



# 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  
DEC 19 2017  
RSD  
Well File No.  
**21796**

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

ND OIL & GAS DIVISION

<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 <b>December 12, 2017</b>	<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	<b>NDAC Section 43-02-03-49 Compliance</b>

Well Name and Number

**Dahl Federal 2-15H**

Footages <b>700 F N L</b>	Qtr-Qtr <b>2026 F E L</b>	Section <b>NWNE</b>	Township <b>15</b>	Range <b>153 N 101 W</b>
Field <b>Baker</b>	Pool <b>Bakken</b>	County <b>McKenzie</b>		

24-HOUR PRODUCTION RATE

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

Name of Contractor(s)

Address	City	State	Zip Code
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## DETAILS OF WORK

On August 29th, 2017, Oasis Petroleum received a letter from the NDIC requiring the above referenced facility is required to have a perimeter berm erected within 180 days. The above referenced site has a perimeter berm surrounding the location. Recently, the perimeter berm height was increased and a retention area was built in northwest corner of the location as part of the continuous efforts made by Oasis Petroleum to maintain the site.

Due to the additional containment Oasis believes the site is in compliance with NDAC Section 43-02-03-49 referenced in the received letter.

In addition, the site has been evaluated by a Professional Engineer and is in compliance with EPA SPCC regulations for specific and general site containment (40 CFR 112).

Company <b>Oasis Petroleum North America LLC</b>	Telephone Number <b>281-404-9494</b>	
Address <b>1001 Fannin, Suite 1500</b>		
City <b>Houston</b>	State <b>TX</b>	Zip Code <b>77002</b>
Signature 	Printed Name <b>Sadie Goodrum</b>	
Title <b>Regulatory Specialist</b>	Date <b>December 12, 2017</b>	
Email Address <b>sgoodrum@oasispetroleum.com</b>		

## FOR STATE USE ONLY

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



# 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**

Well File No.  
**21796**

OCT 25 2017

**ND Oil & Gas Div.**

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 <b>February 18, 2015</b>	<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	<b>Well is now on rod pump</b>

Well Name and Number

**Dahl Federal 2-15H**

Footages	Qtr-Qtr	Section	Township	Range
700 F N L	2026 F E L	NWNE	15	153 N 101 W
Field <b>Baker</b>	Pool <b>Bakken</b>		County <b>McKenzie</b>	

## 24-HOUR PRODUCTION RATE

Before	After
Oil	Bbls
Water	Bbls
Gas	MCF

Name of Contractor(s)

Address	City	State	Zip Code
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## DETAILS OF WORK

Effective 02/18/2015, the above referenced well was equipped with a rod pump.

End of Tubing: 2-7/8" L-80 tubing @ 10044'

Pump: 2-1/2" x 1.75" x 36' insert pump @9950'

Company <b>Oasis Petroleum North America LLC</b>	Telephone Number <b>281 404-9494</b>	
Address <b>1001 Fannin, Suite 1500</b>		
City <b>Houston</b>	State <b>TX</b>	Zip Code <b>77002</b>
Signature 	Printed Name <b>Sadie Goodrum</b>	
Title <b>Regulatory Specialist</b>	Date <b>October 23, 2017</b>	
Email Address <b>sgoodrum@oasispetroleum.com</b>		

## FOR STATE USE ONLY

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



# 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/](http://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

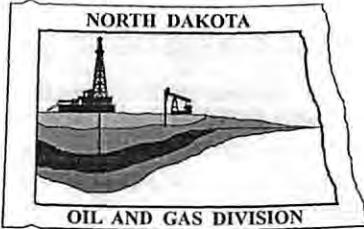
Dear Michael Kukuk:

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/](http://www.dmr.nd.gov/oilgas/)

21796

August 29, 2017

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

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

NDIC # Please see attached list of 10 Facilities

Dear Michael Kukuk:

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

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

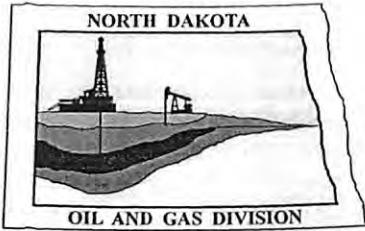
The berm must be at least six inches in height, constructed of sufficiently impermeable material to provide emergency containment, and must be maintained until the facility is either granted a waiver or the site is reclaimed.

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

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

Sincerely,

Richard Dunn  
Field Inspector



# Oil and Gas Division

Lynn D. Helms - Director

Bruce E. Hicks - Assistant Director

## Department of Mineral Resources

Lynn D. Helms - Director

## North Dakota Industrial Commission

[www.dmr.nd.gov/oilgas/](http://www.dmr.nd.gov/oilgas/)

NDIC #	Facility Name
11316	LINDVIG 10 1
16272	THEODORE SWD 5198 11-9
18651	BERQUIST 34-27H
18980	BERQUIST 33-28H
20022	JAYNES 16-12H
20464	ROLFSON 29-32H
20465	ROLFSON 20-17H
20731	HAGEN 31-30H
20732	WHITE 6-7H
21796	DAHL FEDERAL 2-15H



# 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/](http://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  
SFM 5762 (03-2000)

**RECEIVED**

JAN 17 2017

FOR STATE USE ONLY

NDIC Bond Number

0312

**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**Telephone Number  
**406-245-6248**

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)

Date

*[Signature]* **Attorney in Fact**

12/1/16

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

**RECEIVING OPERATOR**

Name of Operator Representative

*[Signature]* **Michael H. Lou**

Operator Receiving Oil and/or Gas Wells

**Oasis Petroleum North America LLC**Telephone Number  
**(281) 404-9500**

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)

Date

*[Signature]* **CFO**

12/1/16

**SURETY COMPANY**

Surety	Telephone Number	Amount of Bond
<b>RLI Insurance Company</b>	<b>(713) 961-1300</b>	<b>\$ 100,000.00</b>
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)

Date

12/1/2016

Printed Name

Robbie Duxbury, Attorney-in-Fact

FOR STATE USE ONLY

Date Approved

*[Signature]* **March 7, 2017**

By

*[Signature]* **Bruce E. Hahn**

Title

**Assistant Director**

NDIC No.	Well File	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	SWSW	
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	SWSW	
20266	33053034230000	WOLD 15-33H	MCKENZIE	33	153 N	97 W	SWSW	
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	NWSW
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	35	152 N	100 W	SWSW
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	SESW
28201	33053058550000	DALLAS 2X-13H	MCKENZIE	13	151 N	100 W	NWNE
28812	33053060930000	JAMES 16X-35HB	MCKENZIE	13	151 N	100 W	NWNE
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	9	151 N	100 W	SESW
30790	33053067560000	STACEY 13-9H	MCKENZIE	35	153 N	101 W	SWSE
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.

21796

NDIC CTB No.

121796

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

## ND Oil &amp; Gas Division

Well Name and Number DAHL FEDERAL 2-15H	Qtr-Qtr NWNE	Section 15	Township 153	Range 101	County McKenzie
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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 08 2017	By 	
By Erie Robertson	Title Oil & Gas Production Analyst	

**AUTHORIZATION TO PURCHASE AND TRANSPORT OIL FROM A 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.	<b>21796</b>
NDIC CTB No.	<b>121796</b>

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

Well Name and Number <b>DAHL FEDERAL 2-15H</b>	Qtr-Qtr <b>NWNE</b>	Section <b>15</b>	Township <b>153 N</b>	Range <b>101 W</b>	County <b>MCKENZIE</b>
Operator <b>SM ENERGY COMPANY</b>	Telephone # <b>406-245-6248</b>	Field <b>BAKER</b>			
Address <b>P O BOX 7168</b>	City <b>BILLINGS</b>		State <b>MT</b>	Zip Code <b>59103-7168</b>	

Name of First Purchaser <b>Targa Badlands LLC.</b>	Telephone # <b>701-842-3315</b>	% Purchased <b>100</b>	Date Effective <b>January 31, 2014</b>
Principal Place of Business <b>1000 Louisiana St. Suite 4300</b>	City <b>Houston</b>	State <b>TX</b>	Zip Code <b>77002</b>
Field Address <b>2680 109th Ave. NW</b>	City <b>Watford City</b>	State <b>ND</b>	Zip Code <b>58854</b>
Name of Transporter <b>Targa Badlands LLC.</b>	Telephone Number <b>713-584-1061</b>	% Transported <b>100</b>	Date Effective <b>January 31, 2014</b>
Address <b>1000 Louisiana St. Suite 4300</b>	City <b>Houston</b>	State <b>TX</b>	Zip Code <b>77002</b>
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 <b>January 31, 2014</b>
---	---------------------------------

Signature 	Printed Name <b>Devin Schmidt</b>	Title <b>Production Accountant</b>
---------------	--------------------------------------	---------------------------------------

Above Signature Witnessed By	Witness Signature 	Witness Printed Name <b>Brenda Young</b>	Witness Title <b>Production Accountant</b>
------------------------------	-----------------------	---	---

FOR STATE USE ONLY		
Date Approved	<b>FEB 11 2014</b>	
By		
Title	 <b>Erie Roberson</b>	
Oil & Gas Production Analyst		

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

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



Well File No.	21796
NDIC CTB No.	121796

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

Well Name and Number <b>DAHL FEDERAL 2-15H</b>	Qtr-Qtr <b>NWNE</b>	Section <b>15</b>	Township <b>153 N</b>	Range <b>101 W</b>	County <b>MCKENZIE</b>
Operator <b>SM ENERGY COMPANY</b>	Telephone # <b>406-245-6248</b>	Field <b>BAKER</b>			
Address <b>P O BOX 7168</b>	City <b>BILLINGS</b>	State <b>MT</b>	Zip Code <b>59103-7168</b>		

Name of First Purchaser <b>Vitol Inc., Crude Marketing USA</b>	Telephone # <b>713-230-1000</b>	% Purchased <b>100</b>	Date Effective <b>December 1, 2013</b>
Principal Place of Business <b>1100 Louisiana Suite 5500</b>	City <b>Houston</b>	State <b>TX</b>	Zip Code <b>7702</b>
Field Address <b>1100 Louisiana Suite 5500</b>	City <b>Houston</b>	State <b>TX</b>	Zip Code <b>7702</b>
Name of Transporter <b>Wind River Oil Services - Windriver Dispatch</b>	Telephone Number <b>701-595-0334</b>	% Transported <b>100</b>	Date Effective <b>December 1, 2013</b>
Address <b>310 Airport Road Suite 100</b>	City <b>Williston</b>	State <b>ND</b>	Zip Code <b>58801</b>

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 <b>December 1, 2013</b>
---	---------------------------------

Signature 	Printed Name <b>Devin Schmidt</b>	Title <b>Production Accountant</b>
---------------	--------------------------------------	---------------------------------------

Above Signature Witnessed By	Witness Signature 	Witness Printed Name <b>Brenda Young</b>	Witness Title <b>Production Accountant</b>
------------------------------	-----------------------	---	---

FOR STATE USE ONLY	
Date Approved <b>DEC 09 2013</b>	By
Title 	

Oil & Gas Production Analyst



# SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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

Well File No.

**21796**

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 <b>May 30, 2012</b>
<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     | <b>Notice of Surface Casing Pressure</b>          |

Well Name and Number <b>Dahl Federal 2-15H</b>				
Footages <b>700 F N L</b>	Qtr-Qtr <b>2026 F E L</b>	Section <b>NWNE</b>	Township <b>15</b>	Range <b>153 N 101 W</b>
Field <b>Baker</b>	Pool <b>Bakken</b>	County <b>McKenzie</b>		

## 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** would like to notify the NDIC of the presence of greater than 250 psi pressure on the 9-5/8" x 7" casing on the Dahl Federal 2-15H. On 5/30/2012, 250 psi was present on the surface casing. The surface casing pressure is monitored and bled off on a daily basis. A quarterly report will be submitted showing details of the pressure build-ups. SM Energy will continue to maintain a pressure gauge on the annulus and monitor and report annular pressure.

Pierre Shale Top - 1,950'  
Surface Casing Shoe - 2,080'  
TOC - 3,404'  
Dakota SS Top - 5,444'

Company <b>SM Energy Company</b>	Telephone Number <b>(406) 245-6248</b>	
Address <b>P.O. Box 7168</b>		
City <b>Billings</b>	State <b>MT</b>	Zip Code <b>59103</b>
Signature <i>Cris Rogers</i>	Printed Name <b>Cris Rogers</b>	
Title <b>Operations Engineer</b>	Date <b>August 26, 2013</b>	
Email Address <b>crogers@sm-energy.com</b>		

## FOR STATE USE ONLY

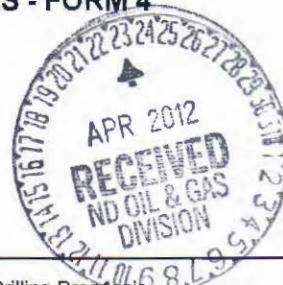
<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <b>11-18-2013</b>	
By <i>Stephen Fried</i>	
Title <b>Stephen Fried Geologist</b>	



# 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.  
**21796**



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 <b>April 10, 2012</b>	<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	<b>Drilling Progress</b>

Well Name and Number <b>Dahl Federal 2-15H</b>				
Foothages <b>700 F N L</b>	Qtr-Qtr <b>2026 F E L</b>	Section <b>NWNE</b>	Township <b>15</b>	Range <b>153 N 101 W</b>
Field <b>Baker</b>	Pool <b>Bakken</b>	County <b>McKenzie</b>		

## 24-HOUR PRODUCTION RATE

Before	After
Oil	Bbls
Water	Bbls
Gas	MCF

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

## DETAILS OF WORK

Perforated the 7" 29# casing from 10,936' - 10,938', 10,932' - 10,934' and 10,928' - 10,930' with ten .25" holes. Set a CICR at 10,902'. Attempted to obtain an injection rate at 6000 psi without success. Drilled out the CICR and CIBP then drilled the 6" lateral from 11,009', reaching 20,924' TD on 4/6/12. Ran 4 1/2" 13.5# P-110 liner from 10,207.2' - 20,909'. Pressure tested the liner top to 5,000 psi, installed the tubinghead and released the rig on 4/10/12.

Company <b>SM Energy Company</b>	Telephone Number <b>(406) 245-6248</b>	
Address <b>P. O. Box 7168</b>		
City <b>Billings</b>	State <b>MT</b>	Zip Code <b>59103-7168</b>
Signature <i>Joy Torgerson</i>	Printed Name <b>Joy Torgerson</b>	
Title <b>Engineering Tech</b>	Date <b>April 20, 2012</b>	
Email Address <b>jtorgeron@sm-energy.com</b>		

## FOR STATE USE ONLY

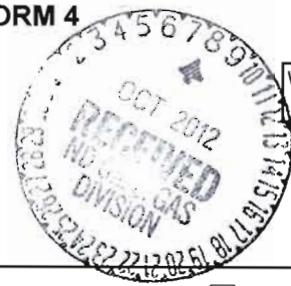
<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <i>4/19/12</i>	
By <i>Todd Gethweg</i>	
Title <b>Mineral Resources Permit Manager</b>	



## 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.  
**21796**



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 <b>May 19, 2012</b>
<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 checked="" type="checkbox"/> Fracture Treatment <input type="checkbox"/> Supplemental History <input type="checkbox"/> Change Production Method <input type="checkbox"/> Temporarily Abandon <input type="checkbox"/> Reclamation <input checked="" type="checkbox"/> Other <b>Completion Setback Requirement</b>	

Well Name and Number <b>Dahl Federal 2-15H</b>				
Footages <b>700 F N L</b>	Qtr-Qtr <b>2026 F E L</b>	Section <b>NWNE</b>	Township <b>15</b>	Range <b>101 W</b>
Field <b>Baker</b>	Pool <b>Bakken</b>	County <b>McKenzie</b>		

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

After gaining approval from the NDIC, SM Energy completed fracturing operations on the Dahl Federal 2-15H on 5/19/12. SM Energy utilized dual swell packers in the lateral above the top frac port sub located at 11,387' MD to achieve the 200' isolation setback requirement. No perforating or fracturing stimulation occurred in the blank section of 4-1/2" production liner above the dual packer assembly located at 11,137' MD. See Completion Form 6 for further stimulation details.

Company <b>SM Energy Company</b>	Telephone Number <b>(406) 245-6248</b>	
Address <b>P.O. Box 7168</b>		
City <b>Billings</b>	State <b>MT</b>	Zip Code <b>59103</b>
Signature <i>Cris Rogers</i>	Printed Name <b>Cris Rogers</b>	
Title <b>Operations Engineer</b>	Date <b>May 29, 2012</b>	
Email Address <b>crogers@sm-energy.com</b>		

FOR STATE USE ONLY	
<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <i>October 11, 2012</i>	
By <i>Nathaniel Corbele</i>	
Title <b>Petroleum Resource Specialist</b>	



## **WELL COMPLETION OR RECOMPLETION REPORT - FORM 6**

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

Well File No. 21796

**PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.**

PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

Designate Type of Completion							
<input checked="" type="checkbox"/> Oil Well	<input type="checkbox"/> EOR Well	<input type="checkbox"/> Recompletion	<input type="checkbox"/> Deepened Well	<input type="checkbox"/> Added Horizontal Leg	<input type="checkbox"/> Extended Horizontal Leg		
<input type="checkbox"/> Gas Well	<input type="checkbox"/> SWD Well	<input type="checkbox"/> Water Supply Well	<input type="checkbox"/> Other:				
Well Name and Number <b>DAHL FEDERAL 2-15H</b>				Spacing Unit Description <b>Sec 3 &amp; 10, T153N-R101W</b>			
Operator <b>SM ENERGY COMPANY</b>		Telephone Number <b>(406) 245-6248</b>		Field <b>BAKER</b>			
Address <b>P. O. BOX 7168</b>				Pool <b>BAKKEN</b>			
City <b>BILLINGS</b>	State <b>MT</b>	Zip Code <b>59103-7168</b>		Permit Type	<input type="checkbox"/> Wildcat	<input checked="" type="checkbox"/> Development	<input type="checkbox"/> Extension

### **LOCATION OF WELL**

At Surface <b>700 F N L</b>		Qtr-Qtr <b>NWNE</b>	Section <b>15</b>	Township <b>153 N</b>	Range <b>101 W</b>	County <b>McKenzie</b>
Spud Date <b>January 6, 2012</b>		Date TD Reached <b>April 6, 2012</b>		Drilling Contractor and Rig Number <b>Nabors Drilling #686</b>	KB Elevation (Ft) <b>2073</b>	Graded Elevation (Ft) <b>2052</b>

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) <b>10956 - 20924</b>							Name of Zone (If Different from Pool Name)	
Date Well Completed (SEE INSTRUCTIONS) <b>May 20, 2012</b>			Producing Method <b>Flowing</b>	Pumping-Size & Type of Pump				Well Status (Producing or Shut-In) <b>Producing</b>
Date of Test <b>05/31/2012</b>	Hours Tested <b>24</b>	Choke Size <b>16 /64</b>	Production for Test	Oil (Bbls) <b>791</b>	Gas (MCF) <b>897</b>	Water (Bbls) <b>748</b>	Oil Gravity-API (Corr.) <b>40.6 °</b>	Disposition of Gas <b>Flared</b>
Flowing Tubing Pressure (PSI) <b>1900</b>		Flowing Casing Pressure (PSI) <b>0</b>		Calculated 24-Hour Rate	Oil (Bbls) <b>791</b>	Gas (MCF) <b>897</b>	Water (Bbls) <b>748</b>	Gas-Oil Ratio <b>1134</b>

## GEOLOGICAL MARKERS

## **PLUG BACK INFORMATION**

## CORES CUT

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

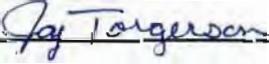
## Drill Stem Test

### Well Specific Stimulation

Date Stimulated 05/19/2012	Stimulated Formation Bakken		Top (Ft) 10956	Bottom (Ft) 20924	Stimulation Stages 20	Volume 77312	Volume Units Barrels
Type Treatment Sand Frac	Acid %	Lbs Proppant 3053400			Maximum Treatment Pressure (PSI) 8844	Maximum Treatment Rate (BBLS/Min) 57.0	
Details Pumped 1,992,000 20/40 sand, 97,400# 30/70 sand, 964,000# 40/70 sand, 77,312 Bbls total fluid in 20 stages over 3 days (5/17/12 - 5/19/12) at a maximum rate of 57.0 bpm and maximum pressure of 8844 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 <a href="mailto:jtorgerson@sm-energy.com">jtorgerson@sm-energy.com</a>	Date 09/27/2012
--	---	--------------------

Signature 	Printed Name Joy Torgerson	Title Engineering Tech
--	-------------------------------	---------------------------



# SUNDY NOTICE AND REPORTS ON WELLS - FORM

INDUSTRIAL COMMISSION OF NORTH DAKOTA

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



Well File No.  
**21796**

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 <b>August 1, 2012</b>
<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 checked="" type="checkbox"/> Change Production Method |
| <input type="checkbox"/> Temporarily Abandon  | <input type="checkbox"/> Reclamation                         |
| <input checked="" type="checkbox"/> Other     | <b>Clean out, Convert to rod pump</b>                        |

Well Name and Number

**Dahl Federal 2-15H**

Footages	700	F	N	L	2026	F	E	L	Qtr-Qtr	Section	Township	Range
Field									NWNE	15	153 N	101 W
Baker									Pool		County	McKenzie

## 24-HOUR PRODUCTION RATE

	Before	After
Oil	Bbls	Oil
Water	Bbls	Water
Gas	MCF	Gas

Name of Contractor(s)

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

## DETAILS OF WORK

On 8/1/12, SM Energy cleaned out and converted the Dahl Federal 2-15H 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 36' tubing barrel pump MSN set at ~10,052'

Tubing: 2-7/8" L-80 TAC set at ~10,053' EOT at ~10,145'

Pumping Unit: Rotaflex RH1100-500-306

Company <b>SM Energy Company</b>	Telephone Number <b>(406) 245-6248</b>	
Address <b>P.O. Box 7168</b>		
City <b>Billings</b>	State <b>MT</b>	Zip Code <b>59103</b>
Signature 	Printed Name <b>Cris Rogers</b>	
Title <b>Operations Engineer</b>	Date <b>August 20, 2012</b>	
Email Address <b>crogers@sm-energy.com</b>		

## FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date	
By	
Title <b>PETROLEUM ENGINEER</b>	



## 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.  
**21796**



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 <b>April 25, 2012</b>	<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 checked="" type="checkbox"/> Reclamation
		<input type="checkbox"/> Other	<b>Reclaim Reserve Pit</b>

Well Name and Number <b>Dahl Federal 2-15H</b>					
Footages	Qtr-Qtr	Section	Township	Range	
700 F N L	NWNE	15	153 N	101 W	
Field	Pool	County			
Baker	Bakken	McKenzie			

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

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

### DETAILS OF WORK

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

There were no drilling fluids to dispose of.

A closed loop procedure was used while drilling, applying 198 tons of flyash from Rosebud Power Plant, Colstrip, MT to the drilling mud to solidify it, covered with 4' of backfill and topsoil, then graded to promote surface drainage away from the reclaimed pit.

Company <b>SM Energy Company</b>	Telephone Number <b>(406) 245-6248</b>	
Address <b>P. O. Box 7168</b>		
City <b>Billings</b>	State <b>MT</b>	Zip Code <b>59103-7168</b>
Signature <i>Lorena Griggs</i>	Printed Name <b>Lorena Griggs</b>	
Title <b>Regulatory &amp; Safety Assistant</b>	Date <b>April 26, 2012</b>	
Email Address <b>rgriggs@sm-energy.com</b>		

FOR STATE USE ONLY	
<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <i>9-11-12</i>	
By <i>AGN/Valley</i>	
Title <i>AGN</i>	



# 21796 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](http://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,

A handwritten signature in black ink that reads "Nathaniel Erbele".

