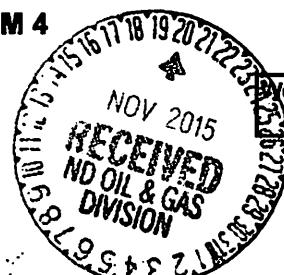




SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

INDUSTRIAL COMMISSION OF NORTH DAKOTA
OIL AND GAS DIVISION
600 EAST BOULEVARD DEPT 405
BISMARCK, ND 58505-0840
SFN 5749 (09-2008)

Well File No.
28634



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 November 6, 2015
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date

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

Well Name and Number
Chalmers 5300 21-19 6B

Footages	Qtr-Qtr	Section	Township	Range
2160 F N L	327 F W L	LOT2	19	153 N 100 W
Field	Pool Bakken		County	McKenzie

24-HOUR PRODUCTION RATE

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

Name of Contractor(s)

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

DETAILS OF WORK

Effective 11/6/2015 the above referenced well is on pump.

End of Tubing: 2-7/8" L-80 tubing @ 10132'

Pump: ESP @ 9873.80'

Company Oasis Petroleum North America LLC	Telephone Number 281-404-9436	
Address 1001 Fannin, Suite 1500		
City Houston	State TX	Zip Code 77002
Signature 	Printed Name Jennifer Swenson	
Title Regulatory Specialist	Date November 19, 2015	
Email Address jswenson@oasispetroleum.com		

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date 11-30-2015	
By Original Signed By: TAYLOR ROTH	
Title Engineering Technician	



SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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



Well File No.

28633TA

28634TA

28635

28636TH

28648TA

28637TA

28649TA

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

<input type="checkbox"/> Notice of Intent	Approximate Start Date
<input checked="" type="checkbox"/> Report of Work Done	Date Work Completed March 14, 2015
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date
<input type="checkbox"/> Drilling Prognosis <input type="checkbox"/> Spill Report <input type="checkbox"/> Redrilling or Repair <input type="checkbox"/> Shooting <input type="checkbox"/> Casing or Liner <input type="checkbox"/> Acidizing <input type="checkbox"/> Plug Well <input type="checkbox"/> Fracture Treatment <input type="checkbox"/> Supplemental History <input type="checkbox"/> Change Production Method <input type="checkbox"/> Temporarily Abandon <input checked="" type="checkbox"/> Reclamation <input type="checkbox"/> Other Reserve pit reclamation	

Well Name and Number
See below

Footages	F N L	F E L	Qtr-Qtr LOT2	Section 19	Township 153 N	Range 100 W
Field Baker			Pool Bakken		County McKenzie	

24-HOUR PRODUCTION RATE

Before	After
Oil	Bbls
Water	Bbls
Gas	MCF

Name of Contractor(s)
Neu Construction

Address 602 W. 9th Street	City Fairview	State MT	Zip Code 59221
-------------------------------------	-------------------------	--------------------	--------------------------

DETAILS OF WORK

Oasis Petroleum North America LLC plans to reclaim the reserve pit for the below referenced wells as follows:

Chalmers 5300 21-19 5T (28633)

Chalmers 5300 21-19 6B (28634)

Chalmers 5300 21-19 7T2 (28635)

Chalmers 5300 21-19 8T (28636)

Chalmers 5300 21-19 9B (28648)

Chalmers 5300 21-19 10T (28637)

Chalmers 5300 21-19 11T (28649)

The NDIC field inspector, Rick Dunn (NDIC) was notified on 03/06/2015

The surface owners, Wesley and Barbara Lindvig, 14075 41st Street NW, Alexander, ND 58831, were contacted on 03/06/2015

Spread material out in pit, cut top edge of liner and fold over cuttings, cover entire pit with liner, back fill with clay
stone and contour well site to ensure proper drainage

Company Oasis Petroleum North America LLC	Telephone Number 281-404-9436	
Address 1001 Fannin, Suite 1500		
City Houston	State TX	Zip Code 77002
Signature 	Printed Name Jennifer Swenson	
Title Regulatory Specialist	Date June 4, 2015	
Email Address jswenson@oasispetroleum.com		

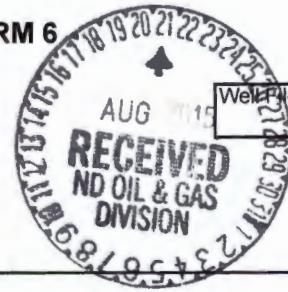
FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date 9-23-15	
By 	
Title 	



WELL COMPLETION OR RECOMPLETION REPORT - FORM 6

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



File No.
28634

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

Chalmers 5300 21-19 6B

Spacing Unit Description

Sec. 19/20 T153N R100W

Operator
Oasis Petroleum North America

Telephone Number
(281) 404-9591

Field
Baker

Address
1001 Fannin, Suite 1500

Pool
Bakken

City
Houston

State
TX

Zip Code
77002

Permit Type
 Wildcat

Development

Extension

LOCATION OF WELL

At Surface		Qtr-Qtr	Section	Township	Range	County
2160	F N L	327 F WL	LOT2	19	153 N	100 W
Spud Date September 30, 2014		Date TD Reached December 12, 2014		Drilling Contractor and Rig Number Nabors B22		KB Elevation (Ft) 2076
						Graded Elevation (Ft) 2051

Type of Electric and Other Logs Run (See Instructions)

MWD/GR from KOP to TD; CBL from Int. TD to surface

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

Well Bore	String Type	Size (Inch)	Top Set (MD Ft)	Depth Set (MD Ft)	Hole Size (Inch)	Weight (Lbs/Ft)	Anchor Set (MD Ft)	Packer Set (MD Ft)	Sacks Cement	Top of Cement
Surface Hole	Surface	13 3/8	0	2190	17 1/2	54.5			1154	0
Vertical Hole	Intermediate	9 5/8	0	6086	13 1/2	36			850	300
Vertical Hole	Intermediate	7	0	11080	8 3/4	32			821	4550
Lateral1	Liner	4 1/2	10132	20580	6	13.5			599	10132

PERFORATION & OPEN HOLE INTERVALS

Well Bore	Well Bore TD Driller's Depth (MD Ft)	Completion Type	Open Hole/Perforated Interval (MD, Ft)	Kick-off Point (MD Ft)	Top of Casing Window (MD Ft)	Date Perfd or Drilled	Date Isolated	Isolation Method	Sacks Cement
			Top	Bottom					
Lateral1	20585	Perforations	11080	20580	10207	04/25/2015			

PRODUCTION

Current Producing Open Hole or Perforated Interval(s), This Completion, Top and Bottom, (MD Ft)					Name of Zone (If Different from Pool Name)			
Lateral 1- 11080' to 20580'								
Date Well Completed (SEE INSTRUCTIONS)			Producing Method		Pumping-Size & Type of Pump			Well Status (Producing or Shut-In)
July 18, 2015			Flowing					Producing
Date of Test 07/19/2015	Hours Tested 24	Choke Size 36 /64	Production for Test		Oil (Bbls) 1606	Gas (MCF) 1552	Water (Bbls) 3175	Oil Gravity-API (Corr.) °
Flowing Tubing Pressure (PSI)	Flowing Casing Pressure (PSI)			Calculated 24-Hour Rate	Oil (Bbls) 1606	Gas (MCF) 1552	Water (Bbls) 3175	Disposition of Gas Sold 966
	1550							

GEOLOGICAL MARKERS

PLUG BACK INFORMATION

CORES CUT

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

Drill Stem Test

Well Specific Stimulation

Date Stimulated 04/25/2015	Stimulated Formation Bakken		Top (Ft) 11080	Bottom (Ft) 20580	Stimulation Stages 36	Volume 223578	Volume Units Barrels
Type Treatment Sand Frac	Acid %	Lbs Proppant 3879492	Maximum Treatment Pressure (PSI) 9244		Maximum Treatment Rate (BBLS/Min) 75.0		
Details 100 Mesh White: 277452 40/70 Ceramic: 1460460 30/50 Ceramic: 2141580							
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 jswenson@oasispetroleum.com	Date 08/20/2015
Signature 	Printed Name Jennifer Swenson	Title Regulatory Specialist



TH

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 5898 (03-2000)

Well File No.
28634
NDIC CTB No.
To-be-assigned

228-33

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND FOUR COPIES.

Well Name and Number CHALMERS 5300 21-19 6B	Qtr-Qtr LOT2	Section 19	Township 153	Range 100	County McKenzie
---	------------------------	----------------------	------------------------	---------------------	---------------------------

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

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

Name of First Purchaser Oasis Petroleum Marketing LLC	Telephone Number (281) 404-9627	% Purchased 100%	Date Effective July 18, 2015
Principal Place of Business 1001 Fannin, Suite 1500	City Houston	State TX	Zip Code 77002
Field Address	City	State	Zip Code
Transporter Hiland Crude, LLC	Telephone Number (580) 616-2058	% Transported 75%	Date Effective July 18, 2015
Address P.O. Box 3886	City Enid	State OK	Zip Code 73702

The above named producer authorizes the above named purchaser to purchase the percentage of oil stated above which is produced from the lease designated above until further notice. The oil will be transported by the above named transporter.

Other First Purchasers Purchasing From This Lease	% Purchased	Date Effective
Other First Purchasers Purchasing From This Lease	% Purchased	Date Effective
Other Transporters Transporting From This Lease	% Transported	Date Effective
Hofmann Trucking	28%	July 18, 2015
Other Transporters Transporting From This Lease	% Transported	Date Effective
		July 18, 2015
Comments		

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

Date
August 13, 2015

Signature

Printed Name
Brianna Salinas

Title
Marketing Assistant

Above Signature Witnessed By:

Signature

Printed Name
Dina Barron

Title
Mktg. Contracts Administrator



FOR STATE USE ONLY	
Date Approved	AUG 28 2015
By	
Title	Oil & Gas Production Analyst

Industrial Commission of North Dakota
Oil and Gas Division

Well or Facility No

28634

Verbal Approval To Purchase and Transport Oil Tight Hole Yes

OPERATOR

Operator OASIS PETROLEUM NORTH AMERICA LL	Representative Todd Hanson	Rep Phone (701) 577-1632
---	--------------------------------------	------------------------------------

WELL INFORMATION

Well Name CHALMERS 5300 21-19 6B	Inspector Richard Dunn
Well Location QQ Sec Twp Rng LOT2 19 153 N 100 W	County MCKENZIE
Footages 2160 Feet From the N Line 327 Feet From the W Line	Field BAKER
Date of First Production Through Permanent Wellhead	Pool BAKKEN
	Date 7/17/2015 This Is Not The First Sales

PURCHASER / TRANSPORTER

Purchaser OASIS PETROLEUM MARKETING LLC	Transporter POWER CRUDE TRANSPORT, INC.
---	---

TANK BATTERY

Central Tank Battery Number : 228633-01

SALES INFORMATION This Is Not The First Sales

ESTIMATED BARRELS TO BE SOLD	ACTUAL BARRELS SOLD	DATE
15000	BBLS	233
	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	7/17/2015
Date Approved	9/1/2015
Approved By	Richard Dunn



SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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

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



Well File No.
28634

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date May 1, 2015	<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input type="checkbox"/> Report of Work Done	Date Work Completed	<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date	<input type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
		<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
		<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
		<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
		<input type="checkbox"/> Other	Waiver from tubing/packer requirement

Well Name and Number Chalmers 5300 21-19 6B				
Footages 2160 F N L	Qtr-Qtr 327 F W L	Section LOT2	Township 19	Range 155 N 100 W
Field Baker	Pool Bakken	County McKenzie		

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

Name of Contractor(s)			
Address	City	State	Zip Code

DETAILS OF WORK

Oasis Petroleum North America LLC requests a variance to NDAC 43-02-03-21 for the tubing/packer requirement: Casing, tubing, and cementing requirements during the completion period immediately following the upcoming fracture stimulation.

The following assurances apply:

1. the well is equipped with new 29# and 32# casing at surface with an API burst rating of 11,220 psi;
2. The Frac design will use a safety factor of 0.85 API burst rating to determine the maximum pressure;
3. Damage to the casing during the frac would be detected immediately by monitoring equipment;
4. The casing is exposed to significantly lower rates and pressures during flowback than during the frac job;
5. The frac fluid and formation fluids have very low corrosion and erosion rates;
6. Production equipment will be installed as soon as possible after the well ceases flowing;
7. A 300# gauge will be installed on the surface casing during the flowback period

Company Oasis Petroleum North America LLC	Telephone Number 281-404-9436	
Address 1001 Fannin, Suite 1500		
City Houston	State TX	Zip Code 77002
Signature 	Printed Name Jennifer Swenson	
Title Regulatory Specialist	Date April 30, 2015	
Email Address jswenson@oasispetroleum.com		

FOR STATE USE ONLY	
<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date May 6, 2015	
By 	
Title PETROLEUM ENGINEER	



SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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

Well File No.
28634



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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date 05/01/215
<input type="checkbox"/> Report of Work Done	Date Work Completed
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	
Approximate Start Date	

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

Well Name and Number Chalmers 5300 21-19 6B					
Footages 2160 F N L	Qtr-Qtr 327 F W L	Section LOT2	Township 19	Range 153 N	Range 100 W
Field Baker	Pool BAKKEN	County McKenzie			

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

Name of Contractor(s)

Address

City

State

Zip Code

DETAILS OF WORK

Effective immediately, we request CONFIDENTIAL STATUS for the above referenced well.

This well has not been completed.

OFF CONFIDENTIAL 11/01/15.

Company Oasis Petroleum North America LLC	Telephone Number 281-404-9436	
Address 1001 Fannin, Suite 1500		
City Houston	State TX	Zip Code 77002
Signature 	Printed Name Jennifer Swenson	
Title Regulatory Specialist	Date April 30, 2015	
Email Address jswenson@oasispetroleum.com		

FOR STATE USE ONLY	
<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date 5/07/15	
By 	
Title Engineering Technician	

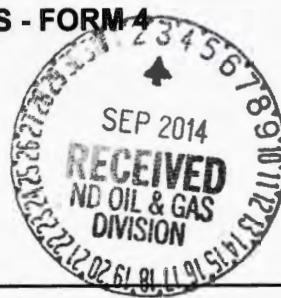


SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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

Well File No.

28634



PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date September 2, 2014	<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input type="checkbox"/> Report of Work Done	Date Work Completed	<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03. Approximate Start Date		<input type="checkbox"/> Casing or Liner	<input 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	Physical Address

Well Name and Number
Chalmers 5300 21-19 6B

Footages	Qtr-Qtr	Section	Township	Range
2160 F N L	327 F W L	LOT2	19	153 N 100 W
Field	Pool Bakken		County	McKenzie

24-HOUR PRODUCTION RATE

Before	After
Oil	Bbls
Water	Bbls
Gas	MCF

Name of Contractor(s)

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

DETAILS OF WORK

Oasis Petroleum respectfully submits the physical address for the above referenced well:

13762 45th Street NW
Alexander, ND 58831

Company Oasis Petroleum North America LLC	Telephone Number 281-404-9563	
Address 1001 Fannin, Suite 1500		
City Houston	State TX	Zip Code 77002
Signature 	Printed Name Heather McCowan	
Title Regulatory Assistant	Date September 2, 2014	
Email Address hmccowan@oasispetroleum.com		

FOR STATE USE ONLY

<input checked="" type="checkbox"/> Received	<input type="checkbox"/> Approved
Date 3/12/2015	
By 	
Title ENGINEERING TECHNICIAN	



Oasis Petroleum North America, LLC

Chalmers 5300 21-19 6B

2,160' FNL & 327' FWL

Lot 2 Sec. 19, 153N, 100W

Baker Field / Middle Bakken

McKenzie County, North Dakota

BOTTOM HOLE LOCATION:

726.73' N & 9,901.09' E of surface location or approx.

1,433.27' FNL & 261.06' FEL, SE NE Sec. 20, T153N, R100W

Prepared for:

Nathan Gabelman
Oasis Petroleum North America, LLC
1001 Fannin Suite 1500
Houston, TX 77002

Prepared by:

Michelle Baker, G. Wayne Peterson
PO Box 80507; Billings, MT 59108
(406) 259-4124
geology@sunburstconsulting.com
www.sunburstconsulting.com

WELL EVALUATION



Figure 1. Nabors B22 drilling the Oasis Petroleum North America, LLC - Chalmers 5300 21-19 6B during September and December, 2014 in Baker Field, McKenzie County, North Dakota.
(G. Wayne Peterson, Sunburst Consulting)

INTRODUCTION

The **Oasis Petroleum North America, LLC Chalmers 5300 21-19 6B** [Lot 2 Section 19, T153N, R100W] is located approximately 7 miles south of the town of Williston in McKenzie County, North Dakota. The Chalmers 5300 21-19 6B is a horizontal Middle Bakken well within the Williston Basin consisting of one 9,503' lateral drilled toward the east. The vertical hole was planned to be drilled to approximately 10,271'. The curve would be built at 12 degrees per 100' to land within the Middle Bakken. This well is a two section lateral which originates in the northwest quarter of section 19, then drilled east to the northeast quarter of section 20. Directional drilling technologies and geo-steering techniques were used to land in the Middle Bakken reservoir and maintain exposure to the ideal target rock.

OFFSET WELLS

Offset well data used for depth correlation during curve operations are found in the ‘Control Data’ section appended to this report. Offset well control was essential in curve operations, to successfully land within the Middle Bakken. Formation thicknesses expressed by gamma ray signatures in these wells were compared to gamma data collected during drilling operations in order to successfully land the curve. The target landing true vertical depth (TVD) was periodically updated during drilling to ensure accurate landing of the curve.

GEOLOGY

The Charles Formation [Mississippian Madison Group] was logged 8,535' MD 8,534' TVD (-6,458' SS). Samples in the lower portion of the Charles Formation consisted of a limestone mudstone, which was light brown, light gray brown, off white in color. It was microcrystalline, friable, laminated, with an earthy texture. A trace of intercrystalline porosity, as was *rare spotty light brown oil stain*. Occasionally noted was a dolomite mudstone, which was light brown, light gray brown in color. It was microcrystalline, friable-firm, laminated, with an earthy texture. Also noted was a trace of intercrystalline porosity, and *occasional spotty light brown oil stain*. Rarely noted was anhydrite, which was off white, cream in color. It was soft, microcrystalline, and massive with an earthy to amorphous texture. Following connections or periods of non-circulation, gas peaks of 32 to 44 units were noted, as were drilling gas shows of 31 to 46 units.

The Mission Canyon Formation [Mississippian Madison Group] was logged 9,432' MD 9,431' TVD (-7,355' SS). The Mission Canyon Formation consisted of a lime mudstone that was described as light gray, light brown, gray brown, trace dark gray in color. The lime mudstone was predominately friable to firm, with an earthy to rarely crystalline in texture. Some intervals contained a trace of black-brown algal material, a trace of fossil fragments, and traces of disseminated pyrite. Also present was an argillaceous lime mudstone that was described as light gray, occasional medium gray, rare gray tan, rare off white, trace dark gray in color. The argillaceous lime mudstone was predominately firm to friable, crystalline to chalky texture. Some intervals contained a trace of disseminated pyrite. Following connections or periods of non-circulation, gas peaks of 51 to 1,414 units were noted, as were drilling gas shows of 31 to 117 units. Rare intercrystalline porosity was noted as well as traces to occasional *spotty light brown oil stain* was occasionally observed while logging the Mission Canyon Formation.

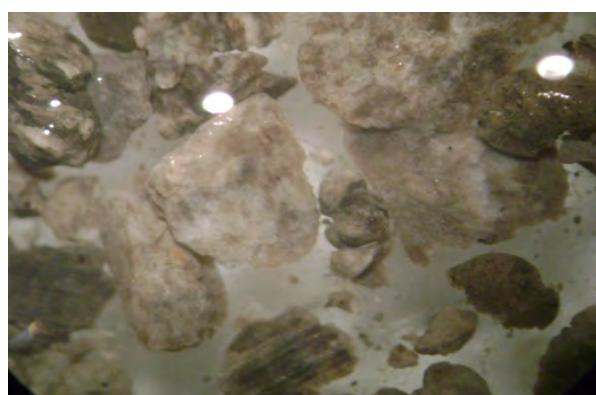


Figure 2. Limestone with spotty light to medium brown staining from the Mission Canyon Formation.

The Upper Bakken Shale [Mississippian-Bakken Formation] was drilled at 10,878' MD 10,724' TVD (-8,648' SS). Entry into this member was characterized by high gamma, elevated background gas and increased rates of penetration. The black to black gray carbonaceous and *petroliferous* shale was hard with a splintery to smooth texture. Fracture porosity was noted, and trace minerals were observed to include disseminated pyrite and calcite fracture fill. Hydrocarbons evaluated in this interval reached a maximum of 532 units drilling gas, with a connection gas of 2,014 units.

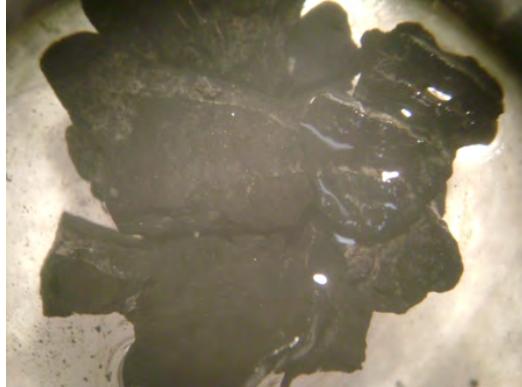
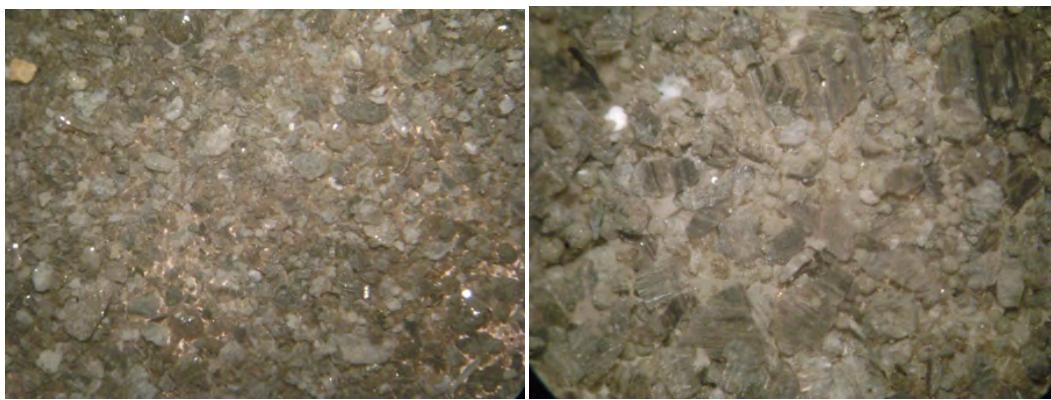


Figure 3. Black carbonaceous and petroliferous shale from the Upper Bakken Shale.

The Middle Bakken [Mississippian-Devonian Bakken Formation] was reached at 10,942' MD 10,739' TVD (-8,663' SS) which was 1' high to the Oasis Petroleum NA LLC Chalmers 5300 21-19 7T2. The target zone of the Middle Bakken was to be drilled in a predominately 10 foot zone beginning 12 feet below the Upper Bakken Shale.

Samples in the Middle Bakken were predominantly silty sandstone which was described as light-medium brown, trace tan-light gray brown, trace gray in color. It was very fine grained, firm-friable, sub rounded to sub angular, smooth, moderately sorted, calcite cement moderately cemented. A trace of disseminated and nodular pyrite was noted as was common intergranular porosity. Also noted was *common light to medium brown spotty to even oil stain*.



Figures 4,5. Predominately silty sandstone sample from the target zone (left), sample from below the target zone (right).

Hydrocarbon Shows

Gas monitoring and fluid gains provided evidence of a hydrocarbon saturated reservoir during the drilling of the Chalmers 5300 21-19 6B. Oil and gas shows at the shakers and in samples were continuously monitored. In the closed mud system, hydrostatic conditions were maintained near balance, this allowed for gas and fluid gains from the well to be evaluated. Gas on the Chalmers 5300 21-19 6B varied according to stratigraphic position and penetration rates which may have reflected increased porosity. During the vertical, connection gas peaks of 12 to 3,531 units were noted, as were drilling gas shows of 31 to 117 units, against a 10.05-10.45 lb/gal diesel-invert mud weight. Background concentrations in the lateral ranged from 300 to 5,000 units, against a 9.7-10.1 lb/gal saltwater gel drilling fluid. Connection peaks of 2,000 to 3,700 units were observed, coinciding with the best shows. The drilling fluid was diverted through the gas buster beginning at 11,389' MD to 19,970' MD effectively muting the recordable gas values. Drilling out of casing at 11,118 MD' yielded a trip gas of 5,010 units, and a trip at 11,389' MD, yielded a trip gas of 12,803 units, along with a 10' to 20' trip gas flare. Chromatography of gas revealed typical concentrations of methane, characteristic of Middle Bakken gas.

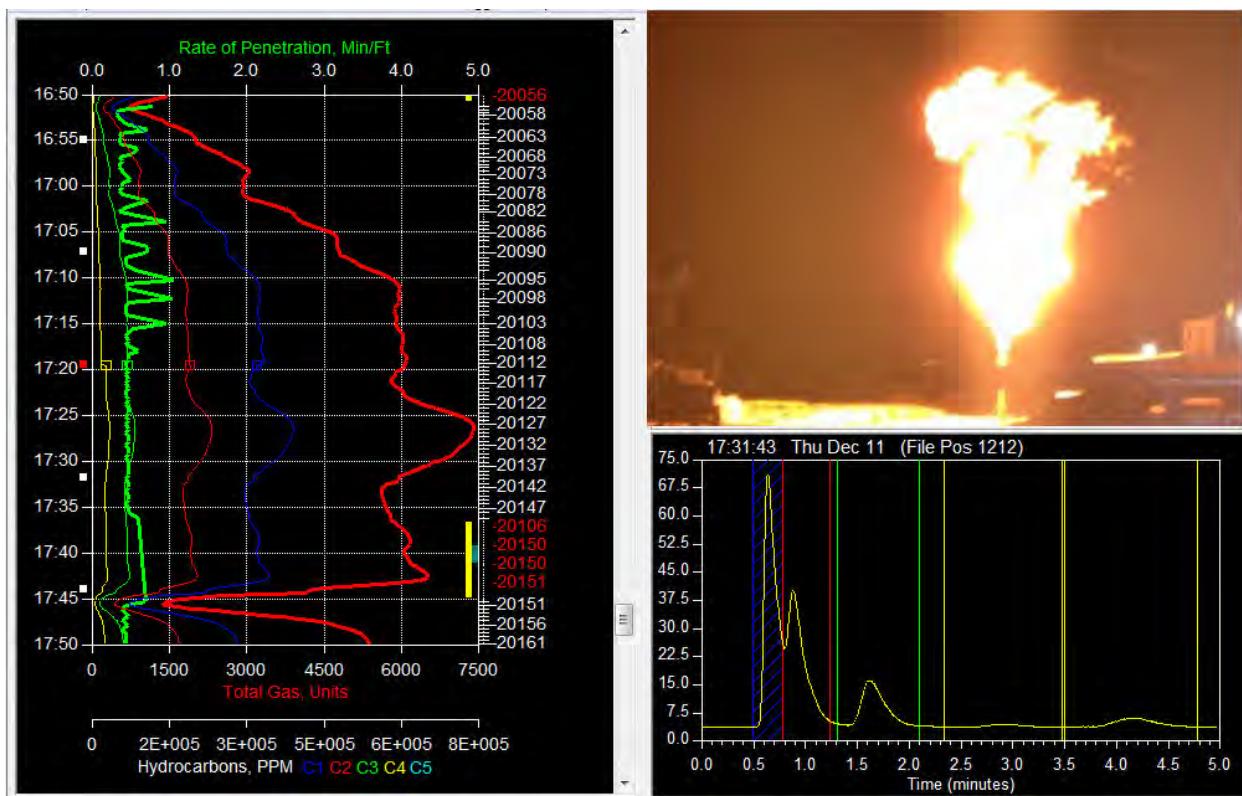


Figure 6. Gas chromatography of a 7,400 unit gas show, picture of a 10' to 20' trip gas flare.

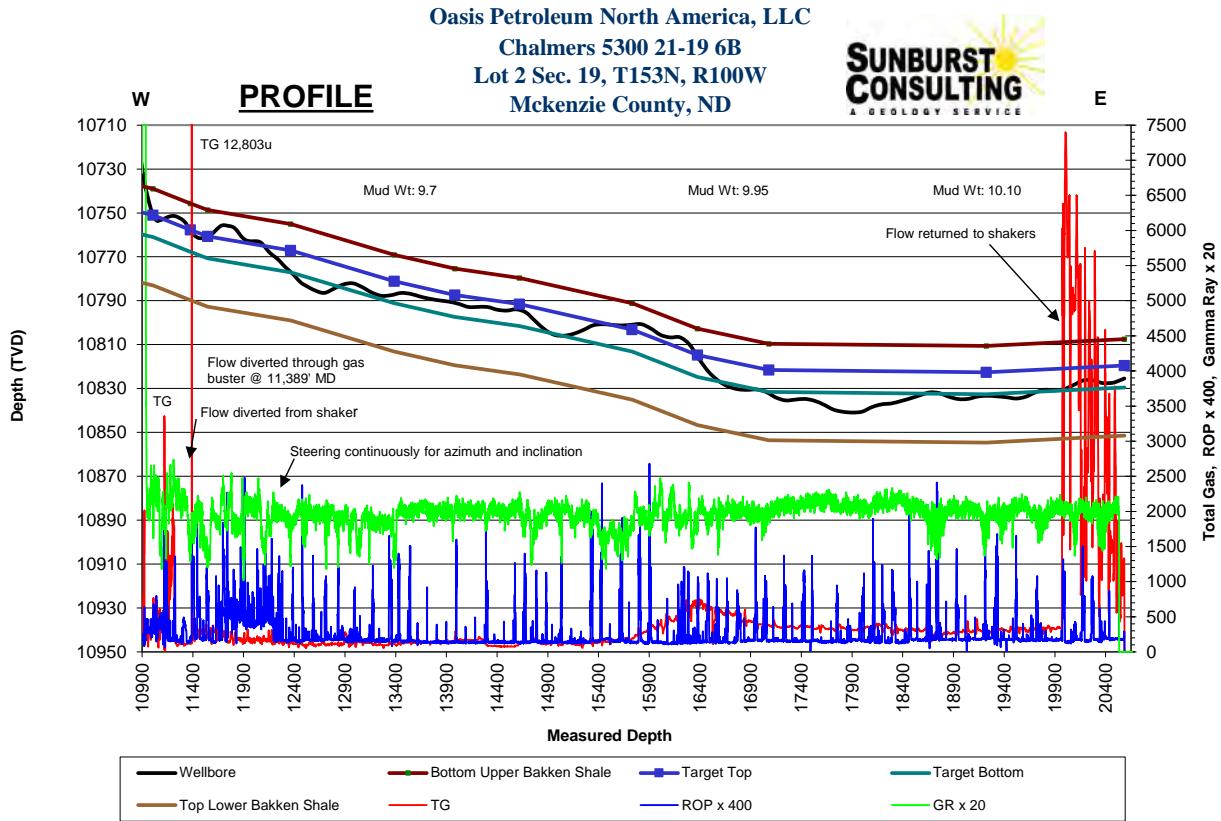


Figure 7. Profile displaying total gas, gamma ray and rate of penetration.

Geosteering

Ryan Energy Technologies provided personnel and equipment for measurement-while-drilling (MWD) services. The RPM directional driller and MWD, and Sunburst Consulting personnel worked closely together throughout the project to evaluate data and make steering decisions to maximize the amount of borehole in the targeted zones and increase rate of penetration (ROP) of the formation.

The 911' curve was drilled in 21 hours with a bottom hole assembly (BHA) consisting of bit #5, a Security MMD64D PDC bit, attached to a 2.38 degree fixed NOV 7/8 5.0 motor and MWD tools. The curve was successfully landed at 11,118' MD and 10,753' TVD, approximately 14' into the Middle Bakken. Seven inch diameter 32# HCP-110 casing was set to 11,082' MD.

Geologic structure maps of the Chalmers 5300 21-19 6B and surrounding control wells had estimated formation dip to be a down dip at approximately -0.3 to -0.5° down to the TD of the lateral. The preferred drilling interval of the Chalmers 5300 21-19 6B consisted of a ten foot zone located approximately twelve feet into the Middle Bakken. Penetration rates, gas shows, gamma ray data, and sample observations were utilized to keep the wellbore in the preferred stratigraphic position in the target zone. Using offset well data provided by Oasis representatives, projected porosity zones were identified in the preferred drilling areas.

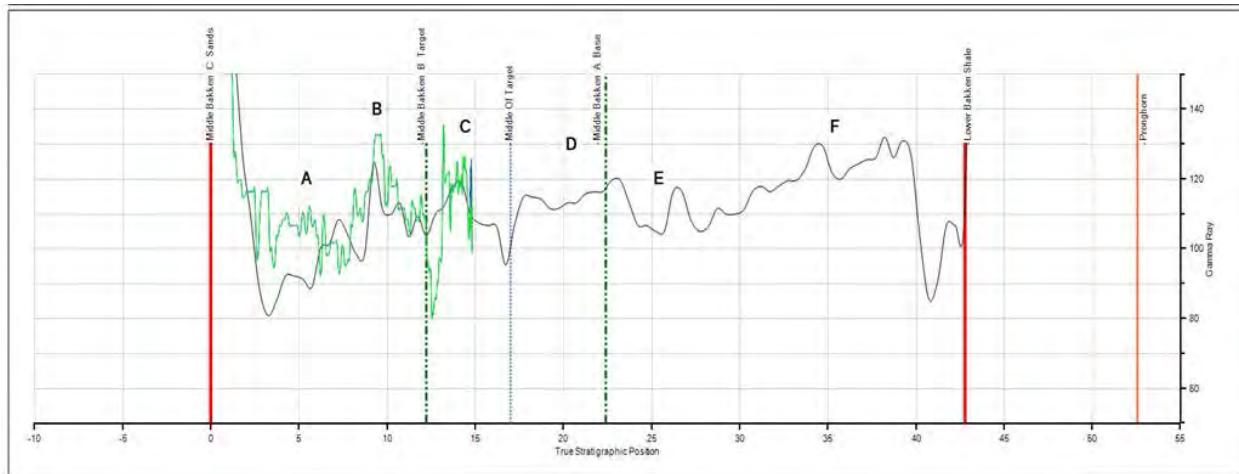


Figure 8. Offset Well Target Definition, Indian Hills Prospect (Oasis).

Steering decisions were made by using the high gamma (C) followed by low gamma as the well-bore moved to the top of the drilling zone. Then the high gamma (B) as the well-bore moved above the target zone. Low gamma in the middle of the target zone was evident and useful in the early portion of the lateral, but later in the lateral his marker appeared to thin to the point that it was difficult to identify. As the well-bore moved lower in formation, lower gamma (D) was noted, then lower gamma as the well-bore exited the target zone. Later in the lateral the well-bore moved below the target zone, and marker (E) was noted as was higher trending gamma indicating that the well-bore was moving lower toward marker (F). Samples collected when drilling below the target zone tended to have a greater concentration of the light gray to gray silty sandstone than did the samples collected when the well-bore was higher in the target zone. The TD of 20,585' MD was achieved at 23:45 hours CST December 11, 2014. The well site team worked together to maintain the well bore in the desired target interval for 66% of the lateral, opening 9,503' of potentially productive reservoir rock. In the later part of the lateral to avoid unnecessary doglegs it was decided not to steer the well-bore into the target zone for the sole purpose of reentering the target zone. The hole was then circulated and reamed for completion.

SUMMARY

The Chalmers 5300 21-19 6B is a successful well in Oasis Petroleum's horizontal Middle Bakken development program in Baker Field. The project was drilled from surface casing to TD in 23 days. The TD of 20,585' MD was achieved at 23:45 hours CST December 11, 2014. The well site team worked together to maintain the well bore in the desired target interval for 66% of the lateral, opening 9,503' of potentially productive reservoir rock. In the later part of the lateral to avoid unnecessary doglegs it was decided not to steer the well-bore into the target zone for the sole purpose of regaining the target zone.

Samples in the Middle Bakken were predominantly silty sandstone which was described as light-medium brown, trace tan-light gray brown, trace gray in color. It was very fine grained, firm-friable, sub rounded to sub angular, smooth, moderately sorted, calcite cement moderately cemented. A trace of disseminated and nodular pyrite was noted as was common intergranular porosity. Also noted was *common light to medium brown spotty to even oil stain*.

Gas on the Chalmers 5300 21-19 6B varied according to stratigraphic position and penetration rates which may have reflected increased porosity. The overall gas and hydrocarbon shows were encouraging and indicate a hydrocarbon rich system in the Middle Bakken.

The Oasis Petroleum North America, LLC. Chalmers 5300 21-19 6B awaits completion operations to determine its ultimate production potential.

