

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/

January 25, 2019

Mr. Jonathon Travis
Ryan, LLC
2800 Post Oak Blvd, Ste 4200
Houston, TX 77056

**RE: Dahl Federal #15-11H
SWSE Sec. 11, T.153N., R.101W.
McKenzie County, North Dakota
Baker Field
Well File No. 21266
STRIPPER WELL DETERMINATION**

Dear Mr. Travis:

Oasis Petroleum North America LLC (Oasis) filed with the North Dakota Industrial Commission – Oil and Gas Division (Commission) on January 14, 2019 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 Oasis 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, August 1, 2016 through July 31, 2017, the well produced at a maximum efficient rate or was not capable of exceeding the production threshold. The average daily production from the well was 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 Bakken 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



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)

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

RECEIVED

Well File No.
21266

OCT 25 2017

ND Oil & Gas Div.

<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 April 16, 2015	<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date	<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
		<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
		<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
		<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
		<input checked="" type="checkbox"/> Other	Well is now on rod pump

Well Name and Number
Dahl 15-11H

Footages	Qtr-Qtr	Section	Township	Range
22 F S L	2488 F E L	SWSE	11	153 N 101 W
Field Baker	Pool Bakken		County McKenzie	

24-HOUR PRODUCTION RATE

Before	After
Oil	Bbls
Water	Bbls
Gas	MCF

Name of Contractor(s)

Address	City	State	Zip Code

DETAILS OF WORK

Effective 04/16/2015, the above referenced well was equipped with a rod pump.

End of Tubing: 2-7/8" L-80 tubing @ 10170'

Pump: 2-1/2" x 2.0" x 36' insert pump @10082'

Company Oasis Petroleum North America LLC		Telephone Number 281 404-9494
Address 1001 Fannin, Suite 1500		
City Houston		State TX
Signature 		Printed Name Sadie Goodrum
Title Regulatory Specialist	Date October 23, 2017	
Email Address sgoodrum@oasispetroleum.com		

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date 11-2-2017	
By 	
Title JARED THUNE Engineering Technician	



SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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

RECEIVED

OCT 27 2017

Well File No.
21266

ND Oil & Gas Div.

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

Notice of Intent

Approximate Start Date
November 1, 2017

Report of Work Done

Date Work Completed

Notice of Intent to Begin a Workover Project that may Qualify
for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.

Approximate Start Date

Drilling Prognosis

Spill Report

Redrilling or Repair

Shooting

Casing or Liner

Acidizing

Plug Well

Fracture Treatment

Supplemental History

Change Production Method

Temporarily Abandon

Reclamation

Other Name Change

Well Name and Number

Dahl 15-11H

Footages	Qtr-Qtr	Section	Township	Range
22 F S L	2488 F E L	SWSE	11	153 N 101 W
Field Baker	Pool Bakken		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

Oasis Petroleum respectfully requests approval to make the following change to the above referenced well:

Name change: Dahl Federal 15-11H (previously Dahl 15-11H)

The well is operated in a DSU with federal minerals. Therefore, Oasis requests to add "Federal" to the well name to clearly indicate to stakeholders the well has federal implications.

Please utilize the credit card on file for the associated fees.

cc \$25.00 11/17 tc
cc \$25.00

Company Oasis Petroleum North America LLC	Telephone Number 281-404-9436	
Address 1001 Fannin, Suite 1500		
City Houston	State TX	Zip Code 77002
Signature 	Printed Name Jennifer Swenson	
Title Regulatory Specialist	Date October 26, 2017	
Email Address jswenson@oasispetroleum.com		

FOR STATE USE ONLY

<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date 10-30-2017	
By 	
Title David Burns	
Engineering Tech.	



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/

September 21, 2017

OASIS PETRO NORTH AMERICA
ATTENTION: MICHAEL KUKUK
1001 FANNIN, STE 1500
HOUSTON, TX 77002

RE:

FOLEY FEDERAL 5301 43-12H
SWSE 12-153N-101W
MCKENZIE COUNTY
WELL FILE NO.: 20863

DAHL 15-11H
SWSE 11-153N-101W
MCKENZIE COUNTY
WELL FILE NO.: 21266

DAHL FEDERAL 2-15H
NWNE 15-153N-101W
MCKENZIE COUNTY
WELL FILE NO.: 21796

Dear Michael Kukuk:

A Sundry notice (Form 4) is needed for the above wells, detailing the changeover from flowing to well now on rod pump. If you have any questions, feel free to contact our office.

Sincerely,

Tom Delling
Tom Delling
Petroleum Engineer - Field Inspector

TKD/RSD/RLR



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/

March 7, 2017

Oasis Petroleum North America, LLC
Attn: Michael Lou
1001 Fannin, Ste 1500
Houston, TX 77002

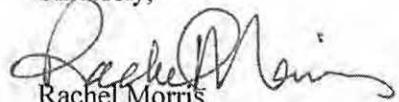
RE: CHANGE OF OPERATOR FROM SM ENERGY COMPANY TO OASIS PETROLEUM NORTH AMERICA, LLC.
157 Wells

Dear Michael Lou:

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 well is now covered by Bond No. RLB0015967.

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

Sincerely,


Rachel Morris
Administrative Assistant

Enclosure:

cc: SM Energy Company
Attn: Tim Keating
PO Box 7168
Billings, MT 59103



NOTICE OF TRANSFER OF OIL AND GAS WELLS - FORM 15

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 5782 (03-2000)

RECEIVED

FOR STATE USE ONLY

NDIC Bond Number

0312

JAN 17 2017

ND Oil & Gas Div.

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

Tim J. Keating

Operator Transferring Oil and/or Gas Wells

SM Energy Company

Address

P.O. Box 7168

City

Billings

State

MT

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)

Attorney in Fact

Date

12/1/16

Well File Number	Requested Official Well Name and Number	Location (Qtr-Qtr, S-T-R)	Assignment Date
	See Attached list of wells	Various	October 1, 2016

RECEIVING OPERATOR

Name of Operator Representative

Michael H. Lou

Operator Receiving Oil and/or Gas Wells

Oasis Petroleum North America LLC

Address

1001 Fannin Suite 1500

City

Houston

State

Tx

Zip Code

77002

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)

CFO

Date

12/1/16

SURETY COMPANY

Surety	Telephone Number	Amount of Bond
RLI Insurance Company	(713) 961-1300	\$ 100,000.00
Address 2925 Richmond Avenue, Suite 1600	City Houston	State TX Zip Code 77098 Bond Number RLB0015967

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)

12/1/2016

Printed Name

Robbie Duxbury, Attorney-in-Fact

FOR STATE USE ONLY

Date Approved

March 7, 2017

By

Bruce E. Kuhn

Title

Assistant Director

NDIC No.	Well File No.	API No.	NDIC Well Name	County	Section	Township	Range	Qtr-Qtr
	7503	33105008220000	MARLEY STATE 1-36HR	WILLIAMS	36	153 N	104 W	SESE
	8957	33053014010000	WILLOW 1-4	MCKENZIE	4	152 N	101 W	SWNW
	9309	33053014780000	LINDVIG 1-11HR	MCKENZIE	11	153 N	101 W	SESE
	9610	33053015400000	NORBY 2A-20HR	MCKENZIE	20	153 N	95 W	SESW
	10088	33053016570000	ECKERT 2-6	MCKENZIE	6	152 N	101 W	SWNE
	10089	33053016580000	ECKERT 2-5HR	MCKENZIE	5	152 N	101 W	NESW
	10157	33053016880000	THOMPSON-FEDERAL 1-19HR	MCKENZIE	19	153 N	95 W	SENE
	10320	33053017310000	FEDERAL 19-42	MCKENZIE	19	150 N	103 W	SENE
	10560	33053017850000	FEDERAL 20-14	MCKENZIE	20	150 N	103 W	SWSW
	10812	33053018460000	ECKERT 4-5	MCKENZIE	5	152 N	101 W	NWSE
	11009	33053019070000	ECKERT 5-12B	MCKENZIE	5	152 N	101 W	LT 5
	11059	33053019180000	ANDERSON 10 32	MCKENZIE	10	152 N	101 W	SWNE
	11070	33053019230000	ECKERT 5-5	MCKENZIE	5	152 N	101 W	LOT 7
	11151	33053019480000	LINDVIG 1-4	MCKENZIE	4	152 N	101 W	SWSW
	11316	33053019980000	LINDVIG 10 1	MCKENZIE	10	152 N	101 W	NENW
	11345	33053020060000	FREDRICKSON 33-33 1	MCKENZIE	33	153 N	101 W	NWSE
	11492	33053020470000	STATE OF NORTH DAKOTA F 1	MCKENZIE	33	153 N	101 W	NWNE
	11523	33053020540000	POWERS 1	MCKENZIE	33	153 N	101 W	NESW
	11617	33053020760000	HAGEN 1-13	MCKENZIE	13	153 N	95 W	SESW
	11624	33053020790000	ANDERSON 10-13	MCKENZIE	13	149 N	96 W	NWSE
	11700	33053020890000	B. A. GREEN 1	MCKENZIE	5	151 N	101 W	SWSW
	11913	33053021460000	BEAR DEN FEDERAL 10-25HR	MCKENZIE	25	149 N	96 W	NWSE
	11990	33053021590000	INDIAN HILL STATE 1-36	MCKENZIE	36	153 N	102 W	SWSE
	12025	33053021650000	STATE 2-36HR	MCKENZIE	36	153 N	102 W	NESW
	12216	33053022030000	ISZLEY-USA 1	MCKENZIE	1	150 N	104 W	NWSW
	12566	33053022620000	ELLETSON 33-1HR	MCKENZIE	1	150 N	104 W	NWSE
	13457	33105014130000	TURMOIL 10-4	WILLIAMS	4	152 N	104 W	NWSE
	15170	33053025460000	BARNES 1-2	MCKENZIE	2	152 N	102 W	NENE
	15344	33053025550000	REHAB 4-33	MCKENZIE	33	153 N	101 W	NWNW
	15915	33053026690000	FANCY BUTTE 14-32	MCKENZIE	32	151 N	96 W	SESW
	16351	33053027540000	FROHOLM 2-24H	MCKENZIE	24	153 N	95 W	NWNE
	17662	33053029440000	BEAR DEN FEDERAL 4Y-30H	MCKENZIE	30	149 N	95 W	NWNW
	17681	33053029480000	ACADIA 31-25H	MCKENZIE	25	151 N	97 W	NWNE
	17778	33053029670000	KIRKLAND 8-13H	MCKENZIE	13	149 N	96 W	SENE
	17952	33053030010000	KLAMM 13-10H	MCKENZIE	10	150 N	97 W	SWSW
	18248	33053030430000	BEAR DEN FEDERAL 4Z-30H	MCKENZIE	30	149 N	95 W	NWNW
	18436	33053030760000	ANDERSON 12-14H	MCKENZIE	14	149 N	96 W	NWSW
	18579	33053030940000	JORGENSEN 1-30H	MCKENZIE	30	149 N	95 W	NENE
	18580	33053030950000	NELSON 4-29H	MCKENZIE	29	151 N	96 W	NWNW
	18805	33053031290000	JOHNSON 16-34H	MCKENZIE	34	150 N	98 W	SESE
	18814	33053031320000	WILSON 8-20H	MCKENZIE	20	153 N	95 W	SENE
	18815	33053031330000	NORBY 9-20H	MCKENZIE	20	153 N	95 W	NESE
	18816	33053031340000	NORBY 16-20H	MCKENZIE	20	153 N	95 W	SESE
	18957	33053031540000	LEE 13-8H	MCKENZIE	8	152 N	101 W	SWSW
	19049	33053031660000	JORGENSEN 1X-30H	MCKENZIE	30	149 N	95 W	NENE
	19303	33053032120000	SEATTLE 1-35H	MCKENZIE	35	152 N	100 W	SWSE
	19324	33053032170000	FOSSUM 15-35H	MCKENZIE	35	153 N	101 W	SWSE
	19390	33053032340000	BRODERSON 13-35H	MCKENZIE	35	150 N	98 W	SWSW
	19997	33053033710000	JOHNSRUD 1-1H	MCKENZIE	1	150 N	99 W	LOT 1
	20022	33053033790000	JAYNES 16-12H	MCKENZIE	12	151 N	100 W	SESE
	20053	33053033850000	NELSON 15-11H	MCKENZIE	11	150 N	97 W	SWSE
	20266	33053034230000	WOLD 15-33H	MCKENZIE	33	153 N	97 W	SWSE
	20318	33053034350000	LEISETH 16-13H	MCKENZIE	13	151 N	100 W	SESE

NDIC No.	Well File	API No.	NDIC Well Name	County	Section	Township	Range	Qtr-Qtr
20485	33053034980000		BARNES 2-2H	MCKENZIE	2	152 N	102 W	LOT2
20497	33053034990000		LEISETH 1-24H	MCKENZIE	24	151 N	100 W	NENE
20592	33053035300000		SCHMITZ 3-4H	MCKENZIE	4	152 N	102 W	LOT3
20661	33053035520000		HOEHN 2-13H	MCKENZIE	13	152 N	102 W	NWNE
20733	33053035770000		STENBERG 16-8H	MCKENZIE	8	151 N	99 W	SESE
20752	33105021920000		KAROMOJO 2-4H	WILLIAMS	4	152 N	104 W	LOT2
20867	33053036100000		STEPANEK 1-18H	MCKENZIE	18	152 N	101 W	NENE
21101	33053036620000		SYVERSON 16-34H	MCKENZIE	34	152 N	100 W	SESE
21258	33053037010000		NORA 13-9H	MCKENZIE	9	151 N	100 W	SWSW
21266	33053037030000		DAHL 15-11H	MCKENZIE	11	153 N	101 W	SWSE
21796	33053038460000		DAHL FEDERAL 2-15H	MCKENZIE	15	153 N	101 W	NWNE
21985	33053038930000		KIRKLAND 4-18H	MCKENZIE	18	149 N	95 W	NWNW
22376	33053039730000		ANDERSON 5X-14H	MCKENZIE	14	149 N	96 W	SWNW
22377	33053039740000		ANDERSON 5-14H	MCKENZIE	14	149 N	96 W	SWNW
22475	33105025470000		DISHON 1-30H	WILLIAMS	30	153 N	103 W	NENE
22520	33053040200000		ANDERSON FEDERAL 16-15H	MCKENZIE	15	149 N	96 W	SESE
22691	33105025820000		ANDERSON 14-20H	WILLIAMS	20	153 N	103 W	SESW
22700	33053040610000		NORBY 9X-20HA	MCKENZIE	20	153 N	95 W	NESE
22701	33053040620000		NORBY 9X-20HB	MCKENZIE	20	153 N	95 W	NESE
22816	33105026010000		CAPSTICK 2-4H	WILLIAMS	4	152 N	104 W	LOT2
22819	33053041000000		OAKLAND 13-31H	MCKENZIE	31	151 N	103 W	LOT4
22975	33053041440000		HOLM 14-12HB	MCKENZIE	12	150 N	99 W	SESW
22976	33053041450000		HOLM 14X-12H	MCKENZIE	12	150 N	99 W	SESW
22977	33053041460000		HOLM 14-12HA	MCKENZIE	12	150 N	99 W	SESW
23121	33053041920000		HOLM 14X-12HA	MCKENZIE	12	150 N	99 W	SESW
23122	33053041930000		HOLM 13-12H	MCKENZIE	12	150 N	99 W	SWSW
23256	33053042140000		ARNOLD 16X-12H	MCKENZIE	12	150 N	99 W	SESE
23257	33053042150000		DOROTHY 16-12H	MCKENZIE	12	150 N	99 W	SESE
23524	33053043010000		CEYNAR 4-18HA	MCKENZIE	18	151 N	99 W	LOT1
23525	33053043020000		CEYNAR 4X-18H	MCKENZIE	18	151 N	99 W	LOT1
23526	33053043030000		CEYNAR 4-18HB	MCKENZIE	18	151 N	99 W	LOT1
24039	33053044620000		BRODERSON 2X-27HB	MCKENZIE	27	150 N	98 W	NWNE
24040	33053044630000		BRODERSON 2-27H	MCKENZIE	27	150 N	98 W	NWNE
24041	33053044640000		BRODERSON 2X-27HA	MCKENZIE	27	150 N	98 W	NWNE
24042	33053044650000		DIDRICK 4-27HB	MCKENZIE	27	150 N	98 W	NENW
24043	33053044660000		DIDRICK 4X-27H	MCKENZIE	27	150 N	98 W	NWNW
24044	33053044670000		DIDRICK 4-27HA	MCKENZIE	27	150 N	98 W	NWNW
24190	33053045180000		JORGENSEN FEDERAL 14-19H	MCKENZIE	19	149 N	95 W	SWSE
24191	33053045190000		JORGENSEN FEDERAL 14X-19H	MCKENZIE	19	149 N	95 W	SWSE
24387	33053045870000		BEHAN 2-29H	MCKENZIE	29	153 N	101 W	NWNE
24402	33053045920000		KOESER 3X-26HB	MCKENZIE	26	150 N	98 W	NENW
24403	33053045930000		KOESER 3-26H	MCKENZIE	26	150 N	98 W	NENW
24404	33053045940000		KOESER 3X-26HA	MCKENZIE	26	150 N	98 W	NENW
24446	33053046060000		LUCILLE 1-27H	MCKENZIE	27	150 N	98 W	NENE
24447	33053046070000		LUCILLE 1X-27H	MCKENZIE	27	150 N	98 W	NENE
24524	33053046410000		KOESER 4X-26H	MCKENZIE	26	150 N	98 W	NWNW
24654	33053046880000		HARTEL 1-26HA	MCKENZIE	26	150 N	98 W	NENE
24655	33053046890000		HARTEL 1X-26H	MCKENZIE	26	150 N	98 W	NENE
24656	33053046900000		HARTEL 1-26HB	MCKENZIE	26	150 N	98 W	NENE
24955	33053047830000		CADE 12-19HB	MCKENZIE	19	151 N	99 W	LOT3
24956	33053047840000		CADE 12X-19H	MCKENZIE	19	151 N	99 W	LOT3
24957	33053047850000		CADE 12-19HA	MCKENZIE	19	151 N	99 W	LOT3
25000	33053047960000		ANNIE 12X-18HB	MCKENZIE	18	151 N	99 W	LOT3
25001	33053047970000		ANNIE 12-18H	MCKENZIE	18	151 N	99 W	LOT3
25002	33053047980000		ANNIE 12X-18HA	MCKENZIE	18	151 N	99 W	LOT3

NDIC Well File No.	API No.	NDIC Well Name	County	Section	Township	Range	Qtr-Qtr
25518	33053049650000	WALLA 13X-19H	MCKENZIE	19	151 N	99 W	LOT4
25519	33053049660000	WALLA 13-19H	MCKENZIE	19	151 N	99 W	LOT4
26135	33053051770000	DORIS 1X-13H	MCKENZIE	13	151 N	100 W	NENE
26136	33053051780000	ELERY 1-13H	MCKENZIE	13	151 N	100 W	NENE
26228	33053052160000	WILSON FEDERAL 1X-20H	MCKENZIE	20	153 N	95 W	NENE
26254	33053052310000	OAKLAND FEDERAL 1-1H	MCKENZIE	1	150 N	104 W	LOT1
26374	33053052560000	LORAINE 1X-20H	MCKENZIE	20	153 N	95 W	NENE
26658	33053053560000	HANK 13X-7H	MCKENZIE	7	151 N	99 W	SWSW
26659	33053053570000	EMMA 13-7H	MCKENZIE	7	151 N	99 W	SWSW
26750	33053053870000	RICK 16X-12H	MCKENZIE	12	150 N	99 W	SESE
26851	33053054250000	BONNER 9X-12HA	MCKENZIE	12	151 N	100 W	NESE
26852	33053054260000	BONNER 9-12H	MCKENZIE	12	151 N	100 W	NESE
26853	33053054270000	BONNER 9X-12HB	MCKENZIE	12	151 N	100 W	NESE
27622	33053056720000	DONNA 12X-35H	MCKENZIE	35	152 N	100 W	NWSW
27623	33053056730000	CAROL 12-35H	MCKENZIE	35	152 N	100 W	NWSW
27624	33053056740000	DIXIE 12X-35H	MCKENZIE	35	152 N	100 W	NWSW
27767	33053057110000	TODD 13X-35H	MCKENZIE	35	152 N	100 W	SWSW
27768	33053057120000	LUELLA 13-35H	MCKENZIE	35	152 N	100 W	SWSW
27769	33053057130000	TRACY 13-35H	MCKENZIE	35	152 N	100 W	SWSW
27937	33053057550000	ELWAY 1-32H	MCKENZIE	32	152 N	100 W	NENE
27938	33053057560000	MANNING 1X-32H	MCKENZIE	32	152 N	100 W	NENE
27939	33053057570000	DAVIS 1-32H	MCKENZIE	32	152 N	100 W	NENE
28196	33053058510000	PHYLIS 14X-12H	MCKENZIE	12	151 N	100 W	SESW
28197	33053058520000	LUKE 14-12H	MCKENZIE	12	151 N	100 W	SESW
28198	33053058530000	JESSE 14X-12H	MCKENZIE	12	151 N	100 W	SESW
28200	33053058540000	CALVIN 2-13H	MCKENZIE	13	151 N	100 W	NWNE
28201	33053058550000	DALLAS 2X-13H	MCKENZIE	13	151 N	100 W	NWNE
28812	33053060930000	JAMES 16X-35HB	MCKENZIE	35	152 N	100 W	SESE
28813	33053060940000	JAMES 16-35H	MCKENZIE	35	152 N	100 W	SESE
28815	33053060960000	JAMES 16X-35HA	MCKENZIE	35	152 N	100 W	SESE
28890	33053061140000	STENEHJEM 15-9HB	MCKENZIE	9	151 N	100 W	SWSE
28891	33053061150000	STENEHJEM 15X-9H	MCKENZIE	9	151 N	100 W	SWSE
28892	33053061160000	STENEHJEM 15-9HA	MCKENZIE	9	151 N	100 W	SWSE
29402	33053062610000	SEATTLE FEDERAL 14X-35H	MCKENZIE	35	152 N	100 W	SESW
29403	33053062620000	SEATTLE FEDERAL 14-35H	MCKENZIE	35	152 N	100 W	SESW
29404	33053062630000	SEATTLE 14X-35H	MCKENZIE	35	152 N	100 W	SESW
30270	33053065940000	STENEHJEM 14X-9HA	MCKENZIE	9	151 N	100 W	SESW
30271	33053065950000	STENEHJEM 14-9H	MCKENZIE	9	151 N	100 W	SESW
30272	33053065960000	STENEHJEM 14X-9HB	MCKENZIE	9	151 N	100 W	SESW
30754	33053067430000	FOSSUM 15-35HR	MCKENZIE	35	153 N	101 W	SWSE
30790	33053067560000	STACEY 13-9H	MCKENZIE	9	151 N	100 W	SWSW
30791	33053067570000	ASHLEY 13X-9H	MCKENZIE	9	151 N	100 W	SWSW
30889	33053067920000	STENBERG 5-9H	MCKENZIE	9	151 N	99 W	SWNW
30890	33053067930000	STENBERG 4X-9H	MCKENZIE	9	151 N	99 W	NWNW
30891	33053067940000	STENBERG 4-9H	MCKENZIE	9	151 N	99 W	NWNW
31064	33053068700000	RICH 1X-16HA	MCKENZIE	16	151 N	100 W	NENE
31065	33053068710000	STEVE 1-16H	MCKENZIE	16	151 N	100 W	NENE
31066	33053068720000	RINI 1X-16HB	MCKENZIE	16	151 N	100 W	NENE
90002	33053900020000	USA 43-11	MCKENZIE	11	150 N	104 W	NESE
90261	33053902610000	CEYNAR 4-18SWD	MCKENZIE	18	151 N	99 W	LOT1



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

DEC 05 2016

Well File No.

21266

NDIC CTB No.

121266

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

ND Oil & Gas Division

Well Name and Number DAHL 15-11H	Qtr-Qtr SWSE	Section 11	Township 153	Range 101	County McKenzie
-------------------------------------	-----------------	---------------	-----------------	--------------	--------------------

Operator Oasis Petroleum North America LLC	Telephone Number (281) 404-9573	Field BAKER
---	------------------------------------	----------------

Address 1001 Fannin, Suite 1500	City Houston	State TX	Zip Code 77002
------------------------------------	-----------------	-------------	-------------------

Name of First Purchaser Oasis Petroleum Marketing LLC	Telephone Number (281) 404-9627	% Purchased 100%	Date Effective December 1, 2016
Principal Place of Business 1001 Fannin, Suite 1500	City Houston	State TX	Zip Code 77002
Field Address	City	State	Zip Code
Transporter Targa	Telephone Number 713-584-1000	% Transported 100%	Date Effective December 1, 2016
Address 1000 Louisiana, Suite 4300	City Houston	State TX	Zip Code 77002

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
		December 1, 2016
Other Transporters Transporting From This Lease	% Transported	Date Effective
		December 1, 2016
Comments		

I hereby swear or affirm that the information provided is true, complete and correct as determined from all available records.	Date December 1, 2016
Signature 	Printed Name Kenzie Buchanan Title Marketing Analyst I

Above Signature Witnessed By:	Printed Name	Title
Signature 	Printed Name Tim O'Brien Title Marketing Analyst II	

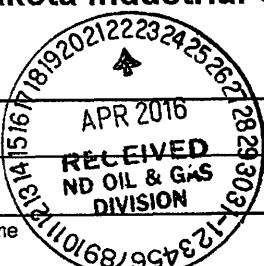
FOR STATE USE ONLY	
Date Approved MAR 09 2017	
By	
Title Eric Roberson Oil & Gas Production Analyst	

North Dakota Industrial Commission Follow-up Spill Report

API Number 33 - 053 - 03703

Well File or Facility No. 21266

Operator SM Energy Company	Telephone Number 406-869-8642					
Address P O Box 7168	State MT					
City Billings	Zip Code 59103					
Well Name and Number or Facility Name Dahl 15-11H	Field Baker					
Location of Well or Facility	Footages 22 F S L	Qtr-Qtr SWSE	Section 11	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 or Facility

Well Site Facility

Directions to Site

Release Discovered By Gary Bjerke	Date Release Discovered April 5, 2016	Time Release Discovered 12 : 00 PM	Date Release Controlled April 5, 2016	Time Release Controlled 12 : 30 PM
Company Personnel Notified Luke Studer	How Notified Internal Reporting System	Date Notified April 5, 2016	Time Notified 12 : 30 PM	

Type of Incident Other-Described Below	Root Cause of Release Other-Described Below	Date Clean up Activities Concluded April 8, 2016
--	---	--

Distance to Nearest Residence or Occupied Building 2 Miles	Distance to Nearest Fresh Water Well 2 Miles
--	--

Piping Specifics (If Applicable)	Size (Decimal Format) "	Type	Location of Piping
-------------------------------------	----------------------------	------	--------------------

Volume of Release	Oil 0.00 Barrels	Saltwater 12.00 Barrels	Other 0.00 Barrels
-------------------	----------------------------	-----------------------------------	------------------------------

Volume of Release Recovered	Oil 0.00 Barrels	Saltwater 0.00	Other 0.00 Barrels
-----------------------------	----------------------------	--------------------------	------------------------------

Was Release Contained Within Dike	If No, Was Release Contained on Well Site Yes	If No, Was Release Contained on Facility Site or Pipeline ROW
-----------------------------------	---	---

Areal Extent of Release if not Within Dike	Affected Medium Well/Facility Soil	General Land Use Well/Facility Site
--	--	---

Describe Cause of Release or Fire and Other Type of Incidents, Root Causes of Release, Land Uses, and Released Substances
12 barrels of SW was discovered in corner of location. Was determined that the release was not from any production activity and is believed to be from an illegal dumping.

Action Taken to Control Release and Clean Up Action Undertaken

The contaminated soil was dug up and disposed of at an authorized disposal site.

Potential Environmental Impacts

Planned Future Action and/or Action Taken to Prevent Reoccurrence

Where Were Recovered Liquids Disposed	Where Were Recovered Solids Disposed
---------------------------------------	--------------------------------------

Weather Conditions	Wind Speed MPH	Wind Direction	Temperature ° F	Skies	Estimated Cleanup Cost \$	Damage Value \$
--------------------	----------------	----------------	-----------------	-------	---------------------------	-----------------

Regulatory Agencies/Others Notified NDIC/NDDH	Person Notified on line	Date Notified April 6, 2016	Time Notified 3 : 30 PM	Notified By Luke Studer
---	-------------------------	---------------------------------------	-----------------------------------	-----------------------------------

Fee Surface Owner			:	
-------------------	--	--	---	--

Federal Agency Lease Number			:	
-----------------------------	--	--	---	--

BLM			:	
------------	--	--	---	--

USFS			:	
-------------	--	--	---	--

Report Originator Lorena Griggs	Title Regulatory&Safety Assistant	Date April 18, 2016
---	---	-------------------------------

Reviewed By	Title	Date
-------------	-------	------



SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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



Well File No.
21266

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 25, 2015
<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	Gas Analysis

Well Name and Number

Dahl 15-11H

Footages 22 F S L	2488 2499 F E L	Qtr-Qtr SWSE	Section 11	Township 153 N	Range 101 W
Field Baker	Pool Bakken	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

SM Energy Company respectfully submits gas analysis on the DAHL 15-11H. Please see attached for further detail.

Company SM Energy Co.	Telephone Number 406-245-6248
Address P. O. Box 7168	
City Billings	State MT
Signature 	Printed Name Cody Hoskins
Title Engineering Tech	Date July 13, 2015

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <i>August 14, 2015</i>	
By <i>J.P. M. Wh.</i>	
Title PETROLEUM ENGINEER	

Gas Analysis Certificate Report
Hiland Partners

3/25/2015 3:59 PM

P.O.Box 5103 Enid, Ok. 73702
(O) 580.242.6040 (Fax) 580.616.2083
EnidMeasurement@kindermorgan.com

Betty Fumage

Analvsis ID: 7833029		Alternate ID:		Use Contract Values: No	
Name	DAHL 15-11H	Company Name: Hiland Partners			
Effective Date:	08/01/2014 09:00	Saturated HV:	1429.9	Sample Date:	08/21/2014
Valid Thru Date:	12/31/2078 00:00	As Del. HV:		Sample ID:	
Last Update:	09/09/2014 09:33	Dry HV:	1454.5	Sample Type:	Spot
Data Acqusition:	File Transfer from Lab	Measured HV:		Sample Pressure Base:	14.730
Data Source:	Lab Analysis	WOBBE:	1553.5	Sample Temperature:	71.0
Gravity:	0.8766	Water Content:		Sample Pressure:	54.0
Status:	Active			Lab Code:	

Component	% Mol	GPM	H2S PPM
Methane	57.8075		
Ethane	22.5945	6.0728	
Propane	11.1930	3.0991	
I Butane	0.8897	0.2926	
N Butane	2.7769	0.8798	
I Pentane	0.4250	0.1562	
N Pentane	0.5247	0.1911	
Hexanes +	0.4037	0.1770	

Nitrogen	2.6152
CO2	0.7697
Oxygen	0.0000
H2O	0.0000
CO	0.0000
H2S	0.0002
Hydrogen	0.0000
Helium	0.0000
Argon	0.0000
Total	100.0001
	10.8686

Sample Comments:

Configuration Comments:

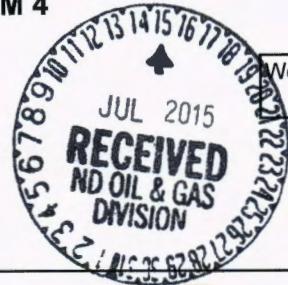


SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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

Well File No.

21266



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 2, 2015
<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	Site Facility Diagram

Well Name and Number

Dahl 15-11H

Footages 22 F S L	Qtr-Qtr 2499 F E L	Section SWSE	Township 11	Range 153 N	101 W
Field Baker	Pool Bakken		County McKenzie		

24-HOUR PRODUCTION RATE

Before	After
Oil	Bbls
Water	Bbls
Gas	MCF

Name of Contractor(s)

Address	City	State	Zip Code
---------	------	-------	----------

DETAILS OF WORK

SM Energy Company respectfully submits the site facility diagram for the above well. Please see attached for further detail.

Company SM Energy Co.	Telephone Number 406-245-6248	
Address P. O. Box 7168		
City Billings	State MT	Zip Code 59103-7168
Signature 	Printed Name Cody Hoskins	
Title Engineering Tech	Date July 13, 2015	

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <i>7/15/15</i>	
By <i>J. Hoskins</i>	
Title <i>Engineering Tech</i>	

SM ENERGY CO

SITE SECURITY DIAGRAM:

WELL: DAHL 15-11H

NDIC NO: 21266

FIELD NAME: BAKER FIELD

LOCATION: SWSE SEC 11-T153N-R101W

COUNTY: DIVIDE STATE: ND

CA# NDM105420

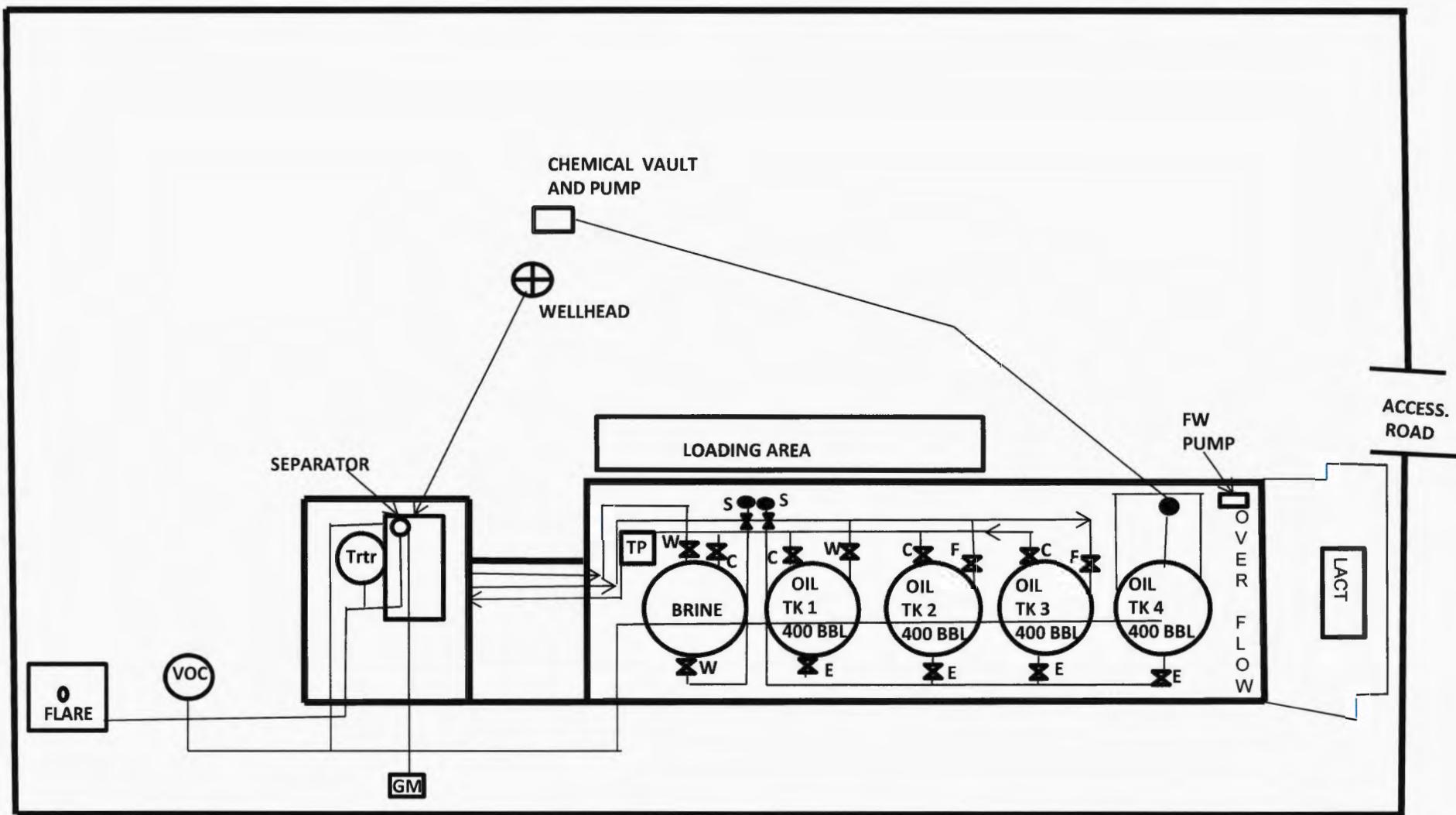
SITE FACILITY PLAN LOCATED AT:
SM ENERGY CO
550 N 31ST ST, SUITE 500
BILLINGS, MT 59103



NOT TO SCALE

VALVE SEALING DETAIL	PRODUCTION OR NORMAL OPERATIONS	RECYCLING	SALES
C=RFCYCLING	O/C	O	SC
E=EQUALIZER	O/C	O/C	SC
F=PRODUCTION	O	O/C	SC
S=SALES	SC	SC	O

**WHERE: O – OPEN, SO – SEALED OPEN,
C – CLOSED, SC – SEALED CLOSED,
O/C – OPEN OR SEALED**



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.

21266

NDIC CTB No.