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

# 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.	21796
NDIC CTB No.	121796

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

Well Name and Number <b>DAHL FEDERAL 2-15H</b>	Qtr-Qtr <b>NWNE</b>	Section <b>15</b>	Township <b>153 N</b>	Range <b>101 W</b>	County <b>MCKENZIE</b>
Operator <b>SM ENERGY COMPANY</b>	Telephone # <b>406-245-6248</b>				Field <b>BAKER</b>
Address <b>P O BOX 7168</b>	City <b>BILLINGS</b>		State <b>MT</b>	Zip Code <b>59103-7168</b>	

Name of First Purchaser <b>Enserco Energy Inc</b>	Telephone # <b>303-566-3354</b>	% Purchased <b>100</b>	Date Effective <b>May 21, 2012</b>
Principal Place of Business <b>1515 Wynkoop St., Suite 500</b>	City <b>Denver</b>	State <b>CO</b>	Zip Code <b>80202</b>
Field Address <b>1515 Wynkoop St., Suite 500</b>	City <b>Denver</b>	State <b>CO</b>	Zip Code <b>80202</b>
Name of Transporter <b>Falco Energy Transportation</b>	Telephone Number <b>701-572-6904</b>	% Transported <b>100</b>	Date Effective <b>May 21, 2012</b>
Address <b>PO Box 2659</b>	City <b>Williston</b>	State <b>ND</b>	Zip Code <b>58721</b>

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  
**May 23, 2012**

Signature 	Printed Name <b>Will Burruss</b>	Title <b>Production Accountant</b>
---------------	-------------------------------------	---------------------------------------

Above Signature Witnessed By

Witness Signature 	Witness Printed Name <b>Brenda Young</b>	Witness Title <b>Production Accountant</b>
-----------------------	---	---

FOR STATE USE ONLY		
Date Approved <b>MAY 29 2012</b>		
By		
Title 		
Oil & Gas Production Analyst		

Industrial Commission of North Dakota  
Oil and Gas Division

Well or Facility No

21796

Verbal Approval To Purchase and Transport Oil      Tight Hole      Yes

**OPERATOR**

Operator <b>SM ENERGY COMPANY</b>	Representative <b>Lynnette Watts</b>	Rep Phone <b>(701) 774-3312</b>
--------------------------------------	---	------------------------------------

**WELL INFORMATION**

Well Name <b>DAHL FEDERAL 2-15H</b>	Inspector <b>Marc Binns</b>
Well Location      QQ      Sec      Twp      Rng	County <b>MCKENZIE</b>
NWNE    15    153    N    101    W	Field <b>BAKER</b>
Footages      700      Feet From the N Line	Pool <b>BAKKEN</b>
2026      Feet From the E Line	
Date of First Production Through Permanent Wellhead	5/21/2012
	<b>This Is The First Sales</b>

**PURCHASER / TRANSPORTER**

Purchaser <b>ENSERCO ENERGY INC.</b>	Transporter <b>FALCO ENERGY TRANSPORTATION</b>
---	---

**TANK BATTERY**

Single Well Tank Battery Number :
-----------------------------------

**SALES INFORMATION**    This Is The First Sales

ESTIMATED BARRELS TO BE SOLD	ACTUAL BARRELS SOLD	DATE
15000	BBLS	220
	BBLS	BBLS

**DETAILS**

Must also forward Forms 6 & 8 to State prior to reaching 15000 Bbl estimate or no later than required time frame for submitting those forms.
--

Start Date      5/21/2012  
Date Approved      5/29/2012  
Approved By      Richard Dunn

21796

AA



## Dahl Federal 2-15H End of Well Report

SHL: 700' FNL - 2026' FEL  
SEC 15, T153N, R101W  
BHL: 263' FNL - 2520' FEL  
SEC 3, T153N, R101W

McKenzie County, ND

Prepared by:

Joe Hallgren, *well-site geologist*  
Basin Geologic Consulting, Inc.  
2213 North Main Court  
Williston, ND 58801

Prepared for:



Dahl Federal 2-15H

Mike Bryant, *company geologist*  
SM Energy Company  
550 North 31<sup>st</sup> St, Suite 500  
P.O. Box 7168  
Billings, MT 59103

## 1.0 INTRODUCTION

Dahl Federal 2-15H is a north lateral Middle Bakken well located NW/NE in SEC 15, T153N, R101W, in McKenzie County, North Dakota. The primary target zone was 7'- 17' under the top of the Middle Bakken Formation. Although the entire Middle Bakken is considered a pay zone, the target zone is used primarily because of its distinct gamma characteristics which are used to help directional drill the lateral. Directional and MWD services were performed by Ryan Energy Company. Joe Hallgren was the well-site geologist providing geo-steering and mudlogging services were provided by Basin Geologic Consulting, Inc.

### Well Information

**API #:** 33-053-03846

**Field:** Baker Field Area

**Spud Date:** 3/7/2012

**TD Date:** 4/6/2012

**Surface Location:** 700' FNL & 2026' FEL SEC 15, T153N, R101W, McKenzie County, North Dakota

**Intermediate Casing Point:** 259' FSL & 2187' FEL, SEC 10, T153N, R101W, McKenzie County, North Dakota; 10948' MD, 10685.02' TVD, 924.6' VS

**Bottom Hole Location:** 263' FNL & 2520' FEL, SEC 3, T153N, R101W, McKenzie County, North Dakota; 20924' MD, 10641.77' TVD, 10687.7' VS

**Surface Elevation:** 2052'

**KB:** 2073'

**Casing Shoe:** 10948' MD

**Total Depth Drilled:** 20924' MD

**Operator:** SM Energy Company

**Contractor:** Nabors Rig 686

**Company Engineer:** Greg Hilton

**Company Geologist:** Mike Bryant

**Company men:** Greg Perino & Paul Berenneise

**Well-site Geologist:** Joe Hallgren

**Mudlogger:** Micah Westby  
Basin Geologic Consulting, Inc.

**Directional Driller:** Bruce Jensen & Adam Alexander  
Ryan Energy Company

**MWD Hands:** Joe Moore & Jamie Frick  
Ryan Energy Company

**Drilling Mud:** Invert- straight hole and curve,  
Saltwater in the lateral

## **2.0 SERVICES**

### **2.1 Wellsite Geology (*Basin Geologic Consulting, Inc.*)**

Geological consulting and mudlogging started on 3/11/2012. Services provided included; morning reports, sample examination, production of mud and horizontal log, geo-steering, and a final end of well report.

### **2.2 Mudlogging (*Basin Geologic Consulting, Inc.*)**

#### **2.2.1 Sample Examination**

Samples were collected every 30' from 8450' MD to the end of the lateral at 20924' MD. Descriptions included; mineralogy, color, firmness, argillaceous content, structure, texture, allochems, porosity, oil stain, and hydrocarbon fluorescence. Carbonate identification was determined with 10% dilute HCl, and alizarin red. Hydrocarbon fluorescence was determined using a fluoroscope with a UV lamp.

#### **2.2.2 Gas Detection**

Gas was logged using the Pason Total Gas System (TGAS). The Pason TGAS is an unmanned system designed to measure the amount of gases exiting the wellbore and then calculate the lag time to show the formation depth where the gases were produced. Gas samples are collected and analyzed right at the shaker. The Pason TGAS works in conjunction with the Pason EDR which displays historical and current total percent gas at a specific depth or time. The Pason TGAS system also changes lag time calculations to optimize accuracy of data using five different formula options.

## 3.0 GEOLOGY

### 3.1 Formation Tops

Uphole formation tops were picked using ROP, lithology, and gamma ray to identify markers in the curve and lateral (Table 3.1).

**Table 3.1 Formation tops**

Formation	MD	TVD	SS	VS
Charles	8451'	8437.4'	-6364.4'	380.0'
Base of Last Salt	9181'	9165.2'	-7092.2'	436.3'
Ratcliffe	9253'	9237.0'	-7164.0'	440.9'
Mission Canyon	9410'	9393.8'	-7320.8'	449.5'
Lodgepole	9991'	9973.5'	-7900.5'	484.9'
KOP	10260'	10241.9'	-8168.9'	502.3'
Carrington Shale	10791'	10647.6'	-8574.6'	785.5'
Scallion Limestone	10804'	10652.9'	-8579.9'	796.4'
Upper Bakken Shale	10824'	10660.0'	-8587.0'	813.6'
Middle Bakken	10875'	10674.9'	-8601.9'	858.3'
7" Intermediate Casing Point	10948'	10685.0'	-8612.0'	924.6'
TD Lateral	20924'	10641.8'	-8568.8'	10687.7'

### 3.2 Lithology

Detailed descriptions of samples logged are provided in the mudlog and horizontal log. A description of the target zone is provided below

*SLTY DOL: med- dk brn, med- dk gybrn, sme lt gy, sl- mod frm, micxl, mod- v calc, mod arg, fr intxl por, g brn o stn; w/LS: lt gy, wh, cgrxln- multi gr clus, frm- brit, sndy, 70-90% bri yell fluor, g immed bri bl/wh flash- mlky cut.*

### 3.3 Formation Dip

#### 3.3.1 Main Horizontal

The formation had an average dip of 90.41°. Dip calculations were conducted along the entire length of the lateral from entry into the Upper Bakken Shale at 10824' MD to TD of 20924' MD, using gamma ray, lithology, and anticipated structure. Dip changes can be found in Table 3.2.

**Table 3.2 Formation Dip Calculations**

Depths	Dip
10824'- 10915'	Dip was flat or 90.00 degrees
10915'- 11060'	0.76'/100' updip or 90.43 degrees
11060'- 11372'	0.42'/100' updip or 90.24 degrees
11372'- 11553'	1.66'/100' updip or 90.95 degrees
11553'- 12966'	1.93'/100' updip or 91.11 degrees
12966'- 13640'	2.72'/100' updip or 91.56 degrees
13640'- 14453'	1.39'/100' updip or 90.80 degrees
14453'- 14844'	1.15'/100' updip or 90.66 degrees
14844'- 16350'	0.92'/100' updip or 90.53 degrees
16350'- 16748'	0.40'/100' updip or 90.23 degrees
16748'- 17775'	0.61'/100' downdip or 89.65 degrees
17775'- 18521'	0.36'/100' downdip or 89.79 degrees
18521'- 18868'	1.35'/100' downdip or 89.22 degrees
18868'- 20175'	0.37'/100' downdip or 89.79 degrees
20175'- 20895'	1.01'/100' updip or 90.58 degrees
20175'- 21000'	1.01'/100' updip or 90.58 degrees

## 4.0 SHOWS

The hydrocarbon shows in the samples were good to very good for the whole lateral. We had good sample quality until about 19950' MD when the samples started becoming saturated with envirotorque. At that point, the envirotorque saturation made some of the samples difficult for the geologist and mudlogger to evaluate. The geologist and mudlogger attempted to wash the envirotorque from the samples using soap and citra-solve but the envirotorque could not be washed away. Envirotorque use in the well caused poor sample quality and therefore the accuracy of sample descriptions was compromised from 19950' MD to TD of 20924' MD. There was good brown oil staining in the samples while drilling the lateral. We had between 50-90% bright yellow hydrocarbon fluorescence. The cuts were good to very good immediate bright blue/white flash to milky to sometimes streaming cuts. Ronsonol was used to cut samples and then view under a UV fluoroscope.

### 4.1 Oil Shows

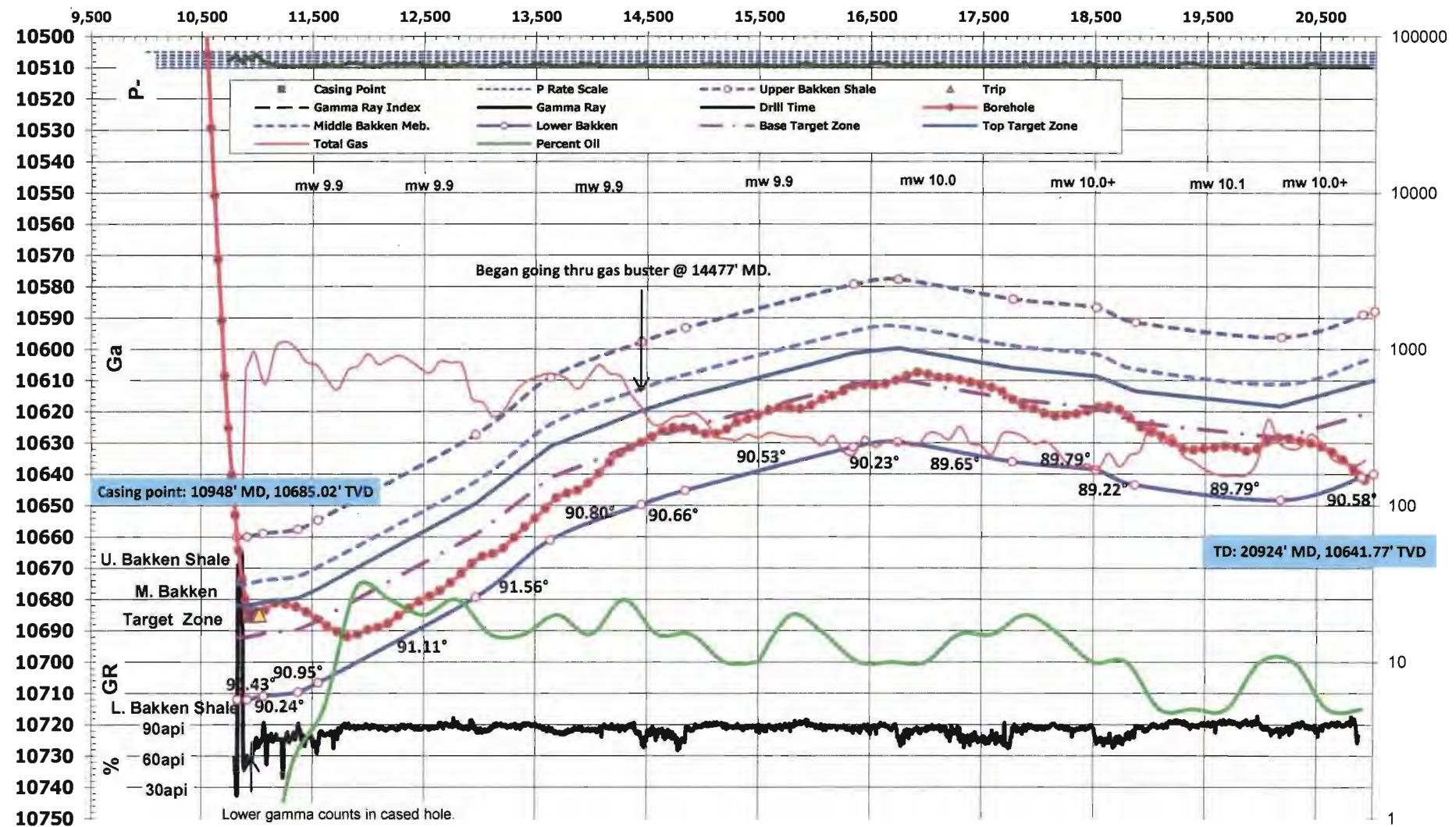
The oil shows at the possum belly for this well were between a trace to 30% of dark to light green to yellow to brownish/green oil. The oil was more green to yellow until the addition of envirotorque and then we saw more brownish/green oil in the possum belly.

## 4.2 Gas Shows

The average range of the background gas from the casing shoe to when we began going thru the gas buster at 14477' MD was from 350 units to 1125 units. After we began going thru the gas buster at 14477' MD, the average range of the background gas was from 150 units to 400 units. The highest background gas was when we drilled near the top of the target zone from 11100' MD to 11400' MD. The background gas was between 1000 units to 1125 units. A trip at 11024' MD produced 3090 units of trip gas. At TD, the bottoms up gas was 323 units. After going thru the gas buster, the gas flare was between 1'- 6' high. The mud weight for the lateral was between 9.9 to 10.1. A chart showing the cross section of the wellbore with the rop, gas, gamma ray, oil shows and mud weight data can be found in Figure 1.

Figure 1

Dahl Federal 2-15H North Leg Cross-Section  
S15, S10 & S3, T153N, R101W



## 5.0 WELL HISTORY

A summary of the daily progress of the well is listed below.

24 HR. FOOTAGE TALLY				
Day	Date	AM Depth	24 hr. Footage	Current 24 hr. Op.
1	3/11/2012	8254'		Basin Geologic Consulting was rigged up and began logging at 10:20am on 3/11/2012.
2	3/12/2012	8792'	538'	We tripped for a new bit and picked up the gamma tool at 8507' MD, we are currently drilling ahead in the Charles formation.
3	3/13/2012	9932'	1140'	Drilling ahead in the Mission Canyon formation.
4	3/14/2012	10260'	328'	Drill to KOP of 10260' MD, TOOH to pick up curve assembly, we are currently tripping back in the hole.
5	3/15/2012	10470'	210'	We finished tripping in the hole, trip gas was 220u, currently drilling the curve.
6	3/16/2012	10882'	412'	Drilling curve.
7	3/17/2012	11009'	127'	Drill to 11009' MD, TD curve, short trip gas prior to tripping out of hole was 4980u, we are currently TOOH.
8	3/18/2012	11009'	0'	We finished tripping out of the hole, we are currently running in 7" casing.
9	3/19/2012	11009'	0'	We were unable to get 7" casing to bottom, became stuck around 7740' MD, we laid down the 7" casing and picked up a reamer assembly, we are currently tripping in the hole with the reamer assembly.
10	3/20/2012	11009'	0'	We finished reaming the hole with the reamer assembly, the casing crew is now rigging up to run 7" casing.
11	3/21/2012	11009'	0'	We ran in 7" casing, we are now attempting to circulate.
12	3/22/2012	11009'	0'	We were unable to circulate, ran wireline to perforate casing, we are currently cementing.
13	3/23/2012	11009'	0'	Cementing operations, currently TIH.
14	3/24/2012	11009'	0'	Pressure testing casing and shoe.
15	3/25/2012	11009'	0'	Reaming/washing cement, TOOH.
16	3/26/2012	11009'	0'	Trip in hole to perforate casing.
17	3/27/2012	11009'	0'	Trip in hole with stinger, circulate and condition to get injection rate, TOOH.
18	3/28/2012	11009'	0'	TIH, rotary drilling out cement retainer, mill on cement retainer, mill on bridge plug.
19	3/29/2012	11024'	15'	TOOH, TIH, trip gas 2857u, rotary drill out CIBP and float shoe, reaming/washing to 11009' MD, drill to 11024' MD, TOOH to pick up the BHA for the lateral.
20	3/30/2012	11593'	569'	TIH, trip gas was 3090u, currently drilling ahead.
21	3/31/2012	12620'	1027'	Drilling ahead.
22	4/1/2012	14030'	1410'	Drilling ahead.
23	4/2/2012	15551'	1521'	Drilling ahead.

24	4/3/2012	16976'	1425'	Drilling ahead.
25	4/4/2012	18560'	1584'	Drilling ahead.
26	4/5/2012	19574'	1014'	Drilling ahead.
27	4/6/2012	20924'	1350'	TD well at 20924' MD at 3:15am CST 4/6/2012.

## 5.1 Critical Points

CRITICAL POINTS			
Data Point	MD (ft)	TVD (ft)	
Casing Point	10948'	10685.0'	
TD	20924'	10641.8'	
KOP	10260'	10241.9'	Reason for Trip
Trip 1	8507'	8493.2'	Trip for new bit and picked up the gamma ray tool.
Trip 2	10260'	10241.9'	KOP, pick up curve assembly.
Trip 3	11009'	10685.3'	End of curve, set 7" int. casing at 10948' MD.
Trip 4	11024'	10684.9'	Trip to pick up PDC bit and BHA to drill the lateral.

## 5.2 Mud Properties

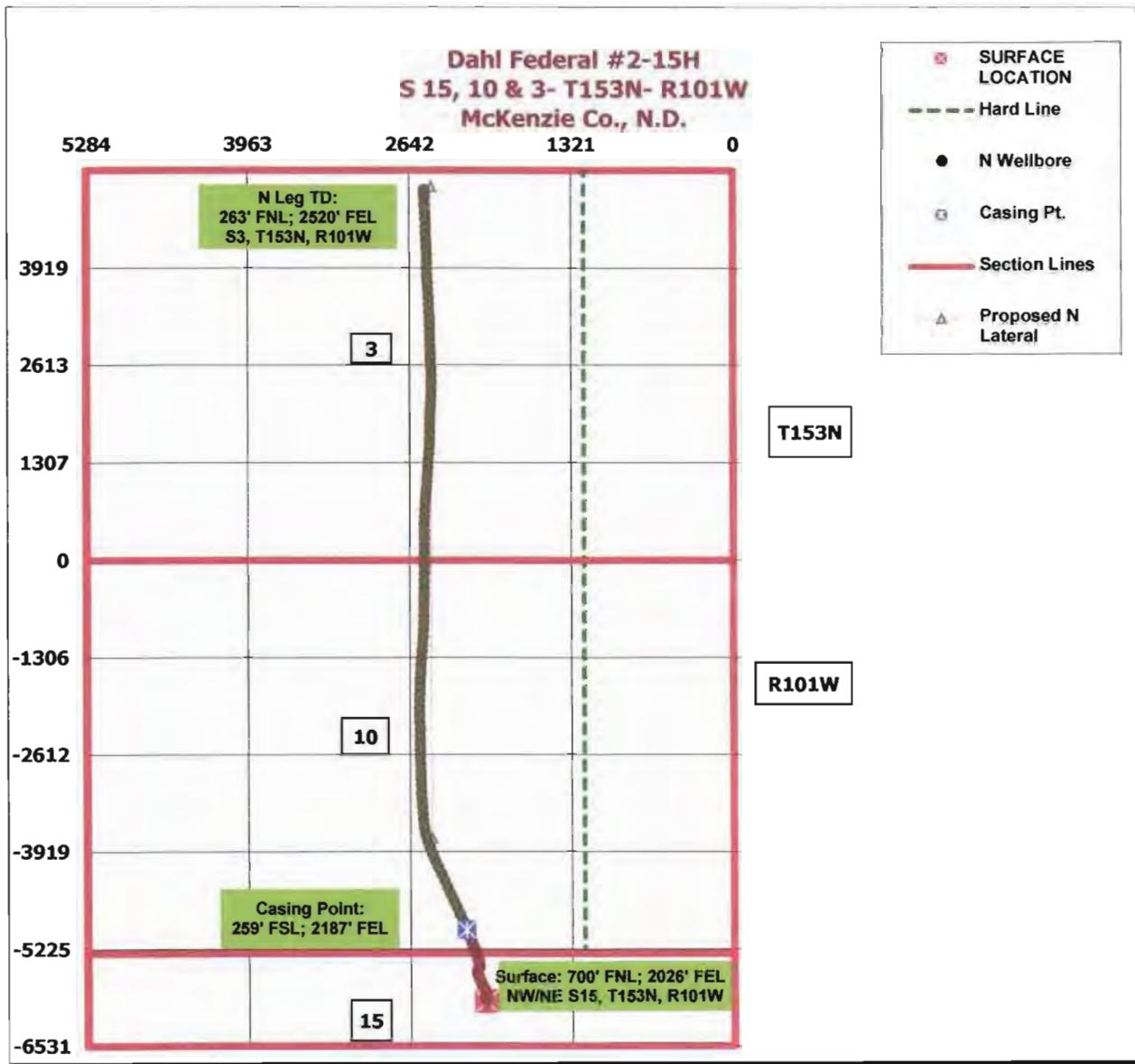
EVALUATE SHOWS		
MD (ft)	Mud Weight	% Oil @ Possum Belly
11000	9.9	0
11500	9.9	2
12000	9.9	30
12500	9.9	20
13000	9.9	25
13500	9.9	15
14000	9.9	15
14500	9.9	25
15000	9.9+	15
15500	9.9	10
16000	10.0	20
16500	10.0	10
17000	10.0	10
17500	10.0	15
18000	10.1	20
18500	10.1	10
19000	10.0	10
19500	10.1	5
20000	10.1	10

20500	10.0	10
20924	10.0+	5

## 6.0 WELLBORE

The Surface location is 700' FNL & 2026' FEL, NW/NE SEC 15, T153N, R101W, McKenzie County, North Dakota. The location of 7" intermediate casing is 259' FSL & 2187' FEL, SEC 10, T153N, R101W, McKenzie County, North Dakota. The actual bottom hole location at TD is 263' FNL & 2520' FEL, NW/NE SEC 3, T153N, R101W, McKenzie County, North Dakota. A chart showing the plat of the wellbore can be found in Figure 2.

**Figure 2**



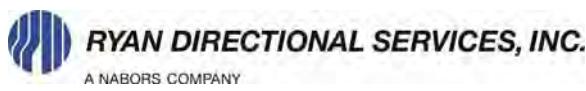
## **7.0 SUMMARY AND CONCLUSION**

The Dahl Federal 2-15H is a single lateral Middle Bakken well that spud from surface casing on March 7, 2012 and completed drilling on April 6, 2012. This well was drilled from surface casing to TD in 30 days. Currently the well is awaiting completion.

---

Joe Hallgren, well-site geologist  
Basin Geologic Consulting, Inc  
2213 North Main Court  
Williston, ND 58801





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

Tuesday, April 10, 2012

State of North Dakota

Subject: **Surveys**

Re: **SM Energy**  
**Dahl Federal 2-15H**  
**McKenzie, ND**

Enclosed, please find the original and one copy of the survey performed on the above-referenced well by Ryan Directional Services, Inc. Other information required by your office is as follows:

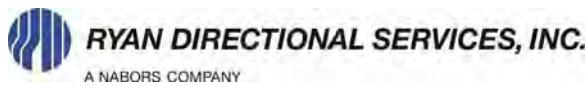
<b>Surveyor Name</b>	<b>Surveyor Title</b>	<b>Borehole Number</b>	<b>Start Depth</b>	<b>End Depth</b>	<b>Start Date</b>	<b>End Date</b>	<b>Type of Survey</b>	<b>TD Straight Line Projection</b>
Jenson, Bruce	Directional Driller	O.H.	2080'	20870'	03/07/12	04/16/12	MWD	20924'

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, April 10, 2012

State of North Dakota

Subject: **Survey Certification Letter**

Re: **SM Energy**  
**Dahl Federal 2-15H**  
**McKenzie, ND**

I, Bruce Jenson, certify that; I am employed by Ryan Directional Services, Inc.; that I did on the conduct or supervise the taking of the following MWD surveys:

on the day(s) of 3/7/2012 thru 4/16/2012 from a depth of 2080' MD to a depth of 20870' MD and Straight line projection to TD 20924' MD;

that the data is true, correct, complete, and within the limitations of the tool as set forth by Ryan Directional Services, 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 Federal 2-15H; in McKenzie, ND.