Respectfully submitted,

G. Wayne Peterson
Sunburst Consulting, Inc.
14 December, 2014

WELL DATA SUMMARY

<u>OPERATOR:</u>	Oasis Petroleum North America, LLC
<u>ADDRESS:</u>	1001 Fannin Suite 1500 Houston, TX 77002
<u>WELL NAME:</u>	Chalmers 5300 21-19 6B
<u>API #:</u>	33-053-06019
<u>WELL FILE #:</u>	28634
<u>SURFACE LOCATION:</u>	2,160' FNL & 327' FWL Lot 2 Sec. 19, 153N, 100W
<u>FIELD/ PROSPECT:</u>	Baker Field / Middle Bakken
<u>COUNTY, STATE</u>	McKenzie County, North Dakota
<u>BASIN:</u>	Williston
<u>WELL TYPE:</u>	Middle Bakken Horizontal
<u>ELEVATION:</u>	GL: 2,051' KB: 2,076'
<u>SPUD/ RE-ENTRY DATE:</u>	September 30, 2014
<u>BOTTOM HOLE LOCATION</u>	726.73' N & 9,901.09' E of surface location or approx. 1,433.27' FNL & 261.06' FEL, SE NE Sec. 20, T153N, R100W
<u>CLOSURE COORDINATE</u>	Closure Direction: 85.80° Closure Distance: 9,927.72'
<u>TOTAL DEPTH / DATE:</u>	20,585' on December 11, 2014 66% within target interval
<u>TOTAL DRILLING DAYS:</u>	23 days
<u>CONTRACTOR:</u>	Nabors #B22
<u>PUMPS:</u>	H&H Triplex (stroke length - 12")

<u>TOOLPUSHERS:</u>	Jessie Tibbets, Mark Rollins
<u>FIELD SUPERVISORS:</u>	John Gordon, Doug Rakstad
<u>CHEMICAL COMPANY:</u>	NOV
<u>MUD ENGINEER:</u>	Joe Vaith, Joe Stander
<u>MUD TYPE:</u>	Fresh water in surface hole Diesel invert in curve; Salt water in lateral
<u>MUD LOSSES:</u>	Invert Mud: 89 bbls, Salt Water: 0 bbls
<u>PROSPECT GEOLOGIST:</u>	Nathan Gabelman
<u>WELLSITE GEOLOGISTS:</u>	Michelle Baker, G. Wayne Peterson
<u>GEOSTEERING SYSTEM:</u>	Sunburst Digital Wellsite Geological System
<u>ROCK SAMPLING:</u>	30' from 8,240' - 20,585 (TD)
<u>SAMPLE EXAMINATION:</u>	Binocular microscope & fluoroscope
<u>SAMPLE CUTS:</u>	Trichloroethylene (Carbo-Sol)
<u>GAS DETECTION:</u>	MSI (Mudlogging Systems, Inc.) TGC - total gas with chromatograph Serial Number(s): ML-134
<u>ELECTRIC LOGS:</u>	n/a
<u>DRILL STEM TESTS:</u>	n/a
<u>DIRECTIONAL DRILLERS:</u>	RPM, Inc. John Gordon, Doug Rakstad, Robert Jasper
<u>MWD:</u>	Ryan Mike McCommard, Ronald Maddalena, Brandon Tankersley Jason Bannahhan
<u>CASING:</u>	Surface: 13 3/8" 54# J-55 set to 2,190' Second: 9 5/8" 40# HCL-80 set to 6,100' Intermediate: 7" 32# P-110 set to 11,082'

KEY OFFSET WELLS:

Oasis Petroleum North America, LLC
Chalmers 5300 31-19H
NW SW Sec. 19 T153N R100W
McKenzie County, ND

Oasis Petroleum North America, LLC
Chalmers 5300 21-19 8T
Lot 2, Sec. 19, T153N, R100W
McKenzie County, ND

Oasis Petroleum North America, LLC
Chalmers 5300 21-19 7T2
Lot 2, Sec. 19, T153N, R100W
McKenzie County, ND

Oasis Petroleum North America, LLC
Chalmers 5301 44-24 4T2R
SE SE Sec. 24 T153N R101W
McKenzie County, ND

WELL LOCATION PLAT

OASIS PETROLEUM NORTH AMERICA, LLC
1001 FANNIN, SUITE 1500, HOUSTON, TX 77002

SECTION 19, T153N, R100W, 8TH P.M., MCKENZIE COUNTY, NORTH DAKOTA
2160 FEET FROM NORTH LINE AND 327 FEET FROM WEST LINE
"MCALMERS 5300 21-19 BB"

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°03'35"
2830.15'

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°00'00"
2640' (GLO)

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°00'00"
1947' (GLO)

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°00'00"
1831.5' (GLO)

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°00'00"
1444' (GLO)

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°00'00"
1056' (GLO)

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°00'00"
5280' (GLO)

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°00'00"
5148' (GLO)

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°00'00"
1207' (GLO)

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°00'00"
1507' (GLO)

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°03'03"
2651.37' (GLO)

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°03'03"
2631.68'

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°04'59"
2160'

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°05'03"
1327'

FOUND REBAR
W/ 2' AC
LS 2352
CALCULATED
IN LAKE

R101W
R100W
AZ 90°03'35"
2830.15'

STAKED ON 1/29/14
VERTICAL CONTROL DATUM WAS BASED UPON
CONTROL POINTS WITH AN ELEVATION OF 2014.2'
THIS SURVEY AND PLAT IS BEING PROVIDED AT THE
REQUEST OF ERIC BAXES OF OASIS PETROLEUM. I CERTIFY
THAT THIS PLAT CORRECTLY REPRESENTS WORK
PERFORMED BY ME OR UNDER MY SUPERVISION
AND IS TRUE AND CORRECT TO THE BEST OF MY
KNOWLEDGE AND BELIEF



THIS DOCUMENT WAS ORIGINALLY ISSUED
AND SEALED BY DARYL D. KASEMAN,
REGISTRATION NUMBER 3880 ON
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www.interstateeng.com
Other offices in Montana, North Dakota and South Dakota

OASIS PETROLEUM NORTH AMERICA, LLC
WELL LOCATION PLAT
SECTION 19, T153N, R100W
MCKENZIE COUNTY, NORTH DAKOTA
Drawn By: B.J.H.L. Project No: S13-09-262.01
Checked By: D.D.K. Date: JAN 2014

Revision No.	Date	By	Description
REV. 1	3/12/14	JBL	Moved wells on P&D
REV. 2	4/22/14	BBL	Moved wells on P&D/revised P&D
REV. 3	5/2/14	JBL	Moved wells on P&D/revised P&D

SECTION BREAKDOWN

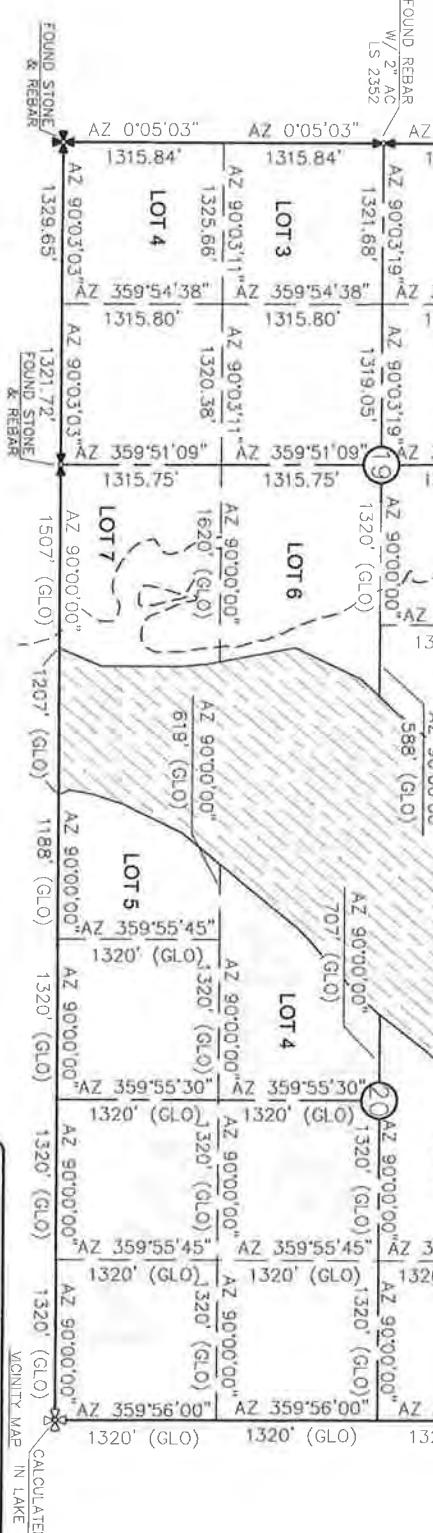
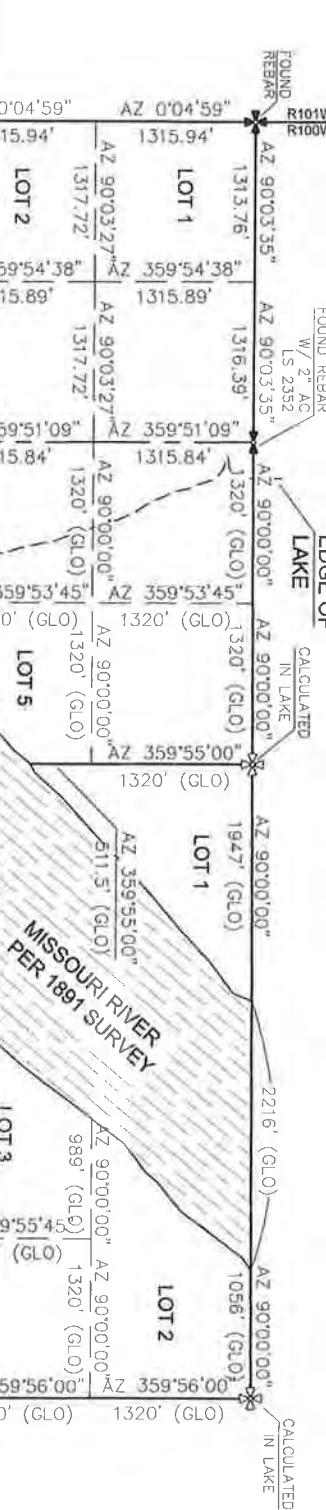
OASIS PETROLEUM NORTH AMERICA, LLC

1001 FANNIN, SUITE 1500, HOUSTON, TX 77002

SECTIONS 19 & 20, T15N R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA

2160 FEET FROM NORTH LINE AND 327 FEET FROM WEST LINE

21-19 BB*



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Skinney, Montana 59270
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Other offices in New Mexico, North Dakota and South Dakota

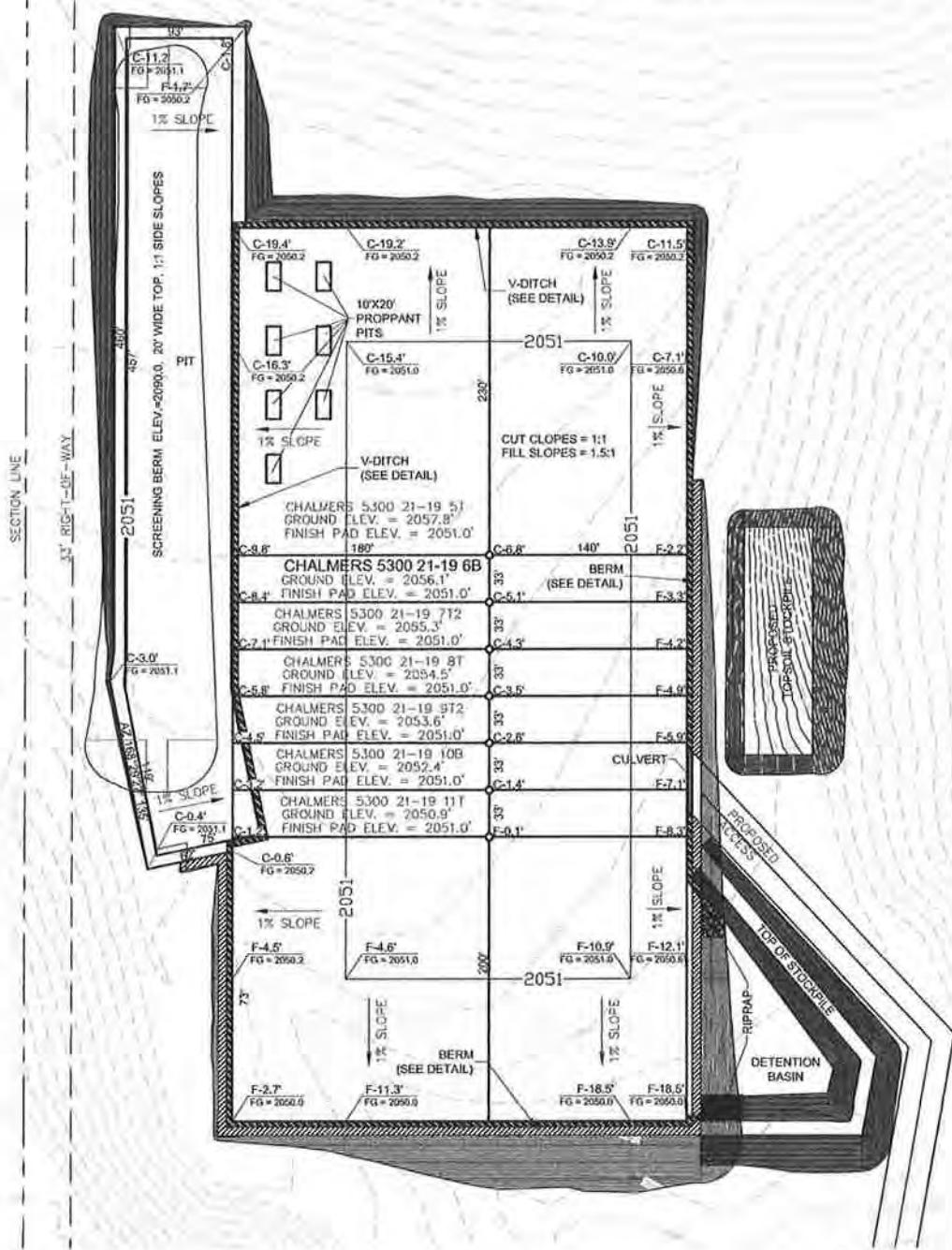
OASIS PETROLEUM NORTH AMERICA, LLC
SECTION BREAKDOWN
SECTIONS 19 & 20, T15N, R100W
MCKENZIE COUNTY, NORTH DAKOTA
Drawn By: B.J.H. Project No.: 813-09-262.01
Checked By: D.D.H. Date: JAN 2014

Reduction Rate	Date	By	Description
REV 1	5/19/14	BB	Moved wells on pad
REV 2	5/20/14	BB	Moved wells on pad/revised pad
REV 3	5/21/14	BB	Moved wells on pad/revised pad

Sheet No. 2/8

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PAD LAYOUT
 OASIS PETROLEUM NORTH AMERICA, LLC
 1001 FANNIN, SUITE 1500, HOUSTON, TX 77002
 "CHALMERS 5300 21-19 6B"
 2160 FEET FROM NORTH LINE AND 327 FEET FROM WEST LINE
 SECTION 19, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA



NOTE 1: Pad dimensions shown are to usable area, the v-ditch and berm areas shall be built to the outside of the pad dimensions.

NOTE 2: Screening berm is to be built after drilling operations are complete.

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Proposed Contours = BERM
 Original Contours = DITCH

NOTE: All utilities shown are preliminary only, a complete utilities location is recommended before construction.

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3/8



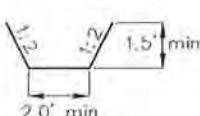
MEET NO.

Interstate Engineering, Inc.
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 Sidney, Montana 59270
 Ph: (406) 433-5617
 Fax: (406) 433-5618
www.interstateeng.com

OASIS PETROLEUM NORTH AMERICA, LLC
 PAD LAYOUT
 SECTION 19, T153N, R100W
 MCKENZIE COUNTY, NORTH DAKOTA

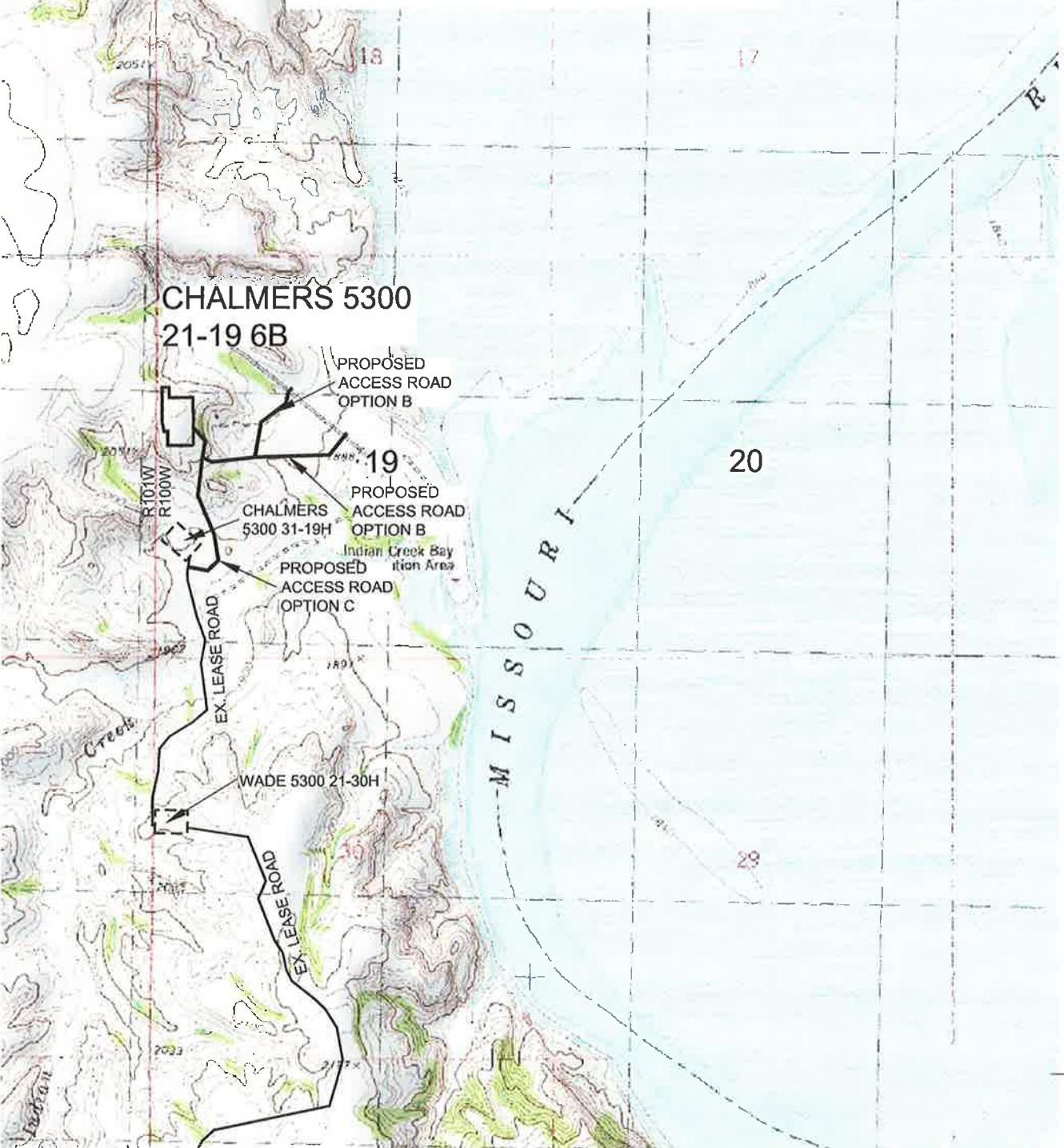
Drawn By: BHN Product No.: 51349-282.01
 Checked By: DDE Date: JUL 2014

Panel/Job No.	Date	Re	Description
REV 1	5/07/14	AS	INITIAL WELL ON PAD
REV 2	5/22/14	REV	SECOND WELL ON PAD/REVISED PAD
REV 3	5/22/14	REV	THIRD WELL ON PAD/REVISED PAD



2076

OASIS PETROLEUM NORTH AMERICA, LLC
 CHALMERS 5300 21-19 6B
 2160' FNL/327' FWL
 QUAD LOCATION MAP
 SECTION 19, T153N, R100W
 MCKENZIE COUNTY, NORTH DAKOTA



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Revision No.	Date	By	Description
REV 1	3/12/14	JBS	MOVED WELLS ON PAD
REV 2	4/22/14	BHH	MOVED WELLS ON PAD/REVISED PAD
REV 3	5/2/14	BHH	MOVED WELLS ON PAD/REVISED PAD

OASIS PETROLEUM NORTH AMERICA, LLC
 QUAD LOCATION MAP
 SECTION 19, T153N, R100W
 MCKENZIE COUNTY, NORTH DAKOTA

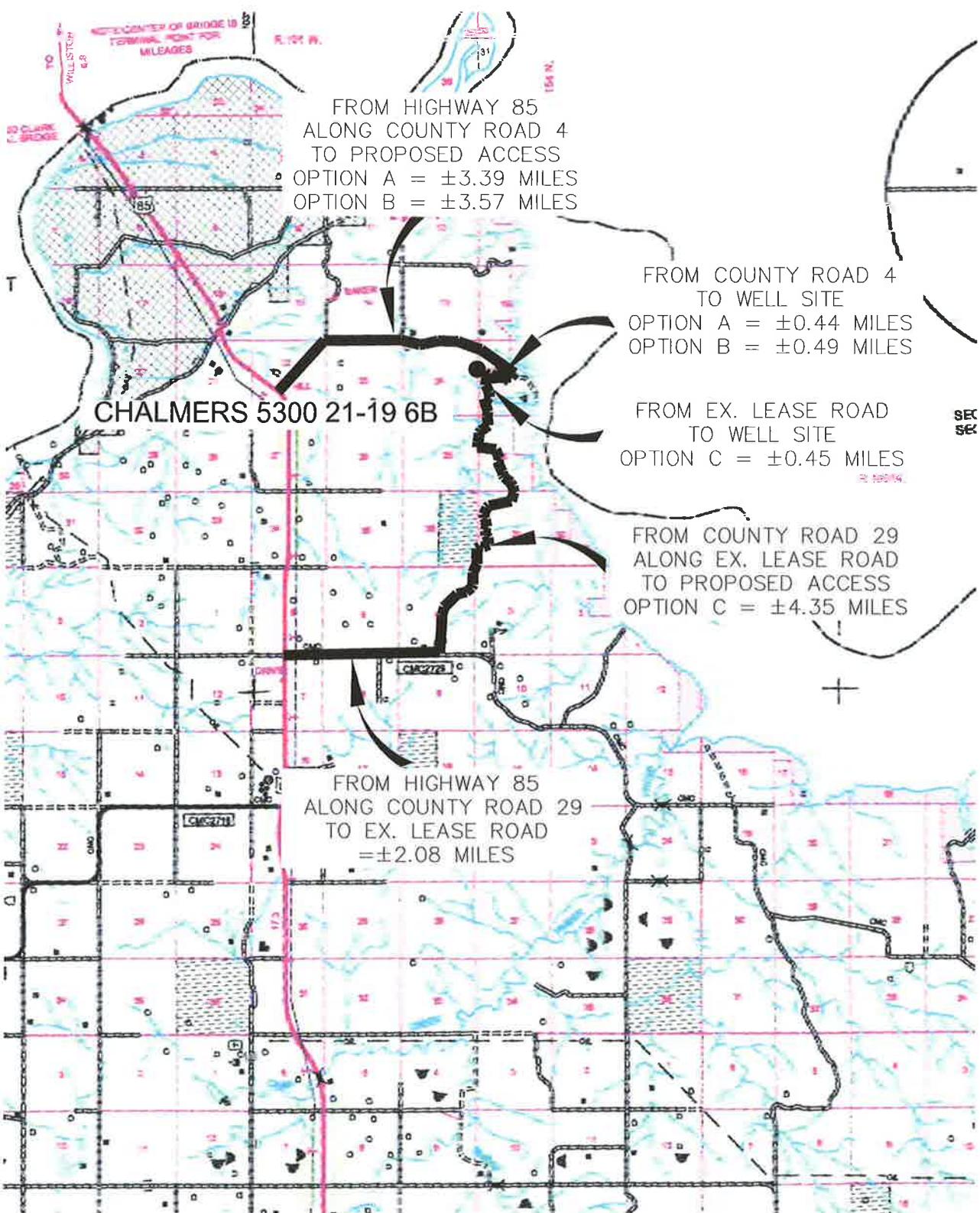
Drawn By: B.H.H. Project No.: S13-05-282.01
 Checked By: D.D.K. Date: JAN, 2014

COUNTY ROAD MAP

OASIS PETROLEUM NORTH AMERICA, LLC
1001 FANNIN, SUITE 1500, HOUSTON, TX 77002

"CHALMERS 5300 21-19 6B"

2160 FEET FROM NORTH LINE AND 327 FEET FROM WEST LINE
SECTION 19, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA



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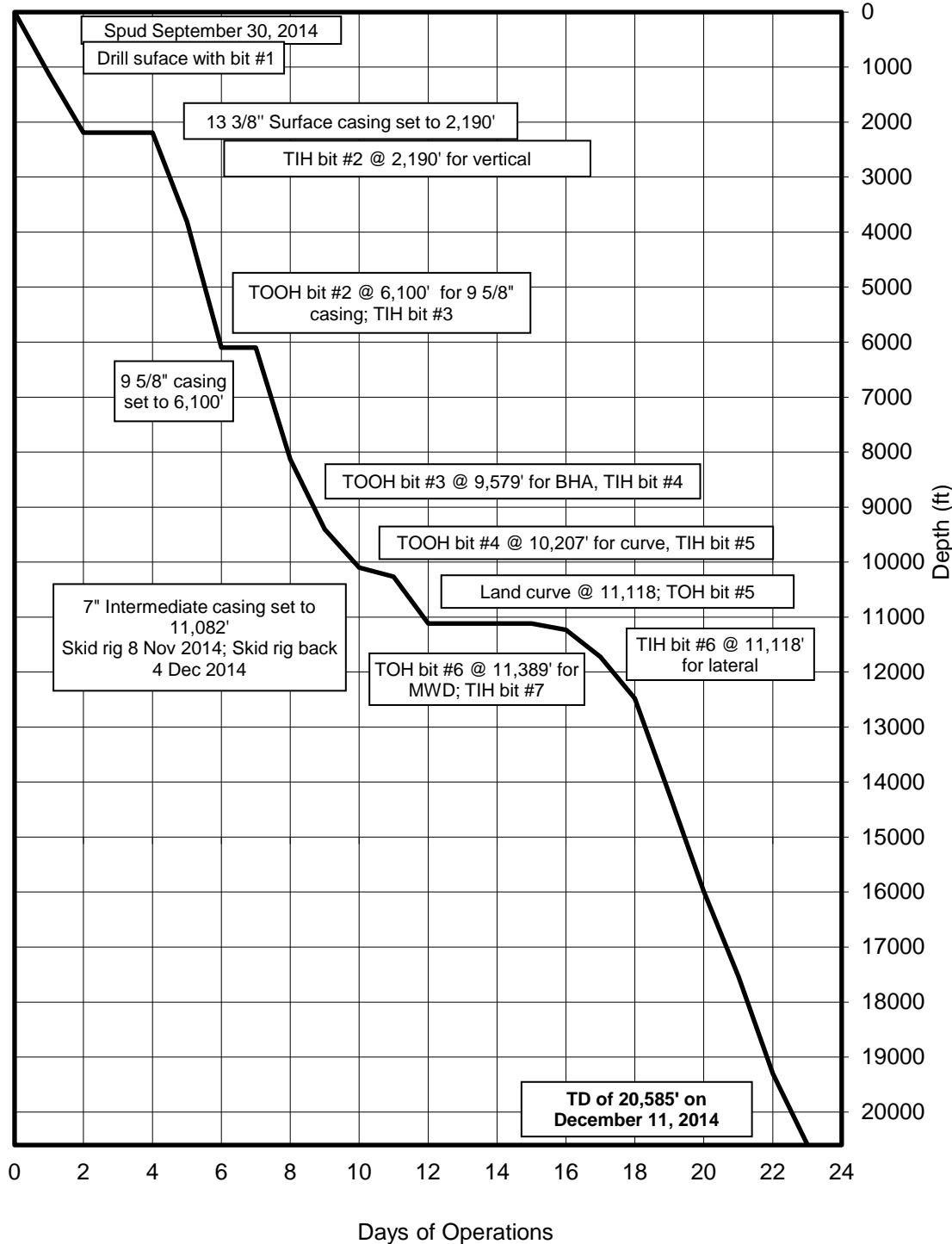
Drawn by: B.H.M. | Project No.: S13-09-282.01
Checked by: D.D.K. | Date: JAN 2014

OASIS PETROLEUM NORTH AMERICA, LLC
COUNTY ROAD MAP
SECTION 19, T153N, R100W
MCKENZIE COUNTY, NORTH DAKOTA

Rev/Ed No.	Date	By	Description
REV 1	3/12/14	JRS	Moved wells on pad
REV 2	4/22/14	BHH	Moved wells on pad/revised pad
REV 3	5/2/14	BHH	Moved wells on pad/revised pad

TIME VS DEPTH

Oasis Petroleum North America, LLC
Chalmers 5300 21-19 6B



DAILY DRILLING SUMMARY

Day	Date 2014	Depth (0600 Hrs)	24 Hr Footage	Bit #	WOB (Klbs) RT	RPM (RT)	WOB (Klbs) MM	RPM (MM)	PP	SPM 1	SPM 2	GPM	24 Hr Activity		Formation
0	9/30	0	-	-	-	-	-	-	-	-	-	-	Rig released from R9384 @ 04:00 9/30/14. Skid rig to Chalmers 5300 21-19 6B.		Surface
1	10/1	1,130'	1,130	1	25	50	-	-	2,400	100	100	704	Pick up BHA. Drill 0'-204' Service rig. Drill 204'-1,130'		Surface
2	10/2	2,190'	1,060	1	25	50	-	-	2,400	100	100	704	Drill 1,130'-1,683'. Service top drive. Drill 1,683'-2,054'. Drill 2,054'- 2,146'. Circulate and condition. TOH. TIH reaming as needed. Circulate and condition. Drill 2,146'-2,190'. Circulate and condition. TOH. Lay down BHA. Rig up to run casing. Pre-job safety meeting. Run casing.		Surface
3	10/3	2,190'	0	-	-	-	-	-	-	-	-	-	Run casing washing to bottom. Rig down casers. Rig up cementers. Cement. Rig down cementers. Rigged cellar pump and hose, sucked out cellar. Cut conductor pipe. Watched casing for 30 min. Cut off casing and put well head in sub. Cut off 13 5/8" casing and lay down. Install well head with welder. Install B section with Weatherford rig. Rig released from Chalmers 5300 21-19 6B, R9388 @ 23:00 on 10/21/14.		Surface
4	10/29	2,190'	0	-	-	-	-	-	-	-	-	-	Skid Rig. Rig up. Nipple up BOPS. Set BOP. Weatherford tighten up bolts. Rig up chike line, flow line, kill line. Test BOPS with Weatherford.		Surface
5	10/30	3,808'	1,618	2	12	65	-	85	3000	93	93	651	Test BOPS. Install wear bushing. Service rig. Pick up BHA. TIH. Remove trip nipple and install rotating head. Displace to oil base mud. Drill cement, float and shoe. Drilled 10' new hole, fit test. Drill 2,190'- 3,808'. Service top drive. Function upper pipes. HCR		Pierre
6	10/31	6,100'	2,292	2	22	60	-	85	3600	93	93	651	Drill 3,808'-5,769'. Service rig. Drill 5,769'-6,100'. Circulate 10 min. Short trip, flow check. Pump dry job. Circulate and condition 2 bottoms up. TOH. Flow check, pump dry job. Pull rotating head. Lay down BHA. Remove wear bushing.		Dakota
7	11/1	6,100'	0	3	-	-	-	-	-	-	-	-	Rig up casers. Hold pre-job safety meeting. Run casing. Rig down casers. Circulate and condition. Rig up cementers. Weatherford check hanger. Cement. Rig down cementers. Pull landing joint. Install wear bushing. Set pack off. Test and set wear bushing. Pressure test casing. Pick up BHA. TIH. Install rotating head. Drill cement float and shoe. Drilled 10' fit test.		Dakota
8	11/2	8,128'	2,028	3	32	45	-	132	3850	78	78	549	Drill and survey vertical hole from 6,100'-7,226'. Service rig. Drill and survey from 7,266'-8,128'.		Otter
9	11/3	9,404'	1,276	3	30	50	40	120	3050	71	71	500	Drill and survey vertical hole from 8,128'-8,844'. Service rig. Drill and survey from 8,844'-9,404'.		Base Last Salt

DAILY DRILLING SUMMARY

Day	Date 2014	Depth (0600 Hrs)	24 Hr Footage	Bit #	WOB (Klbs) RT	RPM (RT)	WOB (Klbs) MM	RPM (MM)	PP	SPM 1	SPM 2	GPM	24 Hr Activity		Formation
10	11/4	10,100'	696	3/4	35	60	-	159	3800	78	78	549	Drill and survey vertical hole from 9,404'-9,579'. Circulate and condition. Pump pill. TOH due to slow ROP. Remove rotating head, install trip nipple. Service rig. TOH. Pick up BHA. TIH. Remove trip nipple, install rotating head. Drill and survey vertical from 9,404'-10,100'		Lodgepole
11	11/5	10,264'	164	4/5	35	60	25	159	3800	78	78	549	Drill and survey vertical hole from 10,100'-10,207'. Circulate and condition. Take survey. Pump pill. TOH to pick up curve assembly. Remove rotating head, install trip nipple. TOH. Lay down BHA. Rig up Schlumberger. Run bond logs. Rig down Schlumberger. Cut drilling line. TIH. Remove trip nipple, install rotating head. Service rig. TIH. Orientate curve, sliding from 10,207'-10,264'		Lodgepole
12	11/6	11,118'	854	5	20	25	40	151	3800	74	74	521	Orientate curve, sliding and rotating as needed from 10,264'-10,576'. Service rig. BOP drill. Drill curve from 10,576'-11,118'. Reach intermediate casing point. Circulate and condition. Wiper trip out and in. Circulate bottoms up.		Middle Bakken
13	11/7	11,118'	0	-	-	-	-	-	-	-	-	-	TOH. Remove rotating head, install trip nipple. TOH. Lay down BHA, bit, motor, 2 monrels, MWD, 2 pony subs, UBHO. Closed blinds took 7 sec. Install wear bushing. Rig up to run casing. Hold safety meeting with casing crew. Run casing. Install float, shoe. Run casing. Service rig. Working pipe tight spot, reciprocate casing. Run casing. Rig down CRT. Rig up wireline crew, hold safety meeting. Run wireline to perf casing. Shot holes in casing with wireline truck, tool stuck in DV tool. Circulate and condition 100 strokes. Try to pressure up on back side to pump out tool. Work tool with wire line truck, stuck in DV tool. Rig down wire line truck. Circulate and condition. Rig up cementers. Hold safety meeting. Cement 7" casing.		Middle Bakken
14	11/8	11,118'	0	-	-	-	-	-	-	-	-	-	Cement. Circulate cement/displace. Rig down cementers. Nipple down BOPS B section from well head-flow line fill line. Rig up BOP wench, pick up BOP. Insert casing slips, slack off casing. Wait on cement. Rig down cement head. Lay down casing, lay down elevators, bell extensions. Wait on welder, cut casing. Rig down BOP wench. Rig released @ 18:00 11/8/2014		Middle Bakken
15	12/4	11,118'	0	-	-	-	-	-	-	-	-	-	Skid rig. Prepare to walk. Move steam line. Pick up BOP. Unhook air, move mats and skid rig. Rig up flowline. Set up cat walk. Nipple up BOP. Set BOP, torque up. Install well cap with Weatherford. Nipple up BOPs. Test BOPs. Service rig. Install weatherford wear bushing and pack off. Slip and cut. Pick up lateral BHA. Prepare to trip in the hole.		Middle Bakken

DAILY DRILLING SUMMARY

Day	Date 2014	Depth (0600 Hrs)	24 Hr Footage	Bit #	WOB (Klbs) RT	RPM (RT)	WOB (Klbs) MM	RPM (MM)	PP	SPM 1	SPM 2	GPM	24 Hr Activity	Formation
16	12/5	11,234'	116	6	10	30	-	312	2500	86	-	303	Pick up BHA and ghost reamer. TIH. TOH. Set secondary wear bushing with Weatherford.TIH. Orientate tools, scribe and test MWD. TIH. Drill cement from 10,337'-10,457'. Change saver sub. Change quill. Service rig. Drill cement from 10,457'-11,093'. Fit test. Float @ 10,986', Shoe @ 11,080'. Rotary drilling sliding as needed 11,080'-11,234'.	Middle Bakken
17	12/6	11,722'	488	6/7	10	25	25	312	2500	86	-	303	Drill and survey lateral, sliding as needed, from 11,234'-11,389'. Troubleshoot MWD. Circulate and condition. TOO/H Lay down BHA. Pick up BHA. Pick up reamer, install secondary wear bushing. TIH. Rig service. TIH. Rig service. TIH. Drill and survey lateral, sliding as needed, from 11,234'-11,694'. Stop to evaluate well-bore position relative to UBS. Sliding down 11,694'-11,722'.	Middle Bakken
18	12/7	12,480'	758	7	20	40	25	312	2500	86	-	303	Sliding from 11,722'-11,847'. Rig service. Slide from 11,847'-12,194'. Rotate and survey lateral, sliding as needed from 12,194'-12,287'. Rig service. Drill and survey lateral, sliding as needed, from 12,287'-12,480'.	Middle Bakken
19	12/8	14,214'	1,734	7	20	40	25	312	2500	86	-	303	Sliding from 12,508'-13,045'. Rig service. Slide from 13,045'-13,266'-13,631'. Rig service. Rotate and survey lateral, sliding as needed from 13,631'-14,214'. Rig service.	Middle Bakken
20	12/9	15,982'	1,768	7	20	35	30	312	3700	86	-	303	Drill and survey, sliding as needed, from 14,214'-14,875'. Rig service. Drill and survey, sliding as needed, from 14,875'-15,793'. Rig service. Drill and survey, sliding as needed, from 15,793'-15,982'.	Middle Bakken
21	12/10	17,530'	1,548	7	20	35	30	290	3700	80	-	282	Drill and survey, sliding as needed, from 15,982'-16,551'. Rig service. Drill and survey, sliding as needed, from 16,551'-17,120'. Rig service.	Middle Bakken
22	12/11	19,300'	1,770	7	20	55	30	283	3700	78	-	275	Drill and survey, sliding as needed, from 17,120'-17,530'. Drill and survey, sliding as needed, from 17,530'-18,162'. Rig service. Drill and survey, sliding as needed, from 18,162'-18,826'. Rig service. Drill and survey, sliding as needed, from 18,826'-19,300'.	Middle Bakken
23	12/12	20,585'	1,285	7	20	55	30	283	3700	78	-	275	Drill and survey, sliding as needed, from 19,300'-19,774'. Service rig. Drill and survey, sliding as needed, from 19,774'-20,184'. Service rig. Drill and survey, sliding as needed, from 20,184'-20,585' TD. Circulate and condition. Circulate bottoms up. Pump dry job. Service rig. Short trip to shoe.	Middle Bakken

