	True

Field

Name	Eastings	Northings	Coord System Name	North Alignment
MCKENZIE COUNTY	1968500.000	3519779.648	ND83-NF on NORTH AMERICAN DATUM 1983 datum	True

Created By

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Comments

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All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #1 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 85.07 degrees

Bottom hole distance is 3420.66 Feet on azimuth 85.07 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION, Slot
 #1 LEWIS & CLARK
 SEC.4-T153N-R101W,
 MCKENZIE COUNTY, NORTH DAKOTA

Wellbore: LEWIS & CLARK 2-4H (PWB)
 East lateral
 Wellpath: LEWIS & CLARK 2-4H (PWP#1)
 Last Revised: 26-Aug-2003



Wellpath (Toolface) Report

MD[ft]	Inc[deg]	Dir[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section [ft]	Toolface [ft]
8575.00	0.60	237.19	8573.80	35.40S	38.30W	0.00	-41.20	27.26
8701.00	1.00	248.50	8699.75	36.16S	39.88W	0.34	-42.84	108.14
8733.00	1.40	313.90	8731.78	35.99S	40.42W	4.19	-43.36	37.50
8765.00	5.00	341.60	8763.73	34.40S	41.14W	11.93	-43.95	11.63
8797.00	11.00	348.00	8795.40	30.08S	42.22W	18.93	-44.65	2.74
8829.00	17.20	349.00	8826.42	22.45S	43.76W	19.39	-45.52	7.79
8860.00	23.30	351.10	8855.49	11.88S	45.58W	19.81	-46.43	10.23
8892.00	28.00	352.90	8884.33	1.84N	47.49W	14.85	-47.16	13.82
8924.00	33.40	355.30	8911.84	18.08N	49.14W	17.30	-47.41	18.74
8956.00	38.80	358.20	8937.69	36.89N	50.18W	17.70	-46.82	35.83
8980.00	40.74	0.33	8956.13	52.24N	50.37W	9.89	-45.69	-1.16
8995.00	41.00	0.32	8967.48	62.06N	50.31W	1.71	-44.79	31.34
9000.00	41.52	0.80	8971.24	65.36N	50.28W	12.18	-44.48	30.98
9100.00	52.27	8.69	9039.52	137.87N	43.82W	12.18	-31.81	25.55
9200.00	63.42	14.54	9092.69	220.55N	26.56W	12.18	-7.50	22.43
9300.00	74.75	19.32	9128.35	309.69N	0.73E	12.18	27.35	20.71
9400.00	86.18	23.61	9144.89	401.27N	36.81E	12.18	71.16	20.00
9433.33	90.00	25.00	9146.00	431.63N	50.52E	12.18	87.43	0.00
9500.00	90.00	25.00	9146.00	492.05N	78.70E	0.00	120.70	0.00
9600.00	90.00	25.00	9146.00	582.68N	120.96E	0.00	170.59	90.00
9700.00	90.00	33.00	9146.00	670.07N	169.40E	8.00	226.36	90.00
9800.00	90.00	41.00	9146.00	749.87N	229.53E	8.00	293.13	90.00
9900.00	90.00	49.00	9146.00	820.52N	300.19E	8.00	369.60	90.00
10000.00	90.00	57.00	9146.00	880.66N	379.98E	8.00	454.27	90.00
10100.00	90.00	65.00	9146.00	929.10N	467.38E	8.00	545.50	90.00
10200.00	90.00	73.00	9146.00	964.91N	560.66E	8.00	641.51	90.00
10300.00	90.00	81.00	9146.00	987.38N	658.01E	8.00	740.44	90.00
10400.00	90.00	89.00	9146.00	996.09N	757.55E	8.00	840.36	90.00
10500.00	90.00	97.00	9146.00	990.86N	857.34E	8.00	939.33	90.00
10600.00	90.00	105.00	9146.00	971.80N	955.42E	8.00	1035.41	90.00
10605.61	90.00	105.45	9146.00	970.32N	960.84E	8.00	1040.68	0.00
10700.00	90.00	105.45	9146.00	945.18N	1051.81E	0.00	1129.16	0.00
10800.00	90.00	105.45	9146.00	918.54N	1148.20E	0.00	1222.90	0.00
10900.00	90.00	105.45	9146.00	891.90N	1244.59E	0.00	1316.64	0.00
11000.00	90.00	105.45	9146.00	865.26N	1340.97E	0.00	1410.38	0.00
11100.00	90.00	105.45	9146.00	838.63N	1437.36E	0.00	1504.12	0.00
11200.00	90.00	105.45	9146.00	811.99N	1533.74E	0.00	1597.86	0.00
11300.00	90.00	105.45	9146.00	785.35N	1630.13E	0.00	1691.60	0.00
11400.00	90.00	105.45	9146.00	758.71N	1726.52E	0.00	1785.34	0.00
11500.00	90.00	105.45	9146.00	732.07N	1822.91E	0.00	1879.08	0.00
11600.00	90.00	105.45	9146.00	705.43N	1919.29E	0.00	1972.82	0.00
11700.00	90.00	105.45	9146.00	678.80N	2015.68E	0.00	2066.56	0.00
11800.00	90.00	105.45	9146.00	652.16N	2112.07E	0.00	2160.30	0.00
11900.00	90.00	105.45	9146.00	625.52N	2208.45E	0.00	2254.04	0.00
12000.00	90.00	105.45	9146.00	598.88N	2304.84E	0.00	2347.75	0.00
12100.00	90.00	105.45	9146.00	572.24N	2401.22E	0.00	2441.52	0.00
12200.00	90.00	105.45	9146.00	545.60N	2497.61E	0.00	2535.26	0.00
12300.00	90.00	105.45	9146.00	518.97N	2594.00E	0.00	2629.00	0.00
12400.00	90.00	105.45	9146.00	492.33N	2690.39E	0.00	2722.74	0.00
12500.00	90.00	105.45	9146.00	465.69N	2786.77E	0.00	2816.48	0.00
12600.00	90.00	105.45	9146.00	439.05N	2883.16E	0.00	2910.23	0.00

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #1 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 85.07 degrees

Bottom hole distance is 3420.66 Feet on azimuth 85.07 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION, Slot
 #1 LEWIS & CLARK
 SEC.4-T153N-R101W,
 MCKENZIE COUNTY, NORTH DAKOTA

Wellbore: LEWIS & CLARK 2-4H (PWB)
 East lateral
 Wellpath: LEWIS & CLARK 2-4H (PWP#1)
 Last Revised: 26-Aug-2003



Wellpath (Toolface) Report

MD[ft]	Inc[deg]	Dir[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section [ft]	Toolface
12700.00	90.00	105.45	9146.00	412.41N	2979.55E	0.00	3003.97	0.00
12800.00	90.00	105.45	9146.00	385.77N	3075.93E	0.00	3097.71	0.00
12900.00	90.00	105.45	9146.00	359.13N	3172.32E	0.00	3191.45	0.00
13000.00	90.00	105.45	9146.00	332.50N	3268.70E	0.00	3285.19	0.00
13100.00	90.00	105.45	9146.00	305.86N	3365.09E	0.00	3378.93	0.00
13144.52	90.00	105.45	9146.00	294.00N	3408.00E	0.00	3420.66	

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #1 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 85.07 degrees

Bottom hole distance is 3420.66 Feet on azimuth 85.07 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION,Slot
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY,NORTH DAKOTA

Wellbore: LEWIS & CLARK 2-4H (PWB)
East lateral
Wellpath: LEWIS & CLARK 2-4H (PWP#1)
Last Revised: 26-Aug-2003



Comments

MD(ft)	TVD(ft)	North(ft)	East(ft)	Comment
0.00				
8980.00	8956.13	52.24N	50.37W	TOP OF WHIPSTOCK
8995.00	8967.48	62.06N	50.31W	KOP/ END 3' RATHOLE

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #1 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 85.07 degrees

Bottom hole distance is 3420.66 Feet on azimuth 85.07 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ



A Subsidiary of
St. Mary Land & Exploration Co.

P.O. BOX 7168 • BILLINGS, MT 59103
550 N. 31ST ST, SUITE 500 • BILLINGS, MT 59101
PHONE: (406) 245-6248 • FAX: (406) 245-9106



July 28, 2003

NDIC – Oil & Gas Division
600 East Blvd, Dept 405
Bismarck ND 58505-0840

Re: Completion Report
Lewis & Clark 2-4H
Well File 15358

NDIC:

After our submission of the Form 6 Completion Report on the above referenced well, it was determined that we had erroneously reported the footage measurements of the lateral legs at TD. The attached Form 6 shows the corrected footages. The original Form 6 reports should be replaced with the enclosed corrected reports.

Sorry for the confusion. Please let me know if you have any questions.

Respectfully submitted,

NANCE PETROLEUM CORPORATION

A handwritten signature in black ink that reads "John Steele".

John Steele
Operations Engineer

Enclosure



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 (03-2000)

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



Well File No. 15358

Designate Type of Completion				Well Name and Number LEWIS & CLARK 2-4H
<input checked="" type="checkbox"/> Oil Well	<input type="checkbox"/> Gas Well	<input type="checkbox"/> Recompletion	<input type="checkbox"/> SWD Well	
<input type="checkbox"/> EOR Well	<input type="checkbox"/> Deepened Well	<input type="checkbox"/> Water Supply Well		
<input type="checkbox"/> Other:				Spacing Unit Description N/2 Sec 3, NE/2 Sec 4 - T153N-R101W, ICD 9448
Operator Nance Petroleum Corporation		Telephone Number (406) 245-6248	Field Baker	
Address PO Box 7168		Pool Madison		
City Billings	State MT	Zip Code 59103	Permit Type <input type="checkbox"/> Wildcat	<input checked="" type="checkbox"/> Development <input type="checkbox"/> Extension

LOCATION OF WELL

At Surface 2094 F N L		Qtr-Qtr se ne	Section 4	Township 153 N	Range 101 W	County McKenzie
At Top Producing Interval, Reported Below 1703 F N L		Qtr-Qtr se ne	Section 4	Township 153 N	Range 101 W	Number of DSTs Run (See Back) none
At Total Depth 744 F N L		Qtr-Qtr nw nw	Section 4	Township 153 N	Range 101 W	Directional Survey Run? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Spud Date March 13, 2003	Date TD Reached May 3, 2003	Drilling Contractor and Rig Number Nabors # 417		KB Elevation 1872	Total Depth (Feet) 13755 MD	9136 TVD
Producing Interval(s), This Completion, Top, Bottom, Name (MD and TVD) Nesson open hole lateral 9375-13755 MD					Plug Back TD (Feet) (See Back) MD TVD	
Type of Electric and Other Logs Run (See Instructions) Neutron/Density, Laterolog Array, FMI, CBL/VDL/CCL/GR			Was Well Cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes List Intervals:			

CASING RECORD (Report all strings set in well)

Casing Size (Inches)	Measured Depth Set (Feet)	Hole Size (Inches)	Weight (Lbs/Ft)	Sacks Cement	Top of Cement surface
10 3/4	3008	13 3/4	40.5	810	
7	9224	9 7/8	26-32	790	4910 (CBL)
7 5/8			47.1		

LINER RECORD

TUBING RECORD

Liner Size (Inches)	Hole Size (Inches)	Top (MD) (Feet)	Bottom (MD) (Feet)	Sacks Cement	Size (Inches)	Depth Set (MD) (Ft)	Anchor Set (MD) (Ft)	Packer Set (MD) (Ft)
					2 7/8	7073	7038	

PERFORATION RECORD

PERFORATION RECORD				
Interval (MD)	Holes Per Foot	Potential (Oil/Water)	Acid, Frac, Sqz, Etc.	Amount and Kind of Material Used
No perfs			acidized	16,000 gal 20% HCl in eight stages
Open hole lateral in Nesson				job pumped after drlg, with drlg rig still on location
				6-8.5 bpm, 850-2200 psi

PRODUCTION

Date of First Production Through Permanent Wellhead June 6, 2003		Producing Method (Flowing, Gas Lift, Pumping - Size & Type of Pump) 2 1/4" tubing barrel pump			Well Status (Producing or Shut-In) producing		
Date of Test June 26, 2003	Hours Tested 240	Choke Size	Production for Test	Oil (Bbls) 2334	Gas (MCF) 610	Water (Bbls) 1651	Oil Gravity - API (Corr.) 38.6 °
Flowing Tubing Pressure (PSI)	Casing Pressure (PSI)	Calculated 24-Hour Rate		Oil (Bbls) 233	Gas (MCF) 61	Water (Bbls) 165	Gas-Oil Ratio 262
Test Witnessed By Dan's Production	Oil Purchaser Nexen Marketing		Oil Transporter Diamond B Trucking			Disposition of Gas Bear Paw	

GEOLOGICAL MARKERS

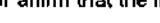
PLUG BACK INFORMATION

DRILL STEM TEST DATA, ADDITIONAL INFORMATION, AND/OR LIST OF ATTACHMENTS

The initial lateral was TD'd as follows:

11605 MD, 9161 TVD, 863' FNL - 2042' FEL, nw ne Section 4-T153N-101W.

The hole was then sidetracked from 10350' to the TD at 13755', as reported on the first page of this form.

I hereby swear or affirm that the information herein provided is true, complete and correct as determined from all available records.			Date July 30, 2003
Signature 	Printed Name John Steele	Title Operations Engineer	
Above Signature Witnessed By			
Witness Signature 	Witness Printed Name Loren Prigan	Witness Title Production Assistant	



NANCE PETROLEUM CORPORATION

WELL: LEWIS & CLARK 2-4H FIELD: BAKER

3008'

10 3/4"

LOCATION: SENE Sec 4 T153N R101W
2094' FNL & 332' FEL, SEC 4 T153N R101W
CSG POINT 9224' MD, 9085' TVD: 1845' FNL & 371' FEL of SEC 4, T153N R101W
END OF LATERAL 1, 11605' MD, 9161' TVD: 863' FNL & 2042' FEL OF SEC 4
END OF SIDETRACK 1, 13755' MD, 9136' TVD: 744' FNL & 1117' FEL OF SEC 4

ACCTG CODE 61180 STATUS: Pumping oil producer

4910'

TOC

ELEVATION: KB - 1872' GL - 1851' (21' KB) STATE FILE NO. 15358

SPUD DATE: 3/13/03 COMP DATE: 6/6/03

ROTARY TD: HORIZONTAL LATERAL 13755' MD, 19136' TVD

SURF CSG: 10 3/4" 40.5# J-55 SET @ 3008'. CMT W/ 610 SX MIDCON II & 200 SX PREM PLUS

PROD CSG: 7" & 7 5/8" 29, 32 & 47.1 #FT SET @ 9224' MD, 9096' TVD.
CMT IN ONE STAGE, W/ 290 SX PREM LITE, THEN 500SX PREM
CASING SHOE IS AT 67 DEGREES.

TUBING & BHA

219 ft 2 7/8" L-80 tubing
2 7/8" x 4" tubing sub
2 1/4" tubing pump barrel
MSN w/ 30' x 1 1/4" diptube - 6999'
2 7/8" x 6" perforated sub
1 ft 2 7/8" L-80 tubing
Basin 7" TAC - 7038'
1 ft 2 7/8" L-80 tubing
bull plug - EOT 7073'

RODS & PUMP

1 1/2" x 30' polish rod
1" x 4" pony rod (4')
100 - 1" Norris 97 rods (2500')
98 - 7/8" Norris 97 rods (2450')
54 - 3/4" Norris 97 rods (1350')
24 - 1" scrprd Norris 97 rods (600')
1" x 2' Norris 97 pony rod (2')
1 1/2" x 26' piston steel polish rod (26')
2 1/4" x 4' barrel plunger

6999'

SN

192" SL - 7 SPM

7" & 7 5/8" SET @

7038'

<<

>>

AC

SALT DEPTH

DUNHAM 6626'
PINE 6986' - 7036'
CHARLES 8252' - 8921'

ID 6.276", Drift 6.15 26# HCL-8C 6517'

ID 6.094", Drift 6.00 32# HCL-8C 7130'

26# HCL-8C 8119'

ID 6.375", Drift 6.25 47.1# Q-12/7 5/8" 8957'

BAKER SLOPE N 8999'-9006'

26# HCL-8C 9224'

WELLHEAD: CSGHD CIW 11" 3M X 10 3/4" SOW.

PUMP UNIT: Lufkin 912-305-192 w/ Ajax DP-80
w/ 33" PU and 19" engine sheave.

8575'

KOP (BUILD RATE 10 TO 19 DEG/100') HORIZONTAL LATERAL IS IN THE NESSON FORMATION

8999'-9006'
SLOPE NIPPLE

7" & 7 5/8" CSG @ 9224' MD, 9085' TVD (IN MIDALE) SET @ 67 DEG.

9224'

Open hole bit size: 6"

HORIZONTAL SIDETRACK 1 BEGIN 10350', END 13755' MD, 9136' TVD

9375' MD, FIRST PENETRATION OF NESSON

HORIZONTAL LATERAL 1 END 11605' MD, 9161' TVD

5621' OF OPEN HOLE LATERAL

PREPARED BY: GARY L. EVERTZ DATE: 05/20/03

Updated by: John Steele

LEWIS & CLARK 2-4H.XLS

Revised 02-2001

FOR STATE USE ONLY

Well File No.

15358

**INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION**

VERBAL APPROVAL TO PURCHASE AND TRANSPORT OIL

Operator Nance Petroleum Corp.		Operator Representative Kaylene Sim			
Well Name or Number Lewis and Clark #2-4H		Telephone Number (701) 774-3273			
Location of Well	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County McKenzie
Field Baker	Pool Madison	Date of First Production Through Permanent Wellhead	June 9, 2003	Is this the First Sales? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Purchaser **Nexen Marketing USA Inc** Transporter **Diamond B Trucking, Inc**

Comments
Form 6 received 7/14/2003.

Date Approved
July 16, 2003
By 
Mark Bohrer
Title
Petroleum Engineer

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.
15358

NDIC CTB No.

115358

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND FOUR COPIES.

Well Name and Number LEWIS & CLARK 2-4H	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County MCKENZIE
Operator NANCE PETROLEUM CORPORATION	Telephone # 406-245-6248		Field BAKER		
Address P O BOX 7168	City BILLINGS		State MT	Zip Code 59103-7168	

Name of First Purchaser Nexen Marketing USA Inc	Telephone # 403-699-4059	% Purchased 100	Date Effective June 6, 2003
Principal Place of Business 5660 Greenwood Plaza Blvd., #230	City Greenwood Village	State CO	Zip Code 80111
Field Address PO Box 567	City Plentywood	State MT	Zip Code 59254
Name of Transporter Diamond B Trucking Inc. (TR)	Telephone Number 701-245-6423	% Transported 100	Date Effective June 6, 2003
Address PO Box 445	City Westhope	State ND	Zip Code 58793
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	0	

I hereby swear or affirm that the information herein provided is true, complete and correct as determined from all available records.	Date July 10, 2003
---	------------------------------

Signature <i>Amanda Rambur</i>	Printed Name Amanda Rambur	Title Marketing Representative
-----------------------------------	--------------------------------------	--

Above Signature Witnessed By	Witness Signature <i>Terry Holzwarth</i>	Witness Printed Name Terry Holzwarth	Witness Title VP - Acquisitions
------------------------------	---	--	---

FOR STATE USE ONLY

Date Approved <i>7-14-03</i>
By <i>Amanda Rambur</i>
Title <i>Oil & Gas Production Analyst</i>



Revised 02-2001

FOR STATE USE ONLY

Well File No.
15358

**INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION**

Tight Hole

VERBAL APPROVAL TO PURCHASE AND TRANSPORT OIL

Operator Nance Petroleum Corp.		Operator Representative Melinda Dokken			
Well Name or Number Lewis and Clark #2-4H					Telephone Number (701) 774-3273
Location of Well	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County McKenzie
Field Baker	Pool Madison	Date of First Production Through Permanent Wellhead June 9, 2003			Is this the First Sales? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Purchaser **Nexen Marketing USA Inc** Transporter **Diamond B Trucking, Inc**

Comments
Form 6 is supposed to be mailed in today.

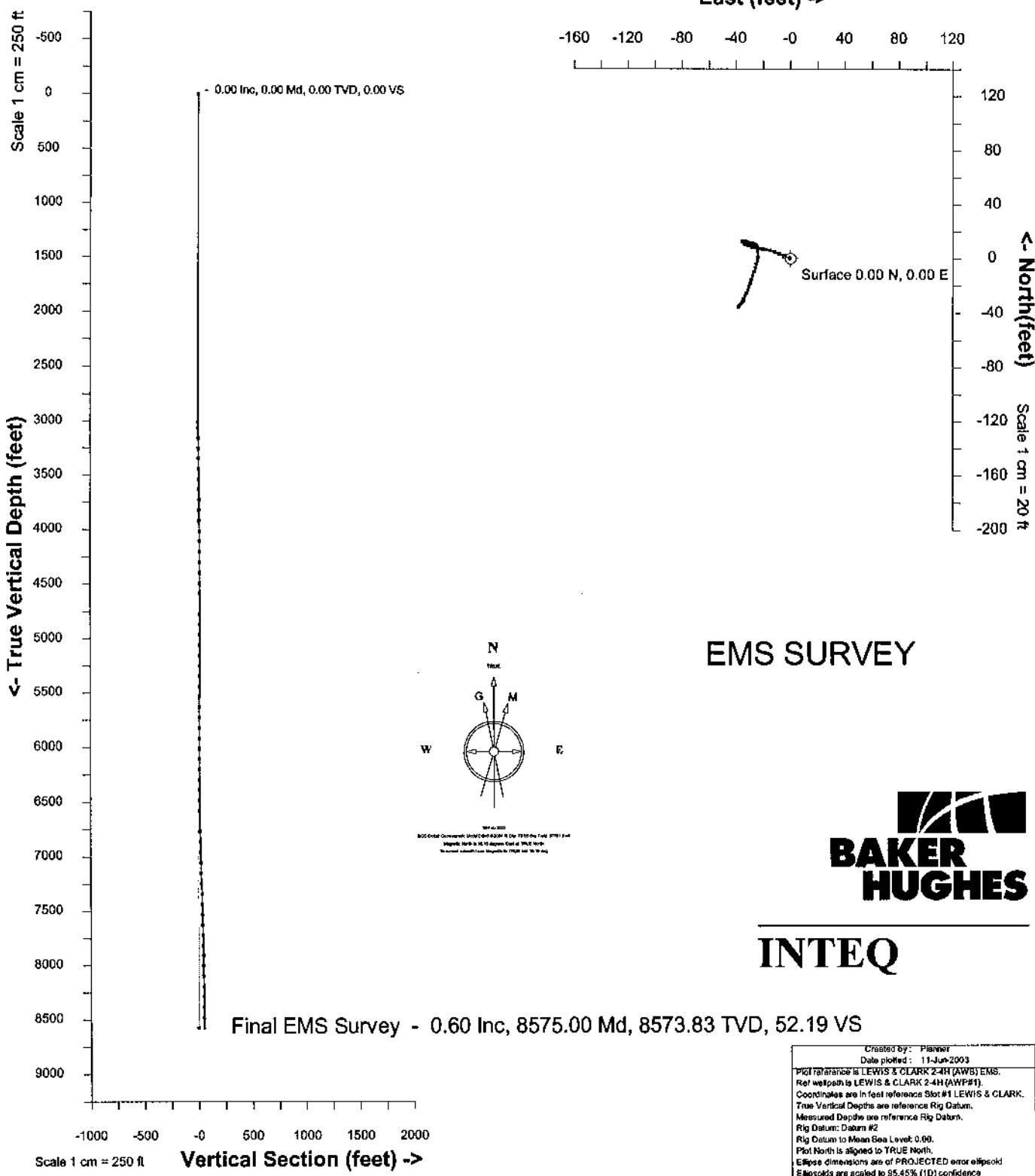
Date Approved	July 10, 2003
By	Mark Bohrer
Title	Petroleum Engineer

15358

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NANCE PETROLEUM CORPORATION

Location: NORTH DAKOTA	Slot: Slot #1 LEWIS & CLARK
Field: MCKENZIE COUNTY	Well: LEWIS & CLARK 2-4H
Installation: SEC.4-T153N-R101W	



NANCE PETROLEUM CORPORATION, Slot Wellbore: LEWIS & CLARK 2-4H (AWB)
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY, NORTH DAKOTA

EMS

Wellpath: LEWIS & CLARK 2-4H (AWP#1)



Date Printed: 10-Jun-2003

INTEQ

Wellbore

Name	Created	Last Revised
LEWIS & CLARK 2-4H (AWB) EMS	10-Jun-2003	10-Jun-2003

Well

Name	Government ID	Last Revised
LEWIS & CLARK 2-4H		19-Feb-2003

Slot

Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #1 LEWIS & CLARK	421880.7886	1190660.8303	N48 6 44.8812	W103 416.1923	3028.00N	332.00W

Installation

Name	Easting	Northing	Coord System Name	North Alignment
SEC.4-T153N-R101W	1190867.3654	418841.8538	ND83-NF on NORTH AMERICAN DATUM 1983 datum	True

Field

Name	Easting	Northing	Coord System Name	North Alignment
MCKENZIE COUNTY	1968500.0000	3519779.6485	ND83-NF on NORTH AMERICAN DATUM 1983 datum	True

Created By

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Comments

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All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 227.25 degrees

Bottom hole distance is 52.19 Feet on azimuth 227.25 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION, Slot Wellbore: LEWIS & CLARK 2-4H (AWB)
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY, NORTH DAKOTA

EMS

Wellpath: LEWIS & CLARK 2-4H (AWP#1)



Date Printed: 10-Jun-2003

INTEQ

Wellpath Report

MD(ft)	Inc[deg]	Dir[deg]	TVD(ft)	North(ft)	East(ft)	Dogleg [deg/100ft]	Vertical Section(ft)
0.00	0.00	0.00	0.00	0.00N	0.00E	0.00	0.00
3008.00	0.00	0.00	3008.00	0.00N	0.00E	0.00	0.00
3065.00	2.54	294.48	3064.98	0.52N	1.15W	4.46	0.49
3160.00	2.30	291.22	3159.90	2.09N	4.84W	0.29	2.14
3255.00	2.27	291.10	3254.82	3.45N	8.38W	0.03	3.81
3350.00	2.17	289.56	3349.75	4.73N	11.82W	0.12	5.47
3445.00	1.90	284.37	3444.69	5.72N	15.05W	0.34	7.16
3540.00	1.69	282.59	3539.64	6.42N	17.94W	0.23	8.81
3630.00	1.53	278.14	3629.61	6.88N	20.42W	0.23	10.33
3730.00	1.36	284.45	3729.58	7.37N	22.89W	0.23	11.81
3825.00	1.24	279.04	3824.55	7.81N	25.00W	0.18	13.06
3920.00	1.05	286.72	3919.53	8.22N	26.85W	0.26	14.13
4015.00	0.94	282.56	4014.52	8.64N	28.44W	0.14	15.02
4110.00	0.95	291.19	4109.51	9.10N	29.94W	0.15	15.81
4205.00	0.86	289.29	4204.49	9.62N	31.34W	0.10	16.49
4300.00	0.54	292.48	4299.49	10.02N	32.43W	0.34	17.01
4395.00	0.42	287.22	4394.48	10.30N	33.18W	0.13	17.37
4490.00	0.38	316.01	4489.48	10.63N	33.73W	0.21	17.55
4585.00	0.38	322.21	4584.48	11.10N	34.14W	0.04	17.53
4775.00	0.38	309.73	4774.47	12.00N	35.01W	0.04	17.56
4870.00	0.17	328.45	4869.47	12.32N	35.33W	0.24	17.58
4965.00	0.09	89.11	4964.47	12.45N	35.33W	0.24	17.49
5060.00	0.21	74.57	5059.47	12.49N	35.09W	0.13	17.28
5155.00	0.30	78.03	5154.47	12.59N	34.67W	0.10	16.91
5250.00	0.60	87.09	5249.47	12.67N	33.93W	0.32	16.32
5345.00	0.76	97.16	5344.46	12.61N	32.81W	0.21	15.53
5440.00	0.91	110.56	5439.45	12.27N	31.48W	0.26	14.79
5530.00	0.86	109.72	5529.44	11.79N	30.18W	0.06	14.15
5630.00	0.77	108.46	5629.43	11.32N	28.83W	0.09	13.48
5725.00	0.68	112.60	5724.42	10.91N	27.71W	0.11	12.94
5820.00	0.62	119.81	5819.42	10.43N	26.74W	0.11	12.55
5915.00	0.50	126.62	5914.41	9.93N	25.96W	0.14	12.32
6010.00	0.30	114.57	6009.41	9.58N	25.40W	0.23	12.15
6105.00	0.03	106.71	6104.41	9.47N	25.15W	0.28	12.04
6200.00	0.27	138.53	6199.41	9.30N	24.98W	0.26	12.03
6295.00	0.28	161.81	6294.41	8.91N	24.76W	0.12	12.13
6390.00	0.61	161.12	6389.41	8.21N	24.52W	0.35	12.43
6485.00	0.76	173.70	6484.40	7.10N	24.29W	0.22	13.01
6580.00	1.24	175.00	6579.38	5.45N	24.13W	0.51	14.02
6770.00	1.52	180.29	6769.33	0.89N	23.97W	0.16	17.00
6865.00	1.57	193.94	6864.30	1.64S	24.29W	0.39	18.94
6960.00	1.74	195.60	6959.26	4.29S	24.99W	0.19	21.26
7055.00	1.84	196.49	7054.21	7.14S	25.81W	0.11	23.80
7150.00	1.81	200.47	7149.16	10.01S	26.76W	0.14	26.45
7245.00	1.85	201.49	7244.11	12.84S	27.85W	0.05	29.17
7340.00	1.66	197.45	7339.07	15.58S	28.82W	0.24	31.74
7435.00	1.65	193.42	7434.03	18.22S	29.56W	0.12	34.07
7530.00	1.63	199.54	7528.99	20.83S	30.32W	0.19	36.41
7625.00	1.34	203.14	7623.96	23.12S	31.21W	0.32	38.62
7720.00	1.55	205.52	7718.93	25.30S	32.20W	0.23	40.82
7815.00	1.49	201.28	7813.89	27.61S	33.20W	0.13	43.13
7910.00	0.98	205.71	7908.87	29.50S	34.01W	0.55	44.99

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 227.25 degrees

Bottom hole distance is 52.19 Feet on azimuth 227.25 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION, Slot Wellbore: LEWIS & CLARK 2-4H (AWB)
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY, NORTH DAKOTA

EMS

Wellpath: LEWIS & CLARK 2-4H (AWP#1)

Date Printed: 10-Jun-2003



Wellpath Report

MD[ft]	Inc[deg]	Dir[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
8005.00	0.84	204.22	8003.86	30.86S	34.64W	0.16	46.39
8100.00	0.77	216.48	8098.85	32.01S	35.31W	0.20	47.66
8195.00	0.63	217.86	8193.84	32.94S	36.01W	0.15	48.80
8290.00	0.68	225.84	8288.84	33.74S	36.73W	0.11	49.88
8385.00	0.42	213.69	8383.83	34.43S	37.33W	0.30	50.78
8480.00	0.35	220.57	8478.83	34.94S	37.71W	0.09	51.41
8575.00	0.60	237.19	8573.83	35.43S	38.32W	0.30	52.19

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Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION, Slot Wellbore: LEWIS & CLARK 2-4H (AWB)
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY,NORTH DAKOTA

EMS
Wellpath: LEWIS & CLARK 2-4H (AWP#1)

Date Printed: 10-Jun-2003



Comments

MD(ft)	TVD(ft)	North(ft)	East(ft)	Comment
8575.00	8573.83	35,43S	38.32W	Final EMS Survey

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 227.25 degrees

Bottom hole distance is 52.19 Feet on azimuth 227.25 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ



1551
1X
INTEQ

NANCE PETROLEUM CORPORATION

Location: NORTH DAKOTA
Field: MCKENZIE COUNTY
Installation: SEC.4-T153N-R101W

Slot: Slot #1 LEWIS & CLARK
Well: LEWIS & CLARK 2-4H

Scale 1 cm = 200 ft

East (feet) ->

-4800 -4400 -4000 -3600 -3200 -2800 -2400 -2000 -1600 -1200 -800 -400 0 400

2000
1600
1200
800
400
0
-400

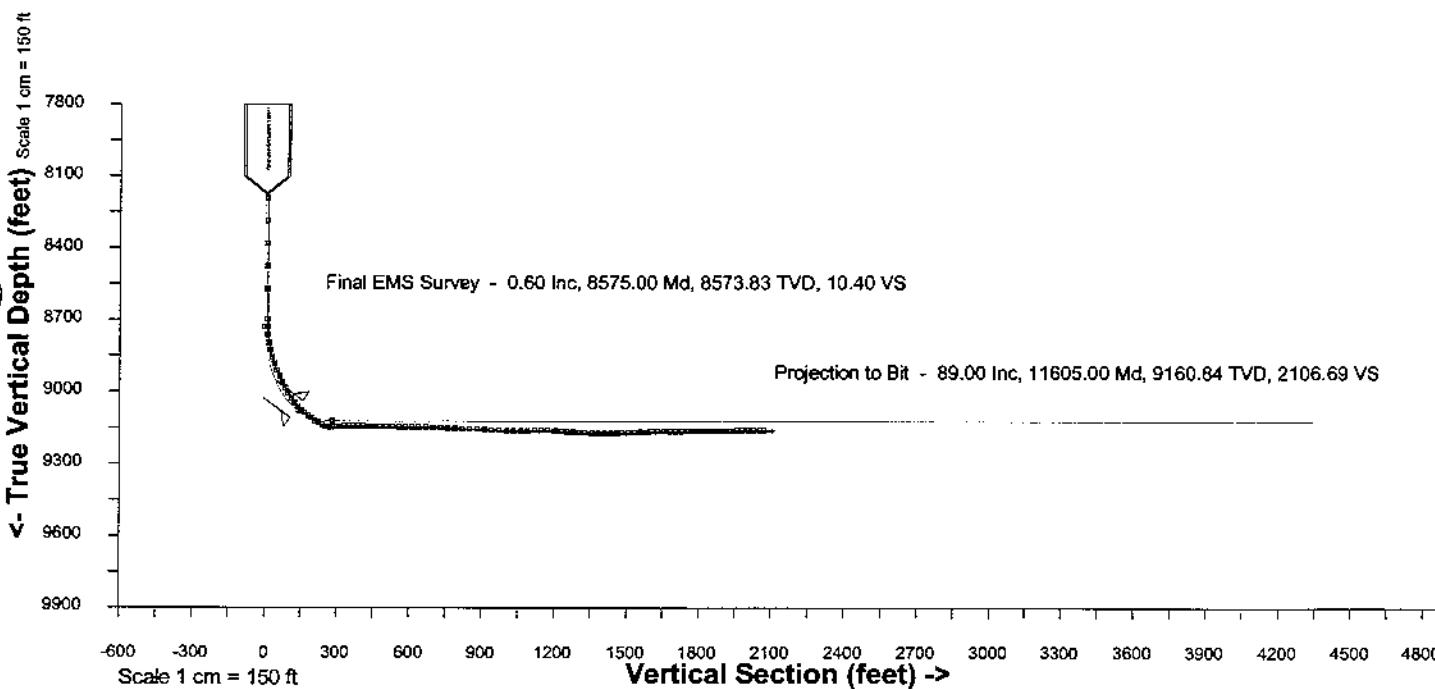
▲ North(feet) Scale 1 cm = 200 ft

MWD Survey

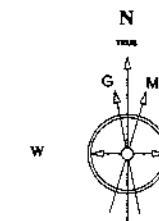
Projection to Bit

11605' MD 89.0 Incl 270.0 Azm
9160.84' TVD 1230.87' N 1709.70' W

Surface 0.00 N, 0.00 E



Azimuth 305.75 with reference 0.00 N, 0.00 E from Slot #1 LEWIS & CLARK



Plot Reference
BGE Online Geopacsoft Model (HMS 2-2000) 0 Dec 13 1998 Plot: 97705 A-H
Magnetic North is 91.15 degrees East of TRUE North.
To convert azimuth from Magnetic to TRUE add 91.15 deg.

Created by : Planner
Date plotted : 11-Jun-2003
Plot reference is LEWIS & CLARK 2-4H (AWB) MWD LATERAL.
Ref wellpath is LEWIS & CLARK 2-4H (AWB#1).
Coordinates are in feet reference Slot #1 LEWIS & CLARK.
True Vertical Depths are reference Rig Datum.
Measured Depths are reference Rig Datum.
Rig Datum: Datum #2
Rig Datum to Mean Sea Level: 0.00.
Plot North is aligned to TRUE North.
Ellipse dimensions are of PROJECTED error ellipsoid
Ellipsoids are scaled to 95.45% (1D) confidence

NANCE PETROLEUM CORPORATION, Slot Wellbore: LEWIS & CLARK 2-4H (AWB)
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY, NORTH DAKOTA

MWD LATERAL

Wellpath: LEWIS & CLARK 2-4H (AWP#1)

Date Printed: 11-Jun-2003



Wellbore

Name	Created	Last Revised
LEWIS & CLARK 2-4H (AWB) MWD LATERAL	10-Jun-2003	10-Jun-2003

Well

Name	Government ID	Last Revised
LEWIS & CLARK 2-4H		19-Feb-2003

Slot

Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #1 LEWIS & CLARK	421880.7886	1190660.8303	N48 6 44.8812	W103 416.1923	3028.00N	332.00W

Installation

Name	Easting	Northing	Coord System Name	North Alignment
SEC.4-T153N-R101W	1190867.3654	416841.8535	ND83-NF on NORTH AMERICAN DATUM 1983	True datum

Field

Name	Easting	Northing	Coord System Name	North Alignment
MCKENZIE COUNTY	1968600.0000	3519779.6485	ND83-NF on NORTH AMERICAN DATUM 1983	True datum

Created By

Comments

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 305.75 degrees

Bottom hole distance is 2106.69 Feet on azimuth 305.75 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION, Slot Wellbore: LEWIS & CLARK 2-4H (AWB)
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY, NORTH DAKOTA



MWD LATERAL
Wellpath: LEWIS & CLARK 2-4H (AWP#1)

INTEQ

Date Printed: 11-Jun-2003

Wellpath Report

MD[ft]	Incl[deg]	Dir[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
8575.00	0.60	237.19	8573.80	35.40S	38.30W	0.00	10.40
8701.00	1.00	248.50	8699.79	36.16S	39.88W	0.34	11.24
8733.00	1.40	313.90	8731.78	35.99S	40.42W	4.19	11.77
8765.00	5.00	341.60	8763.73	34.40S	41.14W	11.93	13.29
8797.00	11.00	348.00	8795.40	30.08S	42.22W	18.93	16.68
8829.00	17.20	349.00	8826.42	22.45S	43.76W	19.39	22.40
8860.00	23.30	351.10	8865.49	11.88S	45.58W	19.81	30.05
8892.00	28.00	352.90	8884.33	1.84N	47.49W	14.89	39.61
8924.00	33.40	355.30	8911.84	18.08N	49.14W	17.30	50.44
8956.00	38.80	358.20	8937.69	36.89N	50.18W	17.70	62.28
8988.00	41.40	1.00	8962.16	57.50N	50.31W	9.89	74.42
9020.00	44.50	2.40	8985.58	79.29N	49.65W	10.14	86.62
9051.00	48.60	3.40	9006.90	101.76N	48.51W	13.43	98.82
9083.00	52.10	3.80	9027.32	126.35N	46.96W	10.98	111.93
9115.00	55.00	4.50	9046.33	152.02N	45.09W	9.23	125.42
9147.00	59.90	4.10	9063.54	178.91N	43.08W	15.35	139.49
9179.00	64.30	3.40	9078.51	207.12N	41.23W	13.89	154.47
9199.00	66.40	3.10	9086.85	225.26N	40.20W	10.59	164.24
9229.00	67.30	2.70	9098.64	252.81N	38.81W	3.24	179.20
9260.00	68.20	2.40	9110.38	281.48N	37.53W	3.04	194.91
9290.00	70.20	2.40	9121.03	309.50N	36.35W	6.67	210.33
9320.00	73.60	3.40	9130.35	337.97N	34.91W	11.77	225.80
9351.00	77.60	4.50	9138.06	367.92N	32.84W	13.35	241.61
9381.00	81.70	5.20	9143.45	397.32N	30.34W	13.86	256.77
9412.00	86.30	6.60	9146.69	427.98N	27.17W	15.50	272.11
9442.00	91.80	8.00	9147.19	457.72N	23.36W	18.92	286.39
9472.00	94.20	5.50	9145.62	487.46N	19.84W	11.54	300.91
9503.00	92.10	3.10	9143.91	518.32N	17.52W	10.28	317.06
9534.00	91.50	359.90	9142.94	549.29N	16.71W	10.50	334.50
9564.00	91.70	358.90	9142.10	579.28N	17.02W	3.40	352.27
9594.00	90.00	355.00	9141.66	609.23N	18.82W	14.18	371.07
9624.00	88.30	352.90	9142.10	639.05N	21.78W	9.01	391.06
9655.00	88.20	350.80	9143.05	669.73N	26.17W	6.78	412.54
9686.00	88.70	346.90	9143.89	700.12N	32.17W	12.68	435.17
9716.00	89.70	343.70	9144.31	729.13N	39.78W	11.17	458.29
9746.00	90.60	339.90	9144.23	757.63N	49.15W	13.02	482.54
9776.00	88.60	337.10	9144.44	785.54N	60.14W	11.47	507.77
9806.00	87.90	336.00	9145.35	813.04N	72.07W	4.34	533.53
9837.00	88.50	333.60	9146.33	841.08N	85.26W	7.98	560.61
9867.00	89.40	331.80	9146.88	867.73N	99.02W	6.71	587.35
9897.00	89.60	328.60	9147.14	893.76N	113.93W	10.69	614.65
9927.00	90.30	326.50	9147.16	919.07N	130.02W	7.38	642.51
9958.00	87.70	324.40	9147.70	944.60N	147.60W	10.78	671.68
9988.00	87.60	320.50	9148.94	968.36N	165.86W	12.99	700.39
10019.00	87.80	317.00	9150.18	991.64N	186.28W	11.30	730.57
10049.00	87.50	314.20	9151.41	1013.06N	207.25W	9.38	760.10
10079.00	87.80	311.80	9152.64	1033.50N	229.17W	8.06	789.83
10109.00	88.20	308.90	9153.69	1052.91N	252.02W	9.75	819.71
10139.00	89.30	306.50	9154.34	1071.25N	275.75W	8.80	849.68
10171.00	87.10	304.00	9155.35	1089.70N	301.86W	10.40	881.66
10202.00	85.40	301.60	9157.38	1106.46N	327.86W	9.47	912.55
10232.00	86.20	298.70	9159.57	1121.49N	353.73W	10.00	942.32

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 305.75 degrees

Bottom hole distance is 2106.69 Feet on azimuth 305.75 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION, Slot Wellbore: LEWIS & CLARK 2-4H (AWB)
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY, NORTH DAKOTA



MWD LATERAL
Wellpath: LEWIS & CLARK 2-4H (AWP#1)

Date Printed: 11-Jun-2003

INTEQ

Wellpath Report

MD[ft]	Inc[deg]	Dif[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
10263.00	88.80	298.00	9160.92	1136.19N	380.99W	8.69	973.03
10293.00	88.70	294.90	9161.58	1149.55N	407.83W	10.34	1002.63
10324.00	89.40	292.40	9162.09	1161.98N	436.23W	8.37	1032.93
10354.00	89.90	290.00	9162.28	1172.83N	464.19W	8.17	1061.97
10384.00	91.80	287.50	9161.83	1182.47N	492.59W	10.47	1090.65
10415.00	91.60	284.30	9160.91	1190.96N	522.39W	10.34	1119.79
10446.00	91.30	281.90	9160.13	1197.98N	552.57W	7.80	1148.39
10476.00	88.00	279.80	9160.31	1203.63N	582.03W	13.04	1175.59
10506.00	86.00	277.00	9161.88	1208.00N	611.66W	11.46	1202.20
10537.00	85.30	274.50	9164.23	1211.10N	642.41W	8.35	1228.97
10567.00	86.40	272.00	9166.40	1212.80N	672.28W	9.08	1254.20
10597.00	87.10	272.40	9168.10	1213.95N	702.21W	2.69	1279.16
10628.00	88.30	272.00	9169.35	1215.14N	733.17W	4.08	1304.97
10659.00	88.50	272.40	9170.22	1216.33N	764.13W	1.44	1330.80
10690.00	88.50	272.40	9171.03	1217.62N	795.09W	0.00	1356.69
10720.00	89.50	272.00	9171.55	1218.77N	825.07W	3.59	1381.68
10751.00	89.70	271.30	9171.77	1219.67N	856.05W	2.35	1407.35
10781.00	90.50	272.00	9171.71	1220.53N	886.04W	3.54	1432.19
10811.00	91.10	271.70	9171.30	1221.50N	916.02W	2.24	1457.09
10843.00	91.10	271.00	9170.68	1222.25N	948.01W	2.19	1483.49
10874.00	90.70	271.30	9170.19	1222.88N	979.00W	1.61	1509.00
10904.00	92.00	271.70	9169.49	1223.66N	1008.98W	4.53	1533.79
10934.00	92.20	271.30	9168.39	1224.44N	1038.94W	1.49	1558.57
10965.00	92.80	271.00	9167.03	1225.07N	1069.91W	2.16	1584.06
10995.00	93.10	270.60	9165.49	1225.48N	1099.87W	1.67	1608.62
11025.00	92.50	271.00	9164.03	1225.90N	1129.83W	2.40	1633.18
11056.00	89.90	271.00	9163.38	1226.44N	1160.81W	8.39	1658.64
11086.00	89.10	270.60	9163.64	1226.86N	1190.81W	2.98	1683.23
11116.00	89.50	271.00	9164.00	1227.28N	1220.80W	1.89	1707.82
11147.00	92.00	271.00	9163.60	1227.82N	1251.79W	8.06	1733.28
11177.00	92.00	271.30	9162.55	1228.42N	1281.77W	1.00	1757.96
11208.00	90.90	270.60	9161.77	1228.94N	1312.76W	4.21	1783.41
11238.00	89.90	271.00	9161.56	1229.36N	1342.75W	3.59	1808.00
11269.00	88.90	271.00	9161.88	1229.90N	1373.74W	3.23	1833.47
11299.00	89.60	269.90	9162.28	1230.13N	1403.74W	4.35	1857.95
11330.00	89.70	270.60	9162.47	1230.27N	1434.74W	2.28	1883.18
11362.00	91.20	270.30	9162.21	1230.52N	1466.74W	4.78	1909.30
11392.00	91.60	269.90	9161.48	1230.57N	1496.73W	1.89	1933.67
11422.00	91.20	269.90	9160.75	1230.52N	1526.72W	1.33	1957.98
11452.00	90.30	270.30	9160.35	1230.57N	1556.71W	3.28	1982.35
11483.00	89.70	269.90	9160.35	1230.63N	1587.71W	2.33	2007.54
11514.00	90.90	270.30	9160.19	1230.68N	1618.71W	4.08	2032.73
11544.00	90.00	269.90	9159.96	1230.73N	1648.71W	3.28	2057.11
11565.00	89.00	270.30	9160.14	1230.77N	1669.71W	5.13	2074.17
11605.00	89.00	270.00	9160.84	1230.87N	1709.70W	0.75	2106.69

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 305.75 degrees

Bottom hole distance is 2106.69 Feet on azimuth 305.75 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION, Slot Wellbore: LEWIS & CLARK 2-4H (AWB)
#1 LEWIS & CLARK MWD LATERAL
SEC.4-T153N-R101W, Wellpath: LEWIS & CLARK 2-4H (AWP#1)
MCKENZIE COUNTY,NORTH DAKOTA Date Printed: 11-Jun-2003



Comments

MD(ft)	TVD(ft)	North(ft)	East(ft)	Comment
11605.00	9160.84	1230.87N	1709.70W	Projection to Bit

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 305.75 degrees

Bottom hole distance is 2106.69 Feet on azimuth 305.75 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ



INTEQ

NANCE PETROLEUM CORPORATION

Location: NORTH DAKOTA	Slot: Slot #1 LEWIS & CLARK
Field: MCKENZIE COUNTY	Well: LEWIS & CLARK 2-4H
Installation: SEC.4-T153N-R101W	

Scale 1 cm = 200 ft

East (feet) ->

-4800 -4400 -4000 -3600 -3200 -2800 -2400 -2000 -1600 -1200 -800 -400 0 400

2000
1600
1200
800
400
0
-400

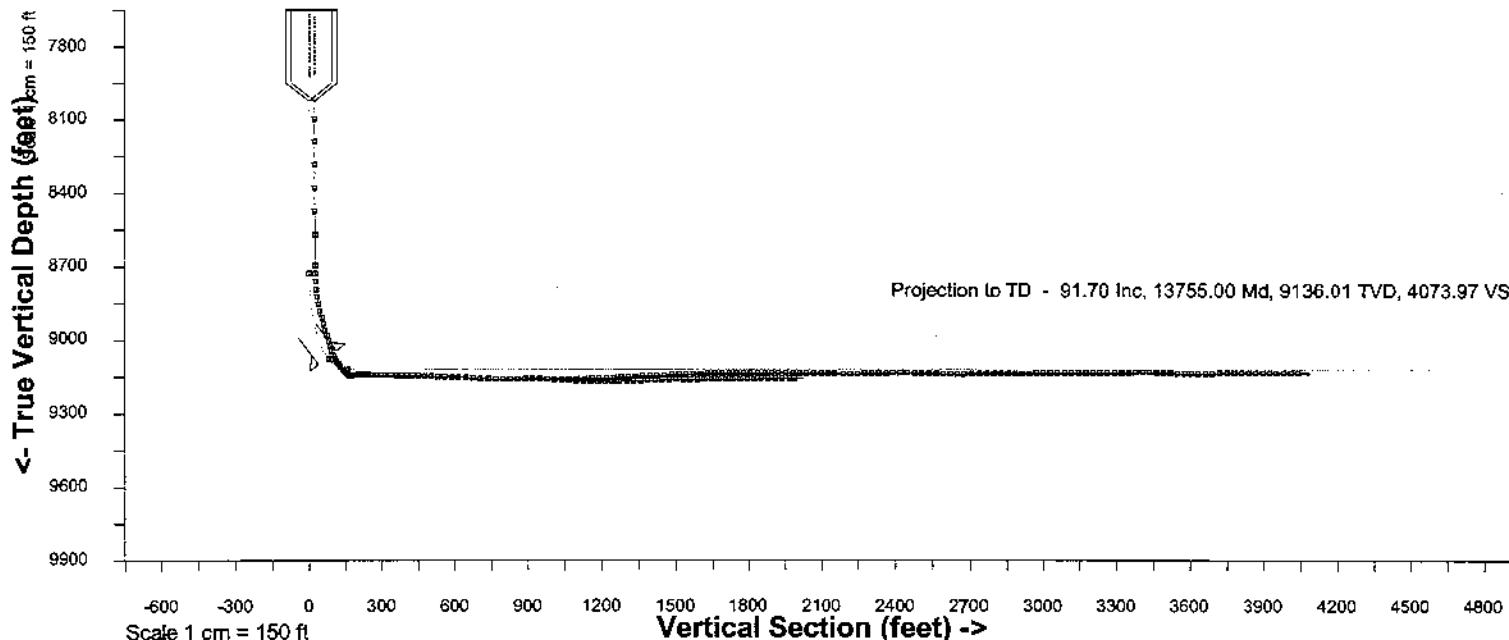
Projection to TD

13755' MD 91.70 Incl 269.60 Azm
9136.01 TVD 1350.45'N 3843.63'W

Surface 0.00 N, 0.00 E

<- North(feet)
Scale 1 cm = 200 ft

MWD Sidetrack Survey



Created by: Planner
Date plotted: 11-Jun-2003
Plot reference is LEWIS & CLARK 2-4H (AWB) MWD SDTRK.
Ref wellpath is LEWIS & CLARK 2-4H (AWP#1).
Coordinates are in feet reference Slot #1 LEWIS & CLARK.
True Vertical Depths are reference Rig Datum.
Measured Depths are reference Rig Datum.
Rig Datum: Datum #2
Rig Datum to Mean Sea Level: 0.00.
Plot North is aligned to TRUE North.
Ellipse dimensions are of PROJECTED error ellipsoid.
Ellipsoids are scaled to 95.45% (1D) confidence.