21266

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

Well Name and Number DAHL 15-11H	Qtr-Qtr SWSE	Section 11	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 Targa Badlands LLC.	Telephone # 701-842-3315	% Purchased 100	Date Effective January 31, 2014
Principal Place of Business 1000 Louisiana St. Suite 4300	City Houston	State TX	Zip Code 77002
Field Address 2680 109th Ave. NW	City Watford City	State ND	Zip Code 58854
Name of Transporter Targa Badlands LLC.	Telephone Number 713-584-1061	% Transported 100	Date Effective January 31, 2014
Address 1000 Louisiana St. Suite 4300	City Houston	State TX	Zip Code 77002
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 herein provided is true, complete and correct as determined from all available records.	Date January 31, 2014
---	---------------------------------

Signature 	Printed Name Devin Schmidt	Title Production Accountant
---------------	--------------------------------------	---------------------------------------

Above Signature Witnessed By	Witness Signature 	Witness Printed Name Brenda Young	Witness Title Production Accountant
------------------------------	-----------------------	---	---

FOR STATE USE ONLY		
Date Approved FEB 11 2014		
By		
Title 	Oil & Gas Production Analyst	



WELL COMPLETION OR RECOMPLETION REPORT - FORM 5

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

Well File No.
21266

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

Designate Type of Completion

- Oil Well EOR Well Recompletion Deepened Well Added Horizontal Leg Extended Horizontal Leg
 Gas Well SWD Well Water Supply Well Other:

Well Name and Number DAHL 15-11H		Spacing Unit Description Sec 2 & 11, T153N-R101W		
Operator SM ENERGY COMPANY		Telephone Number (406) 245-6248	Field BAKER	
Address P. O. BOX 7168			Pool BAKKEN	
City BILLINGS	State MT	Zip Code 59103-7168	Permit Type <input type="checkbox"/> Wildcat	<input checked="" type="checkbox"/> Development <input type="checkbox"/> Extension

LOCATION OF WELL

At Surface 22 F S L	2488 F E L	Qtr-Qtr SWSE	Section 11	Township 153 N	Range 101 W	County McKenzie
Spud Date October 15, 2011	Date TD Reached November 18, 2011	Drilling Contractor and Rig Number Extreme Drilling #18	KB Elevation (Ft) 2127		Graded Elevation (Ft) 2110	
Type of Electric and Other Logs Run (See Instructions)		CBL/GR/CCL				

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

PERFORATION & OPEN HOLE INTERVALS

PRODUCTION

Current Producing Open Hole or Perforated Interval(s), This Completion, Top and Bottom, (MD Ft) 10952 - 20850								Name of Zone (If Different from Pool Name)	
Date Well Completed (SEE INSTRUCTIONS) January 11, 2012			Producing Method Flowing	Pumping Size & Type of Pump			Well Status (Producing or Shut-In) Producing		
Date of Test 01/14/2012	Hours Tested 24	Choke Size 20 /64	Production for Test	Oil (Bbls) 494	Gas (MCF) 418	Water (Bbls) 554	Oil Gravity-API (Corr.) 41.7 °	Disposition of Gas Flared	
Flowing Tubing Pressure (PSI) 860	Flowing Casing Pressure (PSI) 0		Calculated 24-Hour Rate	Oil (Bbls) 494	Gas (MCF) 418	Water (Bbls) 554	Gas-Oil Ratio 846		

GEOLOGICAL MARKERS

PLUG BACK INFORMATION

CORES CUT

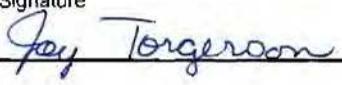
CORES CUT				
Top (Ft)	Bottom (Ft)	Formation	Top (Ft)	Bottom (Ft)

Drill Stem Test

Well Specific Stimulations

Date Stimulated 01/11/2012	Stimulated Formation Bakken		Top (Ft) 10952	Bottom (Ft) 20850	Stimulation Stages 13	Volume 1822380	Volume Units Gallons
Type Treatment Sand Frac	Acid %	Lbs Proppant 1450600	Maximum Treatment Pressure (PSI) 8842		Maximum Treatment Rate (BBLS/Min) 45.5		
Details Pumped 999,800# 20/40 sand, 450,800 40/70 sand, 1,822,380 Gals total fluid in 13 stages over 4 days (1/8/11 - 1/11/12) at a maximum rate of 45.5 bpm and maximum pressure of 8842 psi.							
Date Stimulated	Stimulated Formation		Top (Ft)	Bottom (Ft)	Stimulation Stages	Volume	Volume Units
Type Treatment	Acid %	Lbs Proppant	Maximum Treatment Pressure (PSI)		Maximum Treatment Rate (BBLS/Min)		
Details							
Date Stimulated	Stimulated Formation		Top (Ft)	Bottom (Ft)	Stimulation Stages	Volume	Volume Units
Type Treatment	Acid %	Lbs Proppant	Maximum Treatment Pressure (PSI)		Maximum Treatment Rate (BBLS/Min)		
Details							
Date Stimulated	Stimulated Formation		Top (Ft)	Bottom (Ft)	Stimulation Stages	Volume	Volume Units
Type Treatment	Acid %	Lbs Proppant	Maximum Treatment Pressure (PSI)		Maximum Treatment Rate (BBLS/Min)		
Details							
Date Stimulated	Stimulated Formation		Top (Ft)	Bottom (Ft)	Stimulation Stages	Volume	Volume Units
Type Treatment	Acid %	Lbs Proppant	Maximum Treatment Pressure (PSI)		Maximum Treatment Rate (BBLS/Min)		
Details							

ADDITIONAL INFORMATION AND/OR LIST OF ATTACHMENTS

I hereby swear or affirm that the information provided is true, complete and correct as determined from all available records.	Email Address jtorgeron@sm-energy.com	Date 09/21/2012
Signature 	Printed Name Joy Torgerson	Title Engineering Tech



21266 Oil and Gas Division

Lynn D. Helms - Director Bruce E. Hicks - Assistant Dir
Department of Mineral Resources
Lynn D. Helms - Director
North Dakota Industrial Commission
www.oilgas.nd.gov

September 6, 2012

RANDY CARLSON
SM ENERGY CO
PO BOX 7168
BILLINGS, MT 59103-7168

RE: See Attached List of Wells

Dear Randy:

According to our records, our office has not received a Completion Report (Form 6) for the attached list of wells.

Please note: A Completion Report is due thirty days after the completion of a well, except in the case of a wildcat well, where the Completion Report is due immediately. Please submit the Form 6's, in duplicate, at your earliest convenience. If you have any questions, feel free to contact our office.

Sincerely,

Nathaniel Erbele
Petroleum Resource Specialist

List of Completion Report Due Wells for SM . RGY CO

CARTER 9-8HW
NESE 8-163N-101W
DIVIDE COUNTY
WELL FILE NO: 22717

ADAMS 2-18H
NWNE 18-163N-100W
DIVIDE COUNTY
WELL FILE NO: 22516

GULBRANSON 2-1H
LOT2 1-163N-100W
DIVIDE COUNTY
WELL FILE NO: 22471

DAHL FEDERAL 2-15H
NWNE 15-153N-101W
MCKENZIE COUNTY
WELL FILE NO: 21796

DAHL 15-11H
SWSE 11-153N-101W
MCKENZIE COUNTY
WELL FILE NO: 21266

WOLD 15-33H
SWSE 33-153N-97W
MCKENZIE COUNTY
WELL FILE NO: 20266

NELSON 15-11H
SWSE 11-150N-97W
MCKENZIE COUNTY
WELL FILE NO: 20053



SUNDY 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.

21266

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



Notice of Intent

Approximate Start Date

Report of Work Done

Date Work Completed
April 14, 2012

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

Clean out, Convert to rod pump

Well Name and Number

Dahl 15-11H

Footages

22

F

S

L

2488

F

E

L

Qtr-Qtr
SWSE

Section
11

Township
153 N

Range
101 W

Field

Baker

Pool

Bakken

County

McKenzie

24-HOUR PRODUCTION RATE

Before	After
Oil	Bbls
Water	Bbls
Gas	MCF

Oil

389

Bbls

Water

301

Bbls

Gas

167

MCF

Name of Contractor(s)

Address

City

State

Zip Code

DETAILS OF WORK

On 4/14/12, SM Energy cleaned out and converted the Dahl 15-11H from flowing to rod pump. The ball seats of the frac sleeves were milled up as the well was cleaned out to TD. After cleanout, production equipment was run and the well was returned to production on rod pump.

Pump: 2-1/2" x 2-1/4" x 40' tubing barrel pump MSN set at ~10,076'

Tubing: 2-7/8" L-80 TAC set at ~10,077' EOT at ~10,165'

Pumping Unit: Rotaflex RH1100-500-306

Please submit Completion Report - Form 6 *(initials)*

Company
SM Energy Company

Telephone Number
(406) 245-6248

Address
P.O. Box 7168

City
Billings State
MT Zip Code
59103

Signature
Cris Rogers Printed Name
Cris Rogers

Title
Operations Engineer Date
April 19, 2012

Email Address
crogers@sm-energy.com

FOR STATE USE ONLY

Received

Approved

Date

May 14, 2012

By

Dee J. Mohler

Title

PETROLEUM ENGINEER



SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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

Well File No.

21266



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 Progrosis	<input type="checkbox"/> Spill Report
<input checked="" type="checkbox"/> Report of Work Done	Date Work Completed November 30, 2011	<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date 	<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
		<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
		<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
		<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
		<input checked="" type="checkbox"/> Other	Reserve Pit Reclamation

Well Name and Number
Dahl 15-11H

Footages	22 F S L	2488 F E L	Qtr-Qtr SWSE	Section 11	Township 153 N	Range 101 W
Field	Baker	Pool	Bakken	County	McKenzie	

24-HOUR PRODUCTION RATE

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

Name of Contractor(s)
Franz Construction Inc.

Address P. O. Box 1046	City Sidney	State MT	Zip Code 59270
----------------------------------	-----------------------	--------------------	--------------------------

DETAILS OF WORK

SM Energy Company has completed the reclamation of the reserve pit as follows:

Disposed of the pit water at the following salt water disposals:

Hjort 32-17 SWD (Permit #MTS21MD-0088)
1820' FNL, 2320' FEL (SWNE)
Sec 17-T32N-R56E
Sheridan Co., MT

Applied 85 tons of flyash from the Rosebud Power Plant, Colstrip, MT to the drilling mud to solidify it, covered with 4' backfill and topsoil, then graded to promote surface drainage away from the reclaimed pit.

Company SM Energy Company	Telephone Number (406) 245-6248	
Address P. O. Box 7168		
City Billings	State MT	Zip Code 59103-7168
Signature 	Printed Name Lorena Griggs	
Title Regulatory & Safety Assistant	Date November 28, 2011	
Email Address rgriggs@sm-energy.com		

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date 2-6-12	
By 	
Title 	

AUTHORIZATION TO PURCHASE AND TRANSPORT OIL FROM LEASE - FORM 8

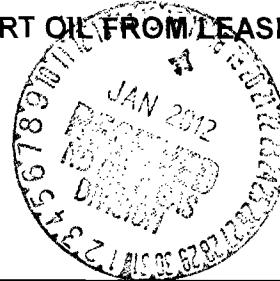
INDUSTRIAL COMMISSION OF NORTH DAKOTA

OIL AND GAS DIVISION

600 EAST BOULEVARD DEPT 405

BISMARCK, ND 58505-0840

SFN 5698 (03-2000)



Well File No.

21266

NDIC CTB No.

21266

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

Well Name and Number DAHL 15-11H	Qtr-Qtr SWSE	Section 11	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, LP	Telephone # 713-646-4100	% Purchased 100	Date Effective January 13, 2012
Principal Place of Business P O Box 4648	City Houston	State TX	Zip Code 77002
Field Address 621 - 17th St., Ste 825	City Denver	State CO	Zip Code 80293
Name of Transporter Plains Marketing, L.P.	Telephone Number 713-993-5900	% Transported 100	Date Effective January 13, 2012
Address P O Box 4648	City Houston	State TX	Zip Code 77210-4648

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 herein provided is true, complete and correct as determined from all available records.	Date January 13, 2012
---	---------------------------------

Signature 	Printed Name Will Burruss	Title Production Accountant
---------------	-------------------------------------	---------------------------------------

Above Signature Witnessed By	Witness Signature 	Witness Printed Name Brenda Young	Witness Title Production Accountant
------------------------------	-----------------------	---	---

FOR STATE USE ONLY		
Date Approved	JAN 19 2012	
By		
Title	Eric Roberson Oil & Gas Production Analyst	

Industrial Commission of North Dakota
Oil and Gas Division
Verbal Approval To Purchase and Transport Oil

Well or Facility No

21266

Tight Hole Yes

OPERATOR

Operator
SM ENERGY COMPANY

Representative
Lynnette Watts

Rep Phone

WELL INFORMATION

Well Name
DAHL 15-11H

Inspector
Marc Binns

Well Location QQ Sec Twp Rng
SWSE 11 153 N 101 W

Footages **22** Feet From the S Line
2488 Feet From the E Line

County
MCKENZIE

Field
BAKER

Pool

Date of First Production Through Permanent Wellhead

This Is Not The First Sales

PURCHASER / TRANSPORTER

Purchaser
PLAINS MARKETING, L.P.

Transporter
PLAINS MARKETING, L.P.

TANK BATTERY

Single Well Tank Battery Number :

SALES INFORMATION This Is Not The First Sales

ESTIMATED BARRELS TO BE SOLD	ACTUAL BARRELS SOLD	DATE
10000	BBLS	
	BBLS	

DETAILS

Frac set to start 1/7/12

Verbal to Purchase and Transport Oil issued on condition that date of first production, date of first sales, and amount of first sales are reported to commission, also that sales do not exceed the barrels approved prior to submission of the Form 8.43-02-03-81. AUTHORIZATION TO TRANSPORT OIL FROM A WELL OR CENTRAL PRODUCTION FACILITY. Before any crude oil is transported from a well or central production facility, the operator of the well or central production facility shall file with the director, and obtain the director's approval, an authorization to purchase

Start Date	1/10/2012
Date Approved	1/10/2012
Approved By	Jessica Gilkey

21266
JW**Llewellyn, Linda B.**

From: oilandgasinfo@nd.gov
Sent: Tuesday, January 10, 2012 4:59 PM
To: Wollan, Glenn L.; Fetzer, Annette M.; Holweger, Todd L.; Suggs, Richard A.; Llewellyn, Linda B.; Joersz, Kyle W.; Gilkey, Jessica L.; Binns, Marc L.; lwatts@sm-energy.com
Subject: "CONFIDENTIAL"-Verbal Approval Procedure PTO - 21266

Type of Verbal Procedure : **PTO**

NDIC file no :**21266**

Well Confidential :**Yes**

Well name :**DAHL 15-11H**

Well operator :**SM ENERGY COMPANY**

Company Representative :**Lynnette Watts**

Representative Phone Number :()-

Field name :**BAKER**

Pool name :

County :**MCKENZIE**

Location STR : **11-153N-101W**

Feet From N/S : **22 S**

Feet From E/W : **2488 E**

Purchaser : **PLAINS MARKETING, L.P.**

Transporter : **PLAINS MARKETING, L.P.**

First Sales Y/N : **No**

First Prod Dt :

CTB No :

CTB Type : **SingleWellTB**

Est ! Barrels	Act Barrels	Date
10000		

Details :Frac set to start 1/7/12 Verbal to Purchase and Transport Oil issued on condition that date of first production, date of first sales, and amount of first sales are reported to commision, also that sales do not exceed the barrels approved prior to submission of the Form 8. 43-02-03-81. AUTHORIZATION TO TRANSPORT OIL FROM A WELL OR CENTRAL PRODUCTION FACILITY. Before any crude oil is transported from a well or central production facility, the operator of the well or central production facility shall file with the director, and obtain the director's approval, an authorization to purchase and transport oil from a well or central production facility (form 8). All forms, reports, logs, and other information required by this section shall be submitted within thirty days after the completion of such work, although a completion report shall be filed immediately after the completion or recompletion of a well in a pool or reservoir not then covered by an order of the commission.

Date Approved ! :Jan 10 2012

Approved By :JLG

Date Start :Jan 10 2012

Inspector :MLB



19510 Oil Center Blvd
Houston, TX 77073
Bus 281.443.1414
Fax 281.443.1676

Tuesday, November 22, 2011

State of North Dakota

Subject: **Surveys**

Re: **SM Energy**
Dahl 15-11 H
McKenzie, ND

Enclosed, please find the original and one copy of the survey performed on the above-referenced well by Ryan Energy Technologies U.S.A., Inc. (Operator No. 740022). Other information required by your office is as follows:

<i>Surveyor Name</i>	<i>Surveyor Title</i>	<i>Borehole Number</i>	<i>Start Depth</i>	<i>End Depth</i>	<i>Start Date</i>	<i>End Date</i>	<i>Type of Survey</i>	<i>TD Straight Line Projection</i>
Sanford, Rory	Directional Driller	O.H.	2113'	20798'	10/17/11	11/18/11	MWD	20850'

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required please contact the undersigned at the letterhead address or phone number.

A handwritten signature in black ink that reads "Douglas Hudson".

Douglas Hudson
Well Planner



19510 Oil Center Blvd
Houston, TX 77073
Bus 281.443.1414
Fax 281.443.1676

Tuesday, November 22, 2011

State of North Dakota

Subject: **Survey Certification Letter**

Re: **SM Energy**
Dahl 15-11 H
McKenzie, ND

I, Rory Sanford, certify that; I am employed by Ryan Energy Technologies U.S.A., Inc.; that I did on the conduct or supervise the taking of the following MWD surveys:

on the day(s) of 10/17/2011 thru 11/18/2011 from a depth of 2113' MD to a depth of 20798' MD and Straight line projection to TD 20850' MD;

that the data is true, correct, complete, and within the limitations of the tool as set forth by Ryan Energy Technologies U.S.A., Inc.; that I am authorized and qualified to make this report; that this survey was conducted at the request of SM Energy for the Dahl 15-11 H; in McKenzie, ND.

Rory Sanford

Rory Sanford
Directional Driller
Ryan Energy Technologies U.S.A., Inc.



Ryan Energy Technologies

COMPLETION REPORT



Company: SM Energy Company	Date: 11/22/2011	Time: 11:01:21	Page: 1
Field: McKenzie Co., ND	Co-ordinate(NE) Reference:	Site: Dahl 15-11H, True North	
Site: Dahl 15-11H	Vertical (TVD) Reference:	SITE 2127.0	
Well: 15-11H	Section (VS) Reference:	Well (0.00N,0.00E,359.66Azi)	
Wellpath: OH	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Field: McKenzie Co., ND	Map System: US State Plane Coordinate System 1983	Map Zone: North Dakota, Northern Zone
Geo Datum: GRS 1980	Coordinate System:	Site Centre
Sys Datum: Mean Sea Level	Geomagnetic Model:	IGRF2010

Site: Dahl 15-11H Sec. 11-T153N-R101W 22' FSL & 2488' FEL	Northing: 410403.41 ft	Latitude: 48 4 56.376 N
From: Geographic	Easting: 1202212.98 ft	Longitude: 103 38 9.239 W
Position Uncertainty: 0.00 ft		North Reference: True
Ground Level: 2110.00 ft		Grid Convergence: -2.33 deg

Well: 15-11H	Slot Name:
Well Position: +N/S 0.00 ft	Northing: 410403.41 ft
+E/-W 0.00 ft	Easting: 1202212.98 ft

Wellpath: OH	Drilled From: Surface
	Tie-on Depth: 0.00 ft
Current Datum: SITE	Above System Datum: Mean Sea Level
Magnetic Data: 10/7/2011	Declination: 8.72 deg
Field Strength: 56737 nT	Mag Dip Angle: 73.12 deg
Vertical Section: Depth From (TVD) ft	+N/S ft
0.00	0.00

Survey Program for Definitive Wellpath	Version: 0	Toolcode	Tool Name
Date: 11/22/2011	Validated: No		
Actual From ft	To ft	Survey	
2113.00	20798.00	Survey #1 (2113.00-20798.00)	MWD
20850.00	20850.00	Survey #2 (20850.00-20850.00)	Projection
			MWD Projected to TD

Survey	MD ft	Incl deg	TVD ft	VS ft	Azim deg	N/S ft	E/W ft	Clsr Dist. ft	Clsr Azi. deg	Dog Leg deg/100ft	Tool
2113.00	0.00	2113.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
2167.00	1.20	2167.00	-0.52	203.90	-0.52	-0.23	0.57	203.90	2.22	0.41	MWD
2259.00	1.40	2258.97	-2.40	206.60	-2.40	-1.12	2.65	205.04	0.23	0.25	MWD
2351.00	1.60	2350.94	-4.45	215.00	-4.46	-2.36	5.05	207.91	0.32	0.25	MWD
2443.00	2.20	2442.89	-7.20	195.10	-7.22	-3.56	8.05	206.25	0.96	0.56	MWD
2534.00	2.60	2533.81	-10.90	190.70	-10.93	-4.40	11.78	201.91	0.48	0.41	MWD
2625.00	2.80	2624.71	-15.15	184.10	-15.18	-4.94	15.96	198.03	0.41	0.38	MWD
2716.00	3.00	2715.59	-19.71	189.70	-19.74	-5.50	20.49	195.57	0.38	0.38	MWD
2807.00	3.00	2806.47	-24.36	194.10	-24.40	-6.48	25.24	194.88	0.25	0.25	MWD
2897.00	2.50	2896.37	-28.55	192.80	-28.60	-7.49	29.56	194.68	0.56	0.56	MWD
2988.00	3.10	2987.26	-32.93	185.50	-32.98	-8.17	33.98	193.91	0.77	0.77	MWD
3079.00	3.00	3078.13	-37.75	185.40	-37.80	-8.63	38.77	192.85	0.11	0.11	MWD
3162.00	3.00	3161.01	-42.07	184.20	-42.13	-8.99	43.08	192.04	0.08	0.08	MWD
3245.00	3.00	3243.90	-46.41	183.90	-46.46	-9.30	47.38	191.31	0.02	0.02	MWD
3328.00	2.70	3326.80	-50.52	185.00	-50.58	-9.61	51.48	190.76	0.37	0.37	MWD
3411.00	2.40	3409.71	-54.19	185.30	-54.25	-9.94	55.16	190.39	0.36	0.36	MWD
3495.00	3.20	3493.61	-58.28	184.80	-58.34	-10.30	59.24	190.02	0.95	0.95	MWD
3578.00	2.70	3576.50	-62.53	184.90	-62.60	-10.66	63.50	189.67	0.60	0.60	MWD
3661.00	3.10	3659.40	-66.72	181.90	-66.79	-10.91	67.67	189.27	0.52	0.52	MWD
3744.00	3.00	3742.28	-71.13	183.90	-71.20	-11.13	72.06	188.88	0.18	0.18	MWD
3828.00	2.80	3826.17	-75.37	183.90	-75.44	-11.42	76.30	188.61	0.24	0.24	MWD
3910.00	2.50	3908.08	-79.15	183.70	-79.22	-11.67	80.08	188.38	0.37	0.37	MWD



Ryan Energy Technologies

COMPLETION REPORT



Company: SM Energy Company
Field: McKenzie Co., ND
Site: Dahl 15-11H
Well: 15-11H
Wellpath: OH

Date: 11/22/2011 **Time:** 11:01:21 **Page:** 2
Co-ordinate(NE) Reference: Site: Dahl 15-11H, True North
Vertical (TVD) Reference: SITE 2127.0
Section (VS) Reference: Well (0.00N,0.00E,359.66Azi)
Survey Calculation Method: Minimum Curvature **Db:** Sybase

Survey

MD ft	Incl deg	TVD ft	VS ft	Azim deg	N/S ft	E/W ft	Clsr Dist. ft	Clsr Azi. deg	Dog Leg deg/100ft	Tool
3994.00	3.20	3991.98	-83.32	181.70	-83.39	-11.86	84.23	188.09	0.84	MWD
4077.00	3.30	4074.85	-88.02	182.80	-88.09	-12.04	88.91	187.78	0.14	MWD
4160.00	3.00	4157.72	-92.57	185.30	-92.64	-12.36	93.46	187.60	0.40	MWD
4244.00	2.30	4241.63	-96.41	191.50	-96.48	-12.90	97.34	187.61	0.90	MWD
4327.00	2.40	4324.56	-99.74	191.20	-99.82	-13.57	100.74	187.74	0.12	MWD
4401.00	2.00	4398.51	-102.49	197.50	-102.57	-14.26	103.56	187.91	0.63	MWD
4492.00	2.50	4489.44	-105.89	197.60	-105.98	-15.33	107.08	188.23	0.55	MWD
4576.00	2.50	4573.36	-109.32	202.30	-109.42	-16.58	110.67	188.62	0.24	MWD
4659.00	2.30	4656.28	-112.57	198.40	-112.67	-17.80	114.07	188.98	0.31	MWD
4742.00	2.40	4739.21	-115.80	197.20	-115.92	-18.84	117.44	189.23	0.13	MWD
4825.00	2.40	4822.14	-119.10	199.20	-119.22	-19.92	120.87	189.49	0.10	MWD
4908.00	2.50	4905.06	-122.47	196.30	-122.60	-21.00	124.38	189.72	0.19	MWD
4991.00	1.60	4988.01	-125.33	192.00	-125.47	-21.75	127.34	189.83	1.10	MWD
5075.00	2.20	5071.96	-128.04	193.70	-128.18	-22.38	130.12	189.90	0.72	MWD
5158.00	2.70	5154.89	-131.51	190.40	-131.65	-23.11	133.66	189.95	0.63	MWD
5241.00	2.10	5237.82	-134.95	184.10	-135.09	-23.57	137.13	189.90	0.79	MWD
5324.00	3.00	5320.73	-138.63	177.10	-138.78	-23.57	140.76	189.64	1.15	MWD
5408.00	3.00	5404.62	-143.03	182.10	-143.17	-23.54	145.09	189.34	0.31	MWD
5490.00	2.10	5486.54	-146.67	184.80	-146.81	-23.74	148.72	189.19	1.11	MWD
5574.00	1.90	5570.48	-149.53	197.40	-149.67	-24.28	151.63	189.22	0.57	MWD
5657.00	1.60	5653.45	-151.90	203.20	-152.05	-25.15	154.12	189.39	0.42	MWD
5740.00	2.50	5736.39	-154.72	193.70	-154.87	-26.04	157.05	189.54	1.16	MWD
5823.00	2.50	5819.31	-158.26	188.50	-158.42	-26.73	160.66	189.58	0.27	MWD
5906.00	2.10	5902.25	-161.57	183.50	-161.73	-27.09	163.98	189.51	0.54	MWD
5989.00	1.60	5985.20	-164.14	204.20	-164.31	-27.66	166.62	189.56	1.00	MWD
6073.00	1.10	6069.18	-165.92	207.30	-166.09	-28.51	168.52	189.74	0.60	MWD
6156.00	0.50	6152.17	-166.97	198.20	-167.14	-28.99	169.64	189.84	0.74	MWD
6239.00	0.40	6235.17	-167.56	210.70	-167.74	-29.25	170.27	189.89	0.17	MWD
6322.00	0.30	6318.17	-167.96	225.80	-168.14	-29.56	170.72	189.97	0.16	MWD
6405.00	0.10	6401.17	-168.15	240.10	-168.33	-29.77	170.94	190.03	0.25	MWD
6488.00	0.20	6484.17	-168.04	8.20	-168.22	-29.82	170.84	190.05	0.33	MWD
6571.00	0.30	6567.17	-167.68	355.80	-167.86	-29.81	170.48	190.07	0.14	MWD
6655.00	0.20	6651.17	-167.31	2.70	-167.49	-29.82	170.13	190.10	0.12	MWD
6738.00	0.30	6734.16	-166.96	345.20	-167.14	-29.87	169.79	190.13	0.15	MWD
6821.00	0.30	6817.16	-166.56	328.20	-166.74	-30.04	169.43	190.21	0.11	MWD
6904.00	0.40	6900.16	-166.10	345.10	-166.28	-30.23	169.00	190.30	0.17	MWD
6987.00	0.60	6983.16	-165.41	337.80	-165.60	-30.47	168.38	190.43	0.25	MWD
7071.00	0.70	7067.15	-164.56	329.30	-164.75	-30.90	167.62	190.62	0.17	MWD
7154.00	0.60	7150.15	-163.69	2.40	-163.88	-31.14	166.81	190.76	0.46	MWD
7237.00	0.60	7233.14	-162.83	8.60	-163.01	-31.05	165.94	190.79	0.08	MWD
7320.00	0.70	7316.14	-161.92	19.50	-162.11	-30.82	165.01	190.76	0.19	MWD
7403.00	0.80	7399.13	-160.91	23.30	-161.10	-30.42	163.94	190.69	0.13	MWD
7486.00	0.80	7482.12	-159.84	19.30	-160.02	-30.00	162.80	190.62	0.07	MWD
7569.00	0.70	7565.12	-158.81	16.70	-158.98	-29.66	161.73	190.57	0.13	MWD
7653.00	0.70	7649.11	-157.83	17.30	-158.00	-29.36	160.71	190.53	0.01	MWD
7736.00	0.60	7732.10	-157.01	40.50	-157.19	-28.93	159.83	190.43	0.34	MWD
7819.00	1.10	7815.10	-156.11	43.10	-156.28	-28.10	158.78	190.19	0.60	MWD
7902.00	1.30	7898.08	-154.77	36.30	-154.94	-27.00	157.27	189.89	0.30	MWD
7985.00	1.00	7981.06	-153.41	32.30	-153.56	-26.06	155.76	189.63	0.37	MWD
8068.00	0.80	8064.05	-152.26	22.60	-152.42	-25.45	154.53	189.48	0.30	MWD
8152.00	0.90	8148.04	-151.14	28.10	-151.29	-24.91	153.33	189.35	0.15	MWD
8235.00	1.00	8231.03	-150.06	44.40	-150.20	-24.10	152.12	189.11	0.35	MWD
8318.00	0.90	8314.02	-148.98	30.30	-149.12	-23.26	150.92	188.87	0.31	MWD



Ryan Energy Technologies

COMPLETION REPORT



Company: SM Energy Company
Field: McKenzie Co., ND
Site: Dahl 15-11H
Well: 15-11H
Wellpath: OH

Date: 11/22/2011 **Time:** 11:01:21 **Page:** 3
Co-ordinate(NE) Reference: Site: Dahl 15-11H, True North
Vertical (TVD) Reference: SITE 2127.0
Section (VS) Reference: Well (0.00N,0.00E,359.66Az)
Survey Calculation Method: Minimum Curvature **Db:** Sybase

Survey

MD ft	Incl deg	TVD ft	VS ft	Azim deg	N/S ft	E/W ft	Clsr Dist. ft	Clsr Azi. deg	Dog Leg deg/100ft	Tool
8401.00	0.80	8397.01	-147.97	39.00	-148.11	-22.57	149.82	188.66	0.20	MWD
8484.00	0.80	8480.00	-147.03	31.10	-147.16	-21.90	148.78	188.47	0.13	MWD
8567.00	0.80	8562.99	-145.96	7.00	-146.09	-21.53	147.67	188.39	0.40	MWD
8650.00	0.80	8645.99	-144.81	351.50	-144.94	-21.55	146.54	188.46	0.26	MWD
8734.00	0.80	8729.98	-143.65	349.30	-143.79	-21.75	145.42	188.60	0.04	MWD
8817.00	1.00	8812.97	-142.36	355.30	-142.49	-21.91	144.17	188.74	0.27	MWD
8900.00	1.00	8895.95	-140.92	355.80	-141.05	-22.02	142.76	188.87	0.01	MWD
8984.00	1.00	8979.94	-139.45	1.70	-139.59	-22.06	141.32	188.98	0.12	MWD
9066.00	1.10	9061.93	-137.96	352.10	-138.09	-22.14	139.86	189.11	0.25	MWD
9149.00	1.00	9144.91	-136.45	5.60	-136.58	-22.18	138.37	189.22	0.32	MWD
9233.00	1.30	9228.90	-134.77	2.60	-134.90	-22.07	136.69	189.29	0.36	MWD
9313.00	1.00	9308.88	-133.16	0.40	-133.30	-22.02	135.10	189.38	0.38	MWD
9396.00	1.10	9391.87	-131.65	9.10	-131.79	-21.89	133.59	189.43	0.23	MWD
9479.00	0.70	9474.86	-130.42	27.50	-130.55	-21.53	132.31	189.36	0.59	MWD
9562.00	0.80	9557.85	-130.24	117.30	-130.36	-20.78	132.01	189.06	1.28	MWD
9646.00	1.70	9641.83	-131.64	154.80	-131.76	-19.73	133.23	188.52	1.39	MWD
9729.00	3.00	9724.76	-134.93	182.40	-135.05	-19.30	136.42	188.13	2.03	MWD
9812.00	3.60	9807.62	-139.69	185.80	-139.81	-19.65	141.18	188.00	0.76	MWD
9895.00	3.40	9890.47	-144.72	187.10	-144.84	-20.22	146.25	187.95	0.26	MWD
9978.00	3.20	9973.33	-149.46	187.30	-149.58	-20.82	151.02	187.92	0.24	MWD
10061.00	3.10	10056.21	-153.90	196.70	-154.03	-21.76	155.56	188.04	0.63	MWD
10145.00	2.20	10140.12	-157.58	200.30	-157.72	-22.97	159.38	188.29	1.09	MWD
10228.00	1.40	10223.08	-159.98	205.90	-160.12	-23.96	161.91	188.51	0.99	MWD
10274.00	0.90	10269.07	-160.57	255.40	-160.72	-24.56	162.59	188.69	2.31	MWD
10316.00	4.90	10311.02	-158.86	358.20	-159.01	-24.93	160.95	188.91	12.32	MWD
10356.00	12.60	10350.52	-152.78	359.70	-152.93	-25.01	154.96	189.29	19.26	MWD
10398.00	18.50	10390.97	-141.53	359.40	-141.68	-25.10	143.88	190.05	14.05	MWD
10440.00	24.80	10429.98	-126.04	359.80	-126.19	-25.21	128.68	191.30	15.00	MWD
10481.00	28.50	10466.62	-107.65	359.40	-107.80	-25.34	110.74	193.23	9.03	MWD
10523.00	32.40	10502.82	-86.37	358.90	-86.52	-25.66	90.25	196.52	9.31	MWD
10564.00	35.30	10536.87	-63.54	359.90	-63.69	-25.89	68.75	202.12	7.20	MWD
10606.00	39.30	10570.27	-38.09	0.60	-38.25	-25.77	46.12	213.97	9.58	MWD
10648.00	43.60	10601.74	-10.31	1.70	-10.46	-25.20	27.29	247.47	10.38	MWD
10689.00	47.60	10630.43	18.95	2.80	18.81	-24.04	30.53	308.03	9.94	MWD
10731.00	52.40	10657.42	51.02	4.90	50.89	-21.86	55.39	336.75	12.05	MWD
10772.00	59.10	10680.48	84.77	4.20	84.66	-19.19	86.81	347.23	16.40	MWD
10814.00	65.80	10699.89	121.87	4.40	121.77	-16.39	122.87	352.33	15.96	MWD
10855.00	71.80	10714.71	159.95	4.20	159.87	-13.53	160.44	355.16	14.64	MWD
10897.00	77.50	10725.83	200.37	1.30	200.30	-11.60	200.64	356.69	15.12	MWD
10936.00	83.50	10732.26	238.80	1.30	238.74	-10.73	238.98	357.43	15.38	MWD
10988.00	84.80	10737.56	290.52	0.20	290.47	-10.05	290.64	358.02	3.27	MWD
11080.00	86.80	10744.30	382.27	359.70	382.21	-10.13	382.35	358.48	2.24	MWD
11172.00	89.60	10747.19	474.21	0.80	474.16	-9.73	474.26	358.82	3.27	MWD
11263.00	90.20	10747.35	565.18	1.00	565.14	-8.30	565.21	359.16	0.70	MWD
11355.00	90.70	10746.63	657.17	359.80	657.14	-7.66	657.18	359.33	1.41	MWD
11447.00	91.20	10745.10	749.16	0.10	749.12	-7.74	749.16	359.41	0.63	MWD
11539.00	90.70	10743.58	841.14	0.60	841.11	-7.18	841.14	359.51	0.77	MWD
11630.00	91.60	10741.75	932.10	0.90	932.08	-5.99	932.10	359.63	1.04	MWD
11722.00	92.20	10738.70	1024.02	1.30	1024.01	-4.22	1024.02	359.76	0.78	MWD
11814.00	89.60	10737.25	1115.96	1.40	1115.97	-2.05	1115.97	359.89	2.83	MWD
11905.00	89.20	10738.21	1206.93	0.90	1206.95	-0.23	1206.95	359.99	0.70	MWD
11996.00	89.80	10739.00	1297.91	0.30	1297.94	0.72	1297.94	0.03	0.93	MWD



Ryan Energy Technologies

COMPLETION REPORT



Company: SM Energy Company
Field: McKenzie Co., ND
Site: Dahl 15-11H
Well: 15-11H
Wellpath: OH

Date: 11/22/2011 **Time:** 11:01:21 **Page:** 4
Co-ordinate(NE) Reference: Site: Dahl 15-11H, True North
Vertical (TVD) Reference: SITE 2127.0
Section (VS) Reference: Well (0.00N,0.00E,359.66Azi)
Survey Calculation Method: Minimum Curvature **Db:** Sybase