DAILY MUD SUMMARY

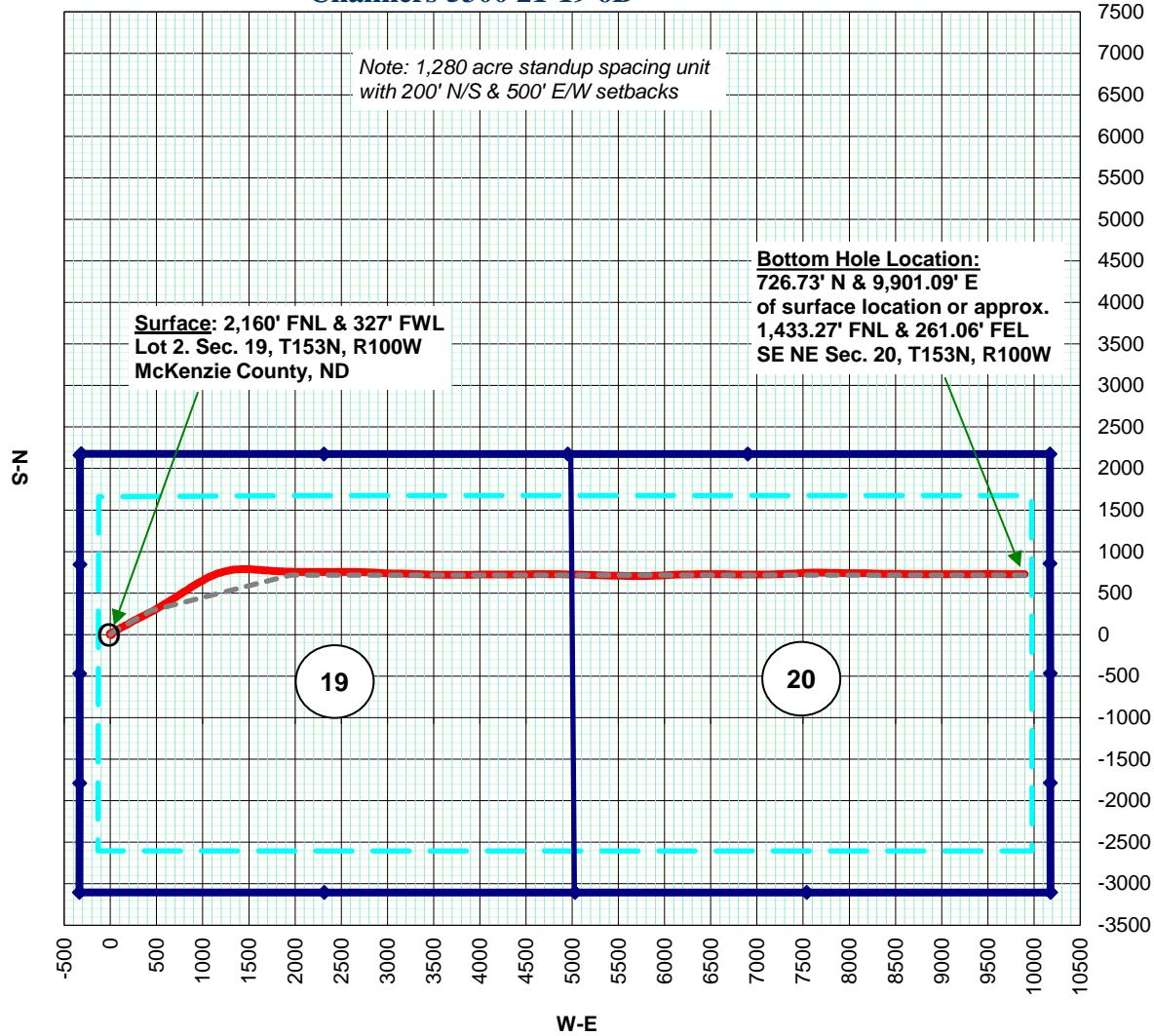
Day	Date 2014	Mud Depth	Drilling Fluid	Mud WT (ppg)	Vis (sec/ qt)	PV (cP)	YP (lbs/ 100 ft ²)	Gels (lbs/ 100 ft ²)	600/ 300	NAP/H ₂ O (ratio)	NAP/H ₂ O (% by vol)	Cake (API/ HTHP)	Cor. Solids (%)	Alk	pH	Excess Lime (lb/bbl)	Cl (mg/L)	HGS/ LGS (%)	Salinity (ppm)	Electrical Stability	Gain/ Loss (bbls)
0	09/30	-	fresh water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	10/01	1,130'	fresh water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	10/02	2,190'	fresh water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	10/03	2,190'	invert	10.45	69	22	11	9/15	55/33	79.9/20.1	67.5/17	3	13.3	2.7	-	3.5	36K	7.9/5.6	258,704	607	-
4	10/29	2,190'	invert	10.45	69	22	11	9/15	55/33	79.9/20.1	67.5/17	3	13.3	2.7	-	3.5	36K	7.9/5.6	258,704	607	-
5	10/30	3,808'	invert	10.45	69	22	11	9/15	55/33	79.9/20.1	67.5/17	3	13.3	2.7	-	3.5	36K	7.9/5.6	258,704	607	-
6	10/31	6,100'	invert	10.2	57	19	7	7/11/-	45/26	76.7/23.3	66/20	3	12	2.4	-	3.1	33K	7.3/4.9	213,787	454	-/-
7	11/01	6,100'	invert	10.2	57	19	7	7/11/-	45/26	76.7/23.3	66/20	3	12	2.4	-	3.1	33K	7.3/4.9	213,787	454	-/-
8	11/02	7,200'	invert	10.2	57	19	7	7/11/-	45/26	76.7/23.3	66/20	3	12	2.4	-	3.1	33K	7.3/4.9	213,787	454	-/-
9	11/03	8,350'	invert	10.05	44	11	7	5/8/-	29/18	80.2/19.8	69/17	3	12	2.4	-	3.1	33K	6.3/6.0	242,370	480	-/30
10	11/04	9,579'	invert	10.5	44	10	7	4/7/-	27/17	82.6/17.4	71/15	3	12	2.6	-	3.4	36K	6.6/5.7	246,320	588	-/30
11	11/05	10,207'	invert	10.25	55	14	8	6/9/-	36/22	82.4/17.6	70/15	3	13	2.7	-	3.5	35K	7.0/5.9	246,320	567	-/69
12	11/06	10,700'	invert	10.35	47	15	10	7/12/-	40/25	81.2/18.8	69/16	3	12.9	2.4	-	3.1	35K	7.8/5.1	246,320	607	-/20
13	11/07	11,118'	invert	10.35	47	15	10	7/12/-	40/25	81.2/18.8	69/16	3	12.9	2.4	-	3.1	35K	7.8/5.1	246,320	607	-/-
14	11/08	11,118'	invert	10.35	47	15	10	7/12/-	40/25	81.2/18.8	69/16	3	12.9	2.4	-	3.1	35K	7.8/5.1	246,320	607	-/-
15	12/04	11,118	saltwater	9.7	27	1	-	3/2	-	0.5/91.5	-	8	-	8	-	161K	-/0.3	-	-	-/-	
16	12/05	11,234'	saltwater	9.7	27	1	-	3/2	-	0.5/91.5	-	8	-	8	-	161K	-/0.3	-	-	-/-	
17	12/06	11,722'	saltwater	9.7	27	1	-	3/2	-	0.5/91.5	-	8	-	8	-	161K	-/0.3	-	-	-/-	
18	12/07	12,480	saltwater	9.95	28	1	-	3/2	-	0.5/90.5	-	9	-	9	-	195K	-/0.3	-	-	-/-	
19	12/08	13,170'	saltwater	9.95	28	1	-	3/2	-	0.5/90.5	-	9	-	9	-	195K	-/0.3	-	-	-/-	
20	12/09	15,982'	saltwater	9.95	28	1	-	3/2	-	0.5/90.5	-	9	-	9	-	195K	-/0.3	-	-	-/-	
21	12/10	17,530	saltwater	9.95	28	1	-	3/2	-	0.5/90.5	-	9	-	9	-	195K	-/0.3	-	-	-/-	
22	12/11	17,994'	saltwater	10.1	28	1	1	1/1/-	3/2	-	0.5/87	-	12.5	-	8	-	210K	-/0.8	-	-	-/-
23	12/12	20,585'	saltwater	10.1	28	1	1	1/1/-	3/2	-	0.5/87	-	12.5	-	8	-	210K	-/0.8	-	-	-/-

BOTTOM HOLE ASSEMBLY RECORD

BHA Run	Depth In	Depth Out	Footage	Hours	Accum. Hours	Vert. Dev.	Bit Data						Motor Data				
							Bit #	Size (in.)	Type	Make	Model	Serial #	Jets	Hours	Motor #	Make	Model
1	0'	2,190'	2,190'	21.5	18.00	Surface	1	17 1/2	PDC	Hughes	PDC	1257356	Open	21.5	-	-	-
2	2,190'	6,100'	3,910'	25.5	47.00	Vertical	2	12 1/4	PDC	Varel	M423	4007272	6x20	25.5	2	NOV	6/5 5.0
3	6,100'	9,579'	3,479'	53	100.00	Vertical	3	8 3/4	PDC	Varel	R616PDG2UX	4007474	6x16	53	3	Hunting	7/8 5.7
4	9,579'	10,207'	628'	7.5	107.50	Vertical	4	8 3/4	PDC	Varel	R616PDG2UX	4007475	6x18	7.5	4	Predator	7/8 5.0
5	10,207'	11,118'	911'	21	128.50	Curve	5	8 3/4	PDC	Security	MMD64D	12564958	6x18	21	5	NOV	7/8 5.0
6	11,118'	11,389'	271'	13	141.50	Lateral	6	6	PDC	Security	MMD64D	1255278	6x18	13	6	Baker	XLP 1.50°
7	11,389'	20,585'	9,196'	112	253.50	Lateral	7	6	PDC	Baker	T406	7154686	6x18	112	7	Baker	XLP 1.50°
															112	1.03	

PLAN VIEW

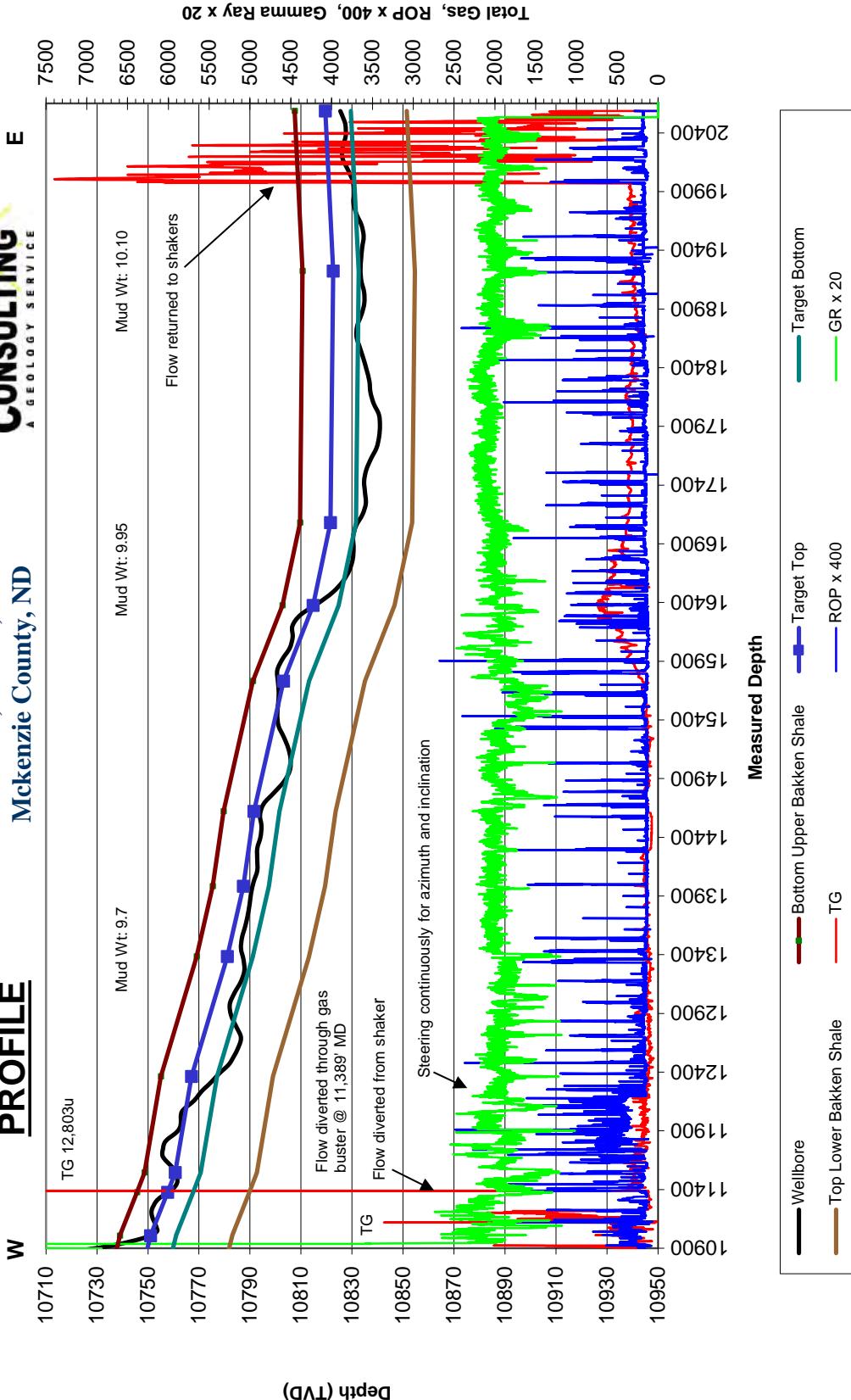
Oasis Petroleum North America, LLC
Chalmers 5300 21-19 6B



Oasis Petroleum North America, LLC
 Chalmers 5300 21-19 6B
 Lot 2 Sec. 19, T153N, R100W
 McKenzie County, ND



PROFILE



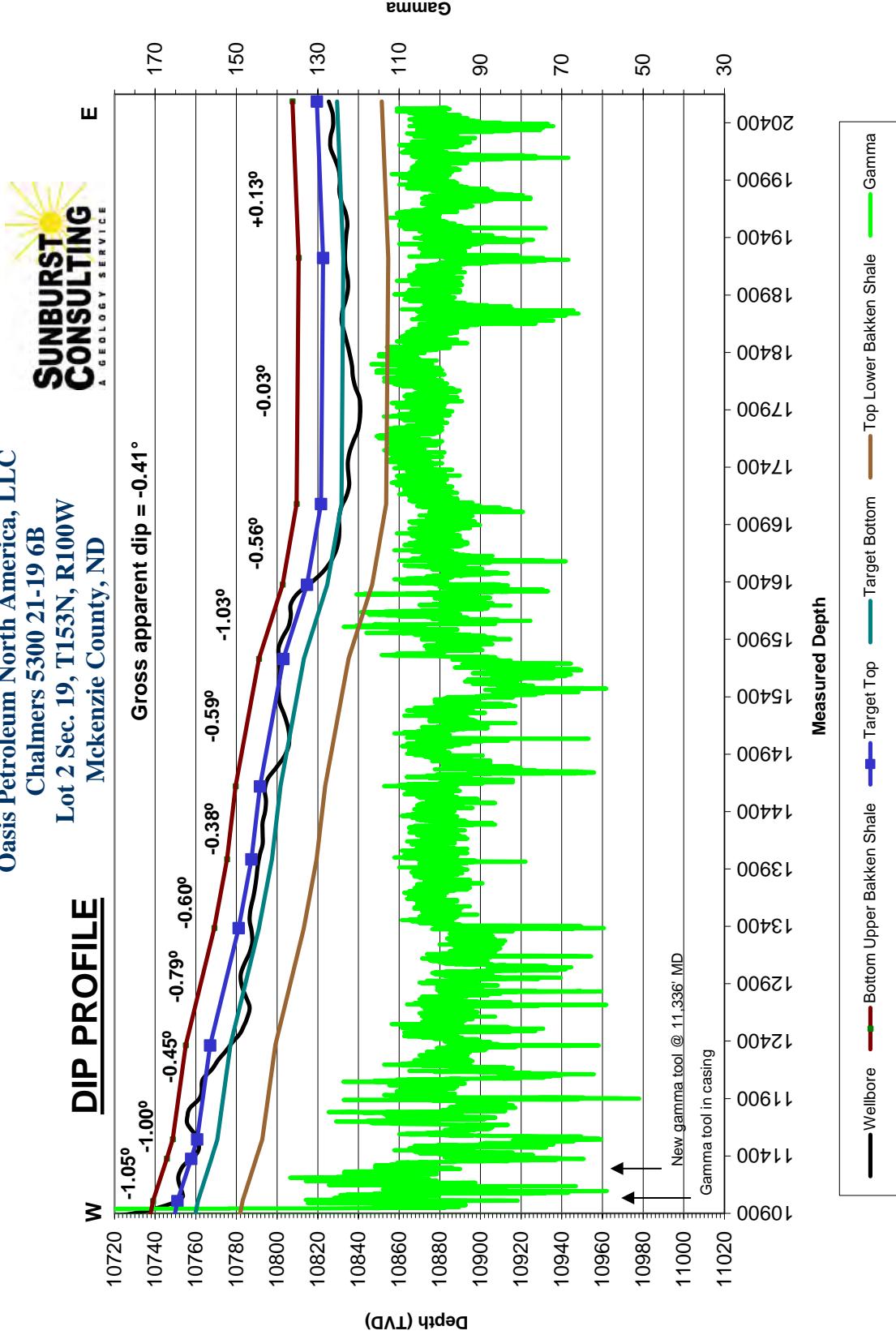
FORMATION MARKERS & DIP ESTIMATES

Oasis Petroleum North America, LLC - Chalmers 5300 21-19 6B

Marker	Dip Change Points	MD	TVD	TVD diff.	MD diff.	Dip	Dipping up/down	Type of Marker
Target zone top	11,010'	10,751.00						Gamma
Target zone top	11,375'	10,757.70	6.70	365.00	-1.05	Down	Gamma	
Target zone top	11,545'	10,760.68	2.98	170.00	-1.00	Down	Gamma	
Target zone bottom	12,363'	10,767.05	6.37	818.00	-0.45	Down	Gamma	
Low gamma #1	13,385'	10,781.10	14.05	1022.00	-0.79	Down	Gamma	
Low gamma #1	13,983'	10,787.40	6.30	598.00	-0.60	Down	Gamma	
Low gamma #1	14,620'	10,791.60	4.20	637.00	-0.38	Down	Gamma	
Target zone top	15,730'	10,803.10	11.50	1110.00	-0.59	Down	Gamma	
Target zone top	16,375'	10,814.70	11.60	645.00	-1.03	Down	Gamma	
Target zone bottom	17,080'	10,821.60	6.90	705.00	-0.56	Down	Gamma	
Target zone bottom	19,222'	10,822.60	1.00	2142.00	-0.03	Down	Gamma	
Estimated Target Top	20,585'	10,819.50	-3.10	1363.00	0.13	Up	Gamma	
Gross Dip								
Initial Target Contact	11,010'	10,751.00						
Projected Final Target Contact	20,585'	10,819.50	68.50	9575.00	-0.41	Down	Projection	

Oasis Petroleum North America, LLC
 Chalmers 5300 21-19 6B
 Lot 2 Sec. 19, T153N, R100W
 Mckenzie County, ND

DIP PROFILE



<

SUNBURST CONSULTING, INC.

>

Operator:	Oasis Petroleum North America, LLC	
Well :	Chalmers 5300 21-19 6B	
County:	Mckenzie	State: ND
QQ:	Lot 2	Section: 19
Township:	153	N/S: N
Range:	100	E/W: W
Footages:	2160	FN/SL: N
	327	FE/WL: W

Kick-off:	11/5/2014
Finish:	12/11/2014
Directional Supervision:	Ryan Directional Services

Date: 12/18/2014
 Time: 11:56
F9 to re-calculate

Proposed dir: 85.88

Minimum Curvature Method (SPE-3362)

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

No.	MD	INC	TRUE				SECT	DLS/ 100
			AZM	TVD	N-S	E-W		
Tie	2089.00	1.00	303.70	2088.89	-5.63	13.56	13.12	1.12
1	2235.00	0.70	319.80	2234.87	-4.24	11.92	11.59	0.26
2	2266.00	0.70	307.30	2265.87	-3.98	11.65	11.34	0.49
3	2360.00	0.70	293.70	2359.86	-3.40	10.67	10.40	0.18
4	2452.00	0.40	306.60	2451.86	-2.99	9.90	9.66	0.35
5	2545.00	0.70	266.90	2544.86	-2.82	9.07	8.84	0.50
6	2639.00	0.70	257.50	2638.85	-2.98	7.93	7.70	0.12
7	2732.00	0.50	220.70	2731.84	-3.41	7.12	6.85	0.46
8	2826.00	0.90	251.70	2825.84	-3.95	6.15	5.85	0.57
9	2919.00	0.50	266.30	2918.83	-4.21	5.05	4.73	0.47
10	3012.00	2.00	32.90	3011.81	-2.87	5.53	5.30	2.51
11	3106.00	1.80	30.00	3105.76	-0.22	7.15	7.12	0.24
12	3199.00	1.80	27.00	3198.72	2.35	8.55	8.69	0.10
13	3293.00	0.70	66.10	3292.69	3.90	9.74	10.00	1.42
14	3386.00	0.80	77.70	3385.69	4.27	10.90	11.18	0.19
15	3479.00	0.80	72.60	3478.68	4.60	12.15	12.45	0.08
16	3573.00	0.80	58.90	3572.67	5.14	13.34	13.67	0.20
17	3666.00	0.70	60.20	3665.66	5.75	14.39	14.76	0.11
18	3759.00	0.70	90.90	3758.65	6.03	15.45	15.84	0.40
19	3853.00	1.10	24.40	3852.64	6.84	16.40	16.84	1.11
20	3946.00	1.10	25.00	3945.63	8.46	17.14	17.71	0.01
21	4040.00	1.00	268.00	4039.62	9.25	16.70	17.32	1.91
22	4133.00	1.10	271.00	4132.60	9.24	15.00	15.62	0.12
23	4227.00	0.90	266.10	4226.59	9.20	13.36	13.99	0.23
24	4320.00	0.90	260.30	4319.58	9.03	11.91	12.53	0.10
25	4413.00	1.10	262.20	4412.56	8.79	10.31	10.91	0.22
26	4506.00	1.00	276.10	4505.55	8.75	8.62	9.22	0.29
27	4599.00	1.10	257.30	4598.53	8.64	6.94	7.54	0.38
28	4693.00	1.10	255.80	4692.51	8.22	5.18	5.76	0.03
29	4786.00	1.50	248.00	4785.49	7.55	3.19	3.72	0.47
30	4879.00	1.40	258.70	4878.46	6.87	0.95	1.44	0.31
31	4973.00	0.70	357.80	4972.45	7.22	-0.20	0.32	1.77
32	5066.00	0.80	353.80	5065.44	8.43	-0.29	0.31	0.12
33	5159.00	0.40	174.60	5158.44	8.75	-0.33	0.30	1.29
34	5253.00	0.50	172.90	5252.44	8.02	-0.25	0.33	0.11

<

SUNBURST CONSULTING, INC.

>

Operator:	Oasis Petroleum North America, LLC	
Well :	Chalmers 5300 21-19 6B	
County:	Mckenzie	State: ND
QQ:	Lot 2	Section: 19
Township:	153	N/S: N
Range:	100	E/W: W
Footages:	2160	FN/SL: N
	327	FE/WL: W

Kick-off:	11/5/2014
Finish:	12/11/2014
Directional Supervision:	Ryan Directional Services

Date: 12/18/2014
 Time: 11:56
F9 to re-calculate

Proposed dir: 85.88

Minimum Curvature Method (SPE-3362)

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

No.	MD	INC	TRUE				SECT	DLS/ 100
			AZM	TVD	N-S	E-W		
35	5346.00	0.80	176.70	5345.43	6.97	-0.16	0.34	0.33
36	5439.00	0.50	187.60	5438.42	5.92	-0.18	0.25	0.35
37	5533.00	0.40	192.90	5532.42	5.19	-0.31	0.07	0.12
38	5626.00	0.20	232.60	5625.42	4.78	-0.51	-0.16	0.30
39	5720.00	0.40	282.10	5719.42	4.74	-0.96	-0.62	0.33
40	5813.00	0.40	204.90	5812.42	4.52	-1.41	-1.09	0.54
41	5906.00	0.30	247.10	5905.42	4.13	-1.77	-1.47	0.29
42	6000.00	0.30	247.70	5999.41	3.94	-2.23	-1.94	0.00
43	6051.00	0.40	264.30	6050.41	3.87	-2.53	-2.25	0.28
44	6178.00	0.70	225.80	6177.41	3.29	-3.53	-3.28	0.36
45	6271.00	0.10	181.50	6270.40	2.81	-3.94	-3.72	0.68
46	6365.00	1.10	11.20	6364.40	3.61	-3.76	-3.49	1.28
47	6458.00	0.70	11.40	6457.39	5.05	-3.48	-3.11	0.43
48	6552.00	1.10	26.00	6551.38	6.42	-2.97	-2.50	0.49
49	6645.00	1.50	83.60	6644.36	7.36	-1.37	-0.84	1.40
50	6738.00	1.40	96.90	6737.33	7.36	0.97	1.50	0.38
51	6832.00	0.90	122.20	6831.31	6.82	2.73	3.22	0.75
52	6925.00	0.90	72.50	6924.30	6.66	4.05	4.52	0.81
53	7018.00	1.60	64.20	7017.27	7.44	5.91	6.43	0.78
54	7112.00	1.50	65.20	7111.24	8.53	8.21	8.80	0.11
55	7205.00	1.50	66.40	7204.21	9.53	10.43	11.09	0.03
56	7298.00	2.00	66.40	7297.16	10.66	13.04	13.77	0.54
57	7392.00	1.50	72.20	7391.12	11.69	15.71	16.51	0.56
58	7485.00	1.50	91.60	7484.09	12.03	18.09	18.90	0.54
59	7578.00	0.90	10.00	7577.07	12.72	19.43	20.29	1.76
60	7672.00	1.10	352.50	7671.06	14.34	19.44	20.42	0.39
61	7765.00	0.90	10.50	7764.05	15.94	19.46	20.55	0.40
62	7858.00	0.90	3.10	7857.03	17.39	19.63	20.83	0.12
63	7952.00	0.30	340.90	7951.03	18.36	19.59	20.86	0.67
64	8045.00	0.80	35.20	8044.03	19.12	19.88	21.21	0.72
65	8138.00	0.40	19.40	8137.02	19.96	20.37	21.75	0.46
66	8232.00	0.50	23.70	8231.02	20.64	20.64	22.07	0.11
67	8325.00	0.60	24.70	8324.01	21.46	21.01	22.49	0.11
68	8419.00	0.50	17.80	8418.01	22.29	21.34	22.88	0.13
69	8512.00	0.30	351.90	8511.01	22.92	21.43	23.02	0.28

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SUNBURST CONSULTING, INC.

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Operator:	Oasis Petroleum North America, LLC	
Well :	Chalmers 5300 21-19 6B	
County:	Mckenzie	State: ND
QQ:	Lot 2	Section: 19
Township:	153	N/S: N
Range:	100	E/W: W
Footages:	2160	FN/SL: N
	327	FE/WL: W

Kick-off:	11/5/2014
Finish:	12/11/2014
Directional Supervision:	Ryan Directional Services

Date: 12/18/2014
 Time: 11:56
F9 to re-calculate

Proposed dir: 85.88

Minimum Curvature Method (SPE-3362)

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

No.	MD	INC	TRUE				SECT	DLS/ 100
			AZM	TVD	N-S	E-W		
70	8605.00	1.20	35.20	8604.00	23.96	21.95	23.62	1.08
71	8699.00	1.00	46.90	8697.98	25.32	23.12	24.88	0.32
72	8792.00	0.90	58.30	8790.97	26.26	24.33	26.16	0.23
73	8885.00	1.10	54.10	8883.95	27.17	25.68	27.56	0.23
74	8979.00	0.90	60.00	8977.94	28.07	27.05	29.00	0.24
75	9072.00	0.60	72.60	9070.93	28.58	28.15	30.13	0.37
76	9166.00	0.20	21.70	9164.93	28.88	28.68	30.68	0.53
77	9259.00	0.10	76.80	9257.93	29.05	28.82	30.83	0.18
78	9352.00	0.10	52.10	9350.93	29.12	28.96	30.98	0.05
79	9445.00	0.10	56.90	9443.93	29.21	29.09	31.11	0.01
80	9539.00	0.40	115.90	9537.93	29.11	29.45	31.47	0.38
81	9632.00	0.40	124.70	9630.93	28.78	30.01	32.00	0.07
82	9725.00	0.20	156.00	9723.92	28.45	30.35	32.31	0.27
83	9819.00	0.40	89.90	9817.92	28.30	30.74	32.69	0.39
84	9912.00	0.40	99.90	9910.92	28.25	31.39	33.33	0.07
85	10005.00	0.10	79.80	10003.92	28.21	31.79	33.73	0.33
86	10099.00	0.30	184.00	10097.92	27.97	31.85	33.78	0.36
87	10161.00	0.40	205.10	10159.92	27.62	31.75	33.65	0.26
88	10205.00	0.70	43.50	10203.92	27.67	31.87	33.77	2.47
89	10236.00	5.50	50.40	10234.86	28.76	33.14	35.12	15.50
90	10267.00	10.90	50.60	10265.53	31.57	36.55	38.73	17.42
91	10299.00	16.10	53.10	10296.64	36.15	42.44	44.93	16.35
92	10330.00	20.90	58.30	10326.03	41.64	50.59	53.45	16.36
93	10361.00	24.00	58.80	10354.68	47.82	60.69	63.97	10.02
94	10392.00	26.50	56.70	10382.71	54.88	71.87	75.62	8.57
95	10423.00	28.70	56.60	10410.19	62.78	83.86	88.16	7.10
96	10454.00	31.10	56.80	10437.06	71.26	96.78	101.65	7.75
97	10485.00	33.00	58.30	10463.33	80.08	110.66	116.13	6.64
98	10517.00	34.80	60.30	10489.89	89.18	126.01	132.09	6.62
99	10548.00	37.00	61.30	10515.00	98.05	141.88	148.55	7.34
100	10579.00	38.90	61.10	10539.45	107.23	158.58	165.88	6.14
101	10610.00	42.50	58.90	10562.95	117.35	176.08	184.05	12.50
102	10641.00	44.80	57.40	10585.37	128.64	194.25	202.99	8.14
103	10672.00	48.40	56.80	10606.67	140.88	213.15	222.72	11.70
104	10703.00	51.30	57.70	10626.66	153.69	233.08	243.52	9.61

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SUNBURST CONSULTING, INC.

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Operator:	Oasis Petroleum North America, LLC	
Well :	Chalmers 5300 21-19 6B	
County:	Mckenzie	State: ND
QQ:	Lot 2	Section: 19
Township:	153	N/S: N
Range:	100	E/W: W
Footages:	2160	FN/SL: N
	327	FE/WL: W

Kick-off:	11/5/2014
Finish:	12/11/2014
Directional Supervision:	Ryan Directional Services
Date:	12/18/2014
Time:	11:56
F9 to re-calculate	
Proposed dir:	85.88

Minimum Curvature Method (SPE-3362)

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

No.	MD	INC	TRUE				SECT	DLS/ 100
			AZM	TVD	N-S	E-W		
105	10734.00	52.20	58.50	10645.85	166.56	253.75	265.06	3.54
106	10765.00	53.50	60.10	10664.57	179.17	274.99	287.16	5.87
107	10797.00	55.90	61.30	10683.06	191.94	297.77	310.79	8.10
108	10828.00	59.80	62.20	10699.56	204.36	320.89	334.74	12.82
109	10859.00	64.00	61.30	10714.15	217.30	344.97	359.69	13.79
110	10890.00	70.00	60.70	10726.26	231.14	369.91	385.56	19.44
111	10921.00	75.70	59.80	10735.40	245.83	395.62	412.26	18.59
112	10952.00	79.30	59.30	10742.11	261.17	421.70	439.38	11.72
113	10983.00	80.10	59.00	10747.65	276.81	447.89	466.62	2.75
114	11014.00	84.40	57.80	10751.83	292.90	474.04	493.86	14.39
115	11046.00	89.20	56.50	10753.61	310.23	500.87	521.87	15.54
116	11058.00	90.60	56.10	10753.64	316.88	510.86	532.30	12.13
117	11109.00	91.20	55.70	10752.83	345.47	553.08	576.48	1.41
118	11140.00	91.40	55.90	10752.13	362.89	578.72	603.29	0.91
119	11171.00	90.50	56.30	10751.62	380.18	604.44	630.20	3.18
120	11202.00	90.40	56.30	10751.37	397.38	630.23	657.15	0.32
121	11233.00	88.90	55.50	10751.56	414.76	655.90	684.01	5.48
122	11264.00	88.60	55.00	10752.24	432.43	681.37	710.67	1.88
123	11295.00	88.40	54.80	10753.05	450.24	706.72	737.24	0.91
124	11326.00	86.50	54.00	10754.43	468.27	731.90	763.65	6.65
125	11347.00	85.70	54.70	10755.86	480.48	748.92	781.51	5.06
126	11378.00	85.80	54.60	10758.16	498.37	774.14	807.94	0.46
127	11409.00	87.60	54.60	10759.94	516.30	799.37	834.39	5.81
128	11440.00	88.20	54.70	10761.08	534.22	824.63	860.88	1.96
129	11470.00	90.00	54.90	10761.55	551.51	849.14	886.57	6.04
130	11501.00	90.60	54.80	10761.39	569.36	874.49	913.14	1.96
131	11532.00	90.70	54.80	10761.03	587.22	899.82	939.68	0.32
132	11563.00	91.60	56.60	10760.41	604.69	925.42	966.48	6.49
133	11594.00	92.30	57.00	10759.36	621.65	951.35	993.55	2.60
134	11625.00	92.80	57.50	10757.98	638.41	977.39	1020.73	2.28
135	11656.00	92.30	59.10	10756.60	654.68	1003.74	1048.18	5.40
136	11687.00	91.00	59.80	10755.71	670.43	1030.43	1075.93	4.76
137	11718.00	89.30	61.20	10755.62	685.69	1057.41	1103.94	7.10
138	11749.00	89.60	63.00	10755.92	700.20	1084.80	1132.30	5.89
139	11780.00	89.50	65.20	10756.17	713.74	1112.68	1161.09	7.10

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SUNBURST CONSULTING, INC.