15358
TH

NANCE PETROLEUM CORPORATION,Slot Wellbore: LEWIS & CLARK 2-4H (AWB)
#1 LEWIS & CLARK MWD SDTRK
SEC.4-T153N-R101W, Wellpath: LEWIS & CLARK 2-4H (AWP#1)
MCKENZIE COUNTY,NORTH DAKOTA Date Printed: 11-Jun-2003



Wellbore

Name	Created	Last Revised
LEWIS & CLARK 2-4H (AWB) MWD SDTRK	10-Jun-2003	10-Jun-2003

Well

Name	Government ID	Last Revised
LEWIS & CLARK 2-4H		19-Feb-2003

Slot

Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #1 LEWIS & CLARK	421880.7886	1190660.8303	N48 6 44.8812	W103 416.1923	3028.00N	332.00W

Installation

Name	Easting	Northing	Coord System Name	North Alignment
SEC.4-T153N-R101W	1190867.3654	416841.8536	ND83-NF on NORTH AMERICAN DATUM 1983 datum	True

Field

Name	Easting	Northing	Coord System Name	North Alignment
MCKENZIE COUNTY	1968500.0000	3519779.6485	ND83-NF on NORTH AMERICAN DATUM 1983 datum	True

Created By

Comments

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 289.36 degrees

Bottom hole distance is 4073.97 Feet on azimuth 289.36 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION, Slot Wellbore: LEWIS & CLARK 2-4H (AWB)
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY, NORTH DAKOTA



Wellpath: LEWIS & CLARK 2-4H (AWP#1)

Date Printed: 11-Jun-2003

INTEQ

Wellpath Report

MD(ft)	Incideal	Dif/ideal	TVD(ft)	North(ft)	East(ft)	Dogleg Idec/100ft	Vertical Section(ft)
8575.00	0.60	237.19	8573.80	35.40S	38.30W	0.00	24.40
8701.00	1.00	248.50	8699.79	36.16S	39.88W	0.34	25.64
8733.00	1.40	313.90	8731.78	35.99S	40.42W	4.19	26.20
8765.00	5.00	341.60	8763.73	34.40S	41.14W	11.93	27.41
8797.00	11.00	348.00	8795.40	30.08S	42.22W	18.93	29.86
8829.00	17.20	349.00	8826.42	22.45S	43.76W	19.39	33.84
8860.00	23.30	351.10	8855.49	11.88S	45.58W	19.81	39.07
8892.00	28.00	352.90	8884.33	1.84N	47.49W	14.89	45.41
8924.00	33.40	355.30	8911.84	18.08N	49.14W	17.30	52.36
8956.00	38.80	358.20	8937.69	36.89N	50.18W	17.70	59.57
8988.00	41.40	1.00	8962.16	57.50N	50.31W	9.89	
9020.00	44.50	2.40	8985.58	79.29N	49.65W	10.14	73.13
9051.00	48.60	3.40	9006.90	101.76N	48.51W	13.43	79.50
9083.00	52.10	3.80	9027.32	126.35N	48.96W	10.98	86.19
9115.00	55.00	4.50	9046.33	152.02N	45.09W	9.23	92.94
9147.00	59.90	4.10	9063.54	178.91N	43.08W	15.35	99.94
9179.00	64.30	3.40	9078.51	207.12N	41.23W	13.89	107.56
9199.00	66.40	3.10	9086.85	225.26N	40.20W	10.59	112.60
9229.00	67.30	2.70	9098.64	252.81N	38.81W	3.24	120.41
9260.00	68.20	2.40	9110.38	281.48N	37.53W	3.04	128.71
9290.00	70.20	2.40	9121.03	309.50N	36.35W	6.67	136.89
9320.00	73.60	3.40	9130.35	337.97N	34.91W	11.77	144.97
9351.00	77.60	4.50	9138.06	367.92N	32.84W	13.35	152.94
9381.00	81.70	5.20	9143.45	397.32N	30.34W	13.86	160.33
9412.00	86.30	6.60	9146.69	427.98N	27.17W	15.50	167.50
9442.00	91.80	8.00	9147.19	457.72N	23.36W	18.92	173.77
9472.00	94.20	5.50	9145.62	487.46N	19.84W	11.54	180.31
9503.00	92.10	3.10	9143.91	518.32N	17.52W	10.28	188.35
9534.00	91.50	359.90	9142.94	549.29N	16.71W	10.50	197.85
9564.00	91.70	358.90	9142.10	579.28N	17.02W	3.40	208.08
9594.00	90.00	355.00	9141.66	609.23N	18.62W	14.18	219.52
9624.00	88.30	352.90	9142.10	639.05N	21.78W	9.01	232.39
9655.00	88.20	350.80	9143.05	669.73N	26.17W	6.78	246.70
9686.00	88.70	346.90	9143.89	700.12N	32.17W	12.68	262.43
9716.00	89.70	343.70	9144.31	729.13N	39.78W	11.17	279.22
9746.00	90.60	339.90	9144.23	757.63N	49.15W	13.02	297.51
9776.00	88.60	337.10	9144.44	785.54N	60.14W	11.47	317.13
9806.00	87.90	336.00	9145.35	813.04N	72.07W	4.34	337.51
9837.00	88.50	333.60	9146.33	841.08N	85.26W	7.98	359.25
9867.00	89.40	331.80	9146.88	867.73N	99.02W	6.71	381.06
9897.00	89.60	328.60	9147.14	893.76N	113.93W	10.69	403.75
9927.00	90.30	326.50	9147.16	919.07N	130.02W	7.38	427.33
9958.00	87.70	324.40	9147.70	944.60N	147.80W	10.78	452.37
9988.00	87.60	320.50	9148.94	968.36N	165.86W	12.99	477.48
10019.00	87.80	317.00	9150.18	991.64N	186.28W	11.30	504.46
10049.00	87.50	314.20	9151.41	1013.06N	207.25W	9.38	531.35
10079.00	87.80	311.80	9152.64	1033.50N	229.17W	8.06	558.80
10109.00	88.20	308.90	9153.69	1052.91N	252.02W	9.75	586.79
10139.00	89.30	306.50	9154.34	1071.25N	275.75W	8.80	615.26
10171.00	87.10	304.00	9155.35	1089.70N	301.86W	10.40	646.02
10202.00	85.40	301.60	9157.38	1106.46N	327.86W	9.47	676.10
10232.00	86.20	298.70	9159.57	1121.49N	353.73W	10.00	705.49

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 289.36 degrees

Bottom hole distance is 4073.97 Feet on azimuth 289.36 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION, Slot Wellbore: LEWIS & CLARK 2-4H (AWB)
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY, NORTH DAKOTA

Wellpath: LEWIS & CLARK 2-4H (AWP#1)



Date Printed: 11-Jun-2003

INTEQ

Wellpath Report

MD[ft]	Inc[deg]	Dir[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
10263.00	88.80	298.00	9160.92	1136.19N	380.99W	8.69	736.07
10293.00	88.70	294.90	9161.58	1149.55N	407.83W	10.34	765.83
10324.00	89.40	292.40	9162.09	1161.98N	436.23W	8.37	796.74
10352.00	90.30	290.70	9162.17	1172.27N	462.27W	6.87	824.72
10383.00	89.50	293.80	9162.22	1184.00N	490.95W	10.33	855.67
10413.00	90.80	296.30	9162.14	1196.70N	518.13W	9.39	885.52
10444.00	91.80	295.60	9161.44	1210.27N	546.00W	3.94	916.31
10475.00	89.70	292.40	9161.03	1222.87N	574.31W	12.35	947.20
10505.00	88.70	289.60	9161.45	1233.62N	602.31W	9.91	977.18
10535.00	88.50	287.80	9162.19	1243.23N	630.72W	6.04	1007.17
10566.00	89.30	284.70	9162.78	1251.91N	660.47W	10.33	1038.11
10596.00	91.00	282.20	9162.70	1258.88N	689.64W	10.08	1067.95
10626.00	90.40	279.80	9162.34	1264.61N	719.09W	8.25	1097.63
10658.00	91.40	279.40	9161.83	1269.94N	750.63W	3.37	1129.16
10689.00	92.00	277.30	9160.91	1274.44N	781.29W	7.04	1159.57
10719.00	91.80	275.90	9159.92	1277.89N	811.08W	4.71	1188.82
10749.00	91.90	275.90	9158.95	1280.97N	840.90W	0.33	1217.98
10780.00	93.20	275.50	9157.57	1284.05N	871.72W	4.38	1248.07
10811.00	93.50	275.20	9155.76	1286.93N	902.53W	1.37	1278.10
10841.00	93.90	275.50	9153.82	1289.72N	932.34W	1.67	1307.14
10871.00	93.40	275.20	9151.91	1292.51N	962.14W	1.94	1336.19
10901.00	92.20	275.20	9150.45	1295.23N	991.98W	4.00	1365.25
10932.00	91.30	275.20	9149.50	1298.04N	1022.84W	2.90	1395.29
10962.00	92.00	275.50	9148.64	1300.83N	1052.70W	2.54	1424.38
10993.00	93.40	274.80	9147.18	1303.61N	1083.54W	5.05	1454.40
11023.00	92.70	274.50	9145.58	1306.04N	1113.40W	2.54	1483.38
11053.00	91.60	274.10	9144.46	1308.29N	1143.29W	3.90	1512.33
11084.00	91.90	274.50	9143.51	1310.61N	1174.19W	1.61	1542.25
11115.00	92.00	274.10	9142.45	1312.94N	1205.08W	1.33	1572.17
11145.00	92.40	273.40	9141.30	1314.90N	1235.00W	2.69	1601.04
11175.00	91.80	273.10	9140.20	1316.60N	1264.93W	2.24	1629.84
11205.00	90.40	273.10	9139.63	1318.22N	1294.88W	4.67	1658.63
11236.00	90.10	270.60	9139.49	1319.22N	1325.86W	8.12	1688.20
11268.00	89.30	270.30	9139.66	1319.47N	1357.86W	2.67	1718.47
11298.00	89.70	270.30	9139.92	1319.63N	1387.86W	1.33	1746.82
11329.00	91.10	270.30	9139.70	1319.79N	1418.85W	4.52	1776.12
11359.00	90.20	270.30	9139.36	1319.95N	1448.85W	3.00	1804.48
11390.00	90.30	270.60	9139.23	1320.19N	1479.85W	1.02	1833.80
11421.00	91.60	270.30	9138.72	1320.43N	1510.84W	4.30	1863.12
11451.00	90.90	270.30	9138.06	1320.59N	1540.84W	2.33	1891.47
11481.00	89.60	270.60	9137.93	1320.83N	1570.83W	4.45	1919.85
11511.00	89.80	269.90	9138.09	1320.96N	1600.83W	2.43	1948.20
11543.00	88.20	269.90	9138.65	1320.90N	1632.83W	5.00	1978.37
11573.00	88.00	270.30	9139.64	1320.95N	1662.81W	1.49	2006.67
11603.00	89.70	270.60	9140.24	1321.19N	1692.80W	5.75	2035.05
11634.00	90.40	269.60	9140.22	1321.24N	1723.80W	3.94	2064.31
11665.00	91.10	269.90	9139.81	1321.11N	1754.80W	2.46	2093.51
11695.00	89.30	269.60	9139.70	1320.98N	1784.80W	6.08	2121.77
11726.00	88.90	269.60	9140.19	1320.76N	1815.79W	1.29	2150.94
11765.00	88.20	269.20	9141.18	1320.35N	1854.78W	2.07	2187.59
11795.00	89.70	269.20	9141.73	1319.93N	1884.77W	5.00	2215.74
11826.00	91.80	269.60	9141.32	1319.61N	1915.76W	6.90	2244.88

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 289.36 degrees

Bottom hole distance is 4073.97 Feet on azimuth 289.36 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION, Slot Wellbore: LEWIS & CLARK 2-4H (AWB)
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY, NORTH DAKOTA

MWD SDTRK

Wellpath: LEWIS & CLARK 2-4H (AWP#1)
Date Printed: 11-Jun-2003



INTEQ

Wellpath Report

MD(ft)	Inc[deg]	Dir[deg]	TVD(ft)	North(ft)	East(ft)	Dogleg [deg/100ft]	Vertical Section(ft)
11857.00	91.30	269.20	9140.48	1319.29N	1946.75W	2.07	2274.00
11887.00	91.00	269.20	9139.88	1318.87N	1976.74W	1.00	2302.16
11918.00	91.00	269.20	9139.34	1318.43N	2007.73W	0.00	2331.26
11948.00	91.20	269.20	9138.76	1318.02N	2037.72W	0.67	2359.41
11978.00	90.90	268.90	9138.22	1317.52N	2067.72W	1.41	2387.54
12010.00	89.90	269.90	9137.99	1317.18N	2099.71W	4.42	2417.62
12040.00	89.00	269.90	9138.28	1317.13N	2129.71W	3.00	2445.91
12071.00	89.60	269.90	9138.66	1317.08N	2160.71W	1.94	2475.13
12101.00	89.60	271.70	9138.87	1317.49N	2190.70W	6.00	2503.57
12132.00	88.70	271.30	9139.33	1318.31N	2221.69W	3.18	2533.07
12163.00	88.40	271.00	9140.11	1318.93N	2252.67W	1.37	2562.51
12193.00	88.20	271.30	9141.00	1319.53N	2282.65W	1.20	2591.00
12223.00	89.50	272.40	9141.60	1320.50N	2312.63W	5.68	2619.60
12253.00	90.40	272.40	9141.63	1321.76N	2342.60W	3.00	2648.29
12283.00	91.40	271.70	9141.16	1322.83N	2372.58W	4.07	2676.93
12314.00	91.80	271.70	9140.29	1323.75N	2403.55W	1.29	2706.46
12344.00	91.80	272.00	9139.35	1324.71N	2433.52W	1.00	2735.06
12375.00	90.60	272.00	9138.70	1325.80N	2464.50W	3.87	2764.84
12405.00	88.80	272.00	9138.86	1326.84N	2494.48W	6.00	2793.27
12435.00	89.00	272.00	9139.43	1327.89N	2524.45W	0.67	2821.90
12465.00	89.00	272.40	9139.96	1329.04N	2554.43W	1.33	2850.56
12496.00	90.40	272.40	9140.12	1330.34N	2585.40W	4.52	2880.21
12527.00	91.20	272.40	9139.69	1331.64N	2616.37W	2.58	2909.86
12557.00	91.60	272.70	9138.95	1332.97N	2646.33W	1.67	2938.57
12587.00	91.60	272.70	9138.12	1334.39N	2676.28W	0.00	2967.30
12617.00	91.50	272.40	9137.31	1335.72N	2706.24W	1.05	2996.00
12647.00	90.70	272.00	9136.73	1336.87N	2736.22W	2.98	3024.66
12678.00	90.60	272.40	9136.38	1338.06N	2767.19W	1.33	3054.28
12708.00	90.30	272.70	9136.14	1339.40N	2797.16W	1.41	3083.00
12738.00	89.80	273.10	9136.12	1340.91N	2827.12W	2.13	3111.77
12770.00	90.40	272.70	9136.06	1342.53N	2859.08W	2.25	3142.46
12800.00	89.70	273.40	9136.03	1344.13N	2889.04W	3.30	3171.25
12831.00	89.30	273.40	9136.31	1345.97N	2919.98W	1.29	3201.05
12861.00	89.00	273.40	9136.75	1347.74N	2949.93W	1.00	3229.89
12892.00	89.30	269.90	9137.21	1348.64N	2980.90W	11.33	3259.42
12923.00	89.10	269.60	9137.64	1348.50N	3011.90W	1.16	3288.62
12953.00	90.90	269.60	9137.64	1348.29N	3041.90W	6.00	3316.85
12984.00	93.30	270.60	9136.51	1348.35N	3072.88W	8.39	3346.09
13014.00	90.70	270.30	9135.46	1348.58N	3102.85W	8.72	3374.45
13044.00	89.80	269.90	9135.33	1348.64N	3132.85W	3.28	3402.77
13074.00	88.60	270.30	9135.75	1348.69N	3162.85W	4.22	3431.09
13104.00	88.30	269.60	9136.56	1348.66N	3192.84W	2.54	3459.38
13135.00	88.60	270.30	9137.40	1348.63N	3223.83W	2.46	3488.60
13165.00	87.60	269.90	9138.39	1348.69N	3253.81W	3.59	3516.91
13195.00	87.50	269.60	9139.68	1348.56N	3283.78W	1.05	3545.14
13226.00	89.70	270.60	9140.43	1348.61N	3314.77W	7.80	3574.40
13256.00	89.50	270.60	9140.64	1348.92N	3344.77W	0.67	3602.80
13286.00	90.00	270.60	9140.77	1349.24N	3374.77W	1.67	3631.21
13316.00	91.70	271.00	9140.33	1349.66N	3404.76W	5.82	3659.65
13347.00	92.20	271.00	9139.27	1350.20N	3435.74W	1.61	3689.05
13378.00	91.80	271.00	9138.19	1350.74N	3466.71W	1.29	3718.45
13408.00	91.30	271.00	9137.38	1351.26N	3496.70W	1.67	3746.92

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 289.36 degrees

Bottom hole distance is 4073.97 Feet on azimuth 289.36 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION, Slot Wellbore: LEWIS & CLARK 2-4H (AWB)
#1 LEWIS & CLARK MWD SDTRK
SEC.4-T153N-R101W, Wellpath: LEWIS & CLARK 2-4H (AWP#1)
MCKENZIE COUNTY,NORTH DAKOTA Date Printed: 11-Jun-2003



Wellpath Report

MD[ft]	Inc[deg]	Dir[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
13439.00	91.30	270.60	9136.68	1351.69N	3527.68W	1.29	3776.30
13469.00	90.40	270.60	9136.23	1352.01N	3557.68W	3.00	3804.70
13501.00	89.50	269.90	9136.26	1352.15N	3589.68W	3.56	3834.94
13531.00	88.70	269.60	9136.73	1352.02N	3619.68W	2.85	3863.19
13562.00	89.00	269.60	9137.35	1351.80N	3650.67W	0.97	3892.36
13592.00	89.30	269.60	9137.80	1351.59N	3680.66W	1.00	3920.59
13623.00	89.50	269.60	9138.12	1351.38N	3711.66W	0.65	3949.77
13653.00	90.10	269.60	9138.23	1351.17N	3741.66W	2.00	3978.00
13684.00	91.00	269.60	9137.93	1350.95N	3772.66W	2.90	4007.17
13714.00	91.70	269.60	9137.22	1350.74N	3802.65W	2.33	4035.40
13755.00	91.70	269.60	9136.01	1350.45N	3843.63W	0.00	4073.97

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 289.36 degrees

Bottom hole distance is 4073.97 Feet on azimuth 289.36 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION,Slot Wellbore: LEWIS & CLARK 2-4H (AWB)
#1 LEWIS & CLARK MWD SDTRK
SEC.4-T153N-R101W, Wellpath: LEWIS & CLARK 2-4H (AWP#1)
MCKENZIE COUNTY,NORTH DAKOTA Date Printed: 11-Jun-2003



Comments

MD(ft)	TVD(ft)	North(ft)	East(ft)	Comment
13755.00	9136.01	1350.45N	3843.63W	Projection to TD

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #2 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 289.36 degrees

Bottom hole distance is 4073.97 Feet on azimuth 289.36 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

Revised 02-2001

FOR STATE USE ONLY

Well File No.

15358

Tight Hole

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION

VERBAL APPROVAL TO PURCHASE AND TRANSPORT OIL

Operator Nance Petroleum Corp.		Operator Representative Melinda Dokken			
Well Name or Number Lewis and Clark #2-4H			Telephone Number (701) 774-3273		
Location of Well Baker	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County McKenzie
Field Baker	Pool Madison	Date of First Production Through Permanent Wellhead June 9, 2003			Is this the First Sales? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Purchaser Nexen Marketing USA Inc		Transporter Diamond B Trucking, Inc			

ESTIMATED BARRELS TO BE SOLD		ACTUAL BARRELS SOLD		DATE
Bbls		251	Bbls	June 30, 2003
Bbls		222	Bbls	July 3, 2003
Bbls		246	Bbls	July 4, 2003
Bbls		227	Bbls	July 5, 2003
Bbls		238	Bbls	July 7, 2003
Bbls			Bbls	

Comments

Date Approved
July 9, 2003

By
Mark Bohrer 

Title
Petroleum Engineer

Revised 02-2001
FOR STATE USE ONLY

Well File No.
15358

INDUSTRIAL COMMISSION OF NORTH DAKOTA

Tight Hole

OIL AND GAS DIVISION

VERBAL APPROVAL TO PURCHASE AND TRANSPORT OIL

Operator Nance Petroleum Corp.		Operator Representative Lynette Watts			
Well Name or Number Lewis and Clark #2-4H		Telephone Number (701) 774-3273			
Location of Well	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County McKenzie
Field Baker	Pool Madison	Date of First Production Through Permanent Wellhead June 9, 2003			Is this the First Sales? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Purchaser Nexen Marketing USA Inc		Transporter Diamond B Trucking, Inc			

Comments

Date Approved
July 1, 2003
By *MB*
Mark Bohrer
Title
Petroleum Engineer

Revised 02-2001

FOR STATE USE ONLY

Well File No.

15358

INDUSTRIAL COMMISSION OF NORTH DAKOTA

Tight Hole

OIL AND GAS DIVISION

VERBAL APPROVAL TO PURCHASE AND TRANSPORT OIL

Operator Nance Petroleum Corp.		Operator Representative Lynette Watts			
Well Name or Number Lewis and Clark #2-4H			Telephone Number (701) 774-3273		
Location of Well	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County McKenzie
Field Baker	Pool Madison	Date of First Production Through Permanent Wellhead June 9, 2003			Is this the First Sales? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Purchaser Nexen Marketing USA Inc	Transporter Diamond B Trucking, Inc
---	---

ESTIMATED BARRELS TO BE SOLD		ACTUAL BARRELS SOLD		DATE
Bbls		248	Bbls	June 24, 2003
Bbls		220	Bbls	June 25, 2003
Bbls		212	Bbls	June 26, 2003
Bbls			Bbls	

Comments

Date Approved
June 26, 2003

By
Mark Bohrer MB

Title
Petroleum Engineer

Revised 02-2001

FOR STATE USE ONLY

Well File No.

15358

Tight Hole

INDUSTRIAL COMMISSION OF NORTH DAKOTA

OIL AND GAS DIVISION

VERBAL APPROVAL TO PURCHASE AND TRANSPORT OIL

Operator Nance Petroleum Corp.		Operator Representative Lynette Watts			
Well Name or Number Lewis and Clark #2-4H				Telephone Number (701) 774-3273	
Location of Well	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County McKenzie
Field Baker		Pool Madison		Date of First Production Through Permanent Wellhead June 9, 2003	
				Is this the First Sales? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Purchaser Nexen Marketing USA Inc		Transporter Diamond B Trucking, Inc			

ESTIMATED BARRELS TO BE SOLD	ACTUAL BARRELS SOLD	DATE
Bbls	229	Bbls June 20, 2003
Bbls	225	Bbls June 22, 2003
Bbls	231	Bbls June 23, 2003
Bbls		Bbls

Comments

Date Approved
June 24, 2003

By
Mark Bohrer MB

Title
Petroleum Engineer

Revised 02-2001

FOR STATE USE ONLY

Well File No.

15350

**INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION**

VERBAL APPROVAL TO PURCHASE AND TRANSPORT OIL

Operator Nance Petroleum Corp.		Operator Representative Lynette Watts			
Well Name or Number Lewis and Clark #2-4H				Telephone Number (701) 774-3273	
Location of Well	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County McKenzie
Field Baker	Pool Madison	Date of First Production Through Permanent Wellhead June 9, 2003			Is this the First Sales? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Purchaser Nexen Marketing USA Inc		Transporter Diamond B Trucking, Inc			

Comments

Date Approved	June 19, 2003
By	Mark Bohrer <i>mB</i>
Title	Petroleum Engineer

Revised 02-2001

FOR STATE USE ONLY

Well File No.

15358

Tight Hole

INDUSTRIAL COMMISSION OF NORTH DAKOTA

OIL AND GAS DIVISION

VERBAL APPROVAL TO PURCHASE AND TRANSPORT OIL

Operator Nance Petroleum Corp.		Operator Representative Lynette Watts			
Well Name or Number Lewis and Clark #2-4H				Telephone Number (701) 774-3273	
Location of Well	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County McKenzie
Field Baker		Pool Madison	Date of First Production Through Permanent Wellhead June 9, 2003		Is this the First Sales? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Purchaser Nexen Marketing USA Inc	Transporter Diamond B Trucking, Inc
---	---

ESTIMATED BARRELS TO BE SOLD	ACTUAL BARRELS SOLD	DATE
Bbls	242	Bbls June 10, 2003
Bbls	448	Bbls June 11, 2003
Bbls	240	Bbls June 12, 2003
Bbls	241	Bbls June 13, 2003
Bbls	246	Bbls June 14, 2003
Bbls	242	Bbls June 15, 2003
Bbls		Bbls

Comments

Making 275 BOPD, still recovering load water.

Date Approved
June 17, 2003

By
Mark Bohrer MB

Title
Petroleum Engineer

Revised 02-2001

FOR STATE USE ONLY

Well File No.
15358

**INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION**

Tight Hole

VERBAL APPROVAL TO PURCHASE AND TRANSPORT OIL

Operator Nance Petroleum Corp.		Operator Representative Lynette Watts			
Well Name or Number Lewis and Clark #2-4H		Telephone Number (701) 774-3273			
Location of Well	Qtr-Qtr SENE	Section 4	Township 153 N	Range 101 W	County McKenzie
Field Baker	Pool Madison	Date of First Production Through Permanent Wellhead			Is this the First Sales? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
June 9, 2003					

Purchaser **Nexen Marketing USA Inc** Transporter **Diamond B Trucking, Inc**

Comments

Started producing well continuously on June 9th. Made 270 barrels first 24 hours.

Date Approved
June 10, 2003
By *MB*
Mark Bohrer
Title
Petroleum Engineer

15358

11

Nance Petroleum Corporation

Lewis & Clark #2-4H

2,094' FNL, 332' FEL



SE NE Section 4, T153N, R101W

Baker Field

McKenzie County, North Dakota

BOTTOM HOLE LOCATION: Lateral #1
1,230.87' North & 1,709.7' West of surface location
Approx. 853.13' FNL, 2,041.7' FEL NW-NE Sec. 4

BOTTOM HOLE LOCATION: Side track #1
1,350.48' North & 3,843.62' West of surface location
Approx. 743.6' FNL, 1,116.8' FWL, NW NW Sec. 4

Prepared by:

Wayne Freisatz

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c/o Sunburst Consulting

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Prepared for

Mike Bryant

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EVALUATION

GENERAL

The Nance Petroleum Corporation Lewis & Clark #2-4H was designed as a horizontal outpost development well for the Nesson member of the Mississippian Mission Canyon Formation within the Baker Field. The Baker Field is located in the U.S. portion of the Williston Basin, in McKenzie County, North Dakota. Due to its location on the Missouri River floodplain, a gravel pad was built up above the surrounding ground elevation for the drilling of the Lewis & Clark #2-4H and any subsequent wells drilled from this location. The planned bottom hole location for the initial lateral in the Lewis & Clark #2-4 was north and west of the surface location. Later sidetracks may be added with different orientations.

The primary offset wells used for correlation while drilling the Lewis & Clark #2-4H were :

- 1) the Basic Earth Science Systems, Inc. Basic Game & Fish #34-3 (now owned by Nance Petroleum Corp.), with the surface location 392' FSL & 494' FWL in the SW SW Section 2, T153N, R101W, McKenzie Co., N.D. The Basic Game & Fish was drilled directionally in late 1985 from a pad in the SW SW Section 2 to a bottom hole location in the SE SE Section 3. Completed in the Nesson zone of the Mission Canyon Formation, the original well produced 224,525 BO, 107,142 MCFG, and 6,623' BW through mid 2002. Nance re-entered the Basic Game & Fish in November of 2003 and drilled a 3,800' horizontal leg in the Nesson. The bottom hole location of the horizontal leg was in the NE SW Section 3, 1,975' North and 4,338.8' West of the surface location. Recent production from the Nesson lateral has averaged 220 BOPD.
- 2) the John L. Cox French-Pinney #24-3 (now owned by Nance Petroleum Corp.), located 660' FSL & 1,955' FWL in the SE SW Section 3, T153N, R101W, McKenzie Co., N.D. The French-Pinney was drilled in 1987 and completed in the Red River Formation (Ordovician in age). The French-Pinney IP'd for 276 BOPD, 486 MCFG, and 0 BWPD, and has produced over 401,537 BO, 718,456 MCFG, and 193,009 BW from the Red River.
- 3) The nearest well to the Lewis & Clark #2-4H is a dry hole drilled by John L. Cox in 1989. The Mildred #1 was located 1,325' FSL and 660' FEL in the NE SE Section 4, T153N, R101W, McKenzie Co., N.D. The Mildred was drilled directionally to Red River depths, reaching a bottom hole location 2,094.64' FSL and 642.92' FEL, still in the NE SE Section 4. The Mildred was plugged and abandoned after unsuccessfully testing the Nesson and the Red River.

- 4) Across the Missouri River from the Lewis & Clark #2-4H in the Todd Field are the Zinke & Trumbo, Inc. Foster #1-32 [200' FNL, 700' FWL, NW NW Section 32, T154N, R101W, Williams Co., N.D.] and the Davidson #1 [670 FSL, 1,970' FWL SE SW Section 29, T154N, R101W, Williams Co., N.D.] both producing from the Nesson.

ENGINEERING

The surface location for the Lewis & Clark #2-4H is 2,094' from the North line & 332' from the East line, in the Southeast quarter of the Northeast quarter of Section 4, Township 153 North, Range 101 West, McKenzie County, North Dakota. The well was spudded with Nabors Drilling USA Rig #417 on April 13, 2003. Surface hole was drilled with 13.75" bits and fresh water down to 3,008'. A string of 10.75" surface casing was set and cemented at 3,008'. Drilling out of the surface casing commenced with 9.875" bits and Invert Oil mud. Ice dams on the Missouri River caused flooding which eventually threatened the location, therefore the drilling was suspended at 4,188'. The drill string was tripped out and laid down and the derrick was laid over to await the recession of the flood. The well was in suspense for 12 days. Drilling resumed after the flood waters receded and the location and road dried out.



Drilling proceeded to the directional kick off point at 8,730'. A Baker Hughes Inteq gyroscopic survey was made of the hole down to the kick off point to accurately determine the starting point for directional operations. The results of the gyroscopic survey placed the hole at 8,575' at 35.4' South and 38.3' West of the surface location. Baker Hughes Inteq provided directional supervision, and MWD with Gamma Ray for the directional drilling operation. The first portion of the curve was built using 9.875" bits down to a projected 70° at 9,224' MD [Measured Depth]. A string of 7" and 7.625" casing was run and cemented to 9,224' MD. The drilling fluid was switched over to fresh water with polymer sweeps for hole cleaning. The curve was drilled ahead with 6" bits. The first mud motor out from intermediate casing under-performed both in

penetration rate and angle build and had to be replaced. Due to the poor performance of the initial motor run after casing, the curve was landed in the Nesson at a steeper angle than planned. The top of the Nesson was cut at a hole angle of 81.5°. The curve was continued to bring the trajectory back up and leveled off in the upper Nesson. However, the well path drilled back out the top of the Nesson into the overlying Midale before the hole angle could be brought back to 90° (horizontal). The well path was brought back down into the Nesson after drilling 530' MD in the overlying Midale.

The well path traversed downward through the upper Nesson with only minor shows. The first significant shows were observed around the mid-Nesson beginning at 10,207' MD. The MWD stopped pulsing and the drilling string was tripped out at 10,455' MD. After returning to drilling, the hole angle dropped while accomplishing the planned azimuth turn to the west. At the same time the dip angle changed. These two factors combined to cause the well path to drill out of the base of the Nesson by 10,560' MD. Also, shortly after resuming drilling the MWD gamma ray sensor failed and the lateral was drilled ahead without benefit of the gamma ray data. The lateral was drilled ahead to the original planned total depth (based on the hardline restrictions for the existing spacing unit in the Northeast Quarter of Section 4). At 11,605' MD (the end of Lateral #1) the bottom hole location was projected at 1,230.87' North and 1,709.7' West of the surface location. This equates to approximately 863.13' FNL & 2,041.7' FEL in the NW NE Section 4.

A Schlumberger Platform Express Log Suite with FMI was run on drill pipe over the open hole from the intermediate casing shoe to total depth in Lateral #1. Meanwhile Nance Petroleum Corp. representatives went before the North Dakota Industrial Commission – Oil & Gas Division to petition for a change in the spacing unit to include the entire north half of Section 4. The request was granted, allowing the continuation of the Lewis & Clark #2-4H lateral to the west. Analysis of the electric log data along with the paucity of shows in the later portions of Lateral #1 seemed to indicate the need for sidetracking the hole to maximize exposure to the more productive portions of the upper Mission Canyon (Nesson).



The decision was made to pull back to 10,364' MD and initiate an open hole sidetrack while in the mid-Nesson show zone. Sidetrack #1 was started at 10,364' MD off of Lateral #1. Sidetrack #1 proceeded in zone, in the mid-Nesson porosity, until the MWD stopped pulsing around 10,693' MD. After the trip for MWD change the well path was pushed up towards the top of the Nesson to check for possible porosity development. Poor shows were encountered near the top of the Nesson and the well path was steered back down to the mid-Nesson show zone. Pressure spikes, abundant metal in the samples and reduced drill rates prompted a trip at 11,788' MD. The well path traversed through the mid-Nesson show zone for the next several hundred feet of lateral, but the zone did not seem developed enough to "capture" the bit (to reduce the need for constant steering corrections). Beginning around 12,600' MD the well path was steered back up to the top of the Nesson to check for porosity development. An apparent "tight streak" held the well path down away from the top. At trip was made at 12,901' MD to replace a failed MWD gamma sensor. After significant steering efforts and time drilling, the "tight streak" was breached and the top Nesson porosity was encountered. However, the hole angle achieved to break through the "tight streak" was too great to keep from drilling out the top of the Nesson and into the overlying Midale. The well path was brought back down into the Nesson in 120' and the balance of Sidetrack #1 was drilled in the upper Nesson.

Sidetrack #1 reached total depth at 13,755' MD, when drill string torque and drag reached excessive levels for continued safe drilling. The Bottom Hole Location [BHL] at total depth in Sidetrack #1 was 1,350.45' North & 3,843.62' West of the surface location, at approximately 743.6' FNL & 1,116.8 FWL in the NW NW of Section 4.

The drilling of the Lewis & Clark #2-4H took 40 operating days (plus the 12 days suspended due to flooding) and ~584 rotating hours. A total of 1,775 barrels of water were lost during drilling. The Nesson laterals were left uncased for an acid stimulation and horizontal completion.

GEOLOGIC EVALUATION

The geologic evaluation of the Lewis & Clark #2-4H began in the Charles Formation (Mississippian in age) below the 1st major salt. Sunburst Consulting provided two well site geologists and a digital gas detection system. The digital gas information was augmented by the use of a digital gas chromatograph. Drilling rig data (including ROP [Rate of Penetration], on-off bottom status, and mud pump strokes) were received through a digital connection to the rig EDR [Electronic Data Recorder]. The Sunburst gas detection readings were returned for display and monitoring to the rig EDR. Engineering and geologic data were then compiled and distributed on a digital drafting and Internet communications system.

BUILD CURVE

After drilling down to the planned KOP at the base of the 2nd to last Charles Salt the directional tools were picked up to begin the curve build portion of the well. The base of the 2nd to the last Charles salt came in at 8,732' MD, 8,731' TVD (-6859') which was 18' low to prognosis. The Base Last Salt came in at 8,921' MD, 8,909' TVD (-7037'), also 18' low to prognosis. The Ratcliffe interval of the lower Charles was encountered at 9,024' MD, 8,988' TVD, (-7116'), 20' low to prognosis. There was a slight hydrocarbon show identified within the Ratcliffe interval between 9,064' and 9,078' MD. Gas peaked at 71 units [1% methane in air = 100 units] with some "heavy gas" components (C₃s & C₄s). Samples recovered from this Ratcliffe show interval included Limestone: medium to light gray brown, very fine crystalline, occasional spotty black oil stain, dull green fluorescence, slow streaming cut in part, very poor intercrystalline porosity, occasionally anhydritic. These shows were considered fair for the Ratcliffe interval in this area, and warrant further investigation when taken together with the much stronger show in the Basic Game & Fish well nearby.

The Midale interval (also a member of the Charles Formation) was topped at 9,149' MD, 9,064' TVD, (-7192'). There were only trace sample shows observed within the Midale, with no significant background gas increases. The curve was built to near 70° where intermediate casing was set in the Midale interval of the lower Charles Formation and the drilling fluid was switched from Invert Oil to fresh water.

The top of the Mission Canyon Formation (Nesson zone) was reached at 9,375' MD, 9,142.6' TVD (-7270.6') in the curve building portion of the lateral. The Nesson top came in a little over 20' low to prognosis. Samples from the initial contact with the Nesson contained Limestone: tan, cream, light brown, very fine crystalline, fragmental, occasionally peloidal, spotty black oil stain, dull green fluorescence in part, slow streaming cut in part, very poor interparticle porosity, occasional white to clear calcite crystals. Although a respectable show for the Nesson, this was not as good a show as that observed in the Basic Game & Fish well. Background gas readings increased only slightly in the Nesson. Due to an unexpectedly aggressive angle build in the last portion of the curve, the top of the Nesson was once again encountered at 9,520' MD, 9,143.3' TVD, as the well path moved back up stratigraphically. The well path was brought back down into the Nesson from the overlying basal Midale argillaceous marker with some difficulty, taking 530' MD. The Nesson was re-entered at 10,050' MD, 9,151.5' TVD. Part of the reason the Nesson was so difficult to get back down to may have been the apparent 0.89° formation down dip during this portion of the lateral.

The gas and sample shows were slight following the re-entry into the Nesson at 10,050' MD. The gamma ray values were also not as clean as the previous encounter with the top portion of the Nesson. The first significant gas and sample shows were observed beginning after 10,207' MD, 9,157.8' TVD (-7285.8'), which was interpreted to be the mid-Nesson (assuming a 16' net thickness for the Nesson, this zone appeared approximately 8' down from the top). Gas peaks over 200 units with heavy gas components were recorded as the lower 8' of the Nesson were traversed between

10,207' MD and 10,560' MD. Samples did contain fragmental textures with occasional peloids, but the high energy lithologies observed in the Basic Game & Fish were not seen. The MWD gamma ray sensor failed around 10,450' MD, therefore the higher gamma signature marking the base of the Nesson was not recorded until later electric logs. There were only trace shows observed from 10,560' MD to total depth in Lateral #1 at 11,605' MD. Electric logs run on drill pipe at the 11,605' TD helped to clarify the stratigraphic position at that point, and illuminated the lack of porosity development in the upper Nesson in Lateral #1. Electric logs pointed out good porosity development in the lower half of the Nesson and significant fracture counts. The resistivities recorded in the lower Nesson porosity intervals indicate good hydrocarbon saturation.