Bruce Jenson

---

**Bruce Jenson**  
Directional Driller  
Ryan Directional Services, Inc.



# Ryan Energy Technologies

## COMPLETION REPORT



**Company:** SM Energy Company  
**Field:** McKenzie Co., ND  
**Site:** Dahl Federal 2-15H  
**Well:** 2-15H  
**Wellpath:** OH

**Date:** 4/10/2012    **Time:** 09:17:54    **Page:** 1  
**Co-ordinate(NE) Reference:** Site: Dahl Federal 2-15H, True North  
**Vertical (TVD) Reference:** SITE 2072.0  
**Section (VS) Reference:** Well (0.00N,0.00E,356.86Azi)  
**Survey Calculation Method:** Minimum Curvature    **Db:** Sybase

**Field:** McKenzie Co., ND

**Map System:** US State Plane Coordinate System 1983  
**Geo Datum:** GRS 1980  
**Sys Datum:** Mean Sea Level

**Map Zone:** North Dakota, Northern Zone  
**Coordinate System:** Site Centre  
**Geomagnetic Model:** IGRF2010

**Site:** Dahl Federal 2-15H  
Sec. 15-T153N-R101W  
700' FNL & 2026' FEL

<b>Site Position:</b>	<b>From:</b> Geographic	<b>Northing:</b> 409878.61 ft	<b>Latitude:</b> 48 4 49.250 N
<b>Position Uncertainty:</b>		<b>Easting:</b> 1197372.78 ft	<b>Longitude:</b> 103 39 20.150 W
<b>Ground Level:</b>			<b>North Reference:</b> True
			<b>Grid Convergence:</b> -2.35 deg

**Well:** 2-15H

<b>Well Position:</b>	+N/S 0.00 ft	<b>Northing:</b> 409878.61 ft	<b>Latitude:</b> 48 4 49.250 N
	+E/-W 0.00 ft	<b>Easting:</b> 1197372.78 ft	<b>Longitude:</b> 103 39 20.150 W
<b>Position Uncertainty:</b>	0.00 ft		

<b>Wellpath:</b> OH	<b>Drilled From:</b> Surface		
<b>Current Datum:</b> SITE	<b>Tie-on Depth:</b> 0.00 ft		
<b>Magnetic Data:</b> 2/14/2012	<b>Above System Datum:</b> Mean Sea Level		
<b>Field Strength:</b> 56697 nT	<b>Declination:</b> 8.67 deg		
<b>Vertical Section:</b> Depth From (TVD)	<b>Mag Dip Angle:</b> 73.10 deg		
ft	+N/-S ft		
0.00	0.00	0.00	356.86

### Survey Program for Definitive Wellpath

**Date:** 4/6/2012    **Validated:** No  
**Actual From**    **To**  
ft                      ft

**Version:** 0  
**Toolcode**    **Tool Name**

2080.00 20924.00 Survey #1 (2080.00-20924.00) Ryan MWD

### 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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
2080.00	0.00	2080.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Ryan MWD
2184.00	0.60	2184.00	0.31	301.90	0.29	-0.46	0.54	301.90	0.58	Ryan MWD
2280.00	1.80	2279.98	2.00	335.30	1.92	-1.52	2.45	321.70	1.40	Ryan MWD
2373.00	3.30	2372.88	5.90	338.60	5.74	-3.11	6.53	331.59	1.62	Ryan MWD
2468.00	4.10	2467.68	11.84	346.50	11.59	-4.90	12.58	337.10	1.00	Ryan MWD
2563.00	4.10	2562.44	18.57	351.90	18.26	-6.17	19.27	341.33	0.41	Ryan MWD
2658.00	4.00	2657.20	25.26	358.10	24.93	-6.76	25.83	344.84	0.47	Ryan MWD
2753.00	4.10	2751.97	31.97	359.90	31.64	-6.87	32.37	347.74	0.17	Ryan MWD
2848.00	4.00	2846.73	38.62	7.20	38.32	-6.46	38.86	350.43	0.55	Ryan MWD
2943.00	3.90	2941.50	45.02	10.00	44.79	-5.49	45.12	353.02	0.23	Ryan MWD
3038.00	4.00	3036.28	51.41	8.70	51.25	-4.42	51.44	355.07	0.14	Ryan MWD
3133.00	3.90	3131.05	57.80	9.90	57.70	-3.37	57.80	356.66	0.14	Ryan MWD
3228.00	3.70	3225.84	63.92	11.00	63.90	-2.23	63.93	358.00	0.22	Ryan MWD
3323.00	3.50	3320.66	69.73	9.40	69.77	-1.17	69.78	359.04	0.24	Ryan MWD
3418.00	4.00	3415.45	75.85	3.00	75.94	-0.52	75.94	359.61	0.69	Ryan MWD
3513.00	3.80	3510.23	82.29	0.70	82.39	-0.31	82.39	359.78	0.27	Ryan MWD
3608.00	3.40	3605.05	88.20	7.10	88.34	0.08	88.34	0.05	0.60	Ryan MWD
3703.00	3.80	3699.86	94.09	348.50	94.22	-0.20	94.22	359.88	1.29	Ryan MWD
3798.00	3.70	3794.66	100.22	346.80	100.29	-1.53	100.30	359.13	0.16	Ryan MWD
3893.00	3.30	3889.48	105.94	347.60	105.94	-2.82	105.98	358.48	0.42	Ryan MWD
3988.00	3.80	3984.30	111.66	340.90	111.59	-4.43	111.67	357.72	0.68	Ryan MWD
4084.00	3.00	4080.13	117.17	344.30	117.01	-6.16	117.17	356.99	0.86	Ryan MWD



# Ryan Energy Technologies

## COMPLETION REPORT



**Company:** SM Energy Company  
**Field:** McKenzie Co., ND  
**Site:** Dahl Federal 2-15H  
**Well:** 2-15H  
**Wellpath:** OH

**Date:** 4/10/2012    **Time:** 09:17:54    **Page:** 2  
**Co-ordinate(NE) Reference:** Site: Dahl Federal 2-15H, True North  
**Vertical (TVD) Reference:** SITE 2072.0  
**Section (VS) Reference:** Well (0.00N,0.00E,356.86Azi)  
**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
4179.00	3.20	4174.99	122.16	341.60	121.92	-7.67	122.16	356.40	0.26	Ryan MWD
4274.00	3.40	4269.83	127.40	339.60	127.08	-9.48	127.43	355.73	0.24	Ryan MWD
4369.00	3.60	4364.66	133.02	346.00	132.61	-11.19	133.08	355.18	0.46	Ryan MWD
4464.00	4.00	4459.45	139.14	340.80	138.63	-13.00	139.24	354.64	0.56	Ryan MWD
4559.00	3.00	4554.27	144.60	333.50	143.99	-15.20	144.79	353.97	1.15	Ryan MWD
4654.00	3.10	4649.14	149.42	348.20	148.73	-16.83	149.68	353.54	0.83	Ryan MWD
4749.00	2.70	4744.01	154.14	343.50	153.39	-17.99	154.44	353.31	0.49	Ryan MWD
4844.00	3.10	4838.89	158.87	4.20	158.09	-18.44	159.17	353.35	1.17	Ryan MWD
4939.00	3.90	4933.72	164.64	353.80	163.87	-18.60	164.92	353.52	1.07	Ryan MWD
5034.00	4.00	5028.49	171.15	349.00	170.33	-19.58	171.45	353.44	0.36	Ryan MWD
5129.00	4.20	5123.25	177.87	348.30	176.99	-20.92	178.22	353.26	0.22	Ryan MWD
5224.00	3.00	5218.06	183.78	351.00	182.85	-22.01	184.17	353.13	1.28	Ryan MWD
5319.00	3.30	5312.92	188.87	339.60	187.87	-23.36	189.32	352.91	0.73	Ryan MWD
5414.00	3.30	5407.76	194.04	336.20	192.94	-25.41	194.60	352.50	0.21	Ryan MWD
5510.00	4.30	5503.55	200.10	342.00	198.89	-27.64	200.80	352.09	1.11	Ryan MWD
5605.00	4.00	5598.30	206.67	337.40	205.33	-30.01	207.51	351.68	0.47	Ryan MWD
5700.00	3.50	5693.10	212.52	337.10	211.06	-32.42	213.54	351.27	0.53	Ryan MWD
5795.00	4.80	5787.85	219.18	348.20	217.63	-34.36	220.32	351.03	1.60	Ryan MWD
5890.00	3.80	5882.58	226.21	347.20	224.59	-35.87	227.43	350.93	1.06	Ryan MWD
5985.00	3.00	5977.41	231.74	344.00	230.05	-37.25	233.04	350.80	0.87	Ryan MWD
6080.00	3.70	6072.25	237.13	342.30	235.36	-38.87	238.54	350.62	0.74	Ryan MWD
6174.00	4.00	6166.03	243.18	338.50	241.30	-40.99	244.75	350.36	0.42	Ryan MWD
6269.00	3.00	6260.86	248.70	339.80	246.71	-43.06	250.44	350.10	1.06	Ryan MWD
6364.00	3.70	6355.69	254.01	339.90	251.92	-44.98	255.91	349.88	0.74	Ryan MWD
6459.00	4.00	6450.48	260.20	346.40	258.02	-46.81	262.23	349.72	0.56	Ryan MWD
6554.00	3.90	6545.25	266.57	341.80	264.31	-48.60	268.74	349.58	0.35	Ryan MWD
6649.00	3.80	6640.04	272.69	339.00	270.32	-50.73	275.04	349.37	0.22	Ryan MWD
6744.00	4.00	6734.82	278.95	346.60	276.48	-52.63	281.45	349.22	0.58	Ryan MWD
6839.00	4.20	6829.58	285.67	351.90	283.15	-53.89	288.23	349.22	0.45	Ryan MWD
6934.00	4.70	6924.29	293.02	351.70	290.45	-54.94	295.60	349.29	0.53	Ryan MWD
7029.00	4.80	7018.96	300.84	350.00	298.21	-56.19	303.46	349.33	0.18	Ryan MWD
7124.00	4.50	7113.65	308.38	341.40	305.66	-58.07	311.12	349.24	0.80	Ryan MWD
7219.00	4.30	7208.37	315.41	341.70	312.57	-60.38	318.35	349.07	0.21	Ryan MWD
7314.00	4.50	7303.09	322.42	340.30	319.46	-62.75	325.57	348.89	0.24	Ryan MWD
7410.00	4.00	7398.83	329.28	343.20	326.21	-64.99	332.62	348.73	0.57	Ryan MWD
7505.00	3.70	7493.61	335.49	344.00	332.33	-66.79	338.98	348.64	0.32	Ryan MWD
7600.00	4.60	7588.36	342.10	339.10	338.84	-69.00	345.79	348.49	1.02	Ryan MWD
7695.00	4.80	7683.04	349.61	344.40	346.22	-71.42	353.51	348.34	0.50	Ryan MWD
7790.00	4.30	7777.75	357.01	347.40	353.53	-73.27	361.04	348.29	0.58	Ryan MWD
7885.00	3.10	7872.55	363.08	352.10	359.55	-74.40	367.16	348.31	1.30	Ryan MWD
7980.00	3.30	7967.40	368.37	352.50	364.80	-75.11	372.45	348.37	0.21	Ryan MWD
8075.00	4.00	8062.20	374.40	354.50	370.81	-75.78	378.48	348.45	0.75	Ryan MWD
8265.00	3.90	8251.75	387.48	358.60	383.87	-76.58	391.43	348.72	0.16	Ryan MWD
8360.00	4.00	8346.53	394.02	0.10	390.41	-76.65	397.86	348.89	0.15	Ryan MWD
8455.00	4.00	8441.30	400.59	6.70	397.02	-76.26	404.27	349.13	0.48	Ryan MWD
8553.00	4.30	8539.04	407.56	8.70	404.04	-75.30	411.00	349.44	0.34	Ryan MWD
8648.00	4.50	8633.76	414.68	9.70	411.24	-74.14	417.87	349.78	0.23	Ryan MWD
8743.00	4.40	8728.47	421.81	13.10	418.46	-72.68	424.72	350.15	0.30	Ryan MWD
8838.00	4.50	8823.19	428.90	12.20	425.65	-71.07	431.54	350.52	0.13	Ryan MWD
8933.00	4.80	8917.87	436.24	16.30	433.11	-69.17	438.60	350.93	0.47	Ryan MWD
9028.00	4.80	9012.54	443.74	16.50	440.73	-66.92	445.79	351.37	0.02	Ryan MWD
9123.00	4.30	9107.24	450.79	18.50	447.92	-64.66	452.57	351.79	0.55	Ryan MWD



# Ryan Energy Technologies

## COMPLETION REPORT



**Company:** SM Energy Company  
**Field:** McKenzie Co., ND  
**Site:** Dahl Federal 2-15H  
**Well:** 2-15H  
**Wellpath:** OH

**Date:** 4/10/2012    **Time:** 09:17:54    **Page:** 3  
**Co-ordinate(NE) Reference:** Site: Dahl Federal 2-15H, True North  
**Vertical (TVD) Reference:** SITE 2072.0  
**Section (VS) Reference:** Well (0.00N,0.00E,356.86Azi)  
**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
9218.00	3.70	9202.01	456.88	21.90	454.14	-62.39	458.41	352.18	0.68	Ryan MWD
9313.00	3.20	9296.84	462.08	20.90	459.47	-60.30	463.41	352.52	0.53	Ryan MWD
9408.00	2.80	9391.71	466.64	19.50	464.13	-58.58	467.81	352.81	0.43	Ryan MWD
9503.00	2.30	9486.61	470.51	21.80	468.09	-57.10	471.56	353.05	0.54	Ryan MWD
9598.00	2.80	9581.52	474.56	357.20	472.17	-56.50	475.54	353.18	1.25	Ryan MWD
9693.00	3.80	9676.36	480.01	350.40	477.60	-57.14	481.00	353.18	1.13	Ryan MWD
9788.00	4.40	9771.12	486.75	349.30	484.28	-58.34	487.78	353.13	0.64	Ryan MWD
9883.00	4.70	9865.82	494.22	349.30	491.69	-59.74	495.30	353.07	0.32	Ryan MWD
9978.00	4.90	9960.49	502.12	351.80	499.53	-61.04	503.24	353.03	0.30	Ryan MWD
10073.00	3.90	10055.21	509.39	353.70	506.75	-61.98	510.53	353.03	1.06	Ryan MWD
10168.00	3.40	10150.01	515.43	355.50	512.77	-62.55	516.57	353.04	0.54	Ryan MWD
10211.00	2.90	10192.95	517.79	355.50	515.13	-62.74	518.94	353.06	1.16	Ryan MWD
10266.00	4.90	10247.82	521.51	350.00	518.83	-63.25	522.67	353.05	3.70	Ryan MWD
10298.00	8.90	10279.58	525.34	353.30	522.64	-63.78	526.51	353.04	12.56	Ryan MWD
10329.00	13.00	10310.01	531.22	352.90	528.48	-64.49	532.40	353.04	13.23	Ryan MWD
10361.00	17.50	10340.87	539.60	351.10	536.81	-65.68	540.81	353.02	14.14	Ryan MWD
10393.00	21.80	10371.00	550.29	349.80	547.42	-67.48	551.56	352.97	13.51	Ryan MWD
10424.00	25.90	10399.35	562.72	349.70	559.75	-69.71	564.07	352.90	13.23	Ryan MWD
10456.00	29.40	10427.69	577.48	351.20	574.39	-72.16	578.91	352.84	11.15	Ryan MWD
10488.00	32.60	10455.12	593.88	351.40	590.68	-74.65	595.38	352.80	10.01	Ryan MWD
10519.00	36.50	10480.65	611.36	350.60	608.04	-77.41	612.95	352.74	12.67	Ryan MWD
10551.00	40.60	10505.67	631.17	349.90	627.69	-80.79	632.87	352.67	12.88	Ryan MWD
10583.00	44.40	10529.26	652.61	349.30	648.95	-84.70	654.45	352.56	11.94	Ryan MWD
10614.00	48.10	10550.69	674.76	347.80	670.89	-89.15	676.79	352.43	12.44	Ryan MWD
10646.00	51.20	10571.41	698.80	346.70	694.67	-94.54	701.07	352.25	10.04	Ryan MWD
10678.00	54.20	10590.79	723.84	346.40	719.42	-100.46	726.40	352.05	9.40	Ryan MWD
10709.00	56.50	10608.42	748.90	346.10	744.19	-106.52	751.78	351.85	7.46	Ryan MWD
10741.00	60.70	10625.09	775.73	346.00	770.69	-113.10	778.95	351.65	13.13	Ryan MWD
10773.00	63.40	10640.08	803.52	346.70	798.16	-119.77	807.10	351.47	8.66	Ryan MWD
10804.00	67.90	10652.86	831.27	345.80	825.59	-126.49	835.22	351.29	14.75	Ryan MWD
10835.00	70.80	10663.79	859.69	344.90	853.65	-133.82	864.07	351.09	9.74	Ryan MWD
10867.00	75.70	10673.01	889.70	345.60	883.27	-141.62	894.55	350.89	15.45	Ryan MWD
10899.00	80.10	10679.72	920.37	345.60	913.57	-149.40	925.71	350.71	13.75	Ryan MWD
10931.00	84.90	10683.90	951.45	345.10	944.26	-157.42	957.29	350.53	15.08	Ryan MWD
10963.00	88.80	10685.65	982.77	345.90	975.18	-165.42	989.11	350.37	12.44	Ryan MWD
10984.00	90.20	10685.84	1003.38	345.80	995.54	-170.55	1010.05	350.28	6.68	Ryan MWD
11076.00	93.00	10683.27	1093.64	345.90	1084.71	-193.03	1101.75	349.91	3.05	Ryan MWD
11169.00	89.90	10680.92	1184.75	344.90	1174.67	-216.47	1194.44	349.56	3.50	Ryan MWD
11261.00	89.70	10681.24	1274.75	344.90	1263.49	-240.43	1286.16	349.23	0.22	Ryan MWD
11353.00	89.20	10682.12	1364.56	343.80	1352.07	-265.25	1377.84	348.90	1.31	Ryan MWD
11446.00	88.80	10683.74	1455.30	344.70	1441.57	-290.49	1470.54	348.61	1.06	Ryan MWD
11539.00	88.30	10686.10	1546.28	345.30	1531.37	-314.55	1563.34	348.39	0.84	Ryan MWD
11631.00	89.20	10688.10	1636.01	343.10	1619.86	-339.59	1655.08	348.16	2.58	Ryan MWD
11723.00	88.30	10690.11	1725.33	343.00	1707.85	-366.41	1746.71	347.89	0.98	Ryan MWD
11816.00	89.80	10691.65	1815.82	344.10	1797.02	-392.74	1839.44	347.67	2.00	Ryan MWD
11908.00	91.10	10690.93	1905.83	345.80	1885.86	-416.63	1931.33	347.54	2.33	Ryan MWD
12000.00	90.80	10689.40	1996.06	345.50	1974.98	-439.42	2023.27	347.46	0.46	Ryan MWD
12092.00	90.10	10688.68	2086.31	345.90	2064.12	-462.15	2115.23	347.38	0.88	Ryan MWD
12185.00	91.40	10687.46	2178.23	350.60	2155.14	-481.08	2208.18	347.42	5.24	Ryan MWD
12277.00	91.70	10684.98	2269.71	351.40	2245.97	-495.47	2299.97	347.56	0.93	Ryan MWD
12369.00	91.20	10682.65	2361.47	354.90	2337.27	-506.43	2391.51	347.77	3.84	Ryan MWD
12461.00	91.60	10680.40	2453.43	357.90	2429.05	-512.21	2482.47	348.09	3.29	Ryan MWD
12553.00	90.40	10678.79	2545.40	358.00	2520.98	-515.50	2573.14	348.44	1.31	Ryan MWD



# Ryan Energy Technologies

## COMPLETION REPORT



**Company:** SM Energy Company  
**Field:** McKenzie Co., ND  
**Site:** Dahl Federal 2-15H  
**Well:** 2-15H  
**Wellpath:** OH

**Date:** 4/10/2012    **Time:** 09:17:54    **Page:** 4  
**Co-ordinate(NE) Reference:** Site: Dahl Federal 2-15H, True North  
**Vertical (TVD) Reference:** SITE 2072.0  
**Section (VS) Reference:** Well (0.00N,0.00E,356.86Azi)  
**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
12645.00	91.80	10677.03	2637.37	357.20	2612.88	-519.35	2663.99	348.76	1.75	Ryan MWD
12740.00	91.30	10674.46	2732.34	356.40	2707.69	-524.65	2758.05	349.03	0.99	Ryan MWD
12835.00	92.20	10671.56	2827.28	358.80	2802.56	-528.63	2851.98	349.32	2.70	Ryan MWD
12931.00	91.80	10668.21	2923.14	359.40	2898.49	-530.13	2946.57	349.64	0.75	Ryan MWD
13026.00	90.90	10665.97	3018.03	359.20	2993.45	-531.29	3040.23	349.94	0.97	Ryan MWD
13121.00	90.10	10665.14	3112.94	359.40	3088.44	-532.45	3134.00	350.22	0.87	Ryan MWD
13216.00	92.00	10663.40	3207.86	358.50	3183.40	-534.20	3227.91	350.47	2.21	Ryan MWD
13311.00	92.10	10660.00	3302.71	359.90	3278.33	-535.52	3321.78	350.72	1.48	Ryan MWD
13406.00	91.90	10656.68	3397.56	359.10	3373.27	-536.35	3415.64	350.97	0.87	Ryan MWD
13501.00	91.50	10653.86	3492.39	0.40	3468.22	-536.76	3509.51	351.20	1.43	Ryan MWD
13596.00	92.30	10650.72	3587.12	1.00	3563.16	-535.60	3603.19	351.45	1.05	Ryan MWD
13691.00	91.80	10647.32	3681.97	357.50	3658.08	-536.85	3697.26	351.65	3.72	Ryan MWD
13786.00	90.00	10645.82	3776.93	358.60	3753.01	-540.08	3791.67	351.81	2.22	Ryan MWD
13881.00	91.10	10644.91	3871.84	359.90	3847.99	-541.32	3885.88	351.99	1.79	Ryan MWD
13976.00	91.60	10642.67	3966.69	359.60	3942.96	-541.74	3980.00	352.18	0.61	Ryan MWD
14071.00	92.30	10639.44	4061.48	0.60	4037.90	-541.57	4074.06	352.36	1.28	Ryan MWD
14166.00	92.00	10635.88	4156.13	2.00	4132.81	-539.42	4167.86	352.56	1.51	Ryan MWD
14261.00	91.40	10633.06	4250.76	1.20	4227.73	-536.77	4261.67	352.76	1.05	Ryan MWD
14356.00	90.90	10631.15	4345.51	0.60	4322.70	-535.27	4355.71	352.94	0.82	Ryan MWD
14451.00	91.00	10629.58	4440.14	2.90	4417.64	-532.37	4449.60	353.13	2.42	Ryan MWD
14546.00	91.20	10627.75	4534.64	2.40	4512.52	-527.98	4543.30	353.33	0.57	Ryan MWD
14641.00	90.90	10626.01	4629.19	2.30	4607.42	-524.09	4637.13	353.51	0.33	Ryan MWD
14736.00	90.40	10624.93	4723.70	3.00	4702.31	-519.70	4730.94	353.69	0.91	Ryan MWD
14831.00	89.70	10624.85	4818.17	2.80	4797.19	-514.89	4824.74	353.87	0.77	Ryan MWD
14926.00	89.10	10625.85	4912.66	2.80	4892.07	-510.25	4918.61	354.05	0.63	Ryan MWD
15021.00	89.70	10626.84	5007.25	1.50	4987.00	-506.68	5012.67	354.20	1.51	Ryan MWD
15116.00	90.30	10626.84	5101.93	1.50	5081.96	-504.20	5106.91	354.33	0.63	Ryan MWD
15212.00	91.50	10625.33	5197.75	359.00	5177.94	-503.78	5202.39	354.44	2.89	Ryan MWD
15360.00	91.10	10621.97	5345.48	1.00	5325.89	-503.78	5349.67	354.60	1.38	Ryan MWD
15402.00	90.20	10621.50	5387.37	0.70	5367.89	-503.16	5391.42	354.65	2.26	Ryan MWD
15497.00	91.10	10620.42	5482.17	0.30	5462.88	-502.33	5485.92	354.75	1.04	Ryan MWD
15592.00	90.90	10618.76	5576.97	0.60	5557.86	-501.58	5580.45	354.84	0.38	Ryan MWD
15687.00	90.20	10617.85	5671.75	1.00	5652.84	-500.25	5674.94	354.94	0.85	Ryan MWD
15782.00	89.60	10618.02	5766.48	1.30	5747.82	-498.35	5769.39	355.04	0.71	Ryan MWD
15877.00	90.10	10618.27	5861.36	357.70	5842.80	-499.18	5864.09	355.12	3.83	Ryan MWD
15972.00	91.30	10617.10	5956.26	0.70	5937.78	-500.50	5958.83	355.18	3.40	Ryan MWD
16067.00	91.00	10615.20	6051.07	359.90	6032.75	-500.01	6053.44	355.26	0.90	Ryan MWD
16162.00	90.40	10614.04	6145.92	0.10	6127.75	-500.01	6148.11	355.34	0.67	Ryan MWD
16257.00	91.30	10612.63	6240.77	359.90	6222.74	-500.01	6242.79	355.41	0.97	Ryan MWD
16352.00	90.70	10610.97	6335.58	0.80	6317.72	-499.43	6337.43	355.48	1.14	Ryan MWD
16447.00	89.90	10610.47	6430.38	0.30	6412.71	-498.51	6432.06	355.55	0.99	Ryan MWD
16542.00	89.70	10610.80	6525.15	1.40	6507.70	-497.10	6526.66	355.63	1.18	Ryan MWD
16637.00	90.90	10610.31	6619.81	2.00	6602.65	-494.29	6621.13	355.72	1.41	Ryan MWD
16732.00	90.60	10609.06	6714.44	1.70	6697.60	-491.22	6715.58	355.81	0.45	Ryan MWD
16827.00	91.00	10607.74	6808.95	3.50	6792.48	-486.91	6809.91	355.90	1.94	Ryan MWD
16922.00	90.40	10606.58	6903.28	3.80	6887.28	-480.86	6904.05	356.01	0.71	Ryan MWD
17017.00	88.80	10607.24	6997.73	2.10	6982.15	-475.97	6998.35	356.10	2.46	Ryan MWD
17112.00	90.00	10608.23	7092.27	2.80	7077.05	-471.91	7092.77	356.19	1.46	Ryan MWD
17207.00	89.80	10608.40	7186.91	0.90	7172.00	-468.85	7187.31	356.26	2.01	Ryan MWD
17302.00	89.50	10608.98	7281.59	2.20	7266.96	-466.28	7281.91	356.33	1.40	Ryan MWD
17397.00	89.50	10609.81	7376.12	2.90	7361.86	-462.05	7376.35	356.41	0.74	Ryan MWD
17492.00	89.50	10610.64	7470.59	2.90	7456.74	-457.24	7470.74	356.49	0.00	Ryan MWD