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Operator:	Oasis Petroleum North America, LLC	
Well :	Chalmers 5300 21-19 6B	
County:	Mckenzie	State: ND
QQ:	Lot 2	Section: 19
Township:	153	N/S: N
Range:	100	E/W: W
Footages:	2160	FN/SL: N
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Kick-off:	11/5/2014
Finish:	12/11/2014
Directional Supervision:	Ryan Directional Services

Date: 12/18/2014
 Time: 11:56
F9 to re-calculate

Proposed dir: 85.88

Minimum Curvature Method (SPE-3362)

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

No.	MD	INC	TRUE				SECT	DLS/ 100
			AZM	TVD	N-S	E-W		
140	11811.00	87.80	67.20	10756.90	726.24	1141.04	1190.27	8.47
141	11842.00	86.40	69.10	10758.46	737.77	1169.77	1219.75	7.61
142	11873.00	86.30	71.60	10760.44	748.17	1198.90	1249.56	8.05
143	11905.00	88.40	73.60	10761.92	757.73	1229.40	1280.67	9.06
144	11936.00	88.90	75.80	10762.65	765.90	1259.30	1311.07	7.28
145	11968.00	90.20	78.20	10762.90	773.10	1290.47	1342.68	8.53
146	12000.00	89.80	81.00	10762.90	778.88	1321.94	1374.48	8.84
147	12031.00	90.20	83.40	10762.90	783.08	1352.65	1405.42	7.85
148	12063.00	88.40	85.30	10763.29	786.23	1384.49	1437.40	8.18
149	12094.00	87.00	87.50	10764.53	788.18	1415.40	1468.37	8.41
150	12126.00	86.30	89.70	10766.40	788.96	1447.34	1500.28	7.20
151	12157.00	87.60	92.50	10768.05	788.37	1478.28	1531.10	9.95
152	12189.00	87.90	94.40	10769.31	786.44	1510.20	1562.80	6.01
153	12221.00	88.10	94.70	10770.43	783.90	1542.08	1594.41	1.13
154	12252.00	87.10	94.70	10771.73	781.37	1572.95	1625.02	3.23
155	12284.00	87.10	94.40	10773.34	778.83	1604.81	1656.61	0.94
156	12315.00	87.50	94.70	10774.81	776.37	1635.67	1687.23	1.61
157	12347.00	87.60	94.50	10776.17	773.81	1667.54	1718.83	0.70
158	12379.00	87.60	94.20	10777.51	771.39	1699.42	1750.45	0.94
159	12410.00	86.90	94.00	10779.00	769.17	1730.31	1781.10	2.35
160	12442.00	87.10	94.00	10780.68	766.94	1762.18	1812.73	0.63
161	12473.00	88.00	94.10	10782.00	764.75	1793.08	1843.39	2.92
162	12505.00	88.70	94.10	10782.92	762.47	1824.98	1875.05	2.19
163	12537.00	88.40	93.60	10783.73	760.32	1856.90	1906.73	1.82
164	12568.00	88.60	93.00	10784.54	758.54	1887.84	1937.46	2.04
165	12600.00	89.00	91.90	10785.21	757.17	1919.80	1969.24	3.66
166	12631.00	88.80	91.20	10785.81	756.33	1950.78	2000.08	2.35
167	12663.00	89.40	91.20	10786.31	755.66	1982.77	2031.94	1.88
168	12694.00	90.10	91.00	10786.45	755.07	2013.77	2062.81	2.35
169	12726.00	91.30	90.40	10786.06	754.67	2045.76	2094.69	4.19
170	12789.00	91.40	89.70	10784.57	754.62	2108.74	2157.51	1.12
171	12884.00	91.00	90.30	10782.58	754.62	2203.72	2252.24	0.76
172	12979.00	89.60	90.10	10782.08	754.29	2298.72	2346.97	1.49
173	13073.00	88.20	89.70	10783.89	754.45	2392.70	2440.72	1.55
174	13168.00	88.80	90.00	10786.38	754.70	2487.66	2535.46	0.71

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Operator:	Oasis Petroleum North America, LLC	
Well :	Chalmers 5300 21-19 6B	
County:	Mckenzie	State: ND
QQ:	Lot 2	Section: 19
Township:	153	N/S: N
Range:	100	E/W: W
Footages:	2160	FN/SL: N
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Kick-off:	11/5/2014
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Date: 12/18/2014
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Proposed dir: 85.88

Minimum Curvature Method (SPE-3362)

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

No.	MD	INC	TRUE				SECT	DLS/ 100
			AZM	TVD	N-S	E-W		
175	13263.00	89.50	89.90	10787.78	754.78	2582.65	2630.21	0.74
176	13358.00	90.90	92.00	10787.45	753.21	2677.63	2724.83	2.66
177	13452.00	90.30	92.50	10786.47	749.52	2771.55	2818.24	0.83
178	13547.00	89.20	92.80	10786.88	745.13	2866.45	2912.58	1.20
179	13642.00	89.30	92.50	10788.13	740.73	2961.34	3006.91	0.33
180	13737.00	89.50	91.80	10789.12	737.17	3056.27	3101.33	0.77
181	13832.00	89.60	91.70	10789.87	734.27	3151.22	3195.83	0.15
182	13926.00	89.70	91.80	10790.44	731.40	3245.17	3289.34	0.15
183	14021.00	89.10	91.90	10791.44	728.33	3340.12	3383.81	0.64
184	14116.00	89.20	91.80	10792.85	725.27	3435.06	3478.29	0.15
185	14211.00	90.80	91.80	10792.85	722.28	3530.01	3572.78	1.68
186	14305.00	89.20	90.70	10792.85	720.23	3623.98	3666.36	2.07
187	14400.00	89.30	89.60	10794.09	719.98	3718.97	3761.09	1.16
188	14495.00	90.20	89.20	10794.50	720.98	3813.97	3855.91	1.04
189	14589.00	90.50	89.90	10793.93	721.72	3907.96	3949.71	0.81
190	14684.00	87.80	89.10	10795.34	722.54	4002.94	4044.50	2.96
191	14779.00	87.30	89.40	10799.40	723.79	4097.84	4139.25	0.61
192	14874.00	88.00	89.60	10803.30	724.61	4192.76	4233.98	0.77
193	14968.00	89.20	90.00	10805.59	724.94	4286.73	4327.73	1.35
194	15063.00	90.40	90.00	10805.92	724.94	4381.72	4422.48	1.26
195	15158.00	90.70	89.40	10805.01	725.44	4476.72	4517.27	0.71
196	15253.00	91.40	88.90	10803.27	726.85	4571.69	4612.10	0.91
197	15348.00	91.10	89.80	10801.20	727.93	4666.66	4706.90	1.00
198	15443.00	89.50	90.80	10800.70	727.43	4761.65	4801.61	1.99
199	15537.00	90.10	90.30	10801.03	726.53	4855.65	4895.30	0.83
200	15632.00	89.60	91.10	10801.28	725.37	4950.64	4989.96	0.99
201	15727.00	90.80	92.30	10800.95	722.55	5045.59	5084.47	1.79
202	15822.00	89.50	92.20	10800.70	718.82	5140.52	5178.88	1.37
203	15916.00	88.10	91.70	10802.67	715.62	5234.44	5272.33	1.58
204	16011.00	88.40	91.40	10805.57	713.05	5329.36	5366.82	0.45
205	16106.00	90.20	91.90	10806.73	710.32	5424.31	5461.33	1.97
206	16201.00	89.90	91.30	10806.64	707.66	5519.27	5555.85	0.71
207	16295.00	86.20	91.00	10809.84	705.78	5613.18	5649.38	3.95
208	16390.00	85.80	89.90	10816.47	705.03	5707.95	5743.85	1.23
209	16485.00	87.10	88.70	10822.35	706.19	5802.75	5838.49	1.86

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SUNBURST CONSULTING, INC.

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Well :	Chalmers 5300 21-19 6B	
County:	Mckenzie	State: ND
QQ:	Lot 2	Section: 19
Township:	153	N/S: N
Range:	100	E/W: W
Footages:	2160	FN/SL: N
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Kick-off:	11/5/2014
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Minimum Curvature Method (SPE-3362)

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

No.	MD	INC	TRUE				SECT	DLS/ 100
			AZM	TVD	N-S	E-W		
210	16580.00	88.00	87.50	10826.41	709.34	5897.61	5933.33	1.58
211	16674.00	88.90	86.50	10828.96	714.26	5991.45	6027.28	1.43
212	16769.00	89.50	87.00	10830.28	719.64	6086.28	6122.26	0.82
213	16864.00	90.10	88.50	10830.61	723.37	6181.21	6217.20	1.70
214	16959.00	90.10	89.20	10830.45	725.28	6276.19	6312.08	0.74
215	17054.00	88.50	89.60	10831.61	726.27	6371.17	6406.89	1.74
216	17149.00	88.50	89.30	10834.10	727.19	6466.13	6501.67	0.32
217	17243.00	89.90	90.30	10835.41	727.51	6560.12	6595.44	1.83
218	17338.00	90.50	90.40	10835.08	726.93	6655.12	6690.15	0.64
219	17433.00	89.90	91.10	10834.74	725.69	6750.11	6784.80	0.97
220	17528.00	89.10	91.10	10835.57	723.87	6845.09	6879.40	0.84
221	17622.00	88.70	90.30	10837.38	722.72	6939.06	6973.05	0.95
222	17717.00	88.60	89.30	10839.62	723.05	7034.03	7067.80	1.06
223	17812.00	90.20	88.60	10840.61	724.79	7129.01	7162.66	1.84
224	17907.00	89.40	87.30	10840.94	728.19	7223.94	7257.59	1.61
225	18001.00	91.10	87.30	10840.53	732.62	7317.84	7351.56	1.81
226	18096.00	91.40	87.40	10838.46	737.01	7412.71	7446.51	0.33
227	18191.00	90.10	86.70	10837.22	741.90	7507.57	7541.48	1.55
228	18286.00	90.40	88.60	10836.80	745.79	7602.49	7636.42	2.02
229	18381.00	90.90	90.90	10835.72	746.21	7697.48	7731.20	2.48
230	18475.00	90.60	91.50	10834.49	744.24	7791.45	7824.78	0.71
231	18570.00	91.10	91.30	10833.08	741.92	7886.41	7919.33	0.57
232	18665.00	90.50	90.70	10831.76	740.26	7981.38	8013.94	0.89
233	18760.00	89.10	91.10	10832.09	738.77	8076.37	8108.57	1.53
234	18854.00	88.90	90.50	10833.73	737.45	8170.34	8202.21	0.67
235	18949.00	89.80	91.50	10834.81	735.80	8265.32	8296.83	1.42
236	19044.00	90.30	91.20	10834.73	733.56	8360.29	8391.39	0.61
237	19139.00	91.00	91.10	10833.65	731.65	8455.27	8485.98	0.74
238	19234.00	89.40	90.10	10833.32	730.66	8550.26	8580.66	1.99
239	19328.00	90.30	91.10	10833.56	729.67	8644.25	8674.34	1.43
240	19423.00	89.20	90.30	10833.98	728.51	8739.24	8769.00	1.43
241	19518.00	90.10	90.30	10834.56	728.01	8834.24	8863.71	0.95
242	19613.00	90.90	90.30	10833.73	727.52	8929.23	8958.42	0.84
243	19708.00	91.50	89.90	10831.74	727.35	9024.21	9053.15	0.76
244	19802.00	89.90	90.20	10830.59	727.27	9118.20	9146.89	1.73

<

SUNBURST CONSULTING, INC.

>

Operator:	Oasis Petroleum North America, LLC	
Well :	Chalmers 5300 21-19 6B	
County:	Mckenzie	State: ND
QQ:	Lot 2	Section: 19
Township:	153	N/S: N
Range:	100	E/W: W
Footages:	2160	FN/SL: N
	327	FE/WL: W

Kick-off:	11/5/2014
Finish:	12/11/2014
Directional Supervision:	
Ryan Directional Services	

Date: 12/18/2014
 Time: 11:56
F9 to re-calculate

Proposed dir: 85.88

Minimum Curvature Method (SPE-3362)

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

No.	MD	INC	TRUE				SECT	DLS/ 100
			AZM	TVD	N-S	E-W		
245	19897.00	89.80	89.20	10830.84	727.77	9213.20	9241.67	1.06
246	19992.00	90.90	89.80	10830.26	728.60	9308.19	9336.48	1.32
247	20087.00	91.40	89.10	10828.35	729.51	9403.16	9431.28	0.91
248	20182.00	91.10	90.40	10826.28	729.92	9498.14	9526.03	1.40
249	20277.00	88.90	90.60	10826.28	729.09	9593.13	9620.72	2.33
250	20371.00	89.60	90.90	10827.51	727.86	9687.11	9714.37	0.81
251	20466.00	90.50	90.30	10827.43	726.87	9782.11	9809.05	1.14
252	20519.00	91.10	90.00	10826.69	726.73	9835.10	9861.90	1.27
253	20585.00	91.10	90.00	10825.42	726.73	9901.09	9927.71	0.00

DEVIATION SURVEYS

Depth	Inclination	Azimuth
147	0.40	140.60
240	0.50	135.90
333	0.60	126.80
427	0.50	107.00
520	0.60	124.40
613	0.60	90.30
702	0.60	96.80
790	0.50	67.00
880	0.10	251.10
970	0.20	213.40
1063	0.30	215.50
1154	0.40	172.80
1250	0.70	128.70
1343	0.60	138.00
1436	0.70	133.30
1530	0.90	116.50
1623	1.10	93.70
1717	1.00	102.90
1810	0.50	114.60
1903	0.40	62.30
1997	0.70	15.60
2089	1.00	303.70
2190	1.00	303.70

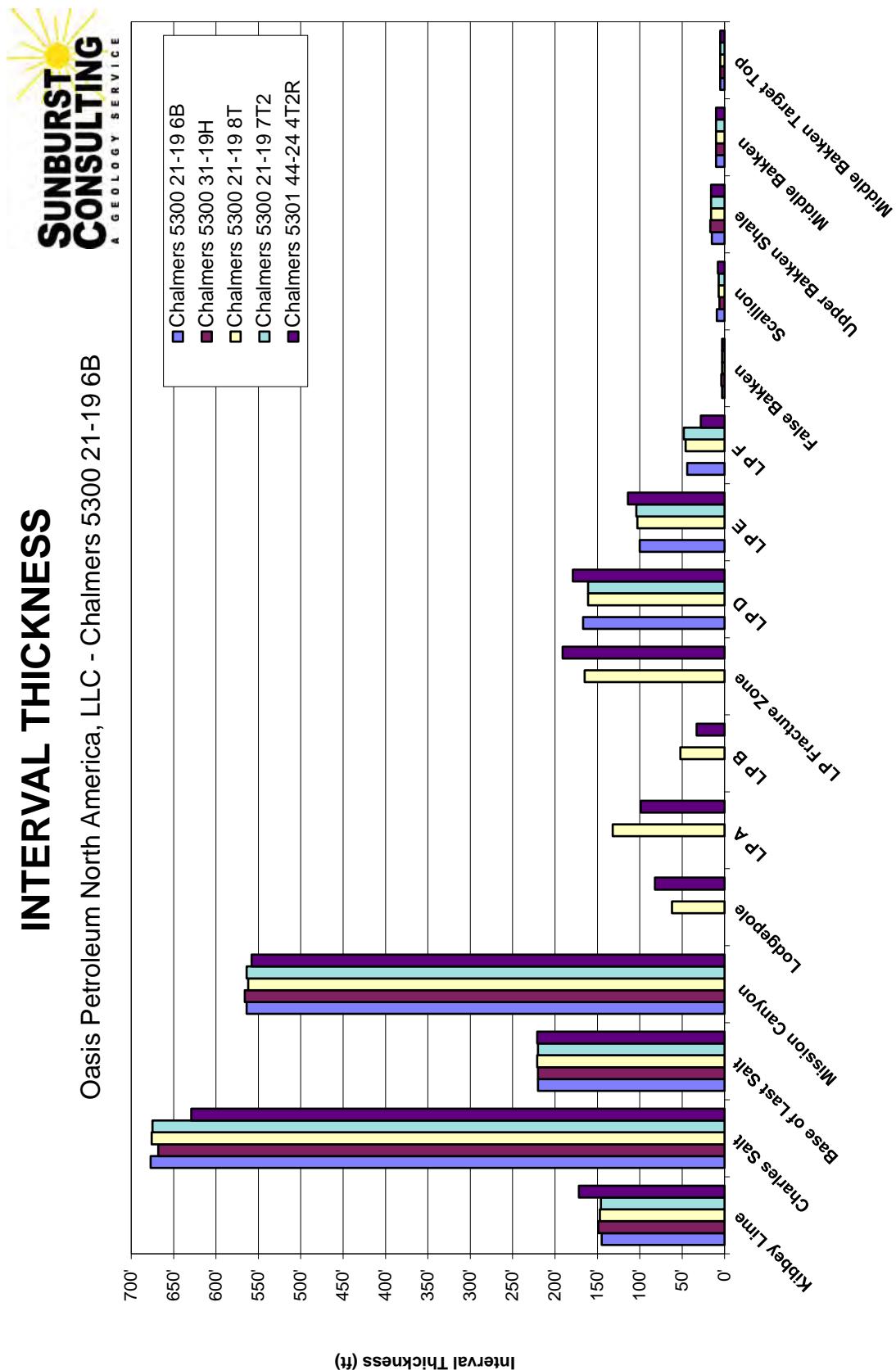
FORMATION TOPS & STRUCTURAL RELATIONSHIPS

CONTROL DATA

Operator:	Oasis Petroleum North America, LLC	Oasis Petroleum North America, LLC	Oasis Petroleum North America, LLC
Well Name:	Chalmers 5300 21-19 8T	Chalmers 5300 21-19 7T2	Chalmers 5301 44-24 4T2R
Location:	NW SW Sec. 19 T153N R100W McKenzie County, ND	Lot 2, Sec. 19, T153N, R100W McKenzie County, ND	SE SE Sec. 24 T153N R101W McKenzie County, ND
Elevation:	~1/4 mile S of subject well KB: 1,929'	Shares pad with subject well KB: 2,076'	~1/2 mile SSW of subject well KB: 1,968'
Formation/ Zone	E-Log Top	Datum (MSL)	Interval Thickness
	Thickness to Target Landing	Thickness to Target Landing	Thickness to Target Landing
Kibbey Lime	8,243'	-6,314'	149'
Charles Salt	8,392'	-6,463'	668'
Base of Last Salt	9,060'	-7,131'	220'
Mission Canyon	9,280'	-7,351'	566'
Lodgepole	9,846'	-7,917'	-
LP A	-	-	-
LP B	-	-	-
LP Fracture Zone	-	-	-
LP D	-	-	-
LP E	-	-	-
LP F	-	-	-
False Bakken	10,556'	-8,627'	4'
Scallion	10,560'	-8,631'	6'
Upper Bakken Shale	10,566'	-8,637'	17'
Middle Bakken	10,583'	-8,654'	10'
Middle Bakken Target Top	10,593'	-8,664'	5'
Landing Target	10,598'	-8,669'	5'
Middle Bakken Target Base	10,603'	-8,674'	13'
Lower Bakken Shale	10,616'	-8,687'	33'
Three Forks	10,649'	-8,720'	-

INTERVAL THICKNESS

Oasis Petroleum North America, LLC - Chalmers 5300 21-19 6B



LANDING PROJECTION

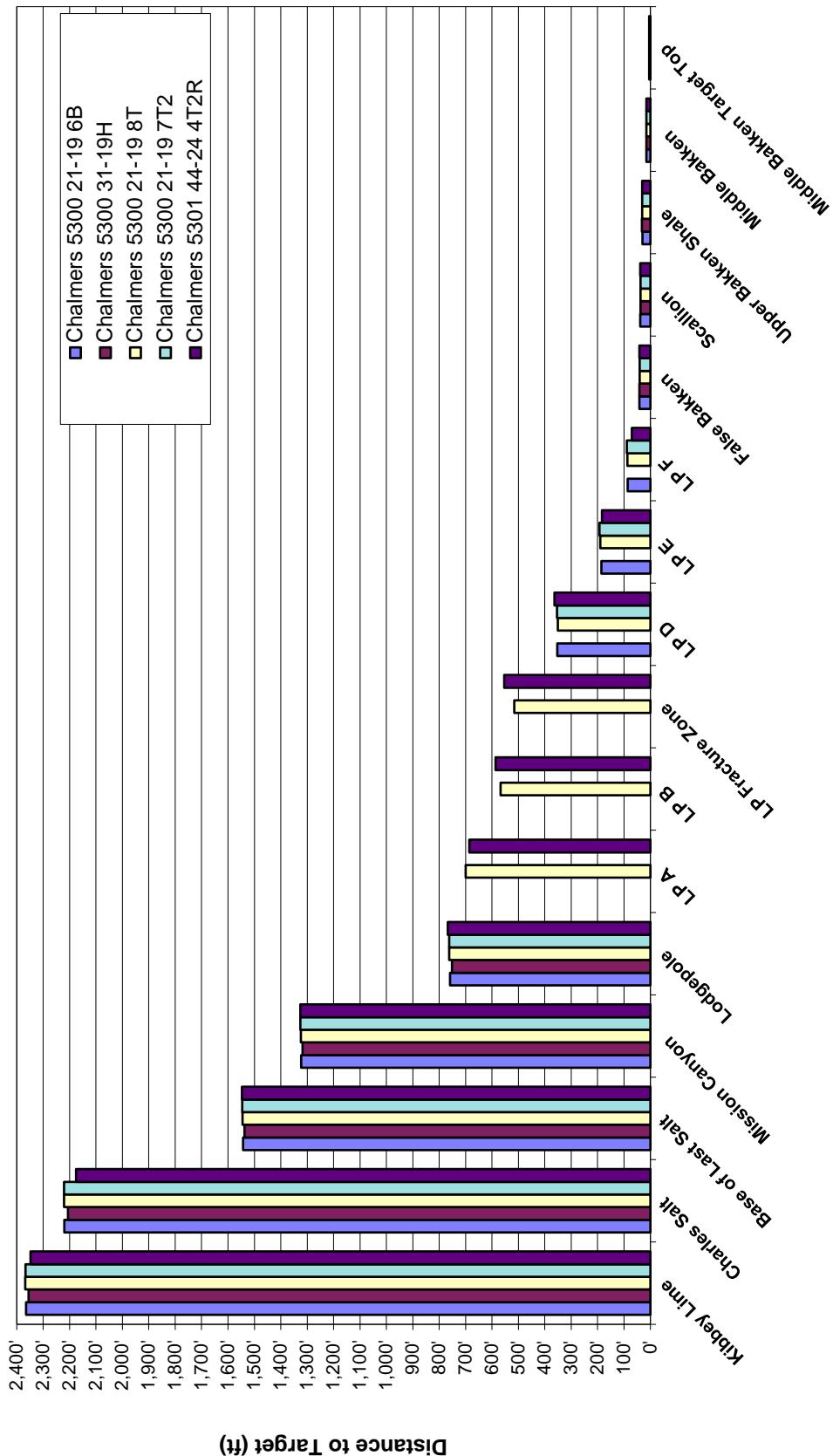
Formation/Zone:	Proposed Target Landing From:				
	Chalmers 5300 31-19H	Chalmers 5300 21-19 8T	Chalmers 5300 21-19 7T2	Chalmers 5301 44-24 4T2R	Average of Offset Wells
Kibbey Lime	10,744'	10,757'	10,756'	10,737'	10,749
Charles Salt	10,740'	10,755'	10,755'	10,710'	10,740'
Base of Last Salt	10,749'	10,756'	10,757'	10,758'	10,755'
Mission Canyon	10,749'	10,755'	10,757'	10,757'	10,755
Lodgepole	10,747'	10,757'	10,757'	10,763'	10,756'
LP A	-	-	-	-	-
LP B	-	-	-	-	-
LP Fracture Zone	-	-	-	-	-
LP D	-	10,752'	10,755'	10,764'	10,757'
LP E	-	10,758'	10,761'	10,752'	10,757'
LP F	-	10,755'	10,757'	10,738'	10,750'
False Bakken	10,754'	10,753'	10,753'	10,754'	10,754'
Scallion	10,753'	10,753'	10,753'	10,754'	10,753'
Upper Bakken Shale	10,756'	10,755'	10,755'	10,755'	10,755'
Middle Bakken	10,754'	10,754'	10,754'	10,754'	10,754'
Middle Bakken Target Top	10,754'	10,754'	10,754'	10,754'	10,754'
Landing Target	10,754'	10,754'	10,754'	10,754'	10,754'

Current Landing Target (5' below target top): 10,754'

Landing targets are subject to change as new formation tops are available

ISOPACH TO TARGET

Oasis Petroleum North America, LLC - Chalmers 5300 21-19 6B



LITHOLOGY

Oasis Petroleum North America, LLC

Chalmers 5300 21-19 6B

Rig crews caught 30' sample intervals, under the supervision of Sunburst geologists, from 8,240' to the TD of the lateral at 20,585'. Formation tops and lithologic markers have been inserted into the sample descriptions below for reference. Sample descriptions begin in the Kibbey Formation just prior to the Kibbey Lime. Samples were examined wet and dry under a binocular microscope. Sample fluorescent cuts are masked by invert mud through intermediate casing. Quantifiers in order of increasing abundance are trace, rare, occasional, common and abundant.

Vertical Log Descriptions:

MD / TVD (MSL Datum)

Drilling in the Kibbey Formation /Mississippian Big Snowy Group]

8,240-8,270 SILTSTONE: brick orange-red brown, soft, sub blocky, calcareous cement, poorly cemented, no visible porosity, no visible oil stain; rare ANHYDRITE: milky pink, crystalline, soft, massive, earthy

8,270-8,300 SILTSTONE: brick orange-red brown, soft, platy, calcareous cement, poorly cemented, no visible porosity, no visible oil stain; trace SILTY SANDSTONE: tan-off white, very fine grained, sub rounded, moderately sorted, calcite cement, poorly cemented

8,300-8,330 SILTSTONE: brick orange-red brown, soft, platy, calcareous cement, poorly cemented, no visible porosity, no visible oil stain; trace SILTY SANDSTONE: tan-off white, very fine grained, sub rounded, moderately sorted, calcite cement, poorly cemented

8,330-8,360 SILTSTONE: brick orange-red brown, soft, platy, calcareous cement, poorly cemented, no visible porosity, no visible oil stain; trace SILTY SANDSTONE: tan-off white, very fine grained, sub rounded, moderately sorted, calcite cement, poorly cemented

8,360-8,390 SILTSTONE: brick orange-red brown, soft, platy, calcareous cement, poorly cemented, no visible porosity, no visible oil stain; trace SILTY SANDSTONE: tan-off white, very fine grained, sub rounded, moderately sorted, calcite cement, poorly cemented; ANHYDRITE: off white, light gray, soft, amorphous texture

Kibbey Lime

8,390' MD / 8,389' TVD (-6,313')

8,390-8,420 LIMESTONE: mudstone, light brown, light gray-gray brown, micro crystalline, firm-hard, argillaceous in part, dense, crystalline-chalky texture, no visible porosity; rare ANHYDRITE: off white, light gray, soft, amorphous texture; trace SILTSTONE: dark orange-light brown, tan, pink, soft, sub blocky, calcite cement, poorly cemented

8,420-8,450 SILTSTONE: dark orange-light brown, tan, pink, soft, sub blocky, calcite cement, poorly cemented; trace SILTY SANDSTONE: tan-off white, very fine grained, sub rounded, moderately sorted, calcite cement, poorly cemented

8,450-8,480 SILTSTONE: dark orange-light brown, tan, pink, soft, sub blocky, calcite cement, poorly cemented; trace SILTY SANDSTONE: tan-off white, very fine grained, sub rounded, moderately sorted, calcite cement, poorly cemented

8,480-8,510 SILTSTONE: dark orange-light brown, tan, soft, sub blocky, calcite cement, poorly cemented; trace SILTY SANDSTONE: tan-off white, very fine grained, sub rounded, moderately sorted, calcite cement, poorly cemented

Charles Formation /Mississippian Madison Group]

8,535' MD / 8,534' TVD (-6,458')

8,510-8,540 SALT: clear-translucent, rarely frosted, crystalline, firm, euhedral, crystalline; trace LIMESTONE: mudstone, off white, gray, rare tan, fine crystalline, firm, laminated, crystalline-chalky texture, no visible porosity, no visible oil stain; trace SILTSTONE and SILTY SANDSTONE: as above

8,540-8,570 SALT: clear-translucent, rarely frosted, crystalline, firm, euhedral, crystalline; trace ARGILLACEOUS LIMESTONE: mudstone-wackestone, light-medium brown, tan, rare light-medium gray, rare gray tan, micro crystalline, friable, earthy

8,570-8,600 SALT: clear-translucent, rarely frosted, crystalline, firm, euhedral, crystalline

8,600-8,630 SALT: clear-translucent, rarely frosted, crystalline, firm, euhedral, crystalline

8,630-8,660 SALT: clear-translucent, rarely frosted, crystalline, firm, euhedral, crystalline

- 8,660-8,690 SALT: clear-translucent, rarely frosted, crystalline, firm, euhedral, crystalline
- 8,690-8,720 SALT: as above; ANHYDRITE: off white, soft, amorphous texture; occasional ARGILLACEOUS LIMESTONE: mudstone-wackestone, light-medium brown, tan, rare light-medium gray, rare gray tan, micro crystalline, friable, earthy; SALT: as above
- 8,720-8,750 ARGILLACEOUS LIMESTONE: mudstone-wackestone, light-medium brown, tan, rare light-medium gray, rare gray tan, micro crystalline, friable, earthy; rare SALT: as above; trace ANHYDRITE: off white, soft, amorphous texture
- 8,750-8,780 LIMESTONE: mudstone, gray, off white, rare cream-tan, very fine crystalline, firm, laminated, crystalline-chalky texture, possible intercrystalline porosity, no visible oil stain; SALT: as above
- 8,780-8,810 SALT: as above; occasional LIMESTONE: mudstone, gray, off white, rare cream-tan, very fine crystalline, firm, laminated, crystalline-chalky texture, possible intercrystalline porosity, no visible oil stain
- 8,810-8,840 LIMESTONE: mudstone-wackestone, tan, cream, light brown, very fine crystalline, firm, laminated, crystalline, rare intercrystalline porosity, occasional even-spotty light-medium brown oil stain; trace DOLOMITE: medium-light brown, micro crystalline, firm, crystalline, occasional intercrystalline porosity, common medium-light brown spotty oil stain; trace: ANHYDRITE: off white, cream, soft, micro crystalline, anhedral, earthy
- 8,840-8,870 SALT: clear-translucent, rarely frosted, crystalline, firm, euhedral, crystalline
- 8,870-8,900 SALT: as above; occasional ANHYDRITE: off white, cream, soft, microcrystalline, anhedral, earthy; rare LIMESTONE: mudstone-wackestone, tan, cream, light brown, very fine crystalline, firm, laminated, crystalline, rare intercrystalline porosity, occasional spotty light-medium brown oil stain
- 8,900-8,930 LIMESTONE: mudstone, light brown, light gray brown, off white, microcrystalline, friable, laminated, earthy, trace intercrystalline porosity, rare even-spotty light-medium brown oil stain; common DOLOMITE: mudstone, light brown, light gray brown, microcrystalline, friable-firm, laminated, earthy trace intercrystalline porosity, occasional even-spotty light-medium brown oil stain; trace ANHYDRITE: off white, cream-light orange, soft, microcrystalline, anhedral, earthy
- 8,930-8,960 LIMESTONE: mudstone, light brown, light gray brown, off white, microcrystalline, friable, laminated, earthy, trace intercrystalline porosity, rare even-spotty light-medium brown oil stain; common DOLOMITE: mudstone, light brown, light gray brown, microcrystalline, friable-firm, laminated, earthy trace intercrystalline porosity, occasional even-spotty light-medium brown oil stain; trace ANHYDRITE: off white, cream, soft, microcrystalline, anhedral, earthy
- 8,960-8,990 LIMESTONE: mudstone, light brown, light gray brown, off white, microcrystalline, friable, laminated, earthy, trace intercrystalline porosity, rare even-spotty light-medium brown oil stain; common DOLOMITE: mudstone, light brown, light gray brown, microcrystalline, friable-firm, laminated, earthy trace intercrystalline porosity, occasional even-spotty light-medium brown oil stain; trace ANHYDRITE: off white, cream, soft, microcrystalline, anhedral, earthy
- 8,990-9,020 SALT: clear-translucent, rarely frosted, crystalline, firm, euhedral, crystalline
- 9,020-9,050 ANHYDRITE: off white, cream-light orange, soft, microcrystalline, anhedral, earthy; occasional DOLOMITE: mudstone, light brown, light gray brown, microcrystalline, friable-firm, laminated, earthy trace intercrystalline porosity, occasional spotty light-medium brown oil stain; trace SALT: as above
- 9,050-9,080 ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous; occasional DOLOMITE: mudstone, light brown, light gray brown, microcrystalline, friable-firm, laminated, earthy trace intercrystalline porosity, occasional spotty light-medium brown oil stain; rare LIMESTONE: mudstone, light brown, light gray brown, off white, microcrystalline, friable, laminated, earthy, trace intercrystalline porosity, trace spotty light-medium brown oil stain
- 9,080-9,110 LIMESTONE: mudstone, light brown, light gray brown, off white, microcrystalline, friable, laminated, earthy, trace intercrystalline porosity, rare spotty light brown oil stain; occasional DOLOMITE: mudstone, light brown, light gray brown, microcrystalline, friable-firm, laminated, earthy trace intercrystalline porosity, occasional spotty light brown oil stain
- 9,110-9,140 LIMESTONE: mudstone, light brown, light gray brown, off white, microcrystalline, friable, laminated, earthy, trace intercrystalline porosity, rare spotty light brown oil stain; occasional DOLOMITE: mudstone, light brown, light gray brown, microcrystalline, friable-firm, laminated, earthy trace intercrystalline porosity, occasional spotty light brown oil stain; rare ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous
- 9,140-9,170 LIMESTONE: mudstone, light brown, light gray brown, off white, microcrystalline, friable, laminated, earthy, trace intercrystalline porosity, trace spotty light brown oil stain; occasional DOLOMITE: mudstone, light brown, light gray brown, microcrystalline, friable-firm, laminated, earthy trace intercrystalline porosity, occasional spotty light brown oil stain

gray brown, microcrystalline, friable-firm, laminated, earthy trace intercrystalline porosity, trace spotty light brown oil stain; rare ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous

9,170-9,200 SALT: clear-translucent, rarely frosted, crystalline, firm, euhedral, crystalline

Base Last Salt [Charles Formation]

9,212' MD / 9,211' TVD (-7,135')

9,200-9,230 ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous; DOLOMITE: mudstone, light brown, light gray brown, rare light gray, microcrystalline, friable-firm, laminated, earthy trace intercrystalline porosity, occasional spotty light brown oil stain

9,230-9,260 ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous; occasional DOLOMITE: mudstone, light brown, light gray brown, microcrystalline, friable-firm, laminated, earthy trace intercrystalline porosity, occasional spotty light-medium brown oil stain; rare LIMESTONE: mudstone, light brown, light gray brown, off white, microcrystalline, friable, laminated, earthy, trace intercrystalline porosity, trace spotty light-medium brown oil stain

9,260-9,290 DOLOMITE: mudstone, light brown, light gray, light gray brown, microcrystalline, friable-firm, laminated, earthy trace intercrystalline porosity, occasional spotty light brown oil stain; ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous

9,290-9,320 LIMESTONE: mudstone, light brown-brown, microcrystalline, firm, earthy-crystalline texture, trace intercrystalline porosity, trace spotty light brown oil stain; rare ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous

9,320-9,350 LIMESTONE: mudstone, light gray, light gray brown, rare light brown, firm, earthy-crystalline texture, trace intercrystalline porosity, trace disseminated pyrite, trace spotty light brown oil stain; trace ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous

9,350-9,380 LIMESTONE: mudstone, gray-light gray, gray brown, rare light brown, firm-friable, earthy-crystalline texture, trace intercrystalline porosity, trace disseminated pyrite, no visible oil stain; trace ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous

9,380-9,410 LIMESTONE: mudstone, gray-light gray, gray brown, rare light brown, firm-friable, earthy-crystalline texture, trace intercrystalline porosity, trace disseminated pyrite, argillaceous in part, no visible oil stain; trace ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous

Mission Canyon Formation [Mississippian Madison Group]

9,432' MD / 9,431' TVD (-7,355')

9,410-9,440 LIMESTONE: mudstone, light brown-off white, light gray brown, trace gray, firm-friable, earthy-crystalline texture, possible intercrystalline porosity, trace disseminated pyrite, argillaceous in part, no visible oil stain; trace ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous

9,440-9,470 LIMESTONE: mudstone, light brown-brown, gray brown, trace gray, firm-friable, earthy-crystalline texture, trace disseminated pyrite, possible intercrystalline porosity, trace spotty light brown oil stain; trace ANHYDRITE: off white, cream, soft, microcrystalline, massive, earthy-amorphous

9,470-9,500 LIMESTONE: mudstone, light gray, light brown, gray brown, trace dark gray, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, trace fossil fragments, trace spotty light brown oil stain

9,500-9,530 ARGILLACEOUS LIMESTONE: mudstone, light gray, occasional medium gray, rare gray tan, rare off white, trace dark gray, firm-friable, crystalline-chalky texture, trace disseminated pyrite, possible intercrystalline porosity, trace light brown spotty oil stain

9,530-9,560 LIMESTONE: mudstone, light gray, light brown, gray brown, trace dark gray, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, trace fossil fragments, trace spotty light brown oil stain

9,560-9,590 LIMESTONE: mudstone, light gray, light brown, gray brown, trace dark gray, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, trace fossil fragments, trace spotty light brown oil stain

9,590-9,620 ARGILLACEOUS LIMESTONE: mudstone, light gray, occasional medium gray, rare gray tan, rare off white, trace dark gray, firm-friable, crystalline-chalky texture, trace disseminated pyrite, trace fossil fragments, trace light brown spotty oil stain

9,620-9,650 LIMESTONE: mudstone, light gray, light brown, gray brown, trace dark gray, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, trace fossil fragments, trace spotty light brown oil stain

9,650-9,680 LIMESTONE: mudstone, light gray, light brown, gray brown, trace dark gray, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, trace fossil fragments, trace spotty light brown oil stain

9,680-9,710 LIMESTONE: mudstone, gray-brown, trace dark gray, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, trace fossil fragments, trace spotty light brown oil stain

9,710-9,740 LIMESTONE: mudstone, light gray-brown, trace dark gray, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, trace fossil fragments, trace spotty light brown oil stain

9,740-9,770 LIMESTONE: mudstone, light gray-brown, trace dark gray, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, trace fossil fragments, trace spotty light brown oil stain

9,770-9,800 LIMESTONE: mudstone, light gray-brown, trace dark gray, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, trace fossil fragments, trace spotty light brown oil stain

9,800-9,830 DOLOMITE: tan-light brown gray, off white, microcrystalline, fine crystalline, rare intercrystalline porosity, argillaceous in part, trace light brown spotty oil stain; rare LIMESTONE: mudstone, cream-tan, gray, trace off white, micro crystalline, friable-firm, dense, massive, trace laminated, occasional Algal laminated, earthy, trace calcite, trace pyrite, no visible porosity, trace dead oil stain

9,830-9,860 LIMESTONE: mudstone, light gray-brown, trace dark gray, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, trace fossil fragments, trace spotty light brown oil stain

9,860-9,890 LIMESTONE: mudstone, light gray-brown, trace dark gray, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, trace fossil fragments, trace spotty light brown oil stain

9,890-9,920 ARGILLACEOUS LIMESTONE: mudstone, light gray, occasional medium gray, rare gray tan, rare off white, trace dark gray, firm-friable, crystalline-chalky texture, trace disseminated pyrite, no visible porosity, no visible oil stain; LIMESTONE: mudstone, light-gray, rare off white, trace dark gray, trace brown, friable-firm, dense, earthy, possible intercrystalline porosity, trace light brown spotty oil stain

9,920-9,950 LIMESTONE: mudstone, light-gray, rare off white, trace brown, friable-firm, dense, earthy, trace spotty light brown oil stain; occasional ARGILLACEOUS LIMESTONE: mudstone, light gray, occasional medium gray, rare gray tan, rare off white, trace dark gray, firm-friable, crystalline-chalky texture, trace disseminated pyrite, no visible porosity, no visible oil stain

9,950-9,980 LIMESTONE: mudstone, light gray-brown, trace dark gray, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, trace fossil fragments

Lodgepole [Mississippian Madison Group]

9,996' MD / 9,995' TVD (-7,919')

9,980-10,010 LIMESTONE: mudstone, light gray-brown, trace dark gray, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, trace fossil fragments, no visible porosity, no visible oil stain