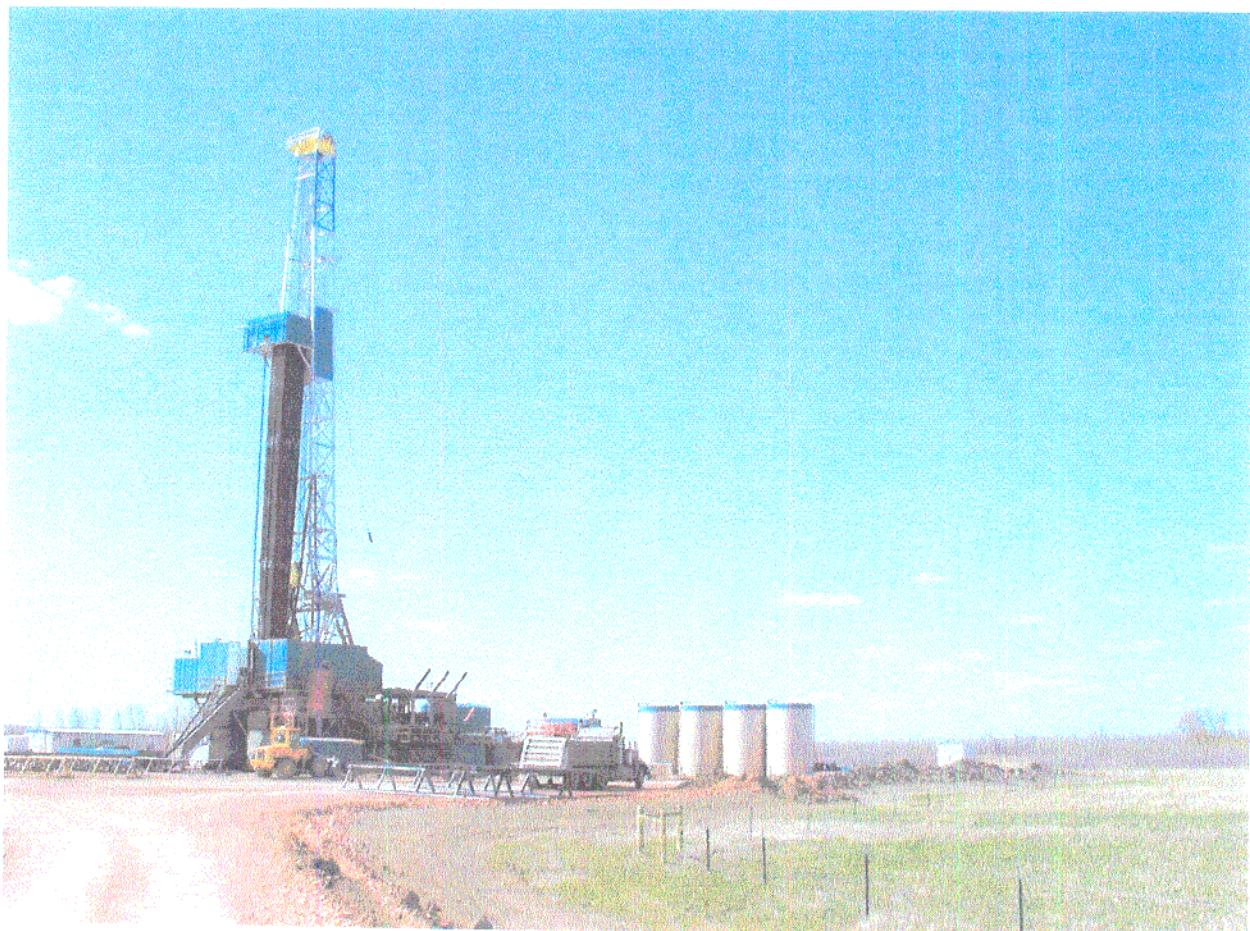
Cuttings photo 10,450' MD

The decision was made to sidetrack off of Lateral #1 to maximize exposure to the more porous mid-Nesson show intervals and seek out upper Nesson porosity development should it occur further out in the lateral. **Sidetrack #1** was initiated at 10,364' MD, within the mid-Nesson show zone. Shows similar to those seen in the mid-Nesson in Lateral #1 were seen once again in the early portions of Sidetrack #1. Once the sidetrack had been established the well path was steered up to the top of the Nesson to seek better porosity development. However, no significant high porosity was encountered between 10,900' MD and 11,700' MD as the upper Nesson was traversed up and back down. The mid-Nesson was explored between 11,750' MD and 12,600' MD, exhibiting good gas and fair sample shows. Another exploration of the upper Nesson was made between 12,600' MD and 12,900' MD. A resistive "tight streak" seemed to be holding the well path down from reaching the top of the Nesson. After significant effort the "tight streak" was breached and some good porosity development was discovered at the top of the Nesson. The gas readings were subdued due to the slow penetration rates sliding up through the "tight streak", however samples looked good. The contained Limestone: with fragmental and peloidal textures, spotty and stylolitic black oil stain in small pin point vugs and slow to moderate streaming cuts. The well path moved up into the overlying basal Midale argillaceous marker between 12,980' MD and 13,100' MD. Gas peaks of up to 200 units were recorded coming back down through the uppermost Nesson porosity. The balance of the Lewis & Clark #2-4H



Cuttings photo 12,989' MD

pursued traversing back and forth through this upper Nesson porosity streak. The porous interval appeared to be a foot or less in thickness and the bit did not seem to be able to track in it. Therefore, steering was required to maintain relative contact with the zone. By this time in the lateral steering (sliding) had become difficult and rotating was the only option for drilling ahead. The Sidetrack #1 finished up with a natural traverse up through the top Nesson porosity yielding good shows at 13,350' MD to 13,550' MD and once again at 13,690' MD to 13,750' MD. Drilling was terminated at 13,755' MD when torque and drag parameters began to exceed reasonable safety limits.



DIP ESTIMATES

Average formation dips were calculated using the multiple contact points with known (or suspected) equivalent stratigraphic markers. The estimates are "straight line" extrapolations, but serve to give an approximate average dip. The large variation in the dip estimates may be due to the drilling of the lateral along the edge of a structure, or minor short term variations in the dip. Interpreted and Gamma Ray documented top and bottom of zone events are tabulated in the "Dip Estimates" table.

Dip Estimates

Lewis & Clark #2-4H

Marker	MD	TVD	Subsea	Vsec	TVD diff.	MD diff.	Dip	Dipping up/down	Comment
Top of Nesson *	9,375.0'	9,142.6'	-7,270.6'	335.70	-	-	-	-	Lateral #1
Top of Nesson *	9,520.0'	9,143.3'	-7,271.3'	444.50	0.70	145.00	-0.28	down	Lateral #1
Top of Nesson *	10,050.0'	9,151.5'	-7,279.5'	944.30	8.20	530.00	-0.89	down	Lateral #1
Top of Nesson *	12,980.0'	9,136.7'	-7264.70	3334.00	-14.80	2930.00	0.29	up	Sidetrack #1
Top of Nesson *	13,100.0'	9,136.4'	-7264.40	3448.20	-0.30	120.00	0.14	flat	Sidetrack #1
Top of Nesson	13,480.0'	9,135.5'	-7263.50	3811.10	-0.90	380.00	0.14	flat	Sidetrack #1
Top of Nesson	13,755.0'	9,136.0'	-7264.00	4072.40	0.50	275.00	-0.10	flat	Sidetrack #1
Top "mid" Nesson porosity *	10,207.0'	9,157.8'	-7,285.8'	1094.10	-	-	-	-	Lateral #1
Top "mid" Nesson porosity	10,456.0'	9,161.1'	-7289.10	1311.60	3.30	249.00	-0.76	down	Sidetrack #1
Top "mid" Nesson porosity	10,884.0'	9,151.1'	-7279.10	1619.60	-10.00	428.00	1.34	up	Sidetrack #1
Top "mid" Nesson porosity	11,773.0'	9,141.4'	-7269.40	2176.70	-9.70	889.00	0.63	up	Sidetrack #1
Top "mid" Nesson porosity	11,950.0'	9,138.7'	-7266.7	2344.50	-2.70	177.00	0.87	up	Sidetrack #1
Top "mid" Nesson porosity	12,122.0'	9,139.0'	-7267.00	2508.30	0.30	172.00	-0.10	flat	Sidetrack #1
Top "mid" Nesson porosity	12,355.0'	9,139.0'	-7267.00	2732.20	0.00	233.00	0.00	flat	Sidetrack #1
Top "mid" Nesson porosity	12,410.0'	9,139.0'	-7267.00	2785.10	0.00	55.00	0.00	flat	Sidetrack #1
Top "mid" Nesson porosity	12,586.0'	9,138.1'	-7266.10	2954.80	-0.90	176.00	0.29	up	Sidetrack #1
base porosity / base Nesson *	10,560.0'	9,166.0'	-7,294.0'	1372.70	-	-	-	-	Lateral #1

* = GR / electric log confirmation

Other markers based on natural deflections & drill rate changes

SUMMARY

The Lewis & Clark #2-4H was successfully steered to a horizontal penetration of the Nesson zone of the Mission Canyon Formation. The lateral exposed a net 4,380' following the initial penetrations of the top of the Nesson. The vast majority of the lateral is interpreted to have been drilled within the Nesson or stratigraphically near the Nesson. The Lewis & Clark #2-4H required 40 drilling days or approximately 584 rotating hours. The drilling operation generally went smoothly, with few delays or problems. General sample quality was rated as fair in the lateral. The show quality in the lateral was poor to fair, with obvious oil staining and visible open porosity only evident in the mid-Nesson show zone and a thin streak at the top of the Nesson during the final 900' of lateral.

CONCLUSIONS

- 1) The well was kicked off in the lower Charles Formation (base of the 2nd to the last salt), which came in 18' low to prognosis.
- 2) A small show was encountered in the Ratcliffe, which corresponds to the show interval seen in the nearby Basic Game & Fish #34-3H well.
- 3) The Lewis & Clark #2-4H was successfully steered to a horizontal trajectory in the targeted Nesson zone of the Mission Canyon Formation. One open hole sidetrack was performed to keep the well path in the target zone. Tubing-conveyed electric logs were of significant help in devising the revised targeting of the lateral and in identifying fracture density and orientations.
- 4) There were 5,621' measured depth drilled in the two laterals following the initial penetration of the Nesson (4,380' from the initial entry point in Lateral #1 to the end of Sidetrack #1). Of the total footage drilled (5,621') after initial penetration of the Nesson: 3,926' (or 70%) were drilled in the Nesson; 650' (or 12%) were drilled just above the Nesson in the basal Midale; and 1,045' (or 18%) were drill below the Nesson.
- 5) Sample show and visual porosity estimates indicated fair hydrocarbon production potential for the lateral. Fluid losses indicate some permeability. Electric logs calculate favorably for the mid-Nesson porosity exposed in Lateral #1.
- 6) The Lewis & Clark #2-4H awaits open hole completion in the Nesson lateral following an acid stimulation with the drilling rig after TD.

Respectfully submitted,

Wayne Freisatz
Sunburst Consulting

WELL DATA SUMMARY

OPERATOR: Nance Petroleum Corporation

ADDRESS: P.O. Box 7168, 550 N. 31st. St., Ste. #500
Billings, Montana 59101
(406) 245-6248

WELL NAME: Lewis & Clark #2-4H

API#: 33-053-02556
NDIC#: 15358

SURFACE LOCATION: 2,094' FNL, 332' FEL
SE NE Section 4, T153N, R101W

BOTTOM HOLE LOCATION:

Lateral #1 1,230.87' North & 1,709.7' West of surface location
Approx. 863.13' FNL, 2,041.7' FEL NW NE Sec. 4

Sidetrack #1 1,350.45' North & 3,843.62' West of surface location
Approx. 743.6' FNL, 1,116.8' FWL, NW NW Sec. 4

FIELD: Baker Field

COUNTY, STATE McKenzie County, North Dakota

BASIN: Williston

WELL TYPE: Horizontal Nesson (Mission Canyon)

BASIS OF PROSPECT: Well Control & 3D Seismic

ELEVATION: SUB: 21'
GL: 1,851'
KB: 1,872'

SPUD DATE: 3/13/2003 CST 9:00:00 PM

TOTAL DEPTH / DATE: Lateral #1: 11,605' MD, 22:00 CDT on 04/23/03
Sidetrack #1: 13,755' MD, 11:20 CDT on 05/03/03

TOTAL DRILLING DAYS: 40

STATUS OF WELL: Open hole completion in Nesson lateral

CONTRACTOR: Nabors Drilling USA - Rig #417

TOOLPUSHER: Don Fritel & Ron Hanson

FIELD SUPERVISOR: Pat Satwey, Jim Rauser

MUD TYPE: Invert Oil to 7" casing point
Fresh water after 7" casing

WELLSITE GEOLOGISTS: Wayne Freisatz, Nancy Auren

GEOSTEERING SYSTEM Sunburst Digital Wellsite Geological System

PROSPECT GEOLOGIST: Mike Bryant

ROCK SAMPLING:

Lateral #1 10' from 8,500' to 9,430'
30' from 9,430' to 11,605'

Sidetrack #1 10' from 10,364' to 10,390'
30' from 10,390' to 13,755'

CASING: 10.75" set @ 3,008'
7" & 7.625" set @ 9,224'

HOLE SIZE: 13.75" from surface to 3,008'
9.875" from 3,008' to 9,224'
6" from 9,224' to 11,605' in Lateral #1
6" from 10,364' to 13,755' in Sidetrack #1

DRILL STEM TEST: none

CORE PROGRAM: none

ELECTRIC LOGGING: Schlumberger Well Service
Engineers: John Schumer & Todd Smith
Ran: Tubing conveyed Platform Express -
Compensated Neutron - Three Detector Density -
High Resolution Laterolog Array - FMI
from 7" casing @ 9,224' MD to 11,557' MD in
Lateral #1

H2S MONITORING: OSI Oilfield Safety Incorporated

MULTI-SHOT: Baker Hughes Inteq
Jim Gale

DIRECTIONAL DRILLERS: Baker Hughes Inteq
Dan Gamel, Jim Drader, Aaron Nelson

MWD: Baker Hughes Inteq
Wes Clausen, Andrew Lim, Troy Hiesler

KEY OFFSET WELLS:

Basic Earth Science Systems, Inc.

Basic Game & Fish 34-3

SW SW Sec. 2, T153N, R101W

McKenzie Co., N.D., KB: 1,872'

Drilled 11/95

John L. Cox

French Pinney #24-3

SE SW Sec. 3, T153N, R101W

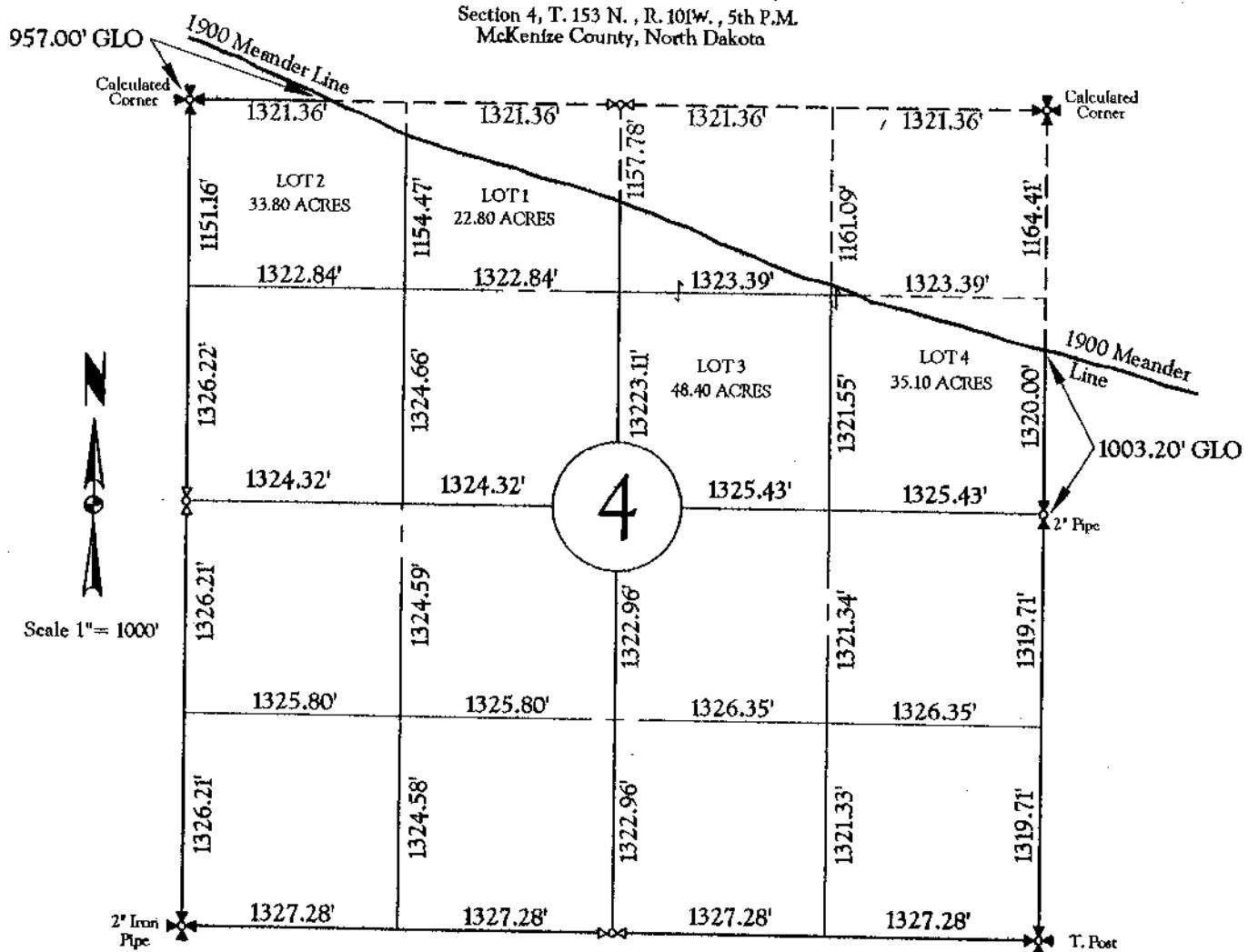
McKenzie Co., N.D., KB: 1,871'

Drilled 7/87

<u>DISTRIBUTION:</u>	Lewis & Clark #2-4H	Reports:	Final logs:
Nance Petroleum Corporation 550 N. 31st. St., Ste. 500 P.O. Box 7166 Billings, MT 59101-7168 (406) 245-6248 fax (406) 245-9106 Mike Bryant, Gary Evertz, Pat Salwey		2	2
Palace Exploration Company 1202 East 33rd. St., Ste. 100 Tulsa, OK 74105 (918) 743-5096 fax (918) 712-8924 Robert M. Zinke, Richard D. Siegal		3	3
Zavanna LLC. 1600 Stout Street, Ste. 560 Denver, CO 80202 (303) 595-8004 fax (303) 595-9847 Bill Coleman, Steve Swanson		2	2
North Dakota Industrial Commission Oil & Gas Division 600 East Boulevard Ave. Bismarck, N.D. 58505 (701) 328-8020 fax (701) 328-8022		2	1&digital

HORIZONTAL SECTION PLAT

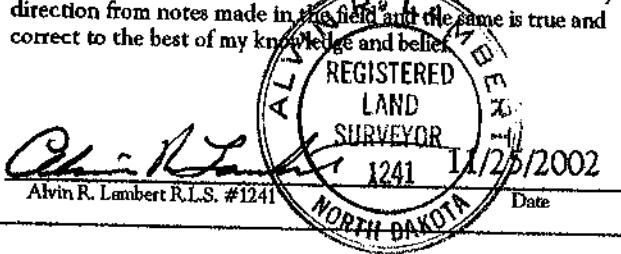
Nance Petroleum Corporation
 P.O. Box 7168 Billings, Montana 59103
LEWIS & CLARK #24
 Section 4, T. 153 N., R. 101W., 5th P.M.
 McKenzie County, North Dakota



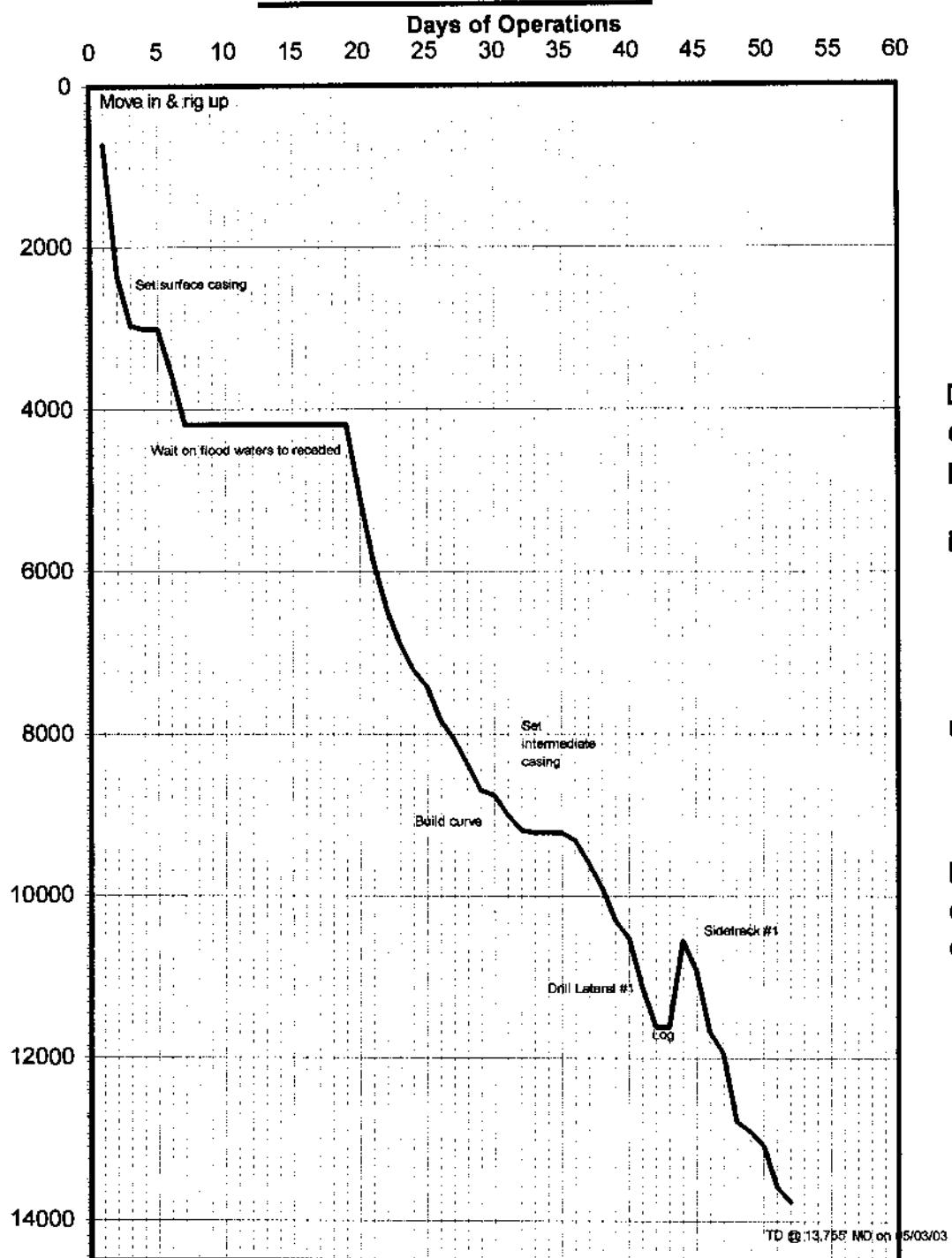
All corners shown on this plat were found or calculated from other found corners during field survey on November 14th & 15th of 2002.

Kadrimas Lee & Jackson	
Engineers, Surveyors and Planners	Surveyed By A. R. Lambert
	Computed By T. L. Steen
	Drawn By T. L. Steen
	Field Book 0-15
	Project No. 8702142
© Kadrimas, Lee & Jackson, 2002	

I, Alvin Lambert, Professional Land Surveyor, do hereby certify
 that the survey plat shown hereon was made by me or under my
 direction from notes made in the field and the same is true and
 correct to the best of my knowledge and belief.



TIME VS DEPTH



DAILY DRILLING SUMMARY

Lewis & Clark #2-4H

2003 06:00 hrs

DAY	DATE	DEPTH	PROG	BIT #	WOB	RPM	PP	WT	VIS	PV/YP	WL	CK	CL	SOL	ACTIVITY	FORMATION
1	3/14	726	641	1	15/20	180	850	8.8	29	-	n/c	n/c	-	-	Move in & rig up Nabors 417, spud,drill	surface
2	3/15	2348	1622	1	15/20	180	1100	9.1	33	4/2	n/c	n/c	-	1.5	Drill, water flow, drill, mud ring, drill, trip	surface
3	3/16	2970	622	2	2/10	180	1100	9.8	38	14/10	n/c	n/c	-	8	Trip, drill, mix bar for water flow	surface
4	3/17	3008	38	2	2/10	180	1100	9.8	38	14/10	n/c	n/c	-	8	Drill, circ., trip out, run 10.75" csg.&cmft	surface
5	3/18	3008	0	-	-	-	-	-	-	-	-	-	-	-	Nipple up, test BOPs, clean tanks	surface
-	switch to Invert Oil mud															
6	3/19	3552	544	3	1	190	1450	10	60	18/11	8	78/22	660	2.7	Clean tanks, PU collars, drill	surface
7	3/20	4188	636	3	20	190	1450	9.6	60	18/11	8	78/22	660	2.7	Drill, prepare for flood, lay over derrick	surface
-	3/21	4188	0	-	-	-	-	-	-	-	-	-	-	-	Wait on flood waters to recede	surface
-	3/22	4188	0	-	-	-	-	-	-	-	-	-	-	-	Wait on flood waters to recede	surface
-	3/23	4188	0	-	-	-	-	-	-	-	-	-	-	-	Wait on flood waters to recede	surface
-	3/24	4188	0	-	-	-	-	-	-	-	-	-	-	-	Wait on flood waters to recede	surface
-	3/25	4188	0	-	-	-	-	-	-	-	-	-	-	-	Wait on flood waters to recede	surface
-	3/26	4188	0	-	-	-	-	-	-	-	-	-	-	-	Wait on flood waters to recede	surface
-	3/27	4188	0	-	-	-	-	-	-	-	-	-	-	-	Wait on flood waters to recede	surface
-	3/28	4188	0	-	-	-	-	-	-	-	-	-	-	-	Wait on flood waters to recede	surface
-	3/29	4188	0	-	-	-	-	-	-	-	-	-	-	-	Wait on flood waters to recede	surface
-	3/30	4188	0	-	-	-	-	-	-	-	-	-	-	-	Wait on flood waters to recede	surface
-	3/31	4188	0	-	-	-	-	-	-	-	-	-	-	-	Wait on flood waters to recede	surface
-	4/1	4188	0	-	-	-	-	-	-	-	-	-	-	-	Wait on flood waters to recede	surface
8	4/2	5079	891	3	35	180	1650	9.8+	67	19/14	8	76/24	680	2	Raise derrick, PU pipe, circ., drill	Dakota
9	4/3	5874	795	3/4	35/45	100/180	1650	9.8	66	20/14	8.2	78/22	720	2.6	Drill, trip, drill	Dakota
10	4/4	6480	586	4	50	80	1650	9.6+	58	18/12	7.8	78/22	760	2.4	Drill	Piper
11	4/5	6891	431	4	40	110	1650	9.6+	54	17/11	8	78/22	768	2.9	Drill	Spearfish
12	4/6	7209	318	4	40	110	1275	9.6	53	17/11	7.4	78/22	780	2.3	Drill, drop survey, trip - SLM	Opeche
13	4/7	7416	207	5	45	100	1275	9.5	52	16/10	7.4	80/20	784	2.1	Trip, PU monel collar, ream to bot., drill	Opeche
14	4/8	7826	410	5	50	100/75	1275	9.5+	50	15/10	8	80/20	800	2.5	Drill	Minnelusa
15	4/9	8066	240	5/6	55	100/75	1275	9.7	52	15/10	8	76/24	680	2.8	Mix & pump pill, trip, water flow, mix bar	Kibbey
16	4/10	8376	310	6	60	70	1275	10	50	17/10	8.2	76/24	740	2.7	Drill	Charles
17	4/11	8700	324	6	60	70	1275	10	48	17/9	8.4	79/21	748	3.2	Drill	Charles
18	4/12	8762	62	6/7	60/45	70/120MM	1950	10	50	18/9	8.2	79/21	740	3.1	Drill to KOP, circ., trip, PU dir. Tools, drill	Charles
19	4/13	9008	241	7	30-45	45/120MM	1825	10	50	18/9	8.2	79/21	740	3.1	Drill	BLS
20	4/14	9196	186	7	35-50	45/120MM	1950	10	47	17/9	8.4	80/20	720	3	Drill, short trip; repair rig; drill	Midale
21	4/15	9224	28	7	35-50	45/120MM	1950	10+	48	17/10	8	80/20	720	2.7	Drill, short trip; lay down pipe; run casing	Midale
22	4/16	9224	0	-	-	-	-	8.4	27	-	-	-	-	-	Run casing; cement; nipple up; test BOP	Midale

DAILY DRILLING SUMMARY

Lewis & Clark #2-4H

2003 06:00 hrs

DAY	DATE	DEPTH	PROG.	B/T #	WOB	RPM	PP	WT	VIS	PV/YP	WL	CK	CL	SOL	ACTIVITY	FORMATION
23	4/17	9224	0	8/9	10	45/120MM	1600	8.3	27	-	-	-	-	-	Pick up pipe, circ, trip, drill cement	Midale
24	4/18	9314	90	9	20-30	45/120MM	1600	8.3	27	1/0	n/c	-	-	-	Drill cement, drill, trip for motor	Midale
25	4/19	9593	279	9	20-40	45/120MM	1600	8.3	27	1/0	n/c	-	-	-	Trip in, drill, re-log GR, drill	Nesson
26	4/20	9897	304	9	20-40	50/120MM	1800	8.3	29	1/0	n/c	-	-	-	Drill	Midale
27	4/21	10300	403	9	20-40	50/120MM	1800	8.3	28	1/0	n/c	-	-	-	Drill, service rig, drill	Nesson
28	4/22	10514	214	9/10	20-40	60/120MM	1800	8.3	28	1/0	n/c	-	-	-	Drill, short trip & sweep, trip for BHA, drill	Nesson
29	4/23	11126	612	10	20-40	60/120MM	1900	8.3	29	1/0	n/c	-	-	-	Drill	Nesson
30	4/24	11605	479	10	20-40	60/120MM	2000	8.3	28	1/0	n/c	-	-	-	Drill; circ.sweep; short trip; trip for logs	Nesson
31	4/25	11605	0	11	-	-	-	8.3	28	1/0	n/c	-	-	-	Trip; rig up Schlumberger; log, trip in	Nesson
32	4/26	10540	176	11	20-35	60/120MM	1800	8.3	28	1/0	n/c	-	-	-	Trip in; timed drill for sidetrack; drill	Nesson
33	4/27	10911	371	11	20-35	60/120MM	1900	8.3	30	1/0	n/c	-	-	-	Drill; trip for motor; drill	Nesson
34	4/28	11663	752	11	20-40	60/120MM	1900	8.3	30	1/0	n/c	-	-	-	Drill	Nesson
35	4/29	11927	264	11/12	20-40	60/120MM	1900	8.3	30	1/0	n/c	-	-	-	Drill; trip for bit; drill	Nesson
36	4/30	12778	851	12	20-40	60/120MM	2000	8.3+	29	1/0	n/c	-	-	-	Drill, rig repair; drill	Nesson
37	5/1	12901	123	12	20-40	60/120MM	2000	8.3+	28	1/0	n/c	-	-	-	Drill, trip for MWD, wait on MWD, trip in	Nesson
38	5/2	13070	169	13	20-40	60/120MM	2000	8.3+	29	1/0	n/c	-	-	-	Trip in; drill	Nesson
39	5/3	13580	510	13	10-40	60/120MM	2050	8.3+	29	1/0	n/c	-	-	-	Drill, circ. Samples; drill	Nesson
40	5/4	13755	175	13	10-40	60/120MM	2050	8.3+	29	1/0	n/c	-	-	-	Drill; TD; circ.;short trip; trip	Total Depth

DAILY DRILLING CHRONOLOGY

Lewis & Clark #2-4H

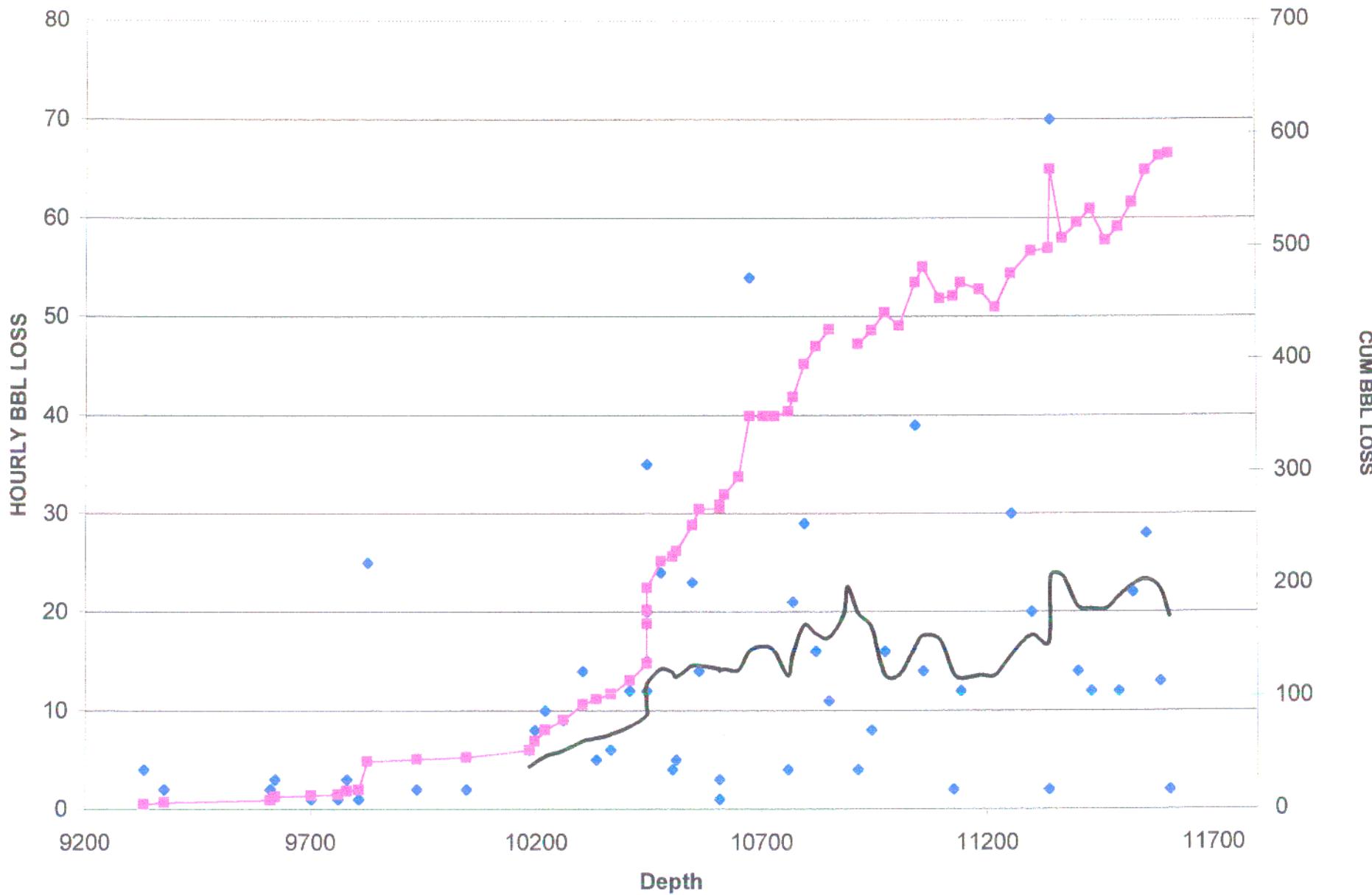
DAY	DATE 2002	6:00 A.M. FOOTAGE (feet)	24 HR. FOOTAGE (feet)	ACTIVITY
1	3/14	726	641	Move in & rig up Nabors 417; spud @ 21:00 CST 3/13/03; notified NDIC - Williston; drill; had sand & gravel, circulate & mix mud; drill
2	3/15	2348	1622	Drill; survey; water flow @ 1100'; let weight come up to 9.6. water flow stopped; drill; mud ring @ 2074'; work mud ring out; drill; started out of hole for bit; water flow started @ 1 bbl./min.; made trip; hauled water out of mud tanks; mix bar
3	3/16	2970	622	Trip for bit; drill; wireline survey; ran 2-10k on bit to attempt to bring deviation back down; mix bar to stop water flow
4	3/17	3008	38	Drill; circulate & wireline survey; SLM 1.03 long - no correction made on wiper trip; drill to 3008'; circulate for casing; trip out; rig up casing crew; ran 67 jts. 10.75" 40.5# casing; rig up Halliburton & cement casing; pump 20 bbl. Fresh water spacer; pump 610 sks. Midcon II cement w/ 2% Cal-seal, 2% Econolite, 8% salt, 0.3% Versaset, 0.253 #/sk. Flocele, 200 sks. Premium Plus with 3% salt, 0.25#/sk. Flocele. Displaced w/ 260 bbls. Invert mud, 21 bbls. fresh water, bump plug w/ 1225 psi, float held; wait on cement 6 hours; cut off casing & weld on wellhead; return 11 bbls. cement to pit
5	3/18	3008	0	Finish welding on wellhead; nipple up BOPs; Pressure test BOPs. blind rams, pipe rams & hydram to 250# low side and 3000# high side; tested all valves 250# low side and 3000# high side; BOP & all valves held OK; Continue to clean mud tanks all during nipple up & testing BOPs; Had 3 sections of mud tanks full of bar that settled out during drilling (using jackhammer to mine out tanks)
6	3/19	3552	544	Finish cleaning mud tanks; fill tanks with oil mud; strap 6 drill collars, trip in hole and pick up 6 collars; drill float collar, 44' cement & shoe; drill ahead running light to bring down deviation
7	3/20	4188	638	Drill; survey; River water started coming up around rig; prepare rig for flood waters; layed over derrick and abandoned rig until flooding recedes; water rose 21" in 14 hrs., water 3" from flooding location @ 3am
-	3/21	4188	0	Wait on flood waters to go down
-	3/22	4188	0	Wait on flood waters to go down
-	3/23	4188	0	Wait on flood waters to go down
-	3/24	4188	0	Wait on flood waters to go down
-	3/25	4188	0	Wait on flood waters to go down
-	3/26	4188	0	Wait on flood waters to go down
-	3/27	4188	0	Wait on flood waters to go down
-	3/28	4188	0	Wait on flood waters to go down
-	3/29	4188	0	Wait on flood waters to go down
-	3/30	4188	0	Wait on flood waters to go down
-	3/31	4188	0	Wait on flood waters to go down
-	4/1	4188	0	Wait on flood waters to go down
8	4/2	5079	691	Raise derrick & rig up floor; service rig; pick up 42 joints drill pipe & circulate bottoms up; drill & wireline survey
9	4/3	5874	795	Drill & wireline survey; pump pill & trip for bit - no tight hole on trip
10	4/4	6460	586	Drill & wireline survey
11	4/5	6891	431	Drill & wireline survey, Dunham salt @ 6825'
12	4/6	7209	318	Drill & wireline survey; drop survey & trip for bit @ 7209'; SLM 0.68' long - no correction made
13	4/7	7418	207	Finish trip out for bit; change bit & pick up monel collar; trip in; ream 60' to bottom; drill
14	4/8	7826	410	Drill & wireline survey

DAY	DATE	6:00 A.M. FOOTAGE (feet)	24 HR. FOOTAGE (feet)	ACTIVITY
2002				
15	4/9	6066	240	Mix & pump pill; drop survey & trip for bit @ 7960'; service rig; trip in; cut drilling line; Pit volume gain noticed @ 8040'; shut down & check for flow - had flow; started mixing bar to kill flow; gained approx. 100 bbls.
16	4/10	8376	310	Drill; service rig; Top Charles salt 8253'
17	4/11	8700	324	Drill; Sunburst Consulting on @ 8500'
18	4/12	8782	62	Drill to KOP @ 8730'; circulate bottoms up; trip out - multi-shot surveying; layed down 15 jts. Drill pipe and 31' drill collars; pick up directional tools, orient & scribe, test MWD; trip in; fill pipe & check MWD; pick up 43 jts. Heavy weight drill pipe; calibrate tracking for MWD GR; orient tools; drill (orient)
19	4/13	9008	241	Drill (orient); rig service; drill (orient); drill (rotate); drill (orient)
20	4/14	9196	188	Drill (orient); rig service; drill (orient); drill (rotate); short trip 5 stands; repair vibrator hose; trip to bottom; drill (orient); drill (rotate); drill (orient)
21	4/15	9224	28	Drill (orient); drill (rotate); circulate @ casing pt. (9224'MD); circulate 20 bbls. Fresh water; pump pill & short trip 11 stands; work tight hole in slot; trip back to bottom; circulate; trip out laying down pipe; lay down BHA; rig up casing crew; run 7" & 7.625" casing
22	4/16	9224	0	Finish running casing; rig up Halliburton cementers; circulate casing; rig down casing crew; pump 25 bbls. N-Ver-Sperse O, 200 bbls. salt water, 21 bbls. fresh water; cement w/ 290 sks. Light Prem 8% gel, 0.4% Halad-344, 0.25% HR-5, 0.25#sk. Floccels & 500 sks. Prem 30% SSA-1, 0.3% CFR-3, 0.1% HR-5, 4% Microbond HT, 0.6% Halad-23, 0.25#/sk. Floccel; bumped plug w/ 2090# w/ 340 bbls. displacement; float held - OK; nipple down; set slips; nipple up; pick up rotating head; clean mud tanks; test BOPs; prepare to pick up BHA & pipe
23	4/17	9224	0	Rig up pick up machine & pick up drill pipe; circulate; trip out; change out BHA, orient, scribe & test MWD; trip in; fill pipe & check MWD; tag cement @ 8865' MD; drill cement
24	4/18	9314	90	Drill cement 9023-9230'; service rig; drill (orient); drill (rotate); drill (orient); trip to check mud motor; change out mud motor, orient, scribe, test MWD
25	4/19	9593	279	Trip in; fill pipe & check MWD; cut drilling line; trip in; fill pipe & check MWD; drill (orient); service rig; wait on orders; drill (orient); re-log Gemma Ray 9410-9454'MD; drill (orient); drill (rotate); drill (orient)
26	4/20	9897	304	Drill (orient); drill (rotate); service rig; drill (orient); drill (rotate); drill (orient)
27	4/21	10300	403	Drill (orient); drill (rotate); service rig; drill (orient); drill (rotate)
28	4/22	10514	214	Drill (rotate); drill (orient); short trip 5 stands; pump polymer sweep & circulate; short trip 15 stands; pump polymer sweep & circulate; MWD stopped pulsing; trip for BHA; change out bit, motor & MWD; orient, scribe & test; trip in; fill pipe & check MWD; drill (orient)
29	4/23	11126	612	Drill (orient); drill (rotate); rig service; drill (rotate); drill (orient); drill (rotate); drill (orient)
30	4/24	11605	479	Drill (orient); drill (rotate); rig service; drill (rotate); drill (orient); TD for logs @ 11,605' MD; pump sweep & circulate; short trip 28 stands; pump sweep & circulate; trip out for logs
31	4/25	11605	0	Trip out for logs; service rig & check BOPs; pick up Schlumberger logging tools (tubing conveyed logging); trip in; pick up side-door sub & run wireline; trip in logging down; log up; pull wireline & rig down side-door sub; trip out; lay down logging tools; pick up directional tools; orient, scribe & test; trip in; fill pipe & check MWD; trip in
32	4/26	10540	176	Trip in; lay down 40 joints drill pipe; circulate; trough hole for sidetrack; time drill for sidetrack 10384-10383'; drill (orient); drill (rotate); drill (orient)

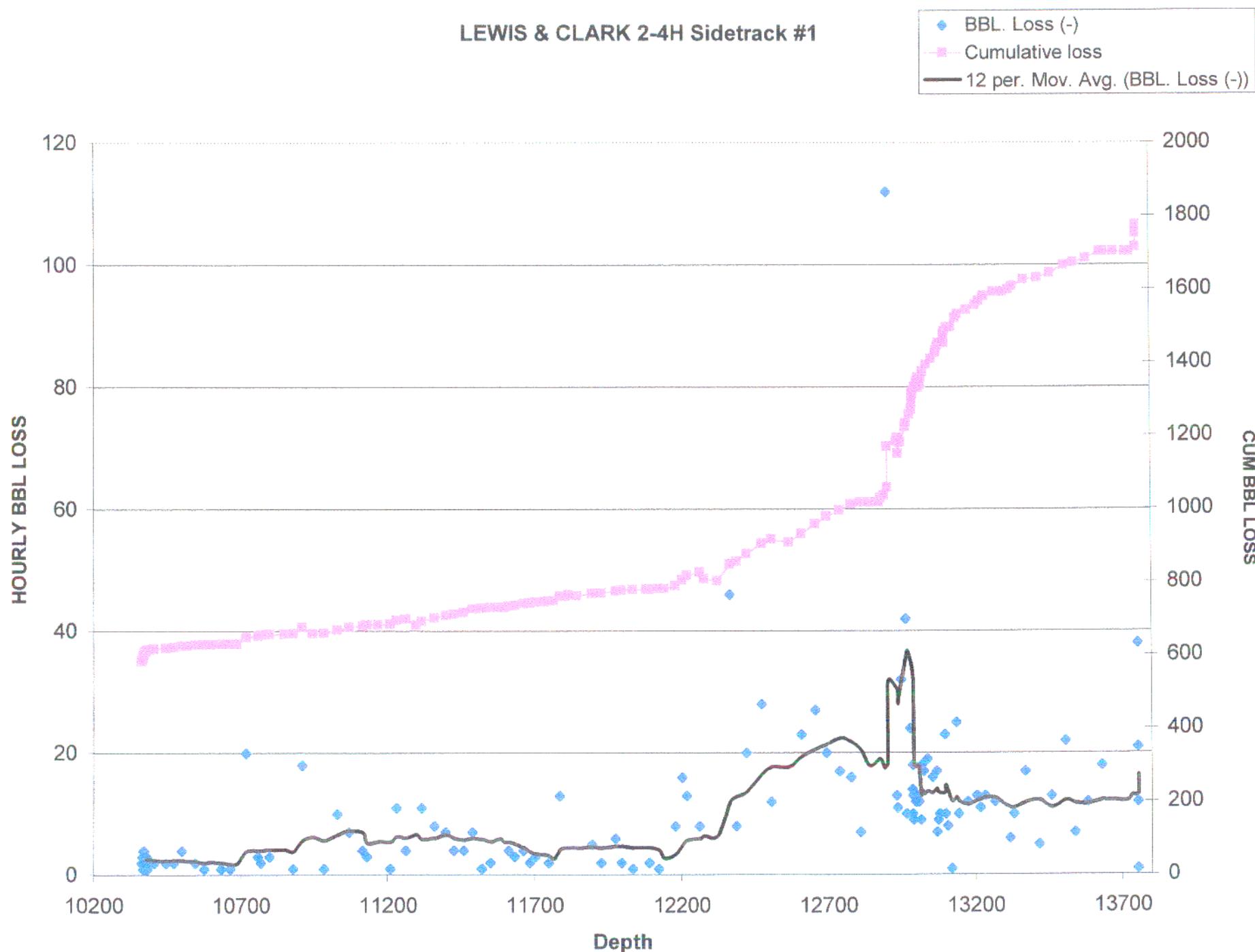
DAY	DATE 2002	6:00 A.M. FOOTAGE (feet)	24 HR FOOTAGE (feet)	ACTIVITY
33	4/27	10811	371	Drill (rotate); drill (rotate); MWD stopped pulsing, work pipe to try to regain signal - no go; trip to check BHA; change out motor & MWD (motor bed); orient, scribe & test; trip in; fill pipe & check MWD; finish trip in; drill (rotate); drill (orient); drill (rotate)
34	4/28	11663	752	Drill (rotate); drill (orient); rig service; drill (rotate); drill (orient); drill (rotate)
35	4/29	11927	264	Drill (rotate); drill (orient); drill (rotate); pressure spikes; circulate bottoms up; trip to check BHA; lay down 16 joints drill pipe; trip out; change out BHA (bit bed); trip in; cut drilling line; trip in; fill pipe & check MWD; orient into sidetrack hole; trip in; ream 90° to bottom; drill (rotate); drill (orient); drill (rotate)
36	4/30	12778	851	Drill (rotate); drill (orient); rig service; rig repair - Epoch sensor; drill (rotate); drill (orient); drill (rotate)
37	5/1	12901	123	Drill (rotate); drill (orient); MWD Gamma Ray stopped working; circulate bottoms up; rig service; trip for MWD; change out BHA; MWD did not test out; wait on MWD tools; Trip in part way; test MWD - failed; trip out; change out MWD; trip in; fill pipe & check MWD - OK; trip in; orient into sidetrack hole; finish trip in
38	5/2	13070	169	Finish trip in; drill (rotate); drill (orient); lime drill 12983-87"; rig service; drill (orient); drill (rotate); drill (orient)
39	5/3	13580	510	Drill (orient); drill (rotate); circulate samples @ 13,096' MD; drill (orient); drill (rotate); rig service; drill (orient); drill (rotate)
40	5/4	13755	175'	Drill (rotate); TD @ 11:20 CDT 05/03/03 due to excessive torque & drag; circulate bottoms up & pump sweep; short trip back up into casing (52 stands); circulate; trip out; lay down directional tools; trip in to acidize