Survey

MD ft	Incl deg	TVD ft	VS ft	Azim deg	N/S ft	E/W ft	Clsr Dist. ft	Clsr Azi. deg	Dog Leg deg/100ft	Tool
12087.00	90.50	10738.76	1388.90	0.00	1388.93	0.96	1388.94	0.04	0.84	MWD
12177.00	90.00	10738.37	1478.90	0.60	1478.93	1.43	1478.93	0.06	0.87	MWD
12268.00	90.10	10738.29	1569.89	0.60	1569.93	2.39	1569.93	0.09	0.11	MWD
12358.00	89.60	10738.53	1659.88	359.90	1659.93	2.78	1659.93	0.10	0.96	MWD
12449.00	90.50	10738.45	1750.88	0.10	1750.92	2.78	1750.93	0.09	1.01	MWD
12533.00	90.20	10737.93	1834.86	1.40	1834.91	3.88	1834.92	0.12	1.59	MWD
12616.00	89.40	10738.22	1917.84	0.40	1917.90	5.18	1917.91	0.15	1.54	MWD
12699.00	89.80	10738.80	2000.82	1.10	2000.89	6.27	2000.90	0.18	0.97	MWD
12782.00	90.90	10738.30	2083.80	0.60	2083.88	7.50	2083.89	0.21	1.46	MWD
12865.00	90.90	10736.99	2166.77	0.90	2166.86	8.59	2166.88	0.23	0.36	MWD
12948.00	91.00	10735.62	2249.74	0.70	2249.84	9.75	2249.86	0.25	0.27	MWD
13032.00	91.40	10733.86	2333.71	0.80	2333.82	10.84	2333.84	0.27	0.49	MWD
13115.00	90.40	10732.55	2416.69	0.60	2416.80	11.86	2416.83	0.28	1.23	MWD
13198.00	90.50	10731.90	2499.68	0.30	2499.79	12.51	2499.82	0.29	0.38	MWD
13281.00	90.60	10731.11	2582.66	1.00	2582.78	13.45	2582.82	0.30	0.85	MWD
13364.00	91.40	10729.66	2665.62	1.30	2665.75	15.12	2665.80	0.32	1.03	MWD
13447.00	91.30	10727.70	2748.57	1.00	2748.71	16.78	2748.76	0.35	0.38	MWD
13530.00	89.90	10726.83	2831.55	359.00	2831.70	16.78	2831.75	0.34	2.94	MWD
13614.00	89.50	10727.27	2915.55	359.20	2915.69	15.46	2915.73	0.30	0.53	MWD
13697.00	89.60	10727.92	2998.54	359.10	2998.68	14.23	2998.71	0.27	0.17	MWD
13780.00	90.30	10728.00	3081.54	0.00	3081.68	13.58	3081.71	0.25	1.37	MWD
13863.00	90.90	10727.13	3164.53	359.80	3164.67	13.44	3164.70	0.24	0.76	MWD
13946.00	91.30	10725.53	3247.52	0.40	3247.65	13.58	3247.68	0.24	0.87	MWD
14029.00	90.90	10723.94	3330.50	359.90	3330.64	13.80	3330.67	0.24	0.77	MWD
14113.00	90.40	10722.99	3414.49	358.40	3414.62	12.55	3414.64	0.21	1.88	MWD
14196.00	90.60	10722.26	3497.46	358.40	3497.59	10.23	3497.60	0.17	0.24	MWD
14279.00	90.50	10721.47	3580.41	357.20	3580.52	7.05	3580.53	0.11	1.45	MWD
14362.00	90.90	10720.45	3663.36	358.30	3663.45	3.79	3663.45	0.06	1.41	MWD
14445.00	90.10	10719.73	3746.31	357.40	3746.38	0.68	3746.38	0.01	1.45	MWD
14528.00	90.40	10719.37	3829.26	357.80	3829.31	-2.80	3829.31	359.96	0.60	MWD
14612.00	89.70	10719.29	3913.18	356.60	3913.21	-6.90	3913.21	359.90	1.65	MWD
14695.00	88.70	10720.45	3996.06	356.70	3996.06	-11.75	3996.07	359.83	1.21	MWD
14778.00	89.30	10721.90	4078.97	357.90	4078.95	-15.66	4078.98	359.78	1.62	MWD
14861.00	91.00	10721.68	4161.95	359.60	4161.92	-17.47	4161.96	359.76	2.90	MWD
14944.00	90.90	10720.31	4244.94	359.50	4244.91	-18.12	4244.95	359.76	0.17	MWD
15027.00	91.50	10718.57	4327.92	0.00	4327.89	-18.49	4327.93	359.76	0.94	MWD
15111.00	91.60	10716.30	4411.89	359.40	4411.86	-18.93	4411.90	359.75	0.72	MWD
15194.00	89.50	10715.50	4494.88	358.50	4494.84	-20.45	4494.88	359.74	2.75	MWD
15277.00	89.40	10716.30	4577.85	358.40	4577.80	-22.69	4577.86	359.72	0.17	MWD
15360.00	89.30	10717.24	4660.83	358.30	4660.76	-25.08	4660.83	359.69	0.17	MWD
15443.00	90.00	10717.74	4743.82	359.30	4743.74	-26.82	4743.82	359.68	1.47	MWD
15526.00	90.80	10717.16	4826.81	359.30	4826.73	-27.83	4826.81	359.67	0.96	MWD
15609.00	89.20	10717.16	4909.80	358.60	4909.71	-29.35	4909.80	359.66	2.10	MWD
15693.00	89.90	10717.82	4993.78	358.40	4993.68	-31.55	4993.78	359.64	0.87	MWD
15776.00	88.40	10719.06	5076.73	357.40	5076.61	-34.59	5076.73	359.61	2.17	MWD
15859.00	87.50	10722.02	5159.62	357.70	5159.48	-38.14	5159.62	359.58	1.14	MWD
15942.00	88.40	10724.99	5242.52	358.00	5242.37	-41.25	5242.53	359.55	1.14	MWD
16025.00	88.50	10727.24	5325.47	358.60	5325.30	-43.71	5325.48	359.53	0.73	MWD
16108.00	89.40	10728.76	5408.45	359.00	5408.27	-45.45	5408.46	359.52	1.19	MWD
16192.00	89.90	10729.27	5492.44	359.00	5492.26	-46.92	5492.46	359.51	0.60	MWD
16275.00	89.20	10729.93	5575.43	358.60	5575.23	-48.66	5575.45	359.50	0.97	MWD
16358.00	88.80	10731.37	5658.40	358.70	5658.20	-50.61	5658.43	359.49	0.50	MWD
16441.00	88.90	10733.04	5741.37	358.40	5741.16	-52.71	5741.40	359.47	0.38	MWD



Ryan Energy Technologies

COMPLETION REPORT



Company: SM Energy Company
Field: McKenzie Co., ND
Site: Dahl 15-11H
Well: 15-11H
Wellpath: OH

Date: 11/22/2011 **Time:** 11:01:21 **Page:** 5
Co-ordinate(NE) Reference: Site: Dahl 15-11H, True North
Vertical (TVD) Reference: SITE 2127.0
Section (VS) Reference: Well (0.00N,0.00E,359.66Azi)
Survey Calculation Method: Minimum Curvature **Db:** Sybase

Survey

MD ft	Incl deg	TVD ft	VS ft	Azim deg	N/S ft	E/W ft	Clsr Dist. ft	Clsr Azi. deg	Dog Leg deg/100ft	Tool
16524.00	89.30	10734.34	5824.34	358.50	5824.11	-54.96	5824.37	359.46	0.50	MWD
16607.00	90.00	10734.85	5907.32	358.60	5907.09	-57.06	5907.36	359.45	0.85	MWD
16691.00	91.10	10734.04	5991.30	358.60	5991.06	-59.11	5991.35	359.43	1.31	MWD
16774.00	89.40	10733.68	6074.29	359.10	6074.03	-60.77	6074.34	359.43	2.13	MWD
16857.00	89.50	10734.48	6157.28	359.00	6157.02	-62.15	6157.33	359.42	0.17	MWD
16940.00	89.90	10734.91	6240.27	358.80	6240.00	-63.74	6240.33	359.41	0.54	MWD
17023.00	89.80	10735.13	6323.27	359.50	6322.99	-64.97	6323.33	359.41	0.85	MWD
17106.00	89.80	10735.42	6406.26	359.00	6405.99	-66.06	6406.33	359.41	0.60	MWD
17190.00	90.40	10735.27	6490.26	359.60	6489.98	-67.09	6490.32	359.41	1.01	MWD
17273.00	90.90	10734.33	6573.26	0.00	6572.97	-67.38	6573.32	359.41	0.77	MWD
17356.00	90.90	10733.03	6656.25	359.50	6655.96	-67.74	6656.31	359.42	0.60	MWD
17439.00	92.20	10730.78	6739.21	0.00	6738.93	-68.10	6739.27	359.42	1.68	MWD
17522.00	90.30	10728.97	6822.18	1.20	6821.90	-67.23	6822.23	359.44	2.71	MWD
17605.00	91.60	10727.60	6905.12	1.60	6904.86	-65.20	6905.17	359.46	1.64	MWD
17688.00	88.50	10727.52	6988.09	0.50	6987.83	-63.68	6988.12	359.48	3.96	MWD
17772.00	88.30	10729.87	7072.05	0.60	7071.80	-62.88	7072.08	359.49	0.27	MWD
17855.00	89.20	10731.68	7155.00	1.40	7154.76	-61.43	7155.03	359.51	1.45	MWD
17938.00	89.10	10732.91	7237.94	1.90	7237.72	-59.04	7237.96	359.53	0.61	MWD
18021.00	88.90	10734.36	7320.89	1.00	7320.68	-56.94	7320.90	359.55	1.11	MWD
18104.00	89.40	10735.59	7403.87	359.60	7403.67	-56.50	7403.88	359.56	1.79	MWD
18187.00	89.60	10736.32	7486.87	0.10	7486.66	-56.72	7486.88	359.57	0.65	MWD
18271.00	90.00	10736.61	7570.87	359.30	7570.66	-57.16	7570.88	359.57	1.06	MWD
18354.00	90.20	10736.46	7653.86	359.00	7653.65	-58.39	7653.87	359.56	0.43	MWD
18437.00	90.70	10735.81	7736.86	359.10	7736.64	-59.77	7736.87	359.56	0.61	MWD
18520.00	89.80	10735.45	7819.85	358.60	7819.62	-61.43	7819.86	359.55	1.24	MWD
18603.00	89.20	10736.17	7902.83	359.00	7902.60	-63.17	7902.85	359.54	0.87	MWD
18686.00	89.00	10737.48	7985.81	358.10	7985.56	-65.27	7985.83	359.53	1.11	MWD
18770.00	89.30	10738.72	8069.77	358.10	8069.50	-68.06	8069.79	359.52	0.36	MWD
18853.00	89.60	10739.52	8152.73	357.90	8152.45	-70.95	8152.76	359.50	0.43	MWD
18936.00	90.00	10739.81	8235.67	357.10	8235.37	-74.57	8235.71	359.48	1.08	MWD
19019.00	91.40	10738.80	8318.61	358.60	8318.30	-77.69	8318.66	359.46	2.47	MWD
19102.00	91.20	10736.91	8401.59	359.30	8401.26	-79.21	8401.64	359.46	0.88	MWD
19185.00	90.60	10735.61	8484.57	359.80	8484.25	-79.86	8484.63	359.46	0.94	MWD
19269.00	90.10	10735.10	8568.57	0.60	8568.25	-79.57	8568.62	359.47	1.12	MWD
19352.00	88.80	10735.89	8651.55	0.60	8651.24	-78.70	8651.59	359.48	1.57	MWD
19435.00	89.20	10737.34	8734.53	0.60	8734.22	-77.83	8734.57	359.49	0.48	MWD
19518.00	89.60	10738.21	8817.51	0.50	8817.21	-77.03	8817.55	359.50	0.50	MWD
19601.00	89.00	10739.23	8900.50	358.70	8900.20	-77.61	8900.54	359.50	2.29	MWD
19684.00	89.20	10740.53	8983.48	358.50	8983.16	-79.64	8983.52	359.49	0.34	MWD
19767.00	89.60	10741.40	9066.46	359.10	9066.14	-81.38	9066.51	359.49	0.87	MWD
19851.00	90.40	10741.40	9150.46	359.50	9150.13	-82.40	9150.50	359.48	1.06	MWD
19934.00	89.40	10741.54	9233.46	359.80	9233.13	-82.91	9233.50	359.49	1.26	MWD
20017.00	88.60	10742.99	9316.45	359.40	9316.12	-83.49	9316.49	359.49	1.08	MWD
20100.00	88.70	10744.95	9399.42	359.40	9399.09	-84.36	9399.47	359.49	0.12	MWD
20183.00	88.80	10746.76	9482.40	359.50	9482.06	-85.16	9482.45	359.49	0.17	MWD
20266.00	89.40	10748.06	9565.39	359.40	9565.05	-85.95	9565.44	359.49	0.73	MWD
20350.00	89.40	10748.94	9649.39	0.10	9649.04	-86.32	9649.43	359.49	0.83	MWD
20433.00	89.40	10749.81	9732.38	359.90	9732.04	-86.32	9732.42	359.49	0.24	MWD
20516.00	88.60	10751.26	9815.37	359.40	9815.02	-86.83	9815.41	359.49	1.14	MWD
20599.00	88.80	10753.14	9898.34	0.10	9898.00	-87.19	9898.39	359.50	0.88	MWD
20682.00	88.90	10754.81	9981.33	359.80	9980.98	-87.26	9981.37	359.50	0.38	MWD
20765.00	88.80	10756.47	10064.31	0.20	10063.97	-87.26	10064.35	359.50	0.50	MWD



Ryan Energy Technologies

COMPLETION REPORT



Company: SM Energy Company
Field: McKenzie Co., ND
Site: Dahl 15-11H
Well: 15-11H
Wellpath: OH

Date: 11/22/2011 Time: 11:01:21 Page: 6
Co-ordinate(NE) Reference: Site: Dahl 15-11H, True North
Vertical (TVD) Reference: SITE 2127.0
Section (VS) Reference: Well (0.00N,0.00E,359.66Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	TVD ft	VS ft	Azim deg	N/S ft	E/W ft	Clsr Dist. ft	Clsr Azi. deg	Dog Leg deg/100ft	Tool
20798.00	88.80	10757.16	10097.30	0.40	10096.96	-87.09	10097.34	359.51	0.61	MWD
20850.00	88.80	10758.25	10149.28	0.40	10148.95	-86.72	10149.32	359.51	0.00	PROJECTED



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.
21266

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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date December 10, 2011	<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input type="checkbox"/> Report of Work Done	Date Work Completed	<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.		<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
Approximate Start Date		<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
		<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
		<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
		<input checked="" type="checkbox"/> Other	Reserve Pit Reclamation

Well Name and Number Dahl 15-11H					
Footages	22 F S L	2488 F E L	Qtr-Qtr SWSE	Section 11	Township 153 N Range 101 W
Field	Pool Bakken		County McKenzie		

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

Name of Contractor(s) Franz Construction Inc.			
Address P. O. Box 1046	City Sidney	State MT	Zip Code 59270

DETAILS OF WORK

SM Energy Company requests approval to reclaim the reserve pit at the Bagley 4-30H as follows:

Dispose of pit water at one of the following salt water disposals:

Hjort 32-17 SWD (Permit #MTS21MD-0088) 1820' FNL, 2320' FEL (SWNE) Sec 17-T32N-R56E Sheridan Co., MT	Wolter 16-23 SWD (UIC #W0207S06590) 250' FSL, 240' FEL (SESE) Sec 23-T163N-R100W Divide Co., ND
---	--

Apply flyash to the drilling mud to solidify it, cover with 4' of backfill and topsoil, then grade to promote surface drainage away from the reclaimed pit.

The surface owner is: Kirby A. Dahl 817 S 3rd St. Cold Springs, MN 56320	Linda Prochazka Dahl Rev Tst 1-26-07 2005 Wynstone Circle NE North Canto, OH 44720	Bruce E. Dahl 4715 Cliff Dr Rapid City, SD 57702
--	--	--

Sharon Eilers 2200 SW Cole Ct Tualatin, OR 87062	Carmelina Lee 3840 Rimrock Rd#3206 Billings, MT 59102	James R Lee 3957 Palisades Pk Dr Billings, MT 59102	Larry D Lee 1559 E Omaha Dr Bismarck, ND 58504	Doris Lindvig Life Estate 515 12th St W Williston, ND 58801
--	---	---	--	---

Company SM Energy Company	Telephone Number (406) 245-6248	
Address P. O. Box 7168		
City Billings	State MT	Zip Code 59103-7168
Signature <i>Lorena Griggs</i>	Printed Name Lorena Griggs	
Title Regulatory & Safety Assistant	Date November 28, 2011	
Email Address rgriggs@sm-energy.com		

FOR STATE USE ONLY	
<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date <i>12-8-11</i>	
By <i>Carrie Dahl</i>	
Title <i>Karen</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.
21266

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 November 21, 2011	<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 checked="" 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	Drilling Progress

Well Name and Number Dahl 15-11H				
Footages	Qtr-Qtr	Section	Township	Range
22 F S L	2488 F E L	SWSE	11	153 N 101 W
Field Baker	Pool Bakken	County McKenzie		

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

Name of Contractor(s) Nabors Drilling USA LP	City Williston	State ND	Zip Code 58802
Address P. O. Box 2396			

DETAILS OF WORK

Completed rig repairs, then continued drilling the 6" lateral from 11,044', reaching 20,850' TD on 11/18/11. Ran 4 1/2" 11.6# HCP-110 casing liner from 10,240' - 20,835', installed the tubing head and released the rig on 11/21/11.

Company SM Energy Company	Telephone Number (406) 245-6248	
Address P. O. Box 7168		
City Billings	State MT	Zip Code 59103-7168
Signature <i>Joy Torgerson</i>	Printed Name Joy Torgerson	
Title Engineering Tech	Date November 22, 2011	
Email Address jtorgeron@sm-energy.com		

FOR STATE USE ONLY	
<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <i>December 7, 2011</i>	
By <i>Daniel J. McElroy</i>	
Title PETROLEUM ENGINEER	

SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4
SFN 5749

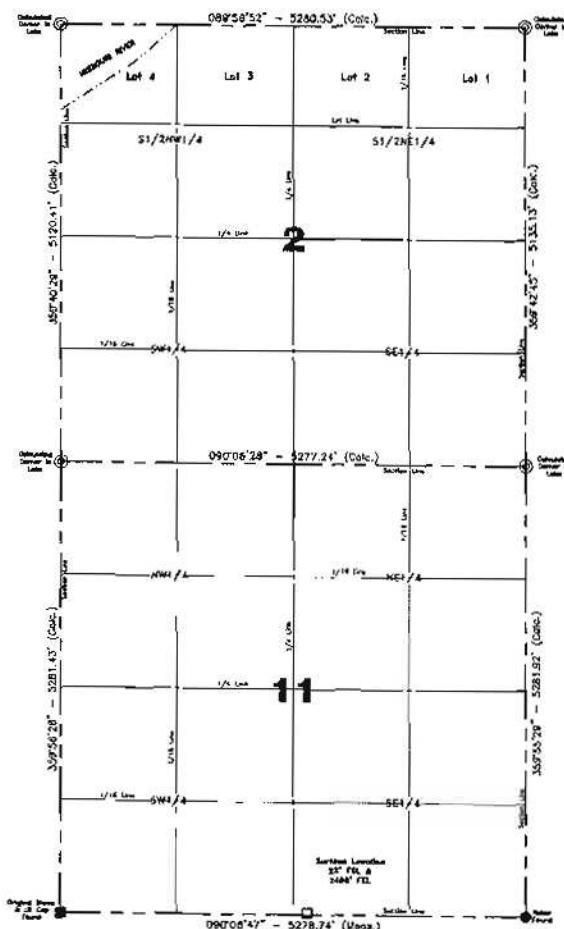
1. Approval shall be obtained prior to perforating or recompleting a well in a reservoir other than the reservoir in which the well is currently completed, prior to plug back of a well, prior to temporary abandonment of a well, prior to abandonment of a well, prior to reclamation of a well site, prior to reclamation of a reserve pit, and prior to beginning a workover project, which may qualify for a tax exemption pursuant to NDCC Section 57-51.1-03. Please refer to Section 43-02-03-16 of the North Dakota Administrative Code (NDAC) regarding recompleting a well in a reservoir other than the reservoir in which the well is currently completed or plugging back of a well, to Section 43-02-03-55 NDAC regarding temporary abandonment of a well, to Section 43-02-03-33 or Section 43-02-05-08 NDAC regarding abandonment of wells, to Section 43-02-03-19 NDAC regarding reclamation, and to Section 43-02-09-03 NDAC regarding workover projects.
2. Upon the completion of any remedial work, or attempted remedial work such as plugging back, drilling deeper, acidizing, shooting, formation fracturing, squeezing operations, setting liner, fishing operations, repair work, perforating, reperforating, or other similar operations not specifically covered herein, a report on the operation shall be filed on a Sundry Notice - Form 4 (SFN 5749) with the Director. The report shall present a detailed account of all work done and the date of such work; the daily production of oil, gas, and water both prior to and after the operation; the shots per foot, size, and depth of perforations; the quantity of sand, crude, chemical, or other materials employed in the operation; and any other pertinent information or operations which affect the original status of the well and are not specifically covered herein. Please refer to Section 43-02-03-31 NDAC.
3. Upon the completion of a workover project, which may qualify for a tax exemption pursuant to NDCC Section 57-51.1-03, a report on the operation shall be filed on a Sundry Notice - Form 4 (SFN 5749) detailing the work done. Include the dates during which the workover rig was in service actually performing work on the workover project and the date the workover was completed, a detailed list identifying all labor, services, and materials used and equipment replaced during the workover project, the cost of each item, and whether the replacement equipment was new or used. The value of all equipment removed from service must be listed. The average daily oil production from the well during the first two months after completion of the project must be included if the costs of the project did not exceed sixty-five thousand dollars. All gauge tickets of oil produced in incomplete months during the first two months after completion of the workover and the volume of oil stored on the well premises immediately prior to commencement of the workover project must also be included. Please refer to Section 43-02-09-04 NDAC.
4. Upon the initial installation of pumping equipment, or change in type or depth of pumping equipment designed to increase productivity in a well, the operator shall file a Sundry Notice - Form 4 (SFN 5749) of such installation. The notice shall include all pertinent information on the pump and the operation thereof including the date of such installation, and the daily production of the well prior to and after the pump has been installed. Please refer to Section 43-02-03-31 NDAC.
5. The well file number, well name and number, well location, field, pool, and county shall coincide with the official records on file with the Commission.
6. The original and one copy of this report shall be filed with the Industrial Commission of North Dakota, Oil and Gas Division, 600 East Boulevard, Dept. 405, Bismarck, ND 58505-0840.

21266

TH



SM Energy
Dahl 15-11H
22' FSL & 2,488' FEL
SW SE Section 11, T153N-R101W
Baker Field / Bakken
McKenzie County, North Dakota



BOTTOM HOLE LOCATION:

10,148.96' North & 86.49' West of surface location or approx.
 238.49' FNL & 2574.49' FEL, Lot 2 Section 2, T153N-R101W

Prepared for:
 Dean Richmond
 SM Energy
 P.O.Box 7168
 Billings, MT 59103-7168

Prepared by:
 Murray Dighans Jr., Vimal Pradhan, Andy Oksendahl
 P.O.Box 51297, Billings, MT 59105
 (406) 259-4124
 geology@sunburstconsulting.com
 www.sunburstconsulting.com

04/15/2012

WELL EVALUATION



Figure 1. Extreme 18 drilling SM Energy Company Dahl 15-11H during November 2011 in McKenzie County, North Dakota (Murray Dighans, Sunburst Consulting Geologist).

INTRODUCTION

SM Energy Dahl 15-11H [SW SE Sec. 11 T153N R101W] is located 6 miles south of Williston in McKenzie County, North Dakota. Dahl 15-11H is a two section horizontal Middle Bakken well planned to be drilled north across sections 11 and 2 (Figure 2). Directional drilling and geo-steering was used to land and maintain exposure to the Middle Bakken reservoir.

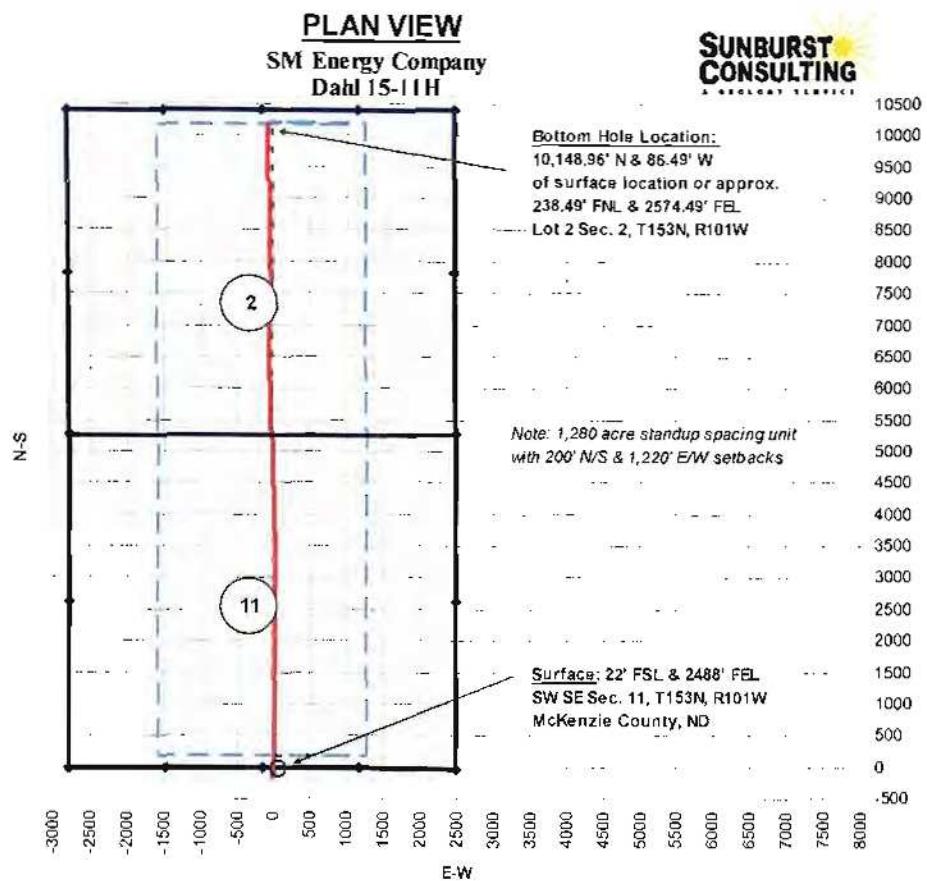


Figure 2. Plan view of Dahl 15-11H spacing unit and well path.

OFFSET WELLS

Three offset wells were used to estimate formation tops and landing target on Dahl 15-11H. These wells were the *SM Energy Co., Lindvig 1-11HR*, located 0.38 miles northeast, the *SM Energy Co., M&G 14-2HR* located 1.18 miles northwest, and the *SM Energy Co., Rosebud 22-11* located 0.7 miles northwest. The *Lindvig 1-11HR* was closest and most helpful in estimating Middle Bakken entry during curve operations.

ENGINEERING

The **Dahl 15-11H** was spud on October 14, 2011 by Extreme 18. A 13 1/2" hole was drilled with fresh water to 2,133' and cased with 9 5/8" casing cemented to surface. A Hughes 8 3/4" PDC bit was used to drill the first part of the vertical. This assembly was tripped out for a new bit and motor at 9,366'. Gamma was also picked up at this time. The second assembly was also a Hughes PDC bit. The vertical was drilled in 119.5 hrs. Diesel invert drilling fluid with a target weight of 10.0 ppg was used to drill the vertical hole.

Ryan Drilling Technologies and Solutions provided the personnel and equipment for the measurement while drilling (MWD) services as well as the night directional driller. Directional drilling was supervised by the company men during the day. Throughout this project, steering decisions were made through a combined effort of the directional drillers, MWD, and Sunburst

Consulting contractors, assisted by continual communication. A Security FXD55M PDC was used at a kick-off point (KOP) of 10,286'. After drilling the curve in 19.5 hours, intermediate casing was set at 10,952 measured depth (MD).

Once casing was set lateral operations began. Two assemblies were used to drill the lateral both utilizing Hughes DP505FX PDC bits in front of Ryan motors. The first assembly was replaced at 11,044' after an MWD tool failure. This assembly drilled 62' in 1 hour. Following the trip in for the MWD failure the rig experienced difficulties with the draw works. Parts were shipped for repair and Sunburst Geologists were placed on stand bye until the parts returned. This cost ten days of rig downtime and an extra day on top of that to trip for a new BHA. The second assembly successfully reached TD drilling 9,806' in 168 hrs. Bottom Hole Location: 10,148.96' N & 86.49' W of surface location or approximately 238.49' FNL & 2,574.49' FEL; Lot 2 Sec. 2, T153N, R101W

GEOLOGY

Methods

Sunburst Consulting, Inc provided on site geologic representation for Dahl 15-11H. Drilling parameters such as depth, drilling rate, pump strokes and total gas were broadcast on location through Pason's electronic data recorder system. The gas was linked from Sunburst's digital gas chromatograph. Hydrocarbon constituents (C_1-C_4) are expressed in part-per-million concentrations. The chromatograph is fed by 1/4" polyflow from an agitation system set up at the shakers. Under the instruction of Sunburst geologists, rig crews collected lagged samples in 30' intervals. Intermediate samples were also collected during intervals requiring extra scrutiny. Rock cuttings were analyzed in wet and dry conditions under a 10x45 power binocular microscope (for detailed lithologic descriptions see appendix). Cuttings were sent to SM Energy and the North Dakota Geological Survey. Along with sample lithology, MWD gamma ray data and rate of penetration (ROP) were used to assist in landing the curve as well as steer through the lateral.

Lithology and Hydrocarbon Show

Sample analysis began at 8,340' MD in the Charles Formation [Mississippian Madison Group]. Samples were interbedded salt, anhydrite, and limestone. *No gas or oil shows were observed.*

The Base of the Last Salt was logged at 9,226' TVD -7,099' SS. The Ratcliffe interval was logged at 9,286' TVD -7,159' SS based on returns of limestone with trace algal material and traces of anhydrite. *The Ratcliffe interval had one gas show of 24.8 units.*

The Mission Canyon Formation [Mississippian Madison Group] was logged at 9,446' TVD -7,319' SS. Typical lithologies were tan to light brown and grayish brown, occasional dark brown, microcrystalline lime mudstone and wackestone with minor interbedded anhydrite. Several gas shows were recorded in the Mission Canyon from 30 to 70 units increasing with depth. Intermittent traces of spotty brown oil staining were observed in samples. Background gas held from 20-40 units.

The Lodgepole Formation [Mississippian Madison Group] was encountered at 10,018' TVD -7,891' SS. This interval contained brown to tan, white to off white argillaceous lime mudstone and wackestone. This facies was microcrystalline and earthy in texture, with varying amounts of pyrite. *Background gas increased throughout the vertical from 25 to 40+ units depleting to 20+ units after the trip for curve assembly. At a measured depth of 10,598' a possible fracture greatly increased background gas to 100+ units. Another possible fracture at 10,836' near the top of Scallion interval raised background gas 800+ units with shows as high as 2,271 units, trace amounts of spotty brown oil stain were observed.*

The top of the Bakken Formation [Mississippian-Devonian] was logged at 10,712' TVD -8,585' SS with sample returns of black carbonaceous and petroliferous shale typical of the Upper Shale Member and characterized by very high gamma (255+ api) and elevated background gas of 800-1,500 units.

The Middle Bakken was logged at 10,728' TVD, -8,601' SS. Near the completion of curve operations, below the Upper Bakken Shale and above the target zone, a medium to light gray brown siltstone was observed with interbedded limestone. It was described as, blocky, earthy, with common amounts of pyrite. Beneath the siltstone, the samples were medium to light gray with common white to off white. They were fine grained, friable, sub angular, and calcite cemented. Samples also contained varying amounts of pyrite and oil staining. Oil staining was most prevalent in this zone often increasing from spotty to even oil staining. Gas values often increased in the upper portion of the preferred porosity. These samples correlated with a ratty gamma signature ranging from 65-80 api counts.

The center of the preferred porosity zone was marked by lower gamma values as low as 40 api that typically correlated with cleaner and more calcareous samples. This zone ranged from 3-5' thick. Often these samples contained lesser amounts of pyrite. In the lower half of target samples were light to medium brown and gray samples typically containing less oil staining. At the base of target was a "ratty" cool signature which ranged from 45-60 api that was attributed to stringers of cleaner, heavily calcite-cemented sandstone. Below the target interval drill cuttings observed showed diminished oil staining and were darker in color. Gamma counts increased as the well bore dropped in formation correlating with the darker coloring of silty sandstone.

Perhaps the most perplexing portion of the well was at 15,000'. The wellbore traveled from gamma and samples that correlated with being below the preferred porosity to gamma values and samples that were indicative of being in the upper half of target. In this transition the cool "ratty" gamma just above the base of target was likely faulted out.

Gas values increased from below 300 units until 12,582' where a possible fracture increased gas values to 300+ units. Around 15,000' gas values began to greatly increase to 500-800 units with shows as high as 1,200+ units. This is likely through a combined effort of being higher in the preferred porosity and the possible and subsequent fracture seen at 15,000'. After 16,200' the wellbore began to drop in formation and as a result gas values fell back to 500-800 units with few gas shows reaching 1,000+ units.

From 17,220' to TD samples were compromised as a result of large amounts of lubricant used.

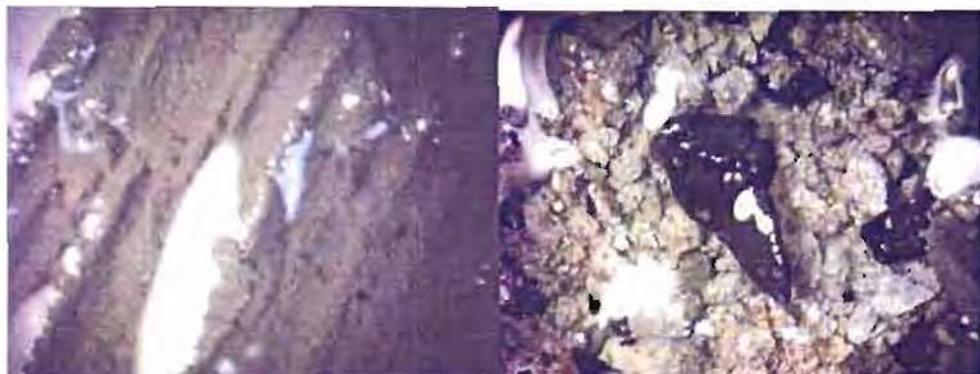


Figure 3 and 4. Lubricant contaminated sample (left); Middle Bakken gray brown siltstone (trace upper shale) (right).

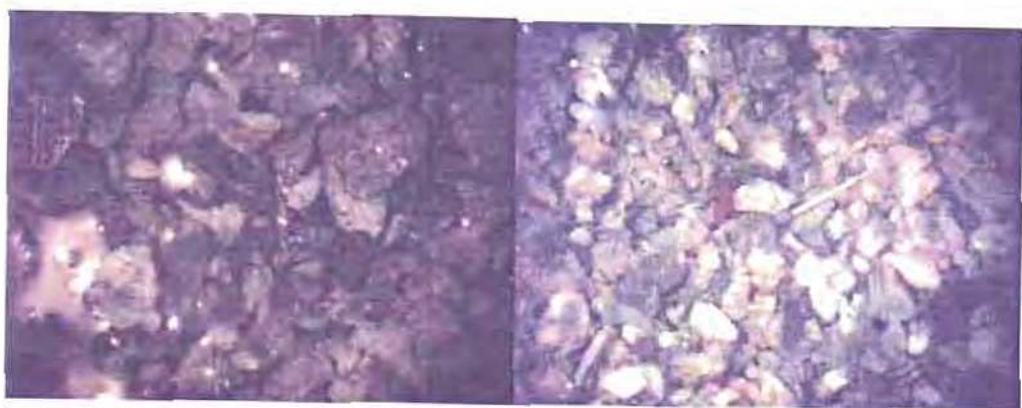


Figure 5 and 6. Gray-brown and tan silty sandstone (left) and off white silty sandstone (right) of the Middle Bakken.

Gas tracking and visible oil show in both cuttings and over the shakers were monitored to assist in evaluating the viability of the reservoir. No oil was observed at the shakers throughout the lateral. Greater amounts of oil staining was observed in the upper half of the preferred porosity zone which varied from trace to common spotty to even brown oil stain.

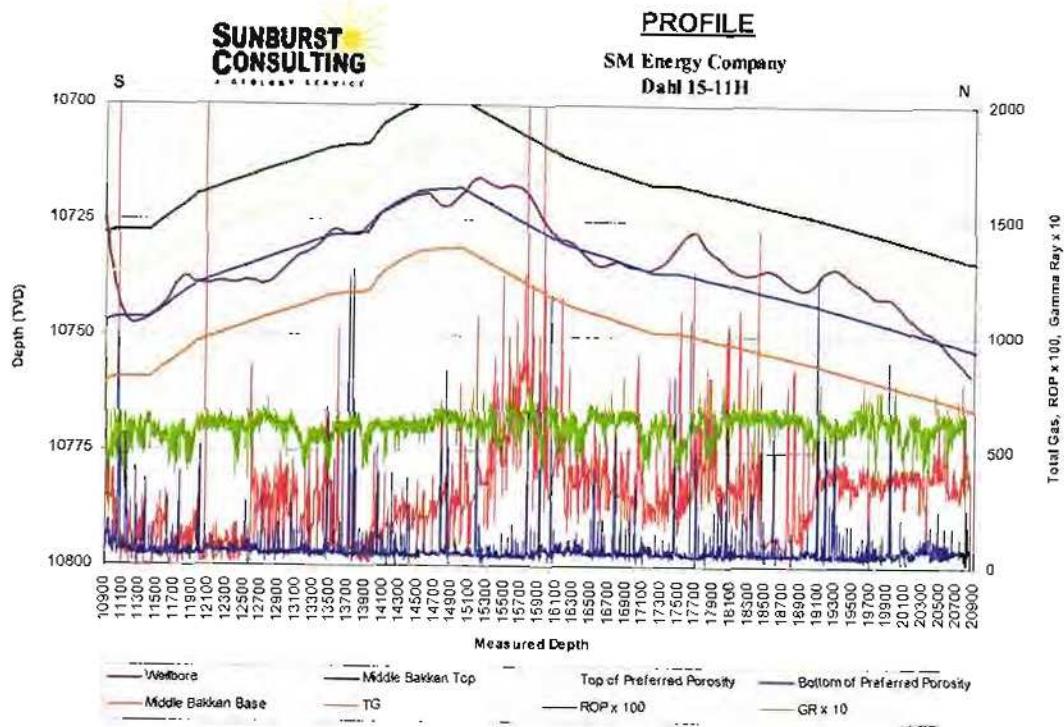


Figure 7. Cross-sectional interpretation of the Dahl 15-11H.

Geo-Steering

While drilling the lateral it was found that just below the preferred porosity zone was the ideal place to drill. Favorable drilling speeds allowed the wellbore to rotate at 120+ ft/hr and a gentle upward rotation minimized the need to slide. The cool gamma at the center of target and the ratty

gamma at the base of target were difficult to drill and often the wellbore deflected when coming into these areas. This made slides more frequent within the preferred porosity. Underneath the preferred porosity this deflection often was anticipated and allowed for smaller slides to keep the wellbore tracking with dip. Geo-steering was successful in maintaining well bore exposure to the Middle Bakken 100% of the lateral. The overall apparent dip was at 0.03 down.