10,010-10,040 LIMESTONE: mudstone, light gray-brown, trace dark gray, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,040-10,070 LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,070-10,100 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,100-10,130 LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,130-10,160 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,160-10,190 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,190-10,207 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,207-10,220 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,220-10,250 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,250-10,280 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,280-10,310 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,310-10,340 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,340-10,370 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,370-10,400 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,400-10,430 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,430-10,460 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,460-10,490 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,490-10,520 ARGILLACEOUS LIMESTONE: mudstone, trace light brown, occasional light gray-gray, gray brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,520-10,550 ARGILLACEOUS LIMESTONE: mudstone, trace light brown, occasional light gray-gray, gray brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,550-10,580 ARGILLACEOUS LIMESTONE: mudstone, trace light brown, occasional light gray-gray, gray brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,580-10,610 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, trace light brown, firm-friable, earthy, rarely crystalline texture, trace disseminated pyrite, no visible porosity, no visible oil stain

10,610-10,640 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, firm-friable, earthy, occasional disseminated pyrite, no visible porosity, no visible oil stain

10,640-10,670 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, firm-friable, earthy, occasional disseminated pyrite, no visible porosity, no visible oil stain

10,670-10,700 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, firm-friable, earthy, occasional disseminated pyrite, no visible porosity, no visible oil stain

10,700-10,730 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, firm-friable, earthy, occasional disseminated pyrite, no visible porosity, no visible oil stain

10,730-10,760 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, firm-friable, earthy, occasional disseminated pyrite, no visible porosity, no visible oil stain

10,760-10,790 ARGILLACEOUS LIMESTONE: mudstone, light gray-gray, gray brown, firm-friable, earthy, occasional disseminated pyrite, no visible porosity, no visible oil stain

10,790-10,820 ARGILLACEOUS LIMESTONE: mudstone, medium gray, light gray-gray, gray brown, firm-friable, earthy, occasional disseminated pyrite, no visible porosity, no visible oil stain

10,820-10,850 ARGILLACEOUS LIMESTONE: mudstone, medium gray, light gray-gray, gray brown, firm-friable, earthy, occasional disseminated pyrite, no visible porosity, no visible oil stain

False Bakken Member[Devonian Period]

10.855' MD / 10.712' TVD (-8.636')

10,850-10,880 LIMESTONE: mudstone, trace wackestone-packstone, tan, light gray brown, rare light gray, very fine crystalline, firm, laminated, crystalline, possible intercrystalline porosity, trace light brown spotty oil stain

Scallion [Devonian Period]

10.862' MD / 10.715' TVD (-8.639')

Upper Bakken Shale [Bakken Formation Devonian Period]

10.878' MD / 10.724' TVD (-8.648')

10,850-10,880 LIMESTONE: mudstone, trace wackestone-packstone, tan, light gray brown, rare light gray, very fine crystalline, firm, laminated, crystalline, possible intercrystalline porosity, trace light brown spotty oil stain; occasional SHALE: dark gray, gray black, firm, sub blocky, earthy

10,880-10,910 SHALE: black, black gray, hard, sub blocky-sub split, earthy, pyritic, carbonaceous, fracture porosity, black oil stain

10,910-10,940 SHALE: black, black gray, hard, sub blocky-sub split, earthy, pyritic, carbonaceous, fracture porosity, black oil stain

Middle Bakken Member [Bakken Formation Devonian Period] 10,942' MD / 10,739' TVD (-8,663')

10,940-10,970 SILTY SANDSTONE: light gray brown, light gray, rare light brown, very fine grained, firm, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, fair intercrystalline porosity, trace light brown spotty oil stain

10,970-11,000 SILTY SANDSTONE: light brown-light gray brown, rare light gray, very fine grained, firm, sub rounded, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, fair intercrystalline porosity, trace light brown spotty oil stain

11,000-11,030 SILTY SANDSTONE: light brown-tan, occasional light gray brown, trace light gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated pyrite, good intercrystalline porosity, occasional light brown spotty oil stain

11,030-11,060 SILTY SANDSTONE: light brown-tan, occasional light gray brown, trace light gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated pyrite, good intercrystalline porosity, occasional light brown spotty oil stain

11,060-11,090 SILTY SANDSTONE: light brown-tan, occasional light gray brown, trace light gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated pyrite, good intercrystalline porosity, occasional light brown spotty oil stain

11,090-11,118 SILTY SANDSTONE: light brown-tan, occasional light gray brown, trace light gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated pyrite, good intercrystalline porosity, occasional light brown spotty oil stain

11,118-11,150 SILTY SANDSTONE: light brown-tan, occasional light gray brown, trace light gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated pyrite, good intercrystalline porosity, occasional light brown spotty oil stain

11,150-11,180 SILTY SANDSTONE: light brown-tan, occasional light gray brown, trace light gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated pyrite, good intercrystalline porosity, occasional light brown spotty oil stain

11,210-11,240 SILTY SANDSTONE: light brown-tan, occasional light gray brown, trace light gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated pyrite, good intercrystalline porosity, occasional light brown spotty oil stain

11,240-11,270 SILTY SANDSTONE: light brown-tan, occasional light gray brown, trace light gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated pyrite, good intercrystalline porosity, occasional light brown spotty oil stain

11,240-11,270 SILTY SANDSTONE: light brown-tan, occasional light gray brown, trace light gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated pyrite, good intercrystalline porosity, occasional light brown spotty oil stain

11,270-11,300 SILTY SANDSTONE: light brown-tan, occasional light gray brown, trace light gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated pyrite, good intercrystalline porosity, occasional light brown spotty oil stain

11,300-11,330 SILTY SANDSTONE: light brown-tan, occasional light gray brown, trace light gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated pyrite, good intercrystalline porosity, occasional light brown spotty oil stain

11,330-11,360 SILTY SANDSTONE: light brown-tan, occasional light gray brown, trace light gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated pyrite, good intercrystalline porosity, occasional light brown spotty oil stain

20,420-20,450 SILTY SANDSTONE: medium-light brown, light gray brown, trace gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, common intercrystalline porosity, common light-medium brown spotty oil stain; fast yellow streaming cut fluorescence

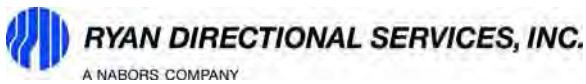
20,450-20,480 SILTY SANDSTONE: medium-light brown, light gray brown, trace gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, common intercrystalline porosity, common light-medium brown spotty oil stain; fast yellow streaming cut fluorescence

20,480-20,510 SILTY SANDSTONE: medium-light brown, light gray brown, trace gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, common intercrystalline porosity, common light-medium brown spotty oil stain; fast yellow streaming cut fluorescence

20,510-20,540 SILTY SANDSTONE: medium-light brown, light gray brown, trace gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, common intercrystalline porosity, common light-medium brown spotty oil stain; fast yellow streaming cut fluorescence

20,540-20,570 SILTY SANDSTONE: medium-light brown, light gray brown, trace gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, common intercrystalline porosity, common light-medium brown spotty oil stain; fast yellow streaming cut fluorescence

20,570-20,585 SILTY SANDSTONE: medium-light brown, light gray brown, trace gray, very fine grained, firm-friable, sub rounded-sub angular, smooth, moderately sorted, calcite cement, moderately cemented, trace disseminated and nodular pyrite, common intercrystalline porosity, common light-medium brown spotty oil stain; fast yellow streaming cut fluorescence



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

Monday, December 15, 2014

State of North Dakota

Subject: **Surveys**

Re: **Oasis**
Chalmers 5300 21-19 6B
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:

Surveyor Name	Surveyor Title	Borehole Number	Start Depth	End Depth	Start Date	End Date	Type of	TD Straight Line Projection
Mike McCammond	MWD Operator	O.H.	0'	2089'	09/30/14	10/02/14	MWD	2089'
Mike McCammond	MWD Operator	O.H.	2089'	11058'	10/26/14	11/06/14	MWD	11058'
Mike McCammond	MWD Operator	O.H.	11058'	20519'	12/05/14	12/11/14	MWD	20585'

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



RYAN DIRECTIONAL SERVICES, INC.

A NABORS COMPANY

Ryan Directic
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Friday, December 12, 2014

State of North Dakota
County of McKenzie

Subject: **Survey Certification Letter**

Survey Company: **Ryan Directional Services, Inc.**

Job Number: **8308**

Surface: **48° 3' 41.950 N, 103'**

Survey Job Type: **Ryan MWD**

A.P.I. No: **33-053-06019**

Customer: **Oasis Petroleum**

Location: **McKenzie, North Da**

Well Name: **Chalmers 5300 21-19 6B**

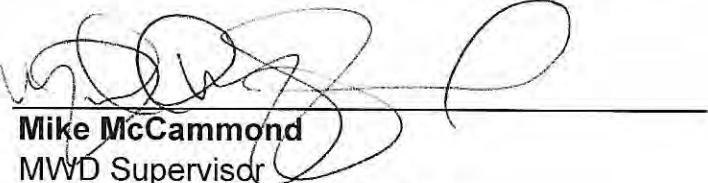
RKB Height: **25'**

Rig Name: **Nabors B-22**

Distance to Bit: **66'**

Surveyor Name	Surveyor Title	Borehole Number	Start Depth	End Depth	Start Date	End Date	Type of
Mike McCommand	MWD Supervisor	OH	11109'	20519'	12/05/14	12/11/14	MWD

The data and calculations for this survey have been checked by me and conform to the c: standards and operational procedures set forth by Ryan Directional Services, Inc. I am at qualified to review the data, calculations and these reports; the reports represents true an Directional Surveys of this well based on the original data, the minimum curvature method True North and obtained at the well site.


Mike McCommand
MWD Supervisor
Ryan Directional Services, Inc.



RYAN DIRECTIONAL SERVICES, INC.
A NABORS COMPANY

Ryan Directional Services, Inc.
19510 Oil Center Blvd.
Houston, Texas 77073
Bus: 281.443.1414
Fax: 281.443.1676

Thursday, November 06, 2014

State of North Dakota
County of McKenzie

Subject: **Survey Certification Letter**

Survey Company: Ryan Directional Services, Inc.

Job Number: 8253

Survey Job Type: Ryan MWD

Customer: Oasis Petroleum

Well Name: Chalmers 5300 21-19 6B

Rig Name: Nabors B-22

Surface: 48 3' 41.950 N / 103 36' 10.110 W

A.P.I. No: 33-053-06019

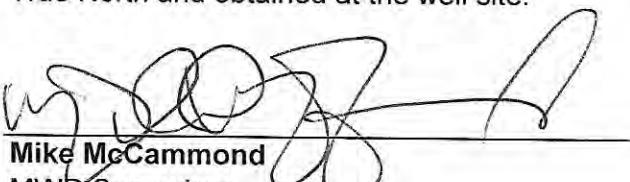
Location: McKenzie, ND

RKB Height: 2076'

Distance to Bit: 59'

<i>Surveyor Name</i>	<i>Surveyor Title</i>	<i>Borehole Number</i>	<i>Start Depth</i>	<i>End Depth</i>	<i>Start Date</i>	<i>End Date</i>	<i>Type of</i>	<i>TD Straight Line Projection</i>
Mike McCommand	MWD Supervisor	OH	2235'	11058'	10/29/14	11/06/14	MWD	11117'

The data and calculations for this survey have been checked by me and conform to the calibration standards and operational procedures set forth by Ryan Directional Services, Inc. I am authorized and qualified to review the data, calculations and these reports; the reports represents true and correct Directional Surveys of this well based on the original data, the minimum curvature method, corrected to True North and obtained at the well site.



Mike McCommand
MWD Supervisor
Ryan Directional Services, Inc.



RYAN DIRECTIONAL SERVICES, INC.
A NABORS COMPANY

Ryan Directional Services, Inc.
19510 Oil Center Blvd.
Houston, Texas 77073
Bus: 281.443.1414
Fax: 281.443.1676

Thursday, October 02, 2014

State of North Dakota
County of McKenzie

Subject: **Survey Certification Letter**

Survey Company: Ryan Directional Services, Inc.

Job Number: 8124

Surface: 48 3' 41.950 N / 103 36' 10.110 W

Survey Job Type: Ryan MWD

A.P.I. No: 33-053-06019

Customer: Oasis Petroleum

Location: McKenzie, ND

Well Name: CHALMERS 5300 21-19 6B

RKB Height: 2076'

Rig Name: Nabors B-22

Distance to Bit: 57'

<i>Surveyor Name</i>	<i>Surveyor Title</i>	<i>Borehole Number</i>	<i>Start Depth</i>	<i>End Depth</i>	<i>Start Date</i>	<i>End Date</i>	<i>Type of</i>	<i>TD Straight Line Projection</i>
Mike McCommend	MWD Supervisor	OH	0'	2089'	09/30/14	10/02/14	MWD	2190'

The data and calculations for this survey have been checked by me and conform to the calibration standards and operational procedures set forth by Ryan Directional Services, Inc. I am authorized and qualified to review the data, calculations and these reports; the reports represents true and correct Directional Surveys of this well based on the original data, the minimum curvature method, corrected to True North and obtained at the well site.


Mike McCommend
MWD Supervisor
Ryan Directional Services, Inc.



SURVEY REPORT

Customer:	Oasis Petroleum
Well Name:	CHALMERS 5300 21-19 6B
Rig #:	Nabors B-22
API #:	33-053-06019
Calculation Method:	Minimum Curvature Calculation

MWD Operator:	M McCommand / R Maddalena
Directional Drillers:	RPM
Survey Corrected To:	True North
Vertical Section Direction:	85.88
Total Correction:	8.17
Temperature Forecasting Model (Chart Only):	Logarithmic

Survey #	MD	Inc	Azm	Temp	TVD	VS	N/S	E/W	DLS
Tie in to Gyro Surveys									
Tie In	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	147	0.40	140.60	71.00	147.00	0.30	-0.40	0.33	0.27
2	240	0.50	135.90	73.00	240.00	0.74	-0.94	0.81	0.11
3	333	0.60	126.80	78.00	332.99	1.37	-1.52	1.49	0.14
4	427	0.50	107.00	82.00	426.99	2.13	-1.94	2.27	0.23
5	520	0.60	124.40	86.00	519.98	2.89	-2.33	3.06	0.21
6	613	0.60	90.30	89.00	612.98	3.75	-2.61	3.95	0.38
7	702	0.60	96.80	95.00	701.97	4.68	-2.67	4.88	0.08
8	790	0.50	67.00	93.00	789.97	5.49	-2.57	5.69	0.34
9	880	0.10	251.10	98.00	879.97	5.79	-2.44	5.98	0.67
10	970	0.20	213.40	104.00	969.97	5.62	-2.60	5.82	0.15
11	1063	0.30	215.50	104.00	1062.97	5.36	-2.93	5.59	0.11
12	1154	0.40	172.80	107.00	1153.97	5.23	-3.44	5.49	0.30
13	1250	0.70	128.70	109.00	1249.96	5.67	-4.14	5.99	0.52
14	1343	0.60	138.00	111.00	1342.96	6.39	-4.86	6.76	0.16
15	1436	0.70	133.30	111.00	1435.95	7.07	-5.61	7.50	0.12
16	1530	0.90	116.50	111.00	1529.94	8.10	-6.33	8.57	0.33
17	1623	1.10	93.70	107.00	1622.93	9.61	-6.72	10.12	0.47
18	1717	1.00	102.90	102.00	1716.91	11.29	-6.96	11.82	0.21
19	1810	0.50	114.60	105.00	1809.90	12.42	-7.31	12.98	0.56
20	1903	0.40	62.30	105.00	1902.90	13.07	-7.33	13.64	0.44
21	1997	0.70	15.60	104.00	1996.90	13.57	-6.62	14.08	0.55
22	2089	1.00	303.70	107.00	2088.89	13.12	-5.63	13.56	1.12
23	2235	0.70	319.80	77.00	2234.87	11.59	-4.24	11.93	0.26
24	2266	0.70	307.30	78.00	2265.87	11.34	-3.99	11.66	0.49
25	2360	0.70	293.70	84.00	2359.86	10.40	-3.41	10.67	0.18
26	2452	0.40	306.60	87.00	2451.86	9.66	-2.99	9.90	0.35
27	2545	0.70	266.90	91.00	2544.85	8.85	-2.83	9.07	0.50
28	2639	0.70	257.50	93.00	2638.85	7.70	-2.98	7.94	0.12
29	2732	0.50	220.70	96.00	2731.84	6.86	-3.41	7.12	0.46
30	2826	0.90	251.70	98.00	2825.84	5.85	-3.96	6.15	0.57
31	2919	0.50	266.30	102.00	2918.83	4.74	-4.21	5.05	0.47
32	3012	2.00	32.90	104.00	3011.81	5.31	-2.87	5.53	2.51
33	3106	1.80	30.00	107.00	3105.76	7.12	-0.22	7.16	0.24
34	3199	1.80	27.00	109.00	3198.71	8.70	2.35	8.55	0.10
35	3293	0.70	66.10	111.00	3292.69	10.00	3.90	9.75	1.42
36	3386	0.80	77.70	107.00	3385.68	11.18	4.26	10.90	0.19
37	3479	0.80	72.60	109.00	3478.67	12.45	4.60	12.15	0.08
38	3573	0.80	58.90	114.00	3572.67	13.68	5.13	13.34	0.20
39	3666	0.70	60.20	116.00	3665.66	14.77	5.75	14.39	0.11
40	3759	0.70	90.90	120.00	3758.65	15.85	6.02	15.45	0.40
41	3853	1.10	24.40	122.00	3852.64	16.85	6.84	16.40	1.11
42	3946	1.10	25.00	123.00	3945.62	17.71	8.46	17.15	0.01
43	4040	1.00	268.00	127.00	4039.62	17.33	9.25	16.71	1.91
44	4133	1.10	271.00	129.00	4132.60	15.63	9.23	15.00	0.12
45	4227	0.90	266.10	131.00	4226.59	13.99	9.20	13.36	0.23
46	4320	0.90	260.30	132.00	4319.57	12.53	9.03	11.92	0.10
47	4413	1.10	262.20	132.00	4412.56	10.92	8.78	10.31	0.22
48	4506	1.00	276.10	132.00	4505.55	9.23	8.75	8.62	0.29
49	4599	1.10	257.30	136.00	4598.53	7.55	8.64	6.94	0.38
50	4693	1.10	255.80	138.00	4692.51	5.76	8.22	5.19	0.03
51	4786	1.50	248.00	140.00	4785.49	3.73	7.54	3.19	0.47
52	4879	1.40	258.70	141.00	4878.46	1.44	6.86	0.95	0.31
53	4973	0.70	357.80	141.00	4972.45	0.32	7.21	-0.20	1.77
54	5066	0.80	353.80	143.00	5065.44	0.32	8.43	-0.29	0.12
55	5159	0.40	174.60	145.00	5158.44	0.30	8.75	-0.33	1.29
56	5253	0.50	172.90	147.00	5252.43	0.33	8.02	-0.25	0.11
57	5346	0.80	176.70	149.00	5345.43	0.34	6.96	-0.16	0.33
58	5439	0.50	187.60	150.00	5438.42	0.25	5.91	-0.18	0.35
59	5533	0.40	192.90	152.00	5532.42	0.07	5.19	-0.30	0.12
60	5626	0.20	232.60	150.00	5625.42	-0.16	4.77	-0.50	0.30



SURVEY REPORT

Customer:	Oasis Petroleum
Well Name:	CHALMERS 5300 21-19 6B
Rig #:	Nabors B-22
API #:	33-053-06019
Calculation Method:	Minimum Curvature Calculation

MWD Operator:	M McCommand / R Maddalena
Directional Drillers:	RPM
Survey Corrected To:	True North
Vertical Section Direction:	85.88
Total Correction:	8.17
Temperature Forecasting Model (Chart Only):	Logarithmic

Survey #	MD	Inc	Azm	Temp	TVD	VS	N/S	E/W	DLS
61	5720	0.40	282.10	152.00	5719.42	-0.61	4.74	-0.96	0.33
62	5813	0.40	204.90	156.00	5812.42	-1.08	4.52	-1.41	0.54
63	5906	0.30	247.10	159.00	5905.41	-1.47	4.13	-1.77	0.29
64	6000	0.30	247.70	161.00	5999.41	-1.94	3.94	-2.23	0.00
65	6051	0.40	264.30	163.00	6050.41	-2.24	3.87	-2.53	0.28
66	6178	0.70	225.80	127.00	6177.41	-3.28	3.28	-3.52	0.36
67	6271	0.10	181.50	134.00	6270.40	-3.72	2.81	-3.93	0.68
68	6365	1.10	11.20	140.00	6364.40	-3.49	3.61	-3.76	1.28
69	6458	0.70	11.40	143.00	6457.39	-3.10	5.04	-3.47	0.43
70	6552	1.10	26.00	147.00	6551.37	-2.50	6.42	-2.97	0.49
71	6645	1.50	83.60	150.00	6644.35	-0.83	7.35	-1.36	1.40
72	6738	1.40	96.90	156.00	6737.32	1.50	7.35	0.97	0.38
73	6832	0.90	122.20	159.00	6831.31	3.22	6.82	2.74	0.75
74	6925	0.90	72.50	163.00	6924.30	4.52	6.65	4.05	0.81
75	7018	1.60	64.20	167.00	7017.27	6.44	7.44	5.92	0.78
76	7112	1.50	65.20	170.00	7111.24	8.81	8.52	8.22	0.11
77	7205	1.50	66.40	174.00	7204.21	11.09	9.52	10.44	0.03
78	7298	2.00	66.40	176.00	7297.16	13.77	10.66	13.04	0.54
79	7392	1.50	72.20	177.00	7391.12	16.51	11.69	15.71	0.56
80	7485	1.50	91.60	177.00	7484.09	18.91	12.03	18.09	0.54
81	7578	0.90	10.00	183.00	7577.07	20.30	12.72	19.43	1.76
82	7672	1.10	352.50	185.00	7671.06	20.42	14.34	19.44	0.39
83	7765	0.90	10.50	188.00	7764.04	20.56	15.94	19.46	0.40
84	7858	0.90	3.10	188.00	7857.03	20.83	17.39	19.63	0.12
85	7952	0.30	340.90	188.00	7951.03	20.86	18.36	19.59	0.67
86	8045	0.80	35.20	190.00	8044.02	21.21	19.12	19.89	0.72
87	8138	0.40	19.40	194.00	8137.02	21.75	19.95	20.37	0.46
88	8232	0.50	23.70	195.00	8231.02	22.07	20.64	20.64	0.11
89	8325	0.60	24.70	195.00	8324.01	22.50	21.45	21.01	0.11
90	8419	0.50	17.80	197.00	8418.01	22.89	22.29	21.34	0.13
91	8512	0.30	351.90	199.00	8511.00	23.02	22.92	21.43	0.28
92	8605	1.20	35.20	199.00	8604.00	23.62	23.96	21.96	1.08
93	8699	1.00	46.90	201.00	8697.98	24.88	25.32	23.12	0.32
94	8792	0.90	58.30	203.00	8790.97	26.16	26.26	24.34	0.23
95	8885	1.10	54.10	201.00	8883.95	27.57	27.17	25.68	0.23
96	8979	0.90	60.00	204.00	8977.94	29.00	28.06	27.05	0.24
97	9072	0.60	72.60	208.00	9070.93	30.13	28.57	28.15	0.37
98	9166	0.20	21.70	210.00	9164.93	30.68	28.87	28.68	0.53
99	9259	0.10	76.80	212.00	9257.93	30.83	29.04	28.82	0.18
100	9352	0.10	52.10	210.00	9350.93	30.98	29.11	28.96	0.05
101	9445	0.10	56.90	213.00	9443.93	31.12	29.21	29.09	0.01
102	9539	0.40	115.90	210.00	9537.93	31.47	29.11	29.46	0.38
103	9632	0.40	124.70	203.00	9630.92	32.01	28.78	30.02	0.07
104	9725	0.20	156.00	201.00	9723.92	32.32	28.45	30.35	0.27
105	9819	0.40	89.90	203.00	9817.92	32.70	28.30	30.74	0.39
106	9912	0.40	99.90	208.00	9910.92	33.34	28.24	31.39	0.07
107	10005	0.10	79.80	210.00	10003.92	33.73	28.20	31.79	0.33
108	10099	0.30	184.00	212.00	10097.92	33.78	27.97	31.85	0.36
109	10161	0.40	205.10	206.00	10159.92	33.65	27.61	31.75	0.26
110	10205	0.70	43.50	179.00	10203.92	33.77	27.67	31.87	2.47
111	10236	5.50	50.40	181.00	10234.86	35.13	28.75	33.14	15.50
112	10267	10.90	50.60	181.00	10265.53	38.73	31.56	36.56	17.42
113	10299	16.10	53.10	185.00	10296.64	44.93	36.15	42.45	16.35
114	10330	20.90	58.30	185.00	10326.03	53.46	41.64	50.59	16.36
115	10361	24.00	58.80	186.00	10354.68	63.97	47.81	60.69	10.02
116	10392	26.50	56.70	188.00	10382.71	75.63	54.88	71.87	8.57
117	10423	28.70	56.60	188.00	10410.18	88.16	62.77	83.87	7.10
118	10454	31.10	56.80	190.00	10437.06	101.65	71.26	96.78	7.75
119	10485	33.00	58.30	190.00	10463.33	116.13	80.08	110.66	6.64
120	10517	34.80	60.30	190.00	10489.89	132.09	89.18	126.01	6.62



SURVEY REPORT

Customer:	Oasis Petroleum
Well Name:	CHALMERS 5300 21-19 6B
Rig #:	Nabors B-22
API #:	33-053-06019
Calculation Method:	Minimum Curvature Calculation

MWD Operator:	M McCommand / R Maddalena
Directional Drillers:	RPM
Survey Corrected To:	True North
Vertical Section Direction:	85.88
Total Correction:	8.17
Temperature Forecasting Model (Chart Only):	Logarithmic

Survey #	MD	Inc	Azm	Temp	TVD	VS	N/S	E/W	DLS
121	10548	37.00	61.30	192.00	10515.00	148.56	98.05	141.88	7.34
122	10579	38.90	61.10	192.00	10539.44	165.88	107.23	158.58	6.14
123	10610	42.50	58.90	194.00	10562.94	184.06	117.35	176.08	12.50
124	10641	44.80	57.40	194.00	10585.37	202.99	128.64	194.25	8.14
125	10672	48.40	56.80	195.00	10606.67	222.73	140.88	213.16	11.70
126	10703	51.30	57.70	195.00	10626.66	243.52	153.69	233.08	9.61
127	10734	52.20	58.50	197.00	10645.85	265.06	166.55	253.75	3.54
128	10765	53.50	60.10	197.00	10664.57	287.16	179.17	275.00	5.87
129	10797	55.90	61.30	195.00	10683.06	310.79	191.94	297.77	8.10
130	10828	59.80	62.20	192.00	10699.55	334.74	204.36	320.89	12.82
131	10859	64.00	61.30	192.00	10714.15	359.69	217.30	344.97	13.79
132	10890	70.00	60.70	192.00	10726.26	385.57	231.13	369.92	19.44
133	10921	75.70	59.80	194.00	10735.40	412.26	245.83	395.62	18.59
134	10952	79.30	59.30	192.00	10742.11	439.38	261.16	421.71	11.72
135	10983	80.10	59.00	192.00	10747.65	466.62	276.80	447.89	2.75
136	11014	84.40	57.80	192.00	10751.83	493.86	292.90	474.05	14.39
137	11046	89.20	56.50	186.00	10753.61	521.87	310.22	500.88	15.54
138	11058	90.60	56.10	192.00	10753.63	532.31	316.88	510.86	12.13
139	11109	91.20	55.70	217.00	10752.83	576.48	345.47	553.09	1.41
140	11140	91.40	55.90	217.00	10752.13	603.30	362.89	578.72	0.91
141	11171	90.50	56.30	219.00	10751.62	630.20	380.18	604.45	3.18
142	11202	90.40	56.30	219.00	10751.37	657.16	397.38	630.24	0.32
143	11233	88.90	55.50	219.00	10751.56	684.01	414.76	655.91	5.48
144	11264	88.60	55.00	219.00	10752.24	710.68	432.42	681.37	1.88
145	11295	88.40	54.80	219.00	10753.05	737.25	450.24	706.72	0.91
146	11326	86.50	54.00	219.00	10754.43	763.66	468.27	731.90	6.65
147	11347	85.70	54.70	208.00	10755.86	781.51	480.48	748.93	5.06
148	11378	85.80	54.60	206.00	10758.15	807.95	498.37	774.14	0.46
149	11409	87.60	54.60	201.00	10759.94	834.40	516.29	799.37	5.81
150	11440	88.20	54.70	203.00	10761.07	860.89	534.22	824.64	1.96
151	11470	90.00	54.90	203.00	10761.55	886.58	551.51	849.15	6.04
152	11501	90.60	54.80	201.00	10761.38	913.14	569.35	874.49	1.96
153	11532	90.70	54.80	203.00	10761.03	939.69	587.22	899.82	0.32
154	11563	91.60	56.60	203.00	10760.41	966.48	604.69	925.43	6.49
155	11594	92.30	57.00	201.00	10759.35	993.56	621.65	951.35	2.60
156	11625	92.80	57.50	201.00	10757.98	1020.74	638.40	977.40	2.28
157	11656	92.30	59.10	201.00	10756.60	1048.19	654.68	1003.75	5.40
158	11687	91.00	59.80	201.00	10755.70	1075.93	670.43	1030.43	4.76
159	11718	89.30	61.20	201.00	10755.62	1103.94	685.69	1057.41	7.10
160	11749	89.60	63.00	201.00	10755.92	1132.31	700.20	1084.80	5.89
161	11780	89.50	65.20	203.00	10756.16	1161.09	713.74	1112.69	7.10
162	11811	87.80	67.20	203.00	10756.89	1190.27	726.24	1141.04	8.47
163	11842	86.40	69.10	203.00	10758.46	1219.76	737.76	1169.77	7.61
164	11873	86.30	71.60	204.00	10760.44	1249.56	748.17	1198.91	8.05
165	11905	88.40	73.60	204.00	10761.92	1280.67	757.72	1229.41	9.06
166	11936	88.90	75.80	204.00	10762.65	1311.07	765.90	1259.30	7.28
167	11968	90.20	78.20	204.00	10762.90	1342.68	773.10	1290.47	8.53
168	12000	89.80	81.00	206.00	10762.90	1374.49	778.87	1321.95	8.84
169	12031	90.20	83.40	206.00	10762.90	1405.42	783.08	1352.66	7.85
170	12063	88.40	85.30	206.00	10763.29	1437.41	786.23	1384.50	8.18
171	12094	87.00	87.50	206.00	10764.53	1468.38	788.18	1415.41	8.41
172	12126	86.30	89.70	206.00	10766.40	1500.28	788.96	1447.34	7.20
173	12157	87.60	92.50	210.00	10768.05	1531.11	788.36	1478.29	9.95
174	12189	87.90	94.40	208.00	10769.31	1562.80	786.44	1510.20	6.01
175	12221	88.10	94.70	210.00	10770.43	1594.42	783.90	1542.08	1.13
176	12252	87.10	94.70	212.00	10771.72	1625.02	781.36	1572.95	3.23
177	12284	87.10	94.40	212.00	10773.34	1656.62	778.83	1604.81	0.94
178	12315	87.50	94.70	213.00	10774.80	1687.23	776.37	1635.68	1.61
179	12347	87.60	94.50	213.00	10776.17	1718.83	773.81	1667.55	0.70
180	12379	87.60	94.20	213.00	10777.51	1750.45	771.38	1699.43	0.94



SURVEY REPORT

Customer: Oasis Petroleum
 Well Name: CHALMERS 5300 21-19 6B
 Rig #: Nabors B-22
 API #: 33-053-06019
 Calculation Method: Minimum Curvature Calculation

MWD Operator: M McCommand / R Maddalena
 Directional Drillers: RPM
 Survey Corrected To: True North
 Vertical Section Direction: 85.88
 Total Correction: 8.17
 Temperature Forecasting Model (Chart Only): Logarithmic

Survey #	MD	Inc	Azm	Temp	TVD	VS	N/S	E/W	DLS
181	12410	86.90	94.00	215.00	10779.00	1781.10	769.17	1730.31	2.35
182	12442	87.10	94.00	213.00	10780.67	1812.74	766.94	1762.19	0.63
183	12473	88.00	94.10	215.00	10782.00	1843.39	764.75	1793.08	2.92
184	12505	88.70	94.10	215.00	10782.92	1875.05	762.46	1824.99	2.19
185	12537	88.40	93.60	215.00	10783.73	1906.73	760.32	1856.90	1.82
186	12568	88.60	93.00	217.00	10784.54	1937.46	758.53	1887.84	2.04
187	12600	89.00	91.90	217.00	10785.21	1969.24	757.17	1919.81	3.66
188	12631	88.80	91.20	219.00	10785.81	2000.09	756.33	1950.79	2.35
189	12663	89.40	91.20	217.00	10786.31	2031.94	755.66	1982.78	1.88
190	12694	90.10	91.00	217.00	10786.44	2062.81	755.06	2013.77	2.35
191	12726	91.30	90.40	219.00	10786.05	2094.70	754.67	2045.77	4.19
192	12789	91.40	89.70	217.00	10784.57	2157.51	754.62	2108.75	1.12
193	12884	91.00	90.30	221.00	10782.58	2252.25	754.62	2203.73	0.76
194	12979	89.60	90.10	221.00	10782.08	2346.97	754.28	2298.72	1.49
195	13073	88.20	89.70	224.00	10783.89	2440.72	754.45	2392.70	1.55
196	13168	88.80	90.00	222.00	10786.37	2535.46	754.70	2487.67	0.71
197	13263	89.50	89.90	224.00	10787.78	2630.21	754.78	2582.66	0.74
198	13358	90.90	92.00	224.00	10787.45	2724.83	753.21	2677.64	2.66
199	13452	90.30	92.50	226.00	10786.47	2818.24	749.51	2771.56	0.83
200	13547	89.20	92.80	226.00	10786.88	2912.58	745.12	2866.45	1.20
201	13642	89.30	92.50	228.00	10788.12	3006.91	740.73	2961.34	0.33
202	13737	89.50	91.80	230.00	10789.12	3101.33	737.17	3056.27	0.77
203	13832	89.60	91.70	230.00	10789.87	3195.83	734.27	3151.22	0.15
204	13926	89.70	91.80	231.00	10790.44	3289.34	731.40	3245.18	0.15
205	14021	89.10	91.90	231.00	10791.43	3383.82	728.33	3340.12	0.64
206	14116	89.20	91.80	233.00	10792.84	3478.29	725.26	3435.06	0.15
207	14211	90.80	91.80	235.00	10792.84	3572.78	722.28	3530.01	1.68
208	14305	89.20	90.70	235.00	10792.84	3666.37	720.23	3623.99	2.07
209	14400	89.30	89.60	237.00	10794.09	3761.09	719.98	3718.98	1.16
210	14495	90.20	89.20	239.00	10794.50	3855.91	720.97	3813.97	1.04
211	14589	90.50	89.90	237.00	10793.93	3949.72	721.71	3907.96	0.81
212	14684	87.80	89.10	237.00	10795.34	4044.51	722.54	4002.94	2.96
213	14779	87.30	89.40	237.00	10799.40	4139.26	723.78	4097.84	0.61
214	14874	88.00	89.60	237.00	10803.29	4233.99	724.61	4192.76	0.77
215	14968	89.20	90.00	239.00	10805.59	4327.74	724.94	4286.73	1.35
216	15063	90.40	90.00	240.00	10805.92	4422.49	724.94	4381.73	1.26
217	15158	90.70	89.40	242.00	10805.01	4517.27	725.44	4476.72	0.71
218	15253	91.40	88.90	242.00	10803.27	4612.10	726.85	4571.69	0.91
219	15348	91.10	89.80	240.00	10801.20	4706.90	727.92	4666.66	1.00
220	15443	89.50	90.80	240.00	10800.70	4801.61	727.43	4761.66	1.99
221	15537	90.10	90.30	242.00	10801.03	4895.30	726.52	4855.65	0.83
222	15632	89.60	91.10	242.00	10801.28	4989.96	725.36	4950.64	0.99
223	15727	90.80	92.30	242.00	10800.94	5084.47	722.54	5045.60	1.79
224	15822	89.50	92.20	242.00	10800.70	5178.88	718.81	5140.52	1.37
225	15916	88.10	91.70	242.00	10802.66	5272.33	715.62	5234.44	1.58
226	16011	88.40	91.40	244.00	10805.57	5366.82	713.05	5329.36	0.45
227	16106	90.20	91.90	244.00	10806.73	5461.33	710.31	5424.31	1.97
228	16201	89.90	91.30	242.00	10806.64	5555.86	707.66	5519.28	0.71
229	16295	86.20	91.00	244.00	10809.84	5649.39	705.78	5613.19	3.95
230	16390	85.80	89.90	244.00	10816.47	5743.85	705.03	5707.95	1.23
231	16485	87.10	88.70	246.00	10822.35	5838.50	706.19	5802.76	1.86
232	16580	88.00	87.50	246.00	10826.41	5933.34	709.34	5897.62	1.58
233	16674	88.90	86.50	248.00	10828.95	6027.28	714.25	5991.45	1.43
234	16769	89.50	87.00	246.00	10830.28	6122.26	719.64	6086.29	0.82
235	16864	90.10	88.50	248.00	10830.61	6217.21	723.37	6181.21	1.70
236	16959	90.10	89.20	248.00	10830.45	6312.08	725.28	6276.19	0.74
237	17054	88.50	89.60	249.00	10831.61	6406.89	726.27	6371.18	1.74
238	17149	88.50	89.30	249.00	10834.09	6501.67	727.18	6466.14	0.32
239	17243	89.90	90.30	249.00	10835.41	6595.44	727.51	6560.12	1.83
240	17338	90.50	90.40	251.00	10835.07	6690.15	726.93	6655.12	0.64



SURVEY REPORT

Customer:	Oasis Petroleum
Well Name:	CHALMERS 5300 21-19 6B
Rig #:	Nabors B-22
API #:	33-053-06019
Calculation Method:	Minimum Curvature Calculation

MWD Operator:	M McCommand / R Maddalena
Directional Drillers:	RPM
Survey Corrected To:	True North
Vertical Section Direction:	85.88
Total Correction:	8.17
Temperature Forecasting Model (Chart Only):	Logarithmic

Survey #	MD	Inc	Azm	Temp	TVD	VS	N/S	E/W	DLS
241	17433	89.90	91.10	249.00	10834.74	6784.81	725.69	6750.11	0.97
242	17528	89.10	91.10	251.00	10835.57	6879.41	723.86	6845.09	0.84
243	17622	88.70	90.30	253.00	10837.38	6973.06	722.71	6939.07	0.95
244	17717	88.60	89.30	251.00	10839.62	7067.81	723.05	7034.04	1.06
245	17812	90.20	88.60	253.00	10840.61	7162.66	724.79	7129.01	1.84
246	17907	89.40	87.30	253.00	10840.94	7257.60	728.19	7223.95	1.61
247	18001	91.10	87.30	253.00	10840.53	7351.56	732.61	7317.84	1.81
248	18096	91.40	87.40	251.00	10838.46	7446.51	737.00	7412.71	0.33
249	18191	90.10	86.70	251.00	10837.22	7541.48	741.89	7507.58	1.55
250	18286	90.40	88.60	251.00	10836.80	7636.43	745.79	7602.49	2.02
251	18381	90.90	90.90	253.00	10835.72	7731.20	746.20	7697.48	2.48
252	18475	90.60	91.50	253.00	10834.49	7824.79	744.23	7791.45	0.71
253	18570	91.10	91.30	255.00	10833.08	7919.33	741.91	7886.41	0.57
254	18665	90.50	90.70	255.00	10831.76	8013.94	740.26	7981.39	0.89
255	18760	89.10	91.10	253.00	10832.09	8108.58	738.76	8076.37	1.53
256	18854	88.90	90.50	255.00	10833.73	8202.22	737.45	8170.35	0.67
257	18949	89.80	91.50	253.00	10834.81	8296.83	735.79	8265.32	1.42
258	19044	90.30	91.20	255.00	10834.72	8391.40	733.56	8360.30	0.61
259	19139	91.00	91.10	255.00	10833.65	8485.99	731.65	8455.27	0.74
260	19234	89.40	90.10	255.00	10833.31	8580.66	730.65	8550.26	1.99
261	19328	90.30	91.10	255.00	10833.56	8674.34	729.67	8644.25	1.43
262	19423	89.20	90.30	255.00	10833.98	8769.00	728.51	8739.24	1.43
263	19518	90.10	90.30	255.00	10834.56	8863.71	728.01	8834.24	0.95
264	19613	90.90	90.30	255.00	10833.73	8958.43	727.51	8929.23	0.84
265	19708	91.50	89.90	255.00	10831.74	9053.15	727.35	9024.21	0.76
266	19802	89.90	90.20	255.00	10830.59	9146.89	727.27	9118.20	1.73
267	19897	89.80	89.20	257.00	10830.84	9241.68	727.76	9213.20	1.06
268	19992	90.90	89.80	255.00	10830.26	9336.48	728.59	9308.19	1.32
269	20087	91.40	89.10	257.00	10828.35	9431.28	729.50	9403.17	0.91
270	20182	91.10	90.40	255.00	10826.28	9526.04	729.92	9498.14	1.40
271	20277	88.90	90.60	255.00	10826.28	9620.72	729.09	9593.13	2.33
272	20371	89.60	90.90	257.00	10827.51	9714.38	727.86	9687.12	0.81
273	20466	90.50	90.30	257.00	10827.43	9809.05	726.86	9782.11	1.14
274	20519	91.10	90.00	257.00	10826.69	9861.90	726.73	9835.10	1.27
Projection	20585	91.10	90.00	257.00	10825.42	9927.72	726.73	9901.09	0.00



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.