LEWIS & CLARK 2-4H Lateral #1

◆ BBL. Loss (-)
■ Cumulative Loss
— 12 per. Mov. Avg. (BBL. Loss (-))



LEWIS & CLARK 2-4H Sidetrack #1



WELL - LEWIS & CLARK 2-4H							DATE 5/4/03	
TIME	DEPTH	PASON PVT	GAIN (+)	LOSS (-)	BBLGAIN (+)	BBL LOSS (-)	TOTAL BBL	COMMENTS
NOON 4/18/03	9330	897		4		4	4	
6PM	9375	895		2		2	6	
8AM 4/19/03	9611	901		2		2	8	
9AM	9622	898		3		3	11	
3PM	9701	897		1		1	12	
9PM	9760	897		1		1	13	
11PM	9779	894		3		3	16	
1AM 4/20/03	9805	893		1		1	17	
2AM	9824	868		25		25	42	
8AM	9935	868		2		2	44	
6PM	10045	873		2		2	46	
2AM 4/21/03	10186	858		6		6	52	
3AM	10197	856		8		8	60	
4AM	10220	854		10		10	70	
5AM	10260	845		9		9	79	
6AM	10303	831		14		14	93	
7AM	10333	836		5		5	98	
8AM	10364	832		6		6	102	
9AM	10406	820		12		12	114	
10AM	10444	805		15		15	129	
NOON	10444	770		35		35	164	SHORT TRIP
1PM	10444	758		12		12	176	CIR SWEEP
3PM	10444	738		20		20	196	SHORT TRIP
4AM 4/22/03	10475	667		24		24	220	TRIP F/TOOLS
5AM	10502	663		4		4	224	
6AM	10510	658		5		5	229	
7AM	10546	637		23		23	252	
8AM	10562	622		14		14	266	
9AM	10607	621		1		1	267	Tight Connection
10AM	10607	618		3		3	270	
11AM	10618	631	9				279	PUMP SWEEP
NOON	10650	648	16				295	PUMP SWEEP
1PM	10674	598		54		54	349	
2PM	10705	733	79				349	BUILD VOLUME
3PM	10730	795	63				349	BUILD VOLUME
4PM	10760	793		4		4	353	
5PM	10770	776		21		21	366	
6PM	10795	747		29		29	395	
7PM	10821	731		16		16	411	
8PM	10851	720		11		11	426	PUMP SWEEP
9PM	10883	913	193					BUILD VOLUME
10PM	10891	939	26					BUILD VOLUME
11PM	10914	935		4		4	413	
12PM	10944	927		8		8	425	
1AM 4/23/03	10974	911		16		16	441	
2AM	11005	913	12				429	PUMP SWEEP
3AM	11040	874		39		39	468	
4AM	11058	860		14		14	482	
5AM	11096	888	28				454	25BLL SWEEP
6AM	11126	886		2		2	456	
7AM	11143	873		12		12	468	
8AM	11184	881	6				462	
9AM	11220	898	16				446	
10AM	11255	874		30		30	476	
11AM	11300	854		20		20	496	
NOON	11339	852		2		2	498	
1PM	11343	784		70		70	568	
2PM	11370	846	61				507	
3PM	11402	832		14		14	521	
4PM	11432	834		12		12	533	
5PM	11465	862	28				505	
6PM	11492	850		12		12	517	

WELL - LEWIS & CLARK 2-4H								DATE 5/4/03
TIME	DEPTH	PASON PVT	GAIN (+)	LOSS (-)	BBLGAIN (+)	BBL LOSS (-)	TOTAL BBL	COMMENTS
7PM	11523	828		22		22	539	
8PM	11554	800		28		28	567	
9PM	11584	787		13		13	580	
10PM 4/23/03	11605	785		2		2	582	
10AM 4/25/03	10364	881		2		2	584	
11AM	10365	879		2		2	586	
NOON	10366	877		2		2	588	
1PM	10367	874		3		3	591	
2PM	10368	871		3		3	594	
3PM	10369	870		1		1	595	
4PM	10370	866		4		4	599	
5PM	10372	862		4		4	603	
6PM	10373	859		3		3	606	
7PM	10374	856		3		3	609	
8PM	10375	855		1		1	610	
9PM	10377	855					610	
10PM	10380	852		3		3	613	
11PM	10381	851		1		1	614	
12PM	10391	849		2		2	616	
1AM 4/26/03	10405	847		2		2	618	
2AM	10445	845		2		2	620	
3AM	10472	843		2		2	622	
4AM	10500	839		4		4	626	
5AM	10518	839					626	
6AM	10547	837		2		2	628	
7AM	10578	836		1		1	629	
8AM	10603	636					629	
9AM	10636	835		1		1	630	
10AM	10667	834		1		1	631	
11AM	10687	835	1				630	
NOON	10720	815		20		20	650	
1AM 4/27/03	10759	812		3		3	653	
2AM	10770	810		2		2	655	
3AM	10800	807		3		3	658	
4AM	10850	807					658	
5AM	10881	806		1		1	659	
6AM	10911	797		18		18	677	
7AM	10947	815	18		18		659	
8AM	10985	814		1		1	660	
9AM	11030	804		10		10	670	
10AM	11069	797		7		7	677	
11AM	11116	793		4		4	681	
NOON	11130	790		3		3	684	
1PM	11168	830					684	Added 45 bbls water
2PM	11210	829		1		1	685	
3PM	11231	818		11		11	696	
4PM	11261	814		4		4	700	
5PM	11297	831	17				683	
6PM	11317	820		11		11	694	
7PM	11360	812		8		8	702	
8PM	11399	805		7		7	709	
9PM	11427	801		4		4	713	
10PM	11461	797		4		4	717	
11PM	11490	790		7		7	727	
12PM	11521	789		1		1	728	
1AM 4/28/03	11551	787		2		2	730	
2AM	11583	823					730	Added 36 bbls water
3AM	11597	827					730	Added 4 bbls water
4AM	11613	823		4		4	734	
5AM	11634	820		3		3	737	
6AM	11663	816		4		4	741	
7AM	11685	814		2		2	743	

WELL - LEWIS & CLARK 2-4H								DATE 5/4/03
TIME	DEPTH	PASON PVT	GAIN (+)	LOSS (-)	BBLGAIN (+)	BBL LOSS (-)	TOTAL BBL	COMMENTS
8AM	11705	811		3		3	746	
9AM	11732	811					746	
10AM	11751	809		2		2	748	
11AM	11767	814					748	
NOON	11788	801		13		13	761	
1AM 4/29/03	11788	801					761	
2AM	11805	886					761	
3AM	11815	882		4			765	
4AM	11846	884	2				763	
5AM	11896	879		5		5	768	
6AM	11927	877		2		2	770	
7AM	11977	871		6		6	776	
8AM	11997	869		2		2	778	
9AM	12035	868		1		1	779	
10AM	12080	868					779	
11AM	12090	866		2		2	781	
NOON	12122	865		1		1	782	
1PM	12141	772					782	Corrected PVT
2PM	12179	764		8		8	790	
3PM	12203	748		16		16	806	
4PM	12218	735		13		13	819	
5PM	12263	727		8		8	827	
6PM	12277	745	18		18		809	
7PM	12323	751	6				803	
8PM	12365	704		46		46	849	
9PM	12388	697		8		8	857	
10PM	12424	677		20		20	877	
11PM	12475	649		28		28	905	
12PM	12510	637		12		12	917	
1AM 4/30/03	12567	645	8		8		909	
2AM	12610	622		23		23	932	
3AM	12657	595		27		27	959	
4AM	12696	575		20		20	979	
5AM	12740	558		17		17	996	
6AM	12778	542		16		16	1012	
7AM	12810	535		7		7	1019	
8AM	12840	895	360				1019	Added 360 bbls
9AM	12873	955	60				1019	Added 60 bbls
10AM	12879	945		10			1029	
11AM	12890	938		7			1036	
NOON	12901	915		23			1059	
7AM 5/1/03	12901	803		112		112	1171	Lost 112 bbls on trip
8AM	12932	790		13		13	1184	
9AM	12934	779		11		11	1195	
10AM	12937	824	45		45		1150	Empty pill tank
11AM	12947	792		32		32	1182	
NOON	12963	750		42		42	1224	
1PM	12965	740		10		10	1234	
2PM	12977	716		24		24	1258	
3PM	12985	702		14		14	1272	
4PM	12986	684		18		18	1290	
5PM	12987	674		10		10	1300	
6PM	12988	661		13		13	1313	
7PM	12989	652		9		9	1322	
8PM	12996	640		12		12	1334	
9PM	13003	627		13		13	1347	
10PM	13007	615		12		12	1359	
11PM	13010	643	28		28		1331	Pump Sweep
12PM	13014	624		9		9	1340	
1AM 5/2/03	13018	606		18		18	1358	
2AM	13023	589		17		17	1375	
3AM	13036	575		19		19	1394	

WELL - LEWIS & CLARK 2-4H

DATE 5/4/03

TIME	DEPTH	PASON PVT	GAIN (+)	LOSS (-)	BBLGAIN (+)	BBL LOSS (-)	TOTAL BBL	COMMENTS
4AM	13054	559		16		16	1410	
5AM	13069	542		17		17	1427	
6AM	13070	535		7		7	1434	
7AM	13075	526		9		9	1443	
8AM	13080	516		10		10	1453	
9AM	13097	708					1453	Add 182 bbls
10AM	13097	685		23		23	1476	
11AM	13097	826	141		141		1476	Add 14 bbls
NOON	13100	816		10		10	1486	
1PM	13108	808		8		8	1496	
2PM	13121	807		1		1	1497	
3PM	13137	782		25		25	1522	
4PM	13144	772		10		10	1532	
5PM	13175	760		12		12	1544	
6PM	13206	747		13		13	1557	
7PM	13218	736		11		11	1568	
8PM	13235	723		13		13	1581	
9PM	13268	711		12		12	1593	
10PM	13300	730	19				1593	
11PM	13320	724		6		6	1599	
12PM	13334	714		10		10	1609	
1AM 5/3/03	13372	697		17		17	1626	
2AM	13418	692		5		5	1631	
3AM	13460	679		13		13	1644	
4AM	13509	657		22		22	1666	
5AM	13542	650		7		7	1673	
6AM	13585	638		12		12	1685	
7AM	13632	620		18		18	1703	
8AM	13642	642	22				1703	
9AM	13678	650	12				1703	Filling Tanks
10AM	13720	822	172				1703	Filling Tanks
11AM	13732	912	90				1703	Filling Tanks
NOON	13755	900		12		12	1715	
6PM	13755	862		38		38	1753	
7PM	13755	861		1		1	1754	
8PM	13755	840		21		21	1775	

BIT RECORD

OPERATOR: Nance Petroleum Corporation
 CONTRACTOR: Nabors Drilling USA - Rig #417
 GROUND LEVEL: GL: 1,851'

WELL NAME: Lewis & Clark #2-4H
 LOCATION: SE NE Section 4, T153N, R101W
 KELLY BUSHING: KB: 1,872'

SPUD DATE: 3/13/2003 CST 9:00:00 PM
 TD DEPTH/DATE: 13,755' MD @ 11:20 CDT 05/03/03

#	Size	Make	Type	Serial #	Jars	Depth In	Depth Out	FTG	Hours	Accum Hours	Weight lbs.	SPM	Virt. Date	Mud		
														Wt	Vt	
1	13.75"	HTC	GTX-1	1X0454	open	85	2348	2263	23	23.0	15/20	94	15	1100	9.1	33
2	13.75"	HTC	GTX-1	1X0433	open	2,348'	3008	660	21	44.0	2/10	96	3	1100	9.8	38
3	9.875"	HTC	GT-1	50006917	3x13	3,008'	5,728'	2720	42.5	86.5	35	100	1	1650	9.8	66
4	9.875"	STC	F-2	YE4618	3x13	5,728'	7,209'	1481	70	156.5	40	90	2	1275	9.6	53
5	9.875"	RTC	EHP53AKPR	U67591	3x13	7,209'	7,860'	651	42.0	198.5	55	90	1	1275	9.7	52
6	9.875"	STC	F-3	ML8432	3x13	7,860'	8,730'	870	63.0	261.5	60	64	14	1950	10	50
7	9.875"	HTC	GT-S30	5002760	open	8,730'	9,224'	494	54.0	315.5	30-45	60&64	70	1950	10	48
8	6"	SEC	M44NF	6943890	open	8865'	8865'	0	0.0	315.5	-	-	70	1600	8.3	27
9	6"	RTC	SL53AKPR	PA4913	open	9224'	10455'	1231	80	395.5	20-40	90	91	1800	8.3	28
10	6"	HTC	STX-30	5028257	open	10455'	11,605'	1150	41	436.5	20-40	90	89	2000	8.3	28
11	6"	STC	XR30TY	ML1214	open	10,365'	11,778'	1424	68	504.5	20-40	90	89	1900	8.3	30
12	6"	HTC	STX-30C	5018066	open	11,778'	12,901'	1113	31	535.5	20-40	90	89	2000	8.3+	28
13	6"	RTC	SL54KPR	NQ1103	open	12,901'	13,755	854	48.5	584.0	10-40	90	91	2050	8.3+	29

Nance Petroleum Corp. Lewis & Clark #2-4H

2,094' FNL, 332' FEL
SE NE Section 4
T 153 N, R 101 W
McKenzie Co., N.D.

Hardline approx. 4,404' W & 1,435' N of surf. loc.
or 652' FNL, 549' FWL NW NW Sec. 4

TD Sidetrack #1

05/04/03

4

TD Lateral #1

Start Sidetrack #1

Top Nesson

7" casing

Lewis & Clark #2-4H
KOP

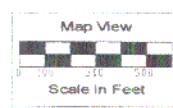
Plotted to projection at TD
Sidetrack #1
Measured Depth 13,755'
True Vertical Depth 9,136.0'
Vertical Section 4,072.38'

BHL @ TD Sidetrack #1
1,350.45' North & 3,843.62' West
of surface location.
Approx. 743.6' FNL &
1,116.8' FWL, NW NW Sec. 4

Plotted to projection at TD
Lateral #1
Measured Depth 11,605'
True Vertical Depth 9,160.84'
Vertical Section 1,997.72'

BHL @ TD Lateral #1
1,230.87' North & 1,709.7' West
of surface location.
Approx. 863.13' FNL &
2,041.7' FEL, NW NE Sec. 4

Mildred #1

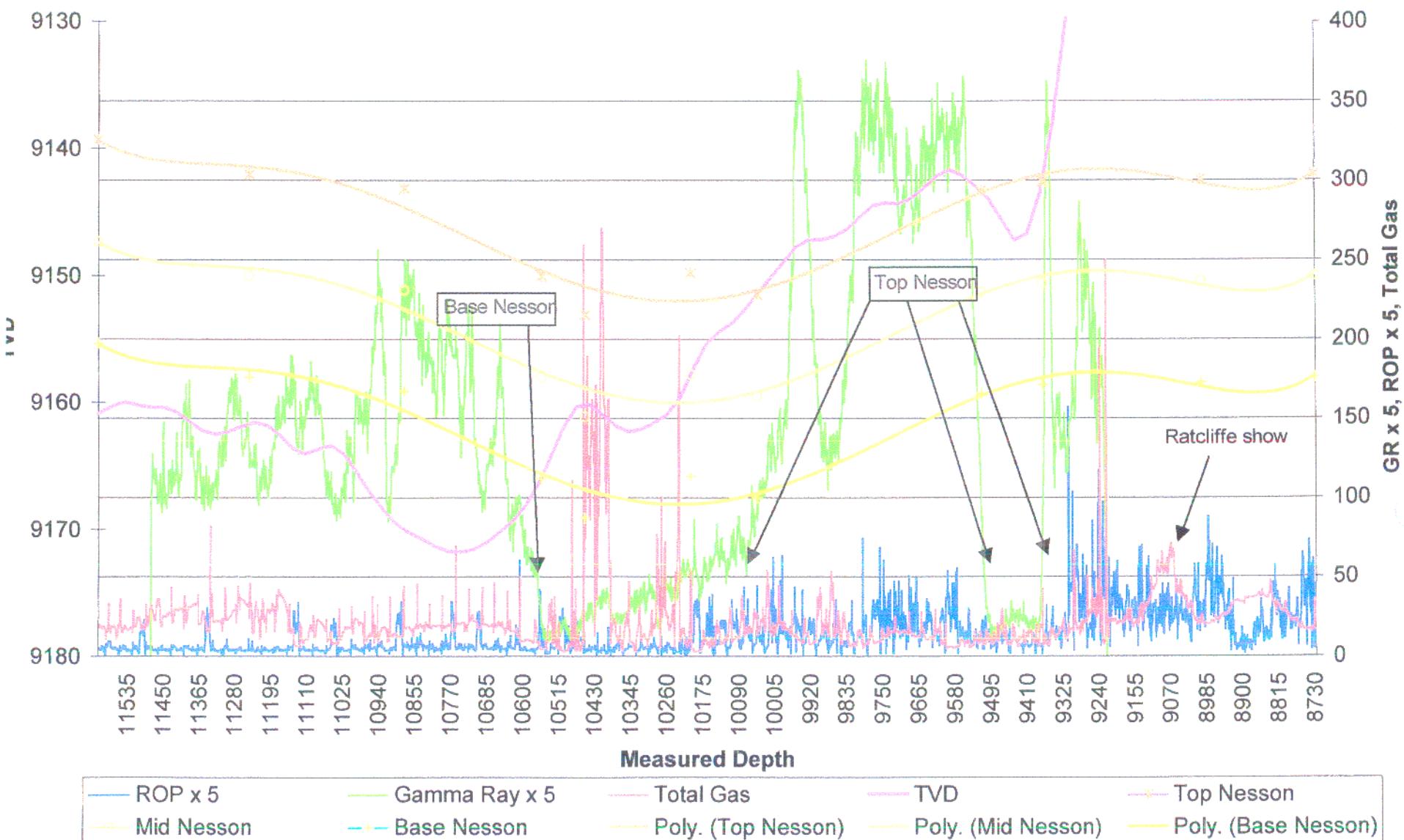


Sunburst
Consulting
Wayne Freisatz
Geologist

= Planned lateral
= Hardline set-back

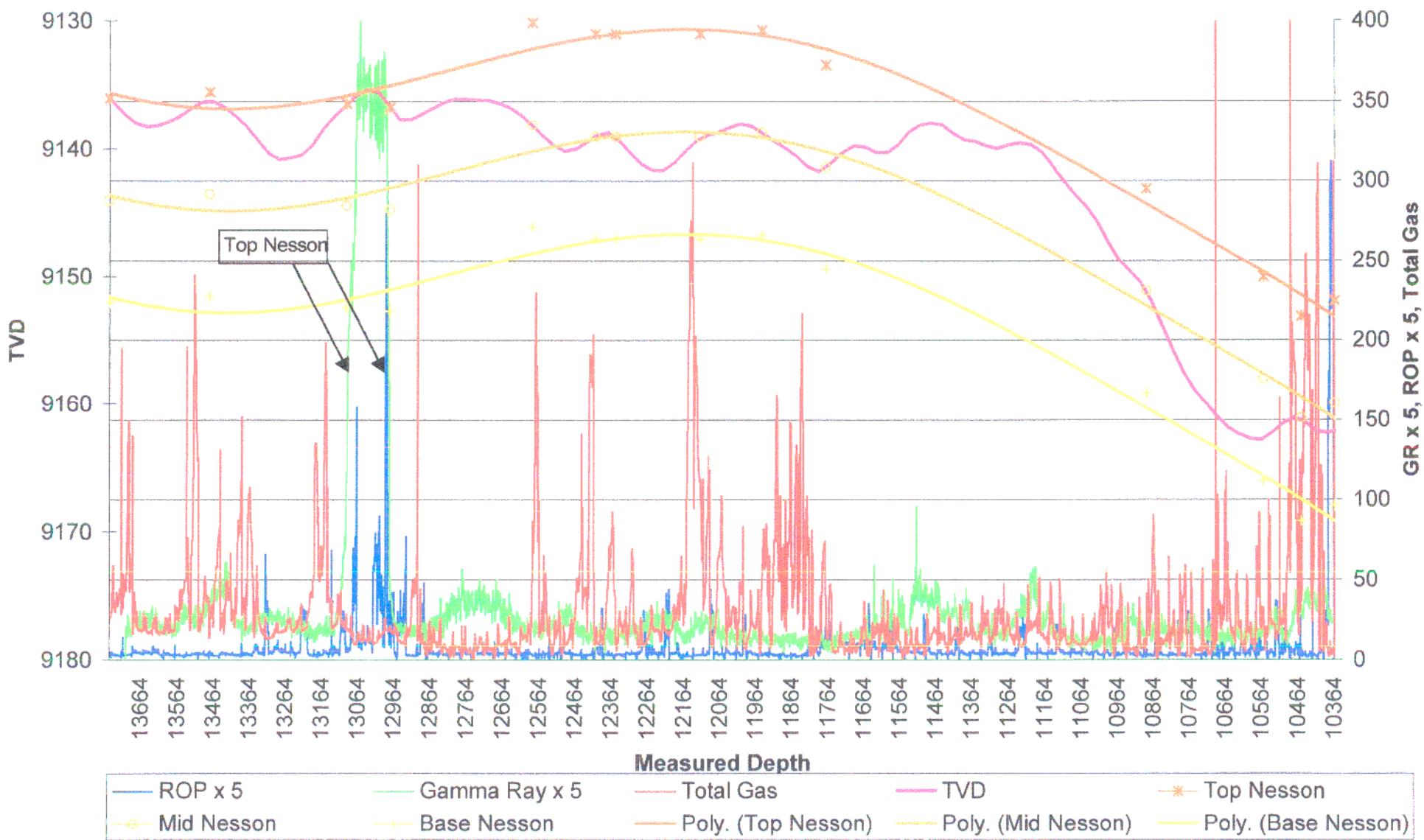
Nance Lewis & Clark #2-4H Lateral #1

Nance Petroleum Corp.
 Lewis & Clark #2-4H
 SE NE Sec. 4, T153N, R101W
 McKenzie Co., N.D.

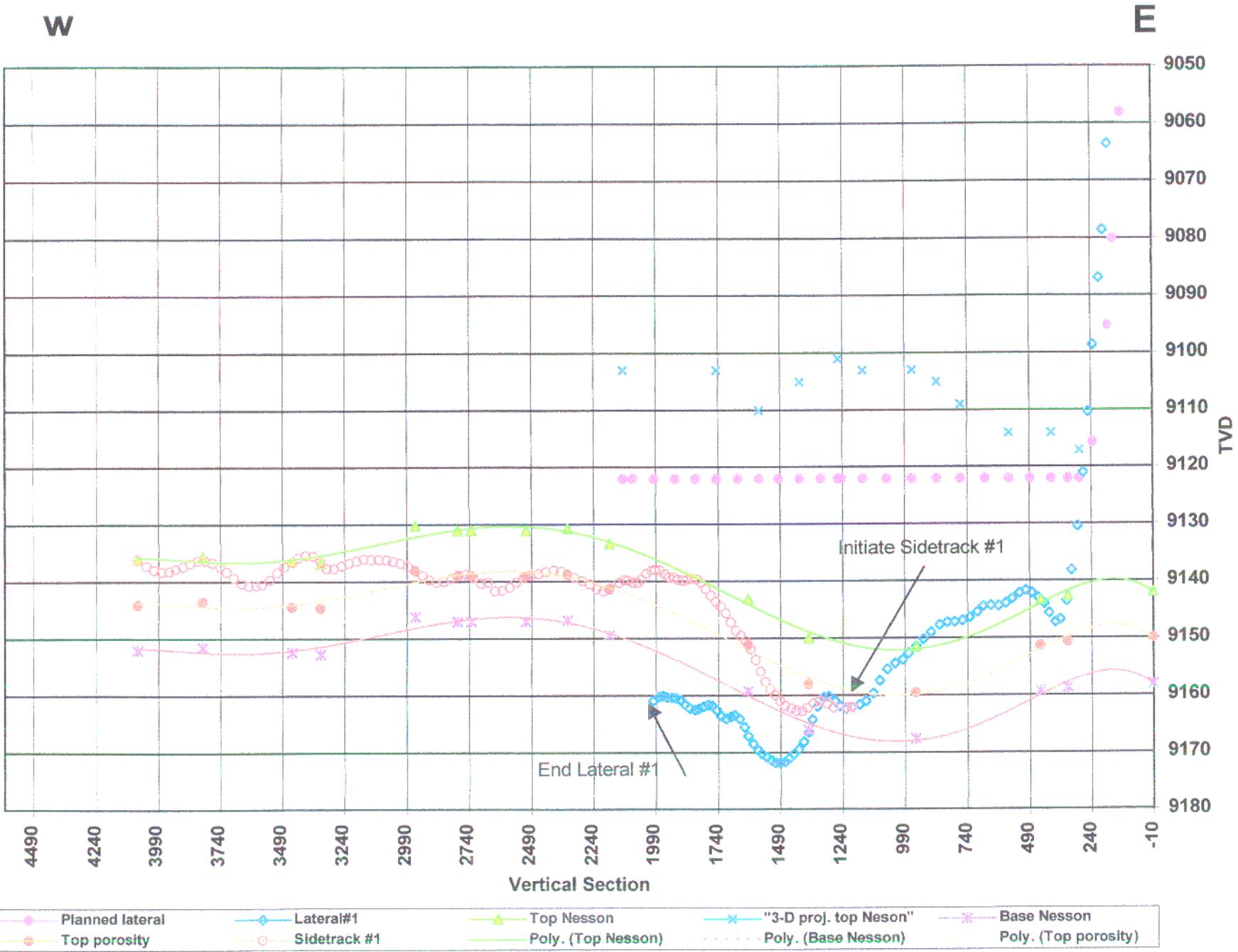


Nance Lewis & Clark #2-4H Sidetrack #1

Nance Petroleum Corp.
 Lewis & Clark #2-4H
 SE NE Sec. 4, T153N, R101W
 McKenzie Co., N.D.



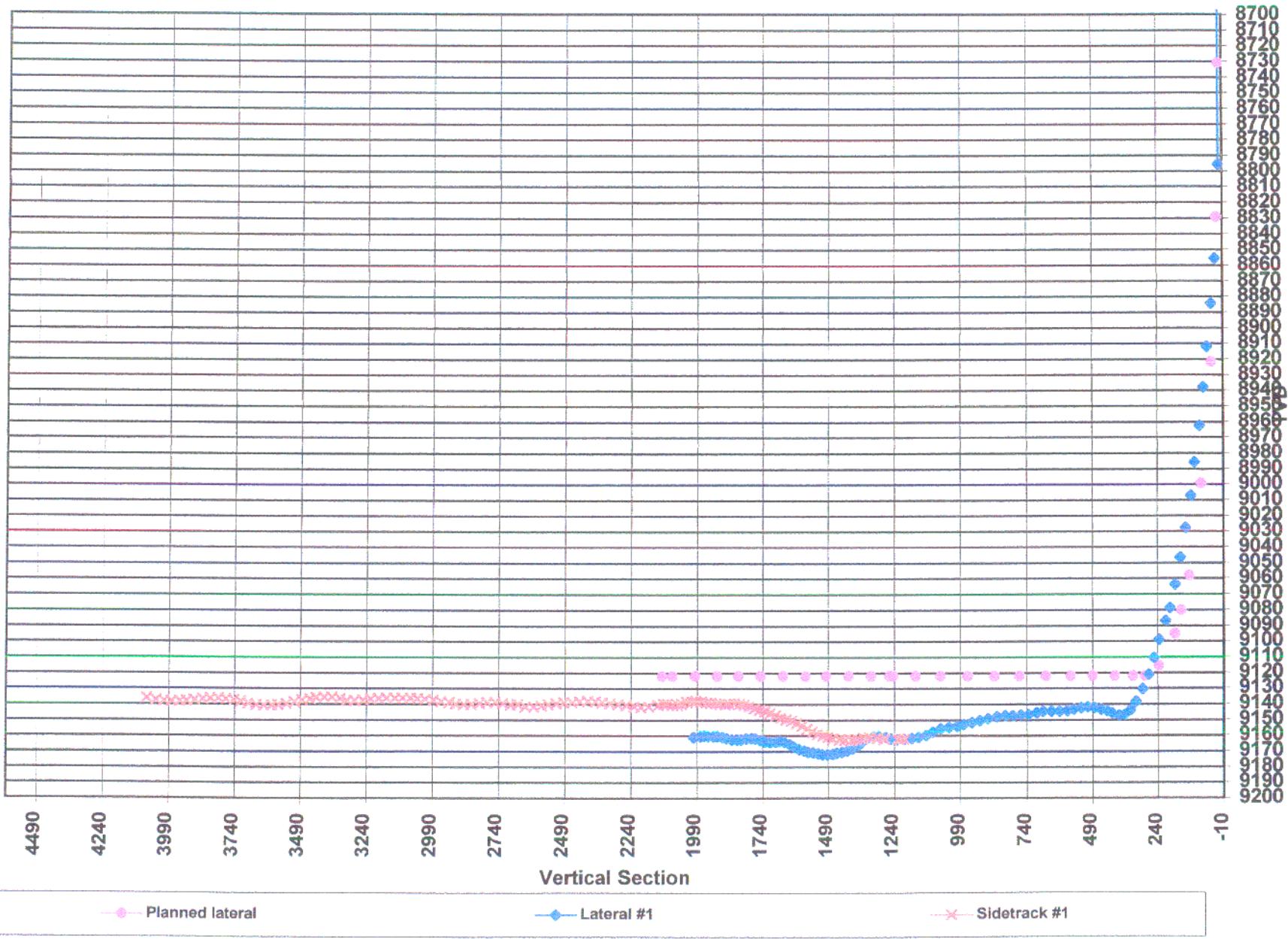
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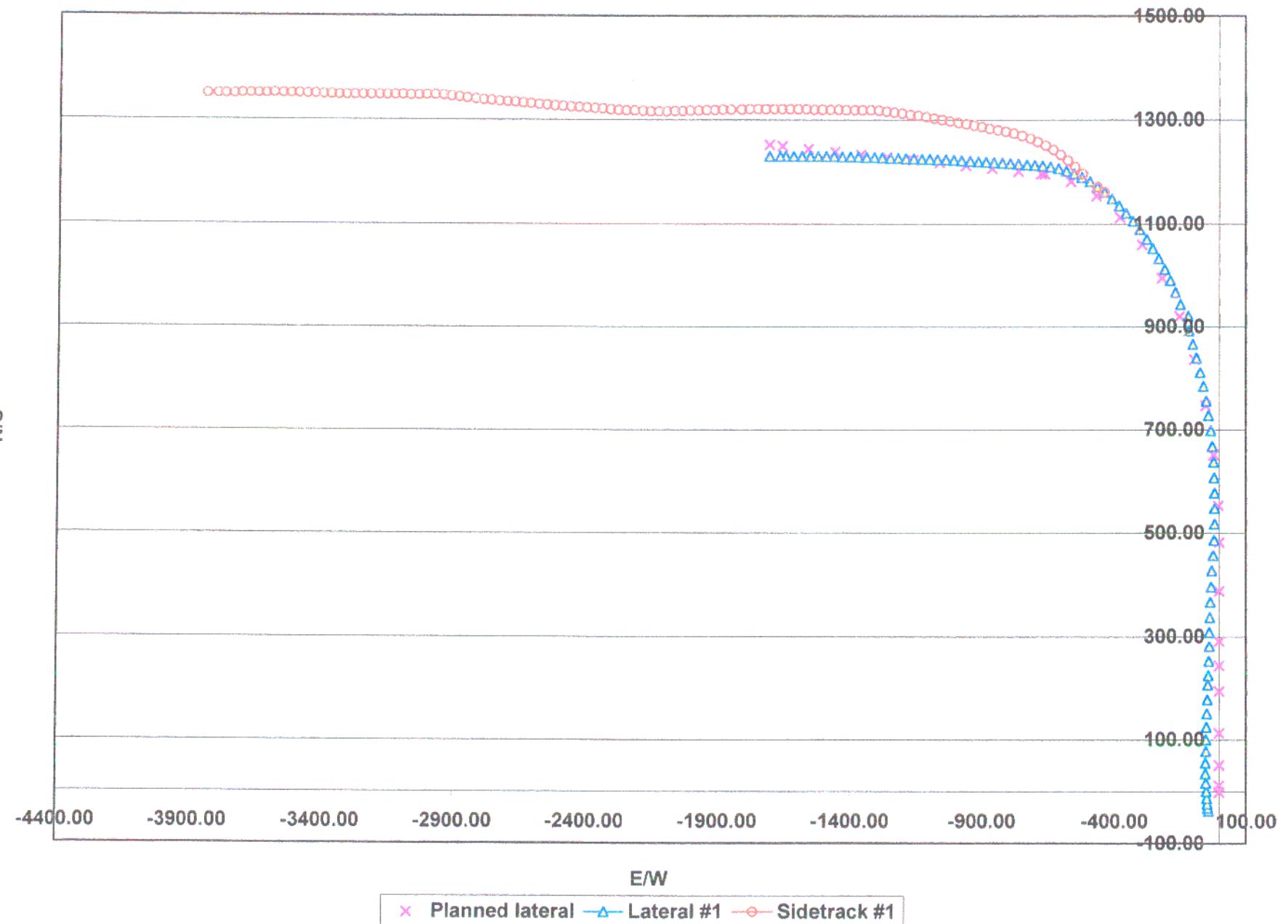
Nance Lewis & Clark #2-4H

W

E



Nance Lewis & Clark #2-4H





Company: NANCE PETROLEUM
 Field: BAKER
 Cty/Blk/Par: MCKENZIE CO.
 Well Name: Lewis & Clark 2-4H S.T.
 Rig: NABORS #417

Job Number: 463600 Calculation Method Minimum Curvature
 Magnetic Decl.: 10.15 Proposed Azimuth 287.76
 Grid Corr.: Depth Reference KB
 Total Survey Corr.: 10.15 Tie Into MWD
 Target Info: 1394 n -4352 w

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lghth (ft)	TVD (ft)	VS (ft)	Coordinates		DLS (°/100')	Bld Rate (°/100')	Wlk Rate (°/100')	Remarks
								N/S (ft)	E/W (ft)				
0	MWD	10324	89.40	292.40		9162.09	769.88	1161.98	N 436.22 W				Tie In
1	MWD	10352	90.30	290.70	28	9162.16	797.81	1172.26	N 462.26 W	6.87	3.2	-6.1	
2	MWD	10383	89.50	293.80	31	9162.22	828.71	1184.00	N 490.95 W	10.33	-2.6	10.0	
3	MWD	10413	90.80	296.30	30	9162.14	858.46	1196.70	N 518.12 W	9.39	4.3	8.3	
4	MWD	10444	91.80	295.60	31	9161.44	889.14	1210.26	N 545.99 W	3.94	3.2	-2.3	
5	MWD	10475	89.70	292.40	31	9161.03	919.95	1222.87	N 574.30 W	12.35	-6.8	-10.3	
6	MWD	10505	88.70	289.60	30	9161.45	949.89	1233.62	N 602.31 W	9.91	-3.3	-9.3	
7	MWD	10535	88.50	287.80	30	9162.18	979.88	1243.23	N 630.71 W	6.04	-0.7	-6.0	
8	MWD	10566	89.30	284.70	31	9162.78	1010.86	1251.90	N 660.46 W	10.33	2.6	-10.0	
9	MWD	10596	91.00	282.20	30	9162.70	1040.77	1258.88	N 689.64 W	10.08	5.7	-8.3	
10	MWD	10626	90.40	279.80	30	9162.33	1070.56	1264.60	N 719.08 W	8.25	-2.0	-8.0	
11	MWD	10658	91.40	279.40	32	9161.83	1102.23	1269.94	N 750.63 W	3.37	3.1	-1.3	
12	MWD	10689	92.00	277.30	31	9160.91	1132.79	1274.44	N 781.29 W	7.04	1.9	-6.8	
13	MWD	10719	91.80	275.90	30	9159.91	1162.21	1277.89	N 811.07 W	4.71	-0.7	-4.7	
14	MWD	10749	91.90	275.90	30	9158.95	1191.55	1280.97	N 840.90 W	0.33	0.3	0.0	
15	MWD	10780	93.20	275.50	31	9157.57	1221.84	1284.04	N 871.71 W	4.39	4.2	-1.3	
16	MWD	10811	93.50	275.20	31	9155.76	1252.06	1286.93	N 902.52 W	1.37	1.0	-1.0	
17	MWD	10841	93.90	275.50	30	9153.82	1281.30	1289.72	N 932.33 W	1.67	1.3	1.0	
18	MWD	10871	93.40	275.20	30	9151.91	1310.54	1292.51	N 962.14 W	1.94	-1.7	-1.0	
19	MWD	10901	92.20	275.20	30	9150.44	1339.79	1295.23	N 991.98 W	4.00	-4.0	0.0	
20	MWD	10932	91.30	275.20	31	9149.50	1370.03	1298.04	N 1022.84 W	2.90	-2.9	0.0	
21	MWD	10962	92.00	275.50	30	9148.63	1399.32	1300.83	N 1052.69 W	2.54	2.3	1.0	
22	MWD	10993	93.40	274.80	31	9147.17	1429.54	1303.61	N 1083.53 W	5.05	4.5	-2.3	
23	MWD	11023	92.70	274.50	30	9145.58	1458.71	1306.04	N 1113.39 W	2.54	-2.3	-1.0	
24	MWD	11053	91.60	274.10	30	9144.45	1487.87	1308.29	N 1143.29 W	3.90	-3.7	-1.3	
25	MWD	11084	91.90	274.50	31	9143.51	1518.00	1310.61	N 1174.18 W	1.61	1.0	1.3	



Company: NANCE PETROLEUM
 Field: BAKER
 Cty/Blk/Par: MCKENZIE CO.
 Well Name: Lewis & Clark 2-4H S.T.
 Rig: NABORS #417

Job Number: 463600 Calculation Method Minimum Curvature
 Magnetic Decl.: 10.15 Proposed Azimuth 287.76
 Grid Corr.: Depth Reference KB
 Total Survey Corr.: 10.15 Tie Into MWD
 Target Info: 1394 n 4352 w

No.	Tool Type	Survey Depth (ft)	Ind (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates		DLS (°/100')	Bld Rate (/100')	Wlk Rate (/100')	Remarks	
26	MWD	11115	92.00	274.10	31	9142.45	1548.13	1312.93	N	1205.08	W	1.33	0.3	-1.3
27	MWD	11145	92.40	273.40	30	9141.30	1577.22	1314.90	N	1234.99	W	2.69	1.3	-2.3
28	MWD	11175	91.80	273.10	30	9140.20	1606.24	1316.59	N	1264.92	W	2.24	-2.0	-1.0
29	MWD	11205	90.40	273.10	30	9139.62	1635.26	1318.22	N	1294.87	W	4.67	-4.7	0.0
30	MWD	11236	90.10	270.60	31	9139.49	1665.07	1319.22	N	1325.85	W	8.12	-1.0	-8.1
31	MWD	11268	89.30	270.30	32	9139.66	1695.62	1319.47	N	1357.85	W	2.67	-2.5	-0.9
32	MWD	11298	89.70	270.30	30	9139.92	1724.24	1319.63	N	1387.85	W	1.33	1.3	0.0
33	MWD	11329	91.10	270.30	31	9139.70	1753.81	1319.79	N	1418.85	W	4.52	4.5	0.0
34	MWD	11359	90.20	270.30	30	9139.36	1782.42	1319.95	N	1448.85	W	3.00	-3.0	0.0
35	MWD	11390	90.30	270.60	31	9139.23	1812.02	1320.19	N	1479.84	W	1.02	0.3	1.0
36	MWD	11421	91.60	270.30	31	9138.71	1841.61	1320.43	N	1510.84	W	4.30	4.2	-1.0
37	MWD	11451	90.90	270.30	30	9138.06	1870.22	1320.59	N	1540.83	W	2.33	-2.3	0.0
38	MWD	11481	89.60	270.60	30	9137.93	1898.86	1320.83	N	1570.83	W	4.45	-4.3	1.0
39	MWD	11511	89.80	269.90	30	9138.08	1927.47	1320.96	N	1600.83	W	2.43	0.7	-2.3
40	MWD	11543	88.20	269.90	32	9138.64	1957.92	1320.90	N	1632.82	W	5.00	-5.0	0.0
41	MWD	11573	88.00	270.30	30	9139.64	1986.49	1320.95	N	1662.81	W	1.49	-0.7	1.3
42	MWD	11603	89.70	270.60	30	9140.24	2015.13	1321.19	N	1692.80	W	5.75	5.7	1.0
43	MWD	11634	90.40	269.60	31	9140.21	2044.66	1321.24	N	1723.80	W	3.94	2.3	-3.2
44	MWD	11665	91.10	269.90	31	9141.81	2074.14	1321.11	N	1754.79	W	2.46	2.3	1.0
45	MWD	11695	89.30	269.60	30	9139.70	2102.67	1320.98	N	1784.79	W	6.08	-6.0	-1.0
46	MWD	11726	88.90	269.60	31	9140.19	2132.12	1320.76	N	1815.79	W	1.29	-1.3	0.0
47	MWD	11765	88.20	269.20	39	9141.17	2169.13	1320.35	N	1854.77	W	2.07	-1.8	-1.0
48	MWD	11795	89.70	269.20	30	9141.72	2197.56	1319.93	N	1884.76	W	5.00	5.0	0.0
49	MWD	11826	91.80	269.60	31	9141.32	2226.98	1319.61	N	1915.76	W	6.90	6.8	1.3
50	MWD	11857	91.30	269.20	31	9140.48	2256.39	1319.28	N	1946.74	W	2.07	-1.6	-1.3



Company: NANCE PETROLEUM
 Field: BAKER
 Cty/Blk/Par: MCKENZIE CO.
 Well Name: Lewis & Clark 2-4H S.T.
 Rig: NABORS #417

Job Number: 463600 Calculation Method Minimum Curvature
 Magnetic Decl.: 10.15 Proposed Azimuth 287.76
 Grid Corr.: Depth Reference KB
 Total Survey Corr.: 10.15 Tie Into MWD
 Target Info: 1394 n -4352 w

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Bld Rate (°/100')	Wlk Rate (°/100')	Remarks
51	MWD	11887	91.00	269.20	30	9139.88	2284.82	1318.86 N	1976.74 W	1.00	-1.0	0.0	
52	MWD	11918	91.00	269.20	31	9139.34	2314.21	1318.43 N	2007.73 W	0.00	0.0	0.0	
53	MWD	11948	91.20	269.20	30	9138.76	2342.64	1318.01 N	2037.72 W	0.67	0.7	0.0	
54	MWD	11978	90.90	268.90	30	9138.21	2371.05	1317.52 N	2067.71 W	1.41	-1.0	-1.0	
55	MWD	12010	89.90	269.90	32	9137.99	2401.42	1317.18 N	2099.71 W	4.42	-3.1	3.1	
56	MWD	12040	89.00	269.90	30	9138.28	2429.97	1317.13 N	2129.70 W	3.00	-3.0	0.0	
57	MWD	12071	89.60	269.90	31	9138.65	2459.48	1317.07 N	2160.70 W	1.94	1.9	0.0	
58	MWD	12101	89.60	271.70	30	9138.86	2488.17	1317.49 N	2190.70 W	6.00	0.0	6.0	
59	MWD	12132	88.70	271.30	31	9139.32	2517.93	1318.30 N	2221.68 W	3.18	-2.9	-1.3	
60	MWD	12163	88.40	271.00	31	9140.11	2547.62	1318.93 N	2252.67 W	1.37	-1.0	-1.0	
61	MWD	12193	88.20	271.30	30	9141.00	2576.36	1319.53 N	2282.65 W	1.20	-0.7	1.0	
62	MWD	12223	89.50	272.40	30	9141.60	2605.20	1320.50 N	2312.62 W	5.68	4.3	3.7	
63	MWD	12253	90.40	272.40	30	9141.63	2634.13	1321.75 N	2342.60 W	3.00	3.0	0.0	
64	MWD	12283	91.40	271.70	30	9141.16	2663.01	1322.83 N	2372.57 W	4.07	3.3	-2.3	
65	MWD	12314	91.80	271.70	31	9140.29	2692.78	1323.75 N	2403.55 W	1.29	1.3	0.0	
66	MWD	12344	91.80	272.00	30	9139.35	2721.62	1324.71 N	2433.52 W	1.00	0.0	1.0	
67	MWD	12375	90.60	272.00	31	9138.70	2751.45	1325.79 N	2464.49 W	3.87	-3.9	0.0	
68	MWD	12405	88.80	272.00	30	9138.86	2780.32	1326.84 N	2494.47 W	6.00	-6.0	0.0	
69	MWD	12435	89.00	272.00	30	9139.43	2809.19	1327.89 N	2524.45 W	0.67	0.7	0.0	
70	MWD	12465	89.00	272.40	30	9139.95	2838.08	1329.04 N	2554.42 W	1.33	0.0	1.3	
71	MWD	12496	90.40	272.40	31	9140.12	2867.97	1330.34 N	2585.39 W	4.52	4.5	0.0	
72	MWD	12527	91.20	272.40	31	9139.68	2897.86	1331.64 N	2616.36 W	2.58	2.6	0.0	
73	MWD	12557	91.60	272.70	30	9138.95	2926.80	1332.97 N	2646.32 W	1.67	1.3	1.0	
74	MWD	12587	91.60	272.70	30	9138.11	2955.76	1334.38 N	2676.28 W	0.00	0.0	0.0	
75	MWD	12617	91.50	272.40	30	9137.30	2984.70	1335.72 N	2706.24 W	1.05	-0.3	-1.0	



Company: NANCE PETROLEUM

Field: BAKER

Cty/Blk/Par: MCKENZIE CO.

INTEQ

Well Name: Lewis & Clark 2-4H S.T.