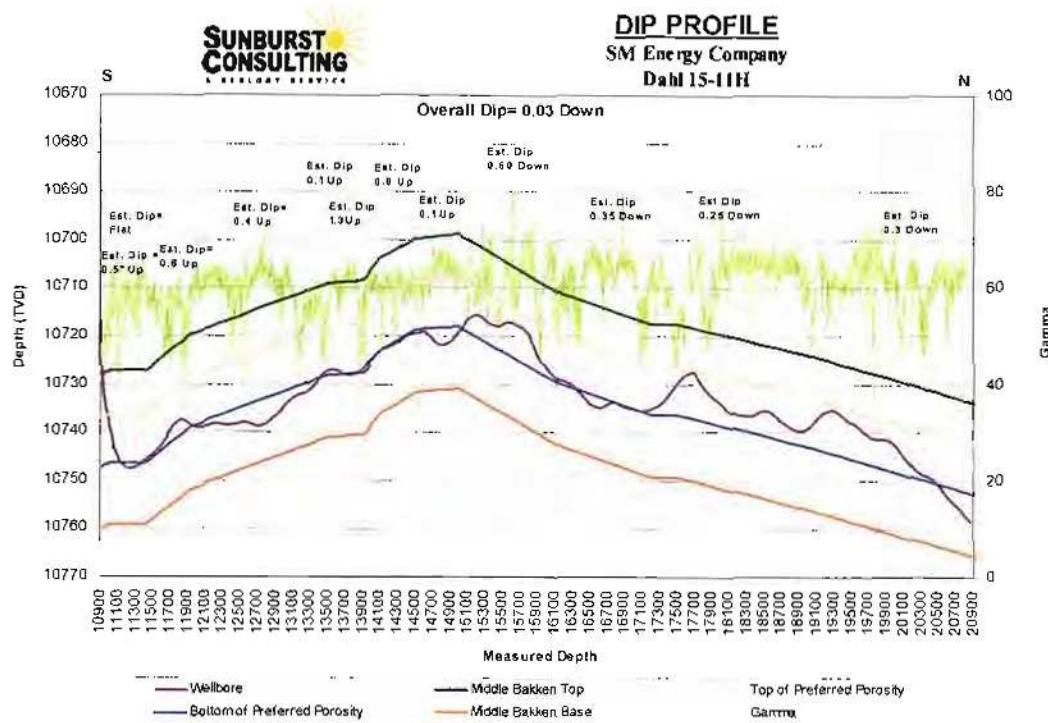


Figure 8. Cross-sectional interpretation with dip estimates of the Dahl 15-11H borehole based upon lithology, MWD gamma ray, and drill rates.

SUMMARY

Dahl 15-11H was spud on October 14, 2011. The vertical was drilled using two PDC bits in 119.5 hrs and the curve was drilled in 19.5 hrs. The most favorable place to be in the Middle Bakken due to *higher oil staining, gas shows, ability to alleviate slides, and favorable drilling speeds* was just below the preferred porosity zone. Samples contaminated with lubricant made correlations based on samples difficult later in the lateral. Oil shows consisted of *common to rare, spotty-even brown oil stain* observed in sample. The lateral was drilled in 169 hrs. One trip at 11,044' was the result of a failed MWD tool. Third party personnel were put on stand-by after issues with the rig's draw works caused a down time issue in excess of a week. The total depth was at 20,850' MD on November 18, 2011 at 1:20 a.m. CST. The SM Energy Dahl 15-11H awaits completion operations to determine its ultimate production potential.

Respectfully submitted,
Murray Dighans Jr.
c/o Sunburst Consulting, Inc.
19 November 2011

WELL DATA SUMMARY

OPERATOR: SM Energy

ADDRESS: P.O.Box 7168
Billings, MT 59103-7168

WELL NAME: Dahl 15-11H

API #: 33-053-03703-00-00

WELL FILE #: 21266

SURFACE LOCATION: 22' FSL & 2,488' FEL
SW SE Section 11, T153N-R101W

FIELD/ PROSPECT: Baker Field/ Bakken

COUNTY, STATE McKenzie County, North Dakota

BASIN: Williston

WELL TYPE: Middle Bakken Horizontal

ELEVATION: GL: 2,110'
KB: 2,127'

SPUD/ RE-ENTRY DATE: October 14, 2011

BOTTOM HOLE LOCATION: 10,148.96' North & 86.49' West of surface location or approx.
238.49' FNL & 2574.49' FEL, Lot 2 Section 2, T153N-R101W

CLOSURE COORDINATES: Closure Direction Azimuth: 359.512°
Closure Distance: 10,459.32'

TOTAL DEPTH / DATE: 20,850' at 1:20 Hrs CST on 3 October 2011
100% Exposure to Middle Bakken

TOTAL DRILLING DAYS: 35 days

STATUS OF WELL: Open-hole completion/ preparing to open-hole frac

CONTRACTOR: Extreme 18

<u>PUMPS:</u>	Emsco FB1600 (stroke length - 12")
<u>TOOLPUSHERS:</u>	Larry Siegel, James Hancock
<u>FIELD SUPERVISORS:</u>	Craig Selvig, Randy Selvig
<u>CHEMICAL COMPANY:</u>	NOV Fluid Control
<u>MUD ENGINEER:</u>	Regan Taylor
<u>MUD TYPE:</u>	Oil based Mud (Vertical & Curve)/ Salt Water (Lateral)
<u>MUD LOSSES:</u>	Invert Mud: 595 bbls, Salt Water: 0 bbls
<u>PROSPECT GEOLOGIST:</u>	Dean Richmond
<u>WELLSITE GEOLOGISTS:</u>	Murray Dighans Jr., Vimal Pradhan, Andy Oksendahl
<u>GEOSTEERING SYSTEM:</u>	Sunburst Digital Wellsite Geological System
<u>ROCK SAMPLING:</u>	30' from 9,120' - 20,850'
<u>SAMPLE EXAMINATION:</u>	Binocular microscope & fluoroscope
<u>SAMPLE CUTS:</u>	Entron
<u>GAS DETECTION:</u>	MSI (Mudlogging Systems, Inc.) TGC - total gas with chromatograph ML-335 from 9,120' - 20,850' Extractor Motor/ Serial #: GE Motor/ BW212264
<u>DIRECTIONAL DRILLERS:</u>	Ryan Drilling Technologies and Solutions/ Field Supervisors Rory Sanford (Night)/ Randy Selvig, Craig Selvig (Day)
<u>MWD:</u>	Ryan Drilling Technologies and Solutions Tate Chatfield, Brad Hughes
<u>CASING:</u>	Surface: 9 5/8" Set to 2,113' Intermediate: 7" Set to 10,952'

KEY OFFSET WELLS:

SM Energy Company

Lindvig #1-11-3C

SE SE 612 FSL 793 FEL

McKenzie, ND

SM Energy Company

M&G 14-2HR

SW SW 566 FSL 575 FWL

McKenzie, ND

SM Energy Company

Rosebud 22-11

SE NW 1745 FNL 1755 FWL

McKenzie County, ND

DISTRIBUTION:

North Dakota Industrial Commission

600 East Boulevard

Bismarck, ND 58505

Oasis Petroleum North America

1001 Fannin, Suite 202

Houston, TX 77002

Lone Rider Trading Company

PO Box 1414

Dickinson, ND 58602-1414

Stuber Minerals Resources, LLC

PO Box 56

Bowman, ND 58623

Deep Creek Exploration, LLC

PO Box 1404

Dickinson, ND 58602

Missouri River Royalty Corporation

Kirkwood Office Tower

919 South 7th Street, Suite 405

Bismarck, ND 58504

WELL LOCATION PLAT

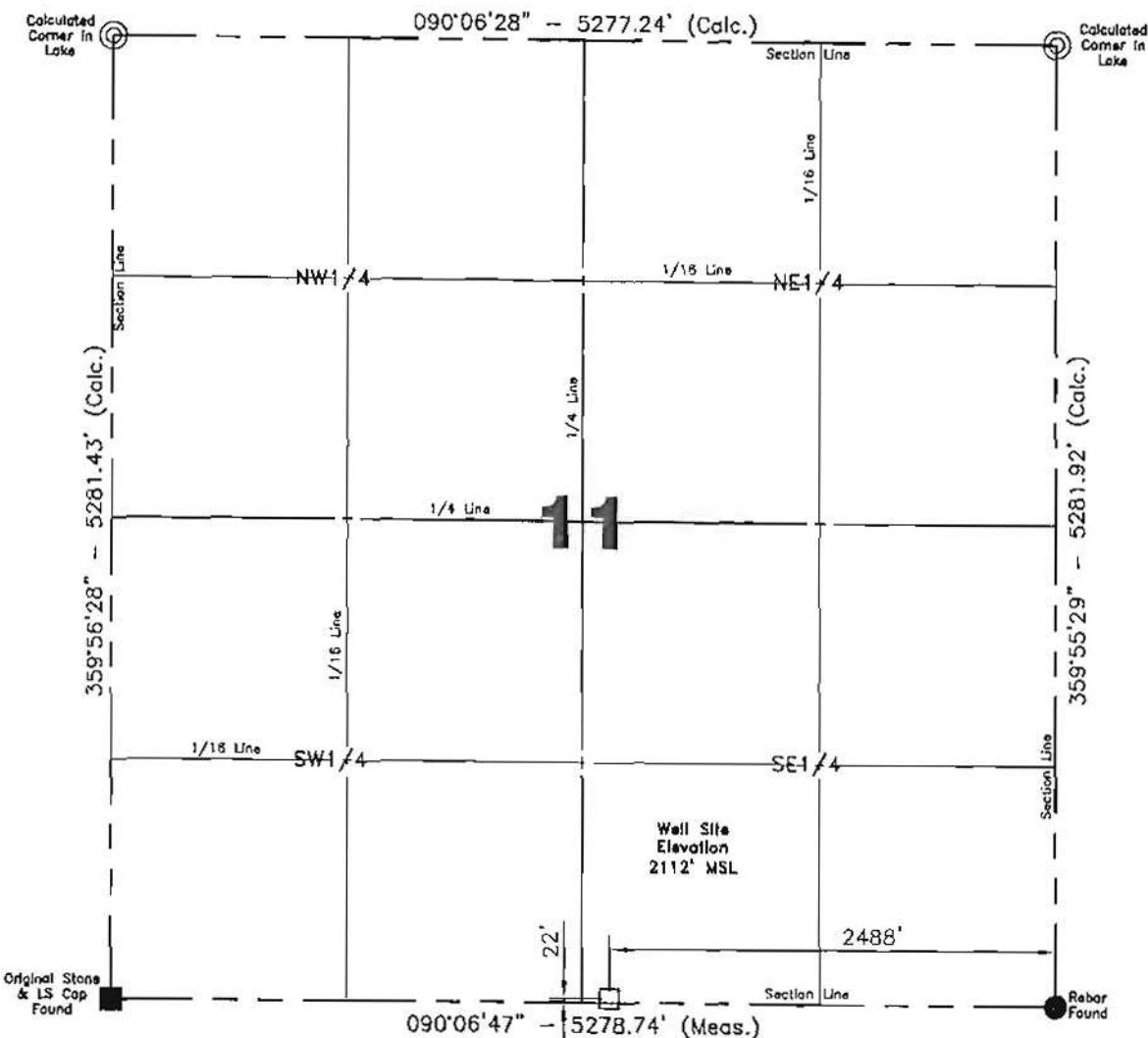
SM Energy Company
P.O. Box 7168 Billings, MT 59103

Dahl 15-11H

22 feet from the south line and 2488 feet from the east line (surface location)
Section 11, T. 153 N., R. 101 W., 5th P.M.

McKenzie County, North Dakota

Surface owner @ well site - Sharon D. Eilers et al
Latitude 48°04'56.376" North; Longitude 103°38'09.239" West (surface location)
[Derived from OPUS Solution NAD-83(CORS96)]



Confidentiality Notice: The information contained on this plot is legally privileged and confidential information intended only for the use of recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

NOTE: All land corners are assumed unless otherwise noted.
The well location shown hereon is not an as-built location.

Jeff McElhinney

06/14/2011

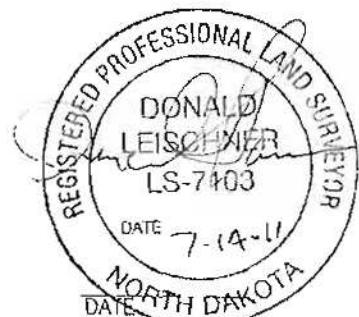
Surveyed By

Date

Vertical Control Datum Used Sea-Level Datum of NAVD 88	Professional Consulting Engineers and Surveyors Registered in North Dakota, South Dakota Montana, Wyoming & Minnesota Tele-Fax No. 701-572-2019 Bus. Phone No. 701-572-6352 222 Airport Road Williston, North Dakota 58801-2976 Certificate of Authorization #C-061
---	--

Project No. 8711180

Book 0-89 Pg. 74-79 Staking



Kadomas
Lee &
Jackson
Engineers Surveyors
Planners

HORIZONTAL SECTION PLAT

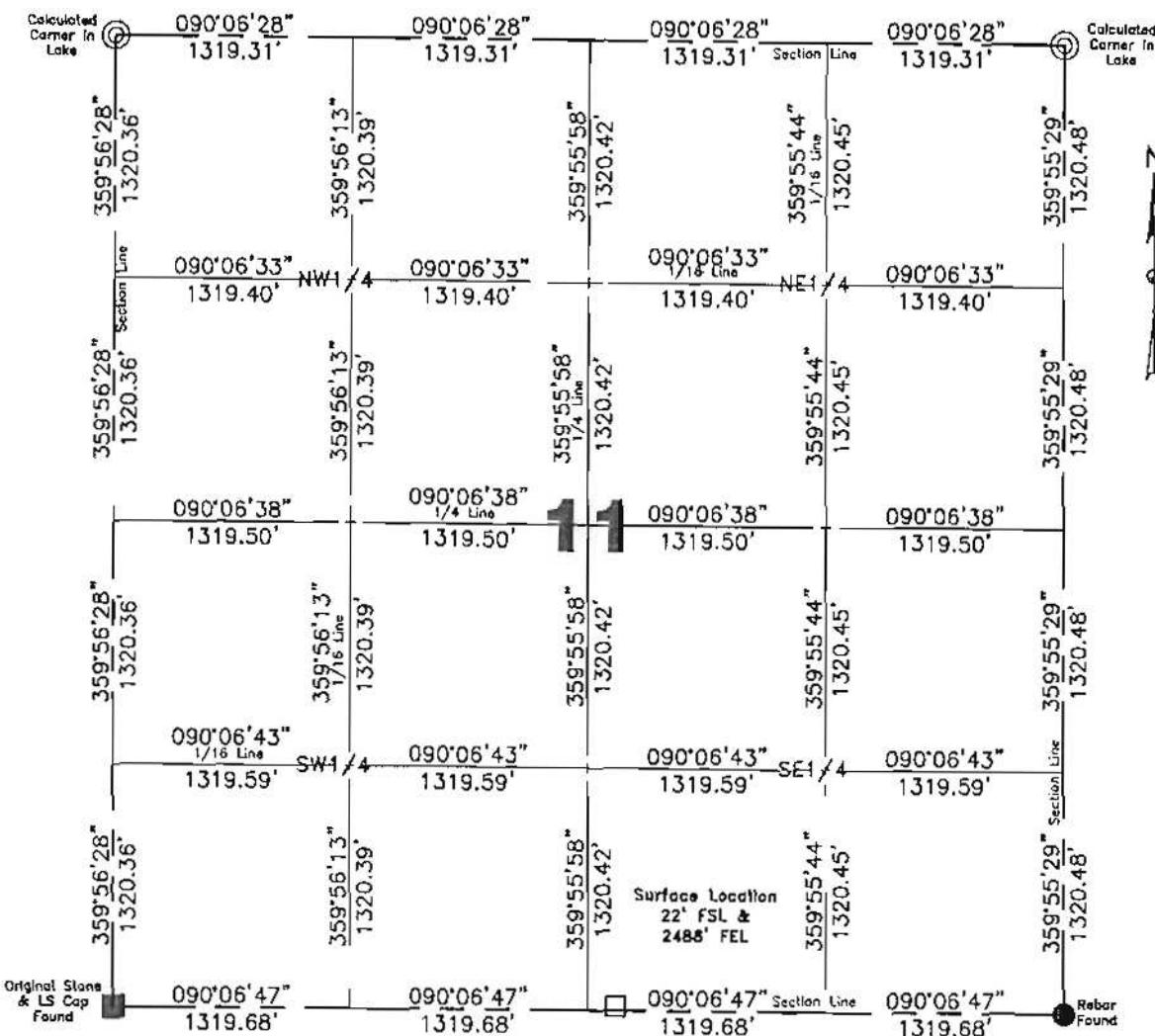
SM Energy Company
P.O. Box 7168 Billings, MT 59103

Dahl 15-11H

22 feet from the south line and 2488 feet from the east line (surface location)
Section 11, T. 153 N., R. 101 W., 5th P.M.

McKenzie County, North Dakota

Surface owner @ well site - Sharon D. Eilers et al
Latitude 48°04'56.376" North; Longitude 103°38'09.239" West (surface location)
[Derived from OPUS Solution NAD-83(CORS96)]



Confidentiality Notice: The information contained on this plot is legally privileged and confidential information intended only for the use of recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

I, Donald Leischner, Professional Land Surveyor, N.D. No. 7103, 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.

All corners shown on this plot were found in the field during SM Energy, Dahl 15-11H oil well survey on June 14, 2010. Distances to all others are calculated. All azimuths are based on the south line of Section 11, being on an azimuth of 090°06'47".

Surveyed By J. McElhiney	Field Book 0-89
Computed & Drawn By M. Meismar	Project No. 8711180



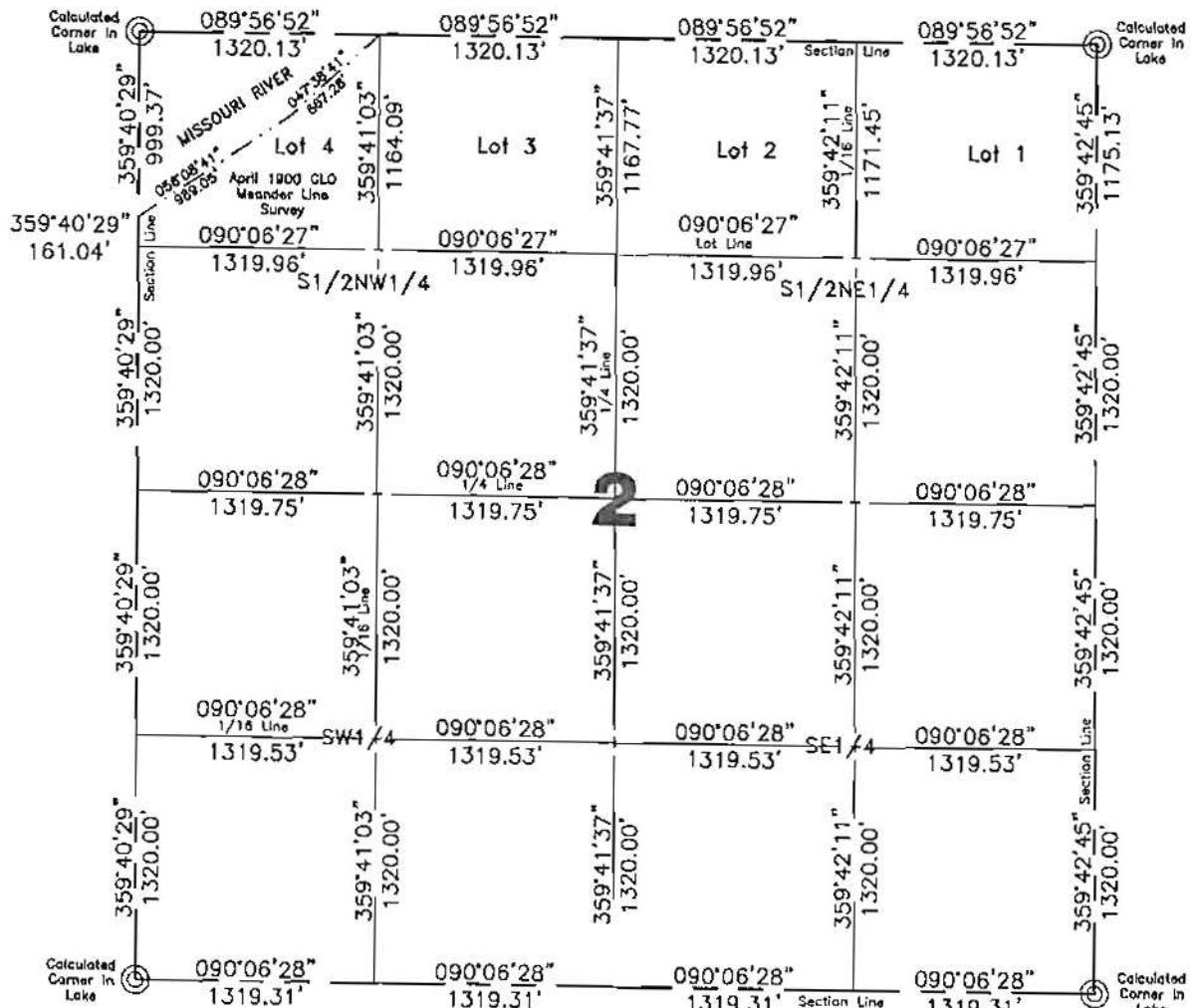
Kadrmas
Lee &
Jackson
Engineers Surveyors
Planners

HORIZONTAL SECTION PLAT

SM Energy Company
P.O. Box 7168 Billings, MT 59103

Dahl 15-11H

22 feet from the south line and 2488 feet from the east line (surface location)
Section 11, T. 153 N., R. 101 W., 5th P.M.
McKenzie County, North Dakota
Surface owner @ well site - Sharon D. Eilers et al
Latitude 48°04'56.376" North; Longitude 103°38'09.239" West (surface location)
[Derived from OPUS Solution NAD-83(CORS96)]



Confidentiality Notice: The information contained on this plot **Scale 1"=1000'** is legally privileged and confidential information intended only for the use of recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

I, Donald Leischner, Professional Land Surveyor, N.D. No. 7103, do hereby certify that the survey plot 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.

All corners shown on this plot were found in the field during SM Energy, Dahl 15-11H oil well survey on June 14, 2010. Distances to all others are calculated. All azimuths are based on the south line of Section 11, being an azimuth of 090°06'47".

Surveyed By J. McElhiney	Field Book 0-89
Computed & Drawn By M. Meismer	Project No. 8711180



Kadmas
Lee &
Jackson
Engineers Surveyors
Planners

BOTTOM HOLE LOCATION PLAT

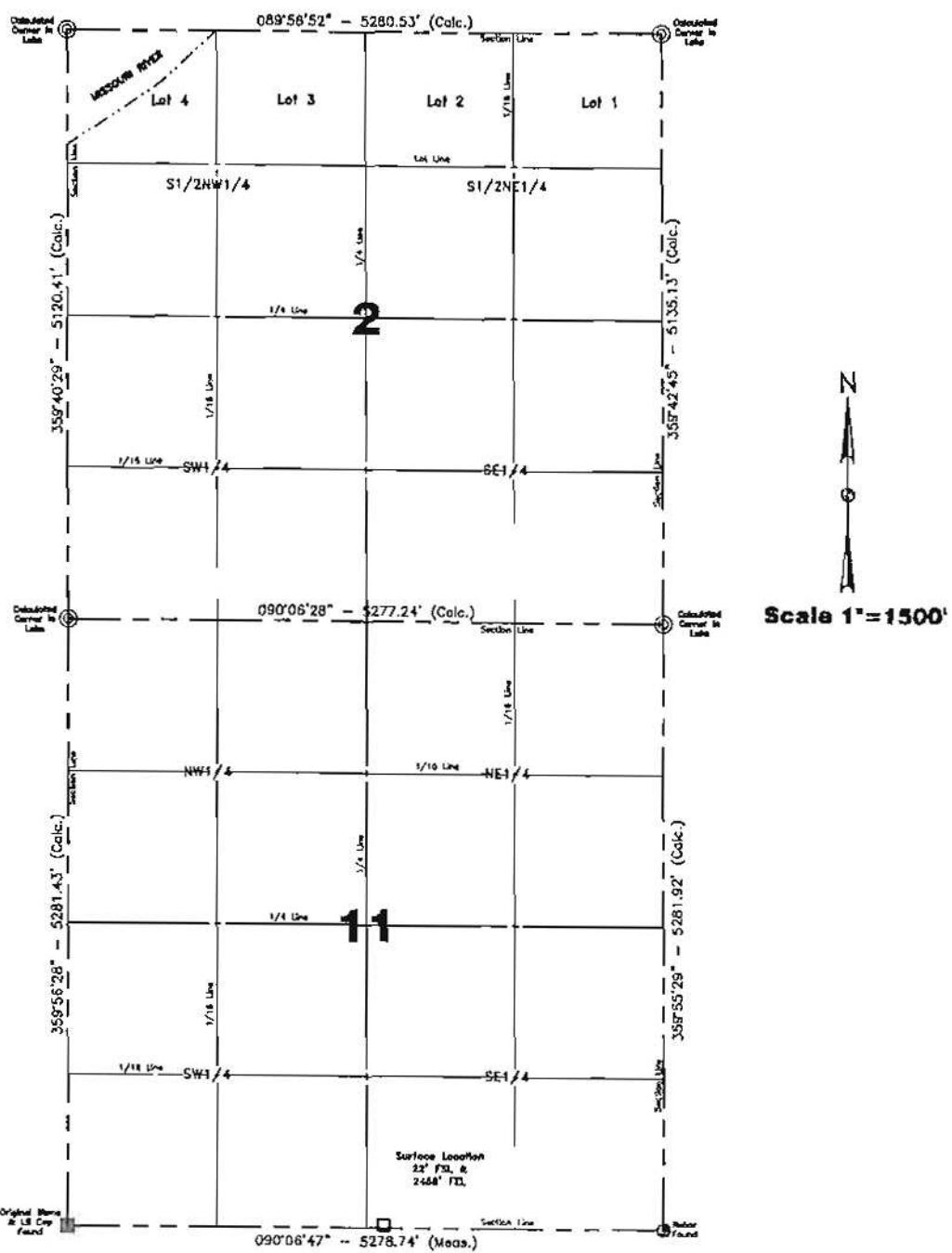
SM Energy Company
P.O. Box 7168 Billings, MT 59103
Dahl 15-11H

Dam 15-11F1

22 feet from the south line and 2488 feet from the east line (surface location)
Section 11, T. 153 N., R. 101 W., 5th P.M.
McKenzie County, North Dakota.

McKenzie County, North Dakota

MCKENZIE COUNTY, NORTH DAKOTA
Surface owner @ well site - Sharon D. Eilers et al
Latitude 48°04'56.376" North; Longitude 103°38'09.239" West (surface location)
[Derived from OPUS Solution NAD-83(CORS96)]



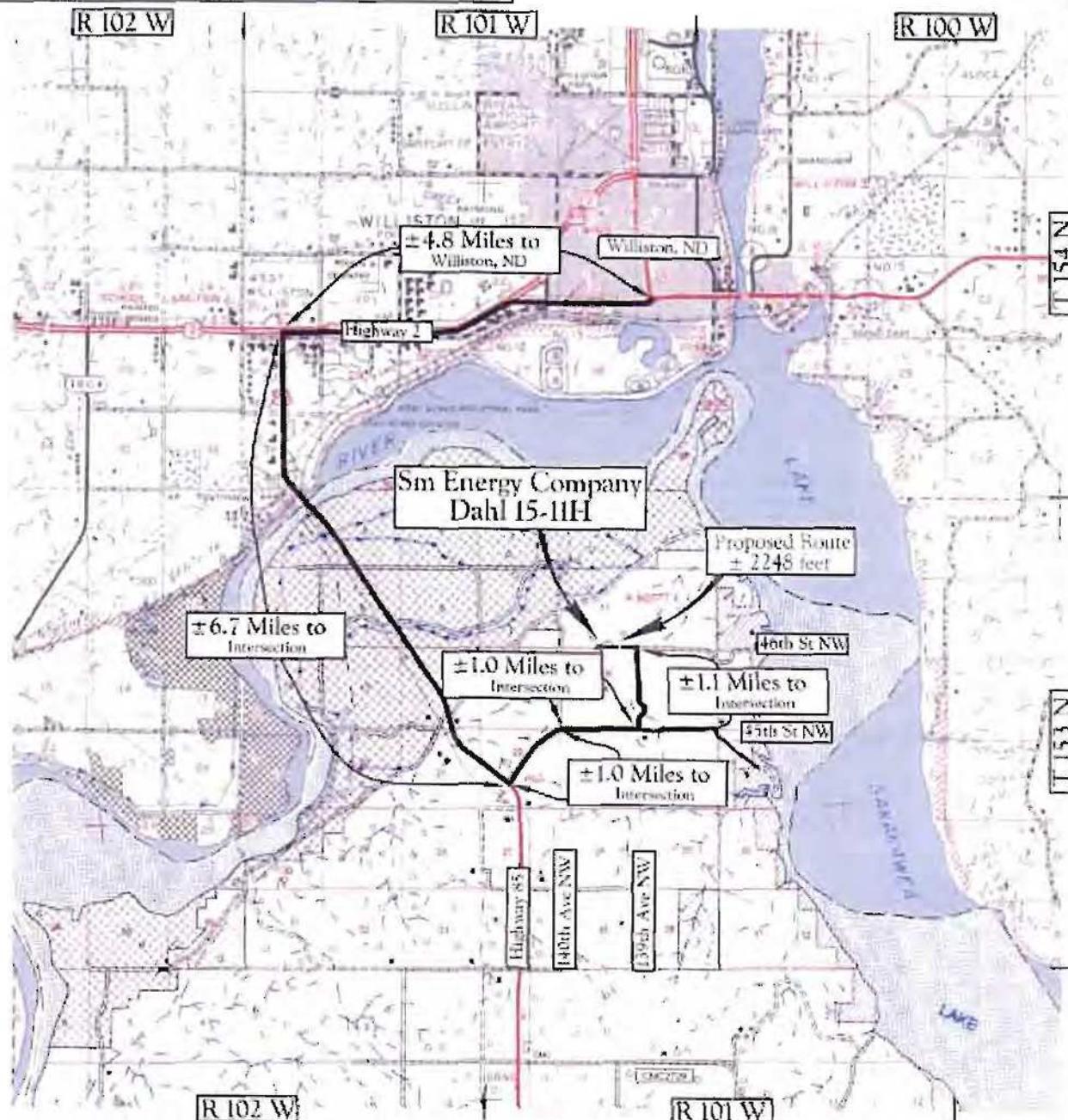
Computed & Drawn By M. Meismer	Surveyed By J. McElhiney	Approved By D. Leischner	Scale 1"=1500'	Date 07/01/2011
Field Book O-89	Material B.H. Layout	Revised —	Project No. 8711180	Drawing No. 4

Kadrmas
Lee &
Jackson
Engineers Surveyors
Planners

SM Energy Company
Dahl 15-11H
22' FSL & 2488' FEL
SW1/4SE1/4 Section 11
T. 153 N., R.101W., 5th P.M.
McKenzie County, ND

Confidentiality Notice: The information contained on this plot is legally privileged and confidential information intended only for the use of recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

N



Scale 1"=2 Miles

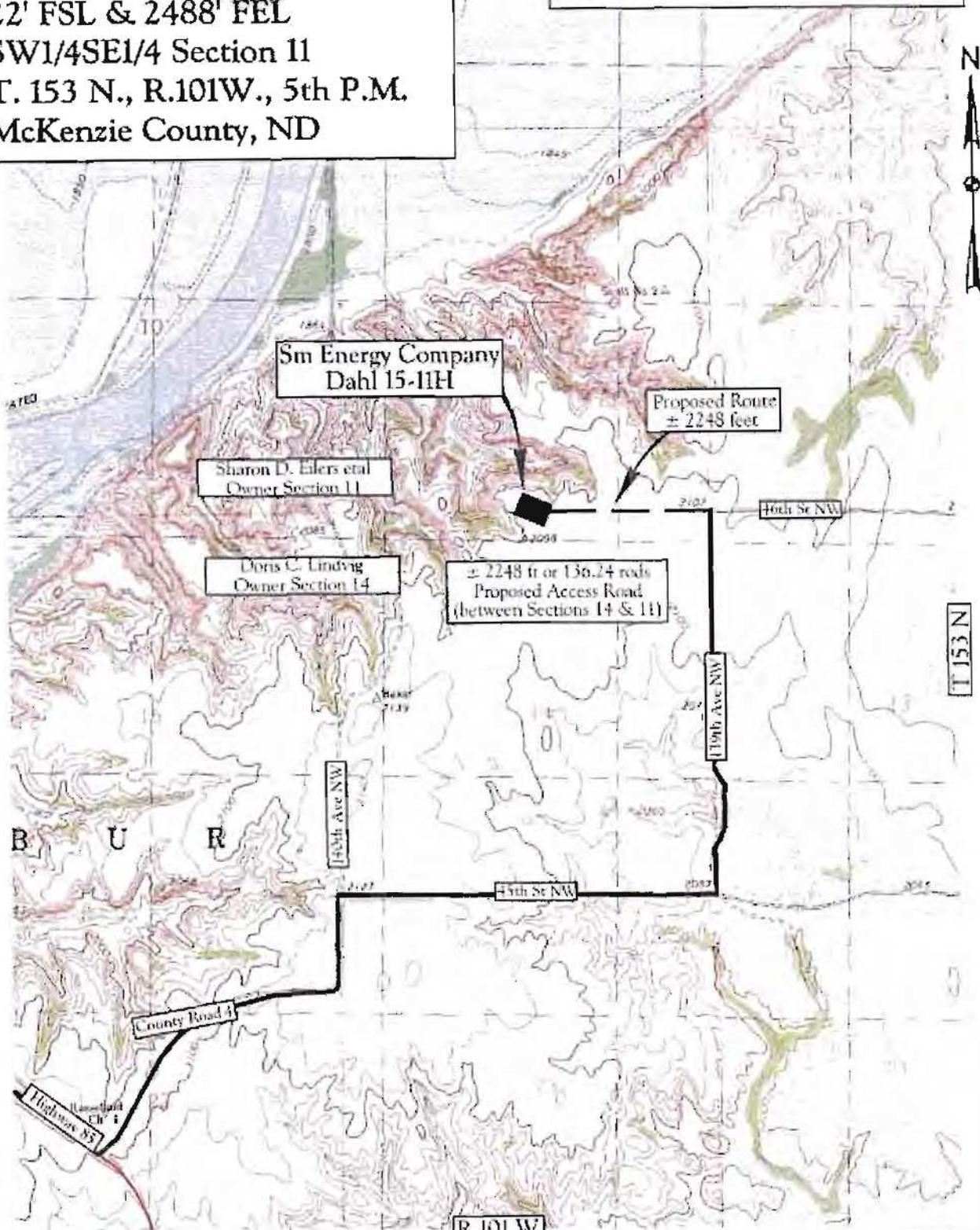
Map "A"
County Access Route

Legend	
Existing Roads	—
Proposed Roads	- - -

**Kadriks
Lee &
Jackson**
Engineers Surveyors
Planners

SM Energy Company
Dahl 15-11H
22' FSL & 2488' FEL
SW1/4SE1/4 Section 11
T. 153 N., R.101W., 5th P.M.
McKenzie County, ND

Confidentiality Notice: The information contained on this plot is legally privileged and confidential information intended only for the use of recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.