28634



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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date July 29, 2014	<input type="checkbox"/> Drilling Prognosis	<input type="checkbox"/> Spill Report
<input type="checkbox"/> Report of Work Done	Date Work Completed	<input type="checkbox"/> Redrilling or Repair	<input type="checkbox"/> Shooting
<input type="checkbox"/> Notice of Intent to Begin a Workover Project that may Qualify for a Tax Exemption Pursuant to NDCC Section 57-51.1-03.	Approximate Start Date	<input checked="" type="checkbox"/> Casing or Liner	<input type="checkbox"/> Acidizing
		<input type="checkbox"/> Plug Well	<input type="checkbox"/> Fracture Treatment
		<input type="checkbox"/> Supplemental History	<input type="checkbox"/> Change Production Method
		<input type="checkbox"/> Temporarily Abandon	<input type="checkbox"/> Reclamation
		<input type="checkbox"/> Other Change casing	

Well Name and Number
Chalmers 5300 21-19 6B

Footages	Qtr-Qtr	Section	Township	Range
2160 F N L	327 F W L	LOT2	19	153 N 100 W
Field	Pool Bakken		County	McKenzie

24-HOUR PRODUCTION RATE

Before	After
Oil	Bbls
Water	Bbls
Gas	MCF

Name of Contractor(s)

Address	City	State	Zip Code

DETAILS OF WORK

Oasis Petroleum respectfully requests permission to make the following changes to the above referenced well:

- Surface casing changed to 13 3/8"
- Contingency 9 5/8" casing added
- 7' casing changed to all 32#

Attached are revised drill plan, well summary, directional plan and plot

Company Oasis Petroleum North America LLC	Telephone Number 281-404-9563	
Address 1001 Fannin, Suite 1500		
City Houston	State TX	Zip Code 77002
Signature 	Printed Name Heather McCowan	
Title Regulatory Assistant	Date July 29, 2014	
Email Address hmccowan@oasispetroleum.com		

FOR STATE USE ONLY

<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date 8-15-14	
By 	
Title Petroleum Resource Specialist	

**Oasis Petroleum
Well Summary**
Chalmers 5300 21-19 6B
Sec. 19 T153N R100W
McKenzie County, North Dakota

SURFACE CASING AND CEMENT DESIGN

Size	Interval	Weight	Grade	Coupling	I.D.	Drift	Make-up Torque (ft-lbs)		
							Minimum	Optimum	Max
13-3/8"	0' to 2,126'	54.5	J-55	STC	12.615"	12.459"	4,100	5,470	6,840

Interval	Description	Collapse	Burst	Tension	Cost per ft
		(psi) a	(psi) b	(1000 lbs) c	
0' to 2,126'	13-3/8", 54.5#, J-55, STC, 8rd	1130 / 1.14	2730 / 2.74	514 / 2.57	

API Rating & Safety Factor

- a) Collapse pressure based on full casing evacuation with 9 ppg fluid on backside (2126' setting depth).
- b) Burst pressure based on 9 ppg fluid with no fluid on backside (2126' setting depth).
- c) Tension based on string weight in 9 ppg fluid at 2126' TVD plus 100k# overpull. (Buoyed weight equals 100k lbs.)

Cement volumes are based on 13-3/8" casing set in 17-1/2" hole with 50% excess to circulate cement back to surface. Mix and pump the following slurry.

Pre-flush (Spacer): **20 bbls** fresh water

Lead Slurry: **629 sks** (325 bbls) 2.9 yield conventional system with 94 lb/sk cement, .25 lb/sk D130 Lost Circulation Control Agent, 2% CaCL2, 4% D079 Extender, and 2% D053 Expanding Agent.

Tail Slurry: **374 sks** (77 bbls) 1.16 yield conventional system with 94 lb/sk cement, .25 lb/sk Lost Circulation Control Agent, and .25% CaCL2.

**Oasis Petroleum
Well Summary**
Chalmers 5300 21-19 6B
Sec. 19 T153N R100W
McKenzie County, North Dakota

INTERMEDIATE CASING AND CEMENT DESIGN

Intermediate Casing Design

Size	Interval	Weight	Grade	Coupling	I.D.	Drift	Make-up Torque (ft-lbs)		
							Minimum	Optimum	Max
9-5/8"	0' - 6000'	40	HCL-80	LTC	8.835"	8.75***	5,450	7,270	9,090

**Special Drift

Interval	Description	Collapse	Burst	Tension
		(psi) a	(psi) b	(1000 lbs) c
0' - 6000'	9-5/8", 40#, HCL-80, LTC, 8rd	3090 / 3.96*	5750 / 1.23	837 / 2.75

API Rating & Safety Factor

- d) Collapse pressure based on 11.5ppg fluid on backside and 9ppg fluid inside of casing.
- e) Burst pressure calculated from a gas kick coming from the production zone (Bakken Pool) at 9,000psi and a subsequent breakdown at the 9-5/8" shoe, based on a 13.5#/ft fracture gradient. Backup of 9 ppg fluid.
- f) Tension based on string weight in 10 ppg fluid, (217k lbs buoyed weight) plus 100k lbs overpull.

Cement volumes are estimates based on 9-5/8" casing set in an 12-1/4" hole with 10% excess in OH and 0% excess inside surface casing. TOC at surface.

Pre-flush (Spacer): **20 bbls** Chem wash

Lead Slurry: **540 sks** (280 bbls) Conventional system with 75 lb/sk cement, 0.5lb/sk lost circulation, 10% expanding agent, 2% extender, 2% CaCl2, 0.2% anti foam, and 0.4% fluid loss

Tail Slurry: **373 sks** (77 bbls) Conventional system with 94 lb/sk cement, 0.3% anti-settling agent, 0.3% fluid loss agent, 0.3 lb/sk lost circulation control agent, 0.2% anti foam, and 0.1% retarder

**Oasis Petroleum
Well Summary
Chalmers 5300 21-19 6B
Sec. 19 T153N R100W
McKenzie County, North Dakota**

INTERMEDIATE CASING AND CEMENT DESIGN

Intermediate Casing Design

Size	Interval	Weight	Grade	Coupling	I.D.	Drift	Make-up Torque (ft-lbs)		
							Minimum	Optimum	Max
7"	0' - 11032'	32	HCP-110	LTC	6.094"	6.000***	6730	8970	9870

**Special Drift

Interval	Description	Collapse	Burst	Tension
		(psi) a	(psi) b	(1000 lbs) c
0' - 11032'	7", 32#, P-110, LTC, 8rd	11820 / 2.10*	12460 / 1.28	897 / 2.24
6746' - 9214'	7", 32#, HCP-110, LTC, 8rd	11820 / 1.28**	12460 / 1.30	

API Rating & Safety Factor

- a. *Assume full casing evacuation with 10 ppg fluid on backside. **Assume full casing evacuation with 1.2 psi/ft equivalent fluid gradient across salt intervals.
- b. Burst pressure based on 9000 psig max press for stimulation plus 10.2 ppg fluid in casing and 9 ppg fluid on backside-to 10,808' TVD.
- c. Based on string weight in 10 ppg fluid, 299k lbs buoyed weight) plus 100k lbs overpull.

Cement volumes are estimates based on 7" casing set in an 8-3/4" hole with 30% excess.

Pre-flush (Spacer): **50 bbls** Saltwater
40 bbls Weighted MudPush Express

Lead Slurry: **219 sks** (86 bbls) 2.21 yield conventional system with 47 lb/sk cement, 37 lb/sk D035 Extender, 3.0% KCl, 3.0% D154 Extender, 0.3% D208 Viscosifier, 0.07% Retarder, 0.2% Anti Foam, 0.5lb/sk D130 LCM

Tail Slurry: **604 sks** (166 bbls) 1.54 yield conventional system with 94 lb/sk cement, 3.0% KCl, 35.0% Silica, 0.5% Retarder, 0.2% Fluid Loss, 0.2% Anti Foam, 0.5 lb/sk LCM

Oasis Petroleum

**Oasis Petroleum
Well Summary**
Chalmers 5300 21-19 6B
Sec. 19 T153N R100W
McKenzie County, North Dakota

PRODUCTION LINER

Size	Interval	Weight	Grade	Coupling	I.D.	Drift	Torque
4-1/2"	10221' - 20612'	13.5	P-110	BTC	3.920"	3.795"	2270

Interval	Description	Collapse (psi) a	Burst (psi) b	Tension (1000 lbs) c
10221' - 20612'	4-1/2", 13.5 lb, P-110, BTC	10670 / 1.99	12410 / 1.28	443 / 2.01

API Rating & Safety Factor

- a) Based on full casing evacuation with 9.5 ppg fluid on backside @ 10808' TVD.
- b) Burst pressure based on 9000 psi treating pressure with 10.2 ppg internal fluid gradient and 9 ppg external fluid gradient @ 10808' TVD.
- c) Based on string weight in 9.5 ppg fluid (Buoyed weight: 120k lbs.) plus 100k lbs overpull.

Oasis Petroleum does not use Diesel Fuel, as defined by the US EPA in the list below, in our hydraulic fracture operations.

68334-30-5 (Primary Name: Fuels, diesel)
68476-34-6 (Primary Name: Fuels, diesel, No. 2)
68476-30-2 (Primary Name: Fuel oil No. 2)
68476-31-3 (Primary Name: Fuel oil, No. 4)
8008-20-6 (Primary Name: Kerosene)

DRILLING PLAN							
OPERATOR	Oasis Petroleum	COUNTY/STATE	McKenzie Co., ND				
WELL NAME	Chalmers 5300 21-19 BB	RIG	B 22				
WELL TYPE	Horizontal Middle Bakken						
LOCATION	SW NW 19-153N-100W	Surface Location (survey plat)	2160' FNL				
EST. T.D.	20,612'		327' FWL				
TOTAL LATERAL:	9,580'		GROUND ELEV:	2,051'		Sub Height:	25'
MARKER	TVD	Subsea TVD	LOGS:	Type	Interval		
Pierre	NDIC MAP	2,026		50			
Greenhorn		4,629		-2,553			
Mowry		5,034		-2,958			
Dakota		5,422		-3,346			
Rierdon		6,468		-4,392			
Durham Salt		6,896		-4,820			
Durham Salt Base		6,965		-4,889			
Pine Salt		7,262		-5,186			
Pine Salt Base		7,295		-5,219			
Opeche Salt		7,356		-5,280			
Opeche Salt Base		7,431		-5,355			
Amsden		7,687		-5,591			
Tyler		7,833		-5,757			
Otter/Base Minnelusa		8,037		-5,961			
Kibbey Lime		8,389		-6,313			
Charles Salt		8,539		-6,463			
Base Last Salt		9,214		-7,138			
Mission Canyon		9,434		-7,358			
Lodgepole		9,998		-7,922			
False Bakken		10,711		-8,635			
Upper Bakken Shale		10,721		-8,645			
Middle Bakken (Top of Target)		10,748		-8,672			
Middle Bakken (Base of target)		10,759		-8,683			
Lower Bakken Shale		10,771		-8,695			
Threeforks		10,804		-8,728			
Est. Dip Rate:							
Max. Anticipated BHP:	4667						
Surface Formation: Glacial till							
MUD:	Interval	Type	WT	Vis	WL	Remarks	
Surface:	0' -	2,126'	FW	8.4-9.0	28-32	NC	Circ Mud Tanks
Intermediate:	2,126' -	11,032'	Invert	9.5-10.4	40-50	30+HHP	Circ Mud Tanks
Lateral:	11,032' -	20,612'	Salt Water	9.8-10.2	28-32	NC	Circ Mud Tanks
CASING:	Size	Wt pdf	Hole	Depth	Cement	WOC	Remarks
Surface:	13-3/8"	54.5#	17-1/2"	2,126'	To Surface	12	100' into Pierre
Intermediate: (Dakota)	9-5/8"	40#	12-1/4"	6,000'	To Surface	24	Set Casing across Dakota
Intermediate:	7"	32#	8-3/4"	11,032'	3922	24	1500' above Dakota
Production Liner:	4.5"	13.5#	6"	20,612'	TOL @ 10,221'		50' above KOP
PROBABLE PLUGS, IF REQ'D:							
OTHER:	MD	TVD	FNL/FSL	FEL/FWL	S-T-R	AZI	
Surface:	2,126	2,126	2160 FNL	327 FWL	SEC 19 T153N R100W		
KOP:	10,271'	10,272'	2125 FNL	362 FWL	SEC 19 T153N R100W		
EOC:	11,019'	10,749'	1876 FNL	786 FWL	SEC 19 T153N R100W	58.4	
Casing Point:	11,032'	10,749'	1689 FNL	777 FWL	SEC 19 T153N R100W	58.4	
Middle Bakken Lateral TD:	20,612'	10,808'	1444 FNL	200 FEL	SEC 20 T153N R100W	90.0	
Comments:							
Request a Sundry for an Open Hole Log Waiver: Oasis Chalmers 5300 31-19H 1,850' to S sec 19 153N 100W							
No frac string planned							
35 packers and 25 sleeves planned 3.6MM lbs 30% ceramic							
Oasis Petroleum does not use Diesel Fuel, as defined by the US EPA in the list below, in our hydraulic fracture operations.							
68334-30-5 (Primary Name: Fuel, diesel) 68476-34-6 (Primary Name: Fuel, diesel, No. 2) 68476-30-2 (Primary Name: Fuel oil No. 2)							
68476-31-3 (Primary Name: Fuel oil, No. 4) 8008-20-6 (Primary Name: Kerosene)							
OASIS PETROLEUM							
Geology: N. Gabelman	2/4/2014	Engineering: C. Gilbert 7/14/14					



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

28634

BRANDI TERRY
OASIS PETROLEUM NORTH AMERICA LLC
1001 FANNIN STE 1500
HOUSTON, TX 77002 USA

Date: 6/23/2014

RE: CORES AND SAMPLES

Well Name: **CHALMERS 5300 21-19 6B** Well File No.: **28634**
Location: **LOT2 19-153-100** County: **MCKENZIE**
Permit Type: **Development - HORIZONTAL**
Field: **BAKER** Target Horizon: **BAKKEN**

Dear BRANDI TERRY:

North Dakota Century Code 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 under North Dakota Century Code: Section 38-08-04 and North Dakota Administrative Code: Section 43-02-03-38.1.
- 2) Samples: The Operator is to begin collecting sample drill cuttings no lower than the:
Base of the Last Charles Salt
 - Sample cuttings shall be collected at:
 - 30' maximum intervals through all vertical and build sections.
 - 100' maximum intervals through any horizontal sections.
 - Samples must be washed, dried, placed in standard sample envelopes (3" x 4.5"), packed in the correct order into standard sample boxes (3.5" x 5.25" x 15.25").
 - Samples boxes are to be carefully identified with a label that indicates the operator, well name, well file number, American Petroleum Institute (API) number, location and depth of samples; and forwarded in to the state core and sample library within 30 days of the completion of drilling operations.
- 3) Cores: Any cores cut shall be preserved in correct order, boxed in standard core boxes (4.5", 4.5", 35.75"), and the entire core forwarded to the state core and samples library within 180 days of completion of drilling operations. Any extension of time must have approval on a Form 4 Sundry Notice.

All cores, core chips, and samples must be shipped, prepaid, to the state core and samples library at the following address:

**ND Geological Survey Core Library
2835 Campus Road, Stop 8156
Grand Forks, ND 58202**

North Dakota Century Code 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.

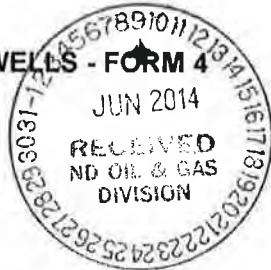
Sincerely

Stephen Fried
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 (09-2006)



Well File No.
28634

PLEASE READ INSTRUCTIONS BEFORE FILLING OUT FORM.

PLEASE SUBMIT THE ORIGINAL AND ONE COPY.

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date May 30, 2014	<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	<u>Waiver to rule Rule 43-02-03-31</u>

Well Name and Number

Chalmers 5300 21-19 6B

Footages	2160 F N L	327 F W L	Qtr-Qtr LOT2	Section 19	Township 153 N	Range 100 W
Field	Pool Bakken		County	McKenzie		

24-HOUR PRODUCTION RATE

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

Name of Contractor(s)

Address

City

State

Zip Code

DETAILS OF WORK

Oasis Petroleum respectfully requests a waiver to Rule 43-02-03-31 in regards to running open hole logs for the above referenced well. Justification for this request is as follows:

H-20407

Oasis Petroleum's Chalmers 5300 31-19H which is located 1850' to S sec 19 T153N R100W (NDIC# 20407)

If this exception is approved, Oasis Petroleum will run a CBL on the intermediate string, and we will also run GR to surface. Oasis Petroleum will also submit two digital copies of each cased hole log and a copy of the mud log containing MWD gamma ray.

Company Oasis Petroleum North America LLC	Telephone Number 281-404-9491	
Address 1001 Fannin, Suite 1500		
City Houston	State TX	Zip Code 77002
Signature <i>Brandi Terry</i>	Printed Name Brandi Terry	
Title Regulatory Specialist	Date May 16, 2014	
Email Address bterry@oasp petroleum.com		

FOR STATE USE ONLY

<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date <i>6-16-2014</i>	
By <i>Stephen Fried</i>	
Title Stephen Fried	
Geologist	



SUNDRY NOTICES AND REPORTS ON WELLS - FORM 4

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

Well File No.
28634

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

<input checked="" type="checkbox"/> Notice of Intent	Approximate Start Date May 16, 2014	<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	Suspension of Drilling

Well Name and Number Chalmers 5300 21-19 6B					
Footages	Qtr-Qtr	Section	Township	Range	
2160 F N L	327 F WL	LOT2	19	153 N	100 W
Field	Pool	County McKenzie			
	Bakken				

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

Name of Contractor(s) Advanced Energy Services			
Address		City	State
			Zip Code

DETAILS OF WORK

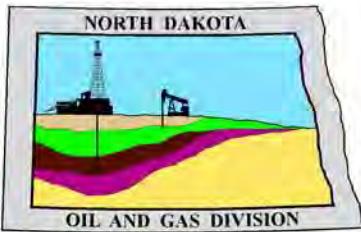
Oasis Petroleum North America LLC requests permission for suspension of drilling for up to 90 days for the referenced well under NDAC 43-02-03-55. Oasis Petroleum North America LLC intends to drill the surface hole with freshwater based drilling mud and set surface casing with a small drilling rig and 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. Oasis Petroleum North America LLC understands NDAC 43-02-03-31 requirements regarding confidentiality pertaining to this permit. The drilling pit will be fenced immediately after construction if the well pad is located in a pasture (NDAC 43-02-03-19 & 19.1). Oasis Petroleum North America LLC 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.

Notify NDIC inspector Richard Dunn at 701-770-3554 with spud and TD info.

Company Oasis Petroleum North America LLC		Telephone Number (281) 404-9491
Address 1001 Fannin, Suite 1500		
City Houston		State TX
Signature 		Printed Name Brandi Terry
Title Regulatory Specialist	Date May 16, 2014	
Email Address bterry@oasispetroleum.com		

FOR STATE USE ONLY

<input type="checkbox"/> Received	<input checked="" type="checkbox"/> Approved
Date 6/16/14	
By Nathaniel Erbele	
Title Petroleum Resource Specialist	



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

June 16, 2014

Brandi Terry
Regulatory Specialist
OASIS PETROLEUM NORTH AMERICA LLC
1001 Fannin Suite 1500
Houston, TX 77002

**RE: HORIZONTAL WELL
CHALMERS 5300 21-19 6B
LOT2 Section 19-153N-100W
McKenzie County
Well File # 28634**

Dear Brandi:

Pursuant to Commission Order No. 23752, approval to drill the above captioned well is hereby given. The approval is granted on the condition that all portions of the well bore not isolated by cement, be no closer than the **500' setback** from the north & south boundaries and **200' setback** from the east & west boundaries within the 1280 acre spacing unit consisting of Section 19 &20 T153N R100W.

PERMIT STIPULATIONS: Due to the proximity of Lake Sakakawea to the well site, a dike is required surrounding the entire location. Effective June 1, 2014, a covered leak-proof container (with placard) for filter sock disposal must be maintained on the well site beginning when the well is spud, and must remain on-site during clean-out, completion, and flow-back whenever filtration operations are conducted. OASIS PETRO NO AMER must contact NDIC Field Inspector Richard Dunn at 701-770-3554 prior to location construction.

Drilling pit

NDAC 43-02-03-19.4 states that "a pit may be utilized to bury drill cuttings and solids generated during well drilling and completion operations, providing the pit can be constructed, used and reclaimed in a manner that will prevent pollution of the land surface and freshwaters. Reserve and circulation of mud system through earthen pits are prohibited. All pits shall be inspected by an authorized representative of the director prior to lining and use. Drill cuttings and solids must be stabilized in a manner approved by the director prior to placement in a cuttings pit."

Form 1 Changes & Hard Lines

Any changes, shortening of casing point or lengthening at Total Depth must have prior approval by the NDIC. The proposed directional plan is at a legal location. Based on the azimuth of the proposed lateral the maximum legal coordinate from the well head is: 9971' east.

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

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

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

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

Specifically, the Horizontal and Directional well survey frequency is 100 feet in the vertical, 30 feet in the curve (or when sliding) and 90 feet in the lateral.

Surface casing cement

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

Logs

NDAC Section 43-02-03-31 requires the running of (1) a suite of open hole logs from which formation tops and porosity zones can be determined, (2) a Gamma Ray Log run from total depth to ground level elevation of the well bore, and (3) a log from which the presence and quality of cement can be determined (Standard CBL or Ultrasonic cement evaluation log) in every well in which production or intermediate casing has been set, this log must be run prior to completing the well. All logs run must be submitted free of charge, as one digital TIFF (tagged image file format) copy and one digital LAS (log ASCII) formatted copy. Digital logs may be submitted on a standard CD, DVD, or attached to an email sent to digitallogs@nd.gov

Thank you for your cooperation.

Sincerely,

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 New Location	Type of Well Oil & Gas	Approximate Date Work Will Start 05 / 30 / 2014	Confidential Status No
Operator OASIS PETROLEUM NORTH AMERICA LLC		Telephone Number 281-404-9491	
Address 1001 Fannin Suite 1500		City Houston	State TX Zip Code 77002

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 CHALMERS			Well Number 5300 21-19 6B				
Surface Footages 2160 F N L		Qtr-Qtr LOT2	Section 19	Township 153 N	Range 100 W	County McKenzie	
Longstring Casing Point Footages 1869 F N L		Qtr-Qtr LOT2	Section 19	Township 153 N	Range 100 W	County McKenzie	
Longstring Casing Point Coordinates From Well Head 291 N From WH 450 E From WH		Azimuth 58.37 °	Longstring Total Depth 11032 Feet MD 10749 Feet TVD				
Bottom Hole Footages From Nearest Section Line 1444 F N L		Qtr-Qtr SENE	Section 20	Township 153 N	Range 100 W	County McKenzie	
Bottom Hole Coordinates From Well Head 716 N From WH 9951 E From WH		KOP Lateral 1 10271 Feet MD	Azimuth Lateral 1 90.0 °	Estimated Total Depth Lateral 1 20612 Feet MD 10808 Feet TVD			
Latitude of Well Head 48 ° 03 ' 41.95 "	Longitude of Well Head -103 ° 36 ' 10.11 "	NAD Reference NAD83		Description of Spacing Unit: Section 19 &20 T153N R100W (Subject to NDIC Approval)			
Ground Elevation 2056 Feet Above S.L.	Acres in Spacing/Drilling Unit 1280	Spacing/Drilling Unit Setback Requirement 500 Feet N/S 200 Feet E/W		Industrial Commission Order 23752			
North Line of Spacing/Drilling Unit 10498 Feet	South Line of Spacing/Drilling Unit 10513 Feet	East Line of Spacing/Drilling Unit 5280 Feet		West Line of Spacing/Drilling Unit 5263 Feet			
Objective Horizons Bakken						Pierre Shale Top 2026	
Proposed Surface Casing	Size 9 - 5/8 "	Weight 36 Lb./Ft.	Depth 2126 Feet	Cement Volume 626 Sacks	NOTE: Surface hole must be drilled with fresh water and surface casing must be cemented back to surface.		
Proposed Longstring Casing	Size 7 - "	Weight(s) 29/32 Lb./Ft.	Longstring Total Depth 11032 Feet MD 10749 Feet TVD		Cement Volume 838 Sacks	Cement Top 3922 Feet	Top Dakota Sand 5422 Feet
Base Last Charles Salt (If Applicable) 9214 Feet		NOTE: Intermediate or longstring casing string must be cemented above the top Dakota Group Sand.					
Proposed Logs Triple Combo: KOP to Kirby GR/Res to BSC GR to surf CND through the Dakota							
Drilling Mud Type (Vertical Hole - Below Surface Casing) Invert				Drilling Mud Type (Lateral) Salt Water Gel			
Survey Type in Vertical Portion of Well MWD Every 100 Feet		Survey Frequency: Build Section 30 Feet		Survey Frequency: Lateral 90 Feet		Survey Contractor Ryan	

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**Documents forwarded by email: Drill plan with drilling fluids, Well Summary with casing/cement plans, Directional Plan & Plot, Plots****Lateral 2**

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

Lateral 3

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

Lateral 4

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

Lateral 5

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

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

Date

05 / 16 / 2014

ePermitPrinted Name
Brandi Terry

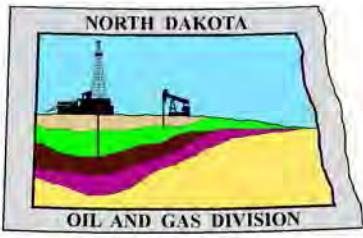
Title

Regulatory Specialist**FOR STATE USE ONLY**

Permit and File Number 28634	API Number 33 - 053 - 06019
Field BAKER	
Pool BAKKEN	Permit Type DEVELOPMENT

FOR STATE USE ONLY

Date Approved 6 / 16 / 2014
By Nathaniel Erbele
Title Petroleum Resource Specialist



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

April 9, 2014

**RE: Filter Socks and Other Filter Media
Leakproof Container Required
Oil and Gas Wells**

Dear Operator,

North Dakota Administrative Code Section 43-02-03-19.2 states in part that all waste material associated with exploration or production of oil and gas must be properly disposed of in an authorized facility in accord with all applicable local, state, and federal laws and regulations.

Filtration systems are commonly used during oil and gas operations in North Dakota. The Commission is very concerned about the proper disposal of used filters (including filter socks) used by the oil and gas industry.

Effective June 1, 2014, a container must be maintained on each well drilled in North Dakota beginning when the well is spud and must remain on-site during clean-out, completion, and flow-back whenever filtration operations are conducted. The on-site container must be used to store filters until they can be properly disposed of in an authorized facility. Such containers must be:

- leakproof to prevent any fluids from escaping the container
- covered to prevent precipitation from entering the container
- placard to indicate only filters are to be placed in the container

If the operator will not utilize a filtration system, a waiver to the container requirement will be considered, but only upon the operator submitting a Sundry Notice (Form 4) justifying their request.

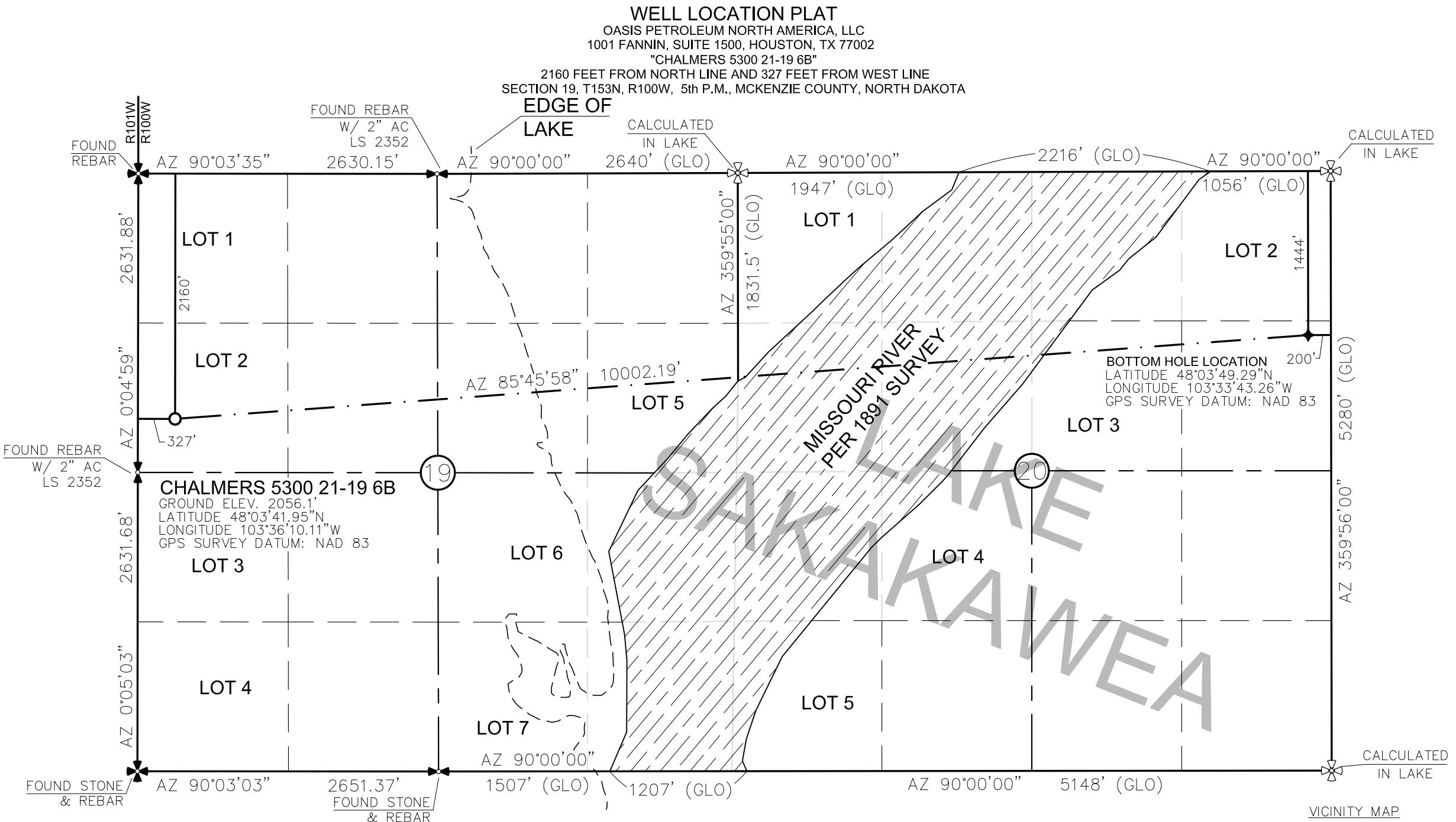
As previously stated in our March 13, 2014 letter, North Dakota Administrative Code Section 33-20-02.1-01 states in part that every person who transports solid waste (which includes oil and gas exploration and production wastes) is required to have a valid permit issued by the North Dakota Department of Health, Division of Waste Management. Please contact the Division of Waste Management at (701) 328-5166 with any questions on the solid waste program. Note oil and gas exploration and production wastes include produced water, drilling mud, invert mud, tank bottom sediment, pipe scale, filters, and fly ash.

Thank you for your cooperation.

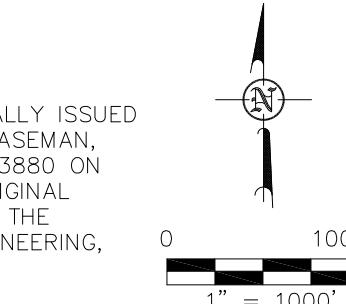
Sincerely,

Bruce E. Hicks

Assistant Director



THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY DARYL D. KASEMAN, PLS, REGISTRATION NUMBER 3880 ON 5/07/14 AND THE ORIGINAL DOCUMENTS ARE STORED AT THE OFFICES OF INTERSTATE ENGINEERING, INC.