# Ryan Energy Technologies

## COMPLETION REPORT



**Company:** SM Energy Company  
**Field:** McKenzie Co., ND  
**Site:** Dahl Federal 2-15H  
**Well:** 2-15H  
**Wellpath:** OH

**Date:** 4/10/2012    **Time:** 09:17:54    **Page:** 5  
**Co-ordinate(NE) Reference:** Site: Dahl Federal 2-15H, True North  
**Vertical (TVD) Reference:** SITE 2072.0  
**Section (VS) Reference:** Well (0.00N,0.00E,356.86Azi)  
**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
17587.00	89.60	10611.38	7565.22	0.80	7551.68	-454.18	7565.33	356.56	2.21	Ryan MWD
17682.00	88.80	10612.71	7660.00	0.50	7646.66	-453.10	7660.08	356.61	0.90	Ryan MWD
17777.00	88.10	10615.28	7754.77	0.50	7741.63	-452.27	7754.82	356.66	0.74	Ryan MWD
17872.00	89.50	10617.27	7849.51	1.30	7836.59	-450.78	7849.54	356.71	1.70	Ryan MWD
17967.00	89.30	10618.26	7944.22	1.40	7931.56	-448.54	7944.23	356.76	0.24	Ryan MWD
18062.00	89.00	10619.67	8038.84	2.40	8026.49	-445.39	8038.84	356.82	1.10	Ryan MWD
18157.00	89.80	10620.67	8133.46	1.50	8121.43	-442.16	8133.46	356.88	1.27	Ryan MWD
18252.00	90.70	10620.25	8228.21	0.50	8216.41	-440.50	8228.21	356.93	1.42	Ryan MWD
18347.00	89.80	10619.84	8322.99	0.90	8311.41	-439.34	8323.01	356.97	1.04	Ryan MWD
18443.00	91.20	10619.00	8418.87	358.30	8407.39	-440.01	8418.89	357.00	3.08	Ryan MWD
18538.00	90.40	10617.68	8513.79	359.70	8502.36	-441.67	8513.83	357.03	1.70	Ryan MWD
18633.00	89.90	10617.43	8608.74	357.80	8597.33	-443.74	8608.78	357.05	2.07	Ryan MWD
18728.00	88.80	10618.50	8703.71	358.20	8692.27	-447.06	8703.76	357.06	1.23	Ryan MWD
18823.00	87.90	10621.24	8798.64	358.40	8787.19	-449.87	8798.69	357.07	0.97	Ryan MWD
18918.00	88.70	10624.06	8893.53	359.40	8882.12	-451.70	8893.60	357.09	1.35	Ryan MWD
19013.00	89.40	10625.63	8988.38	0.50	8977.11	-451.78	8988.47	357.12	1.37	Ryan MWD
19108.00	89.10	10626.88	9083.23	359.40	9072.10	-451.86	9083.35	357.15	1.20	Ryan MWD
19203.00	88.40	10628.95	9178.17	357.60	9167.04	-454.35	9178.29	357.16	2.03	Ryan MWD
19298.00	89.10	10631.02	9273.13	358.40	9261.96	-457.66	9273.26	357.17	1.12	Ryan MWD
19393.00	90.50	10631.35	9368.07	359.20	9356.93	-459.65	9368.22	357.19	1.70	Ryan MWD
19488.00	90.00	10630.94	9463.01	358.30	9451.91	-461.72	9463.18	357.20	1.08	Ryan MWD
19583.00	90.30	10630.69	9558.00	357.60	9546.85	-465.12	9558.17	357.21	0.80	Ryan MWD
19678.00	90.30	10630.19	9652.98	358.00	9641.78	-468.77	9653.16	357.22	0.42	Ryan MWD
19773.00	89.10	10630.69	9747.97	357.70	9736.71	-472.33	9748.16	357.22	1.30	Ryan MWD
19868.00	89.60	10631.77	9842.92	359.20	9831.66	-474.90	9843.13	357.23	1.66	Ryan MWD
19963.00	91.40	10630.94	9937.80	0.10	9926.65	-475.48	9938.03	357.26	2.12	Ryan MWD
20058.00	91.30	10628.70	10032.67	358.90	10021.62	-476.31	10032.93	357.28	1.27	Ryan MWD
20153.00	90.20	10627.46	10127.61	358.70	10116.59	-478.30	10127.89	357.29	1.18	Ryan MWD
20248.00	89.60	10627.62	10222.57	358.10	10211.55	-480.95	10222.87	357.30	0.89	Ryan MWD
20344.00	89.50	10628.38	10318.54	358.60	10307.51	-483.72	10318.85	357.31	0.53	Ryan MWD
20439.00	89.50	10629.21	10413.47	359.20	10402.49	-485.54	10413.81	357.33	0.63	Ryan MWD
20534.00	89.20	10630.28	10508.41	358.50	10497.46	-487.45	10508.77	357.34	0.80	Ryan MWD
20629.00	88.70	10632.02	10603.36	358.00	10592.40	-490.35	10603.74	357.35	0.74	Ryan MWD
20724.00	88.30	10634.51	10698.31	358.30	10687.32	-493.41	10698.70	357.36	0.53	Ryan MWD
20819.00	88.00	10638.67	10754.13	259.30	10739.66	-558.51	10754.18	357.02	104.14	Ryan MWD
20870.00	88.20	10640.99	10784.45	0.00	10768.15	-592.87	10784.45	356.85	197.30	Ryan MWD
20924.00	88.20	10642.68	10838.35	0.00	10822.12	-592.87	10838.35	356.86	0.00	Projection



## 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.  
**21796**



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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date <b>March 27, 2012</b>
<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 Progress	<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	<b>Request to resume drilling to TD</b>

Well Name and Number  
**Dahl Federal 2-15H**

Footages	Qtr-Qtr	Section	Township	Range
700 F N L	2026 F E L	NWNE	15	153 N 101 W
Field <b>BAKER</b>	Pool <b>BAKKEN</b>	County <b>MCKENZIE</b>		

### 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

Follow up to our sundry of 3-21-12: SM Energy requests approval to resume drilling the lateral to TD where a 4-1/2" liner with swell packers will then be run. With the 7" casing at TD, no circulation was established. The 7" was perforated in the Carrington at 10,798' - 10,800' MD (10,650' TVD) with 8 holes. Circulation was established. The 7" Csg was cemented with 167 sx in the first stage and 689 sx of total cement in the second stage putting cmt 500' over the top of the Dakota. The DV was drilled out at 9336' and the cmt across the perfs at 10,798' was drilled out. Csg was pressure tested to 500 psi. The float collar at 10,866' was drilled out and csg cleaned out to the float shoe at 10,948'. A CIBP was run in and set above the shoe at 10,943'. The bottom shoe jt was then perforated at 10,938'-10,936', 10,934'-10,932', 10,930'-10,928'. A CICR was set at 10,902' whereby a cmt squeeze was attempted into the perforations at 10,938' - 10,928', however no injection rate into the perfs was able to be established with a pressure applied of 1.1 psi/ft (6500 psi surface pressure). At this point SM Energy requests approval to drill out the CICR, CIBP and the float shoe. The 6' lateral will be drilled from 11,009' to an estimated TD of 21,015'. A 4-1/2" liner will be run with 21 swell packers. Dual swell packers will be run at approximately 11,040' (348' inside the 1280 spacing unit) with the first frac port sleeve at approximately 11,275'.

\*SM Energy must request a hearing per NDAC 43-02-03-18.1. SM Energy must accept all liability associated with the above procedure and isolation approval is contingent upon a decision rendered by the Commission at a hearing. Cannot frac until after a hearing and Commission decision.

Company <b>SM ENERGY COMPANY</b>	Telephone Number <b>406-869-8716</b>	
Address <b>P.O. BOX 7168</b>		
City <b>BILLINGS</b>	State <b>MT</b>	Zip Code <b>59103</b>
Signature <i>Randy Carlson</i>	Printed Name <b>RANDY CARLSON</b>	
Title <b>DRILLING MANAGER</b>	Date <b>March 27, 2012</b>	

### FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received <i>X</i>	<input type="checkbox"/> Approved
Date <b>3/27/12</b>	
By <i>Lori L. Hansen</i>	
Title <b>Mineral Resources Permit Manager</b>	



## 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.  
21796

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 <b>March 25, 2012</b>
<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	<b>Drilling Progress</b>

Well Name and Number  
**Dahl Federal 2-15H**

Footages <b>700 F N L 2026 F E L</b>	Qlr-Qtr <b>NWNE</b>	Section <b>15</b>	Township <b>153 N</b>	Range <b>101 W</b>
Field <b>Baker</b>	Pool <b>Bakken</b>	County <b>McKenzie</b>		

### 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 <b>P. O. Box 2396</b>	City <b>Williston</b>	State <b>ND</b>	Zip Code <b>58802</b>
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### DETAILS OF WORK

Drilled the 8 3/4" curve from 10,260' - 11,009', then ran 7" 29 - 32# HCL-80 casing to 7,740'. The hole was tight, so we pulled the casing and reamed the tight spots in the Dakota upper salts and the Charles. Ran the 7" 29 - 32# HCL-80 casing in to 10,956'. Unable to circulate casing. Perforated the 7" 29# casing from 10,798' - 10,800' with eight .25" holes and cemented the first stage with 167 sks of cement. Cemented the second stage with 689 sks of cement. Pressure tested the casing slips, packoff, BOP, blind rams and pipe rams and valves to 5000#, annular to 2500# and casing to 1500#. Drilled out the cement across the perfs at 10,798' - 10,800' and pressure tested the casing to 500#.

Company <b>SM Energy Company</b>	Telephone Number <b>(406) 245-6248</b>	
Address <b>P. O. Box 7168</b>		
City <b>Billings</b>	State <b>MT</b>	Zip Code <b>59103-7168</b>
Signature 	Printed Name <b>Joy Torgerson</b>	
Title <b>Engineering Tech</b>	Date <b>March 25, 2012</b>	
Email Address <b>jtorgeron@sm-energy.com</b>		

FOR STATE USE ONLY	
<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <b>3/27/12</b>	
By 	
Title <b>Mineral Resources Permit Manager</b>	



## 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.  
**21796**

*[Handwritten signature]*

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 <b>March 14, 2012</b>	<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	<b>Drilling Progress</b>

Well Name and Number  
**Dahl Federal 2-15H**

Footages <b>700 F N L 2026 F E L</b>	Qtr-Qtr <b>NWNE</b>	Section <b>15</b>	Township <b>153 N</b>	Range <b>101 W</b>
Field <b>Baker</b>	Pool <b>Bakken</b>		County <b>McKenzie</b>	

### 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 <b>P. O. Box 2396</b>	City <b>Williston</b>	State <b>ND</b>	Zip Code <b>58802</b>
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### DETAILS OF WORK

Drilling operations resumed at the Dahl Federal 2-15H on March 7, 2012. Drilled out the surface casing cement and shoe, then drilled the 8 3/4" vertical hole from 2,080' - 10,260' KOP.

Company <b>SM Energy Company</b>	Telephone Number <b>(406) 245-6248</b>	
Address <b>P. O. Box 7168</b>		
City <b>Billings</b>	State <b>MT</b>	Zip Code <b>59103-7168</b>
Signature <i>Joy Torgerson</i>	Printed Name <b>Joy Torgerson</b>	
Title <b>Engineering Tech</b>	Date <b>March 14, 2012</b>	
Email Address <b>jtorgeron@sm-energy.com</b>		

### FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <i>March 22, 2012</i>	
By <i>Dan M. McElroy</i>	
Title <b>PETROLEUM ENGINEER</b>	



## 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.  
**21796**



PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date <b>March 21, 2012</b>
<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 checked="" type="checkbox"/> Other	<b>Request to perforate pipe.</b>

Well Name and Number

**Dahl Federal 2-15H**

Footages	Qtr-Qtr	Section	Township	Range
700 F N L 2026 F E L	NWNE	15	153 N	101 W
Field <b>Baker</b>	Pool <b>Bakken</b>	County <b>McKenzie</b>		

### 24-HOUR PRODUCTION RATE

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

Name of Contractor(s)

Address	City	State	Zip Code
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### DETAILS OF WORK

SM ENERGY CO. REQUESTS APPROVAL TO PERFORATE THE 7" CASING FOR THE PURPOSE OF ESTABLISHING CIRCULATION IN ORDER TO CEMENT THE 7" CASING. THE 8-3/4" INTERMEDIATE HOLE WAS DRILLED TO A TD OF 11,009' IN THE M. BAKKEN. 7" CASING WAS RUN IN THE HOLE TO A DEPTH OF 10,956' AT WHICH TIME IT IS BELIEVED THAT THE U. BAKKEN SHALE HAS BECOME UNSTABLE AND STUCK THE CASING. ATTEMPTS HAVE BEEN MADE TO FREE THE CASING AND AS MUCH AS 2000 PSI OF PRESSURE HAS BEEN APPLIED, BUT CIRCULATION IS UNABLE TO BE ESTABLISHED. WE REQUEST THE APPROVAL TO PERFORATE THE 7" CASING @ 10,791' MD (10,647' TVD) IN THE CARRINGTON FORMATION ABOVE THE U. BAKKEN SHALE. FIELD EXPERIENCE HAS PROVEN THAT THIS IS THE LOCATION WITH THE HIGHEST PROBABILITY OF ESTABLISHING CIRCULATION. BECAUSE THE POINT OF PERFORATION DOES NOT SATISFY THE 200' SETBACK REQUIREMENT FOR CEMENT ISOLATION, UPON COMPLETION OF THE PRIMARY CEMENTING JOB, SM ENERGY CO. WILL SQUEEZE CEMENT AROUND THE CASING SHOE. WE WILL ACCOMPLISH THIS AS FOLLOWS: DRILL OUT THE FLOAT EQUIPMENT, SET A COMPOSITE BRIDGE PLUG @ APPROXIMATELY 10,950' MD, RUN TUBING CONVEYED PERFORATING GUNS TO A DEPTH OF 10,940' MD AND PERFORATE SQUEEZE HOLES. SET A COMPOSITE CEMENT RETAINER @ 10,925' AND RUN IN WITH DRILLPIPE AND PUMP AND SQUEEZE 44 SACKS OF CEMENT AROUND CASING SHOE. THE PERFORATION HOLES @ 10,940' MD WILL BE 252' NORTH OF THE SOUTH LINE OF SEC. 10 - T153N - R101W, THEREFORE SATISFYING THE 200' SETBACK REQUIREMENT OF CEMENT ISOLATION

Company **SM ENERGY COMPANY** \*SM Energy may proceed ahead at your own risk. Hardline & Pool isolation approval is contingent upon NDIC verification of CBL. | 406-869-8749

Address <b>P.O. BOX 7168</b>	State <b>MT</b>	Zip Code <b>59103</b>
City <b>BILLINGS</b>	Printed Name <b>BEN SMITH</b>	
Signature 	Title <b>SR. DRILLING ENGINEER</b>	
Date <b>March 21, 2012</b>		

FOR STATE USE ONLY	
<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <b>3/22/12</b>	
By 	
Title <b>Mineral Resources Permit Manager</b>	

Report #: 1  
 Date: 3/7/2012  
 Ryan Job: 5292  
 Customer: SM Energy  
 Well Name: Dahl Federal 2-15H  
 Block or S S15 T153N R101W  
 Rig: Nabors 686  
 MWD Hand Joe Moore/ Jamie Frick  
 DD Hands Bruce Jensen/ Adam Alexander  
 Calc. Meth Minimun Curvature Calculation  
 Surv. Corr True North  
 Surv. Corr 8.67  
 VS Dir.: 0

Survey #	MD	Inc	Azm	Temp	TVD	VS	N/S	E/W	DLS
Tie In	2080	0.00	0.00	0.00	2080.00	0.00	0.00	0.00	0.00
1	2184	0.60	301.90	71.00	2184.00	0.29	0.29	-0.46	0.58
2	2280	1.80	335.30	82.00	2279.98	1.92	1.92	-1.52	1.40
3	2373	3.30	338.60	80.00	2372.88	5.74	5.74	-3.11	1.62
4	2468	4.10	346.50	87.00	2467.68	11.59	11.59	-4.90	1.00
5	2563	4.10	351.90	91.00	2562.44	18.26	18.26	-6.17	0.41
6	2658	4.00	358.10	95.00	2657.20	24.93	24.93	-6.76	0.47
7	2753	4.10	359.90	98.00	2751.97	31.64	31.64	-6.87	0.17
8	2848	4.00	7.20	96.00	2846.73	38.32	38.32	-6.46	0.55
9	2943	3.90	10.00	100.00	2941.50	44.79	44.79	-5.49	0.23
10	3038	4.00	8.70	107.00	3036.28	51.25	51.25	-4.42	0.14
11	3133	3.90	9.90	106.00	3131.05	57.70	57.70	-3.37	0.14
12	3228	3.70	11.00	123.00	3225.84	63.90	63.90	-2.23	0.22
13	3323	3.50	9.40	113.00	3320.66	69.77	69.77	-1.17	0.24
14	3418	4.00	3.00	109.00	3415.45	75.94	75.94	-0.52	0.69
15	3513	3.80	0.70	105.00	3510.23	82.39	82.39	-0.31	0.27
16	3608	3.40	7.10	91.00	3605.05	88.34	88.34	0.08	0.60
17	3703	3.80	348.50	106.00	3699.86	94.22	94.22	-0.20	1.29
18	3798	3.70	346.80	109.00	3794.66	100.29	100.29	-1.53	0.16
19	3893	3.30	347.60	111.00	3889.48	105.94	105.94	-2.82	0.42
20	3988	3.80	340.90	109.00	3984.30	111.59	111.59	-4.43	0.68
21	4084	3.00	344.30	113.00	4080.13	117.01	117.01	-6.16	0.86
22	4179	3.20	341.60	114.00	4174.99	121.92	121.92	-7.67	0.26
23	4274	3.40	339.60	116.00	4269.83	127.08	127.08	-9.48	0.24
24	4369	3.60	346.00	118.00	4364.66	132.61	132.61	-11.19	0.46
25	4464	4.00	340.80	120.00	4459.45	138.63	138.63	-13.00	0.56
26	4559	3.00	333.50	123.00	4554.27	143.99	143.99	-15.20	1.15
27	4654	3.10	348.20	123.00	4649.14	148.73	148.73	-16.83	0.83
28	4749	2.70	343.50	125.00	4744.01	153.39	153.39	-17.99	0.49
29	4844	3.10	4.20	122.00	4838.89	158.09	158.09	-18.44	1.17
30	4939	3.90	353.80	123.00	4933.72	163.87	163.87	-18.60	1.07
31	5034	4.00	349.00	122.00	5028.49	170.33	170.33	-19.58	0.36

32	5129	4.20	348.30	125.00	5123.25	176.99	176.99	-20.92	0.22
33	5224	3.00	351.00	127.00	5218.06	182.85	182.85	-22.01	1.28
34	5319	3.30	339.60	129.00	5312.92	187.87	187.87	-23.36	0.73
35	5414	3.30	336.20	132.00	5407.76	192.94	192.94	-25.41	0.21
36	5510	4.30	342.00	136.00	5503.55	198.89	198.89	-27.64	1.11
37	5605	4.00	337.40	138.00	5598.30	205.33	205.33	-30.01	0.47
38	5700	3.50	337.10	140.00	5693.10	211.06	211.06	-32.42	0.53
39	5795	4.80	348.20	138.00	5787.85	217.63	217.63	-34.36	1.60
40	5890	3.80	347.20	141.00	5882.58	224.59	224.59	-35.87	1.06
41	5985	3.00	344.00	143.00	5977.41	230.05	230.05	-37.25	0.87
42	6080	3.70	342.30	145.00	6072.25	235.36	235.36	-38.87	0.74
43	6174	4.00	338.50	149.00	6166.03	241.30	241.30	-40.99	0.42
44	6269	3.00	339.80	152.00	6260.86	246.71	246.71	-43.06	1.06
45	6364	3.70	339.90	150.00	6355.69	251.92	251.92	-44.98	0.74
46	6459	4.00	346.40	152.00	6450.48	258.02	258.02	-46.81	0.56
47	6554	3.90	341.80	152.00	6545.25	264.31	264.31	-48.60	0.35
48	6649	3.80	339.00	156.00	6640.04	270.32	270.32	-50.73	0.22
49	6744	4.00	346.60	159.00	6734.82	276.48	276.48	-52.63	0.58
50	6839	4.20	351.90	161.00	6829.58	283.15	283.15	-53.89	0.45
51	6934	4.70	351.70	165.00	6924.29	290.45	290.45	-54.94	0.53
52	7029	4.80	350.00	163.00	7018.96	298.21	298.21	-56.19	0.18
53	7124	4.50	341.40	161.00	7113.65	305.66	305.66	-58.07	0.80
54	7219	4.30	341.70	159.00	7208.37	312.57	312.57	-60.38	0.21
55	7315	4.50	340.30	159.00	7304.09	319.53	319.53	-62.78	0.24
56	7410	4.00	343.20	163.00	7398.83	326.21	326.21	-64.99	0.57
57	7505	3.70	344.00	168.00	7493.61	332.33	332.33	-66.79	0.32
58	7600	4.60	339.10	172.00	7588.36	338.84	338.84	-69.00	1.02
59	7695	4.80	344.40	174.00	7683.04	346.23	346.23	-71.43	0.50
60	7790	4.30	347.40	176.00	7777.75	353.53	353.53	-73.27	0.58
61	7885	3.10	352.10	176.00	7872.55	359.55	359.55	-74.40	1.30
62	7980	3.30	352.50	176.00	7967.40	364.81	364.81	-75.11	0.21
63	8075	4.00	354.50	170.00	8062.20	370.81	370.81	-75.79	0.75
64	8170	3.50	358.70	174.00	8157.00	377.01	377.01	-76.17	0.60
65	8265	3.90	358.60	176.00	8251.80	383.14	383.14	-76.31	0.42
66	8360	4.00	0.10	174.00	8346.58	389.68	389.68	-76.39	0.15
67	8455	4.00	6.70	179.00	8441.35	396.29	396.29	-75.99	0.48
68	8553	4.30	8.70	167.00	8539.09	403.31	403.31	-75.04	0.34
69	8648	4.50	9.70	172.00	8633.81	410.51	410.51	-73.87	0.23
70	8743	4.40	13.10	176.00	8728.52	417.73	417.73	-72.42	0.30
71	8838	4.50	12.20	176.00	8823.24	424.92	424.92	-70.81	0.13
72	8933	4.80	16.30	177.00	8917.92	432.38	432.38	-68.90	0.47
73	9028	4.80	16.50	181.00	9012.59	440.01	440.01	-66.66	0.02
74	9123	4.30	18.50	183.00	9107.29	447.20	447.20	-64.40	0.55

75	9218	3.70	21.90	183.00	9202.06	453.42	453.42	-62.13	0.68
76	9313	3.20	20.90	186.00	9296.89	458.74	458.74	-60.04	0.53
77	9408	2.80	19.50	190.00	9391.76	463.40	463.40	-58.32	0.43
78	9503	2.30	21.80	194.00	9486.66	467.36	467.36	-56.83	0.54
79	9598	2.80	357.20	194.00	9581.57	471.45	471.45	-56.24	1.25
80	9693	3.80	350.40	197.00	9676.41	476.87	476.87	-56.88	1.13
81	9788	4.40	349.30	201.00	9771.17	483.55	483.55	-58.08	0.64
82	9883	4.70	349.30	199.00	9865.87	490.96	490.96	-59.48	0.32
83	9978	4.90	351.80	201.00	9960.54	498.80	498.80	-60.78	0.30
84	10073	3.90	353.70	199.00	10055.25	506.03	506.03	-61.71	1.06
85	10168	3.40	355.50	203.00	10150.06	512.05	512.05	-62.29	0.54
86	10211	2.90	355.50	203.00	10193.00	514.40	514.40	-62.47	1.16
87	10266	4.90	350.00	181.00	10247.87	518.10	518.10	-62.99	3.70
88	10298	8.90	353.30	183.00	10279.63	521.91	521.91	-63.52	12.56
89	10329	13.00	352.90	183.00	10310.06	527.75	527.75	-64.23	13.23
90	10361	17.50	351.10	186.00	10340.92	536.08	536.08	-65.42	14.14
91	10393	21.80	349.80	188.00	10371.05	546.69	546.69	-67.22	13.51
92	10424	25.90	349.70	190.00	10399.40	559.02	559.02	-69.45	13.23
93	10456	29.40	351.20	190.00	10427.74	573.66	573.66	-71.90	11.15
94	10488	32.60	351.40	190.00	10455.17	589.95	589.95	-74.39	10.01
95	10519	36.50	350.60	190.00	10480.69	607.31	607.31	-77.15	12.67
96	10551	40.60	349.90	192.00	10505.72	626.96	626.96	-80.53	12.88
97	10583	44.40	349.30	192.00	10529.30	648.22	648.22	-84.43	11.94
98	10614	48.10	347.80	194.00	10550.74	670.16	670.16	-88.89	12.44
99	10646	51.20	346.70	195.00	10571.45	693.94	693.94	-94.27	10.04
100	10678	54.20	346.40	194.00	10590.84	718.70	718.70	-100.19	9.40
101	10709	56.50	346.10	192.00	10608.47	743.46	743.46	-106.26	7.46
102	10741	60.70	346.00	192.00	10625.14	769.97	769.97	-112.84	13.13
103	10773	63.40	346.70	192.00	10640.13	797.43	797.43	-119.51	8.66
104	10804	67.90	345.80	192.00	10652.91	824.86	824.86	-126.22	14.75
105	10836	70.80	344.90	194.00	10664.20	853.82	853.82	-133.80	9.44
106	10868	75.70	345.50	194.00	10673.42	883.44	883.44	-141.62	15.42
107	10899	80.10	345.50	195.00	10679.91	912.78	912.78	-149.21	14.19
108	10931	84.90	345.10	194.00	10684.09	943.46	943.46	-157.26	15.05
109	10963	88.80	345.90	201.00	10685.85	974.39	974.39	-165.26	12.44