Map "B"
Quad Access Route

Legend

Existing Roads —

Proposed Roads - - -

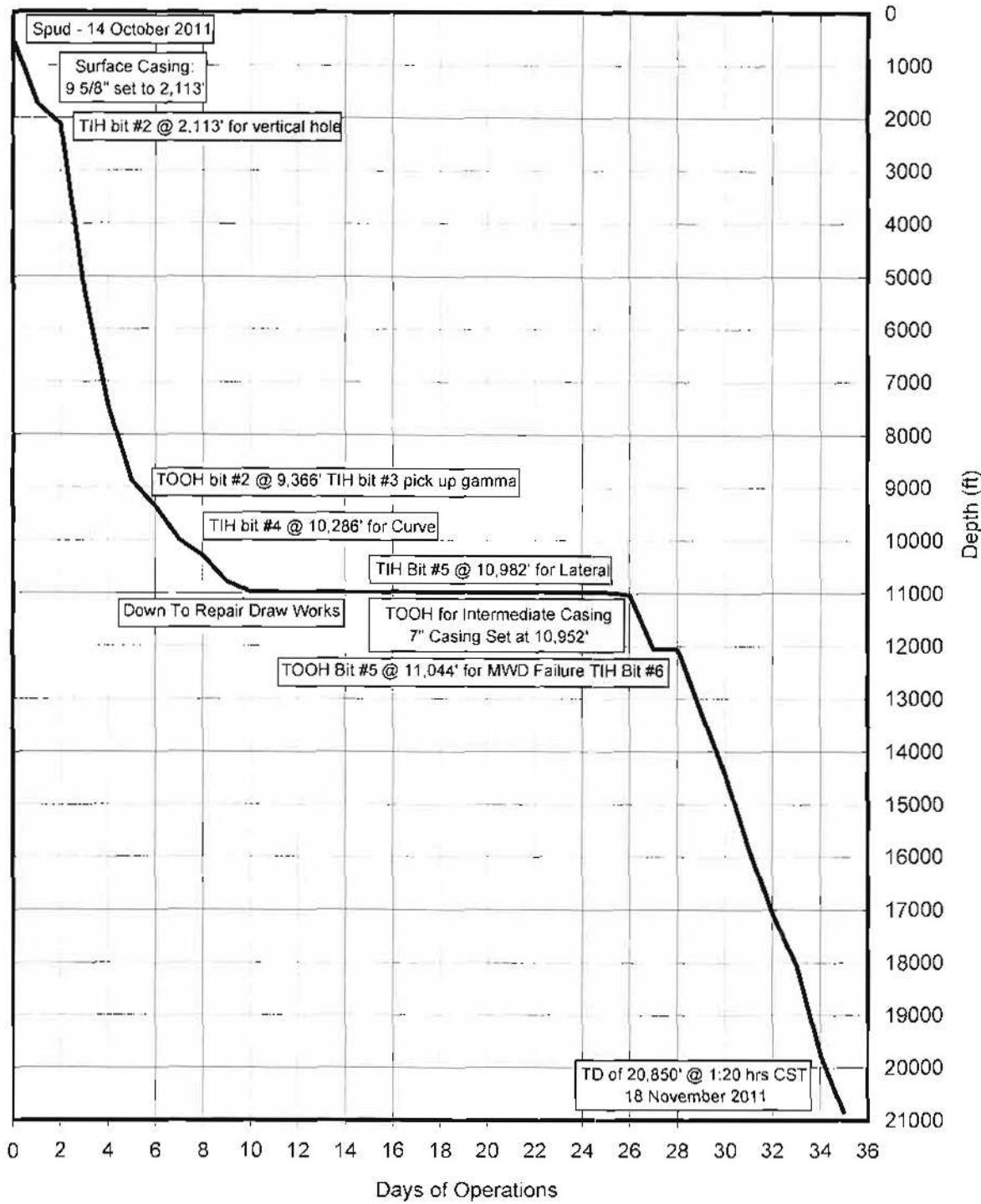
Scale 1" = 2000'

Kadomas
Lee &
Jackson
Engineers, Surveyors
Planners

TIME VS DEPTH

SM Energy

Dahl 15-11H



DAILY DRILLING SUMMARY

Day	Date 2011 (0800 Hrs)	Depth Footage	24 Hr Bit #	WOB (Klbs) RT	WOB (Klbs) MM	RPM (RT)	RPM (MM)	PP	SPM 1	SPM 2	GPM	Formation
0	10/14	535'	-	-	-	-	-	-	-	-	-	Condition mud & circulate, Cement 30 min safety meeting, Cement - Rig down cementers, Cut off conductor pipe, Weld on well, head, Nipple up B.O.P., Test B.O.P., Test pipe rams & floor valve 2500 PSI, Annular 1500 PSI, Choke & blinds 5000 PSI, Set wear bushing, Dir. works, P/U BHA, Trip in hole, Tag float collar at 2092, Drill cement
1	10/15	1,729'	1194	1	30	-	-	1700	110	110	-	Condition mud & circulate, Cement 30 min safety meeting, Cement - Rig down cementers, Cut off conductor pipe, Weld on well, head, Nipple up B.O.P., Test B.O.P., Test pipe rams & floor valve 2500 PSI, Annular 1500 PSI, Choke & blinds 5000 PSI, Set wear bushing, Dir. works, P/U BHA, Trip in hole, Tag float collar at 2092, Drill cement
2	10/16	2,113'	384	1	-	-	-	-	-	-	-	Condition mud & circulate, Cement 30 min safety meeting, Cement - Rig down cementers, Cut off conductor pipe, Weld on well, head, Nipple up B.O.P., Test B.O.P., Test pipe rams & floor valve 2500 PSI, Annular 1500 PSI, Choke & blinds 5000 PSI, Set wear bushing, Dir. works, P/U BHA, Trip in hole, Tag float collar at 2092, Drill cement
3	10/17	5,291'	3178	2	18	-	-	-	3900	70	70	-
4	10/18	7,453'	2162	2	20	-	-	-	3800	62	62	-
5	10/19	8,867'	1414	2	26	-	-	-	3800	62	62	-
6	10/20	9,366'	499	2	28	-	-	40	-	3600	60	-
7	10/21	9,985'	619	3	31	-	-	54	237	3800	60	60

DAILY DRILLING SUMMARY

Day	Date 2011 (0600 Hrs)	Depth Footage	24 Hr Bit #	WOB (Klbs) RT	WOB (Klbs) MM	RPM (RT)	RPM (MM)	PP	SPM 1	SPM 2	GPM	Formation	
8	10/22	10,286'	301	4	28	18	55	233	3800	59	59	415	Drill actual from 9985 to 10194. Lubricate rig, Grease Down drive, Top drive, Crown, Check C.O.M. Drill actual from 10194 to 10276. Lubricate rig, Check C.O.M. Drill actual from 10276 to 10286. Trip out of hole through salts. Pump dry pill, Trip out of hole, Directional work, Change BHA for curve.
9	10/23	10,777'	491	4	41	32	50	221	3900	56	56	394	Trip in hole, Curve assembly, Drill actual - Sliding, Drill actual from 10362 to 10777. Lubricate rig, Grease Crown and Down works, Check, C.O.M.
10	10/24	10,982'	205	4	23	42	38	221	3980	56	56	394	Drill actual from 10777 to total depth 10982 reached @ 10:30, Short trip, Condition mud and circulate rig service, Trip out of hole, Dir. work lay down tools, Change balls ram clamps, Lubricate rig, Casing S/M, Rig up casers, Run intermediate casing.
11	10/25	10,982'	0	4	-	-	-	-	-	-	-	Middle Bakken	Run intermediate casing, Condition mud and circulate bottoms up. Rig service, Run intermediate casing, Wash to bottom, Work stuck casing, Run intermediate casing, Circulate and wash to bottom.
12	10/26	10,982'	0	4	-	-	-	-	-	-	-	Middle Bakken	Work intermediate casing to bottom, Condition mud and circulate. Rig up cementers, Cement first stage, Circulate for second stage cement job, S/M, Rig up cementers, Cement, Rig down cementers, Clean tanks, Change out balls and elevators, Lubricate rig, Set pack off tool, Dir. work pick up tools, Trips in hole.
13	10/27	10,982'	0	4	-	-	-	-	-	-	-	Middle Bakken	Trips in hole, Cut off drilling line, Lubricate rig, Grease Skate/T.D / D.W./ Crown, Test casing, Trips in hole, Drill out DV tool, Test casing, Trips in hole, Drill actual, Condition mud and circulate, Pump pill, Repair top drive, Fix grabber, Trips out of hole.
14	10/28	10,982'	0	5	-	-	-	-	-	-	-	Middle Bakken	Trouble shoot drawworks, Trip out of hole for MWD failure, Dir. Work, Lay down MWD, Pick up new one, Trip in hole, Repair rig, Down works down.
15	10/29	10,982'	0	-	-	-	-	-	-	-	-	Middle Bakken	Repair Draw works
16	10/30	10,982'	0	5	-	-	-	-	-	-	-	Middle Bakken	Repair Draw works, Repair rig, Down works down
17	10/31	10,982'	0	5	-	-	-	-	-	-	-	Middle Bakken	Repair Draw works
18	11/1	10,982'	0	5	-	-	-	-	-	-	-	Middle Bakken	Repair Draw works
19	11/2	10,982'	0	5	-	-	-	-	-	-	-	Middle Bakken	Repair Draw works

DAILY DRILLING SUMMARY

Day	Date 2011 (0600 Hrs)	Depth Footage	24 Hr Footage	Bit #	WOB (Klbs) RT	RPM (MM)	RPM (MM)	PP	SPM 1	SPM 2	GPM	Formation
20	11/3	10,982'	0	5	-	-	-	-	-	-	-	Middle Bakken
21	11/4	10,982'	0	5	-	-	-	-	-	-	-	Middle Bakken
22	11/5	10,982'	0	5	-	-	-	-	-	-	-	Middle Bakken
23	11/6	10,982'	0	5	-	-	-	-	-	-	-	Middle Bakken
24	11/7	10,982'	0	5	-	-	-	-	-	-	-	Middle Bakken
25	11/8	10,982'	0	6	-	-	-	-	-	-	-	Middle Bakken
26	11/9	11,044'	62	6	12	28	58	158	2475	80	0	Middle Bakken
27	11/10	12,055'	1011	6	13	18	59	158	2500	80	0	Middle Bakken
28	11/11	12,055'	0	6	-	-	-	-	-	-	-	Middle Bakken
29	11/12	13,250'	1195	6	15	18	63	158	2900	0	80	Middle Bakken
30	11/13	14,430'	1180	6	15	27	65	158	3030	80	0	Middle Bakken
31	11/14	15,869'	1439	6	15	45	65	158	2605	80	0	Middle Bakken
32	11/15	17,078'	1209	6	15	52	50	158	3140	0	80	Middle Bakken
33	11/16	18,047'	969	6	15	42	50	158	3240	0	80	Middle Bakken

DAILY DRILLING SUMMARY

Day	Date 2011	Depth (0600 Hrs)	Footage	24 Hr Bit #	WOB (Klbs) RT	WOB (Klbs) MM	RPM (RT)	RPM (MM)	PP	SPM 1	SPM 2	GPM	24 Hr Activity		Formation
													Task no cutting corners, lubricate rig grease TD, DW, crown, drill #18988-19133; Drill #19133-19279. Safty stand down-discussed the JSA program and how to properly utilize it. Drill #19279-1975'	Drill #18407-18988, safty stand down-do JSA'S for each job task no cutting corners, lubricate rig grease TD, DW, crown, drill #18988-19133; Drill #19133-19279. Safty stand down-discussed the JSA program and how to properly utilize it. Drill #19279-1975'	
34	11/17	19,755'	1708	6	15	72	50	158	3400	80	0	282	Drill #19755-20316' lubricate rig CK C.O.M. grease crown, TD DW, Drill #20316'-20402'. Drill #20402-20850 TD	Middle Bakken	
35	11/18	20,850'	1095	6	15	72	50	158	3520	0	80	282	Drill #19755-20316' lubricate rig CK C.O.M. grease crown, TD DW, Drill #20316'-20402'. Drill #20402-20850 TD	Middle Bakken	

DAILY MUD SUMMARY

Day	Date	Mud Depth	Mud Wt (ppg)	Vis (sec)	PV (cP)	YP (lbs/100 ft ²)	Gels (lbs/100 ft ²)	600/300	NAP/H2O (% by vol)	NAP/H2O (ratio)	Cake (API/HTHP)	Cor. Solids (%)	Alk	Excess Lime (lb/bbl)	Cl ⁻ (mg/l)	LGS/HGS (%)	Electrical Stability	Gain/Loss (bbls)
7	10/20	9,266'	9.90	46	20	6	10/16	46/26	80.9/19.1	70/16.5	2	13.5	2.6	3.4	48k	4.2/7.2	564	+107
8	10/21	9,609'	10.00	50	20	10	10/16	50/30	77.3/22.7	66.5/19.5	2	14	2.7	3.5	50k	4.5/6.9	511	-20
9	10/22	10,085'	10.00	48	18	9	9/16	45/27	79.1/20.9	68/18	2	14	2.7	3.5	51k	4.8/6.8	520	-37
10	10/23	10,286'	10.20	58	18	8	9/15	44/26	80.2/19.8	69/17	2	14	2.6	3.4	50k	4.2/7.6	572	-70
11	10/24	10,880'	10.10	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	10/25	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	10/26	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	10/27	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	10/28	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	10/29	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	10/30	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	10/31	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	11/01	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	11/02	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	11/03	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	11/04	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	11/05	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	11/06	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	11/07	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	11/08	10,982'	10.10	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	11/09	11,066'	9.90	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	11/10	12,040'	9.90	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	11/11	12,040'	9.90	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	11/12	12,595'	9.90	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	11/13	14,200'	9.90	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	11/14	15,750'	9.90	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	11/15	16,505'	9.90	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	11/16	18,020'	9.85	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	11/17	19,200'	9.85	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-

BIT RECORD

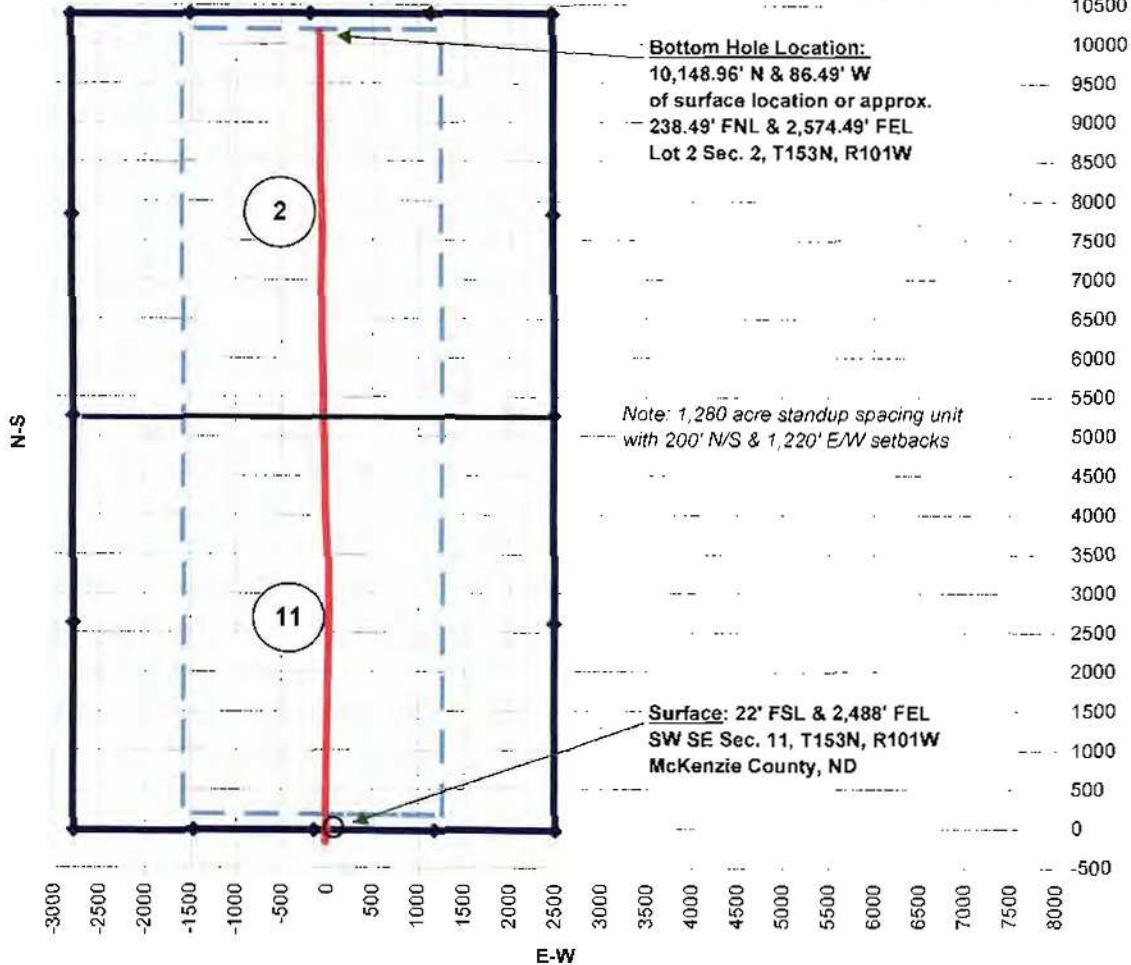
Bit #	Size	Type	Make	Model	Serial #	Jets	Depth In	Depth Out	Footage	Hours	Accum. Hours	Vert. Dev.
1	13 1/2	Tri-cone	Hughes	MXL-1X	7-1-02C8	3x20	80'	2,133'	2,092'	18.5	18.50	Surface
2	8 3/4	PDC	Hughes	DP506FX	7132487	6x16	2,133'	9,366'	7,233'	65	83.50	Vertical
3	8 3/4	PDC	Hughes	DP506FX	7129301	6x16	9,366'	10,286'	920'	36	119.50	Vertical
4	8 3/4	PDC	Security	FxD55M	11681292	6x17	10,286'	10,982'	696'	19.5	139.00	Curve
5	6	PDC	Hughes	Q505FX	7127639	5x16	10,982'	11,044'	62'	1	140.00	Lateral
6	6	PDC	Hughes	Q505FX	10982	5x16	11,044'	20,850'	9,806'	168	308.00	Lateral

PLAN VIEW

SM Energy Company
Dahl 15-11H



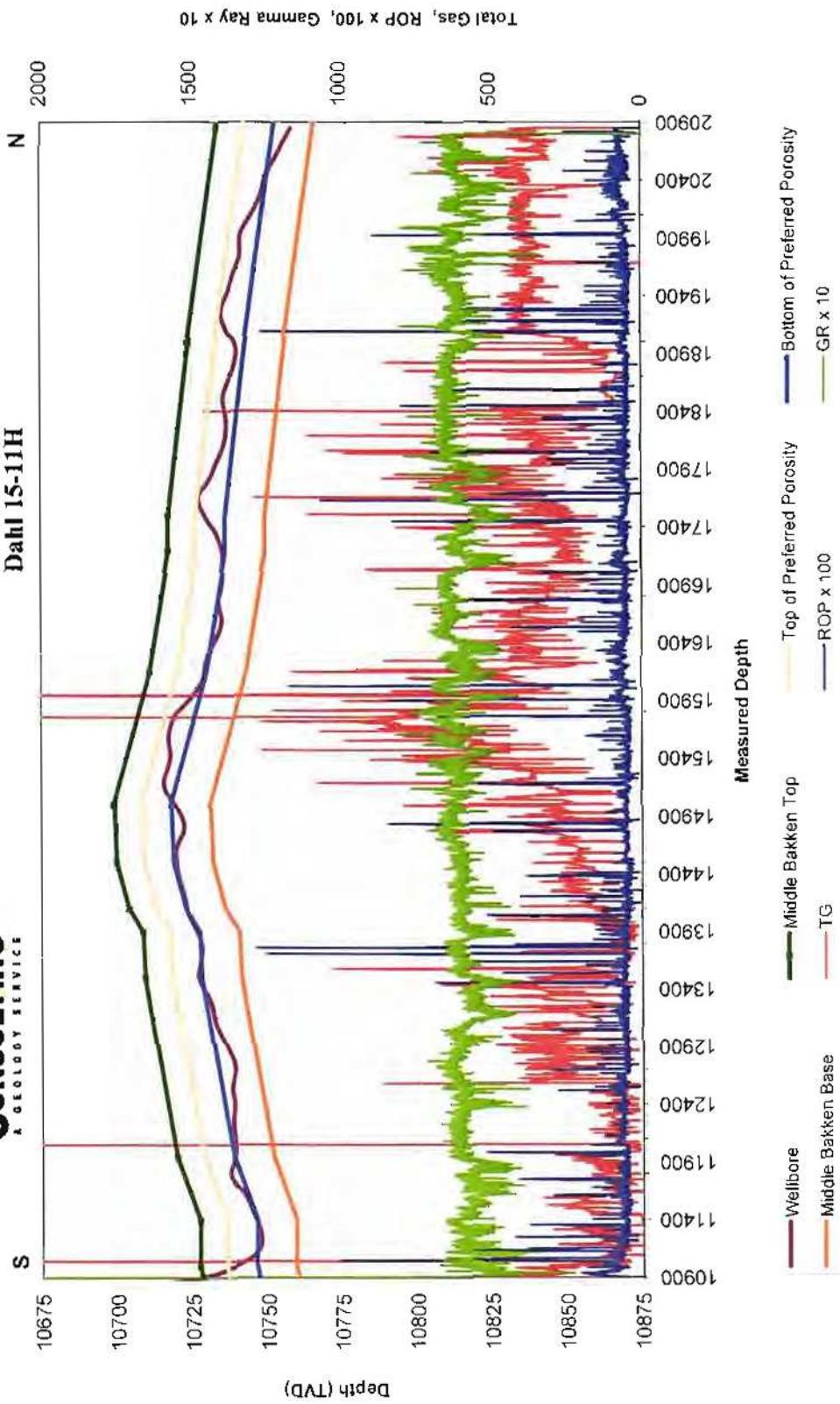
A GEOLOGY SERVICE





PROFILE

SM Energy Company
Dahl 15-11H

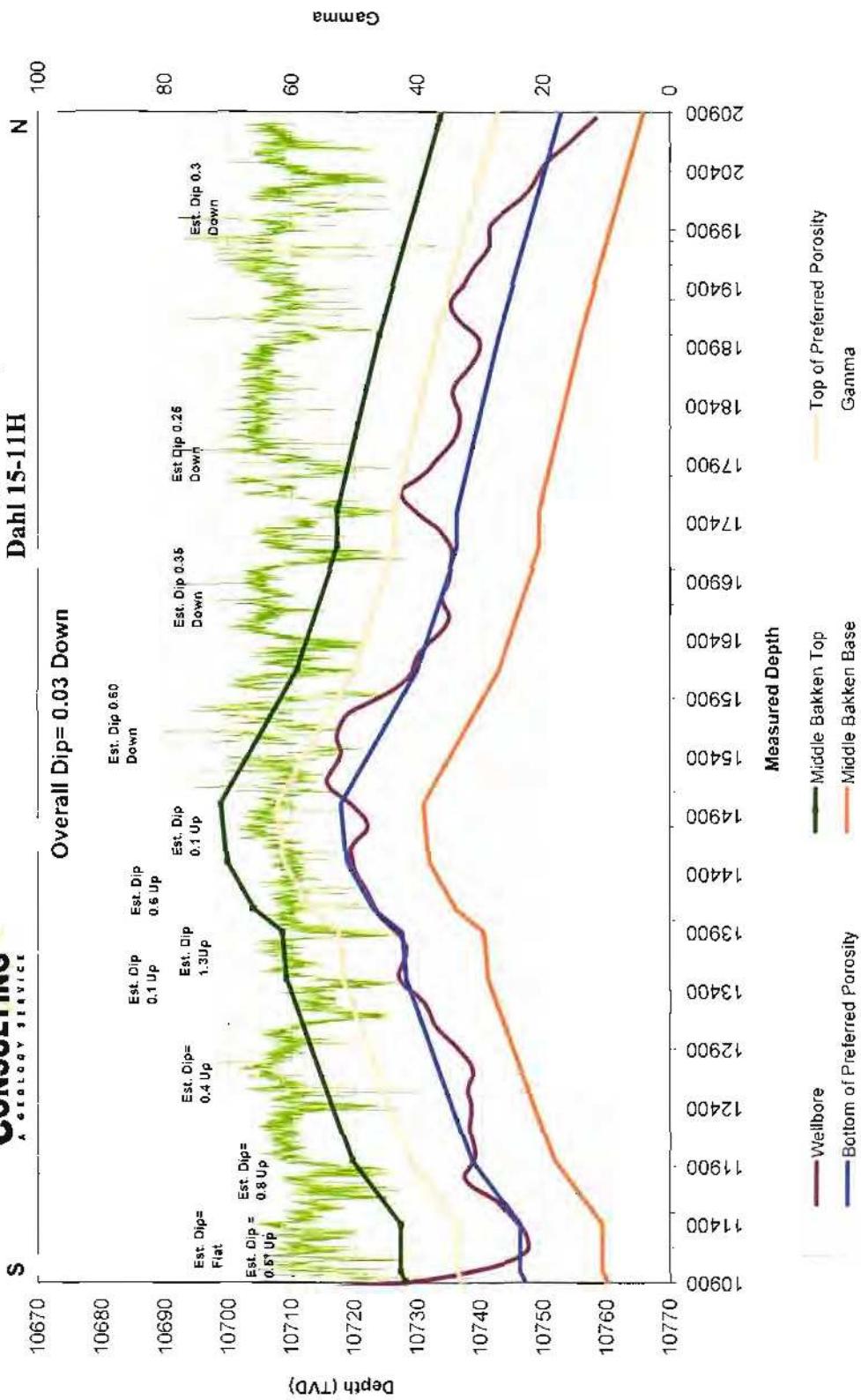


**SUNBURST
CONSULTING**
A GEOLOGY SERVICE

FORMATION MARKERS & DIP ESTIMATES

SM Energy Company - Dahl 15-11H

Dip Change Points Marker	MD	TVD	TVD diff.	MD diff.	Dip	Dipping up/down	Type of Marker
Cool Gamma Base Of Preferred Porosity	11,095'	10,744.77					
Cool Gamma Base Of Preferred Porosity	11,724'	10,738.67	-6.10	629.00	0.56	Up	Gamma
Cool Gamma Base Of Preferred Porosity	11,883'	10,737.98	-0.69	159.00	0.25	Up	Gamma
Cool Gamma Base Of Preferred Porosity	12,426'	10,738.47	0.49	543.00	-0.05	Down	Gamma
Cool Gamma Base Of Preferred Porosity	12,532'	10,737.94	-0.53	106.00	0.29	Up	Gamma
Cool Gamma Base Of Preferred Porosity	13,201'	10,731.87	-6.07	669.00	0.52	Up	Gamma
Cool Gamma Base Of Preferred Porosity	13,470'	10,727.46	-4.41	269.00	0.94	Up	Gamma
Cool Gamma Base Of Preferred Porosity	13,896'	10,726.49	-0.97	426.00	0.13	Up	Gamma
Cool Gamma Base Of Preferred Porosity	15,013'	10,718.86	-7.63	1117.00	0.39	Up	Gamma
Cool Gamma Upper Half Of Preferred Porosity	15,473'	10,717.53	10717.53	15473.00	-	-	Gamma
Cool Gamma Upper Half Of Preferred Porosity	15,950'	10,725.21	7.68	477.00	-0.92	Down	Gamma
Cool Gamma Base Of Preferred Porosity	16,148'	10,729.00	10729.00	16148.00	-	-	Gamma
Cool Gamma Base Of Preferred Porosity	16,387'	10,731.96	2.96	239.00	-0.71	Down	Gamma
Cool Gamma Base Of Preferred Porosity	17,140'	10,735.36	3.40	753.00	-0.26	Down	Gamma
Cool Gamma Base Of Preferred Porosity	19,066'	10,737.73	2.37	1926.00	-0.07	Down	Gamma
Cool Gamma Base Of Preferred Porosity	19,765'	10,741.38	3.65	699.00	-0.30	Down	Gamma
Gross Dip							
Initial Target Contact	10,908'	10,728.00					
Final Target Contact	20,850'	10,733.48	5.48	9942.00	-0.03	Down	



SUNBURST CONSULTING, INC.

<

>

Operator:	SM Energy Company		
Well :	Dahl 15-11H		
County:	McKenzie	State:	ND
QQ:	SW SE	Section:	11
Township:	153	N/S:	N
Range:	101	E/W:	W
Footages:	22	FN/SL:	S
	2488	FE/WL:	E

Kick-off:	10/23/2011
Finish:	11/18/2011
Directional Supervision:	Ryan

Date: 11/21/2011
 Time: 10:20
F9 to re-calculate

Proposed dir: 360

Minimum Curvature Method (SPE-3362)

[North and East are positive and South and West are negative, relative to surface location]

No.	MD	INC	TRUE		N-S	E-W	SECT	DLS/ 100
			AZM	TVD				
Tie	2113.00	0.00	0.00	2113.00	0.00	0.00	0.00	0.00
1	2167.00	1.20	203.90	2167.00	-0.52	-0.23	-0.52	2.22
2	2259.00	1.40	206.60	2258.97	-2.40	-1.12	-2.40	0.23
3	2351.00	1.60	215.00	2350.94	-4.46	-2.36	-4.46	0.32
4	2443.00	2.20	195.10	2442.89	-7.22	-3.56	-7.22	0.96
5	2534.00	2.60	190.70	2533.81	-10.93	-4.40	-10.93	0.48
6	2625.00	2.80	184.10	2624.71	-15.18	-4.94	-15.18	0.41
7	2716.00	3.00	189.70	2715.59	-19.74	-5.50	-19.74	0.38
8	2807.00	3.00	194.10	2806.47	-24.40	-6.48	-24.40	0.25
9	2897.00	2.50	192.80	2896.37	-28.60	-7.49	-28.60	0.56
10	2988.00	3.10	185.50	2987.26	-32.98	-8.17	-32.98	0.77
11	3079.00	3.00	185.40	3078.13	-37.80	-8.63	-37.80	0.11
12	3162.00	3.00	184.20	3161.01	-42.13	-8.99	-42.13	0.08
13	3245.00	3.00	183.90	3243.90	-46.46	-9.30	-46.46	0.02
14	3328.00	2.70	185.00	3326.80	-50.58	-9.61	-50.58	0.37
15	3411.00	2.40	185.30	3409.71	-54.25	-9.94	-54.25	0.36
16	3495.00	3.20	184.80	3493.61	-58.34	-10.30	-58.34	0.95
17	3578.00	2.70	184.90	3576.50	-62.60	-10.66	-62.60	0.60
18	3661.00	3.10	181.90	3659.40	-66.79	-10.91	-66.79	0.52
19	3744.00	3.00	183.90	3742.28	-71.20	-11.13	-71.20	0.18
20	3828.00	2.80	183.90	3826.17	-75.44	-11.42	-75.44	0.24
21	3910.00	2.50	183.70	3908.08	-79.22	-11.67	-79.22	0.37
22	3994.00	3.20	181.70	3991.98	-83.39	-11.86	-83.39	0.84
23	4077.00	3.30	182.80	4074.85	-88.09	-12.04	-88.09	0.14
24	4160.00	3.00	185.30	4157.72	-92.64	-12.36	-92.64	0.40
25	4244.00	2.30	191.50	4241.63	-96.48	-12.90	-96.48	0.90
26	4327.00	2.40	191.20	4324.56	-99.82	-13.57	-99.82	0.12
27	4401.00	2.00	197.50	4398.51	-102.57	-14.26	-102.57	0.63
28	4492.00	2.50	197.60	4489.44	-105.98	-15.33	-105.98	0.55
29	4576.00	2.50	202.30	4573.36	-109.42	-16.58	-109.42	0.24
30	4659.00	2.30	198.40	4656.28	-112.67	-17.80	-112.67	0.31
31	4742.00	2.40	197.20	4739.21	-115.92	-18.84	-115.92	0.13
32	4825.00	2.40	199.20	4822.14	-119.22	-19.92	-119.22	0.10
33	4908.00	2.50	196.30	4905.06	-122.60	-21.00	-122.60	0.19
34	4992.00	1.60	192.00	4989.01	-125.50	-21.76	-125.50	1.09
35	5075.00	2.20	193.70	5071.96	-128.18	-22.38	-128.18	0.73
36	5158.00	2.70	190.40	5154.89	-131.65	-23.11	-131.65	0.63
37	5241.00	2.10	184.10	5237.82	-135.09	-23.57	-135.09	0.79
38	5324.00	3.00	177.10	5320.73	-138.78	-23.57	-138.78	1.15
39	5408.00	3.00	182.10	5404.62	-143.17	-23.54	-143.17	0.31

SUNBURST CONSULTING, INC.

<

>

Operator:	SM Energy Company		
Well :	Dahl 15-11H		
County:	McKenzie	State:	ND
QQ:	SW SE	Section:	11
Township:	153	N/S:	N
Range:	101	E/W:	W
Footages:	22	FN/SL:	S
	2488	FE/WL:	E

Kick-off: [0/23/2011]
 Finish: [11/18/2011]
 Directional Supervision:
 Ryan

Date: 11/21/2011
 Time: 10:20
F9 to re-calculate

Proposed dir: 360

Minimum Curvature Method (SPE-3362)

[North and East are positive and South and West are negative, relative to surface location]

No.	MD	INC	TRUE			N-S	E-W	SECT	DLS/ 100
			AZM	TVD					
40	5490.00	2.10	184.80	5486.54	-146.81	-23.74	-146.81	1.11	
41	5574.00	1.90	197.40	5570.48	-149.67	-24.29	-149.67	0.57	
42	5657.00	1.60	203.20	5653.45	-152.05	-25.15	-152.05	0.42	
43	5740.00	2.50	193.70	5736.39	-154.88	-26.04	-154.88	1.16	
44	5823.00	2.50	188.50	5819.31	-158.43	-26.74	-158.43	0.27	
45	5906.00	2.10	183.50	5902.25	-161.73	-27.10	-161.73	0.54	
46	5989.00	1.60	204.20	5985.20	-164.31	-27.66	-164.31	1.00	
47	6073.00	1.10	207.30	6069.18	-166.09	-28.51	-166.09	0.60	
48	6156.00	0.50	198.20	6152.17	-167.15	-28.99	-167.15	0.74	
49	6239.00	0.40	210.70	6235.17	-167.74	-29.25	-167.74	0.17	
50	6322.00	0.30	225.80	6318.17	-168.14	-29.56	-168.14	0.16	
51	6405.00	0.10	240.10	6401.17	-168.33	-29.78	-168.33	0.25	
52	6488.00	0.20	8.20	6484.17	-168.22	-29.82	-168.22	0.33	
53	6571.00	0.30	355.80	6567.17	-167.86	-29.81	-167.86	0.14	
54	6655.00	0.20	2.70	6651.17	-167.49	-29.82	-167.49	0.12	
55	6738.00	0.30	345.20	6734.16	-167.14	-29.87	-167.14	0.15	
56	6821.00	0.30	328.20	6817.16	-166.75	-30.04	-166.75	0.11	
57	6904.00	0.40	345.10	6900.16	-166.28	-30.23	-166.28	0.17	
58	6987.00	0.60	337.80	6983.16	-165.60	-30.47	-165.60	0.25	
59	7071.00	0.70	329.30	7067.15	-164.75	-30.90	-164.75	0.17	
60	7154.00	0.60	2.40	7150.15	-163.88	-31.14	-163.88	0.46	
61	7237.00	0.60	8.60	7233.14	-163.02	-31.06	-163.02	0.08	
62	7320.00	0.70	19.50	7316.14	-162.11	-30.82	-162.11	0.19	
63	7403.00	0.80	23.30	7399.13	-161.10	-30.42	-161.10	0.13	
64	7486.00	0.80	19.30	7482.12	-160.02	-30.00	-160.02	0.07	
65	7569.00	0.70	16.70	7565.12	-158.99	-29.66	-158.99	0.13	
66	7653.00	0.70	17.30	7649.11	-158.00	-29.36	-158.00	0.01	
67	7736.00	0.60	40.50	7732.10	-157.19	-28.93	-157.19	0.34	
68	7819.00	1.10	43.10	7815.10	-156.28	-28.10	-156.28	0.60	
69	7902.00	1.30	36.30	7898.08	-154.94	-27.00	-154.94	0.30	
70	7985.00	1.00	32.30	7981.06	-153.57	-26.06	-153.57	0.37	
71	8068.00	0.80	22.60	8064.05	-152.42	-25.45	-152.42	0.30	
72	8152.00	0.90	28.10	8148.04	-151.30	-24.91	-151.30	0.15	
73	8235.00	1.00	44.40	8231.03	-150.20	-24.10	-150.20	0.35	
74	8318.00	0.90	30.30	8314.02	-149.12	-23.26	-149.12	0.31	
75	8401.00	0.80	39.00	8397.01	-148.11	-22.57	-148.11	0.20	
76	8484.00	0.80	31.10	8480.00	-147.16	-21.91	-147.16	0.13	
77	8567.00	0.80	7.00	8562.99	-146.09	-21.54	-146.09	0.40	
78	8650.00	0.80	351.50	8645.98	-144.94	-21.55	-144.94	0.26	
79	8734.00	0.80	349.30	8729.98	-143.79	-21.75	-143.79	0.04	

SUNBURST CONSULTING, INC.

<

>

Operator:	SM Energy Company		
Well :	Dahl 15-11H		
County:	McKenzie	State:	ND
QQ:	SW SE	Section:	11
Township:	153	N/S:	N
Range:	101	E/W:	W
Footages:	22	FN/SL:	S
	2488	FE/WL:	E

Kick-off:	10/23/2011
Finish:	11/18/2011
Directional Supervision:	
Ryan	

Date: 11/21/2011
 Time: 10:20
F9 to re-calculate

Proposed dir: 360

Minimum Curvature Method (SPE-3362)

[North and East are positive and South and West are negative, relative to surface location]

No.	MD	INC	AZM	TVD	TRUE		DLS/	
					N-S	E-W	SECT	100
80	8817.00	1.00	355.30	8812.97	-142.50	-21.91	-142.50	0.27
81	8900.00	1.00	355.80	8895.95	-141.05	-22.03	-141.05	0.01
82	8984.00	1.00	1.70	8979.94	-139.59	-22.06	-139.59	0.12
83	9066.00	1.10	352.10	9061.93	-138.09	-22.14	-138.09	0.25
84	9149.00	1.00	5.60	9144.91	-136.58	-22.18	-136.58	0.32
85	9233.00	1.30	2.60	9228.90	-134.90	-22.07	-134.90	0.36
86	9313.00	1.00	0.40	9308.88	-133.30	-22.02	-133.30	0.38
87	9396.00	1.10	9.10	9391.87	-131.79	-21.89	-131.79	0.23
88	9479.00	0.70	27.50	9474.86	-130.55	-21.53	-130.55	0.59
89	9562.00	0.80	117.30	9557.85	-130.37	-20.78	-130.37	1.28
90	9646.00	1.70	154.80	9641.83	-131.76	-19.73	-131.76	1.39
91	9729.00	3.00	182.40	9724.76	-135.05	-19.30	-135.05	2.03
92	9812.00	3.60	185.80	9807.62	-139.81	-19.65	-139.81	0.76
93	9895.00	3.40	187.10	9890.47	-144.85	-20.22	-144.85	0.26
94	9978.00	3.20	187.30	9973.33	-149.59	-20.82	-149.59	0.24
95	10061.00	3.10	196.70	10056.21	-154.03	-21.76	-154.03	0.63
96	10145.00	2.20	200.30	10140.12	-157.72	-22.97	-157.72	1.09
97	10228.00	1.40	205.90	10223.08	-160.13	-23.97	-160.13	0.99
98	10274.00	0.90	255.40	10269.07	-160.72	-24.56	-160.72	2.31
99	10316.00	4.90	358.20	10311.02	-159.01	-24.94	-159.01	12.32
100	10356.00	12.60	359.70	10350.52	-152.93	-25.01	-152.93	19.26
101	10398.00	18.50	359.40	10390.97	-141.68	-25.11	-141.68	14.05
102	10440.00	24.80	359.80	10429.98	-126.19	-25.21	-126.19	15.00
103	10481.00	28.50	359.40	10466.62	-107.81	-25.34	-107.81	9.03
104	10523.00	32.40	358.90	10502.82	-86.53	-25.66	-86.53	9.31
105	10564.00	35.30	359.90	10536.87	-63.69	-25.89	-63.69	7.20
106	10606.00	39.30	0.60	10570.27	-38.25	-25.77	-38.25	9.58
107	10648.00	43.60	1.70	10601.74	-10.46	-25.20	-10.46	10.38
108	10689.00	47.60	2.80	10630.43	18.80	-24.05	18.80	9.94
109	10731.00	52.40	4.80	10657.42	50.89	-21.89	50.89	12.00
110	10772.00	59.10	4.20	10680.48	84.66	-19.24	84.66	16.39
111	10814.00	65.80	4.40	10699.89	121.77	-16.45	121.77	15.96
112	10855.00	71.80	4.20	10714.71	159.87	-13.59	159.87	14.64
113	10897.00	77.50	1.30	10725.83	200.31	-11.66	200.31	15.12
114	10936.00	83.50	1.30	10732.26	238.74	-10.79	238.74	15.38
115	10988.00	84.80	0.20	10737.56	290.47	-10.11	290.47	3.27
116	11080.00	86.80	359.70	10744.30	382.22	-10.19	382.22	2.24
117	11172.00	89.60	0.80	10747.19	474.16	-9.79	474.16	3.27
118	11263.00	90.20	1.00	10747.35	565.15	-8.36	565.15	0.70
119	11355.00	90.70	359.80	10746.63	657.14	-7.72	657.14	1.41

SUNBURST CONSULTING, INC.