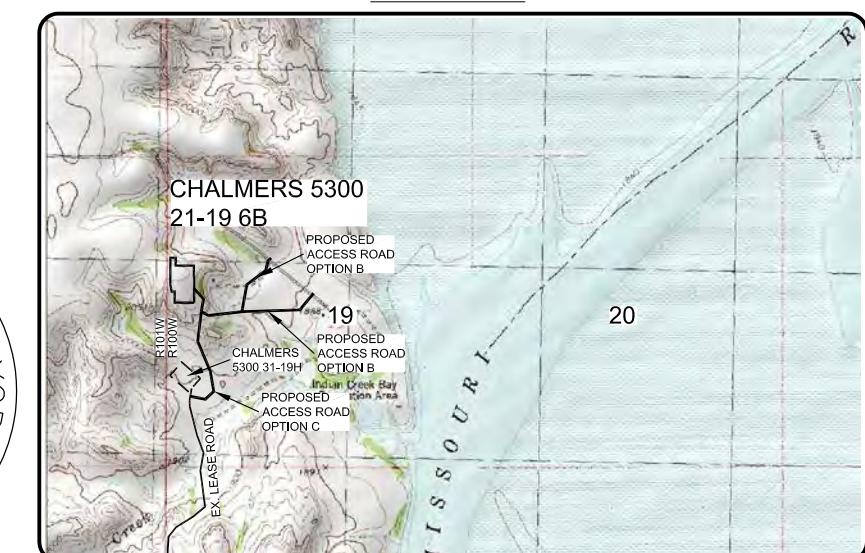
- MONUMENT - RECOVERED
- MONUMENT - NOT RECOVERED

DARYL D. KASEMAN LS-3880

STAKED ON 1/29/14
VERTICAL CONTROL DATUM WAS BASED UPON
CONTROL POINT 16 WITH AN ELEVATION OF 2014.2'

THIS SURVEY AND PLAT IS BEING PROVIDED AT THE REQUEST OF ERIC BAYES OF OASIS PETROLEUM. I CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS WORK PERFORMED BY ME OR UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DARYL D. KASEMAN
LS-3880
DATE: 5/07/14
RECEIVED
LAND SURVEYOR
NORTH DAKOTA



DRILLING PLAN							
OPERATOR	Oasis Petroleum			COUNTY/STATE	McKenzie Co., ND		
WELL NAME	Chalmers 5300 21-19 6B			RIG	B 22		
WELL TYPE	Horizontal Middle Bakken			LOCATION	SW NW 19-153N-100W		
EST. T.D.	20,612'			Surface Location (survey plat):	2160' FNL		
TOTAL LATERAL:	9,580'			327 FWL			
MARKER	TD	Subsea TVD	LOGS:	Type	Interval		
Pierre	NDIC MAP	2,026	50	OH Logs: Request a Sundry for an Open Hole Log Waiver: Oasis Chalmers 5300 31-19H 1,850' to S sec 19 153N 100W			
Greenhorn		4,629	-2,553	CBL/GR: Above top of cement/GR to base of casing			
Mowry		5,034	-2,958	MWD GR: KOP to lateral TD			
Dakota		5,422	-3,346				
Rierdon		6,468	-4,392	DEVIATION:	Surf: 3 deg. max., 1 deg / 100'; svry every 500' Prod: 5 deg. max., 1 deg / 100'; svry every 100'		
Dunham Salt		6,896	-4,820				
Dunham Salt Base		6,965	-4,889				
Pine Salt		7,262	-5,186				
Pine Salt Base		7,295	-5,219				
Opecche Salt		7,356	-5,280				
Opecche Salt Base		7,431	-5,355				
Amsden		7,667	-5,591				
Tyler		7,833	-5,757				
Otter/Base Minnelusa		8,037	-5,961	DST'S:	None planned		
Kibbey Lime		8,389	-6,313				
Charles Salt		8,539	-6,463	CORES:	None planned		
Base Last Salt		9,214	-7,138				
Mission Canyon		9,434	-7,358				
Lodgepole		9,998	-7,922				
False Bakken		10,711	-8,635				
Upper Bakken Shale		10,721	-8,645	MUDLOGGING:	Two-Man: Begin 200' above Kibbey 30' samples in curve and lateral		
Middle Bakken (Top of Target)		10,748	-8,672				
Middle Bakken (Base of target)		10,759	-8,683				
Lower Bakken Shale		10,771	-8,695				
Threeforks		10,804	-8,728				
BOP: 11" 5000 psi blind, pipe & annular							
Est. Dip Rate:	-0.35						
Max. Anticipated BHP:	4667			Surface Formation: Glacial till			
MUD:	Interval	Type	WT	Vis	WL	Remarks	
Surface:	0' -	2,126' FW	8.4-9.0	28-32	NC	Circ Mud Tanks	
Intermediate:	2,126' -	11,032' Invert	9.5-10.4	40-50	30+HtHp	Circ Mud Tanks	
Laterals:	11,032' -	20,612' Salt Water	9.8-10.2	28-32	NC	Circ Mud Tanks	
CASING:	Size	Wt pfp	Hole	Depth	Cement	WOC	Remarks
Surface:	9-5/8"	36#	13-1/2"	2,126'	To Surface	12	100' into Pierre
Intermediate:	7"	29/32#	8-3/4"	11,032'	3922	24	1500' above Dakota
Production Liner:	4.5"	11.6#	6"	20,612'	TOL @ 10,221'		50' above KOP
PROBABLE PLUGS, IF REQ'D:							
OTHER:	MD	TVD	FNL/FSL	FEL/FWL	S-T-R	AZI	
Surface:	2,126	2,126	2160 FNL	327 FWL	SEC 19 T153N R100W	Survey Company:	
KOP:	10,271'	10,272'	2125 FNL	362 FWL	SEC 19 T153N R100W	Build Rate: 12 deg /100'	
EOC:	11,019'	10,749'	1876 FNL	766 FWL	SEC 19 T153N R100W		
Casing Point:	11,032'	10,749'	1869 FNL	777 FWL	SEC 19 T153N R100W	58.4	
Middle Bakken Lateral TD:	20,612'	10,808'	1444 FNL	200 FEL	SEC 20 T153N R100W	58.4	
						90.0	
Comments: Request a Sundry for an Open Hole Log Waiver: Oasis Chalmers 5300 31-19H 1,850' to S sec 19 153N 100W							
No frac string planned 35 packers and 25 sleeves planned 3.6MM lbs 30% ceramic Oasis Petroleum does not use Diesel Fuel, as defined by the US EPA in the list below, in our hydraulic fracture operations. 68334-30-5 (Primary Name: Fuels, diesel) 68476-34-6 (Primary Name: Fuels, diesel, No. 2) 68476-30-2 (Primary Name: Fuel oil No. 2) 68476-31-3 (Primary Name: Fuel oil, No. 4) 8008-20-6 (Primary Name: Kerosene)							
							
Geology: N. Gabelman	2/4/2014			Engineering: C. Gilbert 5/14/14			

Oasis Petroleum
Well Summary
Chalmers 5300 21-9 6B
Section 9 T153N R100W
McKenzie County, ND

SURFACE CASING AND CEMENT DESIGN

Size	Interval	Weight	Grade	Coupling	I.D.	Drift	Make-up Torque (ft-lbs)		
							Minimum	Optimum	Max
9-5/8"	0' - 2126'	36	J-55	LTC	8.921"	8.765"	3400	4530	5660

Interval	Description	Collapse	Burst	Tension
		(psi) / a	(psi) / b	(1000 lbs) / c
0' - 2126'	9-5/8", 36#, J-55, LTC, 8rd	2020 / 2.03	3520 / 3.53	453 / 2.72

API Rating & Safety Factor

- a) Based on full casing evacuation with 9 ppg fluid on backside (2126' setting depth).
- b) Burst pressure based on 9 ppg fluid with no fluid on backside (2126' setting depth).
- c) Based on string weight in 9 ppg fluid at 2126' TVD plus 100k# overpull. (Buoyed weight equals 66k lbs.)

Cement volumes are based on 9-5/8" casing set in 13-1/2 " hole with 60% excess to circulate cement back to surface.

Mix and pump the following slurry.

Pre-flush (Spacer): **20 bbls** fresh water

Lead Slurry: **453 sks** (240 bbls), 11.5 lb/gal, 2.97 cu. Ft./sk Varicem Cement with 0.125 il/sk Lost Circulation Additive

Tail Slurry: **173 sks** (62 bbls), 13.0 lb/gal, 2.01 cu.ft./sk Varicem with .125 lb/sk Lost Circulation Agent

Oasis Petroleum
Well Summary
Chalmers 5300 21-9 6B
Section 9 T153N R100W
McKenzie County, ND

INTERMEDIATE CASING AND CEMENT DESIGN

Size	Interval	Weight	Grade	Coupling	I.D.	Drift**	Make-up Torque (ft-lbs)		
							Minimum	Optimum	Max
7"	0' - 6696'	29	P-110	LTC	6.184"	6.059"	5980	7970	8770
7"	6696' - 10271'	32	HCP-110	LTC	6.094"	6.000"**	6730	8970	9870
7"	10271' - 11032'	29	P-110	LTC	6.184"	6.059"	5980	7970	8770

**Special Drift 7" 32# to 6.0"

Interval	Length	Description	Collapse	Burst	Tension
			(psi) a	(psi) b	(1000 lbs) c
0' - 6696'	6696'	7", 29#, P-110, LTC, 8rd	8530 / 2.44*	11220 / 1.19	797 / 2.09
6696' - 10271'	3575'	7", 32#, HCP-110, LTC, 8rd	11820 / 2.21*	12460 / 1.29	
6696' - 10271'	3575'	7", 32#, HCP-110, LTC, 8rd	11820 / 1.04**	12460 / 1.29	
10271' - 11032'	761'	7", 29#, P-110, LTC, 8rd	8530 / 1.52*	11220 / 1.16	

API Rating & Safety Factor

- a) *Assume full casing evacuation with 10 ppg fluid on backside. **Assume full casing evacuation with 1.2 psi/ft equivalent fluid gradient across salt intervals.
- b) Burst pressure based on 9000 psig max press for stimulation plus 10.2 ppg fluid in casing and 9 ppg fluid on backside-to 10749' TVD.
- c) Based on string weight in 10 ppg fluid, (280k lbs buoyed weight) plus 100k lbs overpull.

Cement volumes are estimates based on 7" casing set in an 8-3/4" hole with 30% excess.

Mix and pump the following slurry

Pre-flush (Spacer): **100 bbls** Saltwater
20bbls CW8
20bbls Fresh Water

Lead Slurry: **199 sks** (81 bbls), 11.8 ppg, 2.55 cu. ft./sk Econocem Cement with .3% Fe-2 and .25 lb/sk Lost Circulation Additive

Tail Slurry: **639 sks** (175 bbls), 14.0 ppg, 1.55 cu. ft./sk Extendcem System with .2% HR-5 Retarder and .25 lb/sk Lost Circulation Additive

Oasis Petroleum
Well Summary
Chalmers 5300 21-9 6B
Section 9 T153N R100W
McKenzie County, ND

PRODUCTION LINER

Size	Interval	Weight	Grade	Coupling	I.D.	Drift	Make-up Torque (ft-lbs)		
							Minimum	Optimum	Max
4-1/2"	10221' - 20612'	11.6	P-110	BTC	4.000"	3.875"	2270	3020	3780

Interval	Length	Description	Collapse (psi) a	Burst (psi) b	Tension (1000 lbs) c
10221' - 20612'	10391	4-1/2", 11.6 lb, P-110, BTC	7560 / 1.41	10690 / 1.10	385 / 1.89

API Rating & Safety Factor

- a) Based on full casing evacuation with 9.5 ppg fluid on backside @ 10808' TVD.
- b) Burst pressure based on 9000 psi treating pressure with 10.2 ppg internal fluid gradient and 9 ppg external fluid gradient @ 10808' TVD.
- c) Based on string weight in 9.5 ppg fluid (Buoyed weight: 103k lbs.) plus 100k lbs overpull.

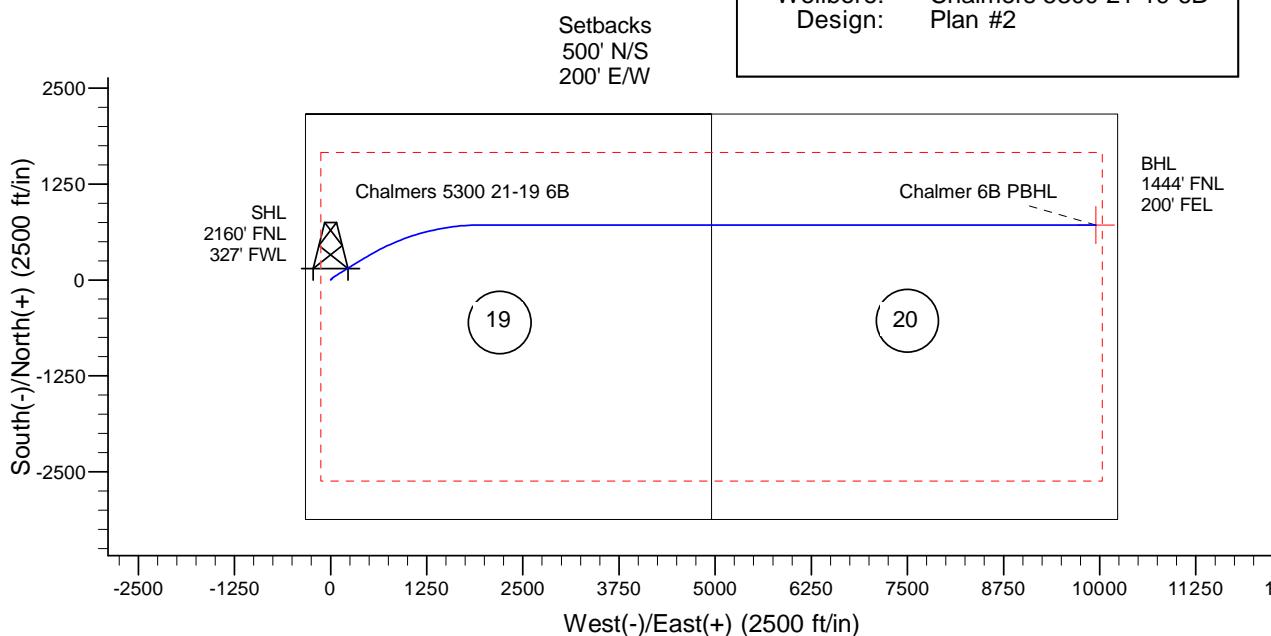


Azimuths to True North
Magnetic North: 8.17°

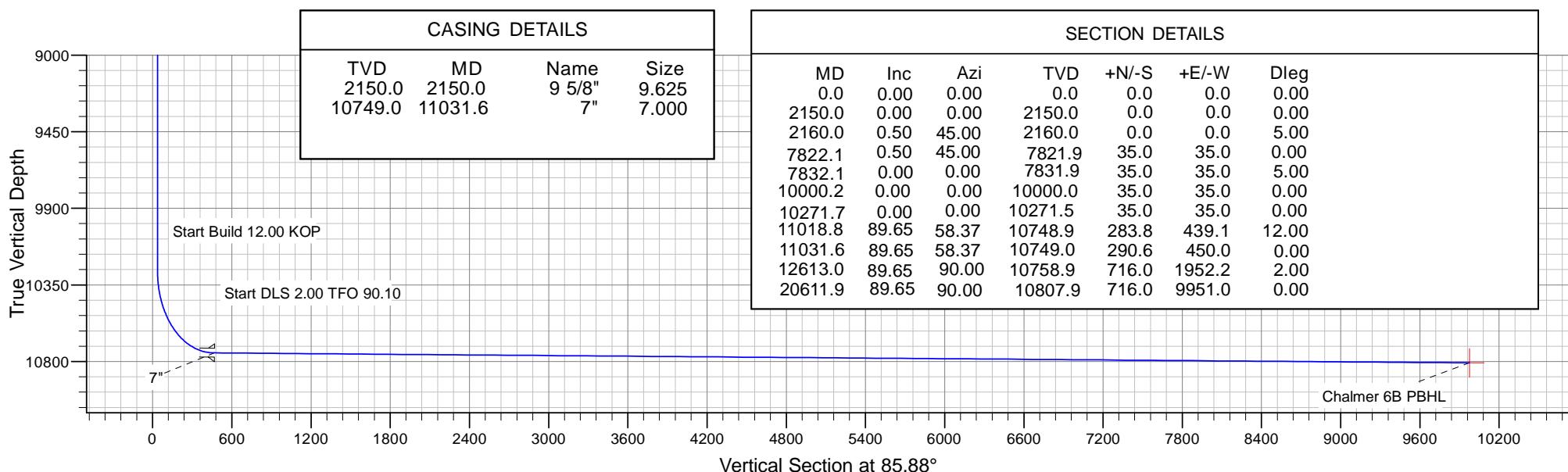
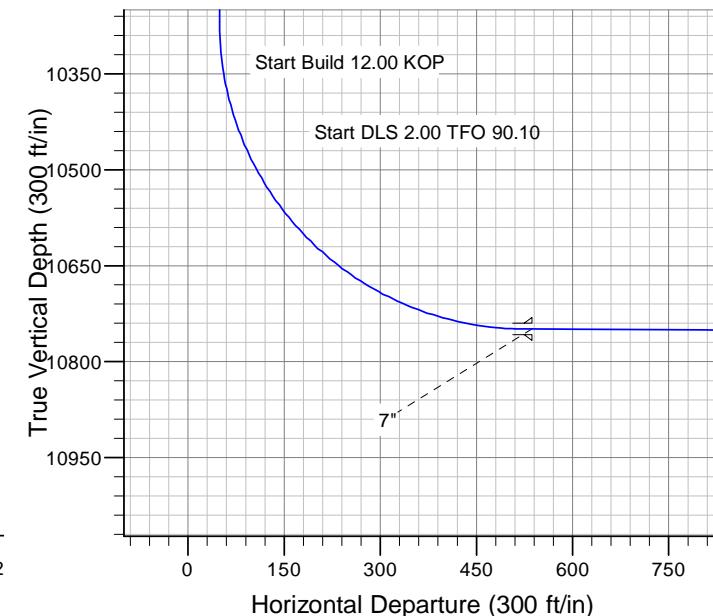
Magnetic Field
Strength: 56490.6nT
Dip Angle: 72.96°
Date: 2/17/2014
Model: IGRF200510



Project: Indian Hills
Site: 153N-100W-19/20
Well: Chalmers 5300 21-19 6B
Wellbore: Chalmers 5300 21-19 6B
Design: Plan #2



SITE DETAILS: 153N-100W-19/20
Well Centre Latitude: 48° 3' 41.950 N Longitude: 103° 36' 10.110 W
Positional Uncertainty: 0.0 Convergence: -2.31 Local North: True



Oasis

**Indian Hills
153N-100W-19/20
Chalmers 5300 21-19 6B**

Chalmers 5300 21-19 6B

Plan: Plan #2

Standard Planning Report

16 May, 2014

Oasis Petroleum

Planning Report

Database:	OpenWellsCompass - EDM Prod	Local Co-ordinate Reference:	Well Chalmers 5300 21-19 6B
Company:	Oasis	TVD Reference:	WELL @ 2076.0ft
Project:	Indian Hills	MD Reference:	WELL @ 2076.0ft
Site:	153N-100W-19/20	North Reference:	True
Well:	Chalmers 5300 21-19 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Chalmers 5300 21-19 6B		
Design:	Plan #2		

Project	Indian Hills	
Map System:	US State Plane 1983	
Geo Datum:	North American Datum 1983	
Map Zone:	North Dakota Northern Zone	

Site	153N-100W-19/20
Site Position:	Northing:
From:	Easting:
Position Uncertainty:	Slot Radius:

Well	Chalmers 5300 21-19 6B
Well Position	+N/-S +E/-W
	-235.1 ft 40.1 ft
Position Uncertainty	0.0 ft

Wellbore	Chalmers 5300 21-19 6B
Magnetics	Model Name
	IGRF200510
	Sample Date

Design	Plan #2
Audit Notes:	
Version:	
Phase:	
Vertical Section:	

Plan Sections									
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00
2,150.0	0.00	0.00	2,150.0	0.0	0.0	0.00	0.00	0.00	0.00
2,160.0	0.50	45.00	2,160.0	0.0	0.0	5.00	5.00	0.00	45.00
7,822.1	0.50	45.00	7,821.9	35.0	35.0	0.00	0.00	0.00	0.00
7,832.1	0.00	0.00	7,831.9	35.0	35.0	5.00	-5.00	0.00	180.00
10,000.2	0.00	0.00	10,000.0	35.0	35.0	0.00	0.00	0.00	0.00
10,271.7	0.00	0.00	10,271.5	35.0	35.0	0.00	0.00	0.00	0.00
11,018.8	89.65	58.37	10,748.9	283.8	439.1	12.00	12.00	0.00	58.37
11,031.6	89.65	58.37	10,749.0	290.6	450.0	0.00	0.00	0.00	0.00
12,613.0	89.65	90.00	10,758.9	716.0	1,952.2	2.00	0.00	2.00	90.10
20,611.9	89.65	90.00	10,807.9	716.0	9,951.0	0.00	0.00	0.00	Chalmer 6B PBHL

Oasis Petroleum

Planning Report

Database:	OpenWellsCompass - EDM Prod	Local Co-ordinate Reference:	Well Chalmers 5300 21-19 6B
Company:	Oasis	TVD Reference:	WELL @ 2076.0ft
Project:	Indian Hills	MD Reference:	WELL @ 2076.0ft
Site:	153N-100W-19/20	North Reference:	True
Well:	Chalmers 5300 21-19 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Chalmers 5300 21-19 6B		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate ('/100ft)	Build Rate ('/100ft)	Turn Rate ('/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,021.0	0.00	0.00	2,021.0	0.0	0.0	0.0	0.00	0.00	0.00
Pierre									
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,150.0	0.00	0.00	2,150.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 5.00 - 9 5/8"									
2,160.0	0.50	45.00	2,160.0	0.0	0.0	0.0	5.00	5.00	0.00
Start 5662.1 hold at 2160.0 MD									
2,200.0	0.50	45.00	2,200.0	0.3	0.3	0.3	0.00	0.00	0.00
2,300.0	0.50	45.00	2,300.0	0.9	0.9	1.0	0.00	0.00	0.00
2,400.0	0.50	45.00	2,400.0	1.5	1.5	1.6	0.00	0.00	0.00
2,500.0	0.50	45.00	2,500.0	2.1	2.1	2.3	0.00	0.00	0.00
2,600.0	0.50	45.00	2,600.0	2.7	2.7	2.9	0.00	0.00	0.00
2,700.0	0.50	45.00	2,700.0	3.4	3.4	3.6	0.00	0.00	0.00
2,800.0	0.50	45.00	2,800.0	4.0	4.0	4.3	0.00	0.00	0.00
2,900.0	0.50	45.00	2,900.0	4.6	4.6	4.9	0.00	0.00	0.00
3,000.0	0.50	45.00	3,000.0	5.2	5.2	5.6	0.00	0.00	0.00
3,100.0	0.50	45.00	3,100.0	5.8	5.8	6.2	0.00	0.00	0.00
3,200.0	0.50	45.00	3,200.0	6.4	6.4	6.9	0.00	0.00	0.00
3,300.0	0.50	45.00	3,300.0	7.1	7.1	7.6	0.00	0.00	0.00
3,400.0	0.50	45.00	3,400.0	7.7	7.7	8.2	0.00	0.00	0.00
3,500.0	0.50	45.00	3,499.9	8.3	8.3	8.9	0.00	0.00	0.00
3,600.0	0.50	45.00	3,599.9	8.9	8.9	9.5	0.00	0.00	0.00
3,700.0	0.50	45.00	3,699.9	9.5	9.5	10.2	0.00	0.00	0.00
3,800.0	0.50	45.00	3,799.9	10.2	10.2	10.9	0.00	0.00	0.00
3,900.0	0.50	45.00	3,899.9	10.8	10.8	11.5	0.00	0.00	0.00
4,000.0	0.50	45.00	3,999.9	11.4	11.4	12.2	0.00	0.00	0.00
4,100.0	0.50	45.00	4,099.9	12.0	12.0	12.8	0.00	0.00	0.00
4,200.0	0.50	45.00	4,199.9	12.6	12.6	13.5	0.00	0.00	0.00
4,300.0	0.50	45.00	4,299.9	13.2	13.2	14.2	0.00	0.00	0.00
4,400.0	0.50	45.00	4,399.9	13.9	13.9	14.8	0.00	0.00	0.00
4,500.0	0.50	45.00	4,499.9	14.5	14.5	15.5	0.00	0.00	0.00
4,600.0	0.50	45.00	4,599.9	15.1	15.1	16.1	0.00	0.00	0.00
4,624.1	0.50	45.00	4,624.0	15.2	15.2	16.3	0.00	0.00	0.00
Greenhorn									

Oasis Petroleum

Planning Report

Database:	OpenWellsCompass - EDM Prod	Local Co-ordinate Reference:	Well Chalmers 5300 21-19 6B
Company:	Oasis	TVD Reference:	WELL @ 2076.0ft
Project:	Indian Hills	MD Reference:	WELL @ 2076.0ft
Site:	153N-100W-19/20	North Reference:	True
Well:	Chalmers 5300 21-19 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Chalmers 5300 21-19 6B		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/S (ft)	+E/W (ft)	Vertical Section (ft)	Dogleg Rate ('/100ft)	Build Rate ('/100ft)	Turn Rate ('/100ft)
4,700.0	0.50	45.00	4,699.9	15.7	15.7	16.8	0.00	0.00	0.00
4,800.0	0.50	45.00	4,799.9	16.3	16.3	17.5	0.00	0.00	0.00
4,900.0	0.50	45.00	4,899.9	16.9	16.9	18.1	0.00	0.00	0.00
5,000.0	0.50	45.00	4,999.9	17.6	17.6	18.8	0.00	0.00	0.00
5,029.1	0.50	45.00	5,029.0	17.7	17.7	19.0	0.00	0.00	0.00
Mowry									
5,100.0	0.50	45.00	5,099.9	18.2	18.2	19.4	0.00	0.00	0.00
5,200.0	0.50	45.00	5,199.9	18.8	18.8	20.1	0.00	0.00	0.00
5,300.0	0.50	45.00	5,299.9	19.4	19.4	20.7	0.00	0.00	0.00
5,400.0	0.50	45.00	5,399.9	20.0	20.0	21.4	0.00	0.00	0.00
5,417.1	0.50	45.00	5,417.0	20.1	20.1	21.5	0.00	0.00	0.00
Dakota									
5,500.0	0.50	45.00	5,499.9	20.6	20.6	22.1	0.00	0.00	0.00
5,600.0	0.50	45.00	5,599.9	21.3	21.3	22.7	0.00	0.00	0.00
5,700.0	0.50	45.00	5,699.9	21.9	21.9	23.4	0.00	0.00	0.00
5,800.0	0.50	45.00	5,799.9	22.5	22.5	24.0	0.00	0.00	0.00
5,900.0	0.50	45.00	5,899.9	23.1	23.1	24.7	0.00	0.00	0.00
6,000.0	0.50	45.00	5,999.9	23.7	23.7	25.4	0.00	0.00	0.00
6,100.0	0.50	45.00	6,099.8	24.3	24.3	26.0	0.00	0.00	0.00
6,200.0	0.50	45.00	6,199.8	25.0	25.0	26.7	0.00	0.00	0.00
6,300.0	0.50	45.00	6,299.8	25.6	25.6	27.3	0.00	0.00	0.00
6,400.0	0.50	45.00	6,399.8	26.2	26.2	28.0	0.00	0.00	0.00
6,463.2	0.50	45.00	6,463.0	26.6	26.6	28.4	0.00	0.00	0.00
Rierdon									
6,500.0	0.50	45.00	6,499.8	26.8	26.8	28.7	0.00	0.00	0.00
6,600.0	0.50	45.00	6,599.8	27.4	27.4	29.3	0.00	0.00	0.00
6,700.0	0.50	45.00	6,699.8	28.0	28.0	30.0	0.00	0.00	0.00
6,800.0	0.50	45.00	6,799.8	28.7	28.7	30.6	0.00	0.00	0.00
6,891.2	0.50	45.00	6,891.0	29.2	29.2	31.2	0.00	0.00	0.00
Dunham Salt									
6,900.0	0.50	45.00	6,899.8	29.3	29.3	31.3	0.00	0.00	0.00
6,960.2	0.50	45.00	6,960.0	29.7	29.7	31.7	0.00	0.00	0.00
Dunham Salt Base									
7,000.0	0.50	45.00	6,999.8	29.9	29.9	32.0	0.00	0.00	0.00
7,100.0	0.50	45.00	7,099.8	30.5	30.5	32.6	0.00	0.00	0.00
7,200.0	0.50	45.00	7,199.8	31.1	31.1	33.3	0.00	0.00	0.00
7,257.2	0.50	45.00	7,257.0	31.5	31.5	33.7	0.00	0.00	0.00
Pine Salt									
7,290.2	0.50	45.00	7,290.0	31.7	31.7	33.9	0.00	0.00	0.00
Pine Salt Base									
7,300.0	0.50	45.00	7,299.8	31.7	31.7	33.9	0.00	0.00	0.00
7,351.2	0.50	45.00	7,351.0	32.1	32.1	34.3	0.00	0.00	0.00
Opeche Salt									
7,400.0	0.50	45.00	7,399.8	32.4	32.4	34.6	0.00	0.00	0.00
7,426.2	0.50	45.00	7,426.0	32.5	32.5	34.8	0.00	0.00	0.00
Opeche Salt Base									
7,500.0	0.50	45.00	7,499.8	33.0	33.0	35.3	0.00	0.00	0.00
7,600.0	0.50	45.00	7,599.8	33.6	33.6	35.9	0.00	0.00	0.00
7,662.2	0.50	45.00	7,662.0	34.0	34.0	36.3	0.00	0.00	0.00
Amsden									
7,700.0	0.50	45.00	7,699.8	34.2	34.2	36.6	0.00	0.00	0.00
7,800.0	0.50	45.00	7,799.8	34.8	34.8	37.2	0.00	0.00	0.00
7,822.1	0.50	45.00	7,821.9	35.0	35.0	37.4	0.00	0.00	0.00
Start Drop -5.00									

Oasis Petroleum

Planning Report

Database:	OpenWellsCompass - EDM Prod	Local Co-ordinate Reference:	Well Chalmers 5300 21-19 6B
Company:	Oasis	TVD Reference:	WELL @ 2076.0ft
Project:	Indian Hills	MD Reference:	WELL @ 2076.0ft
Site:	153N-100W-19/20	North Reference:	True
Well:	Chalmers 5300 21-19 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Chalmers 5300 21-19 6B		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/S (ft)	+E/W (ft)	Vertical Section (ft)	Dogleg Rate ('/100ft)	Build Rate ('/100ft)	Turn Rate ('/100ft)
7,828.2	0.19	45.00	7,828.0	35.0	35.0	37.4	5.00	-5.00	0.00
Tyler									
7,832.1	0.00	0.00	7,831.9	35.0	35.0	37.4	5.00	-5.00	0.00
Start 2168.2 hold at 7832.1 MD									
7,900.0	0.00	0.00	7,899.8	35.0	35.0	37.4	0.00	0.00	0.00
8,000.0	0.00	0.00	7,999.8	35.0	35.0	37.4	0.00	0.00	0.00
8,032.2	0.00	0.00	8,032.0	35.0	35.0	37.4	0.00	0.00	0.00
Otter/Base Minnelusa									
8,100.0	0.00	0.00	8,099.8	35.0	35.0	37.4	0.00	0.00	0.00
8,200.0	0.00	0.00	8,199.8	35.0	35.0	37.4	0.00	0.00	0.00
8,300.0	0.00	0.00	8,299.8	35.0	35.0	37.4	0.00	0.00	0.00
8,384.2	0.00	0.00	8,384.0	35.0	35.0	37.4	0.00	0.00	0.00
Kibbey Lime									
8,400.0	0.00	0.00	8,399.8	35.0	35.0	37.4	0.00	0.00	0.00
8,500.0	0.00	0.00	8,499.8	35.0	35.0	37.4	0.00	0.00	0.00
8,534.2	0.00	0.00	8,534.0	35.0	35.0	37.4	0.00	0.00	0.00
Charles Salt									
8,600.0	0.00	0.00	8,599.8	35.0	35.0	37.4	0.00	0.00	0.00
8,700.0	0.00	0.00	8,699.8	35.0	35.0	37.4	0.00	0.00	0.00
8,800.0	0.00	0.00	8,799.8	35.0	35.0	37.4	0.00	0.00	0.00
8,900.0	0.00	0.00	8,899.8	35.0	35.0	37.4	0.00	0.00	0.00
9,000.0	0.00	0.00	8,999.8	35.0	35.0	37.4	0.00	0.00	0.00
9,100.0	0.00	0.00	9,099.8	35.0	35.0	37.4	0.00	0.00	0.00
9,200.0	0.00	0.00	9,199.8	35.0	35.0	37.4	0.00	0.00	0.00
9,209.2	0.00	0.00	9,209.0	35.0	35.0	37.4	0.00	0.00	0.00
Base Last Salt									
9,300.0	0.00	0.00	9,299.8	35.0	35.0	37.4	0.00	0.00	0.00
9,400.0	0.00	0.00	9,399.8	35.0	35.0	37.4	0.00	0.00	0.00
9,429.2	0.00	0.00	9,429.0	35.0	35.0	37.4	0.00	0.00	0.00
Mission Canyon									
9,500.0	0.00	0.00	9,499.8	35.0	35.0	37.4	0.00	0.00	0.00
9,600.0	0.00	0.00	9,599.8	35.0	35.0	37.4	0.00	0.00	0.00
9,700.0	0.00	0.00	9,699.8	35.0	35.0	37.4	0.00	0.00	0.00
9,800.0	0.00	0.00	9,799.8	35.0	35.0	37.4	0.00	0.00	0.00
9,900.0	0.00	0.00	9,899.8	35.0	35.0	37.4	0.00	0.00	0.00
9,993.2	0.00	0.00	9,993.0	35.0	35.0	37.4	0.00	0.00	0.00
Lodgepole									
10,000.2	0.00	0.00	10,000.0	35.0	35.0	37.4	0.00	0.00	0.00
Start 271.5 hold at 10000.2 MD									
10,100.0	0.00	0.00	10,099.8	35.0	35.0	37.4	0.00	0.00	0.00
10,200.0	0.00	0.00	10,199.8	35.0	35.0	37.4	0.00	0.00	0.00
10,271.7	0.00	0.00	10,271.5	35.0	35.0	37.4	0.00	0.00	0.00
Start Build 12.00 KOP									
10,275.0	0.40	58.37	10,274.8	35.0	35.0	37.4	12.00	12.00	0.00
10,300.0	3.40	58.37	10,299.8	35.4	35.7	38.2	12.00	12.00	0.00
10,325.0	6.40	58.37	10,324.7	36.6	37.5	40.1	12.00	12.00	0.00
10,350.0	9.40	58.37	10,349.4	38.4	40.5	43.1	12.00	12.00	0.00
10,375.0	12.40	58.37	10,374.0	40.8	44.5	47.3	12.00	12.00	0.00
10,400.0	15.40	58.37	10,398.2	44.0	49.6	52.6	12.00	12.00	0.00
10,425.0	18.40	58.37	10,422.2	47.8	55.8	59.1	12.00	12.00	0.00
10,450.0	21.40	58.37	10,445.7	52.3	63.0	66.6	12.00	12.00	0.00
10,475.0	24.40	58.37	10,468.7	57.4	71.3	75.2	12.00	12.00	0.00
10,500.0	27.40	58.37	10,491.2	63.1	80.6	84.9	12.00	12.00	0.00
10,525.0	30.40	58.37	10,513.1	69.4	90.9	95.6	12.00	12.00	0.00

Oasis Petroleum

Planning Report

Database:	OpenWellsCompass - EDM Prod	Local Co-ordinate Reference:	Well Chalmers 5300 21-19 6B
Company:	Oasis	TVD Reference:	WELL @ 2076.0ft
Project:	Indian Hills	MD Reference:	WELL @ 2076.0ft
Site:	153N-100W-19/20	North Reference:	True
Well:	Chalmers 5300 21-19 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Chalmers 5300 21-19 6B		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/S (ft)	+E/W (ft)	Vertical Section (ft)	Dogleg Rate ('/100ft)	Build Rate ('/100ft)	Turn Rate ('/100ft)
10,550.0	33.40	58.37	10,534.3	76.3	102.1	107.3	12.00	12.00	0.00
10,575.0	36.40	58.37	10,554.8	83.8	114.3	120.0	12.00	12.00	0.00
10,600.0	39.40	58.37	10,574.5	91.9	127.4	133.6	12.00	12.00	0.00
10,625.0	42.40	58.37	10,593.4	100.5	141.3	148.2	12.00	12.00	0.00
10,650.0	45.40	58.37	10,611.4	109.6	156.1	163.5	12.00	12.00	0.00
10,675.0	48.40	58.37	10,628.5	119.1	171.6	179.7	12.00	12.00	0.00
10,700.0	51.40	58.37	10,644.6	129.2	187.9	196.7	12.00	12.00	0.00
10,725.0	54.40	58.37	10,659.7	139.6	204.9	214.4	12.00	12.00	0.00
10,750.0	57.40	58.37	10,673.7	150.5	222.5	232.7	12.00	12.00	0.00
10,775.0	60.40	58.37	10,686.6	161.7	240.7	251.7	12.00	12.00	0.00
10,800.0	63.40	58.37	10,698.4	173.3	259.5	271.3	12.00	12.00	0.00
10,817.7	65.52	58.37	10,706.0	181.6	273.1	285.4	12.00	12.00	0.00
False Bakken									
10,825.0	66.40	58.37	10,709.0	185.1	278.8	291.3	12.00	12.00	0.00
10,843.3	68.60	58.37	10,716.0	194.0	293.2	306.4	12.00	12.00	0.00
Upper Bakken Shale									
10,850.0	69.40	58.37	10,718.4	197.3	298.5	311.9	12.00	12.00	0.00
10,875.0	72.40	58.37	10,726.6	209.7	318.6	332.8	12.00	12.00	0.00
10,900.0	75.40	58.37	10,733.5	222.2	339.0	354.1	12.00	12.00	0.00
10,925.0	78.40	58.37	10,739.2	235.0	359.8	375.7	12.00	12.00	0.00
10,946.4	80.96	58.37	10,743.0	246.0	377.7	394.4	12.00	12.00	0.00
Middle Bakken (Top of Target)									
10,950.0	81.40	58.37	10,743.6	247.9	380.7	397.5	12.00	12.00	0.00
10,975.0	84.40	58.37	10,746.7	260.9	401.8	419.5	12.00	12.00	0.00
11,000.0	87.40	58.37	10,748.5	274.0	423.1	441.7	12.00	12.00	0.00
11,018.8	89.65	58.37	10,748.9	283.8	439.1	458.3	12.00	12.00	0.00
Start 12.8 hold at 11018.8 MD EOC									
11,031.6	89.65	58.37	10,749.0	290.6	450.0	469.7	0.00	0.00	0.00
Start DLS 2.00 TFO 90.10 - 7"									
11,100.0	89.65	59.74	10,749.4	325.7	508.6	530.7	2.00	0.00	2.00
11,200.0	89.64	61.74	10,750.1	374.6	595.9	621.2	2.00	0.00	2.00
11,300.0	89.64	63.74	10,750.7	420.4	684.8	713.2	2.00	0.00	2.00
11,400.0	89.64	65.74	10,751.3	463.1	775.2	806.4	2.00	0.00	2.00
11,500.0	89.64	67.74	10,751.9	502.6	867.1	900.9	2.00	0.00	2.00
11,600.0	89.64	69.74	10,752.6	538.8	960.3	996.4	2.00	0.00	2.00
11,700.0	89.64	71.74	10,753.2	571.8	1,054.6	1,093.0	2.00	0.00	2.00
11,800.0	89.64	73.74	10,753.8	601.5	1,150.1	1,190.3	2.00	0.00	2.00
11,900.0	89.64	75.74	10,754.5	627.8	1,246.6	1,288.4	2.00	0.00	2.00
12,000.0	89.64	77.74	10,755.1	650.7	1,343.9	1,387.2	2.00	0.00	2.00
12,100.0	89.64	79.74	10,755.7	670.2	1,442.0	1,486.4	2.00	0.00	2.00
12,200.0	89.64	81.74	10,756.4	686.3	1,540.7	1,586.0	2.00	0.00	2.00
12,300.0	89.64	83.74	10,757.0	699.0	1,639.9	1,685.8	2.00	0.00	2.00
12,400.0	89.64	85.74	10,757.6	708.1	1,739.5	1,785.8	2.00	0.00	2.00
12,500.0	89.65	87.74	10,758.2	713.8	1,839.3	1,885.8	2.00	0.00	2.00
12,600.0	89.65	89.74	10,758.9	716.0	1,939.3	1,985.6	2.00	0.00	2.00
12,613.0	89.65	90.00	10,758.9	716.0	1,952.2	1,998.6	2.00	0.00	2.00
Start 8069.9 hold at 12612.9 MD									
12,700.0	89.65	90.00	10,759.5	716.0	2,039.3	2,085.4	0.00	0.00	0.00
12,800.0	89.65	90.00	10,760.1	716.0	2,139.3	2,185.1	0.00	0.00	0.00
12,900.0	89.65	90.00	10,760.7	716.0	2,239.2	2,284.9	0.00	0.00	0.00
13,000.0	89.65	90.00	10,761.3	716.0	2,339.2	2,384.6	0.00	0.00	0.00
13,100.0	89.65	90.00	10,761.9	716.0	2,439.2	2,484.3	0.00	0.00	0.00
13,200.0	89.65	90.00	10,762.5	716.0	2,539.2	2,584.1	0.00	0.00	0.00
13,300.0	89.65	90.00	10,763.1	716.0	2,639.2	2,683.8	0.00	0.00	0.00