Rig: NABORS #417

Job Number: 463600 Calculation Method Minimum Curvature
Magnetic Decl.: 10.15 Proposed Azimuth 287.76
Grid Com.: Depth Reference KB
Total Survey Cont.: 10.15 Tie Into MWD
Target Info: 1394 n -4352 w

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates		DLS (°/100')	Bld Rate (°/100')	Wlk Rate (°/100')	Remarks	
76	MWD	12647	90.70	272.00	30	9136.73	3013.60	1336.87	N	2736.21	W	2.98	-2.7	-1.3
77	MWD	12678	90.60	272.40	31	9136.37	3043.46	1338.06	N	2767.19	W	1.33	-0.3	1.3
78	MWD	12708	90.30	272.70	30	9136.14	3072.41	1339.39	N	2797.15	W	1.41	-1.0	1.0
79	MWD	12738	89.80	273.10	30	9136.11	3101.40	1340.91	N	2827.12	W	2.13	-1.7	1.3
80	MWD	12770	90.40	272.70	32	9136.06	3132.33	1342.53	N	2859.08	W	2.25	1.9	-1.3
81	MWD	12800	89.70	273.40	30	9136.03	3161.35	1344.13	N	2889.03	W	3.30	-2.3	2.3
82	MWD	12831	89.30	273.40	31	9136.30	3191.38	1345.96	N	2919.98	W	1.29	-1.3	0.0
83	MWD	12861	89.00	273.40	30	9136.75	3220.44	1347.74	N	2949.92	W	1.00	-1.0	0.0
84	MWD	12892	89.30	269.90	31	9137.21	3250.21	1348.64	N	2980.90	W	11.33	1.0	-11.3
85	MWD	12923	89.10	269.60	31	9137.64	3279.69	1348.50	N	3011.90	W	1.16	-0.6	-1.0
86	MWD	12953	90.90	269.60	30	9137.64	3308.20	1348.29	N	3041.89	W	6.00	6.0	0.0
87	MWD	12984	93.30	270.60	31	9136.50	3337.71	1348.35	N	3072.87	W	8.39	7.7	3.2
88	MWD	13014	90.70	270.30	30	9135.46	3366.33	1348.58	N	3102.85	W	8.72	-8.7	-1.0
89	MWD	13044	89.80	269.90	30	9135.33	3394.92	1348.63	N	3132.85	W	3.28	-3.0	-1.3
90	MWD	13074	88.60	270.30	30	9135.74	3423.50	1348.69	N	3162.84	W	4.22	-4.0	1.3
91	MWD	13104	88.30	269.60	30	9136.56	3452.05	1348.66	N	3192.83	W	2.54	-1.0	-2.3
92	MWD	13135	88.60	270.30	31	9137.39	3481.56	1348.63	N	3223.82	W	2.46	1.0	2.3
93	MWD	13165	87.60	269.90	30	9138.39	3510.13	1348.68	N	3253.80	W	3.59	-3.3	-1.3
94	MWD	13195	87.50	269.60	30	9139.67	3538.63	1348.55	N	3283.78	W	1.05	-0.3	-1.0
95	MWD	13226	89.70	270.60	31	9140.43	3568.16	1348.61	N	3314.77	W	7.80	7.1	3.2
96	MWD	13256	89.50	270.60	30	9140.64	3596.82	1348.92	N	3344.76	W	0.67	-0.7	0.0
97	MWD	13286	90.00	270.60	30	9140.77	3625.49	1349.24	N	3374.76	W	1.67	1.7	0.0
98	MWD	13316	91.70	271.00	30	9140.32	3654.18	1349.65	N	3404.75	W	5.82	5.7	1.3
99	MWD	13347	92.20	271.00	31	9139.27	3683.84	1350.20	N	3435.73	W	1.61	1.6	0.0
100	MWD	13378	91.80	271.00	31	9138.19	3713.51	1350.74	N	3466.71	W	1.29	-1.3	0.0



Company: NANCE PETROLEUM
Field: BAKER
Cty/Blk/Par: McKENZIE CO.
Well Name: Lewis & Clark 2-4H S.T.
Rig: NABORS #417

Job Number: 463600 Calculation Method Minimum Curvature
Magnetic Decl.: 10.15 Proposed Azimuth 287.76
Grid Corr.: Depth Reference KB
Total Survey Corr.: 10.15 Tie Into MWD
Target Info: 1394 n -4352 w

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates		DLS (°/100')	Bld Rate (°/100')	Wlk Rate (°/100')	Remarks	
101	MWD	13408	91.30	271.00	30	9137.38	3742.22	1351.26	N	3496.69	W	1.67	-1.7	0.0
102	MWD	13439	91.30	270.60	31	9136.67	3771.87	1351.69	N	3527.68	W	1.29	0.0	-1.3
103	MWD	13469	90.40	270.60	30	9136.23	3800.53	1352.01	N	3557.67	W	3.00	-3.0	0.0
104	MWD	13501	89.50	269.90	32	9136.26	3831.05	1352.15	N	3589.67	W	3.56	-2.8	-2.2
105	MWD	13531	88.70	269.60	30	9136.73	3859.57	1352.02	N	3619.67	W	2.85	-2.7	-1.0
106	MWD	13562	89.00	269.60	31	9137.35	3889.02	1351.80	N	3650.66	W	0.97	1.0	0.0
107	MWD	13592	89.30	269.60	30	9137.79	3917.52	1351.59	N	3680.66	W	1.00	1.0	0.0
108	MWD	13623	89.50	269.60	31	9138.12	3946.98	1351.37	N	3711.66	W	0.65	0.6	0.0
109	MWD	13653	90.10	269.60	30	9138.22	3975.48	1351.16	N	3741.66	W	2.00	2.0	0.0
110	MWD	13684	91.00	269.60	31	9137.93	4004.94	1350.95	N	3772.65	W	2.90	2.9	0.0
111	MWD	13714	91.70	269.60	30	9137.22	4033.44	1350.74	N	3802.64	W	2.33	2.3	0.0
112	Bit	13755	91.70	269.60	41	9136.00	4072.38	1350.45	N	3843.62	W	0.00	0.0	0.0 TOTAL DEPTH



Company: NANCE PETROLEUM
 Field: BAKER
 Cty/Blk/Par: MCKENZIE CO.
 Well Name: LEWIS & CLARK 2-4H
 Rig: NABORS #417

Job Number: 463600 Calculation Method Minimum Curvature
 Magnetic Decl.: 10.15 Proposed Azimuth 324.26
 Grid Corr.: Depth Reference KB
 Total Survey Corr.: 10.15 Tie Into EMS SURVEY
 Target Info: 90° 9142tvd 1252.0n 1710.00w

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates		DLS (°/100')	Bld Rate (/100')	Wlk Rate (/100')	Remarks
0	EMS	8575	0.60	237.19		8573.80	-6.30	35.40	S	38.30	W		
1	MWD	8701	1.00	248.50	126	8699.79	-6.06	36.16	S	39.88	W	0.34	0.3 9.0
2	MWD	8733	1.40	313.90	32	8731.78	-5.60	35.99	S	40.42	W	4.19	1.3 204.4
3	MWD	8765	5.00	341.60	32	8763.73	-3.89	34.40	S	41.14	W	11.93	11.3 86.6
4	MWD	8797	11.00	348.00	32	8795.40	0.24	30.08	S	42.22	W	18.93	18.8 20.0
5	MWD	8829	17.20	349.00	32	8826.42	7.34	22.45	S	43.76	W	19.39	19.4 3.1
6	MWD	8860	23.30	351.10	31	8855.49	16.98	11.88	S	45.58	W	19.81	19.7 6.8
7	MWD	8892	28.00	352.90	32	8884.33	29.23	1.84	N	47.49	W	14.89	14.7 5.6
8	MWD	8924	33.40	355.30	32	8911.84	43.38	18.08	N	49.14	W	17.30	16.9 7.5
9	MWD	8956	38.80	358.20	32	8937.69	59.26	36.89	N	50.18	W	17.70	16.9 9.1
10	MWD	8988	41.40	1.00	32	8962.16	76.06	57.50	N	50.31	W	9.89	8.1 -1116.3
11	MWD	9020	44.50	2.40	32	8985.58	93.36	79.29	N	49.65	W	10.14	9.7 4.4
12	MWD	9051	48.60	3.40	31	9006.90	110.93	101.76	N	48.51	W	13.43	13.2 3.2
13	MWD	9083	52.10	3.80	32	9027.32	129.98	126.35	N	46.96	W	10.98	10.9 1.3
14	MWD	9115	55.00	4.50	32	9048.33	149.73	152.02	N	45.09	W	9.23	9.1 2.2
15	MWD	9147	59.90	4.10	32	9063.54	170.37	178.91	N	43.08	W	15.35	15.3 -1.3
16	MWD	9179	64.30	3.40	32	9078.51	192.20	207.12	N	41.23	W	13.89	13.8 -2.2
17	MWD	9199	66.40	3.10	20	9086.85	206.32	225.27	N	40.20	W	10.59	10.5 -1.5 mag. interference
18	MWD	9229	67.30	2.70	30	9098.64	227.87	252.81	N	38.80	W	3.24	3.0 -1.3 mag. interference
19	MWD	9260	68.20	2.40	31	9110.38	250.39	281.48	N	37.53	W	3.04	2.9 -1.0
20	MWD	9290	70.20	2.40	30	9121.03	272.44	309.50	N	36.35	W	6.67	6.7 0.0
21	MWD	9320	73.60	3.40	30	9130.35	294.71	337.97	N	34.91	W	11.77	11.3 3.3
22	MWD	9351	77.60	4.50	31	9138.06	317.81	367.92	N	32.84	W	13.35	12.9 3.5
23	MWD	9381	81.70	5.20	30	9143.45	340.22	397.32	N	30.34	W	13.86	13.7 2.3
24	MWD	9412	86.30	6.60	31	9146.69	363.25	427.98	N	27.17	W	15.50	14.8 4.5
25	MWD	9442	91.80	8.00	30	9147.19	385.16	457.72	N	23.36	W	18.92	18.3 4.7



Company: NANCE PETROLEUM
 Field: BAKER
 Cty/Blk/Par: McKENZIE CO.
 Well Name: LEWIS & CLARK 2-4H
 Rig: NABORS #417

Job Number: 463600 Calculation Method Minimum Curvature
 Magnetic Decl.: 10.15 Proposed Azimuth 324.26
 Grid Corr.: Depth Reference KB
 Total Survey Corr.: 10.15 Tie Into EMS SURVEY
 Target Info: 90° 9142tvd 1252.0n 1710.00w

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS ('/100')	Bld Rate ('/100')	Wlk Rate ('/100')	Remarks
26	MWD	9472	94.20	5.50	30	9145.62	407.25	487.46 N	19.84 W	11.54	8.0	-8.3	
27	MWD	9503	92.10	3.10	31	9143.91	430.95	518.32 N	17.52 W	10.28	-6.8	-7.7	
28	MWD	9534	91.50	359.90	31	9142.94	455.61	549.29 N	16.71 W	10.50	-1.9	1151.0	
29	MWD	9564	91.70	358.90	30	9142.10	480.13	579.28 N	17.02 W	3.40	0.7	-3.3	
30	MWD	9594	90.00	355.00	30	9141.66	505.37	609.23 N	18.62 W	14.18	-5.7	-13.0	
31	MWD	9624	88.30	352.90	30	9142.10	531.43	639.05 N	21.78 W	9.01	-5.7	-7.0	
32	MWD	9655	88.20	350.80	31	9143.05	558.89	669.73 N	26.17 W	6.78	-0.3	-6.8	
33	MWD	9686	88.70	346.90	31	9143.89	587.06	700.12 N	32.17 W	12.68	1.6	-12.6	
34	MWD	9716	89.70	343.70	30	9144.31	615.05	729.13 N	39.78 W	11.17	3.3	-10.7	
35	MWD	9746	90.60	339.90	30	9144.23	643.65	757.63 N	49.14 W	13.02	3.0	-12.7	
36	MWD	9776	88.60	337.10	30	9144.44	672.73	785.54 N	60.14 W	11.47	-6.7	-9.3	
37	MWD	9806	87.90	336.00	30	9145.35	702.03	813.04 N	72.07 W	4.34	-2.3	-3.7	
38	MWD	9837	88.50	333.60	31	9146.33	732.49	841.08 N	85.26 W	7.98	1.9	-7.7	
39	MWD	9867	89.40	331.80	30	9146.88	762.15	867.73 N	99.02 W	6.71	3.0	-6.0	
40	MWD	9897	89.60	328.60	30	9147.14	791.99	893.76 N	113.93 W	10.69	0.7	-10.7	
41	MWD	9927	90.30	326.50	30	9147.16	821.94	919.07 N	130.02 W	7.38	2.3	-7.0	
42	MWD	9958	87.70	324.40	31	9147.71	852.92	944.60 N	147.60 W	10.78	-8.4	-6.8	
43	MWD	9988	87.60	320.50	30	9148.94	882.87	968.36 N	165.86 W	12.99	-0.3	-13.0	
44	MWD	10019	87.80	317.00	31	9150.18	913.70	991.64 N	186.28 W	11.30	0.6	-11.3	
45	MWD	10049	87.50	314.20	30	9151.41	943.33	1013.06 N	207.25 W	9.38	-1.0	-9.3	
46	MWD	10079	87.80	311.80	30	9152.64	972.73	1033.50 N	229.17 W	8.06	1.0	-8.0	
47	MWD	10109	88.20	308.90	30	9153.69	1001.83	1052.91 N	252.02 W	9.75	1.3	-9.7	
48	MWD	10139	89.30	306.50	30	9154.34	1030.57	1071.25 N	275.75 W	8.80	3.7	-8.0	
49	MWD	10171	87.10	304.00	32	9155.35	1060.81	1089.71 N	301.86 W	10.40	-6.9	-7.8	
50	MWD	10202	85.40	301.60	31	9157.38	1089.59	1106.46 N	327.86 W	9.47	-5.5	-7.7	



Company: NANCE PETROLEUM
Field: BAKER
Cty/Blk/Par: MCKENZIE CO.
Well Name: LEWIS & CLARK 2-4H
Rig: NABORS #417

Job Number: 463600 Calculation Method Minimum Curvature
Magnetic Decl.: 10.15 Proposed Azimuth 324.26
Grid Corr.: Depth Reference KB
Total Survey Corr.: 10.15 Tie Into EMS SURVEY
Target Info: 90° 9142tvd 1252.0n 1710.00w

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates		DLS (°/100')	Bld Rate (°/100')	Wlk Rate (°/100')	Remarks	
								N/S (ft)	E/W (ft)					
51	MWD	10232	86.20	298.70	30	9159.57	1116.90	1121.49	N	353.73	W	10.00	2.7	-9.7
52	MWD	10263	88.80	298.00	31	9160.93	1144.76	1136.19	N	380.98	W	8.69	8.4	-2.3
53	MWD	10293	88.70	294.90	30	9161.58	1171.28	1149.55	N	407.83	W	10.34	-0.3	-10.3
54	MWD	10324	89.40	292.40	31	9162.09	1197.96	1161.98	N	436.22	W	8.37	2.3	-8.1
55	MWD	10354	89.90	290.00	30	9162.28	1223.10	1172.83	N	464.19	W	8.17	1.7	-8.0
56	MWD	10384	91.80	287.50	30	9161.83	1247.51	1182.47	N	492.59	W	10.47	6.3	-8.3
57	MWD	10415	91.60	284.30	31	9160.91	1271.80	1190.96	N	522.39	W	10.34	-0.6	-10.3
58	MWD	10446	91.30	281.90	31	9160.13	1295.13	1197.98	N	552.57	W	7.80	-1.0	-7.7
59	MWD	10476	88.00	279.80	30	9160.31	1316.92	1203.63	N	582.03	W	13.04	-11.0	-7.0
60	MWD	10506	86.00	277.00	30	9161.88	1337.78	1208.00	N	611.66	W	11.46	-6.7	-9.3
61	MWD	10537	85.30	274.50	31	9164.23	1358.26	1211.10	N	642.41	W	8.35	-2.3	-8.1
62	MWD	10567	86.40	272.00	30	9166.40	1377.08	1212.80	N	672.28	W	9.08	3.7	-8.3
63	MWD	10597	87.10	272.40	30	9168.11	1395.50	1213.95	N	702.21	W	2.69	2.3	1.3
64	MWD	10628	88.30	272.00	31	9169.35	1414.54	1215.14	N	733.17	W	4.08	3.9	-1.3
65	MWD	10659	88.50	272.40	31	9170.21	1433.60	1216.33	N	764.13	W	1.44	0.6	1.3
66	MWD	10690	88.50	272.40	31	9171.03	1452.74	1217.62	N	795.09	W	0.00	0.0	0.0
67	MWD	10720	89.50	272.00	30	9171.55	1471.18	1218.77	N	825.07	W	3.59	3.3	-1.3
68	MWD	10751	89.70	271.30	31	9171.77	1490.00	1219.67	N	856.05	W	2.35	0.6	-2.3
69	MWD	10781	90.50	272.00	30	9171.71	1508.22	1220.53	N	886.04	W	3.54	2.7	2.3
70	MWD	10811	91.10	271.70	30	9171.29	1526.52	1221.50	N	916.02	W	2.24	2.0	-1.0
71	MWD	10843	91.10	271.00	32	9170.68	1545.81	1222.25	N	948.01	W	2.19	0.0	-2.2
72	MWD	10874	90.70	271.30	31	9170.19	1564.42	1222.88	N	979.00	W	1.61	-1.3	1.0
73	MWD	10904	92.00	271.70	30	9169.49	1582.57	1223.66	N	1008.98	W	4.53	4.3	1.3
74	MWD	10934	92.20	271.30	30	9168.39	1600.71	1224.44	N	1038.95	W	1.49	0.7	-1.3
75	MWD	10965	92.80	271.00	31	9167.04	1619.30	1225.07	N	1069.91	W	2.16	1.9	-1.0



Company: NANCE PETROLEUM
Field: BAKER
Cty/Blk/Par: McKENZIE CO.
Well Name: LEWIS & CLARK 2-4H
Rig: NABORS #417

Job Number: 463600 Calculation Method Minimum Curvature
Magnetic Decl.: 10.15 Proposed Azimuth 324.26
Grid Corr.: Depth Reference KB
Total Survey Corr.: 10.15 Tie Into EMS SURVEY
Target Info: 90° 9142tvd 1252.0n 1710.00w

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates		DLS (°/100')	Bld Rate (°/100')	Wlk Rate (°/100')	Remarks
76	MWD	10995	93.10	270.60	30	9165.49	1637.14	1225.48	N 1099.87 W	1.67	1.0	-1.3	
77	MWD	11025	92.50	271.00	30	9164.03	1654.98	1225.90	N 1129.83 W	2.40	-2.0	1.3	
78	MWD	11056	89.90	271.00	31	9163.38	1673.52	1226.44	N 1160.81 W	8.39	-8.4	0.0	
79	MWD	11086	89.10	270.60	30	9163.64	1691.38	1226.86	N 1190.81 W	2.98	-2.7	-1.3	
80	MWD	11116	89.50	271.00	30	9164.01	1709.24	1227.28	N 1220.80 W	1.89	1.3	1.3	
81	MWD	11147	92.00	271.00	31	9163.60	1727.78	1227.82	N 1251.79 W	8.06	8.1	0.0	
82	MWD	11177	92.00	271.30	30	9162.55	1745.77	1228.42	N 1281.77 W	1.00	0.0	1.0	
83	MWD	11208	90.90	270.60	31	9161.77	1764.29	1228.94	N 1312.75 W	4.21	-3.5	-2.3	
84	MWD	11238	89.90	271.00	30	9161.56	1782.15	1229.36	N 1342.75 W	3.59	-3.3	1.3	
85	MWD	11269	88.90	271.00	31	9161.88	1800.69	1229.90	N 1373.74 W	3.23	-3.2	0.0	
86	MWD	11299	89.60	269.90	30	9162.28	1818.41	1230.13	N 1403.74 W	4.35	2.3	-3.7	
87	MWD	11330	89.70	270.60	31	9162.47	1836.62	1230.27	N 1434.74 W	2.28	0.3	2.3	
88	MWD	11362	91.20	270.30	32	9162.21	1855.52	1230.52	N 1466.74 W	4.78	4.7	-0.9	
89	MWD	11392	91.60	269.90	30	9161.48	1873.08	1230.57	N 1496.73 W	1.89	1.3	-1.3	
90	MWD	11422	91.20	269.90	30	9160.75	1890.55	1230.52	N 1526.72 W	1.33	-1.3	0.0	
91	MWD	11452	90.30	270.30	30	9160.36	1908.12	1230.57	N 1556.71 W	3.28	-3.0	1.3	
92	MWD	11483	89.70	269.90	31	9160.36	1926.27	1230.63	N 1587.71 W	2.33	-1.9	-1.3	
93	MWD	11514	90.90	270.30	31	9160.19	1944.42	1230.68	N 1618.71 W	4.08	3.9	1.3	
94	MWD	11544	90.00	269.90	30	9159.96	1961.98	1230.73	N 1648.71 W	3.28	-3.0	-1.3	
95	MWD	11565	89.00	270.30	21	9160.14	1974.28	1230.77	N 1669.71 W	5.13	-4.8	1.9	
96	TD	11605	89.00	270.00	40	9160.84	1997.72	1230.87	N 1709.70 W	0.75	0.0	-0.8	

SURVEY CALCULATION REPORT

Customer: Nance Petroleum **Filename:** 224H
Probe # : 2008 **Section Plane:** 324.26
Location: McKenzie Cty. North Dakota **Vertical Section Origin:**
Field: Baker **North:** 0.00 FEET
Operator: Jim Gale **East:** 0.00 FEET
Time: Fri Apr 11 14:31:28 2003 **Declination (Mag to True):** 10.15
Well no: Lewis & Clark 2-4H **Convergence (True to Grid):** 0.00
Rig Name: Nabors #417 **Mag Convergence (Mag to Grid):** 10.15
Comments: Assumed Vertical at casing point
Azimuth Compensation Applied: None
Survey Correction Applied: None.
Survey Calculation Method: Minimum Curvature

RECORD OF SURVEY

Measured Depth (feet)	Inclin (deg)	Azimuth (deg)	RECTANGULAR COORDINATES (feet)	Vertical Depth (feet)	Vertical Section (feet)	Dogleg Severity (dg/100ft)	
3008.0	0.00	0.00	0.0N	0.0E	3008.0	0.0	0.00
3065.0	2.54	294.48	0.5N	1.2W	3065.0	1.1	4.46
3160.0	2.30	291.22	2.1N	4.8W	3159.9	4.5	0.30
3255.0	2.27	291.10	3.5N	8.4W	3254.8	7.7	0.03
3350.0	2.17	289.56	4.7N	11.8W	3349.8	10.7	0.13
3445.0	1.90	284.37	5.7N	15.0W	3444.7	13.4	0.34
3540.0	1.69	282.59	6.4N	17.9W	3539.6	15.7	0.23
3630.0	1.53	278.14	6.9N	20.4W	3629.6	17.5	0.22
3730.0	1.36	284.45	7.4N	22.9W	3729.6	19.3	0.24
3825.0	1.24	279.04	7.8N	25.0W	3824.6	20.9	0.18
3920.0	1.05	286.72	8.2N	26.8W	3919.5	22.3	0.26
4015.0	0.94	282.56	8.6N	28.4W	4014.5	23.6	0.14
4110.0	0.95	291.19	9.1N	29.9W	4109.5	24.9	0.15
4205.0	0.86	289.29	9.6N	31.3W	4204.5	26.1	0.10
4300.0	0.54	292.48	10.0N	32.4W	4299.5	27.1	0.34
4395.0	0.42	287.22	10.3N	33.2W	4394.5	27.7	0.13
4490.0	0.38	316.01	10.6N	33.7W	4489.5	28.3	0.21
4585.0	0.38	322.21	11.1N	34.1W	4584.5	28.9	0.04
4775.0	0.38	309.73	12.0N	35.0W	4774.5	30.2	0.04
4870.0	0.17	328.45	12.3N	35.3W	4869.5	30.6	0.24
4965.0	0.09	89.11	12.5N	35.3W	4964.5	30.7	0.24
5060.0	0.21	74.57	12.5N	35.1W	5059.5	30.6	0.14
5155.0	0.30	78.03	12.6N	34.7W	5154.5	30.5	0.10
5250.0	0.60	87.09	12.7N	33.9W	5249.5	30.1	0.32
5345.0	0.76	97.16	12.6N	32.8W	5344.5	29.4	0.21

SURVEY CALCULATION REPORT

Probe #: 2008

Filename: 224H

Azimuth Compensation Applied: None

Survey Correction Applied: None.

Survey Calculation Method: Minimum Curvature

RECORD OF SURVEY

Measured Depth (feet)	Inclin (deg)	Azimuth (deg)	RECTANGULAR COORDINATES (feet)	Vertical Depth (feet)	Vertical Section (feet)	Dogleg Severity (dg/100ft)
5440.0	0.91	110.56	12.3N 31.5W	5439.5	28.4	0.25
5530.0	0.86	109.72	11.8N 30.2W	5529.4	27.2	0.05
5630.0	0.77	108.46	11.3N 28.8W	5629.4	26.0	0.09
5725.0	0.68	112.60	10.9N 27.7W	5724.4	25.0	0.11
5820.0	0.62	119.81	10.4N 26.7W	5819.4	24.1	0.11
5915.0	0.50	126.62	9.9N 26.0W	5914.4	23.2	0.14
6010.0	0.30	114.57	9.6N 25.4W	6009.4	22.6	0.23
6105.0	0.03	106.71	9.5N 25.2W	6104.4	22.4	0.29
6200.0	0.27	138.53	9.3N 25.0W	6199.4	22.2	0.26
6295.0	0.28	161.81	8.9N 24.8W	6294.4	21.7	0.12
6390.0	0.61	161.12	8.2N 24.5W	6389.4	21.0	0.35
6485.0	0.76	173.70	7.1N 24.3W	6484.4	20.0	0.22
6580.0	1.24	175.00	5.5N 24.1W	6579.4	18.6	0.50
6770.0	1.52	180.29	0.9N 24.0W	6769.3	14.8	0.16
6865.0	1.57	193.94	1.6S 24.3W	6864.3	12.9	0.39
6960.0	1.74	195.60	4.2S 25.0W	6959.3	11.2	0.19
7055.0	1.84	196.49	7.1S 25.8W	7054.2	9.3	0.11
7150.0	1.81	200.47	10.0S 26.8W	7149.2	7.6	0.14
7245.0	1.85	201.49	12.8S 27.9W	7244.1	5.9	0.06
7340.0	1.66	197.45	15.5S 28.8W	7339.1	4.2	0.23
7435.0	1.65	193.42	18.2S 29.6W	7434.0	2.5	0.12
7530.0	1.63	199.54	20.8S 30.3W	7529.0	0.8	0.19
7625.0	1.34	203.14	23.1S 31.2W	7624.0	-0.5	0.32
7720.0	1.55	205.52	25.3S 32.2W	7718.9	-1.7	0.23
7815.0	1.49	201.28	27.6S 33.2W	7813.9	-3.0	0.13
7910.0	0.98	205.71	29.5S 34.0W	7908.9	-4.0	0.55
8005.0	0.84	204.22	30.8S 34.7W	8003.9	-4.8	0.14
8100.0	0.77	216.48	32.0S 35.3W	8098.9	-5.3	0.20
8195.0	0.63	217.86	32.9S 36.0W	8193.8	-5.7	0.15
8290.0	0.68	225.84	33.7S 36.7W	8288.8	-5.9	0.11
8385.0	0.42	213.69	34.4S 37.3W	8383.8	-6.1	0.30
8480.0	0.35	220.57	34.9S 37.7W	8478.8	-6.3	0.09
8575.0	0.60	237.19	35.4S 38.3W	8573.8	-6.3	0.30
CLOSURE:	Distance:	52.18				
	Direction:	227.29				

Deviation surveys

Depth	Inclination
420	0.5
726	0.25
1045	0.5
1362	0.5
1649	0.75
1966	0.5
2284	1.5
2571	4
2666	4
2603	4
2730	4
2793	3.75
2857	3
2984	3
3139	2.75
3297	2
3584	2
3838	1.25
4347	1.5
4761	0.75
5238	1
5810	1
6128	0.5
6445	0.5
6859	1.75
7114	Mis-run
7146	2.5
7209	2
7429	Mis-run
7492	2
7741	1
7860	1

Dip Estimates

Lewis & Clark #2-4H

Marker	MD	TVD	Subsea	Vsec	TVD diff.	MD diff.	Dip	Dipping up/down	Hit Marker Going	Comment
Top of Nesson *	9,375.0'	9,142.6'	-7,270.6'	335.70	-	-	-	-	down	Lateral #1
Top of Nesson *	9,520.0'	9,143.3'	-7,271.3'	444.50	0.70	145.00	-0.28	down	up	Lateral #1
Top of Nesson *	10,050.0'	9,151.5'	-7,279.5'	944.30	8.20	530.00	-0.89	down	down	Lateral #1
Top of Nesson *	12,980.0'	9,136.7'	-7264.70	3334.00	-14.80	2930.00	0.29	up	up	Sidetrack #1
Top of Nesson *	13,100.0'	9,136.4'	-7264.40	3448.20	-0.30	120.00	0.14	flat	down	Sidetrack #1
Top of Nesson	13,480.0'	9,135.5'	-7263.50	3811.10	-0.90	380.00	0.14	flat	up	Sidetrack #1
Top of Nesson	13,755.0'	9,136.0'	-7264.00	4072.40	0.50	275.00	-0.10	flat	up	Sidetrack #1
Top "mid" Nesson porosity *	10,207.0'	9,157.8'	-7,285.8'	1094.10	-	-	-	-	down	Lateral #1
	10,456.0'	9,161.1'	-7289.10	1311.60	3.30	249.00	-0.76	down	up	Sidetrack #1
	10,884.0'	9,151.1'	-7279.10	1619.60	-10.00	428.00	1.34	up	up	Sidetrack #1
	11,773.0'	9,141.4'	-7269.40	2176.70	-9.70	889.00	0.63	up	down	Sidetrack #1
	11,950.0'	9,138.7'	-7266.7	2344.50	-2.70	177.00	0.87	up	up	Sidetrack #1
	12,122.0'	9,139.0'	-7267.00	2508.30	0.30	172.00	-0.10	flat	down	Sidetrack #1
	12,355.0'	9,139.0'	-7267.00	2732.20	0.00	233.00	0.00	flat	up	Sidetrack #1
	12,410.0'	9,139.0'	-7267.00	2785.10	0.00	55.00	0.00	flat	down	Sidetrack #1
	12,586.0'	9,138.1'	-7266.10	2954.80	-0.90	176.00	0.29	up	up	Sidetrack #1
base porosity / base Nesson *	10,560.0'	9,166.0'	-7,294.0'	1372.70	-	-	-	-	down	Lateral #1

* = GR / electric log confirmation

Other markers based on natural deflections & drill rate changes

Marker tops

Lewis & Clark #2-4H

Marker	MD	TVD	Subsea	Hit Marker Going	Comment
Charles	8,252.0'	8,251.0'	-6,379.0'	down	vertical hole
Base 2nd to last salt *	8,732.0'	8,731.0'	-6,859.0'	down	vertical hole
Base Last Salt *	8,921.0'	8,909.0'	-7,037.0'	down	build curve
Ratcliffe *	9,024.0'	8,988.0'	-7,116.0'	down	build curve
Midale *	9,149.0'	9,064.0'	-7,192.0'	down	build curve
Top of Nesson *	9,375.0'	9,142.6'	-7,270.6'	down	build curve
Top of Nesson *	9,520.0'	9,143.3'	-7,271.3'	up	Lateral #1
Top of Nesson *	10,050.0'	9,151.5'	-7,279.5'	down	Lateral #1
Top porosity *	10,207.0'	9,157.8'	-7,285.8'	down	Lateral #1
base porosity / base Nesson *	10,560.0'	9,166.0'	-7,294.0'	down	Lateral #1
Top of Nesson *	12,980.0'	9,136.7'	-7,264.7'	up	Sidetrack #1
Top of Nesson *	13,100.0'	9,136.4'	-7,264.4'	down	Sidetrack #1
Top of Nesson	13,480.0'	9,135.5'	-7,263.5'	up	Sidetrack #1
Top of Nesson	13,755.0'	9,136.0'	-7,264.0'	up	Sidetrack #1

* = GR / electric log confirmation

**OFFSET WELL
FORMATION TOPS**

FORMATION / ZONE	Well Name:	Basic Earth Science Systems, Inc. Basic Game & Fish 34-3 sw sw Sec.2 KB: 1872'				John L. Cox French Pinney 24-3 se sw Sec. 3 KB: 1871'		
	Location:	E-LOG	TVD	DATUM	THICK	E-Log	DATUM	THICK
	Elevation:							
Greenhorn	4,354'	4,351'	-2,479'	208'		4346	-2475	204
Belle Fourche	4,565'	4,559'	-2687	180'		4550	-2679	187
Mowry	4,748'	4,739'	-2867	151'		4737	-2866	154
Muddy	4,902'	4,890'	-3018	10'		4891	-3020	16
Skull Creek	4,913'	4,900'	-3028	222'		4907	-3036	215
Dakota (Inyan Kara)	5,140'	5,122'	-3250	489'		5122	-3251	495
Swift	5,643'	5,611'	-3739	464'		5617	-3746	468
Rierdon	6,116'	6,075'	-4203	98'		6085	-4214	92
Piper	6,216'	6,173'	-4301	506'		6177	-4306	521
Spearfish	6,732'	6,679'	-4807	400'		6698	-4827	394
Minnekahta	7,140'	7,079'	-5207	20'		7092	-5221	14
Opeche	7,160'	7,099'	-5227	206'		7106	-5235	208
Minnelusa	7,370'	7,305'	-5433	320'		7314	-5443	327
Tyler	7,694'	7,625'	-5753	73'		7641	-5770	77
Otter	7,768'	7,698'	-5826	185'		7718	-5847	194
Kibbey	7,956'	7,883'	-6011	169'		7912	-6041	155
Kibbey lime	8,128'	8,052'	-6180	51'		8,067'	-6,196'	50'
Lower Kibbey	8,180'	8,103'	-6231	93'		8,117'	-6,246'	91'
Charles	8,276'	8,196'	-6324	604'		8,208'	-6,337'	594'
Greenpoint	8,902'	8,800'	-6928	93'		8,802'	-6,931'	104'
Base Last Salt	8,998'	8,893'	-7021	74'		8,906'	-7,035'	74'
Ratcliffe	9,074'	8,967'	-7095	80'		8,980'	-7,109'	78'
Midale	9,156'	9,047'	-7175	76'		9,058'	-7,187'	76'
Mission Canyon	9,235'	9,123'	-7251	-		9,134'	-7,263'	572'
Lodgepole	-	-	-	-		9,706'	-7,835'	686'
Bakken	-	-	-	-		10,392'	-8521	61'
Three Forks	-	-	-	-		10,453'	-8582	199'
Nisku	-	-	-	-		10,652'	-8781	94'
Duperow	-	-	-	-		10,746'	-8875	416'
Souris River	-	-	-	-		11,162'	-9291	278'
Dawson Bay	-	-	-	-		11,440'	-9569	106'
Prairie	-	-	-	-		11,546'	-9675	211'
Winnipegosis	-	-	-	-		11,757'	-9886	195'
Ashern	-	-	-	-		11,952'	-10081	101'
Interlake	-	-	-	-		12,053'	-10182	847'
Stonewall	-	-	-	-		12,900'	-11029	100'
Stony Mountain	-	-	-	-		13,000'	-11129	136'
Red River	-	-	-	-		13,136'	-11265	289'
Total depth	9,718'		-7846	-		13,425'	-11554	-

LITHOLOGY

Note: Rig crews caught 10' lagged samples from 8,500' to 9,430', 30' lagged samples from 9,430' to 11,605' in lateral #1, 10' lagged samples from 10,364' to 10,390' and 30' lagged samples from 10,390' to 13,755' MD in Sidetrack #1. Additional samples caught as needed in critical intervals. Gamma Ray marker tops are inserted in the sample description below for reference. Sample descriptions began in the mid Charles Formation below the First Salt. The drilling fluid was Invert Oil mud up to 7" casing point and fresh water thereafter.

8500' - 8510'	<u>Anhydrite</u> :	off white, clear, very fine crystalline, moderately hard to soft, dolomitic to slightly calcareous [60%]
	<u>Siltstone</u> :	red orange, slightly calcareous to dolomitic, soft, blocky, anhydritic in part [30%]
	<u>Limestone</u> :	light gray, light gray brown, very fine crystalline, anhydritic in part, soft to moderately hard, no fluorescence, no cut, no visible porosity [10%]
	<u>Salt</u> :	clear, very light red orange, crystalline, massive, moderately hard [trace]
8510' - 8520'	<u>Salt</u> :	clear, crystalline, massive, moderately [60%]
	<u>Anhydrite</u> :	off white, clear, as above [30%]
	<u>Siltstone</u> :	red orange, as above [10%]
8520' - 8530'	<u>Salt</u> :	clear, very light red brown, crystalline, massive, moderately hard, trace shale partings
	<u>Anhydrite</u> :	off white, clear, as above [trace]
8530' - 8540'	<u>Anhydrite</u> :	off white, mottled, slightly calcareous to dolomitic, soft to moderately hard [80%]
	<u>Siltstone</u> :	red orange, as above [20%]
8540' - 8550'	<u>Limestone</u> :	light gray, off white, very fine crystalline, peloidal / oolitic in part, soft, slightly argillaceous, anhydritic & mottled with anhydrite, mineral fluorescence in part, no cut, no visible open porosity [70%]
	<u>Anhydrite</u> :	off white, light gray, amorphous, mottled with limestone in part [30%]

8550' - 8560'	<u>Limestone</u> :	light gray - gray brown, very fine crystalline, slightly argillaceous, soft to moderately hard, no fluorescence, no cut, no visible porosity [70%]
	<u>Anhydrite</u> :	white, light gray, amorphous, soft to moderately hard, slightly calcareous to dolomitic [30%]
8560' - 8600'	<u>Salt</u> :	clear, crystalline, massive, moderately hard
8600' - 8610'	<u>Anhydrite</u> :	white to medium gray, amorphous, soft to moderately hard, slightly calcareous to dolomitic
8610' - 8620'	<u>Limestone</u> :	light to medium brown, gray brown, very fine to micro-crystalline, moderately hard, slightly argillaceous, anhydritic in part, no fluorescence, no cut, no visible porosity
8620' - 8630'	<u>Limestone</u> :	light to medium brown, light to medium gray brown, mottled with anhydrite, moderately hard, slightly argillaceous, no fluorescence, no cut, no visible porosity
8630' - 8640'	<u>Limestone</u> :	light to medium brown, light to medium gray brown, mottled with anhydrite, moderately hard, slightly argillaceous, no fluorescence, no cut, no visible porosity [80%]
	<u>Anhydrite</u> :	gray, very fine crystalline, slightly calcareous, moderately hard [20%]
8640' - 8650'	<u>Limestone</u> :	medium brown, light to medium gray brown, occasionally mottled with anhydrite, moderately hard, slightly argillaceous, no fluorescence, no cut, no visible porosity [70%]
	<u>Anhydrite</u> :	gray, as above [30%]
8650' - 8660'	<u>Anhydrite</u> :	light to medium gray, very fine crystalline, slightly calcareous [60%]
	<u>Limestone</u> :	medium brown, light to medium gray brown, as above [40%]
8660' - 8670'	<u>Anhydrite</u> :	light to medium gray, white, occasional translucent, slightly calcareous

8670' - 8680'	<u>Anhydrite</u> :	white, light gray, occasional medium gray, as above
8680' - 8690'	<u>Anhydrite</u> :	white, light gray, occasional light brown, amorphous to very fine crystalline, slightly calcareous to dolomitic, soft to moderately hard, with traces limestone (medium brown)
8690' - 8700'	<u>Anhydrite</u> :	light gray, occasional off white, amorphous, slightly argillaceous, slightly calcareous
8700' - 8730'	<u>Salt</u> :	clear, very light red orange, crystalline, massive, moderately hard, occasional shale partings

Trip for multi-shot survey & to pick up directional tools (KOP) @ 8,730' MD

Base 2nd to last Charles salt 8,732' MD, 8,731' TVD (-6859')

8730' - 8740'	<u>Anhydrite</u> :	white, light to medium gray, gray brown, amorphous to very fine crystalline, slightly dolomitic, soft to moderately hard
8740' - 8760'	<u>Anhydrite</u> :	white, light to occasional medium gray, as above
8760' - 8770'	<u>Limestone</u> :	medium brown, light gray brown, very fine to microcrystalline, moderately hard, occasional chalky & anhydritic, mineral fluorescence in part, no cut, no visible porosity [70%]
	<u>Anhydrite</u> :	white, light gray, as above [30%]
8770' - 8790'	<u>Limestone</u> :	light gray brown, occasional medium brown, predominately very fine crystalline, chalky & anhydritic, as above, trace black stylolitic stain, grading to calcareous anhydrite
8790' - 8800'	<u>Dolomite</u> :	light gray brown, medium brown, very fine crystalline, chalky & anhydritic, moderately hard, mineral fluorescence, no cut, limey in part, no visible open porosity

8800' - 8820'	<u>Dolomite</u> :	light gray, off white, very fine crystalline, very anhydritic, moderately hard, mineral fluorescence, no cut, no visible open porosity
8820' - 8830'	<u>Anhydrite</u> :	white, very light brown, light gray, very fine crystalline, dolomitic, predominately soft & gummy [80%]
	<u>Dolomite</u> :	light gray, as above [20%]
8830' - 8860'	<u>Dolomite</u> :	light to occasional medium gray, very fine crystalline, slightly argillaceous, soft to moderately hard, mineral fluorescence, no cut, no visible open porosity
8860' - 8870'	<u>Salt</u> :	clear, crystalline, massive, moderately hard, occasional shale partings
8870' - 8910'	<u>Salt</u> :	clear, crystalline, massive, moderately hard, occasional shale partings

Base Last Charles Salt 8,921' MD, 8,909' TVD (-7037')

8910' - 8920'	<u>Anhydrite</u> :	light gray, amorphous, black specks in part, dolomitic, soft, slightly argillaceous
8920' - 8940'	<u>Anhydrite</u> :	light to medium gray, white, amorphous, dolomitic, soft, gummy, slightly argillaceous
8940' - 8950'	<u>Anhydrite</u> :	light gray, amorphous, dolomitic , soft
8950' - 8970'	<u>Dolomite</u> :	light to medium gray, very fine crystalline, slightly argillaceous, moderately hard, no visible porosity [60%]
	<u>Anhydrite</u> :	light to medium gray, off white, amorphous, soft [40%]
8970' - 8990'	<u>Anhydrite</u> :	light to medium gray, occasional light gray brown, amorphous to very fine crystalline, moderately hard to soft & gummy; dolomitic, grading to anhydritic dolomite
8990' - 9000'	No sample	

9000' - 9010'	<u>Limestone</u> :	light gray, medium brown, very fine to microcrystalline, anhydritic in part, soft to moderately hard, trace black stylolitic & spotty stain, occasional green fluorescence, <u>trace weak cut</u> , no visible to trace very poor intercrystalline porosity
9010' - 9020'	<u>Limestone</u> :	light to medium gray brown, light gray, decreasing anhydritic from above, moderately hard, trace spotty black oil stain, occasional green fluorescence, <u>trace weak cut</u> , very poor intercrystalline porosity in part

Ratcliffe 9,024' MD, 8,988' TVD (-7116')

9020' - 9030'	<u>Anhydrite</u> :	white, off white, very fine crystalline to amorphous, soft to moderately hard, slightly calcareous [70%]
	<u>Limestone</u> :	light to medium gray brown, as above [30%]
9030' - 9040'	<u>Limestone</u> :	light to medium gray brown, very fine to microcrystalline, spotty black oil stain in part, green fluorescence in part, <u>slow streaming cut in part</u> , very poor intercrystalline porosity, occasional chalky & anhydritic, moderately hard, occasional fragmental texture
9040' - 9050'	<u>Limestone</u> :	light gray brown, very fine crystalline, soft to moderately hard, occasional spotty black oil stain, trace green fluorescence, <u>trace weak cut</u> , occasional very poor intercrystalline porosity, increased chalky & anhydritic from above
9050' - 9060'	<u>Limestone</u> :	medium to light gray brown, very fine crystalline, anhydritic in part, occasional spotty black oil stain, trace green fluorescence, <u>trace weak cut</u> , trace very poor intercrystalline porosity, becoming mottled with anhydrite, occasional fragmental texture
9060' - 9070'	<u>Limestone</u> : <u>Anhydrite</u> :	medium to light gray brown, as above [80%] off white, very fine crystalline to amorphous, soft, slightly calcareous [20%]

9070' - 9080'	<u>Limestone</u> :	medium to light gray brown, as above [60%]
	<u>Anhydrite</u> :	off white, very fine crystalline to amorphous, soft, slightly calcareous [40%]
9080' - 9090'	No Sample	
9090' - 9100'	<u>Limestone</u> :	Light gray brown, very fine crystalline, anhydritic, moderately hard, no fluorescence, no cut, no visible porosity [60%]
	<u>Anhydrite</u> :	off white, very fine crystalline to amorphous, slightly calcareous, soft-moderately hard [40%]
9100' - 9110'	<u>Limestone</u> :	light gray brown, very fine crystalline, as above [80%]
	<u>Anhydrite</u> :	off white, very fine crystalline to amorphous, [20%]
9110' - 9120'	<u>Limestone</u> :	light gray brown, occasionally medium gray brown, very fine crystalline, dolomitic in part, no visible porosity
9120' - 9130'	<u>Limestone</u> :	light to medium gray brown, occasionally medium brown, as above
9130' - 9140'	<u>Limestone</u> :	medium gray brown, medium to dark brown, as above

Midale 9,149' MD, 9,064' TVD (-7192')

9140' - 9160'	<u>Limestone</u> :	medium gray brown, as above [50%]
	<u>Anhydrite</u> :	medium gray, amorphous to very fine crystalline, soft to slightly hard, [50%]
9160' - 9180'	<u>Limestone</u> :	medium to dark gray brown, medium to dark gray, very fine crystalline, slightly to moderately argillaceous, moderately hard to soft, no fluorescence, no cut, no visible open porosity
9180' - 9190'	<u>Limestone</u> :	medium to light gray brown, medium to dark gray, very fine crystalline, as above
9190' - 9200'	<u>Limestone</u> :	medium to light gray, medium to light gray brown, very fine crystalline, moderately argillaceous, as above

9200' - 9210' Limestone: light to medium gray brown, medium gray, very fine crystalline, moderately hard to soft, slightly argillaceous, occasional anhydritic, occasional mineral fluorescence, no cut, no visible porosity

9210' - 9224' Limestone: medium gray, medium to light gray brown, as above, moderately argillaceous

Casing point @ 9,224' MD - switch to fresh water from Invert Oil Mud

9224' - 9240' Limestone: medium to light gray brown, very fine to microcrystalline, slightly argillaceous, moderately hard, occasional anhydritic, no fluorescence, no cut, no visible open porosity, with cement

9240' - 9250' Limestone: medium to light gray brown, very fine crystalline, slightly argillaceous, moderately hard, trace black stylolitic stain, trace anhydritic, no fluorescence, no cut, no visible open porosity