75	9218	3.70	21.90	183.00	9202.06	453.42	453.42	-62.13	0.68
76	9313	3.20	20.90	186.00	9296.89	458.74	458.74	-60.04	0.53
77	9408	2.80	19.50	190.00	9391.76	463.40	463.40	-58.32	0.43
78	9503	2.30	21.80	194.00	9486.66	467.36	467.36	-56.83	0.54
79	9598	2.80	357.20	194.00	9581.57	471.45	471.45	-56.24	1.25
80	9693	3.80	350.40	197.00	9676.41	476.87	476.87	-56.88	1.13
81	9788	4.40	349.30	201.00	9771.17	483.55	483.55	-58.08	0.64
82	9883	4.70	349.30	199.00	9865.87	490.96	490.96	-59.48	0.32
83	9978	4.90	351.80	201.00	9960.54	498.80	498.80	-60.78	0.30
84	10073	3.90	353.70	199.00	10055.25	506.03	506.03	-61.71	1.06
85	10168	3.40	355.50	203.00	10150.06	512.05	512.05	-62.29	0.54
86	10211	2.90	355.50	203.00	10193.00	514.40	514.40	-62.47	1.16
87	10266	4.90	350.00	181.00	10247.87	518.10	518.10	-62.99	3.70
88	10298	8.90	353.30	183.00	10279.63	521.91	521.91	-63.52	12.56
89	10329	13.00	352.90	183.00	10310.06	527.75	527.75	-64.23	13.23
90	10361	17.50	351.10	186.00	10340.92	536.08	536.08	-65.42	14.14
91	10393	21.80	349.80	188.00	10371.05	546.69	546.69	-67.22	13.51
92	10424	25.90	349.70	190.00	10399.40	559.02	559.02	-69.45	13.23
93	10456	29.40	351.20	190.00	10427.74	573.66	573.66	-71.90	11.15
94	10488	32.60	351.40	190.00	10455.17	589.95	589.95	-74.39	10.01
95	10519	36.50	350.60	190.00	10480.69	607.31	607.31	-77.15	12.67
96	10551	40.60	349.90	192.00	10505.72	626.96	626.96	-80.53	12.88
97	10583	44.40	349.30	192.00	10529.30	648.22	648.22	-84.43	11.94
98	10614	48.10	347.80	194.00	10550.74	670.16	670.16	-88.89	12.44
99	10646	51.20	346.70	195.00	10571.45	693.94	693.94	-94.27	10.04
100	10678	54.20	346.40	194.00	10590.84	718.70	718.70	-100.19	9.40
101	10709	56.50	346.10	192.00	10608.47	743.46	743.46	-106.26	7.46
102	10741	60.70	346.00	192.00	10625.14	769.97	769.97	-112.84	13.13
103	10773	63.40	346.70	192.00	10640.13	797.43	797.43	-119.51	8.66
104	10804	67.90	345.80	192.00	10652.91	824.86	824.86	-126.22	14.75
105	10836	70.80	344.90	194.00	10664.20	853.82	853.82	-133.80	9.44
106	10868	75.70	345.50	194.00	10673.42	883.44	883.44	-141.62	15.42
107	10899	80.10	345.50	195.00	10679.91	912.78	912.78	-149.21	14.19
108	10931	84.90	345.10	194.00	10684.09	943.46	943.46	-157.26	15.05
109	10963	88.80	345.90	201.00	10685.85	974.39	974.39	-165.26	12.44



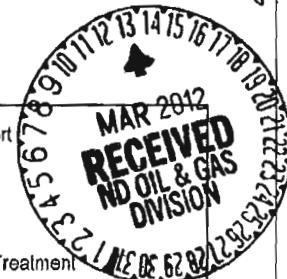
## SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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. **21796**

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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date <b>November 1, 2011</b>	<input checked="" type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input type="checkbox"/> Report of Work Done	Date Work Completed	<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date	<input type="checkbox"/> Casing or Liner	<input 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 <b>Disposal of cuttings outside of spacing unit</b>	



Well Name and Number <b>DAHL FEDERAL 2-15H</b>				
Footages <b>700 F N L</b>	Qtr-Qtr <b>2026 F E L NWNE</b>	Section <b>15</b>	Township <b>153 N</b>	Range <b>101 W</b>
Field <b>BAKER</b>	Pool <b>BAKKEN</b>	County <b>MCKENZIE</b>		

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 FEDERAL 2-15H AS A HORIZONTAL BAKKEN WELL ON A 1280-ACRE DRILLING UNIT. SM ENERGY REQUESTS APPROVAL TO SPOT THE SURFACE LOCATION OUTSIDE OF THE 1280-ACRE DRILLING UNIT (SECTIONS 3 & 10 IN 153N-R101W). SM ENERGY ALSO REQUESTS APPROVAL TO BURY THE CUTTINGS GENERATED FROM DRILLING THIS WELL IN THE CUTTINGS PIT ON THIS LOCATION WHICH IS OUTSIDE THE SPACING UNIT. A COPY OF THE AFFIDAVIT TO A LANDOWNER AGREEMENT IS ATTACHED.

Company <b>SM ENERGY COMPANY</b>	Telephone Number <b>406-869-8716</b>	
Address <b>P.O. BOX 7168</b>		
City <b>BILLINGS</b>	State <b>MT</b>	Zip Code <b>59103</b>
Signature 	Printed Name <b>RANDY CARLSON</b>	
Title <b>DRILLING MANAGER</b>	Date <b>October 18, 2011</b>	

FOR STATE USE ONLY	
<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date <b>3-13-12</b>	
By <b>Randy Carlson</b>	
Title <b>DRILLING MANAGER</b>	



# 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. 21794  
**21888**



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 <b>January 9, 2012</b>	<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 type="checkbox"/> Other	<b>Notice of Spud &amp; Suspension of Drilling</b>

Well Name and Number  
**Dahl Federal 2-15H**

Footages	Qtr-Qtr	Section	Township	Range
700 F N L	2026 F E L	NWNE	15	153 N 101 W
Field <b>Baker</b>	Pool <b>Bakken</b>		County <b>McKenzie</b>	

## 24-HOUR PRODUCTION RATE

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

### Name of Contractor(s)

**White Mountain Operating, LLC (Phone 307-367-3800) (Rig #314, Toolpusher -- Stoney Jackson Phone 307-749-0039)**

Address	City	State	Zip Code
P. O. Box 2353	Pinedale	WY	82941-2353

## DETAILS OF WORK

The Dahl Federal 2-15H was spud at 6:30 PM CST on January 6, 2012. Drilled a 13 1/2" surface hole, reaching 2,080' on 1/8/12. Ran 9 5/8" 36# J-55 surface casing to 2,080' and cemented it with 729 sks of cement with 68 Bbls cement returns to the surface. Cut off the casing top, welded a cap on and released the rig on 1/9/12. SM Energy intends to move a drilling rig onto this well with 90 days to complete drilling and casing of the well.

Company <b>SM Energy Company</b>	Telephone Number <b>(406) 245-6248</b>	
Address <b>P. O. Box 7168</b>		
City <b>Billings</b>	State <b>MT</b>	Zip Code <b>59103-7168</b>
Signature 	Printed Name <b>Joy Torgerson</b>	
Title <b>Engineering Tech</b>	Date <b>January 13, 2012</b>	
Email Address <b>jtorgerson@sm-energy.com</b>		

## FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date <i>January 24, 2012</i>	
By 	
Title <b>PETROLEUM ENGINEER</b>	

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.  
21796



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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date <b>January 3, 2011</b>	<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	<b>Suspension of Drilling</b>

Well Name and Number <b>Dahl Federal 2-15H</b>					
Footages	700 F N L	2026 F E L	Qtr-Qtr NWNE	Section 15	Township 153 N Range 101 W
Field	Pool Bakken	County McKenzie			
Baker					

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

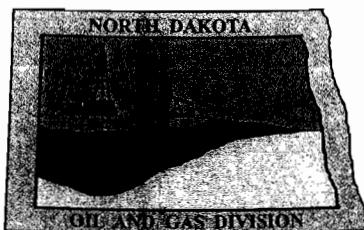
Name of Contractor(s) <b>White Mountain Operating, LLC (Phone 307-367-3800) (Rig #314, Toolpusher -- Stoney Jackson Phone 307-749-0039)</b>			
Address <b>P. O. Box 2353</b>	City <b>Pinedale</b>	State <b>WY</b>	Zip Code <b>82941-2353</b>

### DETAILS OF WORK

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

Company <b>SM Energy Company</b>	Telephone Number <b>(406) 869-8749</b>	
Address <b>P. O. Box 7168</b>		
City <b>Billings</b>	State <b>MT</b>	Zip Code <b>59103-7168</b>
Signature 	Printed Name <b>Ben Smith</b>	
Title <b>Drilling Engineer</b>	Date <b>December 14, 2011</b>	
Email Address <b>bsmith@sm-energy.com</b>		

FOR STATE USE ONLY	
<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date <b>12-14-2011</b>	
By <b>David D. Tabor</b>	
Title	



# Oil and Gas Division 21796

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: 10/31/2011

**RE: CORES AND SAMPLES**

Well Name: **DAHL FEDERAL 2-15H** Well File No.: **21796**  
Location: **NWNE 15-153-101** 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  
SFSN 5749 (03-2004)

Well File No.

21796



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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date <b>November 1, 2011</b>
<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 checked="" type="checkbox"/> Other	<u>Request for waiver of open hole logs</u>

Well Name and Number  
**DAHL FEDERAL 2-15H**

Footages	Qtr-Qtr	Section	Township	Range
700 F N L	2026 F E L	NWNE	15	153 N 101 W
Field	Pool	County		
<b>BAKER</b>	<b>BAKKEN</b>	<b>MCKENZIE</b>		

### 24-HOUR PRODUCTION RATE

	Before	After
Oil	Bbls	Oil
Water	Bbls	Water
Gas	MCF	Gas

Name of Contractor(s)

Address

City

State

Zip Code

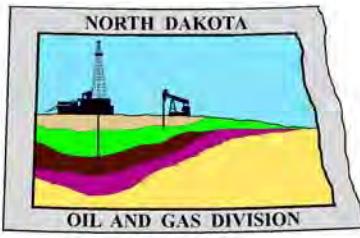
### DETAILS OF WORK

**SM ENERGY COMPANY PLANS TO DRILL THE DAHL FEDERAL 2-15H 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 CORPS OF ENGINEERS 31-10 (NO. 11920) LOCATED 660' FNL, 2305' FEL IN NWNE SEC. 10, T153N-R101W.**

Company <b>SM ENERGY COMPANY</b>	Telephone Number <b>406-869-8716</b>	
Address <b>P.O. BOX 7168</b>		
City <b>BILLINGS</b>	State <b>MT</b>	Zip Code <b>59103</b>
Signature 	Printed Name <b>RANDY CARLSON</b>	
Title <b>DRILLING MANAGER</b>	Date <b>October 18, 2011</b>	

### FOR STATE USE ONLY

<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date <b>10-27-2011</b>	
By 	
Title <b>Richard A. Suggs</b>	
Geologist	



# Oil and Gas Division

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

## Department of Mineral Resources

Lynn D. Helms - Director

## North Dakota Industrial Commission

[www.oilgas.nd.gov](http://www.oilgas.nd.gov)

October 27, 2011

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

**RE: HORIZONTAL WELL  
DAHL FEDERAL 2-15H  
NWNE Section 15-153N-101W  
McKenzie County  
Well File # 21796**

Dear RANDY :

Pursuant to Commission Order No. 18012, 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 spacing unit consisting of SEC 3 & 10, T153N-R101W.

**PERMIT STIPULATIONS: DUE TO A SHALLOW AQUIFER IN THE AREA 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. A DIKE MAY ALSO BE REQUIRED AROUND THE LOCATION. BE ADVISED THE CORPS OF ENGINEERS 31-10 WELL IS WITHIN 112 FEET OF THE PROPOSED WELLCORE FOR THE DAHL FEDERAL 2-15H WELL, AND IS DRILLED TO THE RED RIVER FORMATION WITH 5.5" CASING SET TO 13480'. PRECAUTIONS MUST BE TAKEN WHILE DESIGNING THE FRAC JOB FOR THE DAHL FEDERAL 2-15H WELL AS TO NOT ADVERSELY AFFECT THE CORPS OF ENGINEERS 31-10 WELL. IN CASES WHERE A SPACING UNIT IS ACCESSED FROM AN OFF-SITE DRILL PAD, AN AFFIDAVIT MUST BE PROVIDED AFFIRMING THAT THE SURFACE OWNER OF THE PAD AGREES TO ACCEPT BURIAL ON THEIR PROPERTY OF THE CUTTINGS GENERATED FROM DRILLING THE WELL INTO AN OFFSITE SPACING UNIT. SM ENERGY CO MUST CONTACT NDIC FIELD INSPECTOR MARC BINNS 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.

### **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](mailto: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](mailto:digitallogs@nd.gov). Thank you for your cooperation.

Sincerely,

Nathaniel Erbele  
Petroleum Resource Specialist



# 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 <b>New Location</b>	Type of Well <b>Oil &amp; Gas</b>	Approximate Date Work Will Start <b>11 / 1 / 2011</b>	Confidential Status <b>Yes</b>
Operator <b>SM ENERGY COMPANY</b>		Telephone Number <b>{406} 245-6248</b>	
Address <b>P.O. Box 7168</b>		City <b>Billings</b>	State <b>MT</b> Zip Code <b>59103-7168</b>

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 <b>DAHL FEDERAL</b>			Well Number <b>2-15H</b>				
Surface Footages <b>700 F N L      2026 F E L</b>		Qtr-Qtr <b>NWNE</b>	Section <b>15</b>	Township <b>153 N</b>	Range <b>101 W</b>	County <b>McKenzie</b>	
Longstring Casing Point Footages <b>219 F S L      2186 F E L</b>		Qtr-Qtr <b>SWSE</b>	Section <b>10</b>	Township <b>153 N</b>	Range <b>101 W</b>	County <b>McKenzie</b>	
Longstring Casing Point Coordinates From Well Head <b>919 N From WH      160 W From WH</b>		Azimuth <b>340 °</b>	Longstring Total Depth <b>11008 Feet MD      10697 Feet TVD</b>				
Bottom Hole Footages From Nearest Section Line <b>211 F N L      2417 F E L</b>		Qtr-Qtr <b>NWNE</b>	Section <b>3</b>	Township <b>153 N</b>	Range <b>101 W</b>	County <b>McKenzie</b>	
Bottom Hole Coordinates From Well Head <b>10891 N From WH      391 W From WH</b>		KOP Lateral 1 <b>10305 Feet MD</b>	Azimuth Lateral 1 <b>360 °</b>	Estimated Total Depth Lateral 1 <b>21015 Feet MD      10697 Feet TVD</b>			
Latitude of Well Head <b>48 ° 04 ' 49.25 "</b>	Longitude of Well Head <b>-103 ° 39 ' 20.15 "</b>	NAD Reference <b>NAD83</b>		Description of (Subject to NDIC Approval) <b>SPACING UNIT: SEC 3 &amp; 10, T153N-R101W</b>			
Ground Elevation <b>2052 Feet Above S.L.</b>	Acres in Spacing/Drilling Unit <b>1280</b>	Spacing/Drilling Unit Setback Requirement <b>200 Feet N/S      1220 Feet E/W</b>		Industrial Commission Order <b>18012</b>			
North Line of Spacing/Drilling Unit <b>5281 Feet</b>		South Line of Spacing/Drilling Unit <b>5295 Feet</b>		East Line of Spacing/Drilling Unit <b>10402 Feet</b>		West Line of Spacing/Drilling Unit <b>10411 Feet</b>	
Objective Horizons <b>BAKKEN</b>						Pierre Shale Top <b>1950</b>	
Proposed Surface Casing	Size <b>9 - 5/8 "</b>	Weight <b>36 Lb./Ft.</b>	Depth <b>2050 Feet</b>	Cement Volume <b>703 Sacks</b>	NOTE: Surface hole must be drilled with fresh water and surface casing must be cemented back to surface.		
Proposed Longstring Casing	Size <b>7 - 0 "</b>	Weight(s) <b>29-32 Lb./Ft.</b>	Longstring Total Depth <b>11008 Feet MD      10697 Feet TVD</b>		Cement Volume <b>773 Sacks</b>	Cement Top <b>4900 Feet</b>	Top Dakota Sand <b>5444 Feet</b>
Base Last Charles Salt (If Applicable) <b>9183 Feet</b>		NOTE: Intermediate or longstring casing string must be cemented above the top Dakota Group Sand.					
Proposed Logs <b>MUD LOG {CBL &amp; GR ON COMPLETION}</b> SEE ATTACHMENT							
Drilling Mud Type (Vertical Hole - Below Surface Casing) <b>Invert</b>				Drilling Mud Type (Lateral) <b>Brine</b>			
Survey Type in Vertical Portion of Well <b>MWD Every 100 Feet</b>		Survey Frequency: Build Section <b>30 Feet</b>		Survey Frequency: Lateral <b>90 Feet</b>		Survey Contractor <b>RYAN ENERGY</b>	

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, OFF-UNIT AFFIDAVIT**

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 <b>N</b>	Range <b>W</b>	County
Bottom Hole Footages From Nearest Section Line F      L		Qtr-Qtr	Section	Township <b>N</b>	Range <b>W</b>	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 <b>N</b>	Range <b>W</b>	County
Bottom Hole Footages From Nearest Section Line F      L		Qtr-Qtr	Section	Township <b>N</b>	Range <b>W</b>	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 <b>N</b>	Range <b>W</b>	County
Bottom Hole Footages From Nearest Section Line F      L		Qtr-Qtr	Section	Township <b>N</b>	Range <b>W</b>	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 <b>N</b>	Range <b>W</b>	County
Bottom Hole Footages From Nearest Section Line F      L		Qtr-Qtr	Section	Township <b>N</b>	Range <b>W</b>	County

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

Date

10 / 18 / 2011

ePermit

Printed Name  
**RANDY CARLSON**

Title

**DRILLING MANAGER****FOR STATE USE ONLY**

Permit and File Number <b>21796</b>	API Number <b>33 - 053 - 03846</b>
Field <b>BAKER</b>	
Pool <b>BAKKEN</b>	Permit Type <b>DEVELOPMENT</b>

**FOR STATE USE ONLY**

Date Approved <b>10 / 27 / 2011</b>
By <b>Nathaniel Erbele</b>
Title <b>Petroleum Resource Specialist</b>

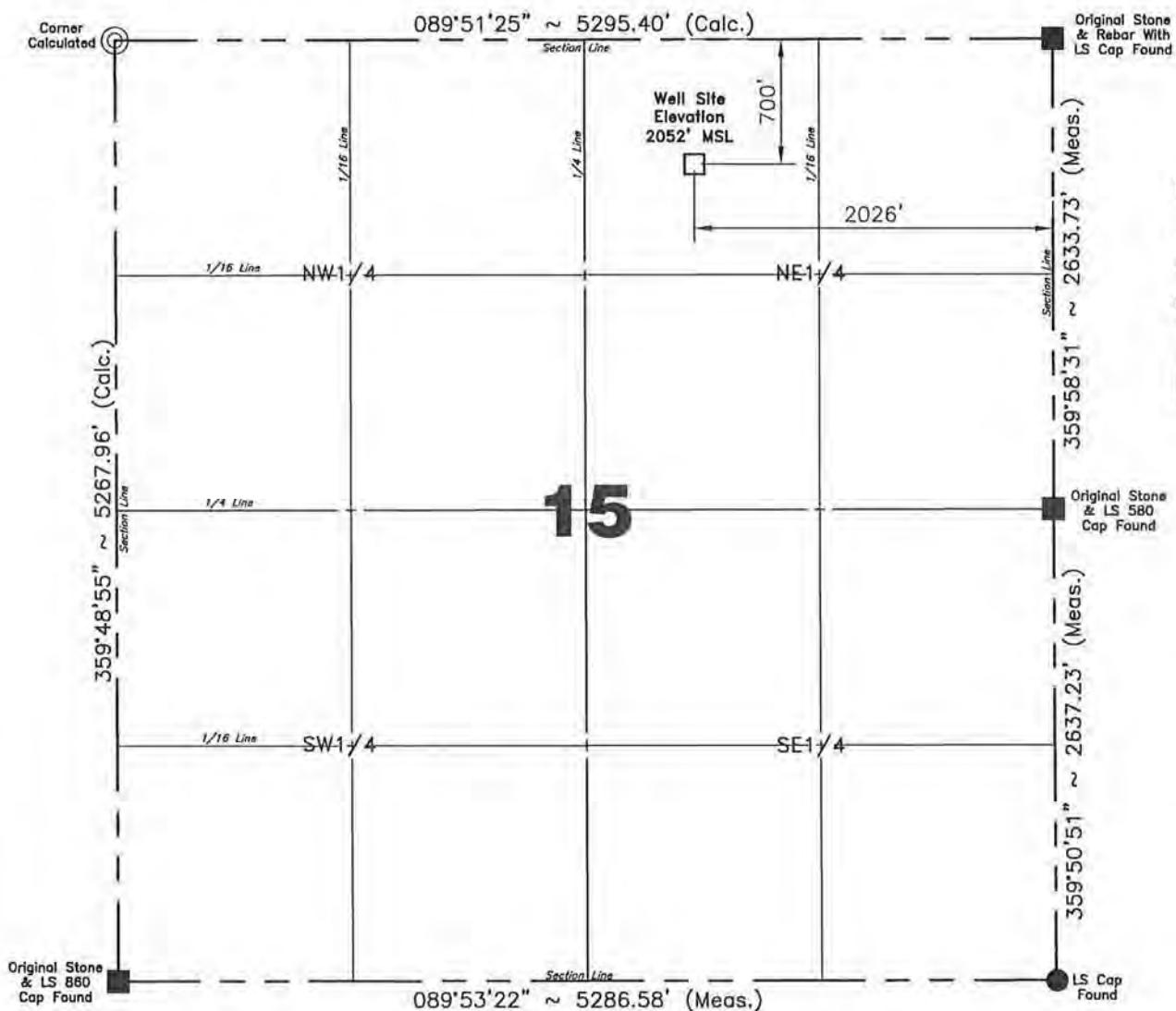
# WELL LOCATION PLAT

SM Energy Company  
P.O. Box 7168 Billings, MT 59103  
Dahl Federal 2-15H

700 feet from the north line and 2026 feet from the east line (surface location)  
Section 15, T. 153 N., R. 101 W., 5th P.M.

McKenzie County, North Dakota

Surface owner @ well site - Sharon D Eilers ETAL  
Latitude 48°04'49.25" North; Longitude 103°39'20.15" West (surface location)  
[Derived from OPUS Solution NAD-83(CORS96)]



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NOTE: All land corners are assumed unless otherwise noted.

The well location shown hereon is not an as-built location.

Andrew Minton 11/20/2010

Surveyed By Date

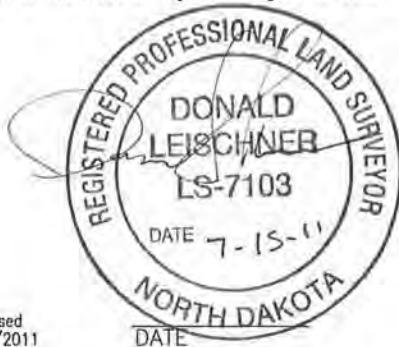
Andrew Staloch 1/21/2011

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
Based on elevation derived from OPUS Solution on GPS KJL 14-53-101 Located a distance of 5260.56' on an azimuth of 089°33'47" from the NE corner of Section 15 T.153N., R.101W., 5th P.M. being at 2110.46' Elevation MSL.	Certificate of Authorization #C-061

Project No. 8710826	Revised 7/15/2011
Book 0-82/0-88 Pg. 61-64/73-74	Certificate of Authorization #C-061

Scale 1"=1000' 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.



Kadrmas  
Lee &  
Jackson  
Engineers Surveyors  
Planners

## Dahl Federal 2-15H

Location: NWNE Sec 15 - T153N - R101W  
 Footage: 2026 FEL & 700 FNL  
 Elev: Graded Pad 2052, 2069 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: **2,050 FT**

Lead Cement: **403** 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).