<

>

Operator:	SM Energy Company		
Well :	Dahl 15-11H		
County:	McKenzie	State:	ND
QQ:	SW SE	Section:	11
Township:	153	N/S:	N
Range:	101	E/W:	W
Footages:	22	FN/SL:	S
	2488	FE/WL:	E

Kick-off:	10/23/2011
Finish:	11/18/2011
Directional Supervision:	Ryan

Date: 11/21/2011
 Time: 10:20
F9 to re-calculate

Proposed dir: 360

Minimum Curvature Method (SPE-3362)

[North and East are positive and South and West are negative, relative to surface location]

No.	MD	INC	AZM	TVD	TRUE		DLS/	
					N-S	E-W	SECT	100
120	11447.00	91.20	0.10	10745.10	749.13	-7.80	749.13	0.63
121	11539.00	90.70	0.60	10743.58	841.11	-7.24	841.11	0.77
122	11630.00	91.60	0.90	10741.75	932.08	-6.05	932.08	1.04
123	11722.00	92.20	1.30	10738.70	1024.02	-4.28	1024.02	0.78
124	11814.00	89.60	1.40	10737.25	1115.97	-2.11	1115.97	2.83
125	11905.00	89.20	0.90	10738.21	1206.95	-0.29	1206.95	0.70
126	11996.00	89.80	0.30	10739.00	1297.94	0.67	1297.94	0.93
127	12087.00	90.50	0.00	10738.76	1388.94	0.90	1388.94	0.84
128	12178.00	90.00	0.60	10738.37	1479.93	1.38	1479.93	0.86
129	12268.00	90.10	0.60	10738.29	1569.93	2.32	1569.93	0.11
130	12359.00	89.60	359.90	10738.53	1660.93	2.72	1660.93	0.95
131	12449.00	90.50	0.10	10738.45	1750.93	2.72	1750.93	1.02
132	12533.00	90.20	1.40	10737.93	1834.92	3.82	1834.92	1.59
133	12616.00	89.40	0.40	10738.22	1917.90	5.12	1917.90	1.54
134	12699.00	89.80	1.10	10738.80	2000.89	6.21	2000.89	0.97
135	12782.00	90.90	0.60	10738.30	2083.88	7.44	2083.88	1.46
136	12865.00	90.90	0.90	10736.99	2166.86	8.53	2166.86	0.36
137	12948.00	91.00	0.70	10735.62	2249.84	9.69	2249.84	0.27
138	13032.00	91.40	0.80	10733.86	2333.82	10.78	2333.82	0.49
139	13115.00	90.40	0.60	10732.55	2416.80	11.80	2416.80	1.23
140	13198.00	90.50	0.30	10731.90	2499.80	12.45	2499.80	0.38
141	13281.00	90.60	1.00	10731.10	2582.79	13.39	2582.79	0.85
142	13364.00	91.40	1.30	10729.66	2665.76	15.06	2665.76	1.03
143	13447.00	91.30	1.00	10727.70	2748.72	16.72	2748.72	0.38
144	13530.00	89.90	359.00	10726.83	2831.71	16.72	2831.71	2.94
145	13614.00	89.50	359.20	10727.27	2915.69	15.40	2915.69	0.53
146	13697.00	89.60	359.10	10727.92	2998.68	14.17	2998.68	0.17
147	13780.00	90.30	0.00	10728.00	3081.68	13.52	3081.68	1.37
148	13863.00	90.90	359.80	10727.13	3164.67	13.38	3164.67	0.76
149	13946.00	91.30	0.40	10725.53	3247.66	13.52	3247.66	0.87
150	14029.00	90.90	359.90	10723.94	3330.64	13.74	3330.64	0.77
151	14113.00	90.40	358.40	10722.99	3414.62	12.49	3414.62	1.88
152	14196.00	90.60	358.40	10722.26	3497.59	10.17	3497.59	0.24
153	14279.00	90.50	357.20	10721.47	3580.52	6.99	3580.52	1.45
154	14362.00	90.90	358.30	10720.45	3663.45	3.73	3663.45	1.41
155	14445.00	90.10	357.40	10719.73	3746.39	0.62	3746.39	1.45
156	14528.00	90.40	357.80	10719.37	3829.31	-2.86	3829.31	0.60
157	14612.00	89.70	356.60	10719.29	3913.21	-6.96	3913.21	1.65
158	14695.00	88.70	356.70	10720.45	3996.06	-11.81	3996.06	1.21
159	14778.00	89.30	357.90	10721.90	4078.95	-15.72	4078.95	1.62

<

SUNBURST CONSULTING, INC.

>

Operator:	SM Energy Company		
Well :	Dahl 15-11H		
County:	McKenzie	State:	ND
QQ:	SW SE	Section:	11
Township:	153	N/S:	N
Range:	101	E/W:	W
Footages:	22	FN/SL:	S
	2488	FE/WL:	E

Kick-off:	10/23/2011
Finish:	11/18/2011
Directional Supervision:	Ryan

Date: 11/21/2011
 Time: 10:20
F9 to re-calculate

Proposed dir: 360

Minimum Curvature Method (SPE-3362)

[North and East are positive and South and West are negative, relative to surface location]

No.	MD	INC	TRUE			N-S	E-W	SECT	DLS/ 100
			AZM	TVD					
160	14861.00	91.00	359.60	10721.68	4161.93	-17.53	4161.93	2.90	
161	14944.00	90.90	359.50	10720.31	4244.91	-18.18	4244.91	0.17	
162	15027.00	91.50	0.00	10718.57	4327.89	-18.55	4327.89	0.94	
163	15111.00	91.60	359.40	10716.30	4411.86	-18.99	4411.86	0.72	
164	15194.00	89.50	358.50	10715.50	4494.84	-20.51	4494.84	2.75	
165	15277.00	89.40	358.40	10716.30	4577.80	-22.75	4577.80	0.17	
166	15360.00	89.30	358.30	10717.24	4660.76	-25.14	4660.76	0.17	
167	15443.00	90.00	359.30	10717.74	4743.74	-26.88	4743.74	1.47	
168	15526.00	90.80	359.30	10717.16	4826.73	-27.89	4826.73	0.96	
169	15609.00	89.20	358.60	10717.16	4909.72	-29.41	4909.72	2.10	
170	15693.00	89.90	358.40	10717.82	4993.68	-31.61	4993.68	0.87	
171	15776.00	88.40	357.40	10719.06	5076.62	-34.65	5076.62	2.17	
172	15859.00	87.50	357.70	10722.02	5159.49	-38.20	5159.49	1.14	
173	15942.00	88.40	358.00	10724.99	5242.37	-41.31	5242.37	1.14	
174	16025.00	88.50	358.60	10727.24	5325.31	-43.77	5325.31	0.73	
175	16108.00	89.40	359.00	10728.76	5408.27	-45.51	5408.27	1.19	
176	16192.00	89.90	359.00	10729.27	5492.26	-46.98	5492.26	0.60	
177	16275.00	89.20	358.60	10729.92	5575.24	-48.71	5575.24	0.97	
178	16358.00	88.80	358.70	10731.37	5658.20	-50.67	5658.20	0.50	
179	16441.00	88.90	358.40	10733.04	5741.16	-52.77	5741.16	0.38	
180	16524.00	89.30	358.50	10734.34	5824.12	-55.01	5824.12	0.50	
181	16607.00	90.00	358.60	10734.85	5907.09	-57.11	5907.09	0.85	
182	16691.00	91.10	358.80	10734.04	5991.06	-59.02	5991.06	1.33	
183	16774.00	89.40	359.10	10733.68	6074.04	-60.54	6074.04	2.08	
184	16857.00	89.50	359.00	10734.48	6157.03	-61.92	6157.03	0.17	
185	16940.00	89.90	358.80	10734.91	6240.01	-63.51	6240.01	0.54	
186	17023.00	89.80	359.50	10735.13	6323.00	-64.74	6323.00	0.85	
187	17106.00	89.80	359.00	10735.42	6405.99	-65.83	6405.99	0.60	
188	17190.00	90.40	359.60	10735.27	6489.99	-66.85	6489.99	1.01	
189	17273.00	90.90	0.00	10734.33	6572.98	-67.14	6572.98	0.77	
190	17356.00	90.90	359.50	10733.03	6655.97	-67.51	6655.97	0.60	
191	17439.00	92.20	0.00	10730.78	6738.94	-67.87	6738.94	1.68	
192	17522.00	90.30	1.20	10728.97	6821.91	-67.00	6821.91	2.71	
193	17605.00	91.60	1.60	10727.60	6904.87	-64.97	6904.87	1.64	
194	17688.00	88.50	0.50	10727.52	6987.84	-63.45	6987.84	3.96	
195	17772.00	88.30	0.60	10729.87	7071.81	-62.65	7071.81	0.27	
196	17855.00	89.20	1.40	10731.68	7154.77	-61.20	7154.77	1.45	
197	17938.00	89.10	1.90	10732.91	7237.73	-58.81	7237.73	0.61	
198	18021.00	88.90	1.00	10734.36	7320.69	-56.71	7320.69	1.11	
199	18104.00	89.40	359.60	10735.59	7403.68	-56.27	7403.68	1.79	

SUNBURST CONSULTING, INC.

<

>

Operator:	SM Energy Company		
Well :	Dahl 15-11H		
County:	McKenzie	State:	ND
QQ:	SW SE	Section:	11
Township:	153	N/S:	N
Range:	101	E/W:	W
Footages:	22	FN/SL:	S
	2488	FE/WL:	E

Kick-off:	10/23/2011
Finish:	11/18/2011
Directional Supervision:	Ryan

Date: 11/21/2011
 Time: 10:20
F9 to re-calculate

Proposed dir: 360

Minimum Curvature Method (SPE-3362)

[North and East are positive and South and West are negative, relative to surface location]

No.	MD	INC	TRUE			N-S	E-W	SECT	DLS/ 100
			AZM	TVD					
200	18187.00	89.60	0.10	10736.32	7486.67	-56.49	7486.67	0.65	
201	18271.00	90.00	359.30	10736.61	7570.67	-56.93	7570.67	1.06	
202	18354.00	90.20	359.00	10736.46	7653.66	-58.16	7653.66	0.43	
203	18437.00	90.70	359.10	10735.81	7736.65	-59.54	7736.65	0.61	
204	18520.00	89.80	358.60	10735.45	7819.63	-61.20	7819.63	1.24	
205	18603.00	89.20	359.00	10736.17	7902.61	-62.94	7902.61	0.87	
206	18686.00	89.00	358.10	10737.48	7985.57	-65.04	7985.57	1.11	
207	18770.00	89.30	358.10	10738.72	8069.51	-67.83	8069.51	0.36	
208	18853.00	89.60	357.90	10739.52	8152.46	-70.72	8152.46	0.43	
209	18936.00	90.00	357.10	10739.81	8235.38	-74.34	8235.38	1.08	
210	19019.00	91.40	358.60	10738.80	8318.31	-77.46	8318.31	2.47	
211	19102.00	91.20	359.30	10736.91	8401.27	-78.98	8401.27	0.88	
212	19185.00	90.60	359.80	10735.61	8484.26	-79.63	8484.26	0.94	
213	19269.00	90.10	0.60	10735.10	8568.26	-79.34	8568.26	1.12	
214	19352.00	88.80	0.60	10735.89	8651.25	-78.47	8651.25	1.57	
215	19435.00	89.20	0.60	10737.34	8734.23	-77.60	8734.23	0.48	
216	19518.00	89.60	0.50	10738.21	8817.22	-76.80	8817.22	0.50	
217	19601.00	89.00	358.70	10739.22	8900.21	-77.38	8900.21	2.29	
218	19684.00	89.20	358.50	10740.53	8983.17	-79.41	8983.17	0.34	
219	19767.00	89.60	359.10	10741.40	9066.15	-81.15	9066.15	0.87	
220	19851.00	90.40	359.50	10741.40	9150.14	-82.17	9150.14	1.06	
221	19934.00	89.40	359.80	10741.54	9233.14	-82.68	9233.14	1.26	
222	20017.00	88.60	359.40	10742.99	9316.12	-83.26	9316.12	1.08	
223	20100.00	88.70	359.40	10744.95	9399.10	-84.13	9399.10	0.12	
224	20183.00	88.80	359.50	10746.76	9482.07	-84.92	9482.07	0.17	
225	20266.00	89.40	359.40	10748.06	9565.06	-85.72	9565.06	0.73	
226	20350.00	89.40	0.10	10748.94	9649.05	-86.09	9649.05	0.83	
227	20433.00	89.40	359.90	10749.81	9732.05	-86.09	9732.05	0.24	
228	20516.00	88.60	359.40	10751.26	9815.03	-86.59	9815.03	1.14	
229	20599.00	88.80	0.10	10753.14	9898.01	-86.96	9898.01	0.88	
230	20682.00	88.90	359.80	10754.81	9980.99	-87.03	9980.99	0.38	
231	20765.00	88.80	0.20	10756.47	10063.98	-87.03	10063.98	0.50	
232	20798.00	88.80	0.40	10757.16	10096.97	-86.86	10096.97	0.61	
233	20850.00	88.80	0.40	10758.25	10148.96	-86.49	10148.96	0.00	

FORMATION TOPS & STRUCTURAL RELATIONSHIPS

Formation/ Zone	Subject Well:			Offset Wells:								
	Prog. Top	Prog. Datum (MSL)	Est. Top (ROP)	E-Log Top	MWD GR	Datum (MSL)	Interval	Thickness to Target	Dip To Prognosis	Dip To Lindvig #1 11-3C	Dip To M&G 14- 2HR	Dip To Rosebud 22-11
Base Last Salt	9,212'	-7,085'	9,226'		-7,099'	60'	1,511'	-14'	2'	13'	-50'	-33'
Railcliff	9,283'	-7,156'	9,286'		-7,159'	160'	1,451'	-3'				
Mission Canyon	9,433'	-7,306'	9,446'		9,446'	-7,319'	572'	1,291'	-13'	5'	-52'	-35'
Lodgepole	10,017'	-7,890'	10,018'	10,018'	-7,891'	687'	719'	-1'	15'	-46'	-46'	-29'
Carrington	10,696'	-8,569'	10,705'	10,705'	-8,578'	3'	32'	-9'	12'	-54'	-54'	-34'
Scallion	10,705'	-8,578'	10,708'	10,708'	-8,581'	4'	29'	-3'	13'	-54'	-54'	-33'
Upper Bakken Shale	10,714'	-8,587'	10,712'	10,712'	-8,585'	16'	25'	2'	18'	-52'	-52'	-29'
Middle Bakken	10,727'	-8,600'	10,728'	10,728'	-8,601'	10'	9'	-1'	16'	-52'	-52'	-29'
Middle Bakken (Target)	10,737'	-8,610'	10,738'	10,738'	-8,611'		-1'		16'	-52'	-52'	-29'

CONTROL DATA

Operator:	SM Energy Company Lindvig 1-11HR			SM Energy Company M&G 14-2HR			SM Energy Company Rosebud 22-11		
Well Name:	SE SE 612 FSL 793 FEL			SW SW 566 FSL 575 FWL			SE NW 1745 FNL 1755 FWL		
Location:	McKenzie, ND			McKenzie, ND			McKenzie County, ND		
Elevation:	0.38 mi. NE of Dahl 15-11H KB: 2,108'			1.18 mi. NW of Dahl 15-11H KB: 1,871'			0.7 mi. NW to Daht 15-11H KB: 1,872'		
Formation/ Zone	E-Log Top	Datum (MSL)	Interval Thickness	Thickness to Target	E-Log Top	Datum (MSL)	Interval Thickness	E-Log Top	Datum (MSL)
Base Last Salt	9,209'	-7,101'	71'	1,526'	-	-	-	-	-
Railcliffe	9,280'	-7,172'	152'	1,455'	8,980'	-7,109'	158'	1,450'	8,998'
Mission Canyon	9,432'	-7,324'	582'	1,303'	9,138'	-7,267'	578'	1,292'	9,156'
Lodgepole	10,014'	-7,906'	684'	721'	9,716'	-7,845'	679'	714'	9,734'
Carrington	10,698'	-8,590'	4'	37'	10,395'	-8,524'	3'	35'	10,416'
Scallion	10,702'	-8,594'	9'	33'	10,398'	-8,527'	6'	32'	10,420'
Upper Bakken Shale	10,711'	-8,603'	14'	24'	10,404'	-8,533'	16'	26'	10,428'
Middle Bakken	10,725'	-8,617'	10'	10'	10,420'	-8,549'	10'	10'	10,444'
Middle Bakken (Target)	10,735'	-8,627"	-	0	10,430'	-8,559'	-	0	10,454'

INTERVAL THICKNESS

SM Energy - Dahl 15-11H

700'

600'

500'

400'

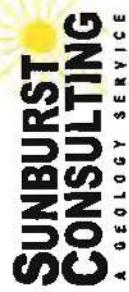
300'

200'

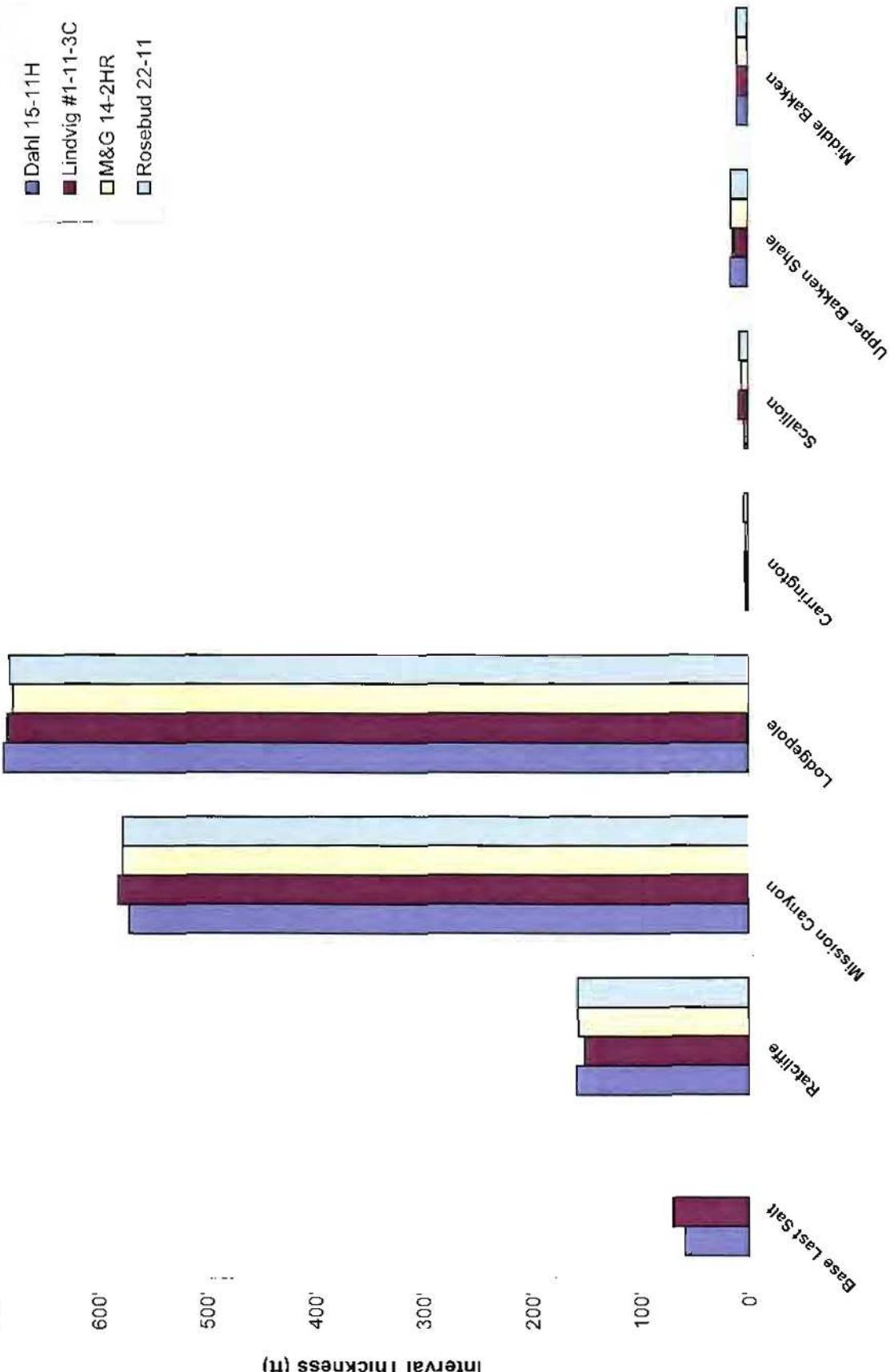
100'

0'

Interval Thickness (ft)



- Dahl 15-11H
- Lindvig #1-11-3C
- M&G 14-2HR
- Rosebud 22-11

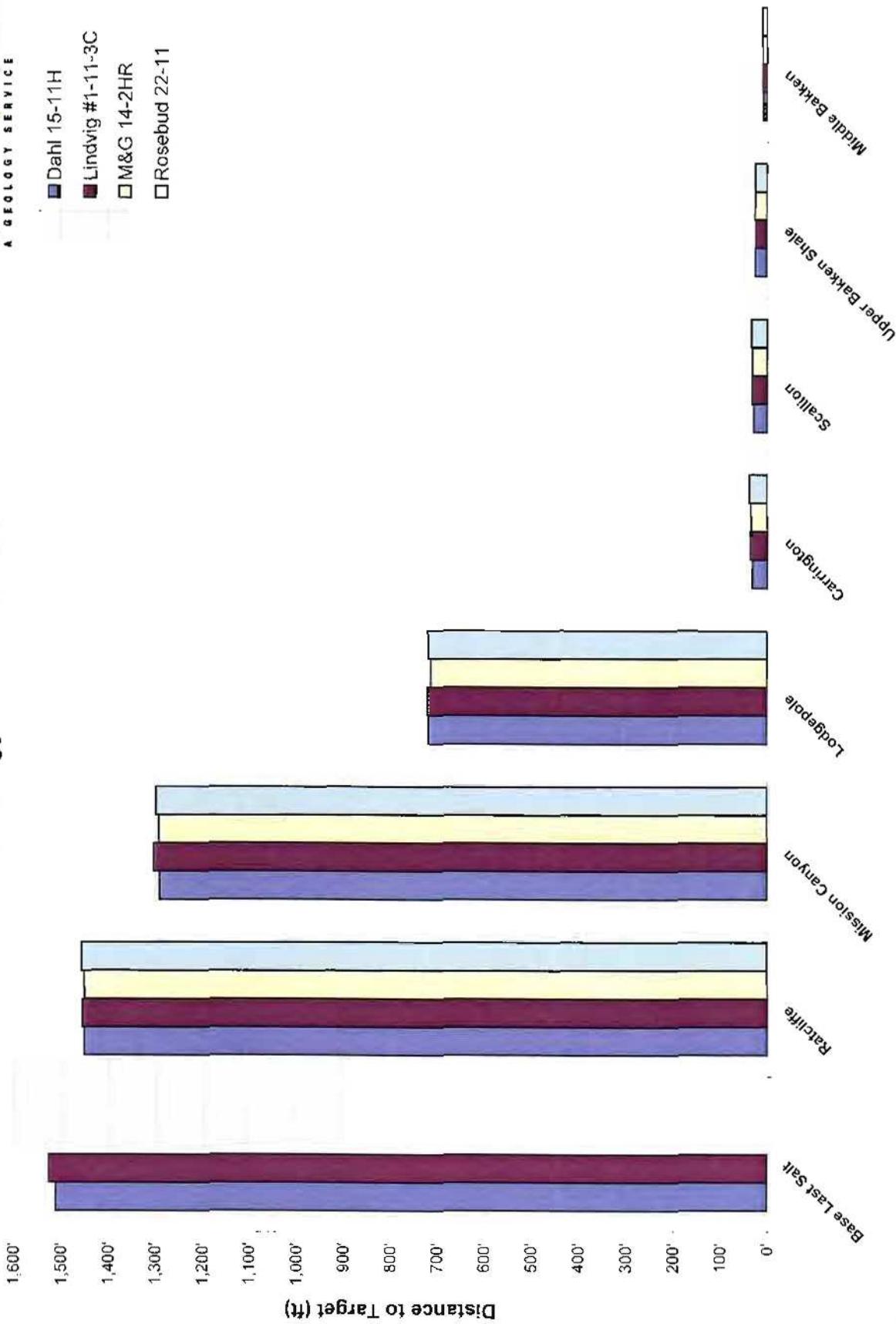


TARGET PROXIMATION

Formation/ Zone:	Lindvig #1-11-3C	M&G 14-2HR	Proposed Top of Target From:	Average of Offset Wells
Base Last Salt	10,752'	-	-	10,752'
Ratcliffe	10,741'	10,736'	10,742'	10,740'
Mission Canyon	10,749'	10,738'	10,744'	10,744'
Lodgepole	10,739'	10,732'	10,738'	10,736'
Carrington	10,742'	10,740'	10,743'	10,742'
Scallion	10,741'	10,740'	10,742'	10,741'
Upper Bakken Shale	10,736'	10,738'	10,738'	10,737'
Middle Bakken	10,738'	10,738'	10,738'	10,738'
Middle Bakken (Target)	10,738'	10,738'	10,738'	10,738'

ISOPACH TO TARGET

SM Energy - Dahl 15-11H



LITHOLOGY

Rig crews caught lagged samples in 30' intervals under the supervision of Sunburst geologists. A detailed list of sampling intervals is included in the well data summary page. Sample or gamma ray marker tops have been inserted in the sample descriptions below for reference. Samples were examined wet and dry under a binocular microscope. The drilling fluid was diesel-based invert from surface casing to 10,982'. The drilling fluid was saltwater from 10,982' to TD sample collection began at 9,120'.

9120-9150 LIMESTONE: wackestone cream to tan, dark gray, microcrystalline, firm to hard, earthy texture,

9150-9180 SALT: transparent to frosted, crystalline, hard, subhedral to occasional euhedral, crystalline texture; trace: LIMESTONE: wackestone cream to tan, dark gray, microcrystalline, firm to hard, earthy texture,

9180-9210 SALT: transparent to frosted, crystalline, hard, subhedral to occasional euhedral, crystalline texture; rare: LIMESTONE: wackestone cream to tan, dark gray, microcrystalline, firm to hard, earthy texture,

9210-9240 LIMESTONE: mudstone, cream to tan, light gray, trace brown to tan, microcrystalline, firm to hard, earthy texture, common ANHYDRITE: white, microcrystalline, soft, amorphous

Base Last Charles Salt **9,226' TVD -7,099' SS**

9240-9270 LIMESTONE: mudstone, cream to tan, light gray, trace brown to tan, microcrystalline, firm to hard, earthy texture, common ANHYDRITE: white, microcrystalline, soft, amorphous

Ratcliffe **9,286' TVD -7,159' SS**

9270-9300 LIMESTONE: wackestone cream to tan, light gray, trace brown to tan, microcrystalline, firm to hard, earthy texture, trace ANHYDRITE: white, microcrystalline, soft, amorphous

9300-9330 LIMESTONE: wackestone cream to tan, light gray, trace brown to tan, microcrystalline, firm to hard, earthy texture, trace DOLOMITE: mudstone, tan, microcrystalline, firm, blocky, trace ANHYDRITE: white, microcrystalline, soft, amorphous

9330-9360 LIMESTONE: wackestone cream to tan, light gray, trace brown to tan, microcrystalline, firm to hard, earthy texture, common DOLOMITE: mudstone, tan, microcrystalline, firm, blocky, common ANHYDRITE: white, microcrystalline, soft, amorphous

9360-9390 LIMESTONE: mudstone, medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture,

9390-9420 LIMESTONE: mudstone, to wackestone medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace spotty brown oil to stain

9420-9450 LIMESTONE: mudstone, medium to light brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace spotty brown oil to stain

Mission Canyon Formation **9,446' TVD -7,319' SS**

9420-9450 LIMESTONE: mudstone, medium to light brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace spotty brown oil to stain

9450-9480 LIMESTONE: mudstone, medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture, argillaceous in part, trace spotty brown oil to stain

9480-9510 LIMESTONE: mudstone, to wackestone medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture, argillaceous in part, trace spotty brown oil to stain

9510-9540 LIMESTONE: mudstone, to wackestone medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace spotty brown oil to stain

9540-9570 LIMESTONE: mudstone, to wackestone medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace spotty brown oil to stain

9570-9600 LIMESTONE: mudstone, to wackestone medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace spotty brown oil to stain

9600-9630 LIMESTONE: mudstone, to wackestone medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace spotty brown oil to stain

9630-9660 LIMESTONE: mudstone, to wackestone light to medium brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace spotty brown oil to stain, no visible porosity

9660-9690 LIMESTONE: mudstone, to wackestone light to medium brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace spotty brown oil to stain, no visible porosity

9690-9720 LIMESTONE: mudstone, to wackestone medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace spotty brown oil to stain, no visible porosity

9720-9750 LIMESTONE: mudstone, to wackestone medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace alga streaky, trace spotty brown oil to stain, no visible porosity

9750-9780 LIMESTONE: mudstone, to wackestone medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace alga streaky, trace spotty brown oil to stain, no visible porosity

9780-9810 LIMESTONE: mudstone, to wackestone light to medium brown, rare brown to tan, microcrystalline, firm to hard, earthy texture, trace alga streaky, trace spotty brown oil to stain, no visible porosity

9810-9840 LIMESTONE: mudstone, to wackestone cream tan, trace brown to tan, microcrystalline, firm to hard, earthy texture, trace alga streaky, trace spotty brown oil to stain, no visible porosity

9840-9870 LIMESTONE: mudstone, to wackestone medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace alga streaky, trace spotty brown oil to stain, no visible porosity

9870-9900 LIMESTONE: mudstone, to wackestone medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace spotty brown oil to stain, no visible porosity

9900- 9930 LIMESTONE: mudstone, dark brown, rare brown to tan, microcrystalline, firm to hard, earthy texture, common dark brown dead oil to stain, no visible porosity

9930-9960 LIMESTONE: mudstone, medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace spotty brown oil to stain, no visible porosity

9960-9990 LIMESTONE: mudstone, light to medium brown, common brown to tan, microcrystalline, firm to hard, earthy texture, no visible porosity

9990-10020 LIMESTONE: mudstone, medium to dark brown, common brown to tan, microcrystalline, firm to hard, earthy texture, trace dead dark brown oil to stain, no visible porosity

Lodgepole Formation**10,018' TVD -7,891' SS**

10020-10050 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common tan, microcrystalline, firm, earthy texture, no visible porosity

10050-10080 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common tan, microcrystalline, firm, earthy texture, no visible porosity

10080-10110 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common tan, microcrystalline, firm, earthy texture, no visible porosity

10110-10140 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common tan, microcrystalline, firm, earthy texture, no visible porosity

10140-10170 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common tan, microcrystalline, firm, earthy texture, no visible porosity

10170-10200 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common tan, microcrystalline, firm, earthy texture, no visible porosity

10200-10230 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common tan, microcrystalline, firm, earthy texture, no visible porosity, trace disseminated pyrite

10230-10260 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common tan, microcrystalline, firm, earthy texture, no visible porosity, trace disseminated pyrite

10260-10290 No Sample

10190-10220 No Sample

10290-10320 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common brown tan, microcrystalline, firm, earthy texture, no visible porosity, trace disseminated pyrite

10320-10350 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common brown tan, microcrystalline, firm, earthy texture, no visible porosity, trace disseminated pyrite

10350-10380 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common brown tan, microcrystalline, firm, earthy texture, no visible porosity, trace disseminated pyrite

10380-10410 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common brown tan, microcrystalline, firm, dense, earthy texture, no visible porosity, trace disseminated pyrite

10410-10440 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common brown tan, microcrystalline, firm, dense, earthy texture, no visible porosity, trace disseminated pyrite

10440-10470 ARGILLACEOUS LIMESTONE: mudstone, medium brown, common brown tan, microcrystalline, firm, dense, earthy texture, no visible porosity, trace disseminated pyrite

10470-10500 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common brown tan, microcrystalline, firm, dense, earthy texture, no visible porosity, trace disseminated pyrite

10500-10530 ARGILLACEOUS LIMESTONE: mudstone, medium to light brown, common brown tan, microcrystalline, firm to hard, dense, earthy texture, no visible porosity, trace disseminated pyrite

10530-10560 ARGILLACEOUS LIMESTONE: mudstone, medium brown, common brown tan, microcrystalline, firm to hard, dense, earthy texture, no visible porosity, trace disseminated pyrite

10560-10590 ARGILLACEOUS LIMESTONE: mudstone, medium brown, common brown tan, microcrystalline, firm to hard, dense, earthy texture, no visible porosity, trace disseminated pyrite

10590-10620 ARGILLACEOUS LIMESTONE: mudstone, medium brown, common brown tan, microcrystalline, firm to hard, dense, earthy texture, no visible porosity, trace disseminated pyrite

10620-10650 ARGILLACEOUS LIMESTONE: mudstone, medium brown, common brown tan, microcrystalline, firm to hard, dense, earthy texture, no visible porosity, trace disseminated pyrite

10650-10680 ARGILLACEOUS LIMESTONE: mudstone, medium brown, common brown tan, microcrystalline, firm to hard, dense, earthy texture, no visible porosity, trace disseminated pyrite

10680-10710 ARGILLACEOUS LIMESTONE: mudstone, medium brown, common brown tan, microcrystalline, firm to hard, dense, earthy texture, no visible porosity, trace disseminated pyrite

10710-10740 ARGILLACEOUS LIMESTONE: mudstone, medium brown, common brown tan, microcrystalline, firm to hard, dense, earthy texture, no visible porosity, common disseminated pyrite

10740-10770 ARGILLACEOUS LIMESTONE: mudstone, medium brown, common brown tan, microcrystalline, firm to hard, dense, earthy texture, no visible porosity, common disseminated pyrite

10770-10800 ARGILLACEOUS LIMESTONE: mudstone, medium brown, common brown tan, microcrystalline, firm to hard, dense, earthy texture, no visible porosity, common disseminated pyrite

10800-10830 ARGILLACEOUS LIMESTONE: mudstone, medium brown, common brown tan, microcrystalline, firm to hard, dense, earthy texture, no visible porosity, common disseminated pyrite

Carrington 10,705' TVD -8,578' SS

Scallion 10,708' TVD -8,581' SS

10830-10860 ARGILLACEOUS LIMESTONE: mudstone, medium brown, common brown tan, microcrystalline, firm to hard, dense, earthy texture, no visible porosity, common disseminated pyrite; SHALE: black, hard to firm, blocky, earthy texture, petrolierous, rare disseminated pyrite

Bakken Formation, Upper Member 10,712' TVD -8,585' SS

10860-10890 SHALE: black, hard to firm, blocky, earthy texture, petrolierous, rare disseminated pyrite

Bakken Formation, Middle Member 10,728' TVD -8,601' SS

10890-10920 SHALE: black, hard to firm, blocky, earthy texture, petrolierous, rare disseminated pyrite; abundant SILTSTONE: medium gray, friable, splintery, calcareous cement, poorly cemented, possible intergranular porosity; trace LIMESTONE: mudstone, light tan to gray, microcrystalline, firm to hard, dense, earthy texture, no visible porosity

10920-10950 SILTSTONE: medium gray, common brown to tan, trace white to off white, friable, splintery, calcareous cement, poorly cemented, possible intergranular porosity, trace white calcareous, abundant disseminated and nodules pyrite

10950-10980 SILTSTONE: medium gray, common brown to tan, trace white to off white, friable, splintery, calcareous cement, poorly cemented, possible intergranular porosity, trace white calcareous, abundant disseminated and nodules pyrite

10980-11010 heavy contaminated SILTSTONE: medium to light gray brown, blocky, earthy, occasional SHALE: black, firm, platy, earthy, petrolierous, common disseminated pyrite, carbonaceous

11010-11040 heavy contaminated SILTSTONE: medium to light gray brown, blocky, earthy, occasional SHALE: black, firm, platy, earthy, petrolierous, common disseminated pyrite, carbonaceous

11460-11490 SILTY SANDSTONE: light gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, common disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

11490-11520 SILTY SANDSTONE: medium to light gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, common disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

11520-11550 SILTY SANDSTONE: medium to light gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, common disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

11550-11580 SILTY SANDSTONE: medium to light gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, common disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

11580-11610 SILTY SANDSTONE: medium to light gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, common disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

11610-11640 SILTY SANDSTONE: medium to light gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, common disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

11640-11670 SILTY SANDSTONE: light gray, abundant white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

11670-11700 SILTY SANDSTONE: light gray, abundant white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

11700-11730 no sample

11730-11760 SILTY SANDSTONE: light gray, abundant white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

11760-11790 SILTY SANDSTONE: light gray, abundant white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

11790-11820 SILTY SANDSTONE: light gray, abundant white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

11820-11850 SILTY SANDSTONE: light gray, abundant white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

11850-11880 SILTY SANDSTONE: light gray, abundant white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain, no cut fluorescence

11880-11910 SILTY SANDSTONE: light gray, abundant white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain,

11910-11940 SILTY SANDSTONE: light gray, abundant white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

11940-11970 SILTY SANDSTONE: light brown, common gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain, no cut fluorescence

11970-12000 SILTY SANDSTONE: light brown, common gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

12000-12030 SILTY SANDSTONE: light brown, common gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

12030-12060 SILTY SANDSTONE: light brown, common gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain, moderately yellow to green blooming cut fluorescence

12060-12090 SILTY SANDSTONE: light brown, common gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

12090-12120 SILTY SANDSTONE: light brown, common gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

12120-12150 SILTY SANDSTONE: light brown, common gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain, moderately yellow to green streaming cut fluorescence

12150-12180 SILTY SANDSTONE: light brown, common gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

12180-12210 SILTY SANDSTONE: light brown, common gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

12210-12240 SILTY SANDSTONE: light brown, medium to light gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

12240-12270 SILTY SANDSTONE: medium to light gray, abundant light brown, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

12270-12300 SILTY SANDSTONE: light brown, medium to light gray, common white to off white, trace light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13170-13200 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13200-13230 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13230-13260 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13260-13290 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain, slow streaming yellow to green cut fluorescence

13290-13320 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13320-13350 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13350-13380 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain, no cut fluorescence

13380-13410 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13410-13440 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13440-13470 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain, fast streaming to diff yellow to green cut fluorescence

13470-13500 SILTY SANDSTONE: medium to light gray, common light brown, occasional white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13500-13530 SILTY SANDSTONE: medium to light gray, common light brown, occasional white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13530-13560 SILTY SANDSTONE: medium to light gray, common light brown, occasional white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain, slow streaming to diff yellow to green cut fluorescence

13560-13590 SILTY SANDSTONE: medium to light gray, common light brown, occasional white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13590-13620 SILTY SANDSTONE: medium to light gray, common light brown, occasional white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13620-13650 SILTY SANDSTONE: medium to light gray, common light brown, occasional white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13650-13680 SILTY SANDSTONE: medium to light gray, common light brown, occasional white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13680-13710 SILTY SANDSTONE: medium to light gray, common light brown, occasional white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13710-13740 SILTY SANDSTONE: medium to light gray, common light brown, occasional white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13740-13770 SILTY SANDSTONE: medium to light gray, common light brown, occasional white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13770-13800 SILTY SANDSTONE: medium to light gray, common light brown, occasional white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13800-13830 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13830-13860 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain, fast streaming to diff yellow to green cut fluorescence

13860-13890 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain, fast streaming to diff yellow to green cut fluorescence

13890-13920 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13920-13950 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13950-13980 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

13980-14010 SILTY SANDSTONE: white to off white, medium to light gray, common light brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15300-15330 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15330-15360 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15360-15390 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15390-15420 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15420-15450 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15450-15480 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15480-15510 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15510-15540 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15540-15570 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain.