9250' - 9270' Limestone: medium to occasional light gray brown, very fine crystalline, as above

9270' - 9280' Limestone: predominantly medium gray brown, occasionally light gray brown, as above

9280' - 9310' Limestone: Medium to light gray brown, increasingly dark gray brown, very fine crystalline, slightly to occasionally moderately argillaceous, moderately hard, no fluorescence, no cut, no visible porosity

9310' - 9330' Limestone: medium to light gray brown, very fine to microcrystalline, slightly argillaceous, moderately hard to firm, no fluorescence, no cut, no visible porosity, occasional anhydritic

9330' - 9340' No sample

9340' - 9360' Limestone: medium to light gray brown, occasional dark gray brown, very fine to microcrystalline, as above, slightly to moderately argillaceous

9360' - 9370' Limestone: medium to light gray brown, dark gray, very fine crystalline, slightly to moderately argillaceous, grading to calcareous shale in part, moderately hard, no fluorescence, no cut, no visible porosity

Nesson [Top Mission Canyon] 9,375' MD, 9,142.6' TVD (-7270.6')

9370' - 9380' Limestone: tan, cream, very fine crystalline, fragmental & peloidal in part, moderately hard, spotty black oil stain in part, dull green fluorescence in part, slow streaming cut in part, very poor interparticle porosity, occasional stylolitic stain

9380' - 9390' Limestone: tan, cream, very fine crystalline, increased fragmental & peloidal from above, show as above

9390' - 9400' Limestone: tan, light brown, very fine crystalline, fragmental & peloidal, occasionally becoming anhydritic or plugged with anhydrite, spotty black oil stain in part, dull green fluorescence in part, slow streaming cut in part, very poor interparticle porosity

9400' - 9410' Limestone: tan, light brown, very fine crystalline, fragmental and peloidal, as above

9410' - 9420' Limestone: light brown, tan, very fine to microcrystalline, decreasing fragmental and peloidal, increasing anhydritic, moderately hard, occasional spotty black oil stain, occasional dull green fluorescence, trace streaming cut, occasional very poor interparticle porosity

9420' - 9430' Limestone: light brown, tan light gray brown, occasionally cream, very fine crystalline to microcrystalline, peloidal, increased anhydritic, moderately hard, trace spotty black oil stain, occasionally dull green fluorescence, trace streaming cut, occasional very poor interparticle porosity

Begin 30' lagged samples

9430' - 9460'	<u>Limestone</u> :	light brown, tan light gray brown, occasionally cream, very fine crystalline to microcrystalline, peloidal, increased anhydritic, moderately hard, trace spotty black oil stain, occasionally dull green fluorescence, decreasing show & porosity from above
9460' - 9490'	<u>Limestone</u> :	light brown, light gray brown, tan, occasionally cream, sucrosic in part, <u>slow streaming cut</u> , as above

Base Midale / Top Nessn 9,520' MD, 9,143.3' TVD (-7271.3')

9490' - 9520'	<u>Limestone</u> :	medium to light gray brown, increasingly dark, as above, becoming slightly argillaceous, decreasing show & porosity
9520' - 9550'	<u>Limestone</u> :	medium to light gray brown, dark gray, very fine crystalline, slightly to moderately argillaceous, moderately hard, no fluorescence, no cut, predominately no visible open porosity
9550' - 9580'	<u>Limestone</u> :	dark gray, medium to occasional light gray brown, very fine crystalline, moderately argillaceous, moderately hard, no fluorescence, no cut, no visible open porosity
9580' - 9650'	<u>Limestone</u> :	dark gray, medium to occasional light gray brown, as above, moderately argillaceous
9650' - 9700'	<u>Limestone</u> :	dark gray, medium to occasional light gray brown, very fine crystalline, predominately moderately argillaceous, moderately hard, no fluorescence, no cut, no visible porosity
9700' - 9790'	<u>Limestone</u> :	dark gray, medium to occasional light gray brown, very fine crystalline, as above
9790' - 9820'	<u>Limestone</u> :	medium to dark gray, increased medium to light gray, as above

9820' - 9850'	<u>Limestone:</u>	medium gray brown, tan, medium to light brown, occasional tan, cream, as above, occasional spotty oil stain, trace dull green fluorescence, <u>trace very poor porosity, trace slow streaming cut</u>
9850' - 9880'	<u>Limestone:</u>	medium to light brown, light gray brown, very fine crystalline, fragmental in part, anhydritic in part, trace black oil stain, trace dull green fluorescence, <u>trace slow streaming cut</u> , trace very poor interparticle porosity
9880' - 9910'	<u>Limestone:</u>	medium to occasional light brown, occasional dark brown, very fine to microcrystalline, slightly argillaceous, moderately hard, trace black oil stain, trace dull green fluorescence, <u>trace weak to slow streaming cut</u> , trace very poor interparticle porosity, anhydritic in part
9910' - 9940'	<u>Limestone:</u>	medium to dark gray, medium to occasional light gray brown, very fine crystalline, moderately to slightly argillaceous, moderately hard, predominately no fluorescence, no cut, no porosity
9940' - 9970'	<u>Limestone:</u>	medium to dark gray, increased medium to light gray brown, very fine to microcrystalline, slightly to moderately argillaceous, trace black oil stain, trace dull green fluorescence, <u>trace weak cut</u> , very poor interparticle porosity in part
9970' - 10000'	<u>Limestone:</u>	medium to light gray brown, very fine crystalline, fine fragmental, anhydritic in part, trace black oil stain, trace dull green fluorescence, <u>trace slow streaming cut</u> , very poor interparticle porosity in part
10000' - 10030'	<u>Limestone:</u>	medium to light brown, very fine crystalline, very fragmental, spotty black oil stain, dull green fluorescence in part, <u>slow streaming cut in part</u> , very poor interparticle porosity

Top Nesson 10,050' MD, 9,151.5' TVD (-7279.5')

10030' - 10060'	<u>Limestone</u> :	medium to light brown, occasional tan, anhydritic in part, decreased fragmental, <u>very slow streaming cut in part</u>
10060' - 10120'	<u>Limestone</u> :	light to medium brown, tan, as above
10120' - 10180'	<u>Limestone</u> :	light to medium brown, tan, anhydritic in part, as above

Top Nesson porosity [mid Nesson] 10,207' MD, 9,157.8' TVD (-7285.8')

10180' - 10210'	<u>Limestone</u> :	light brown, tan, very fine crystalline, fine fragmental and peloidal in part, trace spotty black oil stain, rare dull green fluorescence, <u>trace weak cut</u> , trace very poor intercrystalline porosity
10210' - 10240'	<u>Limestone</u> :	tan, very fine crystalline, fine fragmental and occasional peloidal, moderately hard, rare black oil stain, rare dull green fluorescence, <u>trace weak cut</u> , very poor interparticle porosity, clear to white calcite crystals and cement
10240' - 10300'	<u>Limestone</u> :	light brown, tan, very fine crystalline, fine fragmental & occasional peloidal in part, moderately hard, rare spotty black oil stain, rare dull green fluorescence, <u>weak cut in part</u> , very poor interparticle porosity, clear to white calcite crystals & cements
10300' - 10360'	<u>Limestone</u> :	light brown, tan, very fine crystalline, fragmental & occasional peloidal, moderately hard, rare spotty black oil stain, rare dull green fluorescence, <u>weak cut in part</u> , very poor interparticle porosity, with white to clear calcite crystals & cements in part
10360' - 10390'	<u>Limestone</u> :	tan, light brown, very fine crystalline, fine fragmental & occasional peloidal, as above
10390' - 10450'	<u>Limestone</u> :	tan, occasional light brown, very fine crystalline, very fragmental & occasional peloidal, as above, visible spotty black oil stain increased from above, <u>weak to occasional slow streaming cut in part</u>

Short trip 5 stands, pump polymer sweep & circulate @ 10,455' MD

10450' - 10480'	<u>Limestone:</u>	tan, very fine crystalline, fine fragmental & occasional peloidal, occasional spotty black oil stain, occasional dull green fluorescence, <u>weak to occasional slow streaming cut</u> , very poor interparticle porosity, white to clear calcite crystals & cements
10480' - 10510'	<u>Limestone:</u>	light brown, tan, very fine crystalline, fragmental & peloidal (increased fragment & peloid size from above), spotty black oil stain in part, dull green fluorescence, <u>weak to occasional slow streaming cut in part</u> , very poor interparticle porosity, occasional small pin point vugs, occasional stylolitic stain
10510' - 10540'	<u>Limestone:</u>	tan, occasional light brown, very fine crystalline, fine fragmental & occasional peloidal in part, occasional spotty black oil stain, occasional dull green fluorescence, <u>weak cut in part</u> , very poor interparticle porosity

Base Nesson 10,560' MD, 9,166' TVD (-7294')

10540' - 10570'	<u>Limestone:</u>	tan, very fine to microcrystalline, occasional fine fragmental, rare spotty black oil stain, rare dull green fluorescence, <u>weak to no visible cut</u> , trace very poor interparticle porosity, white to clear calcite crystals & cements
10570' - 10600'	<u>Limestone:</u>	tan, light brown, very fine to increasingly microcrystalline, decreasing fragmental from above, rare dull green fluorescence, predominately no cut, no visible open porosity, increased white to clear calcite crystals & cements
10600' - 10630'	<u>Limestone:</u>	tan, light brown, very fine to microcrystalline, increased fragmental from above, rare spotty black oil stain, dull green fluorescence in part, <u>weak cut in part</u> , very poor interparticle porosity, white to clear calcite crystals & cement

10630' - 10660'	<u>Limestone</u> :	light gray, light brown, tan, very fine to microcrystalline, becoming slightly argillaceous, anhydritic in part, no fluorescence, no cut, no visible open porosity
10660' - 10690'	<u>Limestone</u> :	light to medium gray, light brown, microcrystalline to very fine crystalline, slightly argillaceous, no fluorescence, no cut, no visible porosity
10690' - 10750'	<u>Limestone</u> :	medium to light gray, microcrystalline to very fine crystalline, slightly argillaceous, moderately hard, no fluorescence, no cut, no visible open porosity
10750' - 10810'	<u>Limestone</u> :	medium to light gray, microcrystalline to very fine crystalline, slightly argillaceous, as above
10810' - 10870'	<u>Limestone</u> :	light gray, occasionally medium gray brown, microcrystalline to very fine crystalline, occasionally argillaceous, moderately hard, no fluorescence, no cut, no visible to occasionally very poor porosity
10870' - 10900'	<u>Limestone</u> :	light gray, light brown, light gray brown, microcrystalline to very fine crystalline, decreasing argillaceous, as above
10900' - 10930 '	<u>Limestone</u> :	light gray brown, light gray, occasionally light brown, as above
10930' - 10960'	<u>Limestone</u> :	light gray brown, light brown, occasionally light gray, as above
10960' - 10990'	<u>Limestone</u> :	medium brown, occasionally light brown, light gray brown, microcrystalline to occasionally very fine crystalline, slightly argillaceous, occasional dark stain, no fluorescence, <u>very slow weak cut</u>
10990' - 11050'	<u>Limestone</u> :	medium to light brown, occasional tan, very fine to microcrystalline, occasional fine fragmental, moderately hard, trace mineral fluorescence, <u>slight trace weak cut</u> , no visible open porosity

11050' - 11080'	<u>Limestone</u> :	medium to occasional light brown, microcrystalline to very fine crystalline, slightly argillaceous, moderately hard, no fluorescence, no cut, no visible open porosity
11080' - 11110'	<u>Limestone</u> :	medium to light brown, occasional tan, very fine to microcrystalline, trace fine fragmental, dull green fluorescence in part, <u>trace weak cut</u> , trace very poor interparticle porosity
11110' - 11170'	<u>Limestone</u> :	light to medium brown, increased tan from above, very fine to microcrystalline, trace fine fragmental, as above
11170' - 11200'	<u>Limestone</u> :	light to occasional medium brown, tan, very fine to microcrystalline, fine fragmental in part, moderately hard, spotty black oil stain in part, dull green fluorescence in part, <u>slow streaming to weak cut</u> , very poor interparticle porosity
11200' - 11230'	<u>Limestone</u> :	tan, light to occasional medium brown, as above, <u>weak cut</u>
11230' - 11260'	<u>Limestone</u> :	medium to light brown, occasional tan, very fine to microcrystalline, slightly argillaceous, moderately hard, dull green fluorescence in part, <u>trace weak cut</u> , predominately no visible open porosity
11260' - 11290'	<u>Limestone</u> :	light gray, medium to light brown, microcrystalline to very fine crystalline, moderately hard, slightly argillaceous, no fluorescence, no cut, no visible open porosity, white to clear calcite
11290' - 11350'	<u>Limestone</u> :	light gray, light brown, microcrystalline to very fine crystalline, slightly argillaceous, moderately hard, no fluorescence, no cut, no visible open porosity, white to clear calcite
11350' - 11380'	<u>Limestone</u> :	light gray, light brown, microcrystalline to very fine crystalline, as above

11380' - 11410'	<u>Limestone</u> :	medium to light brown, occasionally light gray brown, as above
11410' - 11470'	<u>Limestone</u> :	light to medium brown light gray brown, microcrystalline to very fine crystalline, moderately hard, slightly argillaceous, trace mineral fluorescence, no visible open porosity, trace weak cut, trace white to clear calcite
11470' - 11500'	<u>Limestone</u> :	medium to light gray brown, as above
11500' - 11530'	<u>Limestone</u> :	light to medium brown, light gray brown, microcrystalline to very fine crystalline, moderately hard, slightly argillaceous, trace mineral fluorescence, no visible open porosity, trace weak cut, trace white to clear calcite
11530' - 11560'	<u>Limestone</u> :	light brown to tan, as above
11560' - 11605'	<u>Limestone</u> :	dark gray, medium to dark gray brown, occasionally gray to tan

Total depth in Lateral #1 11,605' MD.

Pull back for Sidetrack #1.

10364' - 10370'	<u>Limestone</u> :	tan, very fine crystalline, fine fragmental, moderately hard, spotty black oil stain, dull green fluorescence, <u>weak to slow streaming cut</u> , very poor interparticle porosity, with dark gray cavings
10360' - 10390'	<u>Limestone</u> :	tan, light brown, very fine crystalline, fine fragmental & occasional peloidal, as above
10390' - 10450'	<u>Limestone</u> :	tan, light brown, very fine crystalline, fine fragmental, moderately hard, occasional dull green fluorescence, <u>weak slow streaming cut</u> , poor interparticle porosity, occasional pinpoint vuggy porosity, occasional white to clear calcite

10450' - 10480'	<u>Limestone</u> :	tan, very fine crystalline, fine fragmental, moderately hard, occ spotty black oil stain, occasional dull green fluorescence, <u>weak to slow streaming cut in part</u> , very poor interparticle & occasional small pin point vuggy porosity, white to clear calcite
10480' - 10510'	<u>Limestone</u> :	tan, very fine crystalline, fine fragmental, occasional spotty black oil stain, dull green fluorescence in part, <u>weak streaming cut</u> , very poor interparticle porosity, with white to occasional clear calcite
10510' - 10570'	<u>Limestone</u> :	tan, very fine crystalline, fine fragmental, as above, <u>weak streaming cut</u>
10570' - 10630'	<u>Limestone</u> :	tan, very fine crystalline, fine fragmental, as above, <u>weak streaming cut in part</u> , very poor interparticle porosity in part, white calcite
10630' - 10660'	<u>Limestone</u> :	tan, very fine crystalline, fine fragmental, occasional spotty black oil stain, dull green fluorescence in part, <u>weak streaming cut in part</u> , very poor interparticle porosity, predominately white calcite

Trip to check BHA @ 10,690' MD

10660' - 10690'	<u>Limestone</u> :	tan, very fine crystalline, fine fragmental, as above, black cavings, bottoms up sample after trip
10690' - 10720'	<u>Limestone</u> :	tan, very fine crystalline, fine fragmental in part, moderately hard, trace poor interparticle porosity, <u>trace weak slow cut</u>
10720' - 10750'	<u>Limestone</u> :	tan to light brown, microcrystalline to very fine crystalline, fine fragmental in part, as above, trace spotty black oil stain
10750' - 10810'	<u>Limestone</u> :	light brown, tan, occasional medium brown, microcrystalline to very fine crystalline, fine fragmental in part, trace spotty black oil stain, occasional dull green fluorescence

10810' - 10870'	<u>Limestone</u> :	light brown, tan, very fine crystalline, fragmental, rare peloidal, trace spotty black oil stain, dull green fluorescence in part, <u>weak cut</u> , very poor interparticle porosity, white to occasional clear calcite
10870' - 10960'	<u>Limestone</u> :	light brown, tan, very fine crystalline to microcrystalline, fine fragmental, as above, <u>weak cut in part</u>
10960' - 11050'	<u>Limestone</u> :	light brown, tan, very fine crystalline, fragmental, occasional spotty black oil stain, dull green fluorescence, <u>weak to occasional weak streaming cut</u> , very poor interparticle porosity, white calcite
11050' - 11110'	<u>Limestone</u> :	predominately light brown, occasional tan, very fine to microcrystalline, fragmental in part, occasional spotty black oil stain, dull green fluorescence in part, <u>weak cut</u> , trace very poor interparticle porosity, white calcite
11110' - 11140'	<u>Limestone</u> :	light brown, very fine crystalline, fragmental, occasional spotty & stylolitic black oil stain, dull green fluorescence in part, <u>weak to slow streaming cut in part</u> , very poor interparticle porosity, white to occasional clear calcite
11140' - 11200'	<u>Limestone</u> :	light to occasional medium brown, very fine to microcrystalline, fragmental, occasional spotty & stylolitic black stain, dull green fluorescence in part, <u>weak to slow streaming cut</u> , very poor interparticle porosity, white to clear calcite
11200' - 11260'	<u>Limestone</u> :	light to medium brown, very fine to microcrystalline, occasional fragmental, rare spotty black oil stain, occasional dull green fluorescence, <u>trace weak cut</u> , occasional very poor interparticle porosity, increased white to clear calcite form above

11260' - 11320'	<u>Limestone</u> :	light brown, occasionally tan and medium brown, very fine to microcrystalline, occasional fragmental, rare black oil stain, occasional dull green fluorescence, <u>trace weak cut</u> , occasional very poor interparticle porosity, occasional white to clear calcite
11320' - 11380'	<u>Limestone</u> :	light brown, occasionally tan, very fine to microcrystalline, occasional fragmental, as above
11380' - 11470'	<u>Limestone</u> :	light brown, tan, occasionally medium brown, very fine to microcrystalline, occasional fragmental, occasional spotty and stylolitic black oil stain, occasional dull green fluorescence, <u>trace weak cut</u> , very poor interparticle porosity, occasional white to translucent calcite
11470' - 11530'	<u>Limestone</u> :	light brown, tan occasionally medium brown, as above
11530' - 11590'	<u>Limestone</u> :	tan to light brown, occasionally medium brown, very fine to occasionally microcrystalline, occasional fragmental, occasional spotty and stylolitic oil stain, increased dull green fluorescence, <u>weak to slow streaming cut</u> , occasional white to translucent calcite
11590' - 11650'	<u>Limestone</u> :	tan, light brown, very fine crystalline, occasional spotty black oil stain & stylolitic stain, dull green fluorescence, <u>weak to slow streaming cut</u> , very poor interparticle porosity, white to translucent calcite, increased percentage metal in sample
11650' - 11740'	<u>Limestone</u> :	tan, light brown, very fine to microcrystalline, occasional fragmental, occasional spotty & stylolitic oil stain, dull green fluorescence in part, <u>weak to slow streaming cut in part</u> , very poor interparticle porosity, white calcite, metal
11740' - 11788'	<u>Limestone</u> :	tan, occasional light brown, very fine crystalline, fragmental & occasional peloidal, increased spotty black oil stain, dull green fluorescence in part, <u>weak to slow streaming cut in part</u> , very poor interparticle & small pin point vuggy porosity, white calcite, metal

Trip to check BHA @ 11,788' MD

11788' - 11800'	<u>Limestone:</u>	tan, occasional light brown, very fine crystalline, as above, <u>weak to slow streaming cut in part</u> , with metal & slough after trip
11800' - 11890'	<u>Limestone:</u>	tan, light brown, very fine crystalline, fragmental, spotty black oil stain in part, dull green fluorescence, <u>weak to slow streaming cut in part</u> , very poor interparticle & small pin point vuggy porosity, white calcite, metal
11890' - 11950'	<u>Limestone:</u>	tan, light brown, very fine crystalline, fragmental, as above, <u>weak to slow streaming cut in part</u> , decreasing metal from above
11950' - 12010'	<u>Limestone:</u>	light brown, tan, very fine crystalline, fragmental, spotty black oil stain in part, dull green fluorescence, <u>weak cut</u> , very poor interparticle porosity, increased white calcite
12010' - 12070'	<u>Limestone:</u>	light brown, tan, very fine crystalline, as above, slight increase spotty black oil stain from above, <u>weak to occasional slow streaming cut</u>
12070' - 12130'	<u>Limestone:</u>	tan, light brown, very fine crystalline, fragmental, spotty black oil stain in part, dull green fluorescence, <u>weak to slow streaming cut</u> , very poor interparticle porosity, decreasing white calcite from above
12130' - 12190'	<u>Limestone:</u>	tan, occasional light brown, very fine crystalline, fragmental & occasional peloidal, spotty black oil stain, dull to moderate green fluorescence, <u>slow to occasional moderate streaming cut</u> , very poor interparticle & small pin point vuggy porosity, white calcite
12190' - 12250'	<u>Limestone:</u>	tan, occasional light brown, fragmental in part, occasional peloidal, moderately hard, spotty black oil stain, dull green fluorescence, <u>slow streaming cut</u> , very poor interparticle porosity, white calcite

12250' - 12340'	<u>Limestone</u> :	tan occasional light brown, as above, moderately hard, spotty black oil stain, dull green fluorescence, <u>slow streaming cut</u> , very poor interparticle porosity, white calcite
12340' - 12400'	<u>Limestone</u> :	tan to light brown, very fine crystalline, moderately hard, fragmental in part, rare peloidal, spotty black oil stain, as above
12400' - 12640'	<u>Limestone</u> :	tan, occasional light brown, very fine crystalline, fragmental in part, rare peloidal, spotty black stain, <u>trace weak cut</u> , as above
12460' - 12550'	<u>Limestone</u> :	light brown to tan, very fine crystalline, fragmental in part, peloidal in part, increased spotty and stylolitic black stain, <u>slow streaming cut</u> , poor interparticle porosity, white to clear calcite
12550' - 12670'	<u>Limestone</u> :	light brown to tan, very fine crystalline, fragmental in part, peloidal in part, increased spotty and stylolitic black stain, <u>weak slow cut</u> , poor interparticle porosity, white to clear calcite
12670' - 12730'	<u>Limestone</u> :	light brown, tan, very fine crystalline, fragmental in part, occasional spotty black oil stain, dull green fluorescence in part, <u>weak cut in part</u> , very poor interparticle porosity, white calcite
12730' - 12820'	<u>Limestone</u> :	light brown, tan, very fine crystalline, fragmental in part, occasional spotty black oil strain, <u>trace weak cut</u> , dull green fluorescence in part, very poor interparticle porosity in part, white calcite
12820' - 12901'	<u>Limestone</u> :	light brown, tan, very fine crystalline, increased fragmental texture, occasional spotty black oil stain, occasional dull green fluorescence, <u>trace weak cut</u> , very poor interparticle porosity in part, white, calcite

Trip for MWD Gamma Ray @ 12,901' MD

12901' - 12910 Slough after trip with Limestone as above

12910' - 12940'	<u>Limestone</u> :	light brown, tan, very fine crystalline, fragmental & occasional peloidal, spotty & stylolitic black oil stain in part, dull green fluorescence in part, <u>weak cut in part</u> , very poor interparticle porosity in part
12940' - 12980'	<u>Limestone</u> :	light brown, tan, very fine crystalline, occasional fragmental, occasional spotty black oil stain, trace dull green fluorescence, <u>trace weak cut</u> , occasional very poor interparticle porosity
12980' - 12990'	<u>Limestone</u> :	light brown, tan, very fine crystalline, very fragmental & peloidal, increased spotty & stylolitic back oil stain, dull green fluorescence, <u>slow streaming cut</u> , very poor to poor interparticle & pin point vuggy porosity, occasional white calcite

Base Midale / Top Nesson 12,980' MD, 9,136.7' TVD (-7264.7')

12990' - 13030'	<u>Limestone</u> :	grading to calcareous shale, dark gray, microcrystalline to very fine crystalline, argillaceous, moderately hard, occasional dull fluorescence, no visible open porosity, <u>slow streaming cut</u>
13030' - 13090'	<u>Limestone</u> :	dark gray, grading to calcareous shale, very fine crystalline, argillaceous, moderately hard, no fluorescence, <u>weak to slow streaming cut</u> , no visible porosity
13090' - 13100'	<u>Limestone</u> :	medium to light brown, very fine to microcrystalline, slightly argillaceous, occasional fragmental, trace spotty black oil stain, dull green fluorescence in part, <u>weak to slow streaming cut in part</u> , very poor interparticle porosity

Top Nesson 13,100' MD, 9,136.4' TVD (-7264.4')

13100' - 13150'	<u>Limestone</u> :	light brown, tan, very fine crystalline, fragmental & peloidal in part, spotty black oil stain in part, dull green fluorescence in part, <u>slow streaming cut in part</u> , very poor interparticle porosity
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13150' - 13240'	<u>Limestone</u> :	light brown, tan, occasionally off white, very fine crystalline, fragmental and peloidal in part, rare spotty black oil stain, dull green fluorescence in part, <u>slow streaming cut</u> , very poor interparticle porosity
13240' - 12300'	<u>Limestone</u> :	light brown, tan, occasionally off white, very fine crystalline, decreased fragmental and peloidal, as above, <u>weak cut</u>
12300' - 13360'	<u>Limestone</u> :	light brown, tan, decreased off white, very fine crystalline, as above
13360' - 13450'	<u>Limestone</u> :	light brown to tan, very fine crystalline, moderately hard, increased fragmental and peloidal, increased spotty and stylolitic black oil stain, dull green fluorescence, very poor to trace pin point vuggy porosity, <u>slow streaming cut</u>
13450' - 13540'	<u>Limestone</u> :	tan, light brown, very fine crystalline, fragmental & peloidal, spotty & stylolitic black oil stain, dull - moderate green fluorescence, <u>slow streaming cut</u> , very poor to occasional poor interparticle porosity, occasional small pin point vugs
13540' - 13600'	<u>Limestone</u> :	light brown, tan, very fine crystalline, as above, slight decrease in show & visible porosity from above
13600' - 13690'	<u>Limestone</u> :	tan, off white, very fine crystalline, fragmental, occasional spotty black oil stain, dull green fluorescence, <u>weak to slight streaming cut</u> , very poor interparticle porosity
13690' - 13720'	<u>Limestone</u> :	light brown, tan, off white, very fine crystalline, increased fragmental & peloidal, increased spotty & stylolitic black oil stain, dull to moderate green fluorescence, <u>slow streaming cut</u> , very poor to occasional poor interparticle & small pin point vuggy porosity

13720' - 13755'

Limestone:

light brown, tan, very fine crystalline, increased fragmental & peloidal, increased spotty & stylolitic black oil stain, dull to moderate green fluorescence, slow streaming cut, very poor to occasional poor interparticle & small pin point vuggy porosity

Total depth 13,755' MD, 9,136' TVD (-7264')

LOGGING REPORT

Logging Company: Schlumberger
Date: 11/25-26/02

Engineers: John Schumer &
Todd Smith

Witnessed by: Wayne Freisatz, Pat Salwey, Brian Cebull

Driller's TD Depth: 11,605'

Logger's TD Depth: 11,557'

Driller's Casing Depth: 9,224'

Logger's Casing Depth: 9,224'

Elevation: GL: 1,851' Sub: 21' KB: 1,872'

Mud Conditions: Wt: 8.4 Vis: 29 WL: n/c

BHT: 220°F Rmf: 1.88 @ 62°F Rmf @ BHT: 0.57 @ 220°F

Hole Condition: good

Logging Time: Time Arrived: 05:30 04/24/03 First Tool On Bttm: 16:35 04/24/03

Finished log: 19:43 04/24/03 Time Departed: 02:00 04/25/03

Electric Logging Program: 1.) TLC [Tubing Conveyed on drill pipe] Platform Express High Resolution Laterolog Array from 11,501' to 9,224', and Platform Express Compensated Neutron - Three Detector Density from 11,525' to 9,224', and FMI (Formation Micro Imaging)

Log Tops: Nesson 9,375' MD; Nesson 9,520' MD; Nesson 10,050' MD; Top porosity in Nesson 10,207' MD; Base porosity in Nesson 10,560' MD

Software Presentations: LAS Data Disk & FMI post well processing

Comments: Log depths came in deeper than driller's depths on key marker beds. Schlumberger adjusted gamma markers to agree with pre-existing BHI MWD Gamma Ray log depths.

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

Lynn D. Helms
DIRECTOR

<http://explorer.ndic.state.nd.us>

Bruce E. Hicks
ASSISTANT DIRECTOR

15358
AA

May 28, 2003

Gary Evertz
Nance Petroleum Corporation.
P.O. Box 7169
Billings, MT 59103-7168

RE: Lewis & Clark 2-4H
SE NE Sec 4-T153N-R101W
McKenzie County, ND
Well File No. 15358

Dear Mr. Evertz:

We are in receipt of the Cement Bond Log run on the above referenced well, dated May 23, 2003. We have determined that the top of the cement behind the 7-inch casing string is at a depth of 4914 feet. The top of the Newcastle Formation is picked from logs at 4891 feet. The North Dakota Administrative Code Section 43-02-03-21 requires that sufficient cement be used to isolate the Dakota Group, of which the Newcastle Formation is a part.

Since the Newcastle Formation is not properly isolated, approval may be given permission to monitor the surface-production casing annulus. This approval may be granted in lieu of an immediate cement squeeze, contingent upon the following stipulations:

1. The surface – production casing annulus must be continuously monitored with an accurate pressure gauge.
2. The pressure gauge must not be any higher than a 300-psi gauge.
3. All valves installed on the annulus must be exposed to the surface; burial will be allowed only in the presence of an NDIC Oil and Gas Division Inspector.
4. Any pressure development on the annulus must be immediately reported to the Oil and Gas Division.
5. The Newcastle Formation must be isolated, as directed by the Oil and Gas Division, upon the abandonment of the well.

Mr. Gary Evertz

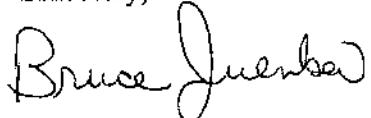
Page 2

May 28, 2003

6. Remedial action may be required prior to abandonment if warranted by the Director.

If you have any questions, do not hesitate to contact me.

Sincerely,



Bruce Juenker

Geologist

Bj/er



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 (07-2000)

Well File No.
15358

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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date April 23, 2003
<input type="checkbox"/> Report of Work Done	Date Work Completed
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	
Approximate Start Date	

APR 2003
04/30/03 EXPIRES
23
INSPECTED

<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
<input checked="" type="checkbox"/> Other	<u>CHANGE TD</u>

Well Name and Number

LEWIS AND CLARK 2-4

Footages

209

1

3

Section

1

— 54 —

1

1

ANGE TD

24-HOUR PRODUCTION RATE

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

Name of Contractor(s)

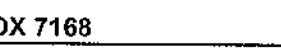
Addressees

1

1

DETAILS OF WORK

Nance Petroleum Corporation requests approval to revise the drilling program. The current lateral will be extended at an azimuth of 272 degrees to a final BHL of 600' FWL and 700' FNL of Section 4, T153N, R101W.
See attached Baker directional plan.

Company NANCE PETROLEUM CORPORATION		Telephone Number 406-245-6248
Address P.O. BOX 7168		
City BILLINGS		State MT
Signature 		Printed Name Gary L Evertz
Title VP Operations		Date April 23, 2003

FOR STATE USE ONLY	
<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date	APR 25 2003
By	
Title	Horizontal Drilling Supervisor



INTEQ

NANCE PETROLEUM CORPORATION

Location: NORTH DAKOTA

Field: MCKENZIE COUNTY

Installation: SEC.4-T153N-R101W

Slot: Slot #1 LEWIS & CLARK

Well: LEWIS & CLARK 2-4H

Created by: PlotNet
Date Created: 26-Feb-2005
Plot Reference is LEWIS & CLARK 2-4H (PIPE) PLAN2
Ref Wellhead is LEWIS & CLARK 2-4H (PIPE);
Coordinates are in feet reference Slot#1 LEWIS & CLARK
True Vertical Depths are reference Rig Datum
Measured Depths are reference Rig Datum
Rig Datum Column#;
Rig Datum to Mean Sea Level: 0.00
Plot North is aligned to TRUE North

Scale 1 cm = 250 ft

East (feet) ->

-4500 -4250 -4000 -3750 -3500 -3250 -3000 -2750 -2500 -2250 -2000 -1750 -1500 -1250 -1000 -750 -500 -250 0

1500
1250
1000
750
500
250
0
-250

<-North(feet)

T.D. & End of Hold - 9122.00 Tvd, 1394.00 N 4352.00 W

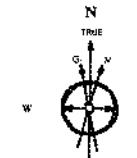
End of Turn - 9122.00 Tvd, 1165.64 N 671.84 W

2083 FEL

End of Build - 9122.00 Tvd, 391.00 N 0.00 E

Surface 0.00 N, 0.00 E

SHL- 3028 FSL & 332 FEL
BHL - 600 FWL & 700 FNL



<- True Vertical Depth(feet) foot

Kick off Point - 0.00 Inc, 8731.00 Md, 8731.00 Tvd, 0.00 VS

14.65

29.31

DLS: 14.65 deg/100ft

End of Turn - 90.00 Inc, 10485.62 Md, 9122.00 Tvd, 995.39 VS

Kick off Point - 90.00 Inc, 9405.00 Md, 9122.00 Tvd, 137.52 VS

T.D. & End of Hold - 90.00 Inc, 14172.85 Md, 9122.00 Tvd, 4569.81 VS

-200 0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000 4200 4400 4600 4800

Scale 1 cm = 200 ft

Vertical Section (feet) ->

Azimuth 287.76 with reference 0.00 N, 0.00 E from Slot #1 LEWIS & CLARK



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
SPN 5749 (07-2000)

Well File No.
15358



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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date
<input type="checkbox"/> Report of Work Done	Date Work Completed
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	
Approximate Start Date	

<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
<input checked="" type="checkbox"/> Other	Revised Horizontal Lateral Direction

Well Name and Number LEWIS AND CLARK 2-4				
Footages 2094' FNL	Qtr-Qtr 332' FEL	Section SENE	Township 4	Range 153 N 101 W
Field BAKER	Pool MADISON	County McKENZIE		

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

Name of Contractor(s)			
Address	City	State	Zip Code

DETAILS OF WORK

Nance Petroleum Corporation (NPC) requests approval to revise the direction of our horizontal lateral due to acquired 3-D Seismic. The surface location will remain the same at 2094' FNL & 332' FEL of Section 4, T153N, R101W. The pay zone will be entered at 1611' FNL & 332' FEL of Section 4, T153, R101W. The proposed bottom bottom hole location is 841' FNL & 2043' FEL, Section 4, 153N, R101W. NPC also plans to drill a second lateral out of this well bore by side tracking out of the casing below the base of the last Salt and drilling a curved lateral ending up with an azimuth of 110 degrees. The pay zone will be entered at approximately 1790' FNL and 160' FEL of Section 4, T153N, R101W. The proposed BHL is 2040' FEL and 1800' FNL of Section 3, T153N, R101W. The drilling of the second lateral will be commenced by September 1, 2003. See the attached directional plan, drilling prognosis, and Survey Plots for Section 3 & 4.

Should the captioned well be completed as a producer, NPC will escrow all royalty interests in an interest bearing escrow account pending the NDIC's determination of a final spacing, proration unit. The working interests have been pooled by agreement dated October 1, 2002.

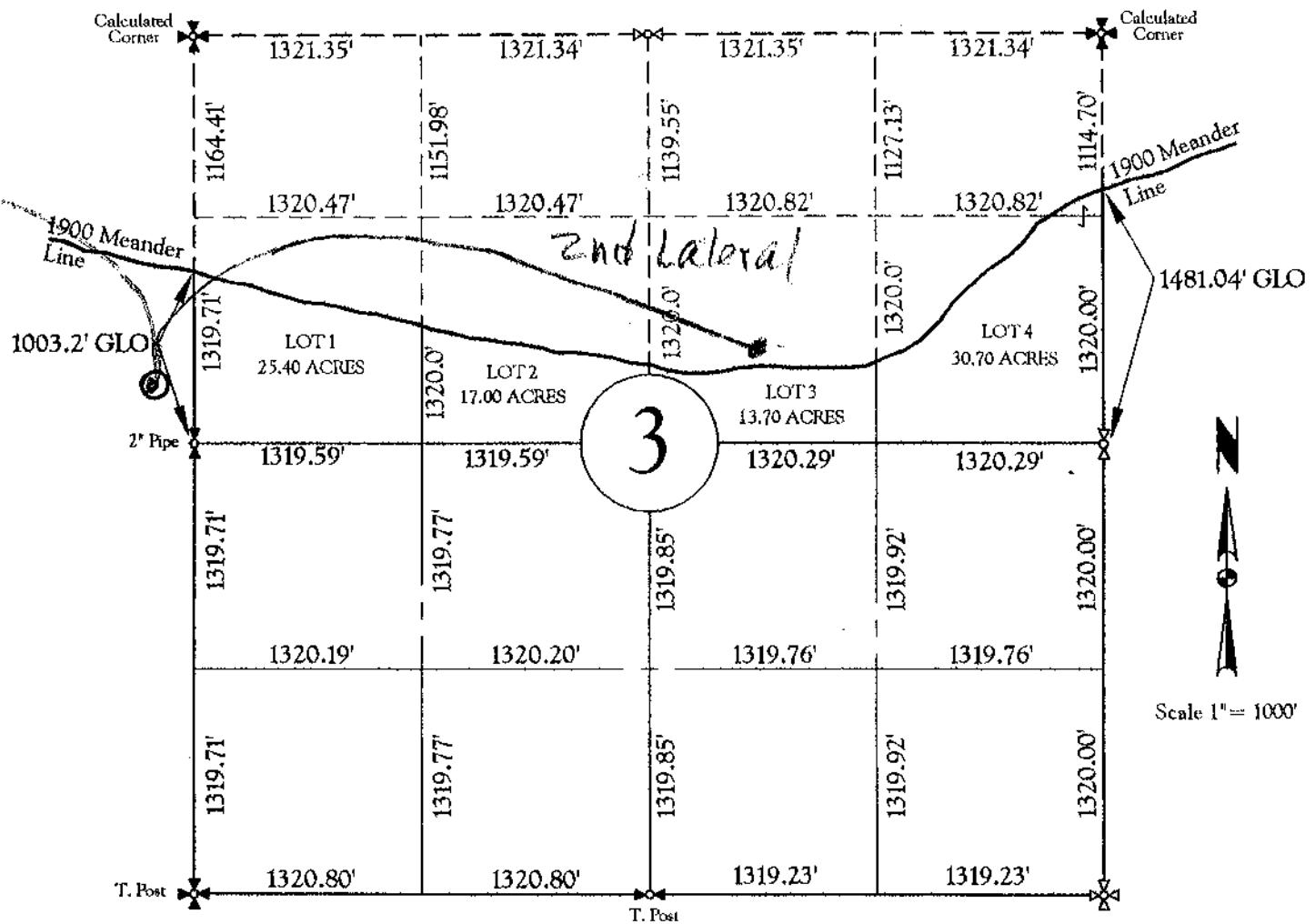
NPC requests the well number be changed to 2-4H. (\$25 check for attached)

Company NANCE PETROLEUM CORPORATION	Telephone Number 406-245-6248	
Address P.O. BOX 7168		
City BILLINGS	State MT	Zip Code 59103-7168
Signature 	Printed Name Gary L Evertz	
Title VP Operations	Date March 4, 2003	

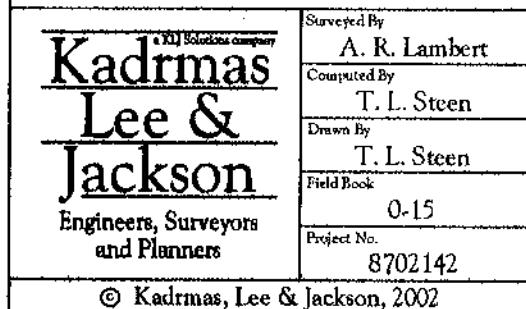
FOR STATE USE ONLY	
<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date MAR 06 2003	
By 	
Title "Horizontal Drilling Supervisor	

HORIZONTAL SECTION PLAT

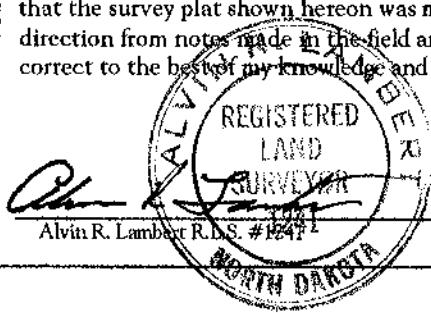
Nance Petroleum Corporation
P.O. Box 7168 Billings, Montana 59103
LEWIS & CLARK #2-4
Section 3, T. 153 N., R. 101 E., 5th P.M.
McKenzie County, North Dakota



All corners shown on this plat were found or calculated from other found corners during field survey on November 14th & 15th of 2002.



I, Alvin Lambert, Professional Land Surveyor, do hereby certify that the survey plat shown hereon was made by me or under my direction from notes made in the field and the same is true and correct to the best of my knowledge and belief.

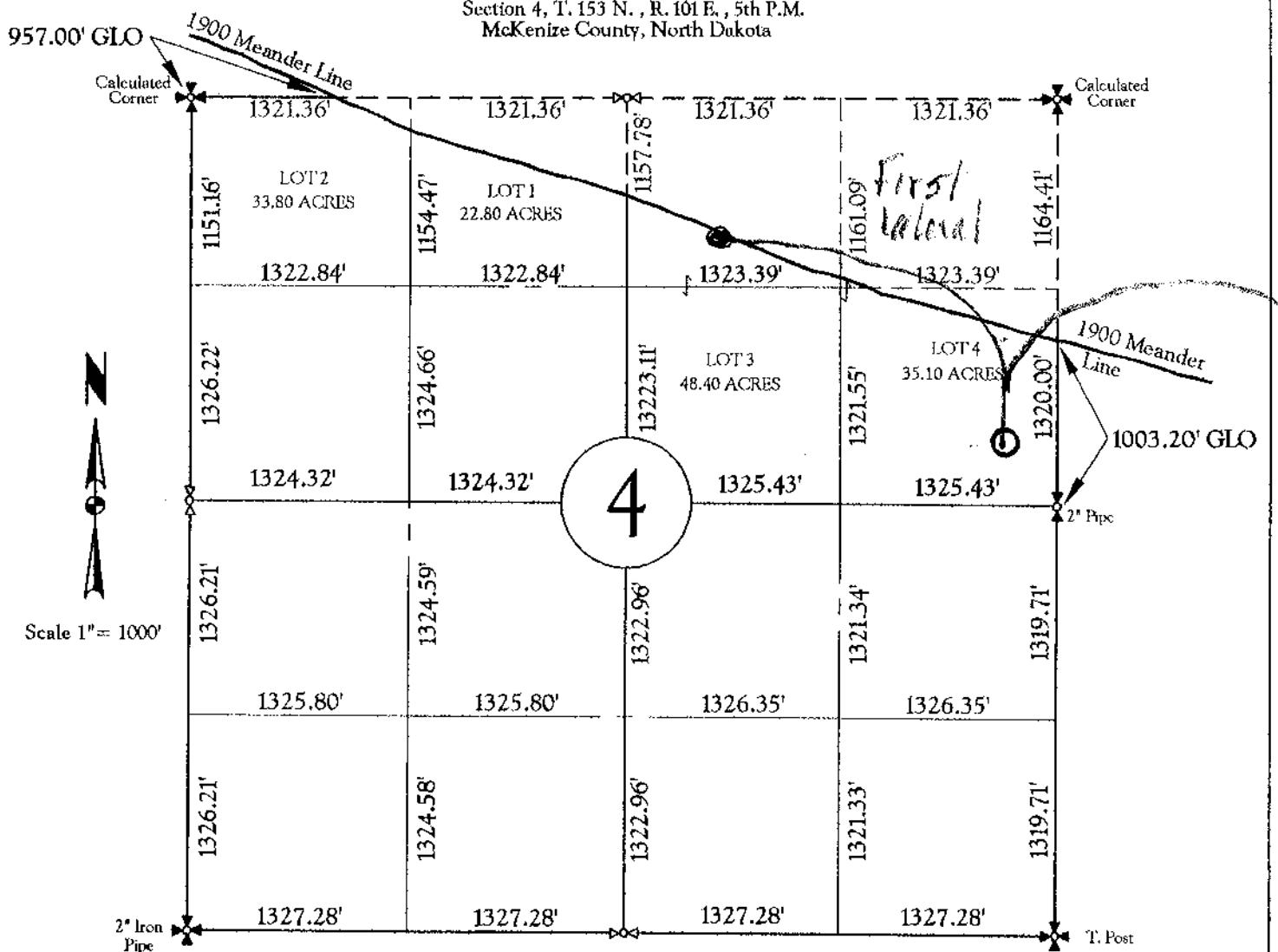


11/25/2002

Date

HORIZONTAL SECTION PLAT

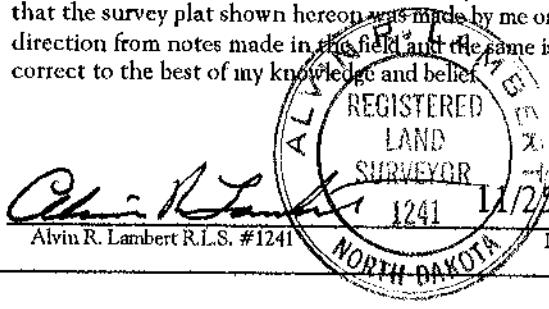
Nance Petroleum Corporation
P.O. Box 7168 Billings, Montana 59103
LEWIS & CLARK #2-4
Section 4, T. 153 N., R. 101 E., 5th P.M.
McKenzie County, North Dakota



All corners shown on this plat were found or calculated from other found corners during field survey on November 14th & 15th of 2002.

Kadrimas Lee & Jackson
Engineers, Surveyors and Planners

I, Alvin Lambert, Professional Land Surveyor, do hereby certify that the survey plat shown hereon was made by me or under my direction from notes made in the field and the same is true and correct to the best of my knowledge and belief.