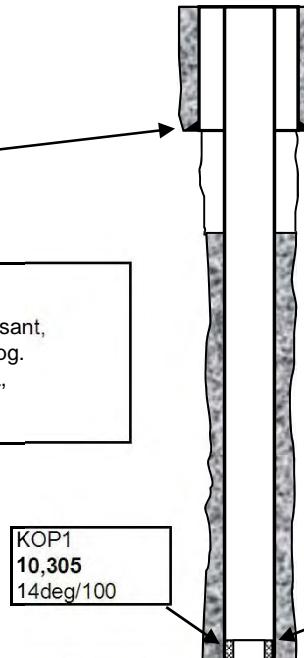
Set 7" Casing at: **11,008 FT MD** 7in 29# L-80 LT&C & 32# HC L-80 120' above and below salts.

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): **581** 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.

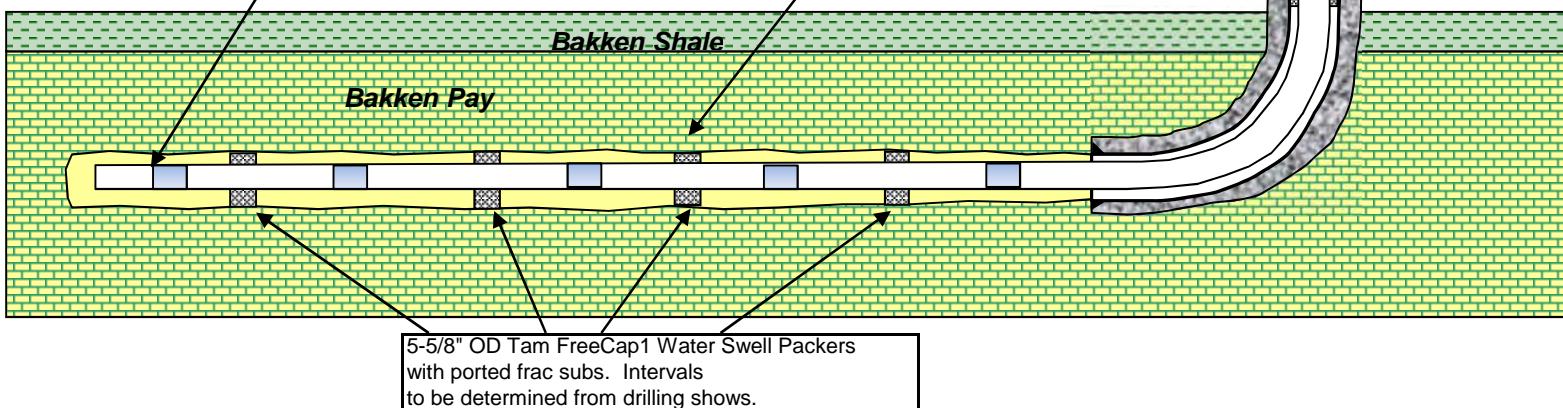
Assume 9" hole dia.

Est TD	<b>21,015</b>	Pay	<b>10,007</b>
Hole Size:	6"	Target TVD	<b>10,697</b>
Liner:	4-1/2" 11.6# P110 LT&C Liner		
From:	<b>10,265</b>	to:	<b>20,995</b>
note: from liner top packer to top frac port use BTC connection			



KOP1  
**10,305**  
14deg/100

Liner Hanger  
Top at: **10,255**  
with 5.25" PBR





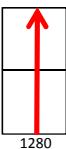
### GEOLOGIC PROGNOSIS

		Spacing Unit		
Well Name:	Dahl Federal 2-15H			
Prospect:	Baker Field			
County:	McKenzie			
State:	North Dakota	640	1280	
Twp / Rge:	153N-101W		1280	
Location	FNL	FSL	FEL	
Surf. Loc.:	nw/ne sec.15	700	2026	
BHL:	nw/ne sec.3	215	2467	

GL elev.: 2052 GL  
 KB elev. Datum: 2069 KB

Xtreme 18

Frn Name/ <b>Poss Pay</b>	Geologic Tops			Actual		
	Depth	thickness	Subsea	Depth	thickness	Subsea
Greenhorn	864					
Dakota ss	5444	412	-3375			
Jm	5856	1033	-3787			
Dunham Salt	6889	55	-4820			
Trsp	6944	313	-4875			
Pine Salt	7257	56	-5188			
base Pine	7313	24	-5244			
Minnekahta	7337	20	-5268			
Opeche Salt	7357	8	-5288			
base Opeche	7365	415	-5296			
Tyler	7780	553	-5711			
Kibbey L.S.	8333	154	-6264			
Charles	8487	696	-6418			
BLS	9183	75	-7114			
Ratcliffe	9258	151	-7189			
Mission Canyon	9409	540	-7340			
Lodgepole	9949	702	-7880			
Carrington Sh	10651	7	-8582			
Scallion L.S.	10658	8	-8589			
Mb Upper Sh	10666	15	-8597			
Mb Middle	10689	8	-8620			
<b>Target</b>	10697	29	-8628			
Mb Lower Shale	10726	24	-8657			
Dtf	10750		-8681			
<b>Target</b>						
Dtf1-mbb						



#### Offset Wells

- 1 SME Corps of Engineers 1872' k.b.  
#31-10  
nw/ne sec.10-153N-101W
- 2

#1			#2		
Depth	Thickness	Subsea	Depth	Thickness	Subsea
4345		-2473			
5209	412	-3337			
5621	1033	-3749			
6654	55	-4782			
6709	313	-4837			
7022	56	-5150			
7078	24	-5206			
7102	20	-5230			
7122	8	-5250			
7130	415	-5258			
7545	553	-5673			
8098	154	-6226			
8252	696	-6380			
8948	75	-7076			
9023	151	-7151			
9174	540	-7302			
9714	702	-7842			
10416	7	-8544			
10423		-8551			
10431	15	-8559			
10446	8	-8574			
10454	29	-8582			
10483	24	-8611			
10507		-8635			

**Mudlogging** 2-man unit with chrom:

KOP @ XXXXX to EOL

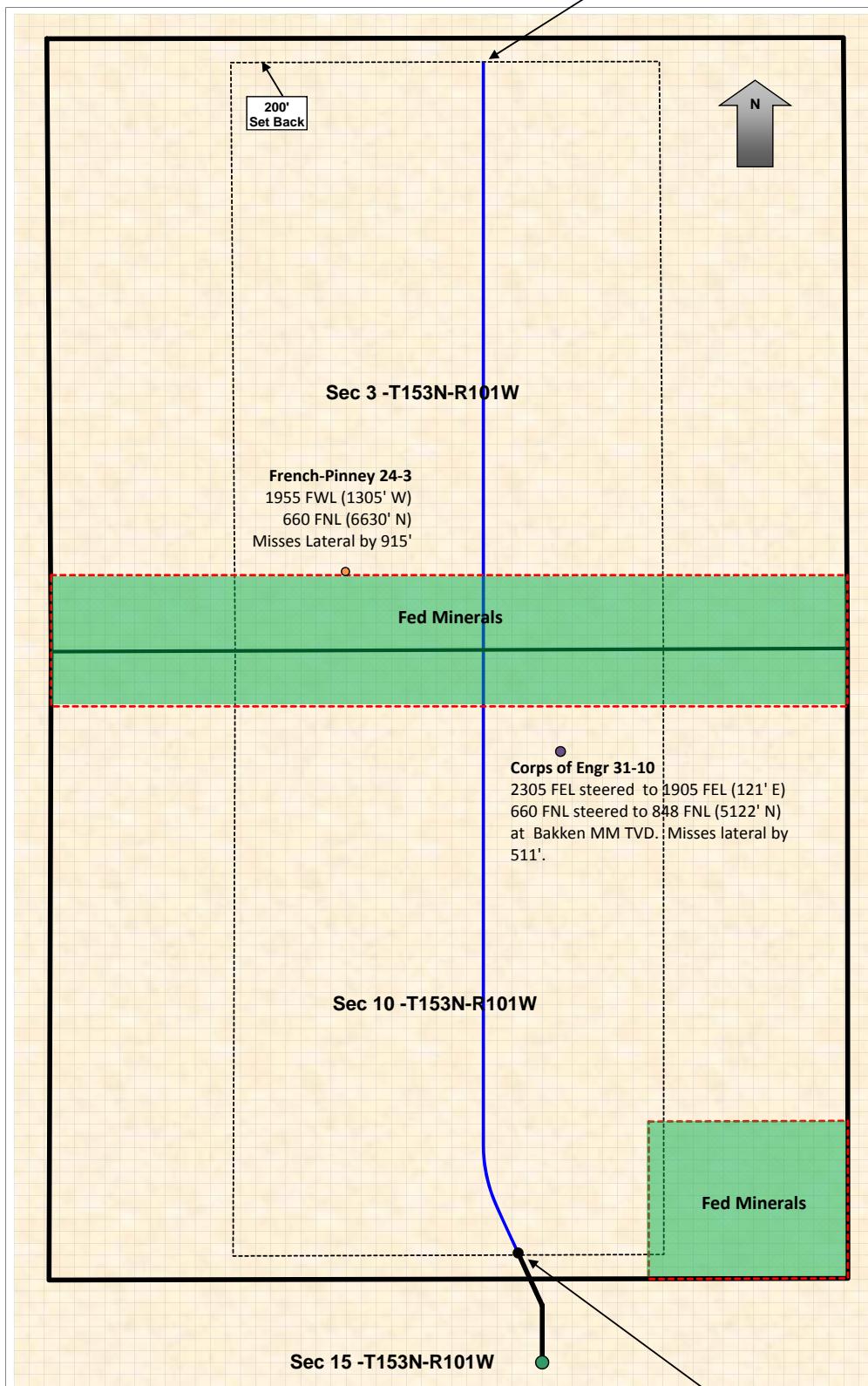
**Openhole Logs** none - wavier request from NDIC filed w/APD

**Core / DST** none

**Geologist** Mike Bryant  
406-255-8625 office  
406-860-7970 cell

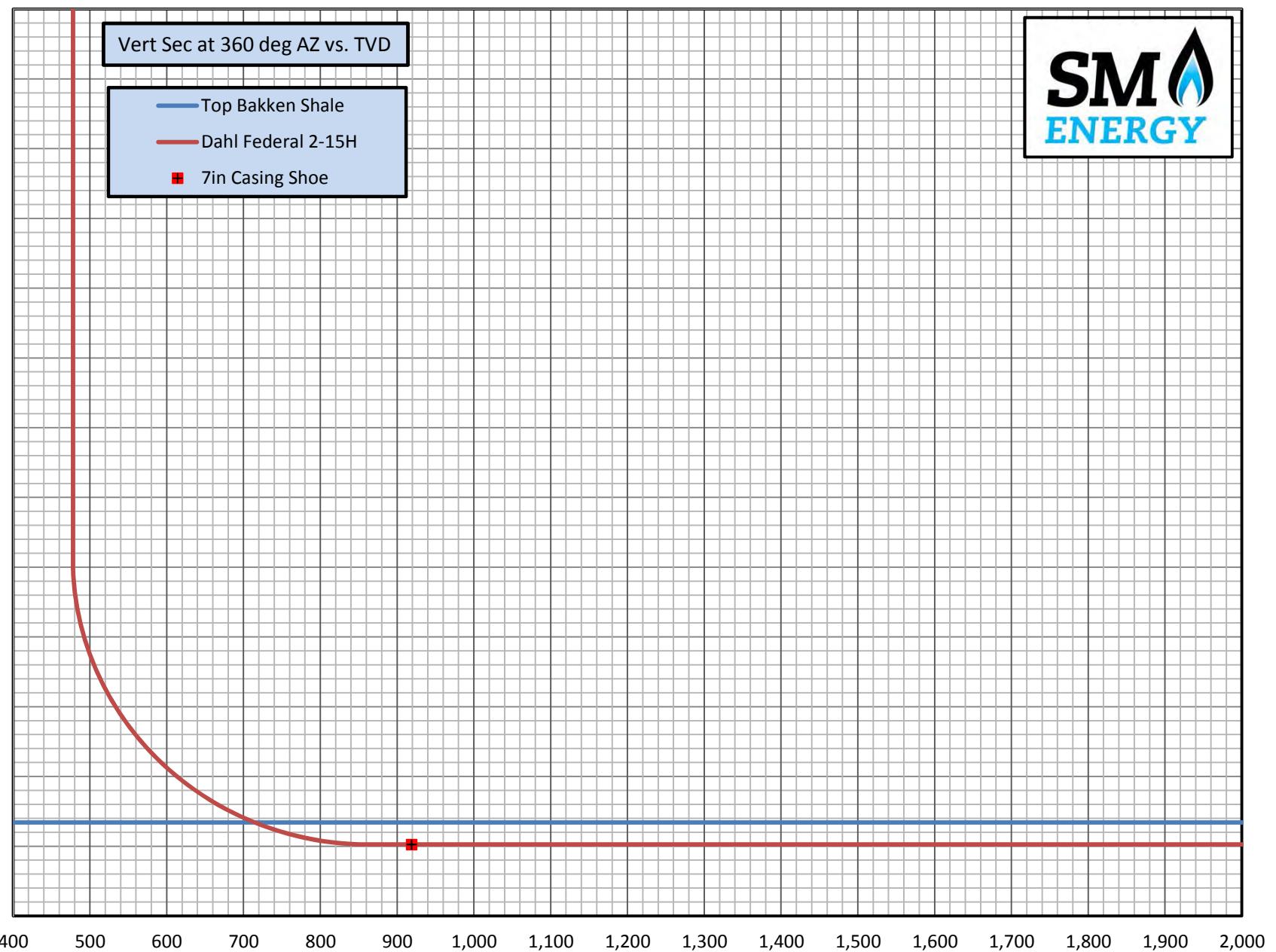
**Engineer** Greg Hilton  
406-869-8744 office  
406-861-0566 cell

Est. TD:	21,015 FT MD
FT of Pay	10,007 FT
BH Target Coord:	391 W 10891 N
BH Target:	2417 FEL & 215 FNL



Dahl Federal 2-15H
Location: NWNE Sec 15 - T153N - R101W
Footage: 2026 FEL & 700 FNL
Elev: Graded Pad 2052, 2069 KB
McKenzie County, ND

7" Casing: 11,008 FT MD
Csg Shoe Coord: 160 W 919 N
BHL: 2186 FEL & 219 FSL



# HORIZONTAL DIRECTIONAL DRILLING PLAN



Company **SM Energy**  
Well Dahl Federal 2-15H  
Build Rate **14.000**

Tgt. Inc. **90**  
Mag. Decl. \_\_\_\_\_  
Target TVD **10,697**  
Target Az. **357.946068**  
Tgt. Coor. **391 W**   **10891 N**   **10,898 VS**

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

# HORIZONTAL SECTION PLAT

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

Dahl Federal 2-15H

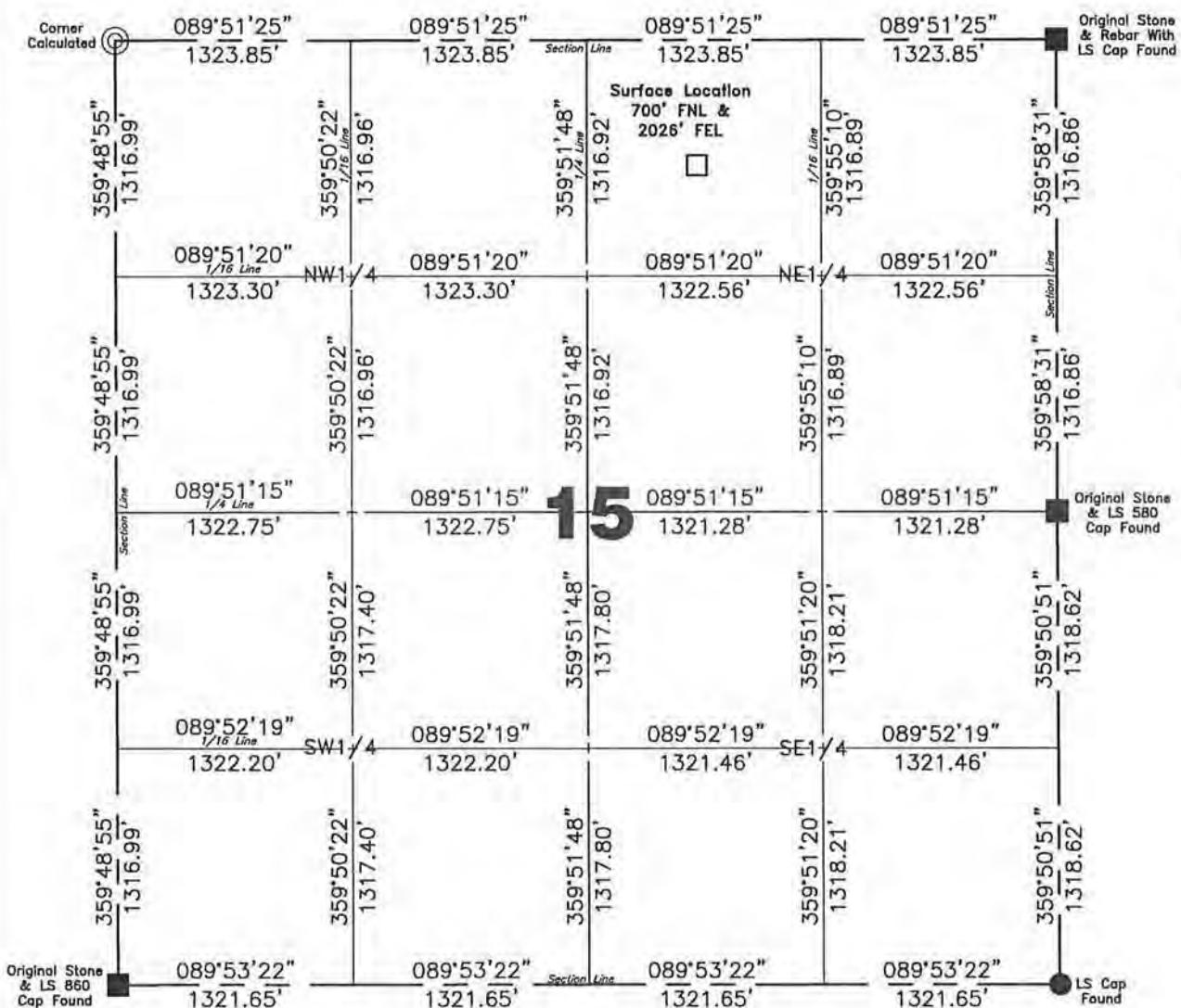
700 feet from the north line and 2026 feet from the east line (surface location)  
Section 15, T. 153 N., R. 101 W., 5th P.M.

McKenzie County, North Dakota

Surface owner @ well site - Sharon D Eilers ETAL

Latitude 48°04'49.25" North; Longitude 103°39'20.15" West (surface location)

[Derived from OPUS Solution NAD-83(CORS96)]



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All corners shown on this plat were found in the field during SM Energy, Dahl Federal 2-15H oil well survey on November 20, 2010. Distances to all others are calculated. All azimuths are based on the south line of Section 15, being on an azimuth of 089°53'22".

**Scale 1"=1000"**

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.



Surveyed By A.M. - A.S.	Field Book 0-82
Computed & Drawn By M.B. - D.F.	Project No. 8710826

Revised  
7/15/2011

Kadrmas  
Lee &  
Jackson  
Engineers Surveyors  
Planners

# HORIZONTAL SECTION PLAT

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

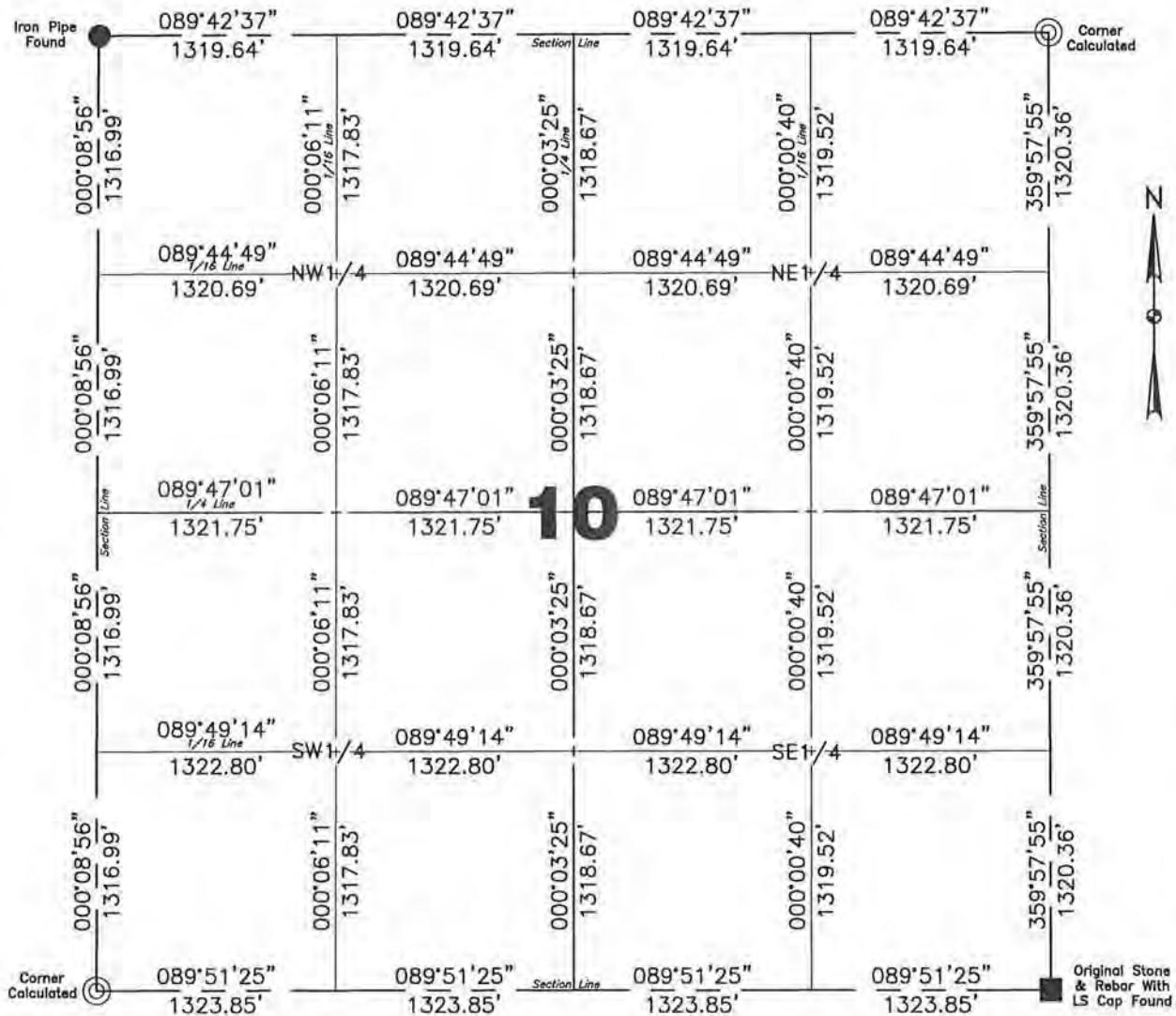
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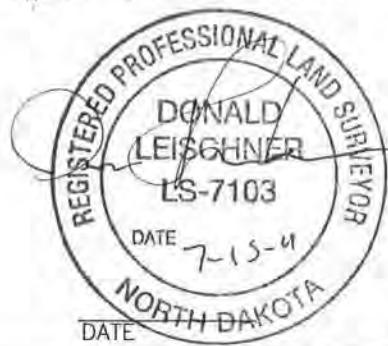
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Surveyed By A.M. - A.S.	Field Book 0-82
Computed & Drawn By M.B. - D.F.	Project No. 8710826

Revised  
7/15/2011



Kadrmas  
Lee &  
Jackson  
Engineers Surveyors  
Planners

# HORIZONTAL SECTION PLAT

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

Dahl Federal 2-15H

700 feet from the north line and 2026 feet from the east line (surface location)  
Section 15, T. 153 N., R. 101 W., 5th P.M.