15570-15600 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15600-15630 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15630-15660 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain.

15660-15690 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15690-15720 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15720-15750 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15750-15780 SILTY SANDSTONE: medium to light brown, common dark gray, common light brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, rare light brown spotty oil stain

15780-15810 SILTY SANDSTONE: medium gray, common brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, occasional light brown spotty oil stain

15810-15840 SILTY SANDSTONE: medium gray, common brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, occasional light brown spotty oil stain

15840-15870 SILTY SANDSTONE: medium gray, common brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, occasional light brown spotty oil stain

15870-15900 SILTY SANDSTONE: medium gray, common brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, occasional light brown spotty oil stain

15900-15930 SILTY SANDSTONE: medium gray, common brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, occasional light brown spotty oil stain

15930-15960 SILTY SANDSTONE: medium gray, common brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, occasional light brown spotty oil stain

15960-15990 SILTY SANDSTONE: medium gray, common brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, occasional light brown spotty oil stain

15990-16020 SILTY SANDSTONE: medium gray, common brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, occasional light brown spotty oil stain

16020-16050 SILTY SANDSTONE: medium gray, common brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, occasional light brown spotty oil stain

16920-16950 SILTY SANDSTONE: medium gray, common brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

16950-16980 SILTY SANDSTONE: medium gray, common brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

16980-17010 SILTY SANDSTONE: medium gray, common brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17010-17040 No Sample

17040-17070 No Sample

17070-17100 SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17100-17130 SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17130-17160 SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17160-17190 SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17190-17220 SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17220-17250 slightly contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17250-17280 slightly contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17280-17310 slightly contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17310-17340 slightly contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17340-17370 slightly contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17370-17400 slightly contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17400-17430 slightly contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17430-17460 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17460-17490 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17490-17520 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17520-17550 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17550-17580 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17580-17610 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17610-17640 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17640-17670 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17670-17700 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17700-17730 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17730-17760 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17760-17790 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17790-17820 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17820-17850 slightly contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17850-17880 slightly contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17880-17910 slightly contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17910-17940 slightly contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17940-17970 slightly contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

17970-18000 slightly contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18000-18030 slightly contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18030-18060 SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18060-18090 SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18090-18120 SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18120-18150 SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18150-18180 SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18180-18210 SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18210-18240 SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18240-18270 SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18270-18300 SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18300-18330 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18330-18360 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18360-18390 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18390-18420 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18420-18450 No Sample

18450-18480 No Sample

18480-18510 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18510-18540 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18540-18570 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18570-18600 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18600-18630 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18630-18660 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18660-18690 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18690-18720 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18720-18750 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18750-18780 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, occasional brown, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18780-18810 SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

18810-18840 SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19200-19230 SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19230-19260 SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19260-19290 SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19290-19320 SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19320-19350 SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19350-19380 SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19380-19410 SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19410-19440 heavy contaminated with lubricant SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19440-19470 heavy contaminated with lubricant SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19470-19500 heavy contaminated with lubricant SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19500-19530 heavy contaminated with lubricant SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19530-19560 heavy contaminated with lubricant SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19560-19590 heavy contaminated with lubricant SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19590-19620 heavy contaminated with lubricant SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19620-19650 moderately contaminated with lubricant SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19650-19680 moderately contaminated with lubricant SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19680-19710 moderately contaminated with lubricant SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19710-19740 moderately contaminated with lubricant SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19740-19770 moderately contaminated with lubricant SILTY SANDSTONE: light to medium gray, occasional dark gray, occasional brown, trace white to off white, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19770-19800 moderately contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19800-19830 moderately contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19830-19860 moderately contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19860-19890 moderately contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19890-19920 moderately contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19920-19950 moderately contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19950-19980 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

19980-20010 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20010-20040 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20040-20070 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20070-20100 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20100-20130 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20130-20160 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20160-20190 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20190-20220 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20220-20250 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20250-20280 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20280-20310 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20310-20340 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20340-20370 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20370-20400 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20400-20430 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20430-20460 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20460-20490 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20490-20520 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20520-20550 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20550-20580 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20580-20610 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20610-20640 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20640-20670 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20670-20700 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20700-20730 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20730-20760 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20760-20790 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

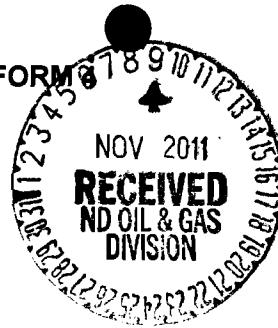
20790-20820 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain

20820-20850 heavy contaminated with lubricant SILTY SANDSTONE: white to off white, light to medium gray, trace brown, fine grain, friable to firm, sub-angular to angular, moderately sorted, calcareous cement, moderately cemented, rare disseminated pyrite, trace intergranular porosity, trace light brown spotty oil stain



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
SFN 5749 (09-2006)



Well File No.

**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 November 4, 2011	<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 checked="" 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	Drilling Progress

Well Name and Number
Dahl 15-11H

Footages

22 E S | **2488 E E** | **SWSE**

Field **Baker** **Pool** **Bakken** **County** **McKinzie**

Baker Bakell McKenzie

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

Name of Contractor(s)

Nabors Drilling USA LP

Address

P. O. Box 2396

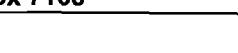
City

State
ND

Zip Code

DETAILS OF WORK

Continued drilling the 8 3/4" vertical hole from 7,453' - 10,286' KOP. Drilled the 8 3/4" curve from 10,286' - 10,982', then ran 7" 29-32# L-80 intermediate casing to 10,952' and cemented it with 922 sks of cement. Drilled the 6" lateral from 10,982' - 11,044' and had to shut down for rig repairs. Drilling operations are expected to resume next week as soon as repairs are completed.

Company SM Energy Company		Telephone Number (406) 245-6248
Address P. O. Box 7168		
City Billings		State MT Zip Code 59103-7168
Signature 	Printed Name Joy Torgerson	
Title Engineering Tech	Date November 4, 2011	
Email Address jtorgerson@sm-energy.com		

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date	November 10, 2011
By	Dan P. McColley
Title	PETROLEUM ENGINEER

SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4
SFN 5749

1. Approval shall be obtained prior to perforating or recompleting a well in a reservoir other than the reservoir in which the well is currently completed, prior to plug back of a well, prior to temporary abandonment of a well, prior to abandonment of a well, prior to reclamation of a well site, prior to reclamation of a reserve pit, and prior to beginning a workover project, which may qualify for a tax exemption pursuant to NDCC Section 57-51.1-03. Please refer to Section 43-02-03-16 of the North Dakota Administrative Code (NDAC) regarding recompleting a well in a reservoir other than the reservoir in which the well is currently completed or plugging back of a well, to Section 43-02-03-55 NDAC regarding temporary abandonment of a well, to Section 43-02-03-33 or Section 43-02-05-08 NDAC regarding abandonment of wells, to Section 43-02-03-19 NDAC regarding reclamation, and to Section 43-02-09-03 NDAC regarding workover projects.
2. Upon the completion of any remedial work, or attempted remedial work such as plugging back, drilling deeper, acidizing, shooting, formation fracturing, squeezing operations, setting liner, fishing operations, repair work, perforating, reperforating, or other similar operations not specifically covered herein, a report on the operation shall be filed on a Sundry Notice - Form 4 (SFN 5749) with the Director. The report shall present a detailed account of all work done and the date of such work; the daily production of oil, gas, and water both prior to and after the operation; the shots per foot, size, and depth of perforations; the quantity of sand, crude, chemical, or other materials employed in the operation; and any other pertinent information or operations which affect the original status of the well and are not specifically covered herein. Please refer to Section 43-02-03-31 NDAC.
3. Upon the completion of a workover project, which may qualify for a tax exemption pursuant to NDCC Section 57-51.1-03, a report on the operation shall be filed on a Sundry Notice - Form 4 (SFN 5749) detailing the work done. Include the dates during which the workover rig was in service actually performing work on the workover project and the date the workover was completed, a detailed list identifying all labor, services, and materials used and equipment replaced during the workover project, the cost of each item, and whether the replacement equipment was new or used. The value of all equipment removed from service must be listed. The average daily oil production from the well during the first two months after completion of the project must be included if the costs of the project did not exceed sixty-five thousand dollars. All gauge tickets of oil produced in incomplete months during the first two months after completion of the workover and the volume of oil stored on the well premises immediately prior to commencement of the workover project must also be included. Please refer to Section 43-02-09-04 NDAC.
4. Upon the initial installation of pumping equipment, or change in type or depth of pumping equipment designed to increase productivity in a well, the operator shall file a Sundry Notice - Form 4 (SFN 5749) of such installation. The notice shall include all pertinent information on the pump and the operation thereof including the date of such installation, and the daily production of the well prior to and after the pump has been installed. Please refer to Section 43-02-03-31 NDAC.
5. The well file number, well name and number, well location, field, pool, and county shall coincide with the official records on file with the Commission.
6. The original and one copy of this report shall be filed with the Industrial Commission of North Dakota, Oil and Gas Division, 600 East Boulevard, Dept. 405, Bismarck, ND 58505-0840.



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.
21266

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

Notice of Intent

Approximate Start Date

Report of Work Done

Date Work Completed
October 19, 2011

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

Notice of Spud & Drilling Progress

Well Name and Number

Dahl 15-11H

Footages

22 F S L 2488 F E L Qtr-Qtr SWSE Section 11 Township 153 N Range 101 W

Field

Baker

Pool

Bakken

County

McKenzie

24-HOUR PRODUCTION RATE

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

Name of Contractor(s)

Nabors Drilling USA LP

Address

P. O. Box 2396

City

Williston

State

ND

Zip Code

58802

DETAILS OF WORK

The Dahl 15-11H was spud at 12:30 AM CDT on October 15, 2011. Drilled a 13 1/2" surface hole to 2,113', ran 9 5/8" 36# J-55 surface casing to 2,113' and cemented it with 736 sks of cement with 100 Bbls cement returns to the surface. Drilled the 8 3/4" vertical hole from 2,113', reaching 7,453' as of 6:00 AM 10/19/11.

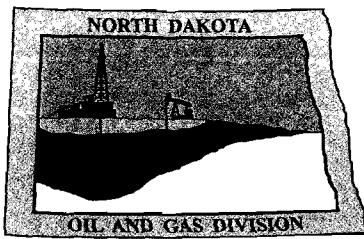
Company SM Energy Company	Telephone Number (406) 245-6248	
Address P. O. Box 7168		
City Billings	State MT	Zip Code 59103-7168
Signature <i>Jay Torgerson</i>	Printed Name Jay Torgerson	
Title Engineering Tech	Date October 19, 2011	
Email Address jtorgeron@sm-energy.com		

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <i>October 21, 2011</i>	
By <i>Jay Torgerson</i>	
Title PETROLEUM ENGINEER	

SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4
SFN 5749

1. Approval shall be obtained prior to perforating or recompleting a well in a reservoir other than the reservoir in which the well is currently completed, prior to plug back of a well, prior to temporary abandonment of a well, prior to abandonment of a well, prior to reclamation of a well site, prior to reclamation of a reserve pit, and prior to beginning a workover project, which may qualify for a tax exemption pursuant to NDCC Section 57-51.1-03. Please refer to Section 43-02-03-16 of the North Dakota Administrative Code (NDAC) regarding recompleting a well in a reservoir other than the reservoir in which the well is currently completed or plugging back of a well, to Section 43-02-03-55 NDAC regarding temporary abandonment of a well, to Section 43-02-03-33 or Section 43-02-05-08 NDAC regarding abandonment of wells, to Section 43-02-03-19 NDAC regarding reclamation, and to Section 43-02-09-03 NDAC regarding workover projects.
2. Upon the completion of any remedial work, or attempted remedial work such as plugging back, drilling deeper, acidizing, shooting, formation fracturing, squeezing operations, setting liner, fishing operations, repair work, perforating, reperforating, or other similar operations not specifically covered herein, a report on the operation shall be filed on a Sundry Notice - Form 4 (SFN 5749) with the Director. The report shall present a detailed account of all work done and the date of such work; the daily production of oil, gas, and water both prior to and after the operation; the shots per foot, size, and depth of perforations; the quantity of sand, crude, chemical, or other materials employed in the operation; and any other pertinent information or operations which affect the original status of the well and are not specifically covered herein. Please refer to Section 43-02-03-31 NDAC.
3. Upon the completion of a workover project, which may qualify for a tax exemption pursuant to NDCC Section 57-51.1-03, a report on the operation shall be filed on a Sundry Notice - Form 4 (SFN 5749) detailing the work done. Include the dates during which the workover rig was in service actually performing work on the workover project and the date the workover was completed, a detailed list identifying all labor, services, and materials used and equipment replaced during the workover project, the cost of each item, and whether the replacement equipment was new or used. The value of all equipment removed from service must be listed. The average daily oil production from the well during the first two months after completion of the project must be included if the costs of the project did not exceed sixty-five thousand dollars. All gauge tickets of oil produced in incomplete months during the first two months after completion of the workover and the volume of oil stored on the well premises immediately prior to commencement of the workover project must also be included. Please refer to Section 43-02-09-04 NDAC.
4. Upon the initial installation of pumping equipment, or change in type or depth of pumping equipment designed to increase productivity in a well, the operator shall file a Sundry Notice - Form 4 (SFN 5749) of such installation. The notice shall include all pertinent information on the pump and the operation thereof including the date of such installation, and the daily production of the well prior to and after the pump has been installed. Please refer to Section 43-02-03-31 NDAC.
5. The well file number, well name and number, well location, field, pool, and county shall coincide with the official records on file with the Commission.
6. The original and one copy of this report shall be filed with the Industrial Commission of North Dakota, Oil and Gas Division, 600 East Boulevard, Dept. 405, Bismarck, ND 58505-0840.



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

RANDY CARLSON
SM ENERGY COMPANY
PO BOX 7168
BILLINGS, MT 59103-7168 USA

Date: 8/8/2011

RE: CORES AND SAMPLES

Well Name: **DAHL 15-11H** Well File No.: **21266**
Location: **SWSE 11-153-101** County: **MCKENZIE**
Permit Type: **Development - HORIZONTAL**
Field: **BAKER** Target Horizon: **BAKKEN**

Dear RANDY CARLSON:

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

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

Base of the Last Charles Salt

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

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

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

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

Sincerely

Richard A. Suggs
Geologist



SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 6749 (03-2004)

Well File No. **21266**



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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date August 12, 2011
<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 checked="" 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 | Request for waiver of open hole logs |

Well Name and Number
DAHL 15-11H

Footages 22 F S L	2488 F E L	Qtr-Qtr SWSE	Section 11	Township 153 N	Range 101 W
Field BAKER	Pool BAKKEN	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

SM ENERGY COMPANY PLANS TO DRILL THE DAHL 15-11H AS A HORIZONTAL BAKKEN WELL ON A 1280-ACRE DRILLING UNIT. SM ENERGY REQUESTS A WAIVER FROM RUNNING OPEN HOLE LOGS ON THE WELL DUE TO THE EXISTENCE OF OPEN HOLE LOGS RUN ON THE LINDVIG 1-11HR (NO. 9309) LOCATED 612' FSL, 793' FEL IN SESE SEC. 11, T153N-R101W.

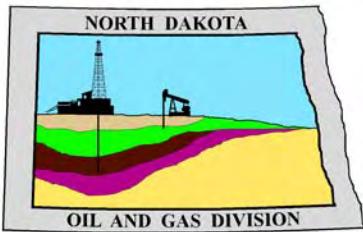
**SM Energy must run a CBL on the production casing
and a Gamma Ray log to ground level.*

Company SM ENERGY COMPANY	Telephone Number 406-869-8716	
Address P.O. BOX 7168		
City BILLINGS	State MT	Zip Code 59103
Signature <i>RCC</i>	Printed Name RANDY CARLSON	
Title DRILLING MANAGER	Date August 2, 2011	

FOR STATE USE ONLY

<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date 8-3-2011	
By <i>RCC</i>	
Title Richard A. Suggs	
Geologist	

gjt



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

August 3, 2011

RANDY CARLSON
DRILLING MANAGER
SM ENERGY COMPANY
P.O. Box 7168
Billings, MT 59103-7168

**RE: HORIZONTAL WELL
DAHL 15-11H
SWSE Section 11-153N-101W
McKenzie County
Well File # 21266**

Dear RANDY:

Pursuant to Commission Order No. 14938, approval to drill the above captioned well is hereby given. The approval is granted on the condition that all portions of the well bore not isolated by cement, be no closer than the **200' setback** from the north & south boundaries and **1220' setback** (per Commission policy) from the east & west boundaries within the 1280 acre drilling unit consisting of Sections 2 & 11-T153N-R101W.

PERMIT STIPULATIONS: PRECAUTIONS MUST BE TAKEN WHILE DESIGNING THE FRAC JOB FOR THE DAHL 15-11H WELL AS TO NOT ADVERSELY AFFECT THE SM ENERGY LINDVIG 1-11HR WELL. Due to river adjacent to the well site, a dike is required surrounding the entire location. Also, a Closed Mud System may be required, although the disposal of drill cuttings is contingent upon site specific conditions to be determined by an NDIC Field Inspector. SM ENERGY CO must contact NDIC Field Inspector Kevin Connors at 701-220-5989 prior to location construction.

Location Construction Commencement (Three Day Waiting Period)

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

Permit Fee & Notification

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

RANDY CARLSON

August 3, 2011

Page 2

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

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

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

Confidential status

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

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

Drilling pit

Please be advised approval for use of a drilling reserve pit or drill cuttings pit on this site is contingent on site specific conditions and special pit closure requirements may apply.

Surface casing cement

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

Logs

NDAC Section 43-02-03-31 requires the running of a Cement Bond Log from which the presence of cement can be determined in every well in which production or intermediate casing has been set and a Gamma Ray Log must be run from total depth to ground level elevation of the well bore. All logs must 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 standard CD, or attached to an email sent to digitallogs@nd.gov. Thank you for your cooperation.

Sincerely,

David Tabor
Engineering Technician IV



APPLICATION FOR PERMIT TO DRILL HORIZONTAL WELL - FORM 1H

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

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

Type of Work New Location	Type of Well Oil & Gas	Approximate Date Work Will Start 8 / 8 / 2011	Confidential Status Yes
Operator SM ENERGY COMPANY		Telephone Number {406} 245-6248	
Address P.O. Box 7168		City Billings	State MT Zip Code 59103-7168

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

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

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

Well Name DAHL			Well Number 15-11H				
Surface Footages 22 F S L		Qtr-Qtr SWSE	Section 11	Township 153 N	Range 101 W	County McKenzie	
Longstring Casing Point Footages 451 F S L		Qtr-Qtr SWSE	Section 11	Township 153 N	Range 101 W	County McKenzie	
Longstring Casing Point Coordinates From Well Head 429 N From WH 1 W From WH		Azimuth 359.8 °	Longstring Total Depth 10991 Feet MD 10737 Feet TVD				
Bottom Hole Footages From Nearest Section Line 223 F N L		Qtr-Qtr NWNE	Section 2	Township 153 N	Range 101 W	County McKenzie	
Bottom Hole Coordinates From Well Head 10164 N From WH 30 W From WH		KOP Lateral 1 10328 Feet MD	Azimuth Lateral 1 359.8 °	Estimated Total Depth Lateral 1 20725 Feet MD 10737 Feet TVD			
Latitude of Well Head 48 ° 04 ' 56.38 "		Longitude of Well Head -103 ° 38 ' 09.24 "	NAD Reference NAD83	Description of Drilling Unit: Sections 2 & 11-T153N-R101W (Subject to NDIC Approval)			
Ground Elevation 2112 Feet Above S.L.		Acres in Spacing/Drilling Unit 1280	Spacing/Drilling Unit Setback Requirement 200 Feet N/S 1220 Feet E/W		Industrial Commission Order 14938		
North Line of Spacing/Drilling Unit 5281 Feet		South Line of Spacing/Drilling Unit 5279 Feet	East Line of Spacing/Drilling Unit 10417 Feet		West Line of Spacing/Drilling Unit 10402 Feet		
Objective Horizons BAKKEN						Pierre Shale Top 1977	
Proposed Surface Casing	Size 9 - 5/8 "	Weight 36 Lb./Ft.	Depth 2100 Feet	Cement Volume 715 Sacks	NOTE: Surface hole must be drilled with fresh water and surface casing must be cemented back to surface.		
Proposed Longstring Casing	Size 7 - 0 "	Weight(s) 29-32 Lb./Ft.	Longstring Total Depth 10991 Feet MD 10737 Feet TVD		Cement Volume 770 Sacks	Cement Top 4900 Feet	Top Dakota Sand 5473 Feet
Base Last Charles Salt (If Applicable) 9212 Feet		NOTE: Intermediate or longstring casing string must be cemented above the top Dakota Group Sand.					
Proposed Logs MUD LOG {CBL & GR ON COMPLETION} SEE ATTACHMENT							
Drilling Mud Type (Vertical Hole - Below Surface Casing) Invert				Drilling Mud Type (Lateral) Brine			
Survey Type in Vertical Portion of Well MWD Every 100 Feet		Survey Frequency: Build Section 30 Feet		Survey Frequency: Lateral 90 Feet		Survey Contractor RYAN ENERGY	

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

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

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

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

See Page 2 for Comments section and signature block.

COMMENTS, ADDITIONAL INFORMATION, AND/OR LIST OF ATTACHMENTS**GEOLOGIC TOPS, PLATS, DIRECTIONAL, DRILLING PLAN, LOG WAIVER**

Lateral 2

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

Lateral 3

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

Lateral 4

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

Lateral 5

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

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

Date

08 / 02 / 2011

ePermit

Printed Name
RANDY CARLSONTitle
DRILLING MANAGER**FOR STATE USE ONLY**

Permit and File Number 21266	API Number 33 - 053 - 03703
Field BAKER	
Pool BAKKEN	Permit Type DEVELOPMENT

FOR STATE USE ONLY

Date Approved 8 / 3 / 2011
By David Tabor
Title Engineering Technician IV

WELL LOCATION PLAT

SM Energy Company
P.O. Box 7168 Billings, MT 59103

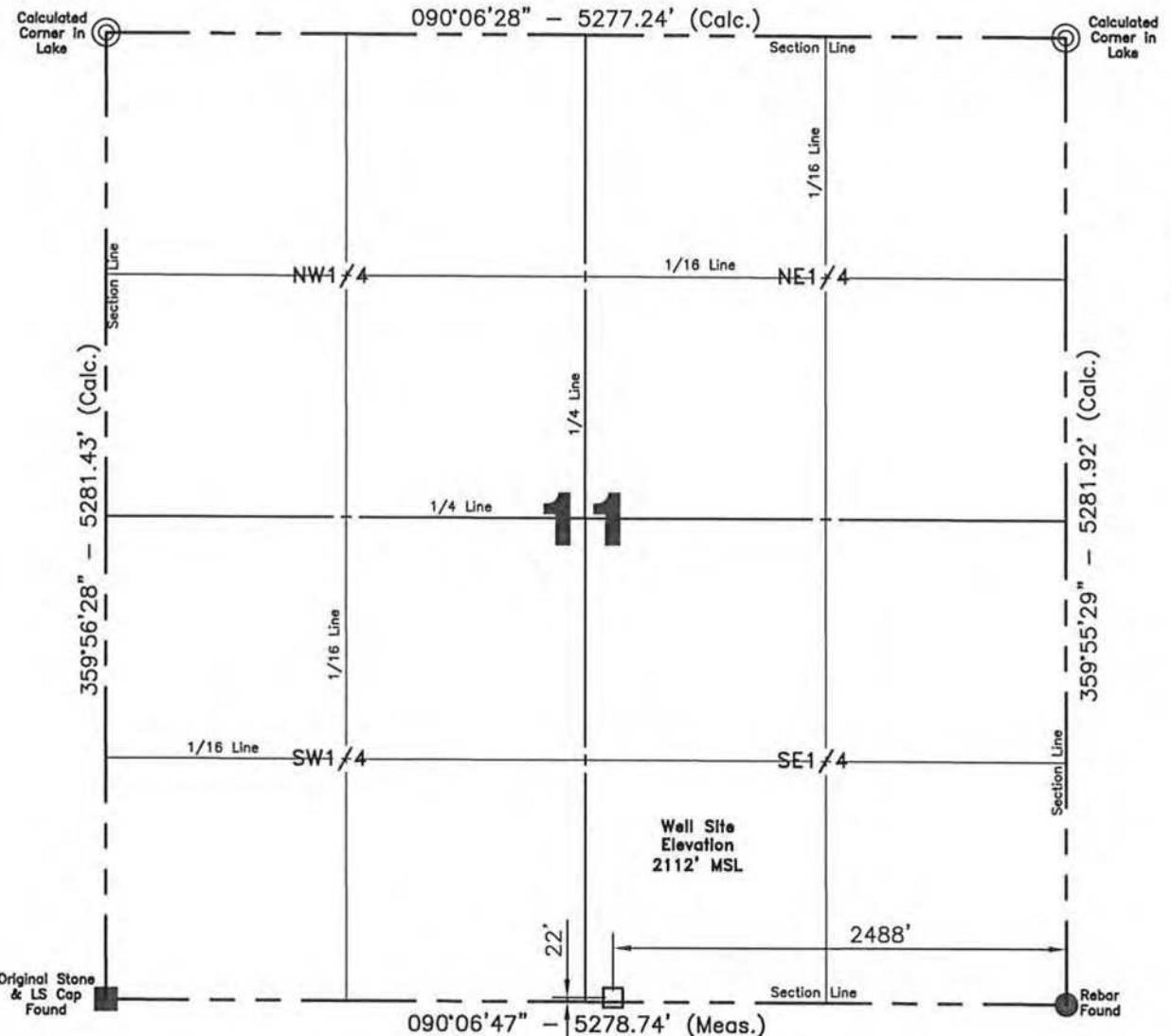
Dahl 15-1H

22 feet from the south line and 2488 feet from the east line (surface location)
Section 11, T. 153 N., R. 101 W., 5th P.M.

McKenzie County, North Dakota

Surface owner @ well site - Sharon D. Eilers et al

Latitude 48°04'56.376" North; Longitude 103°38'09.239" West (surface location)
[Derived from OPUS Solution NAD-83(CORS96)]



Confidentiality Notice: The information contained on this plat is legally privileged and confidential information intended only for the use of recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

NOTE: All land corners are assumed unless otherwise noted.
The well location shown hereon is not an as-built location.

Jeff McElhiney **06/14/2011**
Surveyed By Date

Vertical Control Datum Used Sea-Level Datum of NAVD 88	Professional Consulting Engineers and Surveyors Registered in North Dakota, South Dakota, Montana, Wyoming & Minnesota Tele-Fax No. 701-572-2019 Bus. Phone No. 701-572-6352 222 Airport Road Williston, North Dakota 58801-2976 Certificate of Authorization #C-061
Based on elevation derived from OPUS Solution on GPS* Q462 Located a distance of 9501.84' on an azimuth of 203°09'37" from the SW corner of Section 11 T.153N., R.101W., 5th P.M. being at 2099.99' Elevation MSL.	
Project No. 8711180 Book 0-89 Pg. 74-79 Staking	

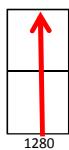


Kadmas
Lee &
Jackson
Engineers Surveyors
Planners



GEOLOGIC PROGNOSIS

		Spacing Unit		
Well Name:	Dahl 15-11H			
Prospect:	Baker Field			
County:	McKenzie			
State:	North Dakota	640	1280	
Twp / Rge:	153N-101W			
Location	FNL	FSL	FEL	FWL
Surf. Loc.:	sw/se sec.11	22	2488	
BHL:	nw/ne sec.2	215	2550	



Offset Wells

- 1 SME Lindvig #1-11-3C 2105' k.b.
se/se sec.11-153N-101W
- 2

GL elev.: 2110 GL
KB elev. Datum: 2127 KB

Xtreme 18

Fm Name/Poss Pay	Depth	Geologic Tops		Actual		
		Est.	Subsea	Depth	thickness	Subsea
Greenhorn	4628	845	-2501			
Dakota ss	5473	394	-3346			
Jim	5867	1022	-3740			
Dunham Salt	6889	69	-4762			
Trsp	6958	314	-4831			
Pine Salt	7272	52	-5145			
base Pine	7324	37	-5197			
Minnekahta	7361	20	-5234			
Opeche Salt	7381	8	-5254			
base Opeche	7389	438	-5262			
Tyler	7827	539	-5700			
Kibbey L.S.	8366	147	-6239			
Charles	8513	699	-6386			
BLS	9212	71	-7085			
Ratcliffe	9283	150	-7156			
Mission Canyon	9433	584	-7306			
Lodgepole	10017	679	-7890			
Carrington Sh	10696	9	-8569			
Scallion L.S.	10705	9	-8578			
Mb Upper Sh	10714	13	-8587			
Mb Middle	10727	10	-8600			
Target	10737	30	-8610			
Mb Lower Shale	10767	30	-8640			
Dtf						
Target						
Dtf1-mbb						

#1			#2		
Depth	Thickness	Subsea	Depth	Thickness	Subsea
4625	845	-2520			
5470	394	-3365			
5864	1022	-3759			
6886	69	-4781			
6955	314	-4850			
7269	52	-5164			
7321	37	-5216			
7358	20	-5253			
7378	8	-5273			
7386	438	-5281			
7824	539	-5719			
8363	147	-6258			
8510	699	-6405			
9209	71	-7104			
9280	150	-7175			
9430	584	-7325			
10014	679	-7909			
10693	9	-8588			
10702	9	-8597			
10711	13	-8606			
10724	10	-8619			
10734	30	-8629			
10764	30	-8659			
10794		-8689			

Mudlogging 2-man unit with chromatograph

KOP @ XXXXX to EOL

Openhole Logs none - wavier request from NDIC filed w/APD

Core / DST none

Geologist Mike Bryant Bob Bachman
406-255-8625 office 406-255-8621 office
406-860-7970 cell 406-861-8836 cell

Engineer Greg Hilton
406-869-8744 office
406-861-0566 cell

Dahl 15-11H

Location: SWSE Sec 11 - T153N - R101W
Footage: 2488 FEL & 22 FSL
Elev: Graded Pad 2110, 2127 KB
McKenzie County, ND



Set 16" Conductor set at 40'-60'. Drill out surface shoe w/ 13.5" bit and FW mud.

Set 9-5/8" 36# K-55 surface casing at: **2,100 FT**

Lead Cement: **415** Sacks Class C plus 2% high yield add, 3% CaCl, 4% wtr control add, 1/8 #/sk Celloflake. Mixed at 19.6 gps wtr, 3.20 cf/sk yield and 11.2 ppg.

Tail Cement: **300** Sacks Class G plus 2% CaCl and 1/8 #/sk Celloflake. Mixed at 4.97 gps wtr, 1.15 cf/sk yield and 15.8 ppg.

Assume 13.5" dia. Hole size and use 55% excess.

8-3/4" hole size. Drill with invert mud (80% diesel & 20% SW).

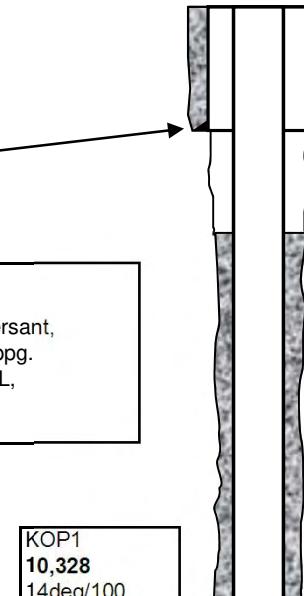
Set 7" Casing at: **10,991 FT MD** 7in 29# L-80 LT&C & 32# HC L-80 120' above and below salts.

Lead Cement (top at **4,900** & **20.0%** Excess): **192** Sacks Lite CRETE w/ 10% salt, 0.7% dispersant, 0.25% Fluid Loss, 0.4% Retarder 0.2% Anti-foam and 1/4#/sk Cellophane Flakes. Yield: 1.85 cf/sk, Wt: 11.5 ppg.

Tail Cement (top at **6,600** & **20.0%** Excess): **578** Sacks Class G w/ 35% Silica Flour, 3% KCL, 0.2% Fluid Loss, 0.5% Dispersant, 0.8% Retarder, 1/4#/sk Cellophane Flakes. Yield: 1.59 cf/sk, Wt: 15.6 ppg.

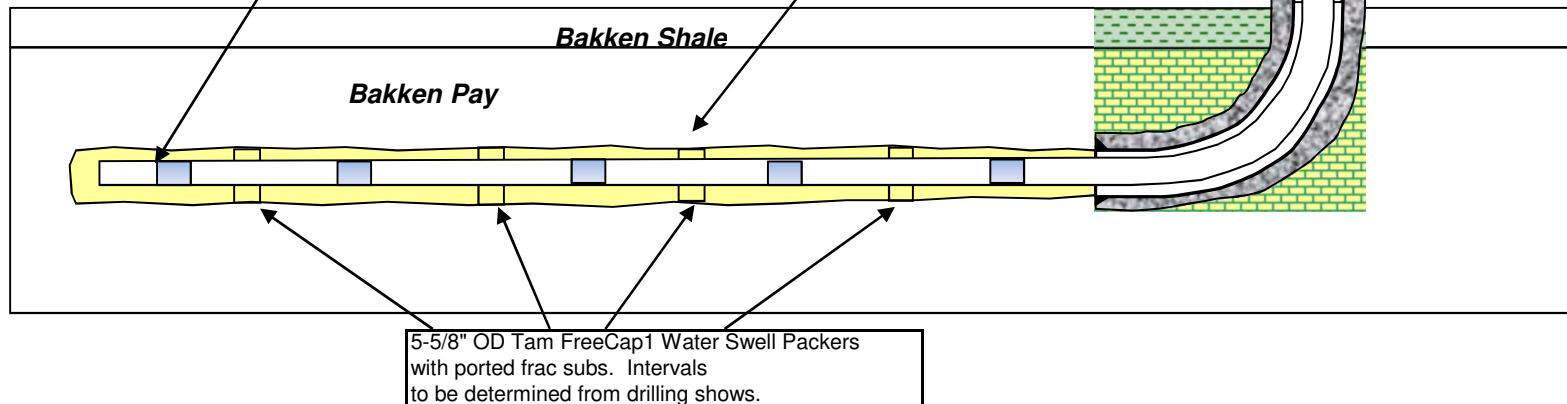
Assume 9" hole dia.