DRILLING PROGNOSIS

2/24/03

TIGHT HOLE

OPERATOR: NANCE PETROLEUM CORPORATION

Lease and Well No: **LEWIS & CLARK 2-4H**

Surface Location: 2094' FNL & 332' FEL, SENE, Section 4, T153N, R101E, McKenzie County, ND

Planned Csg Point: 1850' FNL & 332' FEL, Section 4, T153N R101W

Planned BHL: 841' FNL & 2043' FEL, Section 4, T153N R101W

Elev. Gr. 1851' (after 2' fill)', KB 1872'

Horizontal Target: 9122', Mission Canyon Nesson porosity, Azimuth 70 degrees

Field: Baker
By: M. Bryant, G. Evertz

KOP:	8731' MD
CSG PT:	9185' MD
	9080' TVD
Proposed TD:	11549' MD
	9122' TVD

ESTIMATED FORMATION TOPS

FORMATION	TVD	Datum	FORMATION	TVD	Datum
Greenhorn	4340	-2468	Base of 2 nd to Last Salt	8713	-6841
Dakota Silt	5054	-3182	Base of Last Salt	8891	-7019
Dakota Sand	5186	-3314	Ratcliffe	8968	-7096
	5588	-3716	Ratcliffe Anhydrite	9007	-7135
Dunham Salt	6626	-4754	Lower Ratcliffe	9017	-7145
Spearfish	6670	-4798	Midale	9043	-7171
Pine Salt	6986	-5114	Mission Canyon	9122	-7250
Base Pine Salt	7036	-5164	State 'A'	9137	-7265
Opeche Salt	Absent	Absent	Horizontal Target –		
Opeche Shale	7083	-5211	Mission Canyon		9122
Charles	8234	-6362			-7250

CASING PROGRAM

STRING	HOLE SIZE	AMOUNT	SIZE CASING	WEIGHT & GRADE	DEPTH SET	SACKS CMT	TOP OF CMT
Surface	13-3/4"	3025'	10-3/4"	40.5 K-55	3025'	1800	Surface
Production	9-7/8"	9185' MD	7" & 7 5/8"	26, 29 #/ft L-80 47.1 #/ft P-110	9185' MD	1600	Above Dakota

PROPOSED WORK

Lateral 6" 9185' to 11549' MD Open hole Completion

MUD PROGRAM

The type and characteristics of the proposed circulating mud system will be fresh water for surface and oil base, until the 7" Csg is set.

DEPTH	WEIGHT (PPG)	VIS	FLUID LOSS	SALINITY (PPM)
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INTEQ

NANCE PETROLEUM CORPORATION

Location: NORTH DAKOTA
 Field: MCKEANIE COUNTY
 Installation: SEC.4-T153N-R101W

Slot: Slot #1 LEWIS & CLARK
 Well: LEWIS & CLARK 2-4H

Slot #1
 Drilled
 Planned
 Actual
 Total Depth - 11549.00 ft
 Surface Depth - 0.00 ft
 Total Vertical Depth - 11549.00 ft
 Total Horizontal Distance - 2036.31 ft
 Maximum Vertical Deviation - 2036.31 ft
 Maximum Horizontal Deviation - 1368.20 ft
 Total Deviation - 2036.31 ft
 Total Deviation Angle - 324.26 deg
 Total Deviation Vertical - 2036.31 ft
 Total Deviation Horizontal - 1368.20 ft

Scale 1 cm = 220 ft

East (feet) ->

-2420 -2200 -1920 -1760 -1540 -1320 -1100 -860 -650 -440 -220 0 220

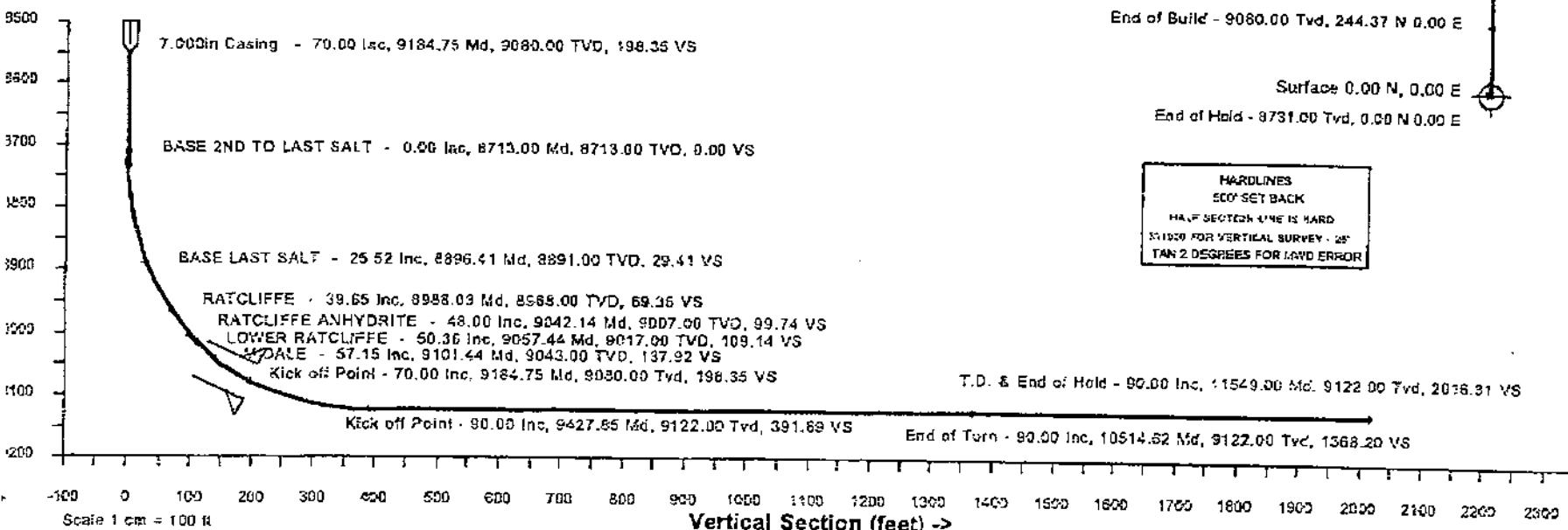
1540
 1320
 1100
 880
 660
 440
 220
 0

Scale 1 cm = 220 ft

<. North(feet)

WELL PROFILE DATA

Point	MD	Inc	Dir	TVD	North	East	deg/100ft	V. Sect
Tie-in	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP	8731.00	0.00	0.00	8731.00	0.00	0.00	0.00	0.00
Target	9184.75	70.00	9.00	9080.00	244.37	0.00	+5.43	144.33
Target	9427.55	89.00	0.00	9122.00	482.57	0.00	8.23	285.12
End of Turn	10514.52	90.00	273.06	9122.00	1197.74	-677.99	8.00	1254.66
T.D. & Target	11549.00	90.00	273.06	9122.00	1252.92	-1710.89	0.00	2120.81



HARDLINES
 50' SET BACK
 HALF SECTION LINE IS HARD
 351.92 FOR VERTICAL SURVEY - 45'
 TAN 2 DEGREES FOR L AND ERROR

NANCE PETROLEUM CORPORATION, Slot
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY, NORTH DAKOTA

Wellbore: LEWIS & CLARK 2-4H (PWB)
Half Section plan
Wellpath: LEWIS & CLARK 2-4H (PWP#1)
Date Printed: 27-Feb-2003

BAKER HUGHES
INTEQ

Wellbore

Name	Created	Last Revised
LEWIS & CLARK 2-4H (PWB) Half Section plan	19-Feb-2003	27-Feb-2003

Well

Name	Government ID	Last Revised
LEWIS & CLARK 2-4H		19-Feb-2003

Slot

Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #1 LEWIS & CLARK	421880.7886	1190860.8303	N48 6.44.8812	W103 416.1923	3028.00N	332.00W

Installation

Name	Eastng	Northing	Coord System Name	North Alignment
SEC.4-T153N-R101W	1190867.365	418841.853	ND83-NF on NORTH AMERICAN DATUM 1983 datum	True

Field

Name	Eastng	Northing	Coord System Name	North Alignment
MCKENZIE COUNTY	1968500.000	3519779.648	ND83-NF on NORTH AMERICAN DATUM 1983 datum	True

Created By

--

Comments

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Notes 417

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #1 0.00ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 306.22 degrees
Bottom hole distance is 2120.61 Feet on azimuth 306.22 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Baker Hughes - INTEQ

NANCE PETROLEUM CORPORATION, Slot
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY, NORTH DAKOTA

Wellbore: LEWIS & CLARK 2-4H (PWB)
Half Section plan
Wellpath: LEWIS & CLARK 2-4H (PWP#1)
Date Printed: 27-Feb-2003

BAKER HUGHES
INTEQ

Wellpath Report

MD(ft)	Inclination	Dip(deg)	TVD(ft)	North(ft)	East(ft)	Dipole (deg/100ft)	Vertical Section(ft)
0.00	0.00	0.00	0.00	0.00N	0.00E	0.00	0.00
100.00	0.00	0.00	100.00	0.00N	0.00E	0.00	0.00
200.00	0.00	0.00	200.00	0.00N	0.00E	0.00	0.00
300.00	0.00	0.00	300.00	0.00N	0.00E	0.00	0.00
400.00	0.00	0.00	400.00	0.00N	0.00E	0.00	0.00
500.00	0.00	0.00	500.00	0.00N	0.00E	0.00	0.00
600.00	0.00	0.00	600.00	0.00N	0.00E	0.00	0.00
700.00	0.00	0.00	700.00	0.00N	0.00E	0.00	0.00
800.00	0.00	0.00	800.00	0.00N	0.00E	0.00	0.00
900.00	0.00	0.00	900.00	0.00N	0.00E	0.00	0.00
1000.00	0.00	0.00	1000.00	0.00N	0.00E	0.00	0.00
1100.00	0.00	0.00	1100.00	0.00N	0.00E	0.00	0.00
1200.00	0.00	0.00	1200.00	0.00N	0.00E	0.00	0.00
1300.00	0.00	0.00	1300.00	0.00N	0.00E	0.00	0.00
1400.00	0.00	0.00	1400.00	0.00N	0.00E	0.00	0.00
1500.00	0.00	0.00	1500.00	0.00N	0.00E	0.00	0.00
1600.00	0.00	0.00	1600.00	0.00N	0.00E	0.00	0.00
1700.00	0.00	0.00	1700.00	0.00N	0.00E	0.00	0.00
1800.00	0.00	0.00	1800.00	0.00N	0.00E	0.00	0.00
1900.00	0.00	0.00	1900.00	0.00N	0.00E	0.00	0.00
2000.00	0.00	0.00	2000.00	0.00N	0.00E	0.00	0.00
2100.00	0.00	0.00	2100.00	0.00N	0.00E	0.00	0.00
2200.00	0.00	0.00	2200.00	0.00N	0.00E	0.00	0.00
2300.00	0.00	0.00	2300.00	0.00N	0.00E	0.00	0.00
2400.00	0.00	0.00	2400.00	0.00N	0.00E	0.00	0.00
2500.00	0.00	0.00	2500.00	0.00N	0.00E	0.00	0.00
2600.00	0.00	0.00	2600.00	0.00N	0.00E	0.00	0.00
2700.00	0.00	0.00	2700.00	0.00N	0.00E	0.00	0.00
2800.00	0.00	0.00	2800.00	0.00N	0.00E	0.00	0.00
2900.00	0.00	0.00	2900.00	0.00N	0.00E	0.00	0.00
3000.00	0.00	0.00	3000.00	0.00N	0.00E	0.00	0.00
3100.00	0.00	0.00	3100.00	0.00N	0.00E	0.00	0.00
3200.00	0.00	0.00	3200.00	0.00N	0.00E	0.00	0.00
3300.00	0.00	0.00	3300.00	0.00N	0.00E	0.00	0.00
3400.00	0.00	0.00	3400.00	0.00N	0.00E	0.00	0.00
3500.00	0.00	0.00	3500.00	0.00N	0.00E	0.00	0.00
3600.00	0.00	0.00	3600.00	0.00N	0.00E	0.00	0.00
3700.00	0.00	0.00	3700.00	0.00N	0.00E	0.00	0.00
3800.00	0.00	0.00	3800.00	0.00N	0.00E	0.00	0.00
3900.00	0.00	0.00	3900.00	0.00N	0.00E	0.00	0.00
4000.00	0.00	0.00	4000.00	0.00N	0.00E	0.00	0.00
4100.00	0.00	0.00	4100.00	0.00N	0.00E	0.00	0.00
4200.00	0.00	0.00	4200.00	0.00N	0.00E	0.00	0.00
4300.00	0.00	0.00	4300.00	0.00N	0.00E	0.00	0.00
4400.00	0.00	0.00	4400.00	0.00N	0.00E	0.00	0.00
4500.00	0.00	0.00	4500.00	0.00N	0.00E	0.00	0.00
4600.00	0.00	0.00	4600.00	0.00N	0.00E	0.00	0.00
4700.00	0.00	0.00	4700.00	0.00N	0.00E	0.00	0.00
4800.00	0.00	0.00	4800.00	0.00N	0.00E	0.00	0.00
4900.00	0.00	0.00	4900.00	0.00N	0.00E	0.00	0.00
5000.00	0.00	0.00	5000.00	0.00N	0.00E	0.00	0.00
5100.00	0.00	0.00	5100.00	0.00N	0.00E	0.00	0.00

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #1 0.00 ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 306.22 degrees
Bottom hole distance is 2120.61 Feet on azimuth 306.22 degrees from Wellhead
Calculation method uses Minimum Curvature method

NANCE PETROLEUM CORPORATION, Slot
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY, NORTH DAKOTA

Wellbore: LEWIS & CLARK 2-4H (PWB)

Half Section plan

Wellpath: LEWIS & CLARK 2-4H (PWP#1)

Date Printed: 27-Feb-2003



BAKER
HUGHES

INTEQ

Wellpath Report

MD(ft)	Incl(deg)	Dir(deg)	TVD(ft)	North(ft)	East(ft)	Dipole [deg/100ft]	Vertical Section(ft)
5200.00	0.00	0.00	5200.00	0.00N	0.00E	0.00	0.00
5300.00	0.00	0.00	5300.00	0.00N	0.00E	0.00	0.00
5400.00	0.00	0.00	5400.00	0.00N	0.00E	0.00	0.00
5500.00	0.00	0.00	5500.00	0.00N	0.00E	0.00	0.00
5600.00	0.00	0.00	5600.00	0.00N	0.00E	0.00	0.00
5700.00	0.00	0.00	5700.00	0.00N	0.00E	0.00	0.00
5800.00	0.00	0.00	5800.00	0.00N	0.00E	0.00	0.00
5900.00	0.00	0.00	5900.00	0.00N	0.00E	0.00	0.00
6000.00	0.00	0.00	6000.00	0.00N	0.00E	0.00	0.00
6100.00	0.00	0.00	6100.00	0.00N	0.00E	0.00	0.00
6200.00	0.00	0.00	6200.00	0.00N	0.00E	0.00	0.00
6300.00	0.00	0.00	6300.00	0.00N	0.00E	0.00	0.00
6400.00	0.00	0.00	6400.00	0.00N	0.00E	0.00	0.00
6500.00	0.00	0.00	6500.00	0.00N	0.00E	0.00	0.00
6600.00	0.00	0.00	6600.00	0.00N	0.00E	0.00	0.00
6700.00	0.00	0.00	6700.00	0.00N	0.00E	0.00	0.00
6800.00	0.00	0.00	6800.00	0.00N	0.00E	0.00	0.00
6900.00	0.00	0.00	6900.00	0.00N	0.00E	0.00	0.00
7000.00	0.00	0.00	7000.00	0.00N	0.00E	0.00	0.00
7100.00	0.00	0.00	7100.00	0.00N	0.00E	0.00	0.00
7200.00	0.00	0.00	7200.00	0.00N	0.00E	0.00	0.00
7300.00	0.00	0.00	7300.00	0.00N	0.00E	0.00	0.00
7400.00	0.00	0.00	7400.00	0.00N	0.00E	0.00	0.00
7500.00	0.00	0.00	7500.00	0.00N	0.00E	0.00	0.00
7600.00	0.00	0.00	7600.00	0.00N	0.00E	0.00	0.00
7700.00	0.00	0.00	7700.00	0.00N	0.00E	0.00	0.00
7800.00	0.00	0.00	7800.00	0.00N	0.00E	0.00	0.00
7900.00	0.00	0.00	7900.00	0.00N	0.00E	0.00	0.00
8000.00	0.00	0.00	8000.00	0.00N	0.00E	0.00	0.00
8100.00	0.00	0.00	8100.00	0.00N	0.00E	0.00	0.00
8200.00	0.00	0.00	8200.00	0.00N	0.00E	0.00	0.00
8300.00	0.00	0.00	8300.00	0.00N	0.00E	0.00	0.00
8400.00	0.00	0.00	8400.00	0.00N	0.00E	0.00	0.00
8500.00	0.00	0.00	8500.00	0.00N	0.00E	0.00	0.00
8600.00	0.00	0.00	8600.00	0.00N	0.00E	0.00	0.00
8700.00	0.00	0.00	8700.00	0.00N	0.00E	0.00	0.00
8731.00	0.00	0.00	8731.00	0.00N	0.00E	0.00	0.00
8831.00	15.43	0.00	8029.80	13.38N	0.00E	15.43	7.91
8931.00	30.85	0.00	8921.47	52.56N	0.00E	15.13	31.06
9031.00	46.20	-0.00	8999.41	114.72N	0.00E	15.43	67.78
9131.00	61.71	0.00	9058.01	195.37N	0.00E	15.43	115.43
9181.73	70.00	0.00	9080.00	244.37N	0.00E	15.43	144.36
9233.90	74.04	0.00	9095.11	291.11N	0.00E	8.23	
9333.90	82.27	0.00	9115.61	388.90N	0.00E	8.23	172.00
9427.81	90.00	0.00	9122.00	482.57N	0.00E	8.23	229.71
9500.00	90.00	354.23	9122.00	554.60N	3.63W	8.00	285.12
9600.00	90.00	346.23	9122.00	653.06N	20.59W	8.00	330.60
9700.00	90.00	338.23	9122.00	748.22N	51.09W	8.00	402.46
9800.00	90.00	330.23	9122.00	838.20N	94.53W	8.00	483.29
9900.00	90.00	322.23	9122.00	921.25N	150.08W	8.00	571.60
10000.00	90.00	314.23	9122.00	995.77N	216.61W	8.00	665.39
10100.00	90.00	306.23	9122.00	1060.30N	292.93W	8.00	763.12
							862.79

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's arc from Rig and TVD's arc from Rig (Datum #1 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 308.22 degrees

Bottom hole distance is 2120.61 Foot on azimuth 308.22 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NANCE PETROLEUM CORPORATION, Slot
#1 LEWIS & CLARK
SEC. 4-T153N-R101W,
MCKENZIE COUNTY, NORTH DAKOTA

Wellbore: LEWIS & CLARK 2-4H (PWB)

Half Section plan

Wellpath: LEWIS & CLARK 2-4H (PWP#1)

Date Printed: 27-Feb-2003



BAKER
HUGHES
INTEQ
Wellpath Report

MD(ft)	Incl(deg)	Dip(deg)	TVD(ft)	North(ft)	East(ft)	Dipleg (deg/100ft)	Vertical Section(ft)
10200.00	90.00	298.23	9122.00	1113.59N	377.45W	8.00	962.47
10300.00	90.00	290.23	9122.00	1154.59N	468.57W	8.00	1060.21
10400.00	90.00	282.23	9122.00	1182.52N	561.51W	8.00	1154.11
10500.00	90.00	274.23	9122.00	1196.82N	663.40W	8.00	1242.34
10514.61	90.00	273.06	9122.00	1197.74N	677.99W	8.00	1254.68
10600.00	90.00	273.06	9122.00	1202.30N	763.25W	0.00	1326.14
10700.00	90.00	273.06	9122.00	1207.63N	863.10W	0.00	1409.85
10800.00	90.00	273.06	9122.00	1212.97N	962.96W	0.00	1493.57
10900.00	90.00	273.06	9122.00	1218.30N	1062.82W	0.00	1577.29
11000.00	90.00	273.06	9122.00	1223.64N	1162.68W	0.00	1661.00
11100.00	90.00	273.06	9122.00	1228.97N	1262.53W	0.00	1744.72
11200.00	90.00	273.06	9122.00	1234.31N	1362.39W	0.00	1828.44
11300.00	90.00	273.06	9122.00	1239.64N	1462.25W	0.00	1912.16
11400.00	90.00	273.06	9122.00	1244.98N	1562.11W	0.00	1995.87
11500.00	90.00	273.06	9122.00	1250.31N	1661.96W	0.00	2079.59
11549.06	90.00	273.06	9122.00	1252.92N	1710.89W	0.00	2120.61

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #1 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 306.22 degrees

Bottom hole distance is 2120.61 Feet on azimuth 306.22 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes Inc.

NANCE PETROLEUM CORPORATION, Slot
#1 LEWIS & CLARK
SEC.4-T153N-R101W,
MCKENZIE COUNTY,NORTH DAKOTA

Wellbore: LEWIS & CLARK 2-4H (PWB)
Half Section plan
Wellpath: LEWIS & CLARK 2-4H (PWP#1)
Date Printed: 27-Feb-2003



BAKER
HUGHES

INTEQ

Comments

MD(ft)	TVD(ft)	North(ft)	East(ft)	Comment
8713.00	8713.00	0.00N	0.00E	BASE 2ND TO LAST SALT
8896.41	8891.00	36.23N	0.00E	BASE LAST SALT
8888.03	8868.00	85.45N	0.00E	RATCLIFFE
9042.14	9007.00	122.88N	0.00E	RATCLIFFE ANHYDRITE
9057.44	9017.00	134.46N	0.00E	LOWER RATCLIFFE
9101.44	9043.00	160.92N	0.00E	MIDALE

Casings

Name	Top MD(ft)	Top TVD(ft)	Top North(ft)	Top East(ft)	Shoe MD(ft)	Shoe TVD(ft)	Shoe North(ft)	Shoe East(ft)	Wellbore
7,000in Casing	0.00	0.00	0.00N	0.00E	8184.75	9080.00	244.37N	0.00E	LEWIS & CLARK 2-4H (PWB) Half Section plan

All data is in Feet unless otherwise stated

Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Datum #1 0.00ft above Mean Sea Level)

Vertical Section is from 0.00N 0.00E on azimuth 306.22 degrees

Bottom hole distance is 2120.61 Feet on azimuth 306.22 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Baker Hughes INTEQ

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

Lynn D. Helms
DIRECTOR

<http://explorer.ndic.state.nd.us>
October 23, 2002

Bruce E. Hicks
ASSISTANT DIRECTOR

Mr. Gary Evertz
Nance Petroleum Corp.
P. O. Box 7168
Billings, MT 59103

RE: PERMIT TO DRILL
Lewis & Clark 2-4
SE NE 4-153N-101W
McKenzie Co.
Baker Field
Well File #15358

Dear Mr. Evertz:

Check No. M8897 in the amount of \$100.00 was received. Enclosed find the approved application for the above captioned well. 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.

Please be advised that conditions may be imposed on the use and reclamation of a drilling reserve pit on this site if specific site conditions warrant. Also, please be advised NDAC Section 43-02-03-31 requires the running of a log from which the presence of cement can be determined in every well in which production or intermediate casing has been set. Revisions to NDAC Section 43-02-03-31 effective September 1, 2000 require the operator to run a Gamma Ray Log from total depth to ground level elevation of the well bore, and that all logs shall be submitted as one paper copy and one digital copy in LAS (Log ASCII) format, or a format approved by the Director.

Image logs that include, but are not limited to, Mud Logs, Cement Bond Logs, and Cyberlook Logs, cannot be produced in their entirety as LAS (Log ASCII) files. To create a solution and establish a standard format for industry to follow when submitting image logs, the Director has given approval for the operator to submit an image log as a TIFF (*.tif) formatted file. The TIFF (*.tif) format will be accepted **only** when the log cannot be produced in its **entirety** as a LAS (Log ASCII) file format. The digital copy may be submitted on a 3.5" floppy diskette, a standard CD, or attached to an email sent to digitallogs@saturn.ndic.state.nd.us. Thank you for your cooperation.

Sincerely,



Kelly Triplett
Horizontal Drilling Supervisor

KT/db
Enc.

APPLICATION FOR PERMIT TO DRILL - FORM 1

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 4615 (03-2000)

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND THREE COPIES.



Type of Work	Type of Well						
Vertical Well <input checked="" type="checkbox"/>	Directional Well <input type="checkbox"/>	Reenter Well <input type="checkbox"/>	X Oil <input checked="" type="checkbox"/>	Gas <input type="checkbox"/>	Disposal <input type="checkbox"/>	Injection <input type="checkbox"/>	Other <input type="checkbox"/>
Operator						Telephone Number	
NANCE PETROLEUM CORPORATION						(406)245-6248	
Address P. O. BOX 7168			City BILLINGS		State MT	Zip Code 59103-7168	
Name of Surface Owner or Tenant							
Corp of Engineers							
Address			City Riverdale		State ND	Zip Code 58565-0527	
Well Name and Number Lewis and Clark 2-4							

LOCATION OF WELL

At Surface 3028 F S L	Qtr-Qtr 332 F E L	Section SENE	4	Township 153 N	Range 101 W	County McKenzie
If Directional, Top of Pay See Below	F L	Qtr-Qtr	Section	Township N	Range W	County
Proposed Bottom Hole Location See Below	F L	Qtr-Qtr	Section	Township N	Range W	County
Distance to Nearest Permitted or Completed Well in the Same Pool			Distance From Location to Nearest			
5634 Feet			X Spacing Unit Line Drilling Unit Line 388.51 Feet			
Description of Spacing Unit	Drilling Unit	Acres In 480 N/2 Sec 3 & NE/4 Sec 4-T153N-R101W			Drilling Unit Acres	
Ground Elevation 1849 Feet Above S.L.	Estimated Total Depth (Feet) See Below	TVD			Approximate Date Work Will Start October 21, 2002	
Objective Horizons Madison 76HT						
Comments This is a proposed grass roots horizontal Madison well. The proposed surface location has been approved by the Corp of Engineers and North Dakota Game & Fish. The pad and location need to be built before the ground freezes due to requirements of placing a ground stabilization membrane under the road and location. The drilling of this well is dependent on the results of our sidetrack and horizontal lateral of the Basic Game & Fish 34-3. If that well is successful, we plan to drill the Lewis & Clark 2-4 in January 2003. An exact well plan will be submitted prior to moving in a rig, showing casing program, mud program and horizontal path.						

I hereby swear or affirm that the information herein provided is true, complete and correct as determined from all available records.			Date October 11, 2002
Signature 	Printed Name Gary L. Evertz	Title	Vice President Operations

Above Signature Witnessed By

Witness Signature 	Witness Printed Name Loren W. Prigan	Witness Title Engineering Tech
-----------------------	--	--

FOR STATE USE ONLY

Permit and File Number 15358	API Number 33-053-02556
Field Baker	
Pool madison	Permit Type dev.

FOR STATE USE ONLY

Date Approved OCT 23 2002
By
Title Horizontal Drilling Supervisor

Nance Petroleum Corporation

Lewis & Clark 2-4

SE/NE 4-153N-101W

1871' KB (+25' updip)

Greenhorn	-2458	4329
Dakota Silt	-3172	5043
Dakota Sand	-3304	5175
Morrison	-3706	5577
Dunham Salt	-4744	6615
Spearfish	-4788	6659
Pine Salt	-5104	6975
base Pine Salt	-5154	7025
Opeche Salt	Absent	Absent
Opeche Shale	-5201	7072
Charles	-6352	8223
BLS	-7009	8880
Racliffe	-7086	8957
Racliffe Anhydrite	-7125	8996
lower Ratcliffe	-7135	9006
Midale	-7161	9032
Mission Canyon	-7240	9111
State 'A'	-7255	9126

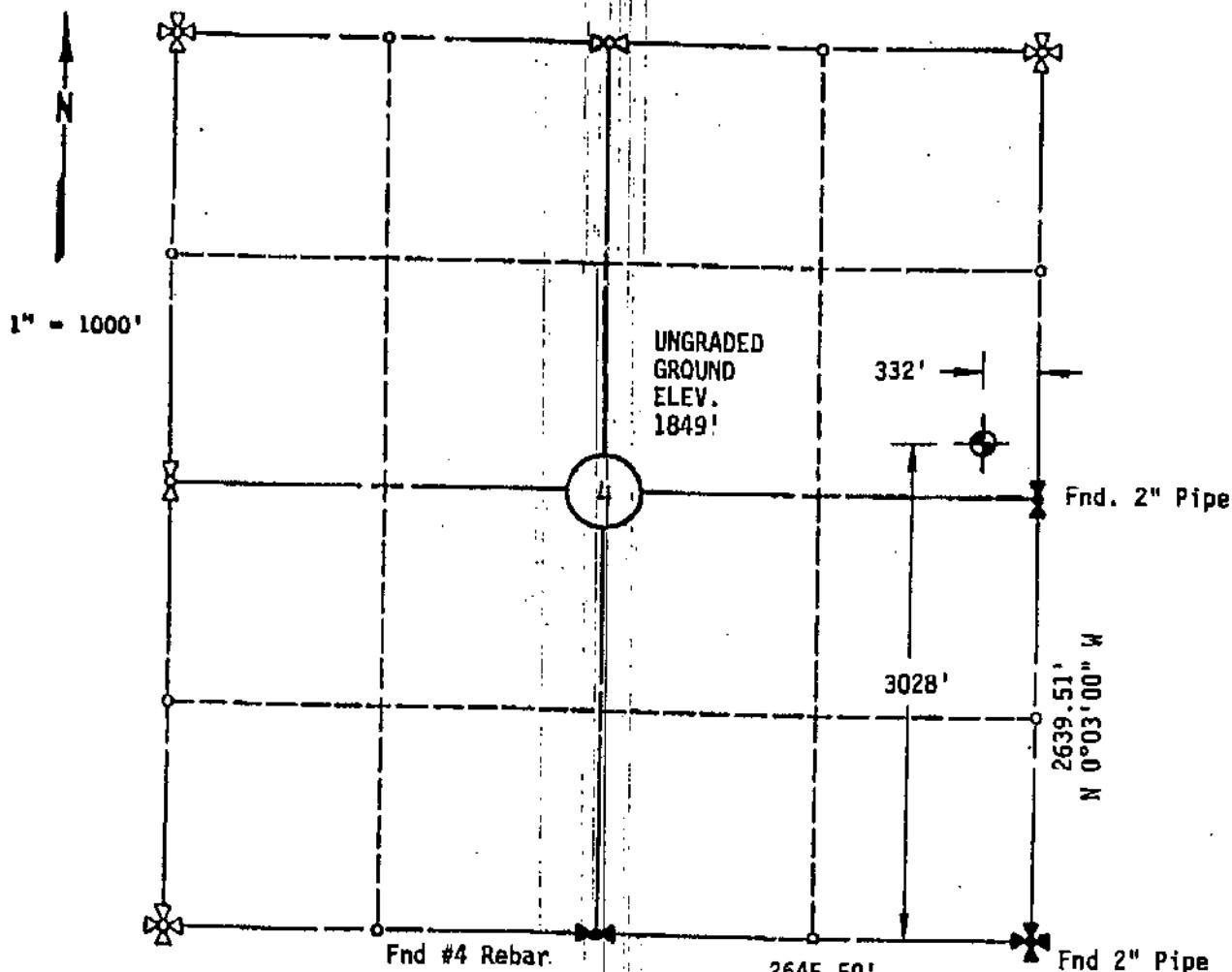
WELL LOCATION PLAT

APPLICANT: ZINKE & TRUMBO INC. 1202 E. 33rd, Suite 100
 AUTHORIZED BY: Bob Zinke Tulsa, OK 74105

WELL NAME & NO. LEWIS & CLARK #2-4

3028 feet from south line and 332 feet from east line

SECTION 4, T.153 N., R.101 W. OF THE 5th PRINCIPAL MERIDIAN,
MCKENZIE COUNTY, NORTH DAKOTA



I, DOUGLAS W. KUMMER, A REGISTERED LAND SURVEYOR IN THE STATE OF NORTH DAKOTA, HEREBY CERTIFY THAT THE ABOVE SURVEY WAS DONE BY ME OR UNDER MY DIRECT SUPERVISION.

Douglas W. Kummer 10-15-99

DOUGLAS W. KUMMER

R.L.S. 1225

DATE:



VERTICAL CONTROL
 DATUM USED
 USGS 1 JHP
 "1968"
 ELEV. 1860.31'

Powers Elevation Co., Inc.

Office 701-572-3802

P.O. BOX 1611
 WILLISTON, ND 58802



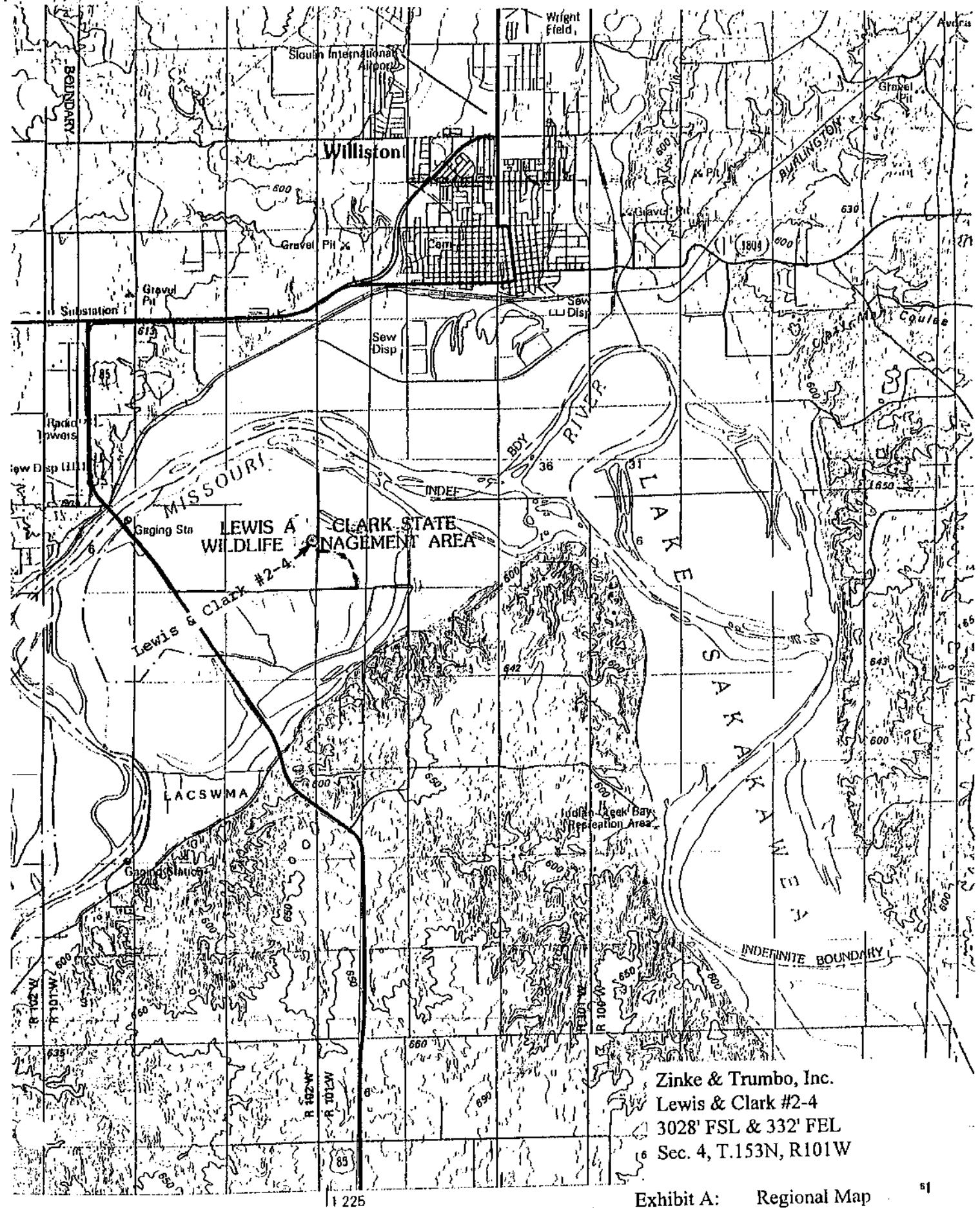
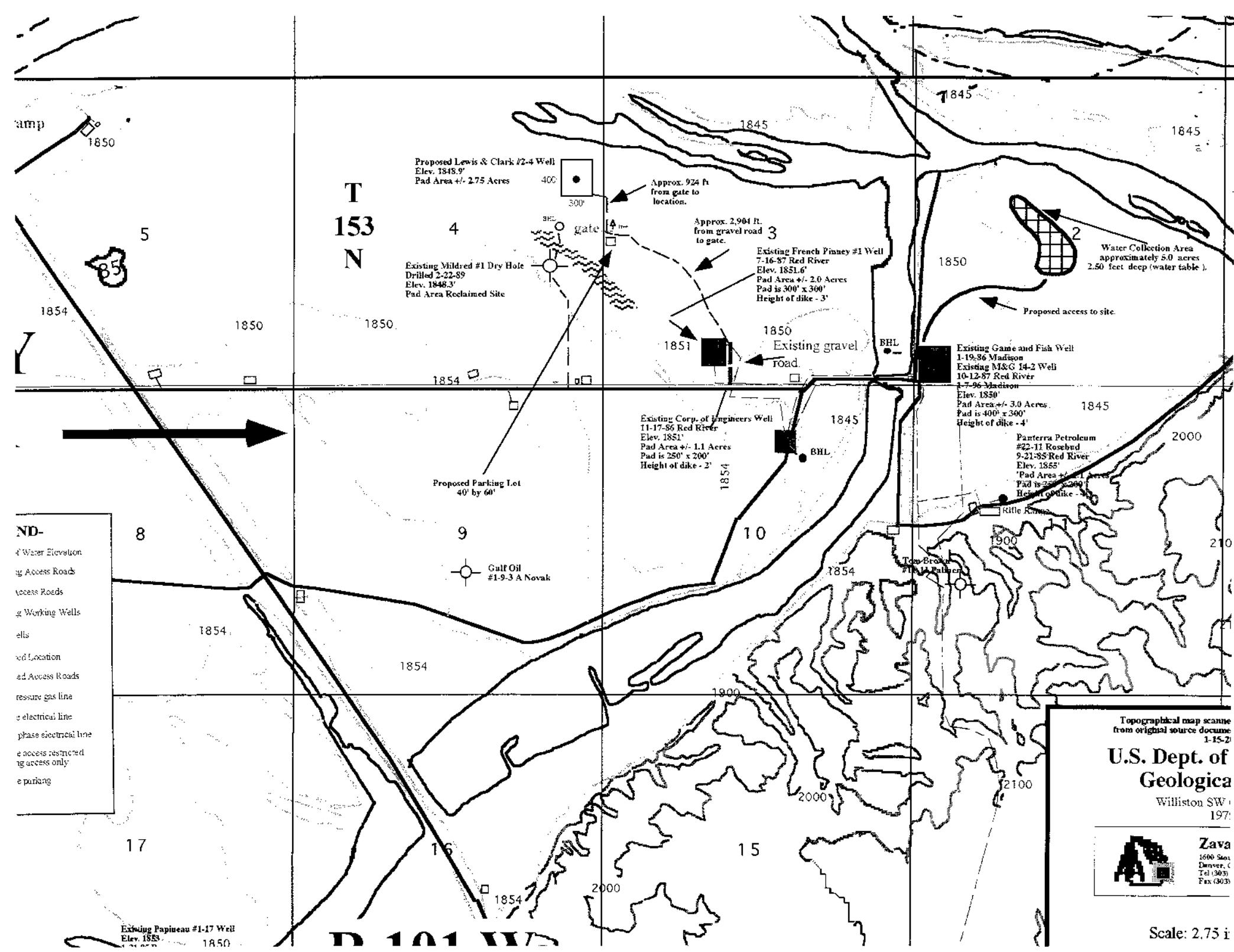
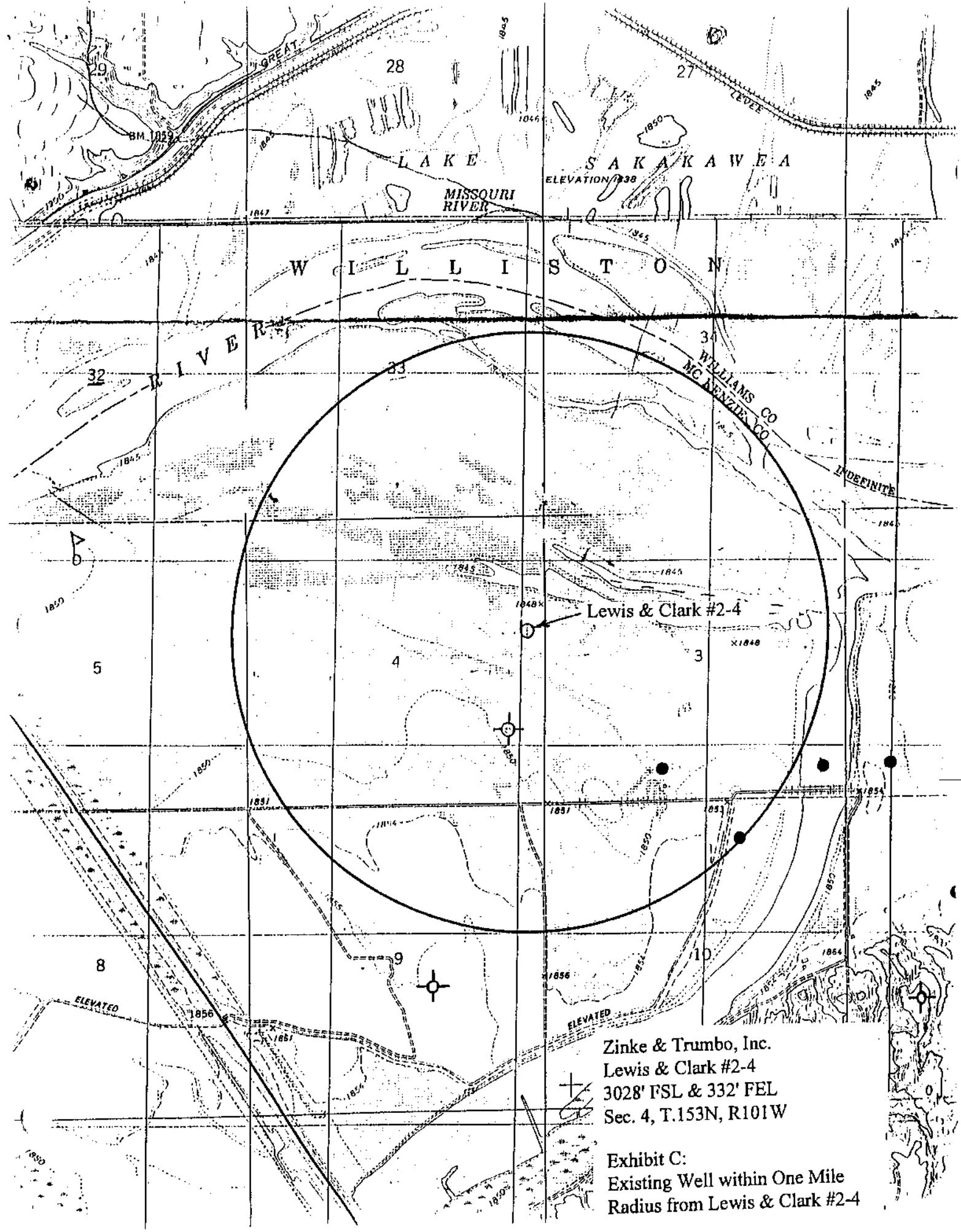


Exhibit A: Regional Map





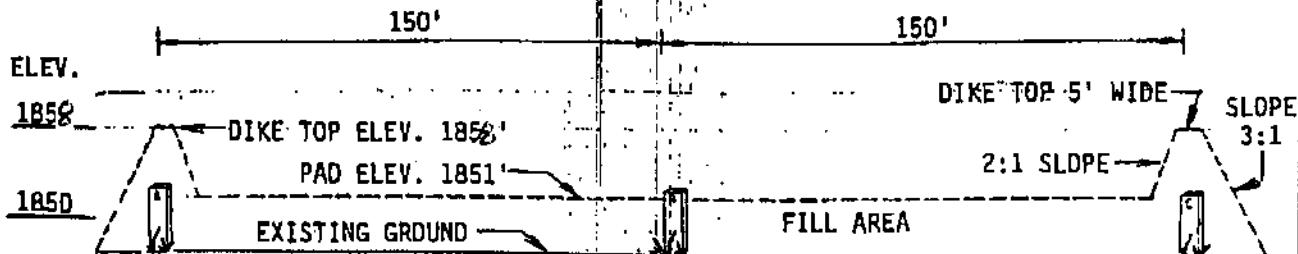
Zinke & Trumbo, Inc.
Lewis & Clark #2-4
3028' FSL & 332' FEL
Sec. 4, T.153N, R101W

Exhibit C:
Existing Well within One Mile
Radius from Lewis & Clark #2-4

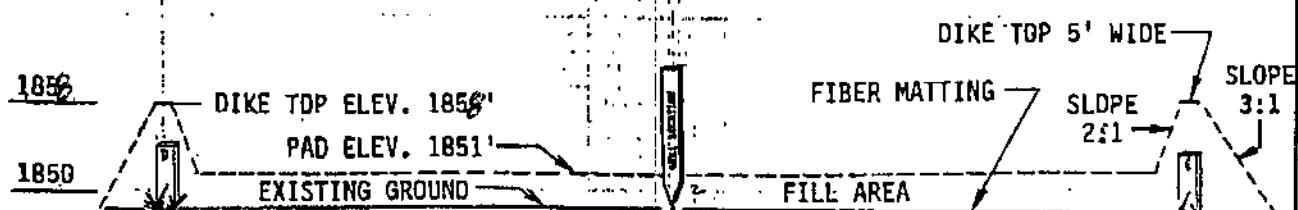
TYPICAL CROSS SECTIONS

X-Section
Scale
 $1'' = 50'$

LEWIS & CLARK 2-4
3028' FSL & 332' FEL
SEC. 4, T153N, R101W



X-SECTION "A"- "B"- "C"
200' SOUTH OF CENTER



X-SECTION "D"-LOC-"E"
PAD CENTER



X-SECTION "E"- "F"- "G"- "H"
200' NORTH OF CENTER

ESTIMATED EARTH QUANTITIES

1' TOP SOIL: 4,444 CUBIC YARDS

CUT AND FILL LESS TOP SOIL

CUT: 0 CUBIC YARDS

FILL: 11,550 CUBIC YARDS PAD + 6,100 CUBIC YARDS DIKE = 17,650 TOTAL CUBIC YARDS

GROUND ELEVATION AT LOCATION STAKE: 1849'

FINISHED PAD GRADE ELEVATION: 1851'