McKenzie County, North Dakota

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Surveyed By A.M. - A.S.	Field Book 0-82
Computed & Drawn By M.B. - D.F.	Project No. 8710826

Revised  
7/15/2011

Kadrmas  
Lee &  
Jackson  
Engineers Surveyors  
Planners

# BOTTOM HOLE LOCATION PLAT

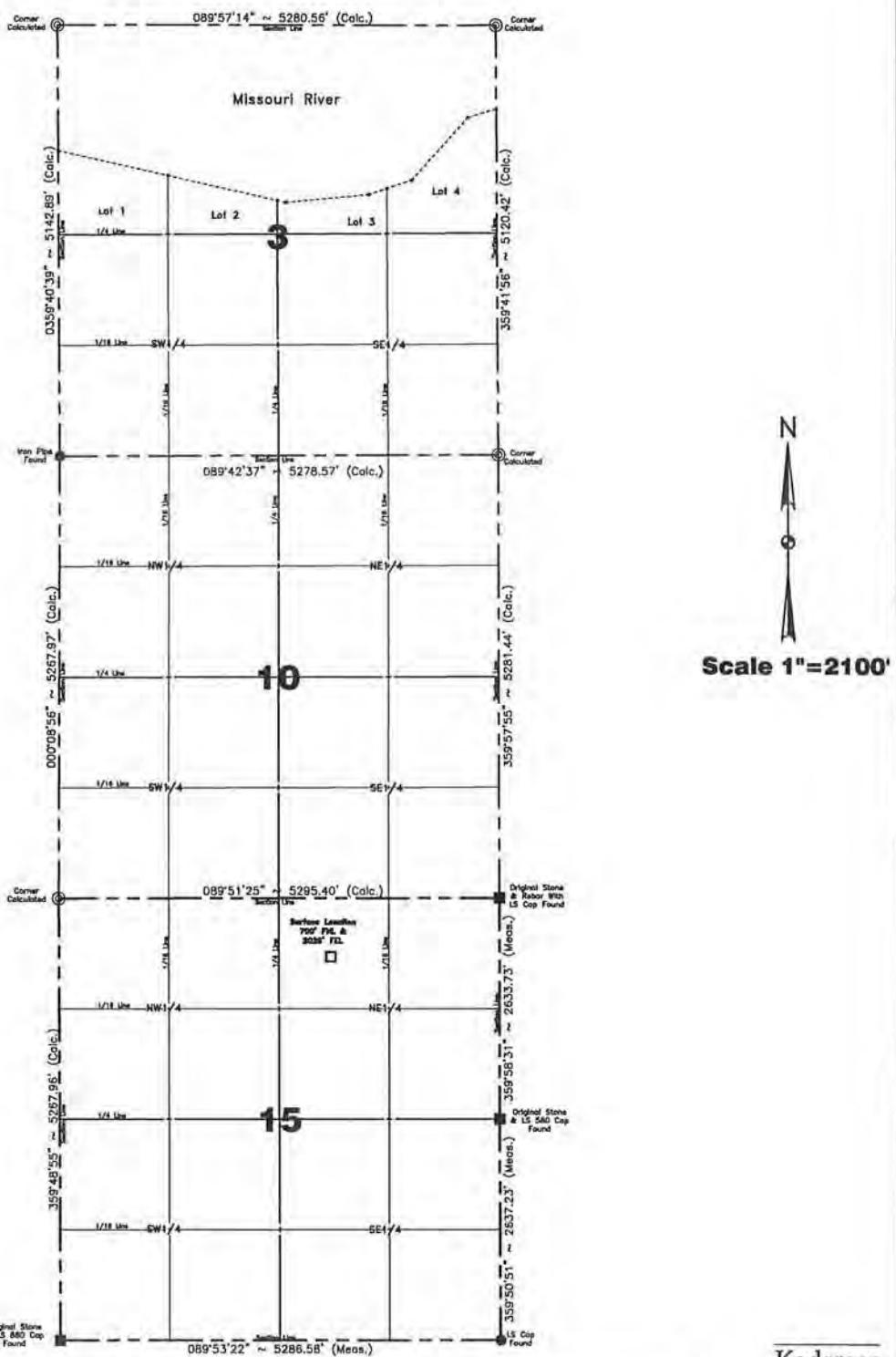
SM Energy Company  
P.O. Box 7168 Billings, MT 59103

Dahl Federal 2-15H

700 feet from the north line and 2026 feet from the east line (surface location)  
Section 15, T. 153 N., R. 101 W., 5th P.M.

McKenzie County, North Dakota

Surface owner @ well site - Sharon D Eilers ETAL  
Latitude 48°04'49.25" North; Longitude 103°39'20.15" West (surface location)  
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Computed & Drawn By M.B. - D.F.	Surveyed By A.M. - A.S.	Approved By D. Leischner	Scale 1"=2100'	Date 12/16/2010
Field Book 0-82	Material B.H. Layout	Revised 7/15/2011	Project No. 8710826	Drawing No. 5

Kadrmas  
Lee &  
Jackson  
Engineers Surveyors  
Planners

**SM Energy Company**  
**Dahl Federal 2-15H**  
**Section 15 T. 153 N., R. 101 W., 5th P.M.**  
**McKenzie County, North Dakota**

Well Site Elevation	2052.4'	MSL
Well Pad Elevation	2052.2'	MSL
Excavation	7,460	C.Y.
Cutting Pit	625	C.Y.
	<hr/>	
	8,085	C.Y.
Embankment	3,350	C.Y.
Plus Shrinkage (+30%)	1,005	C.Y.
	<hr/>	
	4,355	C.Y.
Stockpile Pit	3,150	C.Y.
Stockpile Top Soil (6")	2,905	C.Y.
Road Embankment & Stockpile from Pad	200	C.Y.
Disturbed Area From Pad	3.60	Acres

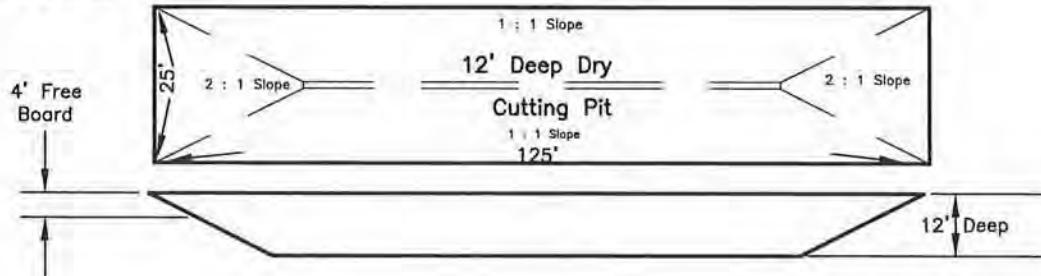
**NOTE :**

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

700' FNL  
2026' FEL

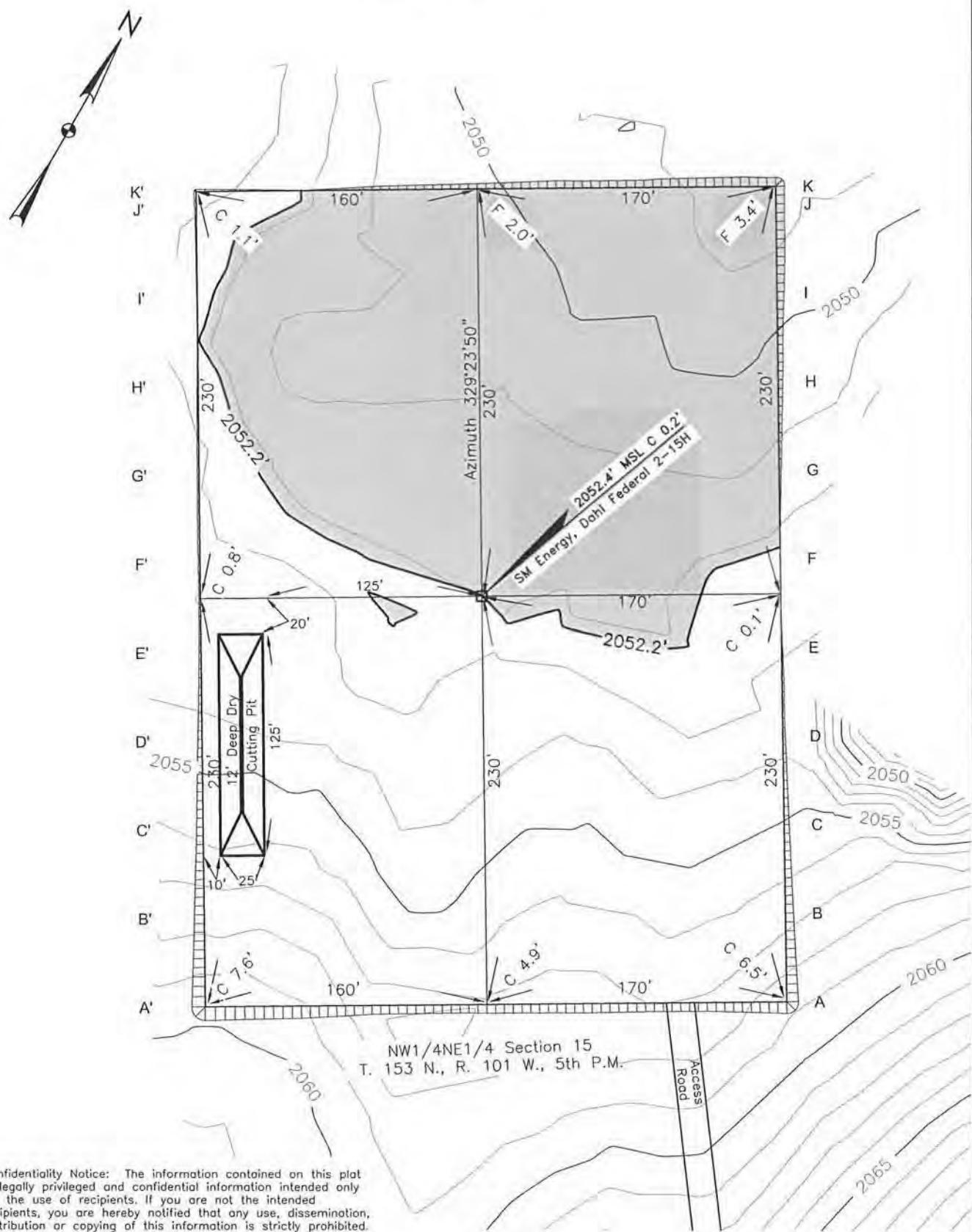
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prohibited.



Drawn By D. Flinders	Surveyed By A. Staloch	Approved By D. Leischner	Scale None	Date 12/17/2010
Field Book 0-88	Material Quantities	Revised 8/29/2011	Project No. 8710826	Drawing No. 6

**Kadrmas  
Lee &  
Jackson**  
Engineers Surveyors  
Planners

Dahl Federal 2-15H  
Original Ground

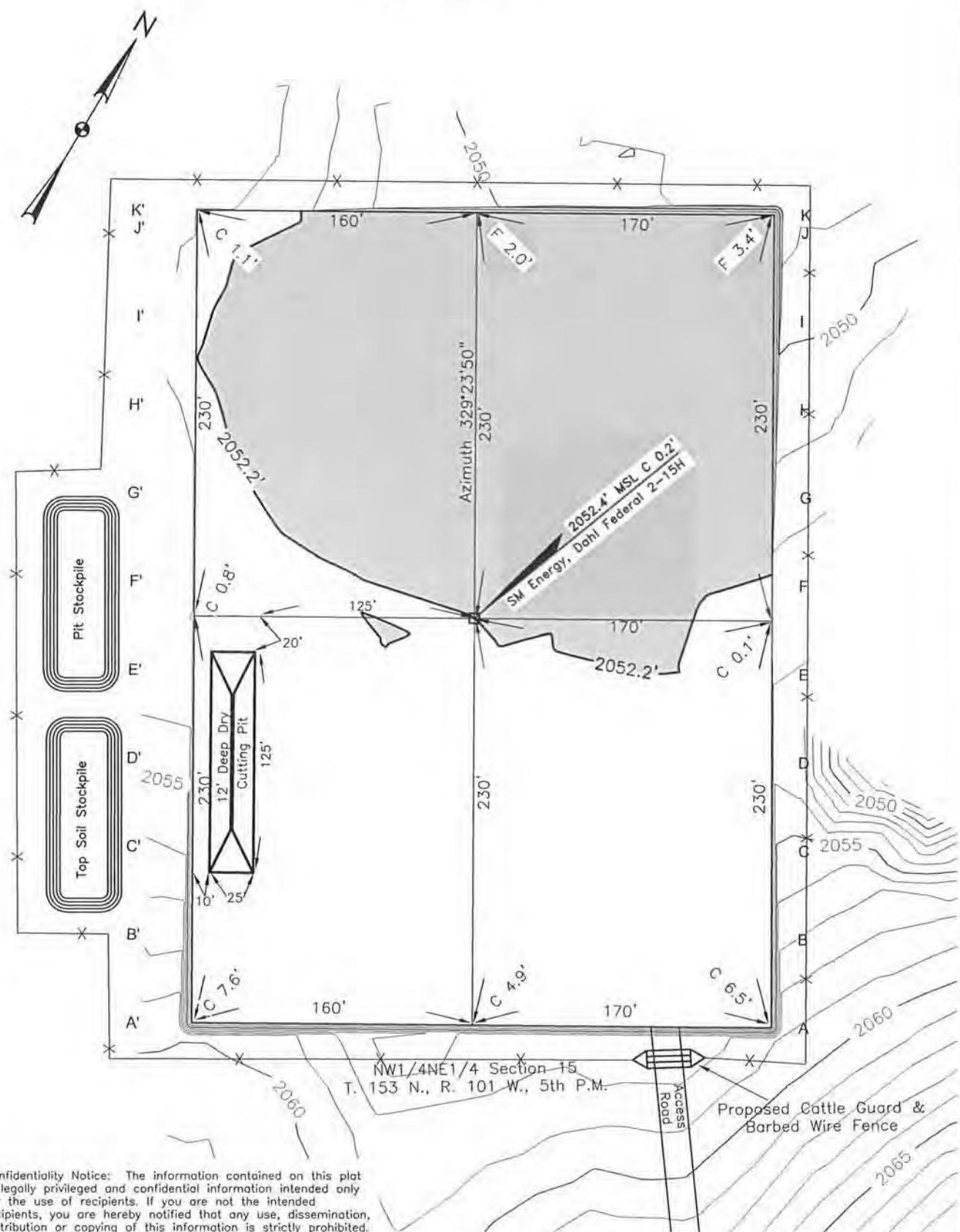


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Drawn By D. Flinders	Surveyed By A. Staloch	Approved By D. Leischner	Scale 1" = 80'	Date 3/07/2011
Field Book 0-88	Material Original Ground	Revised 8/29/2011	Project No. 8710826	Drawing No. 7

Kadrmas  
Lee &  
Jackson  
Engineers Surveyors  
Planners

# Dahl Federal 2-15H Pad Layout

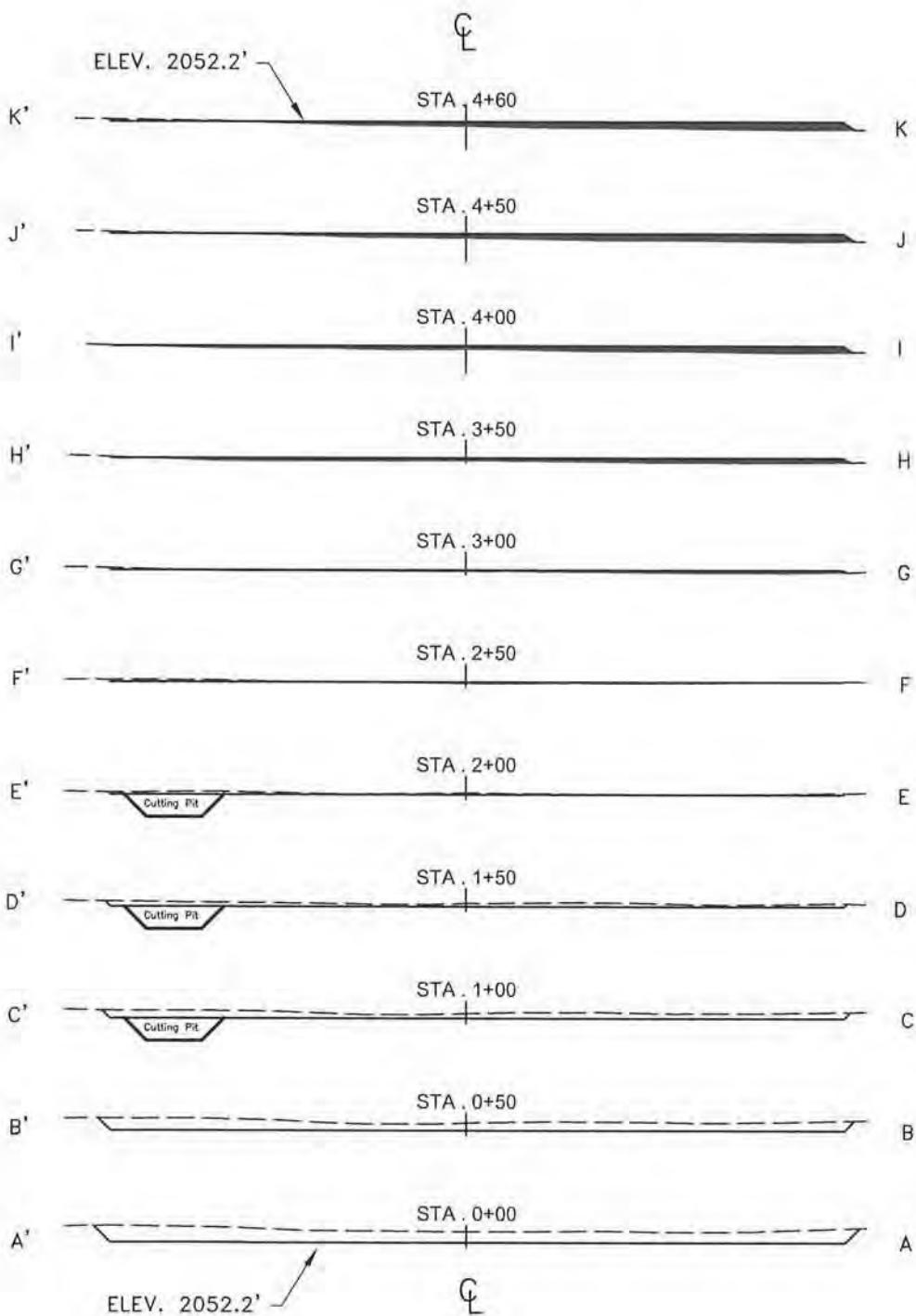


Drawn By D. Flinders	Surveyed By A. Staloch	Approved By D. Leischner	Scale 1" = 80'	Date 12/17/2010
Field Book 0-88	Material Pad Layout	Revised 8/29/2011	Project No. 8710826	Drawing No. 8

Kadrmas  
Lee &  
Jackson  
Engineers Surveyors  
Planners

# Dahl Federal 2-15H

## Cross Sections

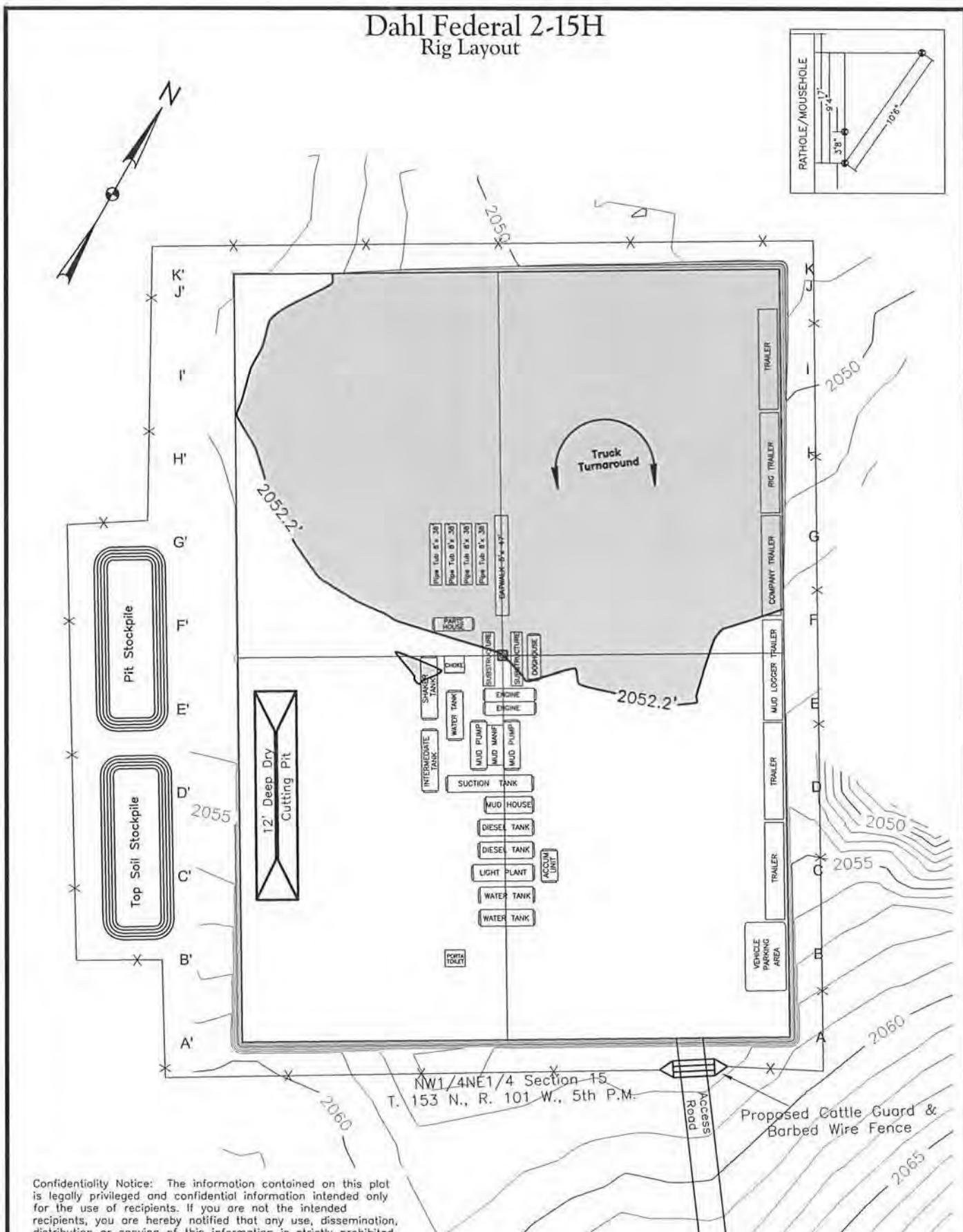


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Drawn By D. Flinders	Surveyed By A. Staloch	Approved By D. Leischner	Scale 1" = 80'	Date 3/07/2011
Field Book 0-88	Material Cross Sections	Revised 8/29/2011	Project No. 8710826	Drawing No. 9

**Kadrmas  
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Jackson  
Engineers Surveyors  
Planners**

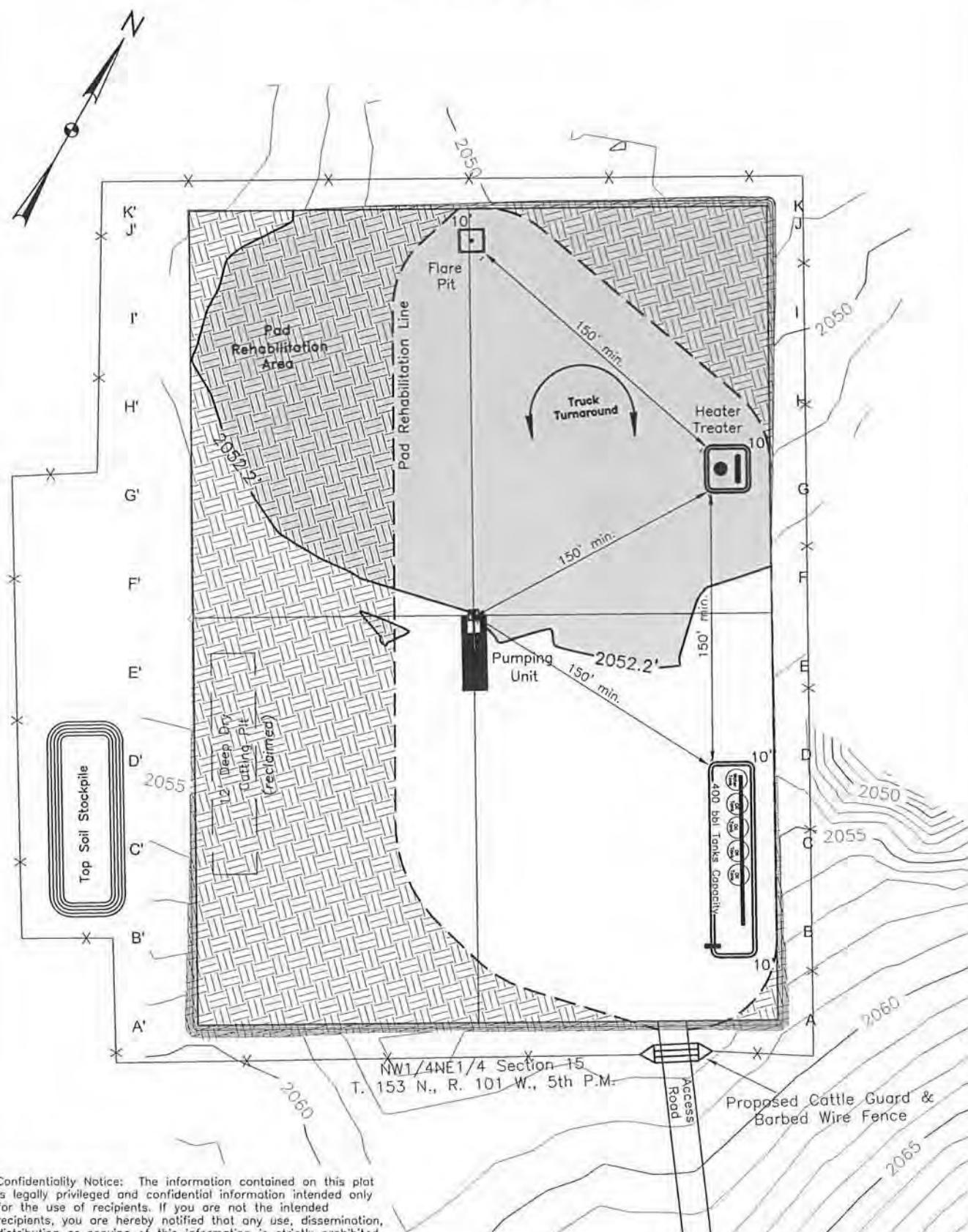
# Dahl Federal 2-15H Rig Layout



Drawn By D. Flinders	Surveyed By A. Staloch	Approved By D. Leischner	Scale 1" = 80'	Date 3/07/2011
Field Book 0-88	Material Rig Layout	Revised 8/29/2011	Project No. 8710826	Drawing No. 10