Est TD	20,725	Pay	9,735
Hole Size:	6"	Target TVD	10,737
Liner:	4-1/2" 11.6# P110 LT&C Liner		
From:	10,288 to: 20,705		
note: from liner top packer to top frac port use BTC connection			



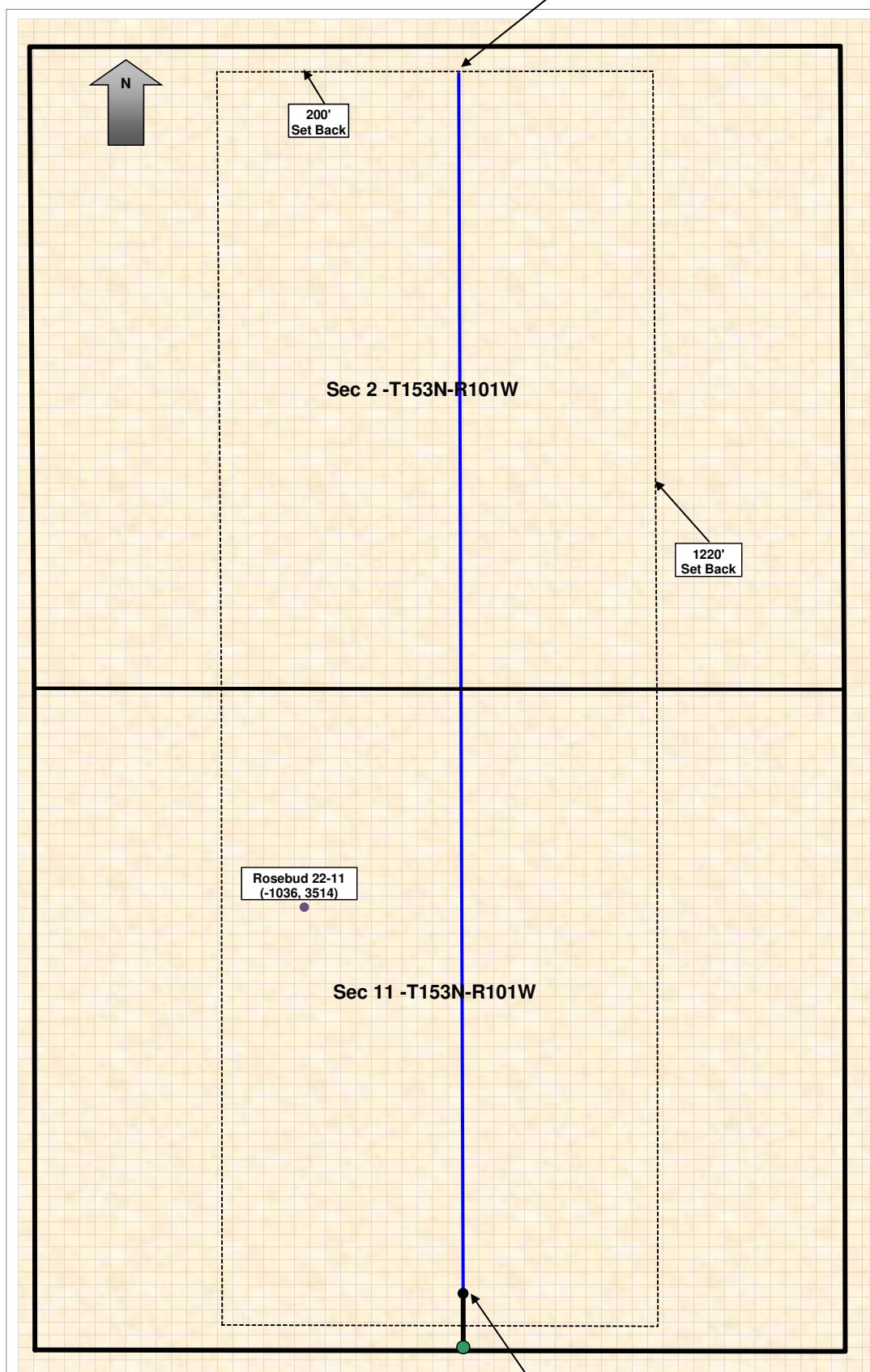
KOP1
10,328
14deg/100

Liner Hanger
Top at: **10,278**
with 5.25" PBR





Est. TD: 20,725 FT MD
FT of Pay 9,735 FT
BH Target Coord: 30 W 10164 N
BH Target: 2518 FEL & 215 FNL



Dahl 15-11H
Location: SWSE Sec 11 - T153N - R101W
Footage: 2488 FEL & 22 FSL
Elev: Graded Pad 2110, 2127 KB

7" Casing: 10,991 FT MD
Csg Shoe Coord: 1 W 429 N
BHL: 2489 FEL & 451 FSL

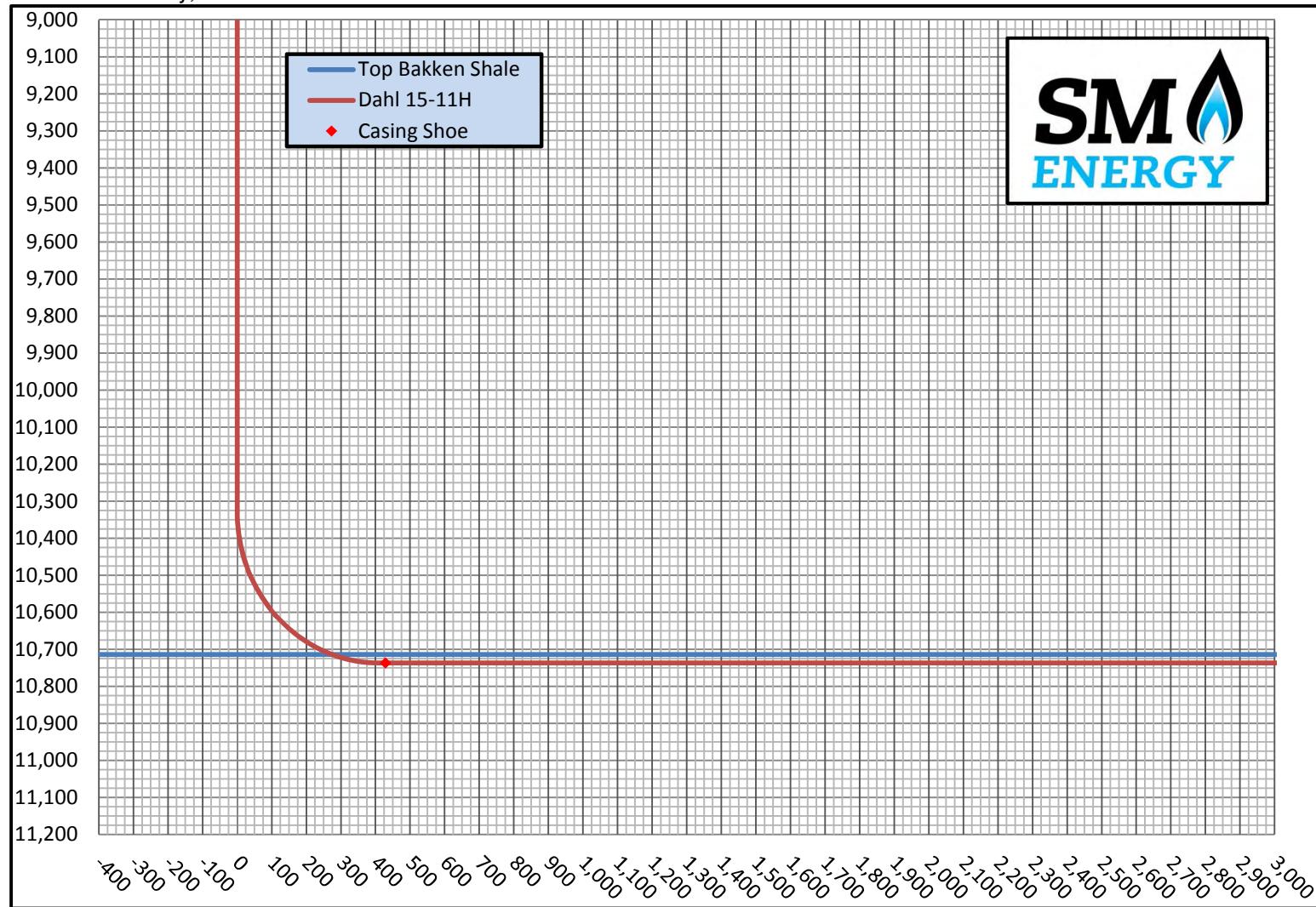
Dahl 15-11H

Location: SWSE Sec 11 - T153N - R101W

Footage: 2488 FEL & 22 FSL

Elev: Graded Pad 2110, 2127 KB

McKenzie County, ND

TVD VERSUS VERTICAL SECTION (AZ = 359.83)

HORIZONTAL DIRECTIONAL DRILLING PLAN



Company **SM Energy**

Well Dahl 15-11H

Build Rate **14.00**

Tgt. Inc. 90

Mag. Decl.

Target TVD **10,737**

Target Az. **359.8308866**

Tgt. Coor. 30 W 10164 N 10,164 VS

***NOTE: ALL AZIMUTHS RELATIVE TO TRUE NORTH**

McKenzie County, ND

HORIZONTAL SECTION PLAT

SM Energy Company
P.O. Box 7168 Billings, MT 59103

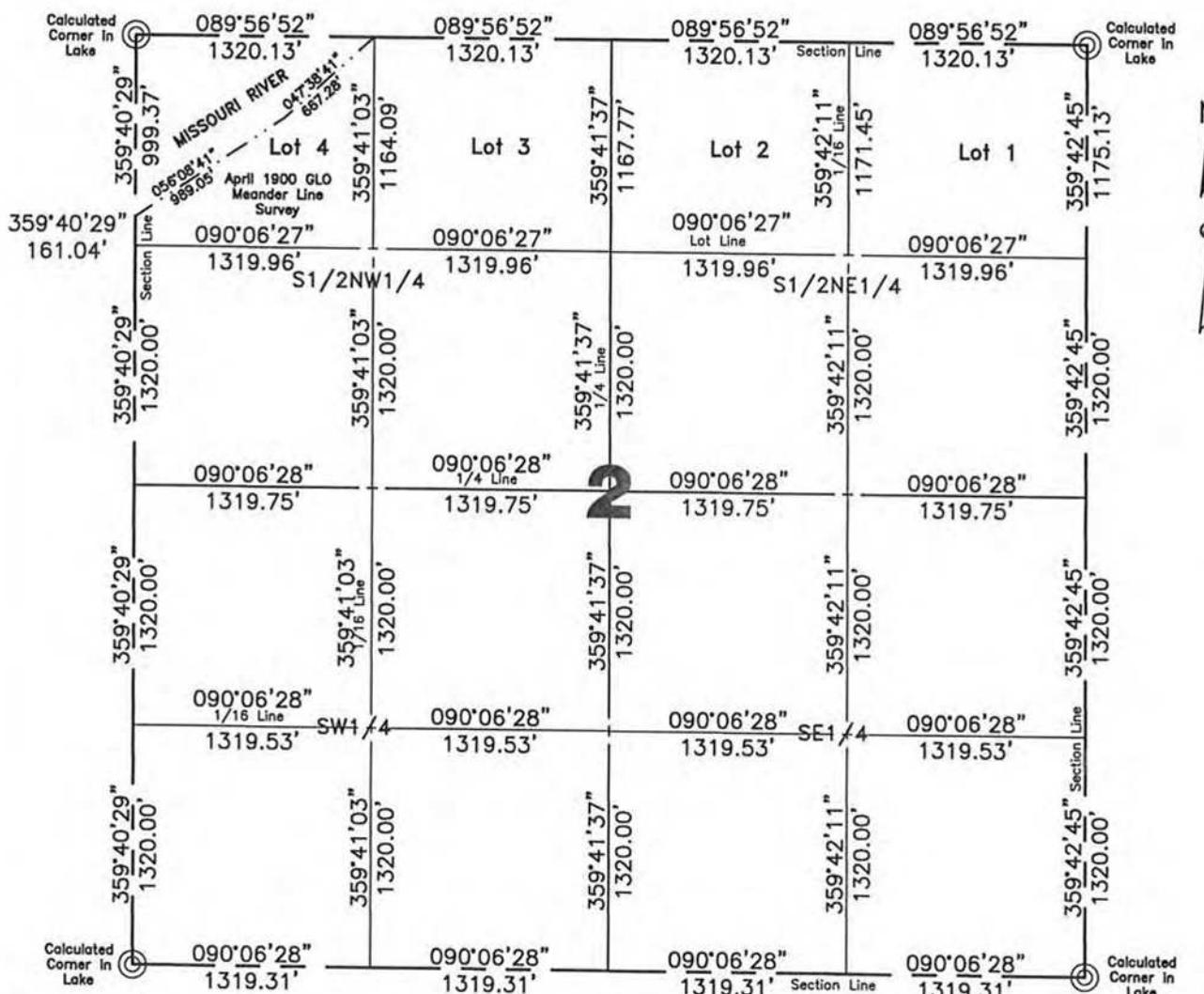
Dahl 15-11H

22 feet from the south line and 2488 feet from the east line (surface location)
Section 11, T. 153 N., R. 101 W., 5th P.M.

McKenzie County, North Dakota

Surface owner @ well site - Sharon D. Eilers et al

Latitude 48°04'56.376" North; Longitude 103°38'09.239" West (surface location)
[Derived from OPUS Solution NAD-83(CORS96)]



Confidentiality Notice: The information contained on this plat **Scale 1"=1000'**

is legally privileged and confidential information intended only for the use of recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

I, Donald Leischner, Professional Land Surveyor, N.D. No. 7103, 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.

All corners shown on this plat were found in the field during SM Energy, Dahl 15-11H oil well survey on June 14, 2010. Distances to all others are calculated. All azimuths are based on the south line of Section 11, being on an azimuth of 090°06'47".

Surveyed By J. McElhiney	Field Book 0-89
Computed & Drawn By M. Meismar	Project No. 8711180



Kadrmas
Lee &
Jackson
Engineers Surveyors
Planners

HORIZONTAL SECTION PLAT

SM Energy Company
P.O. Box 7168 Billings, MT 59103

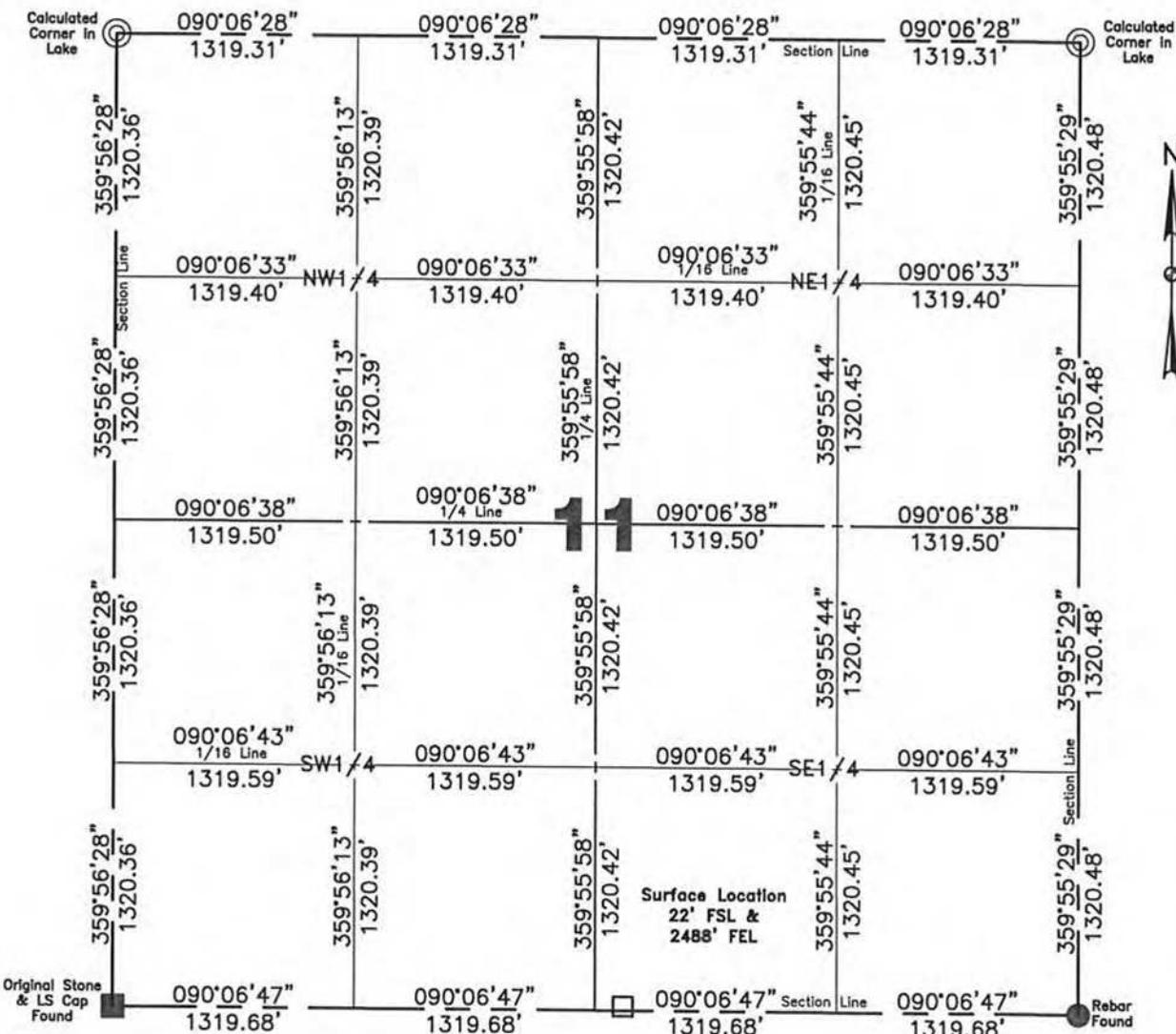
Dahl 15-11H

22 feet from the south line and 2488 feet from the east line (surface location)
Section 11, T. 153 N., R. 101 W., 5th P.M.

McKenzie County, North Dakota

Surface owner @ well site - Sharon D. Eilers et al

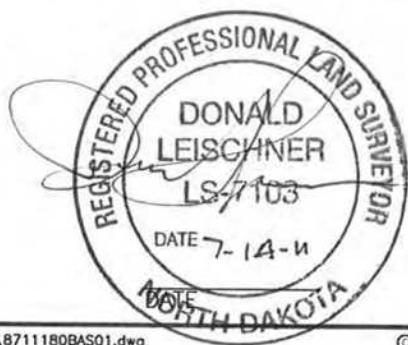
Latitude 48°04'56.376" North; Longitude 103°38'09.239" West (surface location)
[Derived from OPUS Solution NAD-83(CORS96)]



Confidentiality Notice: The information contained on this plot is legally privileged and confidential information intended only for the use of recipients. If you are not the intended recipient, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

All corners shown on this plat were found in the field during SM Energy, Dahl 15-11H oil well survey on June 14, 2010. Distances to all others are calculated. All azimuths are based on the south line of Section 11, being on an azimuth of 090°06'47".

Surveyed By J. McElhiney	Field Book 0-89
Computed & Drawn By M. Meismer	Project No. 8711180



BOTTOM HOLE LOCATION PLAT

SM Energy Company
P.O. Box 7168 Billings, MT 59103

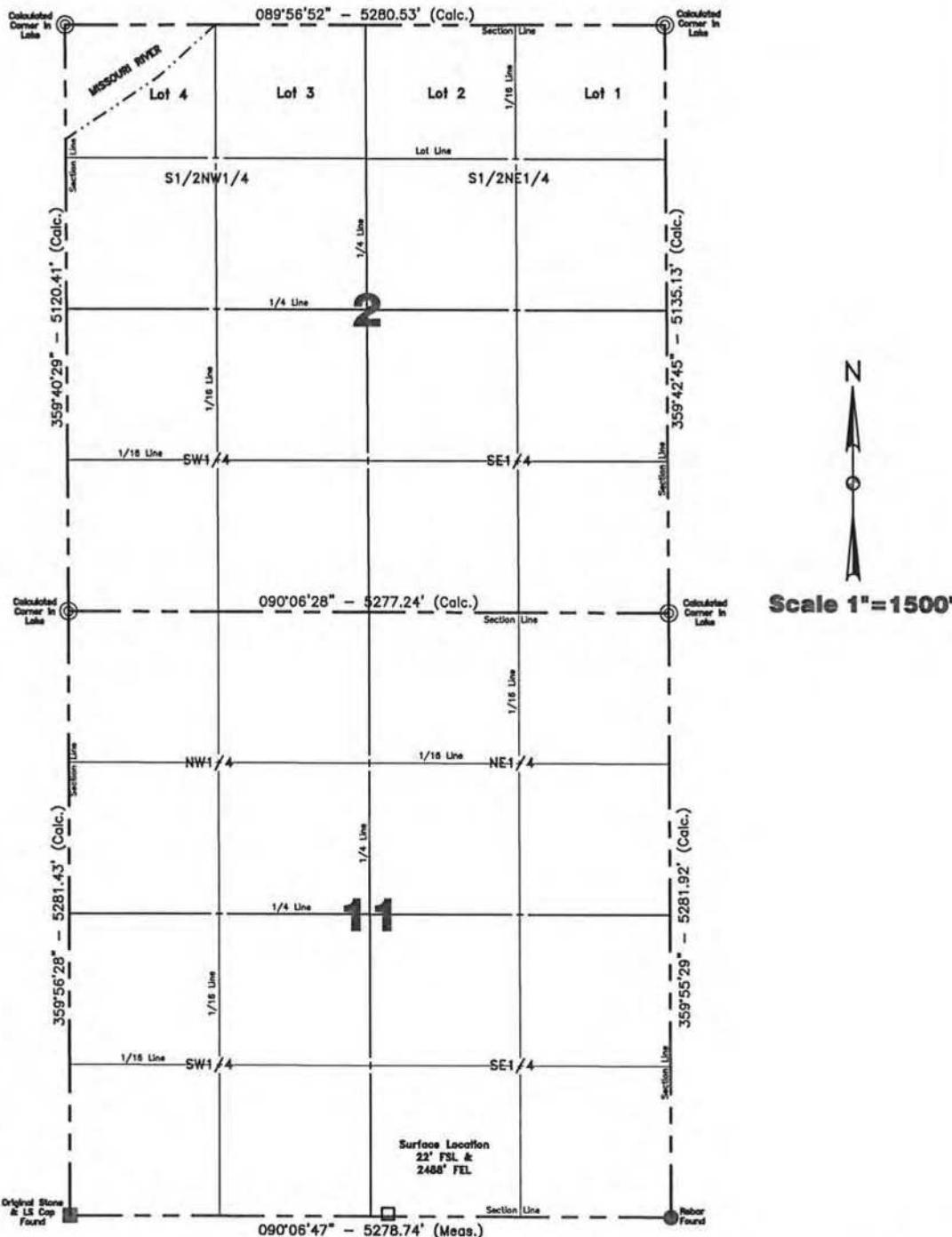
Dahl 15-11H

22 feet from the south line and 2488 feet from the east line (surface location)
Section 11, T. 153 N., R. 101 W., 5th P.M.

McKenzie County, North Dakota

Surface owner @ well site - Sharon D. Eilers et al

Latitude 48°04'56.376" North; Longitude 103°38'09.239" West (surface location)
[Derived from OPUS Solution NAD-83(CORS96)]



Confidentiality Notice:
The information contained on this plat is legally privileged and confidential information intended only for the use of recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

Computed & Drawn By M. Meismer	Surveyed By J. McElhiney	Approved By D. Leischner	Scale 1"=1500'	Date 07/01/2011
Field Book O-89	Material B.H. Layout	Revised -	Project No. 8711180	Drawing No. 4

Kadmas
Lee &
Jackson
Engineers Surveyors
Planners

SM Energy Company
Dahl 15-11H
Section 11, T 153 N, R 101 W, 5th P.M.
McKenzie County, North Dakota

Well Site Elevation	2111.7' MSL
Well Pad Elevation	2109.9' MSL
Excavation	6,210 C.Y.
Plus Pit	<u>3,150 C.Y.</u>
	9,360 C.Y.
Embankment	2,275 C.Y.
Plus Shrinkage (+30%)	<u>685 C.Y.</u>
	2,960 C.Y.
Stockpile Pit	3,150 C.Y.
Stockpile Top Soil (6")	2,910 C.Y.
Production Rehabilitation	0 C.Y.
Road Embankment & Stockpile from Pad	340 C.Y.
Disturbed Area From Pad	3.61 Acres

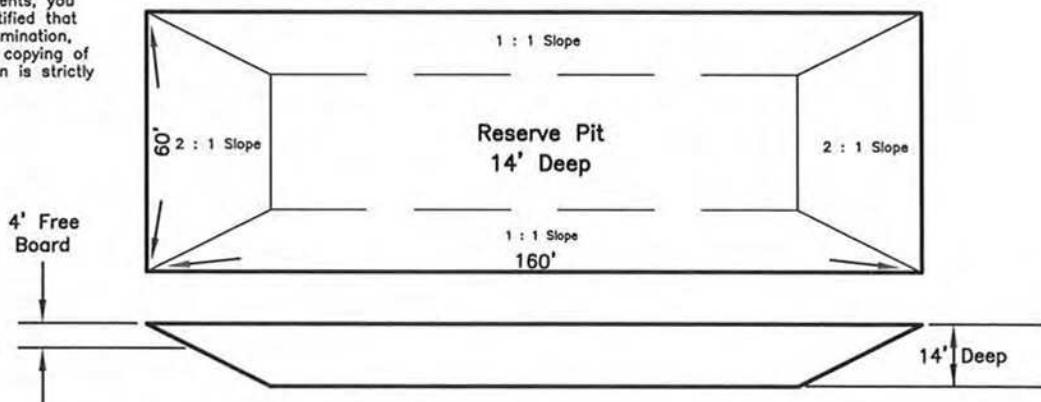
NOTE :

All cut end slopes are designed at 1:1 slopes &
all fill end slopes are designed at 1 1/2:1 slopes

Well Site Location

22' FSL
2488' FEL

Confidentiality Notice:
The information contained
on this plat is legally
privileged and confidential
information intended only
for the use of recipients.
If you are not the
intended recipients, you
are hereby notified that
any use, dissemination,
distribution or copying of
this information is strictly
prohibited.

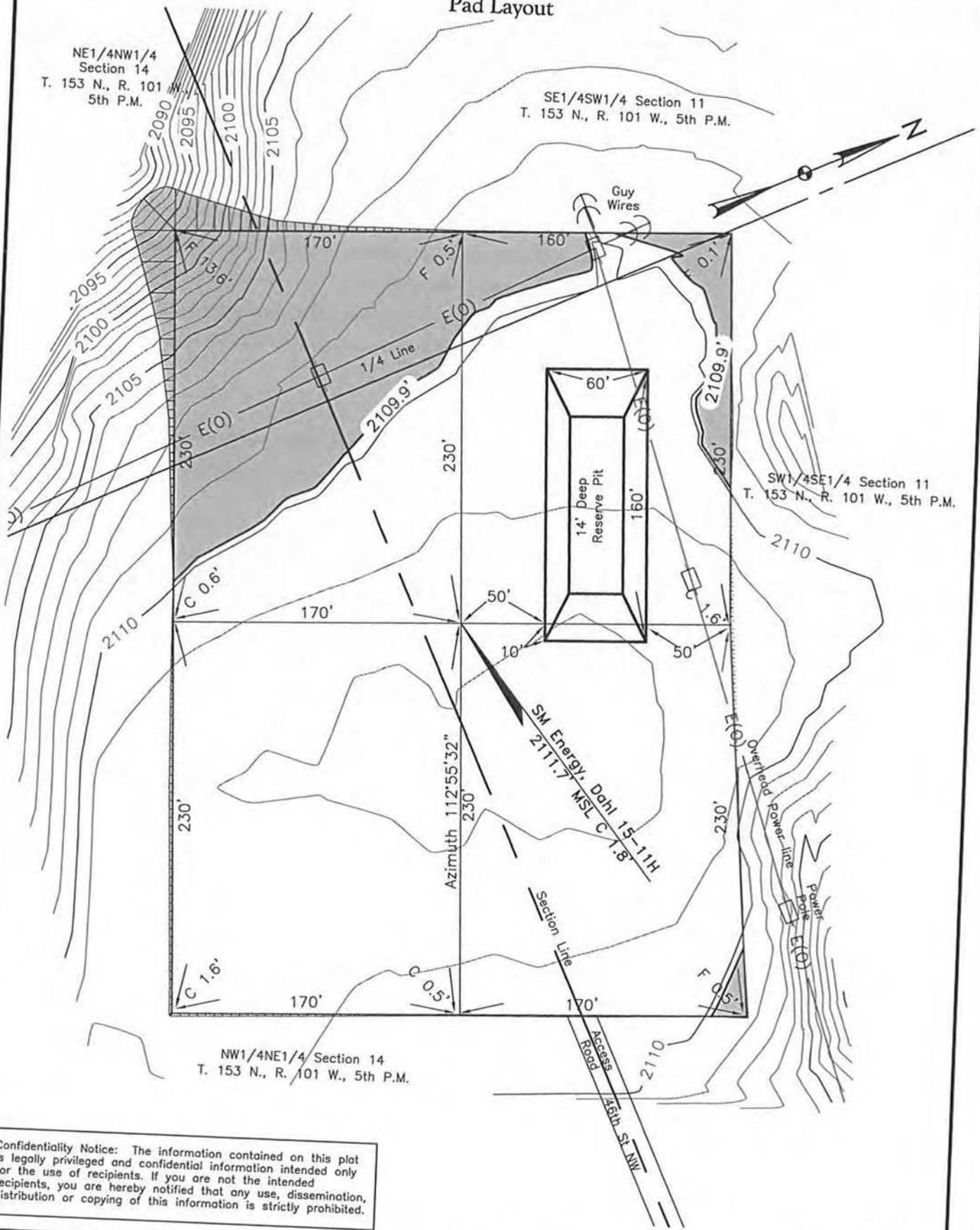


Drawn By M. Meismer	Surveyed By J. McElhiney	Approved By D. Leischner	Scale None	Date 07/07/2011
Field Book O-89	Material Quantities	Revised -	Project No. 8711180	Drawing No. 5

Dahl 15-11H Pad Layout

NE1/4NW
Section
T. 153 N., R.
5th P.M.

SE1/4SW1/4 Section 11
T. 153 N., R. 101 W., 5th P.M.



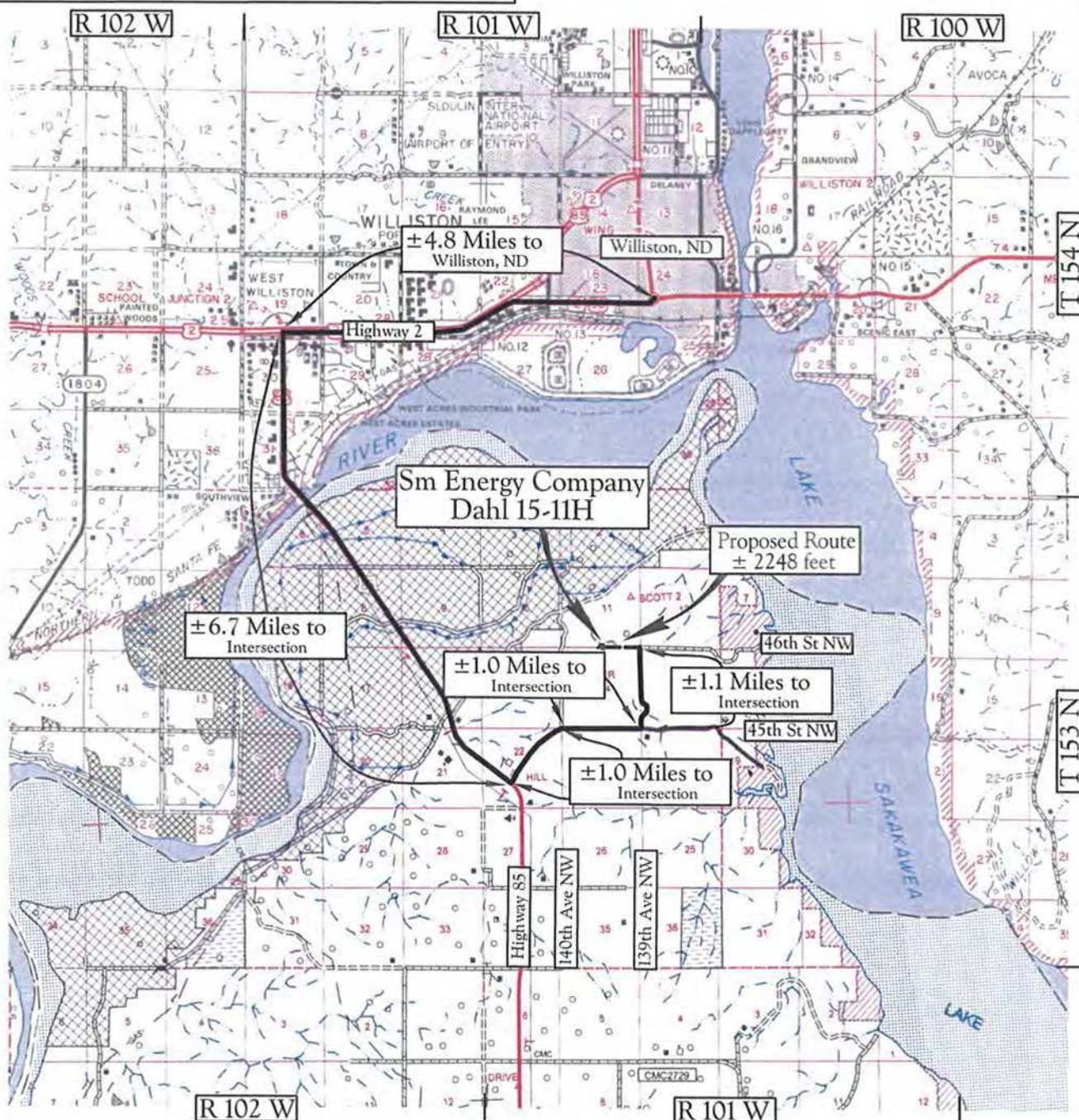
Confidentiality Notice: The information contained on this plat is legally privileged and confidential information intended only for the use of recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

Drawn By M. Meismer	Surveyed By J. McElhiney	Approved By D. Leischner	Scale 1" = 80'	Date 07/07/2011
Field Book O-89	Material Pad Layout	Revised —	Project No. 8711180	Drawing No. 6
Jul 25, 2011 - 7:50am - A3 Field Site Survey				

Kadrmas
Lee &
Jackson
Engineers Surveyors
Planners

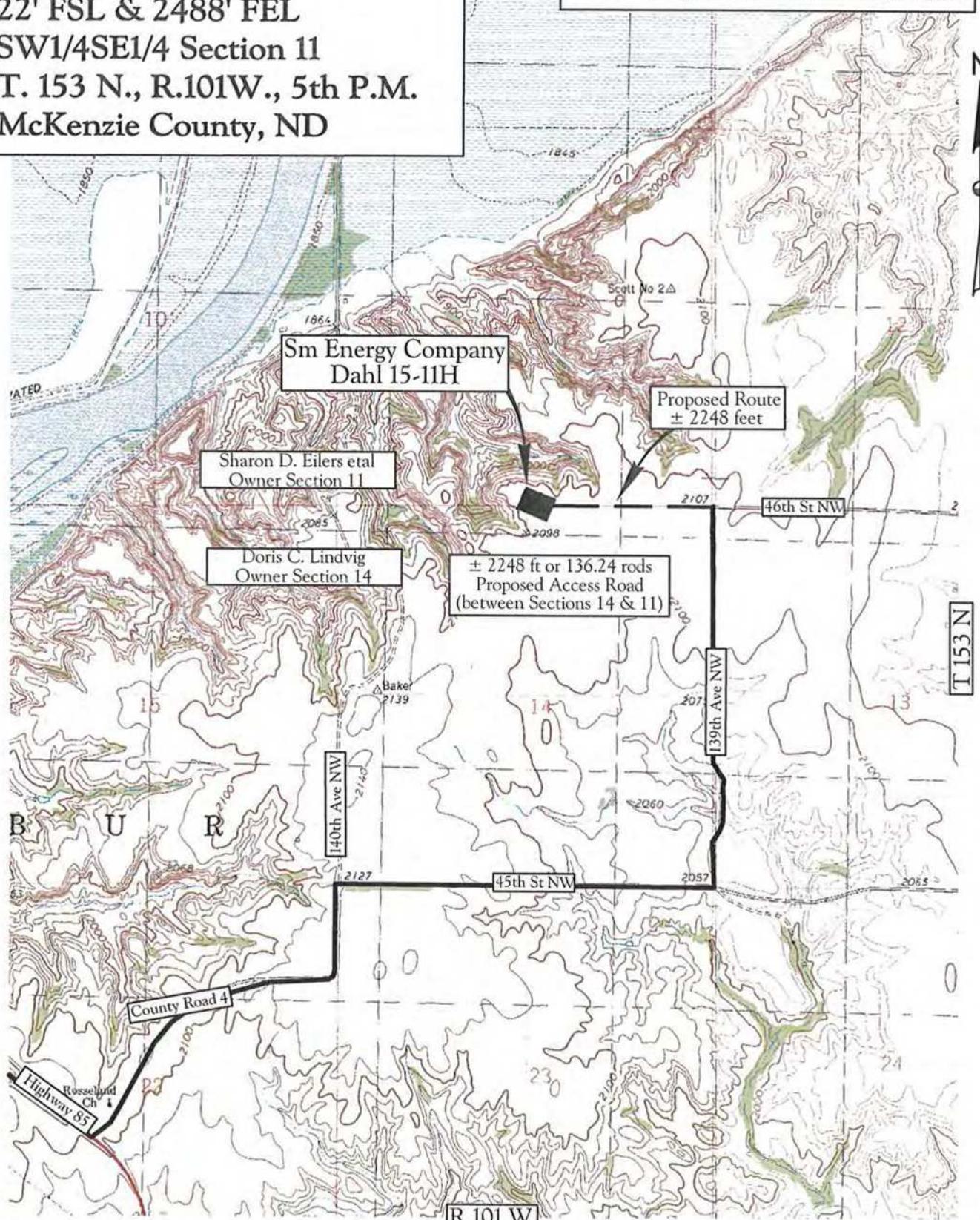
SM Energy Company
Dahl 15-11H
22' FSL & 2488' FEL
SW1/4SE1/4 Section 11
T. 153 N., R.101W., 5th P.M.
McKenzie County, ND

Confidentiality Notice: The information contained on this plat is legally privileged and confidential information intended only for the use of recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.



SM Energy Company
Dahl 15-11H
22' FSL & 2488' FEL
SW1/4SE1/4 Section 11
T. 153 N., R.101W., 5th P.M.
McKenzie County, ND

Confidentiality Notice: The information contained on this plat is legally privileged and confidential information intended only for the use of recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.



Map "B"
Quad Access Route

Legend

Existing Roads —

Proposed Roads - - -

Scale 1" = 2000'

**Kadrmas
Lee &
Jackson**
Engineers Surveyors
Planners