BACKSLOPES ARE TO BE AS SHOWN

USE EXCESS MATERIALS IN ACCESS ROAD FILL

PAD PLAN VIEW

LEWIS & CLARK 2-4
3028' FSL & 332' FEL
SEC. 4, T153N, R101W

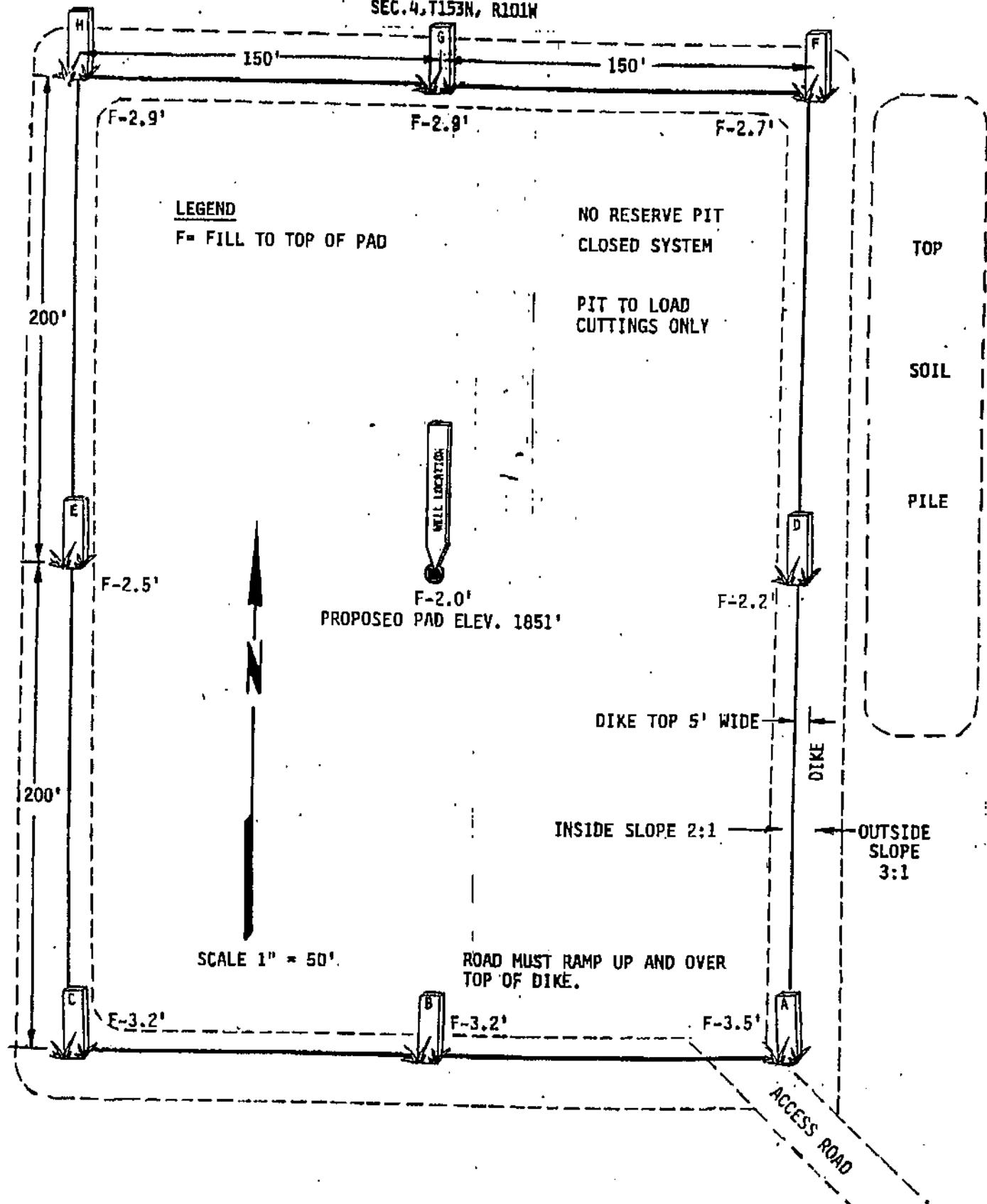
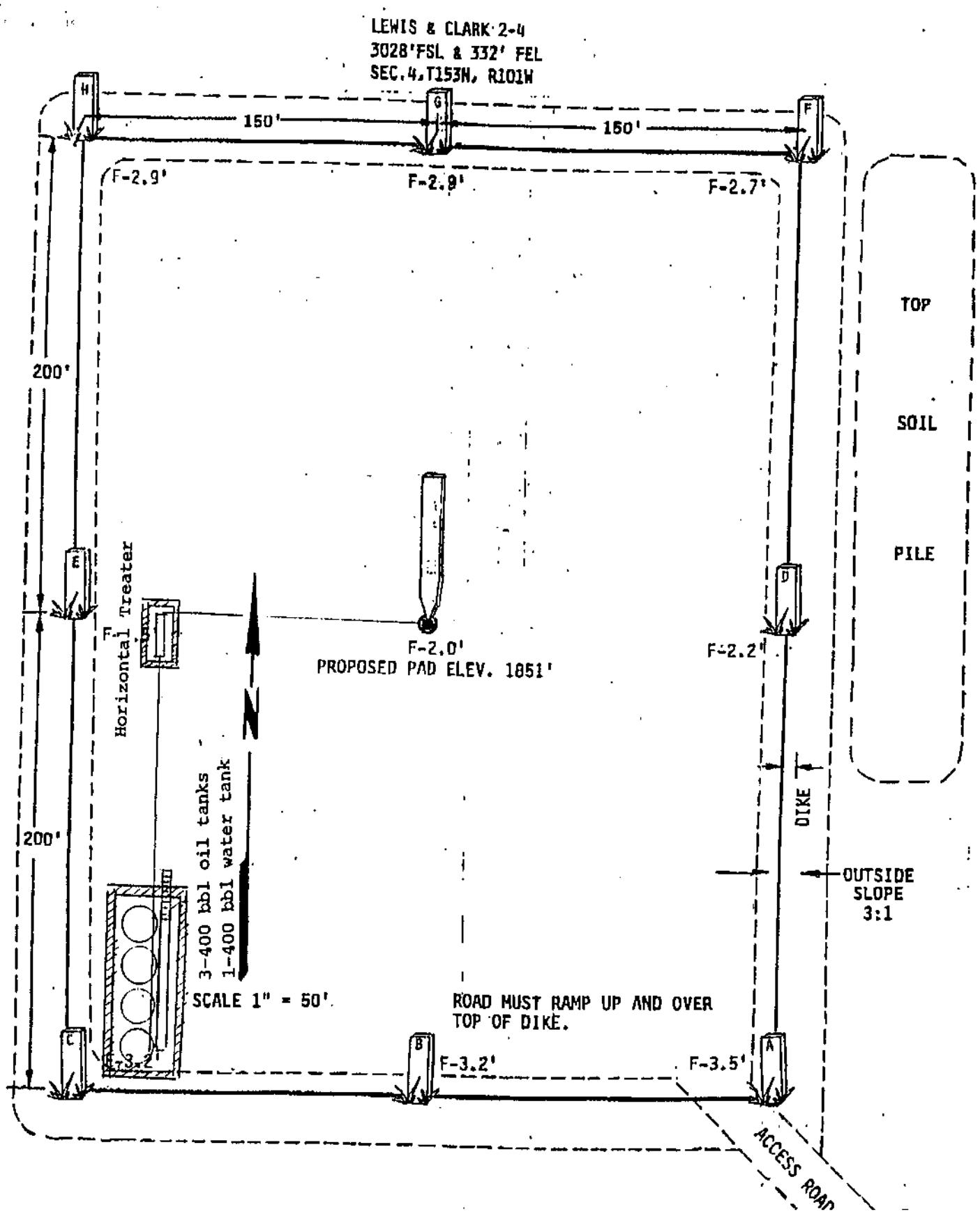


Exhibit F: Pad Layout



Zinke & Trumbo, Inc.
Lewis & Clark #2-4
3028' FSL & 332' FEL
Sec. 4, T.153N, R101W
Exhibit G: Production
Equipment Layout

Nance
September 27, 2002

SEP 30 2002

(918) 743-5096: Fax (918) 743-5159
email: Bzinke@ZTIEnergy.com

Mr. Robert Zinke
Zinke & Trumbo, Inc.
1202 East 33rd Street, Suite 100
Tulsa, Oklahoma 74105

Re: **LEWIS & CLARK 2-4 PERMIT**
Final Copy: Multi-Point Surface Use and
Operations Plan
Township 153 North – Range 101 West
Section 4: NE/4
McKenzie County, North Dakota

Dear Bob:

Enclosed is a copy of the final *Multi-Point Surface Use and Operations Plan* for the Zinke & Trumbo, Inc. Lewis & Clark 2-4 well.

Please review the Plan, sign and return three executed copies to me. I will then forward a copy to the Corps of Engineers and Nance Petroleum.

Please note that under our Exhibit E: Cut and Fill Cross-Section, the diagram needs to be changed to show the dikes at a total elevation at 1,858'. This coincides with our *Multi-Point Surface Use and Operations Plan*. This may be modified when we file the State permit.

Background for your information

This draft has gone through extensive review with the Corps of Engineers, Nance Petroleum, Zavanna, LLC and your representative, Rick Burnett. This is a workable plan for the parties. After this *Multi-Point Surface Use and Operations Plan* is signed and returned to the Corps, the Corps will issue a letter approving it and attaching it as an exhibit. Our map will also be attached along with the letter.

Once the Corps has returned the letter, we will then assign the Lewis & Clark 2-4 permit and *Multi-Point Surface Use and Operations Plan* to Nance (subject to our JOA and Corps approval) who will sign off, ratifying and assuming the obligations under the permit.



Zinke & Trumbo, Inc.
Tulsa, Oklahoma 74105
September 27, 2002

Page 2

If you have any questions, please call.

Best regards,



William L. Coleman
President

WLC:aws

cc: Mr. Daniel E. Cimarosti
Project Engineer
Department of the Army - Corps of Engineers
North Dakota Regulatory Office
1513 South 12th Street
Bismarck, ND 58504-6640
(701) 255-0015
Fax (701) 255-4917

Mr. Timothy D. Kolke, Chief
Real Estate Office
Department of the Army – Omaha District
Corps of Engineers
Riverdale Real Estate Office Adm. Bldg.
Riverdale, ND 58565-0527
(701) 654-7414, Ext. 235 Fax (701) 654-7691
email: Timothy.D.Kolke@usace.army.mil

Mr. Kent Luttschwager
North Dakota Game & Fish
13932 West Front Street
Williston, North Dakota 58801
(701) 774-4320 (701) 328-6300
Fax (701) 774-4305 or (701) 328-6352
Email: kluttsch@state.ND.US

Mr. Gary L. Evertz
Nance Petroleum Corporation
550 North 31st Street - #500 (59101)
P. O. Box 7168
Billings, MT 59103-7168
(406) 245-6245: Fax (406) 245-9106

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

ZINKE & TRUMBO, INC.

LEWIS & CLARK #2-4

Township 153 North-Range 101 West, 5th P.M.

Section 4: SE/4 NE/4

3028' FSL - 332' FEL (Surface)

902' FNL - 762' FEL (Bottom Hole)

McKenzie County, North Dakota

LIST OF EXHIBITS

Number

- A Regional Map
- B Topographical Map - Access Roads
- C Existing Well Map
- D Survey Plat
- E Cut & Fill Cross Section
- F Pit & Pad Layout
- G Production & Equipment Layout
- H Rig Layout
- I Archeological Report
- J BOP Diagram
- K Test Procedures for BOP
- L Well Control Equipment
- M ND Application for Permit to Drill
- N Drilling Prognosis

ZINKE and TRUMBO, INC.

Lewis & Clark #2-4

Surface Location: 3028' FSL & 332' FEL (SENE), Sec. 4, T.153N, R.101W
Bottom Hole Location: McKenzie County, North Dakota

MULTIPOINT REQUIREMENTS

SURFACE USE PLANS

1. Existing Roads

- A. The proposed wellsite and surveyor's plat is shown on **Exhibit "D"**.
- B. To drive to the wellsite, you drive 3.3 miles south of the junction of U.S. Highway 2 and U.S. Highway 85 to the Section line between Section 5 and Section 8 and turn east on an elevated graveled road and go east 2.05 miles. Then turn north and go 0.65 miles on an existing road to junction of new access road. The new access road goes 0.15 of a mile ~~NE~~^N to the proposed drill site pad. The proposed wellsite pad is 6.2 miles from the junction of U.S. Highway 2 and U.S. Highway 85 and 10.0 miles from Williston, North Dakota.
- C. The existing roads will be maintained in as good or better condition than they were before the drilling and completion operations commenced.
- D. **Exhibit "A"** shows the route from Williston, North Dakota to the proposed wellsite.

2. Access Roads

The access road is divided into two parts. The first part is the Access Road from the French Pinney to the Gate and the second part is the Access Road from the Gate to the Location.

A. Access Road from the French Pinney to the Gate.

This portion of the total road starts from the existing gravel road at the French Pinney and stops at the North Dakota Game & Fish gate ("Gate") approximately 2,904 feet from the French Pinney location or .55 miles.

The new access road will be built on a ground stabilizing liner such as Dupont's Typar. The liner will be placed on the existing surface and all road construction material placed on the liner.

Regardless of the outcome of the proposed well, this section of the Access Road will not be reclaimed. However, if the well is completed as a producer, it will be upgraded according to sub-section 2C herein.

B. Access Road from the Gate to the Location.

This portion of the total road starts from the existing Gate and will end at the Location. The Access Road from the Gate to the Location is approximately 924 feet or .17 miles.

The new access road will be built on a ground stabilizing liner such as Dupont's Typar. The liner will be placed on the existing surface and all road construction material placed on the liner.

If the proposed well is a dry hole, the Access Road from the Gate to the Location will be reclaimed within six (6) months, pending weather conditions.

C. Upgrade of Access Roads

If the proposed well is completed as a producer, the Access Roads will be upgraded with three (3) inches of gravel. In addition, the following upgrades will be made:

- 1) The width of the new access road will be a maximum of 25' wide.
- 2) The maximum grade will be 2 percent.
- 3) No cuts or fills will be required.
- 4) No turnouts will be required. If the well is a producer, a public parking lot measuring 40' x 60' will be constructed adjacent to the access roads and well pad.
- 5) No additional drainage consisting of ditching or water bars will be required.
- 6) A culvert of sufficient size will be installed at the Gate.
- 7) A cattle guard or gate maybe required near the drill pad entrance.
- 8) Cross country traffic will not be allowed.
- 9) No additional surface material should be required. If any surfacing material is required it will be obtained from private contractors unless otherwise agreed and will be free from noxious weeds. The Corps of Engineers will be notified of the source point of all fill material prior to road construction.
- 10) Exhibit "B" shows roads within a three mile radius of the proposed well.

- 11) The Access Road from the Gate to the Location and parking lot will be fenced with a two (2) strand wire fence on both sides to prevent cross country traffic. A walk-through gate will be installed near the parking lot. This fence and gate will be installed prior to drilling.

D. Material for Access Roads

Dirt fill from the man-made drainage ditches may be used for the building up of the Access Roads and Location. However, approval, in writing, must first be obtained from the North Dakota Game & Fish. The approval letter will have attached a map indicating the location of such drainage ditches and any requirements associated therewith.

3. Location of Existing Wells

- A. Exhibit "C" shows all the existing wells in a one-mile radius of the proposed well.
- B. There are no injection wells within a one-mile radius of the proposed well.
- C. There is one plugged and abandoned well within a one-mile radius of the proposed well. The Cox-Mildred #1 in Section 4.
- D. There are no disposal wells within a one-mile radius of the proposed well.
- E. There are no drilling wells within a one-mile radius of this well as of September 4, 2002.
- F. There are two producing wells within a one-mile radius of the proposed well and they are listed below:
 - 1) John L. Cox #31-10 Basic Corps of Engr. (660' FNL & 2305' FEL) Sec. 10 (Red River);
 - 2) John L. Cox 24-3 French Pinney (660' FSL & 1985' FWL) Sec. 3 (Red River).
- G. There are no shut-in gas or oil wells within a one-mile radius of the proposed well.
- H. There are no monitoring or observation wells within a one-mile radius of the proposed well.

4. Location of Existing or Proposed Facilities

- A. Zinke and Trumbo, Inc. do not have any oil and gas production facilities within a five mile radius of the proposed well.
- B. Exhibits "D" and "E" show the surveyed location and the anticipated cut and fill. The production pad layout is shown on Exhibit "F". The drilling pad will be built up 2.1 feet to elevation 1851' m.s.l. and a ring dike built around the location 7' high to

elevation 1858' m.s.l. and cross-section as shown in Exhibit "E". Notwithstanding anything to the contrary contained herein, the ring dike is only required if the well is a producer.

- C. If this proposed well is successfully completed as a producer, the production equipment will be located on the wellsite pad as shown on **Exhibit "G"**. The equipment will be painted a flat tan color.
- D. The soil used in construction of the pad base will be treated with a ground stabilizer material such as Dupont's Typar. Fill dirt and scoria will be placed on top of that material to increase the height of the location pad to 1851' elevation. The material to raise the height of the location will be purchased from private contractors or from the area if prior approval, in writing, is obtained from the North Dakota Fish and Game, Williston, North Dakota and will be free from noxious weeds. Dikes will be installed to make sure that no hydrocarbons can escape from the site and any spill of hydrocarbons can be easily and rapidly recovered and the spill area cleaned up.
- E. New facilities contemplated if well is completed as a producer are shown on **Exhibit "G"**.
 - 1) Proposed tank battery and production equipment are as shown on **Exhibit "G"**. Tanks and treater will be diked immediately upon production. Transfer pipes between tanks and treater will be diked or buried. Tanks will be diked to one hundred fifty percent (150%) of capacity.
 - 2) Dimension of the facilities are shown on **Exhibit "G"**.
 - 3) All gas emissions will be combined into one flare pit.
 - 4) All Ajax pump motors will be fitted and maintained with Hospital Grade mufflers that will meet state and local decibel limits.
 - 5) The soil will be stabilized with ground stabilization material, such as Dupont's 20 mil thickness Typar or similar material with 200 psi burst strength.

Fill dirt will be obtained from approved outside sources, unless otherwise agreed to, and scoria will then be placed on top of that material to raise the location.

Construction methods will be employed to assure that drainage flows are impounded to prevent the loss of any hydrocarbon from the site. This is to be done in a manner to facilitate rapid recovery and clean up.

6) Protective measures to protect wildlife and livestock will be taken as follows:

- a) Weights on the pumping unit will be enclosed.
- b) Production (flare pit) will be diked.
- c) The entire exterior of the well pad will be fenced with a two (2) strand fence.

F. Upon completion of well, areas required for continued use will be graded to provide drainage and minimize erosion. Those areas unnecessary for use will be reclaimed by removing all fill dirt, scoria and the liner from lands of the United States. The reclaimed areas will be seeded with a grass mixture as prescribed by the Corps of Engineers and the North Dakota Game and Fish Department. It is recognized that additional wells may be drilled from the initial location and if the proposed well is a producer, the reclamation process will not start until one year after first production. The time period will allow the planning and drilling of one or more additional wells.

5. **Location and Type of Water Supply**

- A. Fresh water for spudding and drilling the first 3,000 feet will be purchased from the City of Williston and will be trucked to the location over the roads shown on **Exhibit "B"**. Salt water for the salt-saturated mud system will be trucked from Williston.
- B. Salt and fresh water will be trucked to location over the roads marked on **Exhibit "B"**.

6. **Source of Construction Materials**

- A. **Exhibit "H"** shows the layout of the planned pad for drilling purposes. This layout represents the maximum area to be disturbed. We calculate this pad will cover an area from the spotted location extending approximately 150' east, 150' west, 200' south, and 200' north.

This location will be built by first laying down a ground stabilization material, such as DuPont's 20 mil thickness Typar with 200 psi burst strength. This will be laid directly on top of the ground, and the surface will be built-up with one foot, six inches (1'6") of soil, and an additional six (6) inches of scoria to a base elevation of 1851' m.s.l. for the entire drilling pad.

The area to be made into a drain pit (6' x 20') will be constructed entirely above the current surface elevation. Drain pit will be lined with Dupont's 20 mil thickness non-porous Typar with 200 psi burst strength.

The drain pit will be fenced with a two (2) strand fence on three sides during drilling and on the fourth side once the rig is removed.

If the well is productive, the drillsite will be reclaimed in accordance with Paragraph

4.F. and an area sufficient for the wellhead and a completion rig will be left at the proposed drillsite. The production equipment will then be installed as shown on **Exhibit "G"**. The production pad will be ring diked to a minimum elevation of 1,858' m.s.l. Gravel will then be placed on the production pad. Construction materials will consist of soil, scoria and gravel brought in from private sources and free of noxious weeds. Gravel will be used as needed. The Corps of Engineers will be notified of the source point of all fill material prior to placement.

- B. The planned site and access roads are outleased to the North Dakota Game and Fish Department.
- C. All gravel (containing no noxious weeds) will be obtained from private land in quantities necessary for the road surfacing and tank base material on the battery site.

7. **Methods of Handling Waste Disposal for Totally Closed System (No Reserve Pit)**

The well is being drilled to a depth of 3,000 feet or the Fox Hills formation, whichever occurs first, with fresh water. From that depth on, salt water or oil base will be used. All cuttings and salt saturated material generated will be hauled off location during and after completion of the well. Upon the completion of drilling operations, all waste materials including, but not limited to drill cuttings, drilling fluids, and all trash, shall be completely removed from Government land as directed by the Project Manager, Garrison Project. No waste material shall be buried onsite.

Containment of drilling fluids will be in three (3) steel pits and two (2) reserve steel pits. Each steel pit has a capacity of 400-500 barrels, contents of which will be ~~hauled daily~~ to an approved disposal system. The Corps of Engineers shall be notified of the location of the disposal site prior to drilling the well.

- A. All drill cuttings will be hauled from site to an approved disposal site during drilling operations. Drain pit (6' x 20') will be lined with Dupont's 20 mil thickness Typar with 200 psi burst strength.
- B. All excess fresh water drilling fluids and solids will be removed from site to an approved disposal site.
- C. At 3,000 feet, the well will be switching over to a brine system. All liquid and solid waste that is produced will be hauled from the site, either during or immediately after drilling is completed. All waste stored on location during drilling activities will be stored in steel containers or in a drain pit lined with 20 mil plastic liner with a minimum 200 psi burst strength. Salt water tanks will be located entirely on the drilling location within the location dike.

- D. No produced water is expected while drilling. The amount of hydrocarbon that may be produced while testing will be stored in a steel tank. Previous to clean up operations, the hydrocarbon material will be removed by hauling to an approved disposal site as the situation would dictate.
- E. Sanitary facilities will consist of chemical toilets. Waste will be contained and hauled from the site weekly during drilling operations and immediately following drilling operations.
- F. Garbage, flammable and nonflammable waste are to be contained in the trash container.
- G. All trash, garbage, etc.. is to be gathered and hauled from the site at the end of the drilling operations. Trash and drain pits will be filled as soon as the rig leaves the location. All liners will be removed from the pits prior to backfilling.

8. Ancillary Facilities

There are no airstrips, camps or other facilities planned during the drilling of the proposed well.

9. Wellsite Layout

- A. See **Exhibit "E"** for a cross section of the drill pad with cut and fills. **Exhibit "E"** shows that there will be three foot or more of fill on the drill pad.
- B. Rig layout is shown on **Exhibit "H"**. No permanent living facilities are planned. However, during drilling operations, three trailers will be on location.
- C. Location of mud tanks; drain pit; pipe racks; and soil material stockpiles are shown on **Exhibits "H"**.

10. Plans for Restoration of the Surface

- A. If the well will be completed as a dryhole:
 - 1) All restoration procedures will be coordinated with the Corps and North Dakota Game & Fish Department. The drain pit will be emptied immediately, and the pit liner removed, pit backfilled, leveled and contoured. Prior to backfilling, the Corp of Engineers will observe and approve pit cleanup. The drain pit will be reclaimed within 31 days after finishing drilling this well.

- 2) When the access road (from the Gate to the Location) is not needed all fill material and the ground liner will be removed and the surface reseeded with a seed mixture prescribed by the North Dakota Game & Fish Department.
- 3) If there is any oil in the drain pit, it will be removed immediately after drilling. Produced fluids, drill hole cuttings and fluids and the steel containment tanks will be removed immediately after drilling.
- 4) Rehabilitation operations will begin immediately after the drilling rig is removed. Produced fluids will be stored in test tanks. All fill material, scoria, gravel and the ground liner will be removed from lands of the United States. Reseeding and revegetation operations shall be accomplished in accordance with the instructions, and to the satisfaction of the Project Manager, Garrison Project. The entire reclamation process will be completed within six (6) months after finishing drilling the well

B. If the proposed well is completed as a producer:

- 1) The drain pit will be reclaimed and backfilled and all excess liquids will be hauled off site, immediately after well completion.
- 2) The road will be upgraded as discussed in Section 2 and the production pad will be reduced in areal extent as discussed in Section 4F. The area to be returned to the Game and Fish will be reclaimed within six (6) months after finishing drilling the well. The reclamation will consist of removing all fill material and the ground liner and seeding with a seed mixture prescribed by the North Dakota Game & Fish Department.
- 3) The production pad is in a 100 year flood plain. Any facilities and equipment which can be damaged by floodwater and which cannot be readily moved if a flood is imminent will be placed at a location above, or adequately protected by diking to 1858', the 100 year flood water surface elevation.

11. **Protection of Habitat Areas**

Flood gauges will be installed on each location and on the access road. The construction of the ring dike and implementation of the Spill Prevention Control and Countermeasure Plan will further protect the area. If the area should be determined to be in danger of inundation above the planned protected area, operator will immediately shut-in the well, haul from the lease all oil production from the oil storage tanks, and salt water from the salt water tank. The tanks will then be filled with fresh water to prevent further danger if the area is inundated. A tubing hanger plug will be installed in wellhead as an additional security measure, if the well will still flow. The entire shut-in process will require a minimum of twenty-four (24) hours to a maximum of forty-eight (48) hours. Operator will be in daily contact with officials at the Garrison Dam for updated flood information. Production will not be resumed until approval is received from the Corp of Engineers an

the North Dakota Game and Fish indicating that no dangerous or threatening conditions exist.

Fences will be erected as necessary to protect the wildlife in the area. No chemicals, pesticides, or herbicides will be used. If requested by the North Dakota Game and Fish, vegetation will be planted on the dikes to prevent erosion. The type of vegetation will be as instructed by the representative of the North Dakota Game and Fish.
No hazardous materials will be used during the drilling operations.

12. Other Information

- A. Topography: The location borders the Missouri River flood plain.
- B. The surface at the drillsite and on the access road is outleased to the North Dakota Game and Fish Department. Surface damages will be mitigated in accordance with the conditions of Department of the Army Permit No. 200060047. Mitigation will be completed by June, 2004. However, if dirt is used from the Corps of Engineers area in sufficient quantity to reduce the overall need for outside dirt, a one time surface damage payment totaling \$3,000 will be paid to a construction firm of the North Dakota Game and Fish's election for specified work to be performed under the direction of the North Dakota Game and Fish office in Williston, North Dakota.
- C. The nearest occupied dwelling is greater than a mile to the south of the site.
- D. The nearest source for water is approximately one (1) mile east southeast of the location.
- E. An archeological survey has been conducted. There are no known archeological, historical or cultural sites that will be disturbed by drilling operation. The survey will be submitted under separate cover for inclusion in this application as Exhibit "Y".
- F. A Spill Prevention Control and Countermeasure Plan is attached to this Multi-Point Surface Use and Operational Plan as follows:
 - I. Drilling Operations.
 - II. Production Operations.
- G. No hazardous materials will be used while drilling this well. Strict adherence to rules and regulations regarding use of pesticides, herbicides, chemical and any type of hazardous materials will be adhered to during all production and completion operations.
- H. Additional wells may be drilled from the Lewis & Clark #2-4 pad location. Further written approvals will be obtained from the Corps of Engineers prior to pursuing other wells.

13. **Lessee's or Operator's Representative and Certification**

A. The Operator is:

Zinke and Trumbo, Inc.
1202 E. 33rd, Ste 100
Tulsa, OK 74105

The Field Representative is:

B. The Lessee/Operator certified the following:

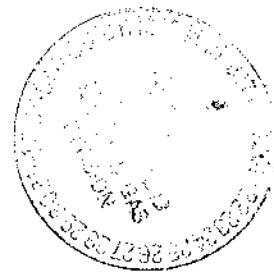
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are to the best of my knowledge true and correct; and that the work associated with the operations proposed herein will be performed by **Zinke & Trumbo, Inc.** and their contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Zinke & Trumbo, Inc.

Date

Name:

Attachments: Exhibits "A" - "J"

**NANCE PETROLEUM CORPORATION****FAX TRANSMITTAL FORM**

PHONE (406)245-6248 FAX(406)245-9106

DATE: 10/16/2002**TO:** NDIC, Kelly Triplett**FAX:** 701-328-8022**NO. PAGES:** 4**FROM:** Gary Evertz

(including cover sheet)

If the reader of this message is not the intended recipient or an agent responsible for delivering it to the intended recipient, you are hereby notified that you have received this document in error, and that any review, dissemination, distribution, or copying of the message is strictly prohibited. It is intended for the exclusive use of the recipient.

If you have received this communication in error, PLEASE notify sender immediately by telephoning collect, (406)245-6248 to arrange for the return or destruction of the information and all copies. THANK YOU.

Kelly,

The attached exhibits are an addendum to our Form 1 on the Lewis Clark 2-4 horizontal well. As we discussed this plan may be changed with the NDIC approval. Let me know if you need any more information.

Gary

PLEASE DELIVER IMMEDIATELY UPON RECEIPT

DIRECTIONAL PLAN

Lewis & Clark 2-4 HORIZONTAL WELL

10/16/2002

SURF LOCATION	3028' FSL & 332' FEL SEC 4 T153N R101W
KOP	3026' FSL & 332' FEL SEC 4 T153N R101W
TARGET (9529'MD)	3235' FSL & 236' FWL SEC 3 T153N R101W
END OF LATERAL	053" FNL & 1853' FEL SEC 3 T153N R101W
	CASING POINT

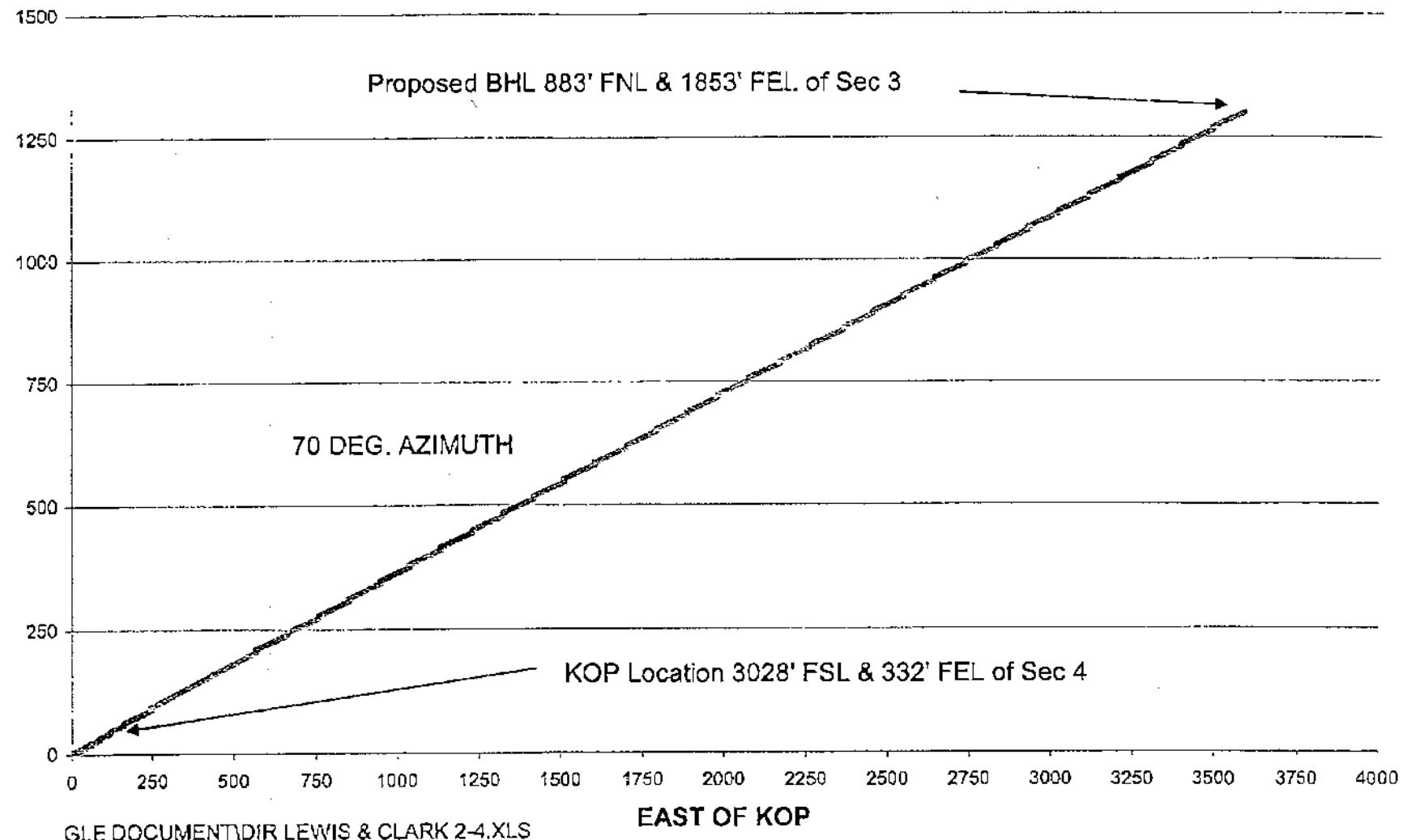
GLEDOCUMENTS\DIR LEWIS & CLARK 2-4.XLS

	TVD FEET	TMD FEET	DEV.	AZIMUTH DEGREES	SECTION HORIZ. DISPL.	TOTAL DISPL.	RECTANGULAR COORDINATES		DOG LEG SEVERITY DEG/100'
							NORTH	EAST	
KICK-OFF PT	-	-	0.0	70.0	0.00	0	0	0	
	8,781	8,781	0.0	70.0	0.00	0.00	0.00	0.00	
	8,811	8,811	6.5	70.0	1.70	1.70	0.58	1.60	21.63
	8,841	8,841	13.0	70.0	5.15	6.86	2.34	6.44	21.35
	8,871	8,873	20.0	70.0	8.88	15.74	5.38	14.79	22.37
	8,901	8,905	24.3	70.0	12.21	27.95	9.56	26.27	13.28
	8,931	8,939	31.0	70.0	15.71	43.66	14.93	41.03	19.78
	8,961	8,975	38.0	70.0	20.61	64.28	21.98	60.10	19.23
	8,991	9,016	46.0	70.0	27.00	91.28	31.21	85.78	19.82
	9,021	9,051	53.0	70.0	35.11	126.40	43.22	118.76	19.94
	9,051	9,098	62.5	70.0	47.53	173.92	59.47	163.44	19.99
	9,081	9,107	80.0	70.0	88.31	262.23	89.67	246.42	19.82
TARGET & CSNG PT	9,111	9,529	90.0	70.0	341.80	604.03	296.55	567.62	2.93
	9,111	9,629	90.0	70.0	100.00	704.03	240.75	661.59	0.00
	9,111	9,729	90.0	70.0	100.00	801.03	274.95	755.56	0.00
	9,111	9,829	90.0	70.0	100.00	904.03	308.14	849.53	0.00
	9,111	9,929	90.0	70.0	100.00	1004.03	343.34	943.50	0.00
	9,111	10,029	90.0	70.0	100.00	1104.03	377.53	1037.48	0.00
	9,111	10,129	90.0	70.0	100.00	1204.03	411.73	1131.45	0.00
	9,111	10,229	90.0	70.0	100.00	1304.03	445.92	1225.42	0.00
	9,111	10,329	90.0	70.0	100.00	1404.03	480.12	1319.39	0.00
	9,111	10,429	90.0	70.0	100.00	1504.03	514.32	1413.38	0.00
	9,111	10,529	90.0	70.0	100.00	1604.03	548.61	1507.33	0.00
	9,111	10,629	90.0	70.0	100.00	1704.03	582.71	1601.31	0.00
	9,111	10,729	90.0	70.0	100.00	1804.03	616.90	1895.28	0.00
	9,111	10,829	90.0	70.0	100.00	1904.03	651.10	1789.25	0.00
	9,111	10,929	90.0	70.0	100.00	2004.03	685.30	1883.22	0.00
	9,111	11,029	90.0	70.0	100.00	2104.03	719.49	1977.19	0.00
	9,111	11,129	90.0	70.0	100.00	2204.03	753.69	2071.16	0.00
	9,111	11,229	90.0	70.0	100.00	2304.03	787.88	2165.13	0.00
	9,111	11,329	90.0	70.0	100.00	2404.03	822.00	2259.11	0.00
	9,111	11,429	90.0	70.0	100.00	2504.03	856.27	2353.08	0.00
	9,111	11,529	90.0	70.0	100.00	2604.03	890.47	2447.05	0.00
	9,111	11,629	90.0	70.0	100.00	2704.03	924.67	2541.02	0.00
	9,111	11,729	90.0	70.0	100.00	2804.03	958.86	2634.99	0.00
	9,111	11,829	90.0	70.0	100.00	2904.03	993.06	2728.96	0.00
	9,111	11,929	90.0	70.0	100.00	3004.03	1027.25	2822.94	0.00
	9,111	12,029	90.0	70.0	100.00	3104.03	1061.45	2916.91	0.00
	9,111	12,129	90.0	70.0	100.00	3204.03	1095.65	3010.88	0.00
	9,111	12,229	90.0	70.0	100.00	3304.03	1129.84	3104.85	0.00
	9,111	12,329	90.0	70.0	100.00	3404.03	1164.04	3198.82	0.00
	9,111	12,429	90.0	70.0	100.00	3504.03	1198.23	3292.79	0.00
	9,111	12,529	90.0	70.0	100.00	3604.03	1232.43	3386.76	0.00
	9,111	12,629	90.0	70.0	100.00	3704.03	1266.02	3480.74	0.00
	9,111	12,729	90.0	70.0	100.00	3804.03	1300.82	3574.71	0.00
	9,111	12,829	90.0	70.0	100.00	3904.03	1335.02	3668.68	0.00
	9,111	12,929	90.0	70.0	100.00	4004.03	1369.21	3762.66	0.00 HORIZONTAL DISPL.

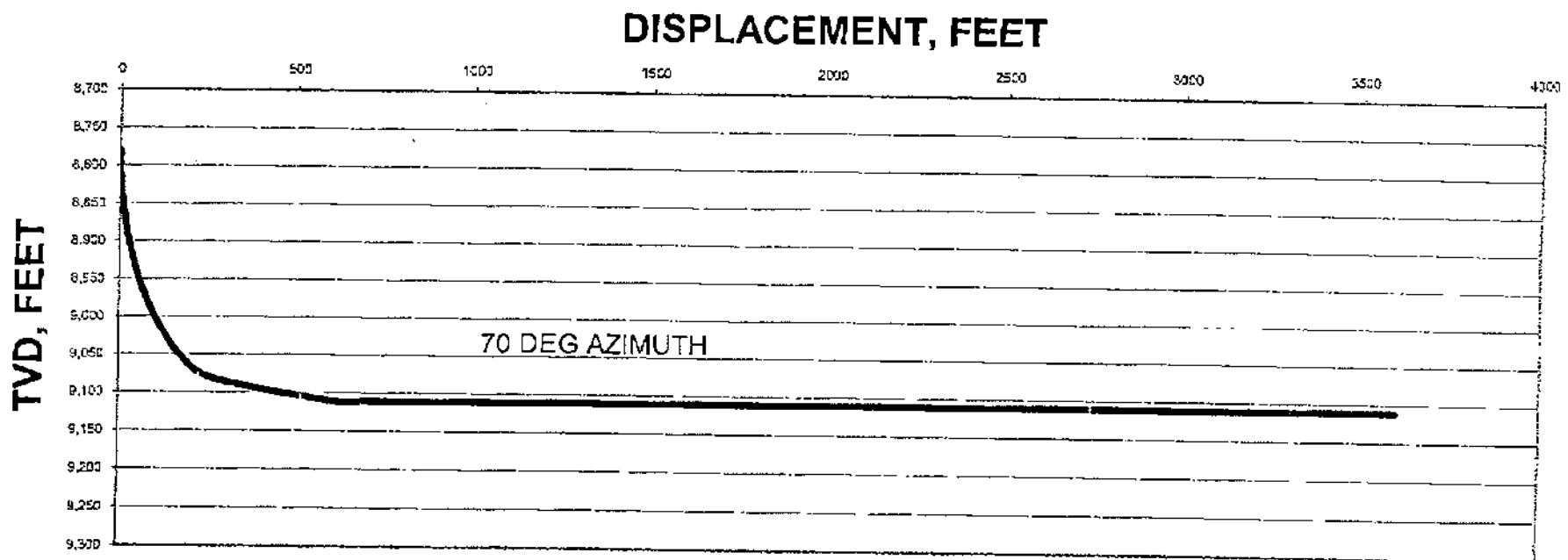
3913 FT

10 3/4" 40.5 #/FT SURFACE CASING SET @ 3025'. CEMENTED TO SURFACE.
 7" & 7 5/8" 26, 29 & 47.1 #/FT CASING SET AT 90 DEG IN THE TARGET ZONE (MADISON - NESSON POROSITY)
 PRODUCTION CASING CEMENTED ABOVE THE DAKOTA FORMATION TO 5000',
 CEMENT BOND LOG RUN TO DETERMINE CEMENT TOP.

LEWIS & CLARK 2-4 HORIZONTAL WELL PLAN VIEW



LEWIS & CLARK 2-4 HORIZONTAL WELL CROSS SECTION



NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

Lynn D. Helms
DIRECTOR

<http://explorer.ndic.state.nd.us>

Bruce E. Hicks
ASSISTANT DIRECTOR

October 23, 2002

Mr. Gary Evertz
Nance Petroleum Corp.
P. O. Box 7168
Billings, MT 59103

RE: HORIZONTAL HOLE
Lewis & Clark 2-4
SE NE 4-153N-101W
McKenzie Co.
Baker Field
Well File #15358

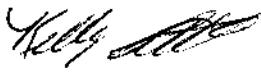
Dear Mr. Evertz:

Pursuant to Commission Order No. 9277, approval to deviate the well bore of 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 500 feet from the 480 acre spacing unit, consisting of the NE/4 of Sec. 4 and the N2 of Sec. 3-153N-101W. Inaccuracy of the survey equipment must be considered when determining compliance with setbacks. 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.

All directional surveys of the well showing the location of the well bore shall be filed with the Industrial Commission within 30 days after completion of the well. Such survey must be certified by a representative of the survey contractor and mailed directly to us by the contractor. Survey points shall be of such frequency to accurately determine the entire location of the well bore.

Sincerely,


Kelly Triplett
Horizontal Drilling Supervisor

KT/db
Enc.

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

Lynn D. Helms
DIRECTOR

<http://explorer.ndic.state.nd.us>

Bruce E. Hicks
ASSISTANT DIRECTOR

October 23, 2002

Mr. Gary Evertz
Nance Petroleum Corp.
P. O. Box 7168
Billings, MT 59103

RE: CONFIDENTIAL STATUS
Lewis & Clark 2-4
SE NE 4-153N-101W
McKenzie Co.
Baker Field
Well File #15358

Dear Mr. Evertz:

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.

Sincerely,



Kelly Triplett
Horizontal Drilling Supervisor

KT/db
Enc.



John P. Bluemle, State Geologist

North Dakota Geological Survey

INDUSTRIAL COMMISSION

John Hoeven - Governor, Chairman

Wayne Stenehjem - Attorney General

Roger Johnson - Commissioner of Agriculture

SD Rec. 27503 TH Exp. 9-13-03
Core Rec. 13 LD.

NOTICE

Nance Petroleum Corp.

RE: Cores and samples from the

NAME OF OPERATOR

Lewis & Clark #2-4 15358

WELL NAME AND NUMBER

PERMIT NUMBER

SE NE 4 -T 153 N-R 101 W Tight Hole

LOCATION

TARGET INFORMATION

- | | |
|---|--------------------------------------|
| <input type="checkbox"/> Wildcat | <input type="checkbox"/> Replacement |
| <input checked="" type="checkbox"/> Development | <input type="checkbox"/> Extension |
| <input type="checkbox"/> Outpost | <input type="checkbox"/> Horizontal |

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

1. All cores, core chips, and samples must be submitted to the State Geologist as provided for by Section 38-08-04 of the North Dakota Century Code and Section 43-02-03-38.1 of the North Dakota Administrative Code.
2. *Samples:* Include all from Base of Last Charles Salt to measure T.D. Samples must be washed, dried, packaged in sample envelopes in correct order with labels showing operator, well name, location and depth, and forwarded in standard boxes to the State Geologist.
3. *Cores:* Please forward ALL CORES prepaid to the State Geologist within 30 days of completion of drilling operations. Any extension of time must have written approval from the State Geologist.
4. Section 38-08-16 allows for a civil penalty for any violation of Chapter 38-08 of the North Dakota Century Code not to exceed \$12,500 for each offense, and each day's violation is a separate offense.

Signed Thomas J. Leek

Date 10/24/2002

NORTH DAKOTA INDUSTRIAL COMMISSION

OIL AND GAS DIVISION

Lynn D. Helms
DIRECTOR

<http://explorer.ndic.state.nd.us>

Bruce E. Hicks
ASSISTANT DIRECTOR

#5358

November 30, 1999

Mr. Robert M. Zinke
President
Zinke & Trumbo, Inc.
1202 East 33rd Street, Suite 100
Tulsa, OK 74105

RE: Lewis & Clark #2-4
SE NE Sec. 4-153N-101W (SL)
SE NW Sec. 3-153N-101W (BHL)
McKenzie County, North Dakota

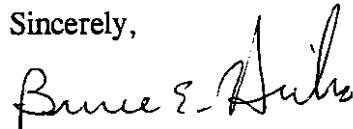
Dear Mr. Zinke:

We are in receipt of the Application For Permit To Drill (Form 1) the above captioned well. The purpose of this letter is to reiterate our telephone conversation of October 26, 1999, in which I indicated your application could not be considered until the following information is submitted:

1. Certified plat detailing the dimensions of the N/2 of Section 3.
2. Survey frequency of the directional survey equipment.
3. Objective horizons for possible completion.
4. State you will run a cement bond log.
5. Will you utilize a closed mud system & where will cuttings go?
6. Is confidential status requested?

If you have any questions or comments, do not hesitate to contact this office.

Sincerely,



Bruce E. Hicks
Assistant Director

Cc: Donn Skadeland