Kadrmas  
Lee &  
Jackson  
Engineers Surveyors  
Planners

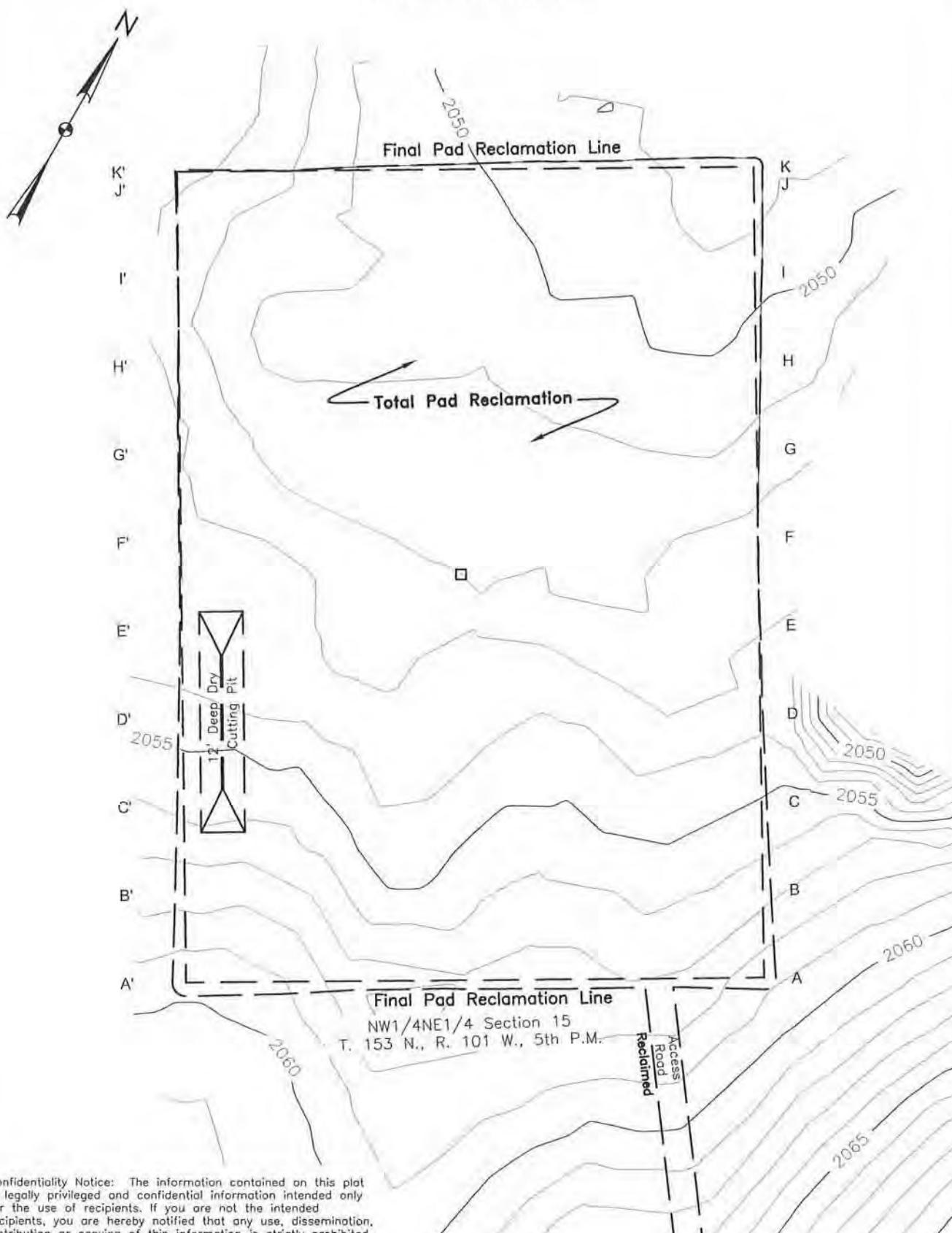
# Dahl Federal 2-15H Production Layout



Drawn By D. Flinders	Surveyed By A. Staloch	Approved By D. Leischner	Scale 1" = 80'	Date 3/07/2011
Field Book 0-88	Material Prod. Layout	Revised 8/29/2011	Project No. 8710826	Drawing No. 11

**Kadrmas  
Lee &  
Jackson**  
Engineers Surveyors  
Planners

# Dahl Federal 2-15H Reclamation Layout

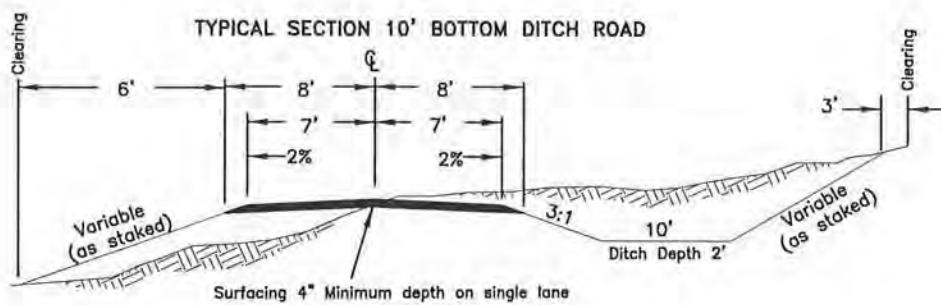


Drawn By D. Flinders	Surveyed By A. Staloch	Approved By D. Leischner	Scale 1" = 80'	Date 3/07/2011
Field Book 0-88	Material Reclam Layout	Revised 8/9/2011	Project No. 8/29/2011	Drawing No. 12

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Jackson  
Engineers Surveyors  
Planners

# Dahl Federal 2-15H

## Roadway Typical Sections



**FILL SLOPES**  
 3:1 Under 4' Height  
 2:1 Over 4' Height  
 (-) Slopes steeper than 2:1 will be subject to FS approval

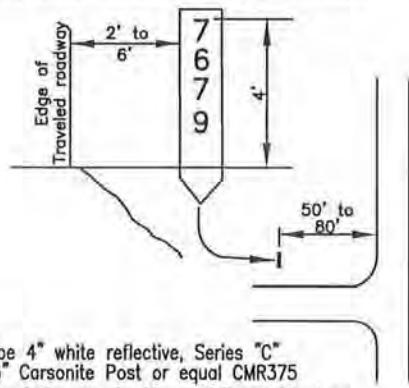
**FILL WIDENING**  
 2' to 5' high/add 1'  
 Over 5' high/add 2'

**CUT SLOPES**  
 3:1 Under 10' height  
 2:1 10' to 20' height  
 (-) Variable over 20' height W/FS approval

**CURVE WIDENING**  
 130 / R

No Scale

### TYPICAL SECTION VERTICAL ROUTE MARKER



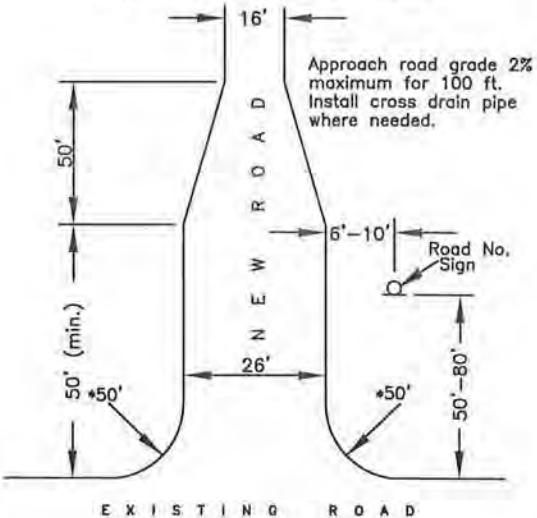
Letters shall be 4" white reflective, Series "C" on Brown 6" 6" Carsonite Post or equal CMR375

Figure 11-28.- Typical Signage for Vertical Route Markers

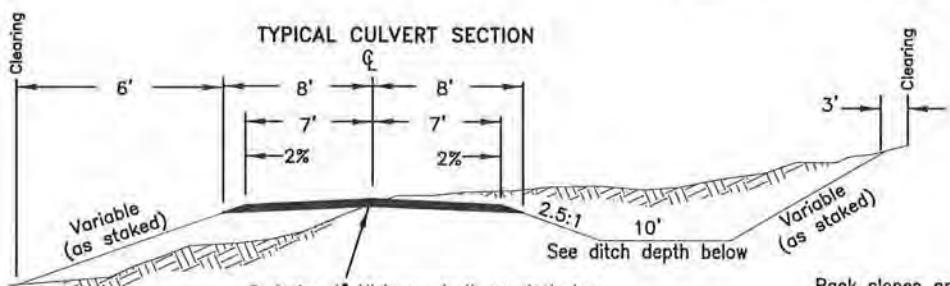
### TYPICAL "F"

No Scale

### TYPICAL APPROACH ROAD CONNECTION



\*As noted on road sheets



Fill slopes are V1 H1.5 (1.5:1) or as staked

Ditch width shall be the larger of the following:

- Standard ditch width
- 2 times the pipe diameter
- 4.25'

CMP diameter	Ditch depth
18"	2.5'
24"	3.0'
36"	4.0'
48"	5.0'

Back slopes are V1 H1 (1:1) or as staked

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Kadrmas

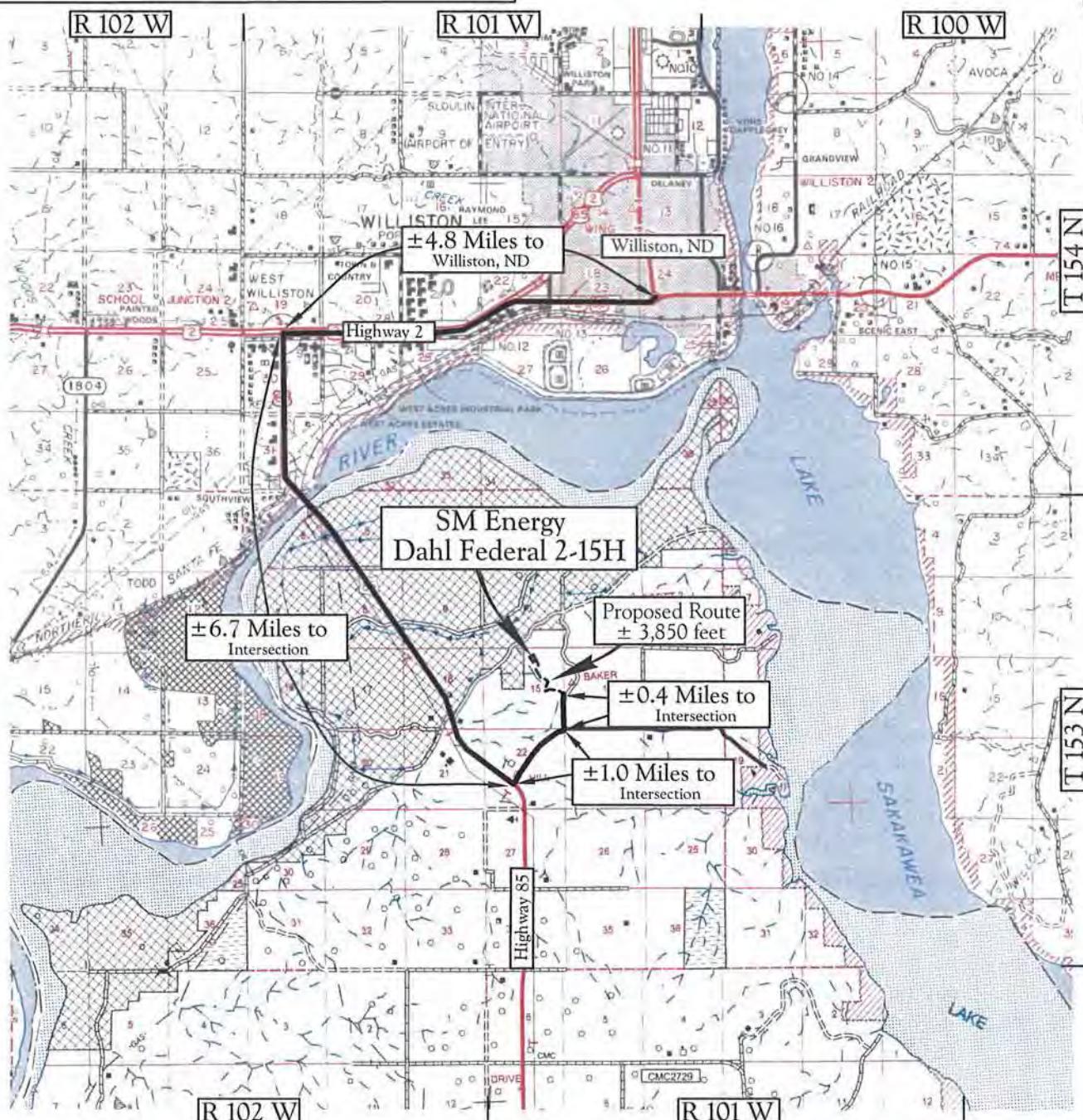
Lee & Jackson  
Engineers Surveyors Planners

Drawn By D. Flinders	Surveyed By A. Staloch	Approved By D. Leischner	Scale None	Date 3/07/2011
Field Book 0-88	Material Road Typical	Revised 7/15/2011	Project No. 8710826	Drawing No. 13

**SM Energy Company**  
**Dahl Federal 2-15H**  
**700' FNL & 2026' FEL**  
**NW1/4NE1/4 Section 15**  
**T. 153 N., R.101W., 5th P.M.**  
**McKenzie County, ND**

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N



Scale 1"=2 Miles

**Map "A"**  
**County Access Route**

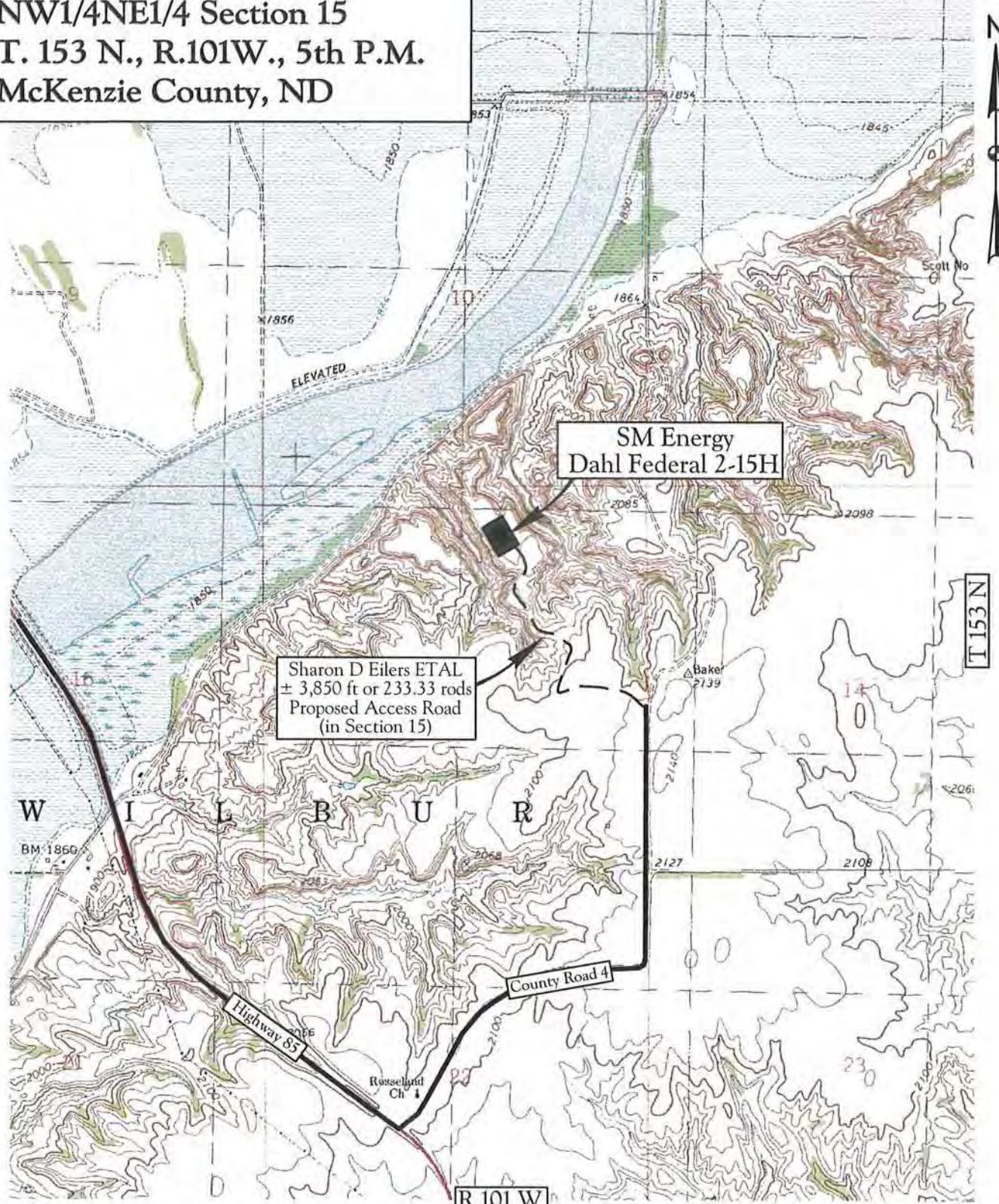
**Legend**

Existing Roads	—
Proposed Roads	— — —

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Jackson**  
Engineers Surveyors  
Planners

**SM Energy Company  
Dahl Federal 2-15H  
700' FNL & 2026' FEL  
NW1/4NE1/4 Section 15  
T. 153 N., R.101W., 5th P.M.  
McKenzie County, ND**

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**Map "B"  
Quad Access Route**

**Legend**

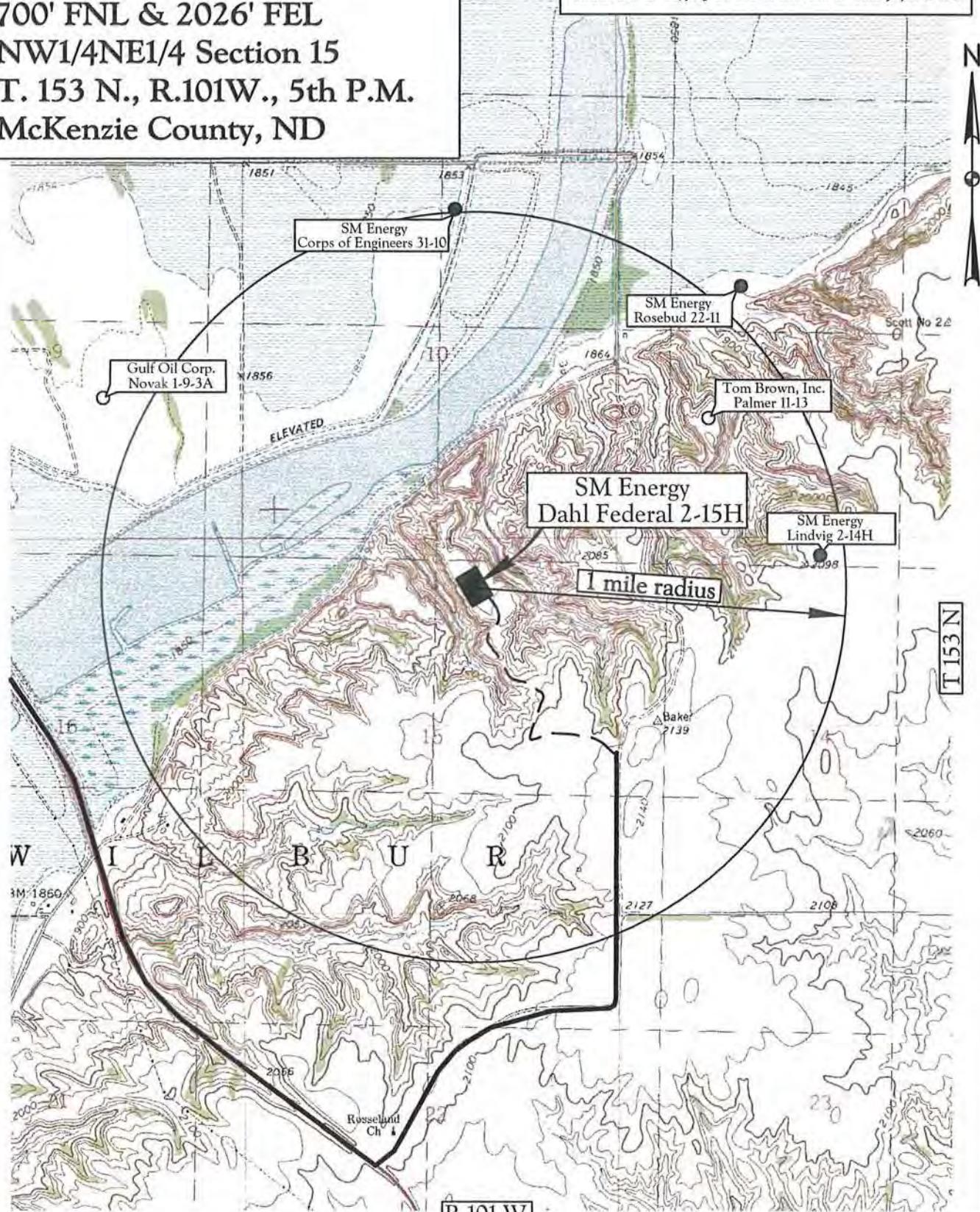
Existing Roads	—
Proposed Roads	- - -

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Scale 1"=2000'

**SM Energy Company**  
**Dahl Federal 2-15H**  
**700' FNL & 2026' FEL**  
**NW1/4NE1/4 Section 15**  
**T. 153 N., R.101W., 5th P.M.**  
**McKenzie County, ND**

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**Map "C"**  
**One Mile Radius Map**

**Legend**

Existing Roads —  
 Proposed Roads - - -

Scale 1"=2000'

**Kadrimas  
 Lee &  
 Jackson**  
Engineers Surveyors  
 Planners

## Legend

<b>wells</b>	○ DRL, AI	○ LOC, GASD
<b>STATUS, WELL_TYPE</b>	○ DRL, GASC	○ LOC, OG
* A, AGD	○ DRL, GASD	○ LOC, SWD
♂ A, AI	○ DRL, OG	○ LOC, WI
☀ A, CBM	○ DRL, SWD	◆ PA, DF
⚡ A, DF	○ DRL, WI	◆ PA, GASC
⌚ A, DFP	○ DRY, GASC	◆ PA, GASD
✳ A, GASC	○ DRY, GASD	◆ PA, GS
✳ A, GASD	○ DRY, OG	◆ PA, OG
✳ A, GASN	○ DRY, ST	◆ PA, SWD
● A, OG	✳ EXP, GASD	◆ PA, WI
△ A, SWD	● EXP, OG	◆ PA, WS
⌚ A, WI	✳ EXP, SWD	-○ PNC, GASD
⚡ A, WS	✳ EXP, WS	-○ PNC, OG
♂ A, AI	♂ IA, AI	-○ PNC, SWD
♂ AB, AI	☀ IA, CBM	☒ TA, AI
☀ AB, DF	⚡ IA, DF	☒ TA, GASC
⌚ AB, DFP	⌚ IA, DFP	☒ TA, GASD
✳ AB, GASC	✳ IA, GASC	☒ TA, OG
✳ AB, GASD	✳ IA, GASD	☒ TA, SWD
♂ AB, GI	● IA, OG	☒ TA, WI
● AB, OG	△ IA, SWD	☒ TA, WS
△ AB, SWD	⌚ IA, WI	☒ TAO, GI
⌚ AB, WI	✳ IA, WS	☒ TAO, OG
⚡ AB, WS	♂ IA, AI	☒ TAO, WI
Confidential, Confidential	○ LOC, GASC	

A = Active, AB = Abandoned, DRL = Drilling, Dry = Dry, EXP = Expired, IA = Inactive, LOC = Location, PA = Producer Abandoned, PNC = Permit Now Cancelled  
 TA = Temporarily Abandoned, TAO = Temporarily Abandoned Observation.

AGD = Acid Gas Disposal, AI = Air Injection, DF = Dump Flood, DFP = Dump Flood Producing, GASN = Nitrogen Gas Well, GASC = Gas Condensate, GASD = Gas Dry, GI = Gas Injection, GS = Gas Storage, OG = Oil or Gas Well, SWD = Salt Water Disposal, WI = Water Injection, WS = Water Supply, ST = Strat Test

Exhibit "D"  
GIS Well Symbols



Prepared by NDIC Oil and Gas Division

**AFFIDAVIT  
OF OFF UNIT LOCATION**

STATE: NORTH DAKOTA

COUNTY: McKenzie

AFFIANT: Brook Maier, Landman  
Bakken Oil LLC as agent for  
SM Energy Company, Inc.  
550 N. 31<sup>st</sup> St., Suite 500  
Billings, MT 59101

DATE: August 5th, 2011

Affiant on oath swears that the following statements are true:

My name is Brook Maier. I am the agent who negotiated the Surface Damage Agreement on the Pad consisting of the Dahl Federal 2-15H, which agreement covers the following lands in McKenzie County, North Dakota:

Township 153 North, Range 101 West, 5<sup>th</sup> PM  
Section 15: NW/4NE/4

The agreement provides for drilling of an off unit well, Dahl Federal 2-15H, to be drilled from this site. The landowner is aware and has agreed that a pit for the burial of well cuttings will be located on these lands.

AFFIANT:



Brook Maier

SUBSCRIBED AND SWORN TO before me and personally appeared, Brook Maier, the person known to me to be the affiant and who acknowledged to me he executed this affidavit, this the 6 day of August, 2011.

COMMISSION EXPIRES:

7-20-2013



Notary Public for the State of ND  
Residing at Jamestown ND 58401