Oasis Petroleum

Planning Report

Database:	OpenWellsCompass - EDM Prod	Local Co-ordinate Reference:	Well Chalmers 5300 21-19 6B
Company:	Oasis	TVD Reference:	WELL @ 2076.0ft
Project:	Indian Hills	MD Reference:	WELL @ 2076.0ft
Site:	153N-100W-19/20	North Reference:	True
Well:	Chalmers 5300 21-19 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Chalmers 5300 21-19 6B		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/S (ft)	+E/W (ft)	Vertical Section (ft)	Dogleg Rate ('/100ft)	Build Rate ('/100ft)	Turn Rate ('/100ft)
13,400.0	89.65	90.00	10,763.8	716.0	2,739.2	2,783.6	0.00	0.00	0.00
13,500.0	89.65	90.00	10,764.4	716.0	2,839.2	2,883.3	0.00	0.00	0.00
13,600.0	89.65	90.00	10,765.0	716.0	2,939.2	2,983.0	0.00	0.00	0.00
13,700.0	89.65	90.00	10,765.6	716.0	3,039.2	3,082.8	0.00	0.00	0.00
13,800.0	89.65	90.00	10,766.2	716.0	3,139.2	3,182.5	0.00	0.00	0.00
13,900.0	89.65	90.00	10,766.8	716.0	3,239.2	3,282.3	0.00	0.00	0.00
14,000.0	89.65	90.00	10,767.4	716.0	3,339.2	3,382.0	0.00	0.00	0.00
14,100.0	89.65	90.00	10,768.0	716.0	3,439.2	3,481.7	0.00	0.00	0.00
14,200.0	89.65	90.00	10,768.6	716.0	3,539.2	3,581.5	0.00	0.00	0.00
14,300.0	89.65	90.00	10,769.3	716.0	3,639.2	3,681.2	0.00	0.00	0.00
14,400.0	89.65	90.00	10,769.9	716.0	3,739.2	3,781.0	0.00	0.00	0.00
14,500.0	89.65	90.00	10,770.5	716.0	3,839.2	3,880.7	0.00	0.00	0.00
14,600.0	89.65	90.00	10,771.1	716.0	3,939.2	3,980.5	0.00	0.00	0.00
14,700.0	89.65	90.00	10,771.7	716.0	4,039.2	4,080.2	0.00	0.00	0.00
14,800.0	89.65	90.00	10,772.3	716.0	4,139.2	4,179.9	0.00	0.00	0.00
14,900.0	89.65	90.00	10,772.9	716.0	4,239.2	4,279.7	0.00	0.00	0.00
15,000.0	89.65	90.00	10,773.5	716.0	4,339.2	4,379.4	0.00	0.00	0.00
15,100.0	89.65	90.00	10,774.2	716.0	4,439.2	4,479.2	0.00	0.00	0.00
15,200.0	89.65	90.00	10,774.8	716.0	4,539.2	4,578.9	0.00	0.00	0.00
15,300.0	89.65	90.00	10,775.4	716.0	4,639.2	4,678.6	0.00	0.00	0.00
15,400.0	89.65	90.00	10,776.0	716.0	4,739.2	4,778.4	0.00	0.00	0.00
15,500.0	89.65	90.00	10,776.6	716.0	4,839.2	4,878.1	0.00	0.00	0.00
15,600.0	89.65	90.00	10,777.2	716.0	4,939.2	4,977.9	0.00	0.00	0.00
15,700.0	89.65	90.00	10,777.8	716.0	5,039.2	5,077.6	0.00	0.00	0.00
15,800.0	89.65	90.00	10,778.4	716.0	5,139.2	5,177.3	0.00	0.00	0.00
15,900.0	89.65	90.00	10,779.0	716.0	5,239.2	5,277.1	0.00	0.00	0.00
16,000.0	89.65	90.00	10,779.7	716.0	5,339.2	5,376.8	0.00	0.00	0.00
16,100.0	89.65	90.00	10,780.3	716.0	5,439.2	5,476.6	0.00	0.00	0.00
16,200.0	89.65	90.00	10,780.9	716.0	5,539.2	5,576.3	0.00	0.00	0.00
16,300.0	89.65	90.00	10,781.5	716.0	5,639.2	5,676.0	0.00	0.00	0.00
16,400.0	89.65	90.00	10,782.1	716.0	5,739.2	5,775.8	0.00	0.00	0.00
16,500.0	89.65	90.00	10,782.7	716.0	5,839.2	5,875.5	0.00	0.00	0.00
16,600.0	89.65	90.00	10,783.3	716.0	5,939.2	5,975.3	0.00	0.00	0.00
16,700.0	89.65	90.00	10,783.9	716.0	6,039.2	6,075.0	0.00	0.00	0.00
16,800.0	89.65	90.00	10,784.6	716.0	6,139.2	6,174.7	0.00	0.00	0.00
16,900.0	89.65	90.00	10,785.2	716.0	6,239.2	6,274.5	0.00	0.00	0.00
17,000.0	89.65	90.00	10,785.8	716.0	6,339.2	6,374.2	0.00	0.00	0.00
17,100.0	89.65	90.00	10,786.4	716.0	6,439.2	6,474.0	0.00	0.00	0.00
17,200.0	89.65	90.00	10,787.0	716.0	6,539.2	6,573.7	0.00	0.00	0.00
17,300.0	89.65	90.00	10,787.6	716.0	6,639.2	6,673.4	0.00	0.00	0.00
17,400.0	89.65	90.00	10,788.2	716.0	6,739.2	6,773.2	0.00	0.00	0.00
17,500.0	89.65	90.00	10,788.8	716.0	6,839.2	6,872.9	0.00	0.00	0.00
17,600.0	89.65	90.00	10,789.4	716.0	6,939.2	6,972.7	0.00	0.00	0.00
17,700.0	89.65	90.00	10,790.1	716.0	7,039.2	7,072.4	0.00	0.00	0.00
17,800.0	89.65	90.00	10,790.7	716.0	7,139.2	7,172.1	0.00	0.00	0.00
17,900.0	89.65	90.00	10,791.3	716.0	7,239.2	7,271.9	0.00	0.00	0.00
18,000.0	89.65	90.00	10,791.9	716.0	7,339.2	7,371.6	0.00	0.00	0.00
18,100.0	89.65	90.00	10,792.5	716.0	7,439.2	7,471.4	0.00	0.00	0.00
18,200.0	89.65	90.00	10,793.1	716.0	7,539.2	7,571.1	0.00	0.00	0.00
18,300.0	89.65	90.00	10,793.7	716.0	7,639.1	7,670.8	0.00	0.00	0.00
18,400.0	89.65	90.00	10,794.3	716.0	7,739.1	7,770.6	0.00	0.00	0.00
18,500.0	89.65	90.00	10,794.9	716.0	7,839.1	7,870.3	0.00	0.00	0.00
18,600.0	89.65	90.00	10,795.6	716.0	7,939.1	7,970.1	0.00	0.00	0.00
18,700.0	89.65	90.00	10,796.2	716.0	8,039.1	8,069.8	0.00	0.00	0.00
18,800.0	89.65	90.00	10,796.8	716.0	8,139.1	8,169.5	0.00	0.00	0.00

Oasis Petroleum

Planning Report

Database: OpenWellsCompass - EDM Prod	Local Co-ordinate Reference:	Well Chalmers 5300 21-19 6B
Company: Oasis	TVD Reference:	WELL @ 2076.0ft
Project: Indian Hills	MD Reference:	WELL @ 2076.0ft
Site: 153N-100W-19/20	North Reference:	True
Well: Chalmers 5300 21-19 6B	Survey Calculation Method:	Minimum Curvature
Wellbore: Chalmers 5300 21-19 6B		
Design: Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate ('/100ft)	Build Rate ('/100ft)	Turn Rate ('/100ft)
18,900.0	89.65	90.00	10,797.4	716.0	8,239.1	8,269.3	0.00	0.00	0.00
19,000.0	89.65	90.00	10,798.0	716.0	8,339.1	8,369.0	0.00	0.00	0.00
19,100.0	89.65	90.00	10,798.6	716.0	8,439.1	8,468.8	0.00	0.00	0.00
19,200.0	89.65	90.00	10,799.2	716.0	8,539.1	8,568.5	0.00	0.00	0.00
19,300.0	89.65	90.00	10,799.8	716.0	8,639.1	8,668.2	0.00	0.00	0.00
19,400.0	89.65	90.00	10,800.5	716.0	8,739.1	8,768.0	0.00	0.00	0.00
19,500.0	89.65	90.00	10,801.1	716.0	8,839.1	8,867.7	0.00	0.00	0.00
19,600.0	89.65	90.00	10,801.7	716.0	8,939.1	8,967.5	0.00	0.00	0.00
19,700.0	89.65	90.00	10,802.3	716.0	9,039.1	9,067.2	0.00	0.00	0.00
19,800.0	89.65	90.00	10,802.9	716.0	9,139.1	9,166.9	0.00	0.00	0.00
19,900.0	89.65	90.00	10,803.5	716.0	9,239.1	9,266.7	0.00	0.00	0.00
20,000.0	89.65	90.00	10,804.1	716.0	9,339.1	9,366.4	0.00	0.00	0.00
20,100.0	89.65	90.00	10,804.7	716.0	9,439.1	9,466.2	0.00	0.00	0.00
20,200.0	89.65	90.00	10,805.3	716.0	9,539.1	9,565.9	0.00	0.00	0.00
20,300.0	89.65	90.00	10,806.0	716.0	9,639.1	9,665.6	0.00	0.00	0.00
20,400.0	89.65	90.00	10,806.6	716.0	9,739.1	9,765.4	0.00	0.00	0.00
20,500.0	89.65	90.00	10,807.2	716.0	9,839.1	9,865.1	0.00	0.00	0.00
20,600.0	89.65	90.00	10,807.8	716.0	9,939.1	9,964.9	0.00	0.00	0.00
20,611.9	89.65	90.00	10,807.9	716.0	9,951.0	9,976.7	0.00	0.00	0.00

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
- hit/miss target										
- Shape										
Chalmer 6B PBHL	0.00		0.00		10,808.3		716.0		9,951.0	
- plan misses target center by 0.5ft at 20611.9ft MD (10807.9 TVD, 716.0 N, 9951.0 E)										
- Point										

Casing Points									
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)					
2,150.0	2,150.0 9 5/8"		9.625	13.500					
11,031.6	10,749.0 7"		7.000	8.750					

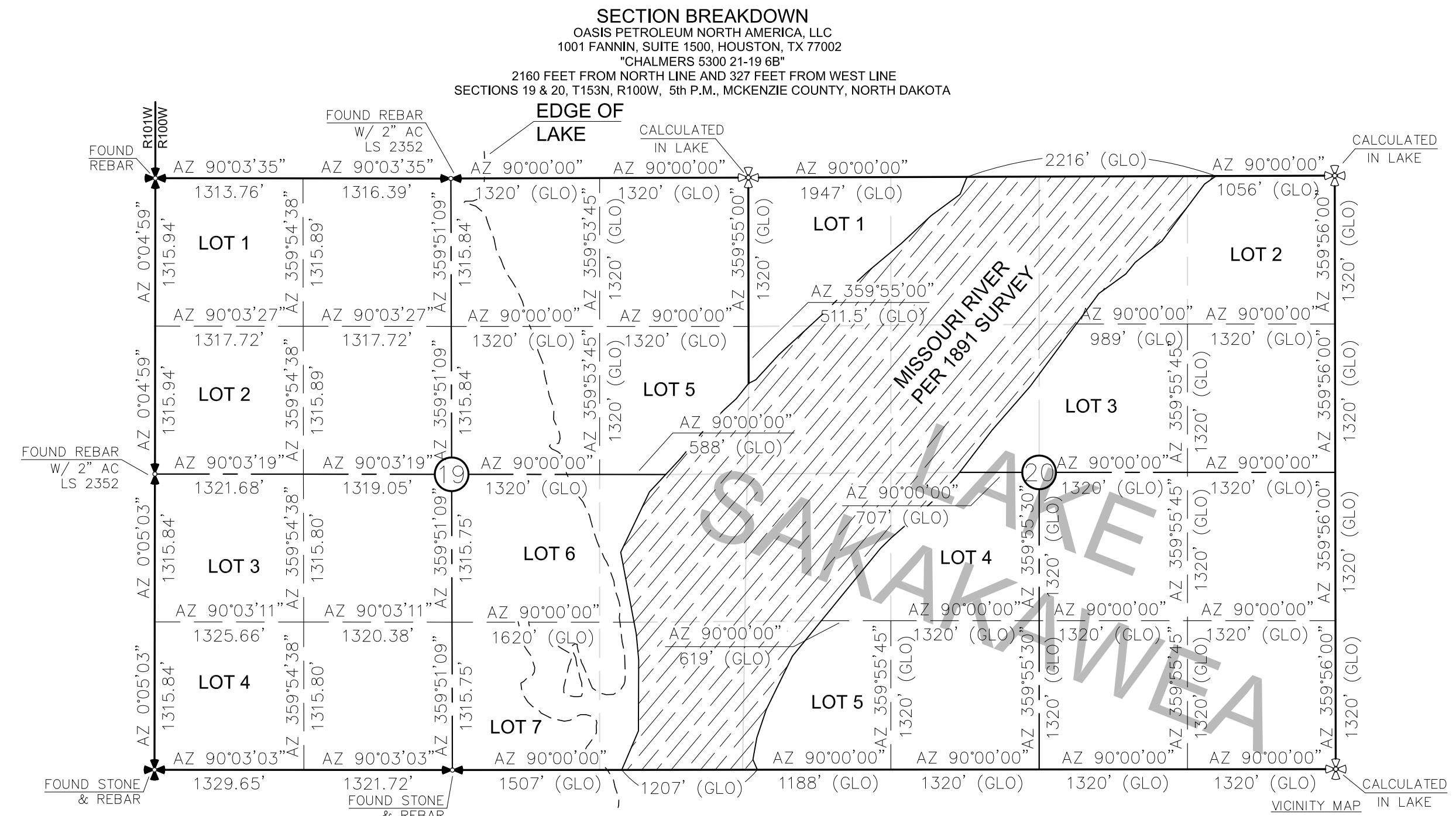
Oasis Petroleum

Planning Report

Database:	OpenWellsCompass - EDM Prod	Local Co-ordinate Reference:	Well Chalmers 5300 21-19 6B
Company:	Oasis	TVD Reference:	WELL @ 2076.0ft
Project:	Indian Hills	MD Reference:	WELL @ 2076.0ft
Site:	153N-100W-19 20	North Reference:	True
Well:	Chalmers 5300 21-19 6B	Survey Calculation Method:	Minimum Curvature
Wellbore:	Chalmers 5300 21-19 6B		
Design:	Plan #2		

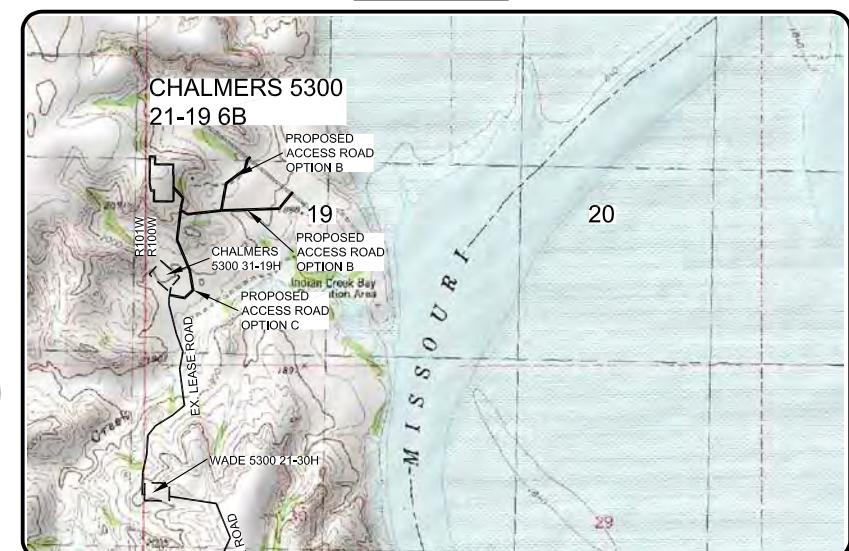
Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,021.0	2,021.0	Pierre				
4,624.1	4,624.0	Greenhorn				
5,029.1	5,029.0	Mowry				
5,417.1	5,417.0	Dakota				
6,463.2	6,463.0	Rierdon				
6,891.2	6,891.0	Dunham Salt				
6,960.2	6,960.0	Dunham Salt Base				
7,257.2	7,257.0	Pine Salt				
7,290.2	7,290.0	Pine Salt Base				
7,351.2	7,351.0	Opeche Salt				
7,426.2	7,426.0	Opeche Salt Base				
7,662.2	7,662.0	Amsden				
7,828.2	7,828.0	Tyler				
8,032.2	8,032.0	Otter/Base Minnelusa				
8,384.2	8,384.0	Kibbey Lime				
8,534.2	8,534.0	Charles Salt				
9,209.2	9,209.0	Base Last Salt				
9,429.2	9,429.0	Mission Canyon				
9,993.2	9,993.0	Lodgepole				
10,817.7	10,706.0	False Bakken				
10,843.3	10,716.0	Upper Bakken Shale				
10,946.4	10,743.0	Middle Bakken (Top of Target)				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,150.0	2,150.0	0.0	0.0	Start Build 5.00	
2,160.0	2,160.0	0.0	0.0	Start 5662.1 hold at 2160.0 MD	
7,822.1	7,821.9	35.0	35.0	Start Drop -5.00	
7,832.1	7,831.9	35.0	35.0	Start 2168.2 hold at 7832.1 MD	
10,000.2	10,000.0	35.0	35.0	Start 271.5 hold at 10000.2 MD	
10,271.7	10,271.5	35.0	35.0	Start Build 12.00 KOP	
11,018.8	10,748.9	283.8	439.1	Start 12.8 hold at 11018.8 MD EOC	
11,031.6	10,749.0	290.6	450.0	Start DLS 2.00 TFO 90.10	
12,613.0	10,758.9	716.0	1,952.2	Start 8069.9 hold at 12612.9 MD	
20,682.9				TD at 20682.9	



THIS DOCUMENT WAS ORIGINALLY ISSUED
AND SEALED BY DARYL D. KASEMAN,
PLS, REGISTRATION NUMBER 3880 ON
5/07/14 AND THE ORIGINAL
DOCUMENTS ARE STORED AT THE
OFFICES OF INTERSTATE ENGINEERING,
INC.

ALL AZIMUTHS ARE BASED ON G.P.S.
OBSERVATIONS. THE ORIGINAL SURVEY OF THIS
AREA FOR THE GENERAL LAND OFFICE (G.L.O.)
WAS 1891. THE CORNERS FOUND ARE AS
INDICATED AND ALL OTHERS ARE COMPUTED FROM
THOSE CORNERS FOUND AND BASED ON G.L.O.
DATA. THE MAPPING ANGLE FOR THIS AREA IS
APPROXIMATELY -0°03'.



Revision No.	Date	By	Description
REV 1	3/12/14	JJS	Moved wells on pad
REV 2	4/22/14	BHH	Moved wells on pad/revised pad
REV 3	5/2/14	BHH	Moved wells on pad/revised pad

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	www.interstateeng.com
Other offices in Minnesota, North Dakota and South Dakota	

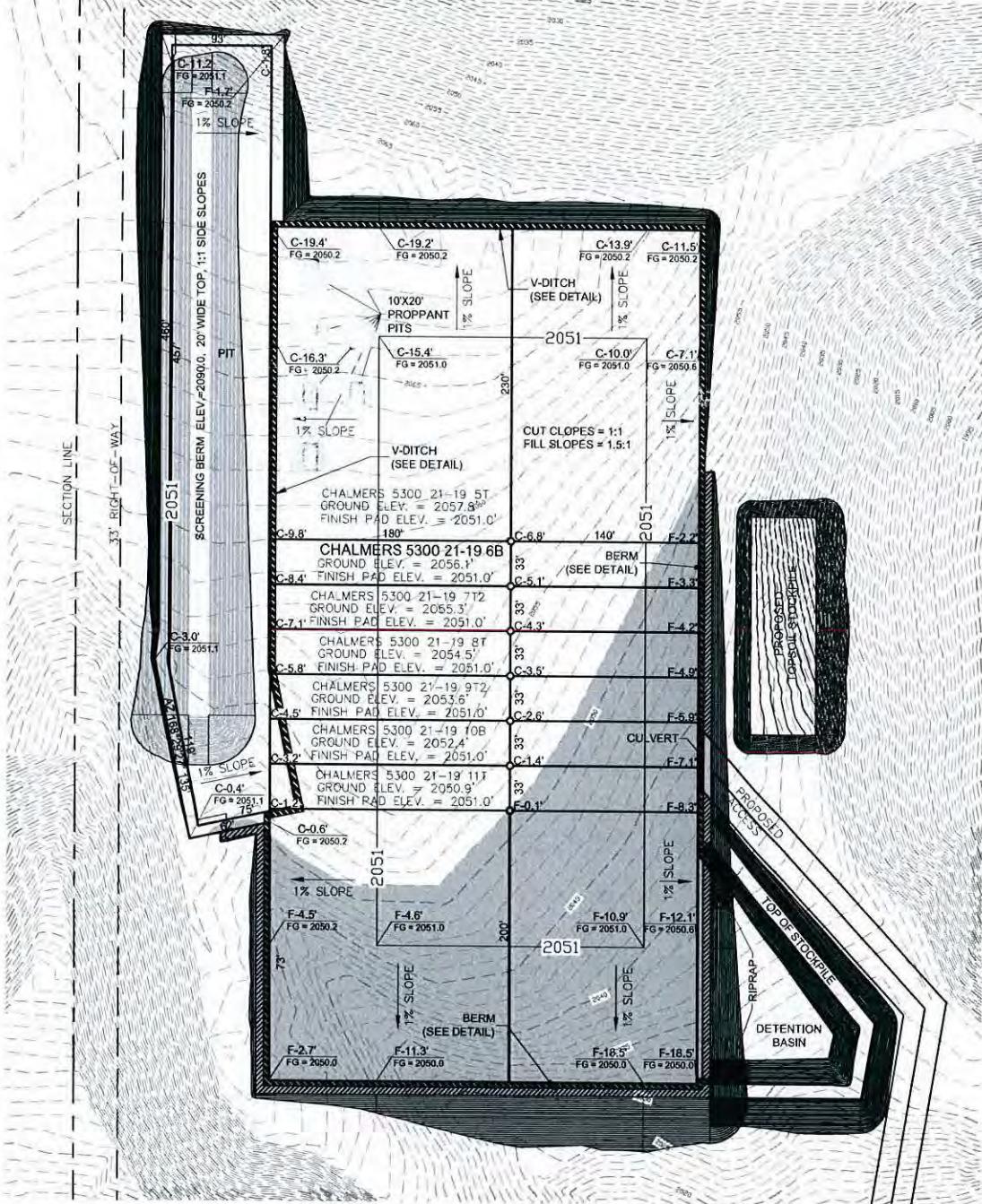
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PAD LAYOUT

OASIS PETROLEUM NORTH AMERICA, LLC
1001 FANNIN, SUITE 1500, HOUSTON, TX 77002

*CHALMERS 5300 21-19 6B

2160 FEET FROM NORTH LINE AND 327 FEET FROM WEST LINE
SECTION 19, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA



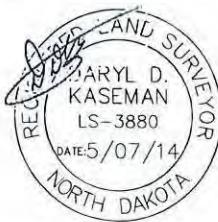
NOTE 1: Pad dimensions shown are to usable area, the v-ditch and berm areas shall be built to the outside of the pad dimensions.

NOTE 2 : Screening berm is to be built after drilling operations are complete.

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V-DITCH DETAIL



Proposed Contours
Original Contours

NOTE: All utilities shown are preliminary only, a complete utilities location is recommended before construction.

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OASIS PETROLEUM NORTH AMERICA, LLC
PAD LAYOUT
SECTION 19, T153N, R100W

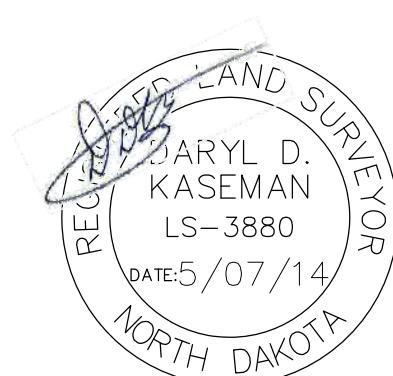
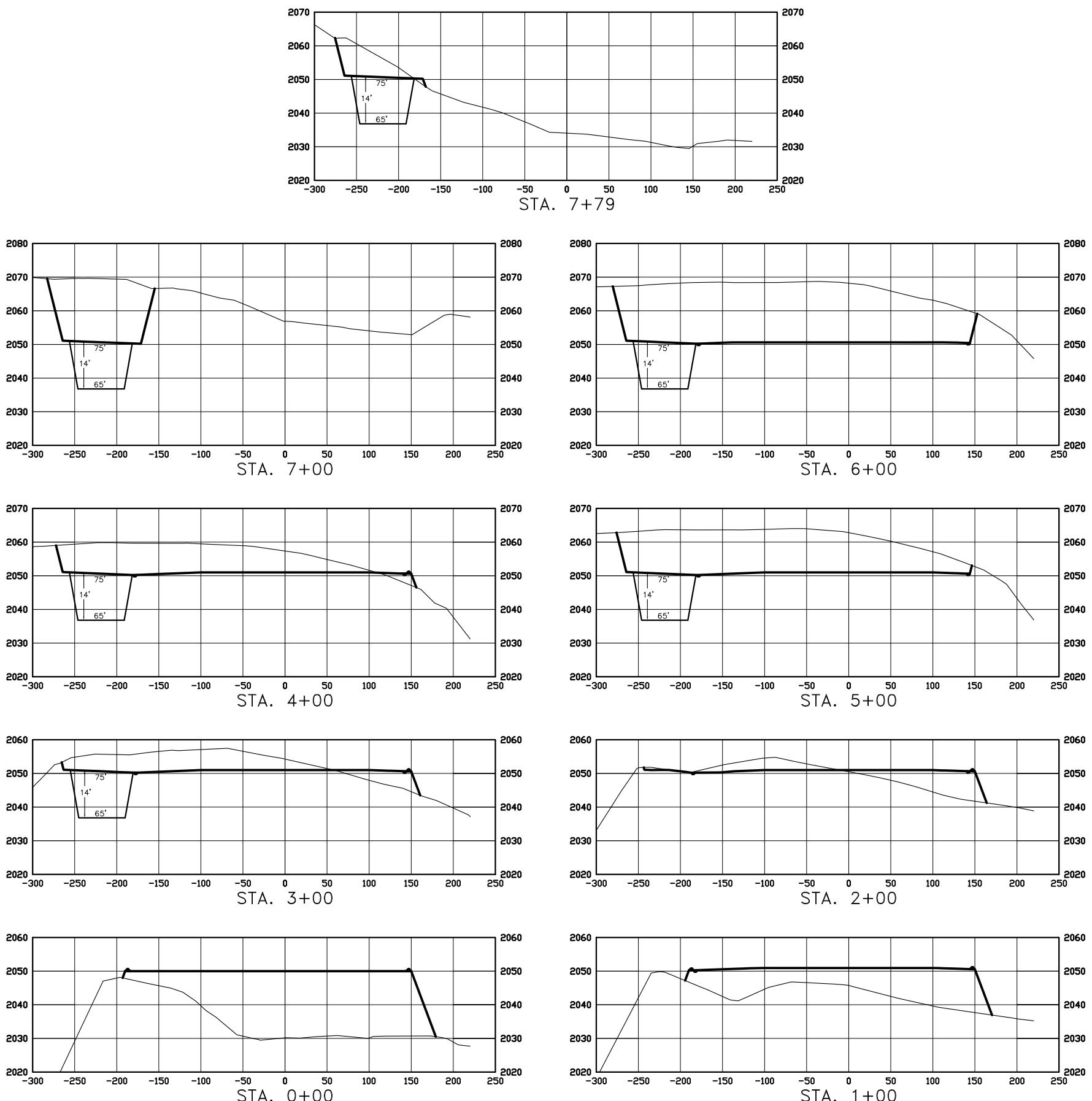
MCKENZIE COUNTY, NORTH DAKOTA

Drawn By: B.H.H. Project No.: S13-09-282.01

Checked By: D.O.S. Date: JAN 2014

Revision No.	Date	By	Description
REV 1	3/12/14	B.H.H.	MVED. MELLS ON PAD
REV 2	4/22/14	B.H.H.	MVED. MELLS ON PAD/REVISED PAD
REV 3	5/2/14	B.H.H.	MVED. MELLS ON PAD/REVISED PAD

CROSS SECTIONS
 OASIS PETROLEUM NORTH AMERICA, LLC
 1001 FANNIN, SUITE 1500, HOUSTON, TX 77002
 "CHALMERS 5300 21-19 6B"
 2160 FEET FROM NORTH LINE AND 327 FEET FROM WEST LINE
 SECTION 19, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA



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SCALE
 HORIZ 1"=140'
 VERT 1"=35'

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CROSS SECTIONS
 SECTION 19, T153N, R100W
 MCKENZIE COUNTY, NORTH DAKOTA

Drawn By: B.H.H. Project No.: S13-09-282,01
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REV 3	5/2/14	BHH	MOVED WELLS ON PAD/REVISED PAD

Chalmers\Cap001\Chalmers 5300 21-19 6B Revised 5-2-14.kewg - 5/7/2014 11:34 AM
 schmierer

WELL LOCATION SITE QUANTITIES

OASIS PETROLEUM NORTH AMERICA, LLC

1001 FANNIN, SUITE 1500, HOUSTON, TX 77002

"CHALMERS 5300 21-19 6B"

2160 FEET FROM NORTH LINE AND 327 FEET FROM WEST LINE
SECTION 19, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA

WELL SITE ELEVATION	2056.1
WELL PAD ELEVATION	2051.0

EXCAVATION	67,041
PLUS PIT	<u>22,050</u>
	89,091

EMBANKMENT	26,714
PLUS SHRINKAGE (25%)	<u>6,679</u>
	33,393

STOCKPILE PIT	22,050
---------------	--------

STOCKPILE TOP SOIL (6")	5,434
-------------------------	-------

BERMS	1,007 LF = 326 CY
-------	-------------------

DITCHES	1,768 LF = 270 CY
---------	-------------------

SCREENING BERM	27,464 CY
----------------	-----------

STOCKPILE MATERIAL	694
--------------------	-----

DISTURBED AREA FROM PAD	6.74 ACRES
-------------------------	------------

NOTE: ALL QUANTITIES ARE IN CUBIC YARDS (UNLESS NOTED)

CUT END SLOPES AT 1:1

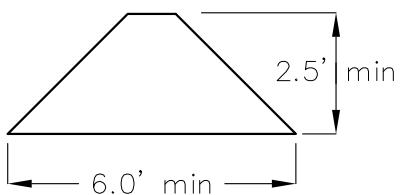
FILL END SLOPES AT 1.5:1

WELL SITE LOCATION

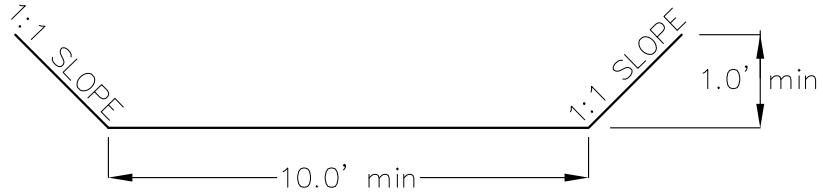
2160' FNL

327' FWL

BERM DETAIL



DITCH DETAIL



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OASIS PETROLEUM NORTH AMERICA, LLC QUANTITIES

SECTION 19, T153N, R100W

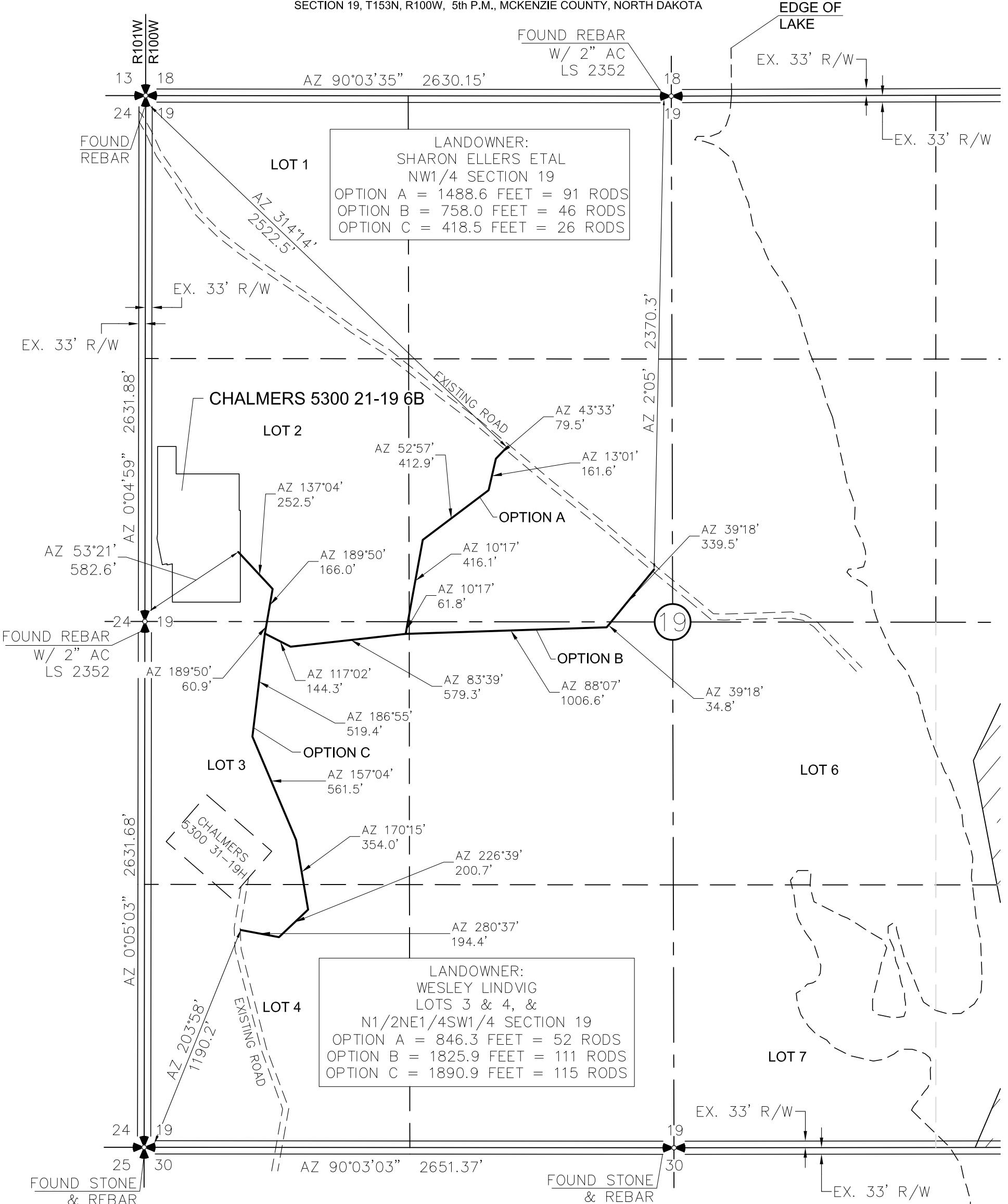
MCKENZIE COUNTY, NORTH DAKOTA

Drawn By:	B.H.H.	Project No.:	S13-09-282.01
Checked By:	D.D.K.	Date:	JAN, 2014

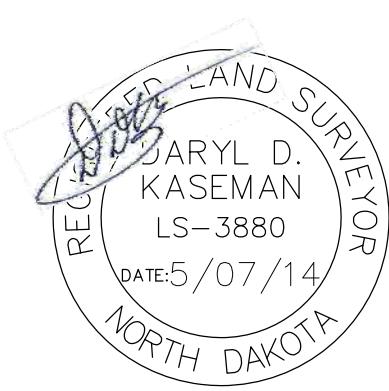
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ACCESS APPROACH
 OASIS PETROLEUM NORTH AMERICA, LLC
 1001 FANNIN, SUITE 1500, HOUSTON, TX 77002
 "CHALMERS 5300 21-19 6B"

2160 FEET FROM NORTH LINE AND 327 FEET FROM WEST LINE
 SECTION 19, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA



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NOTE: All utilities shown are preliminary only, a complete utility location is recommended before construction.

0 500
1" = 500'

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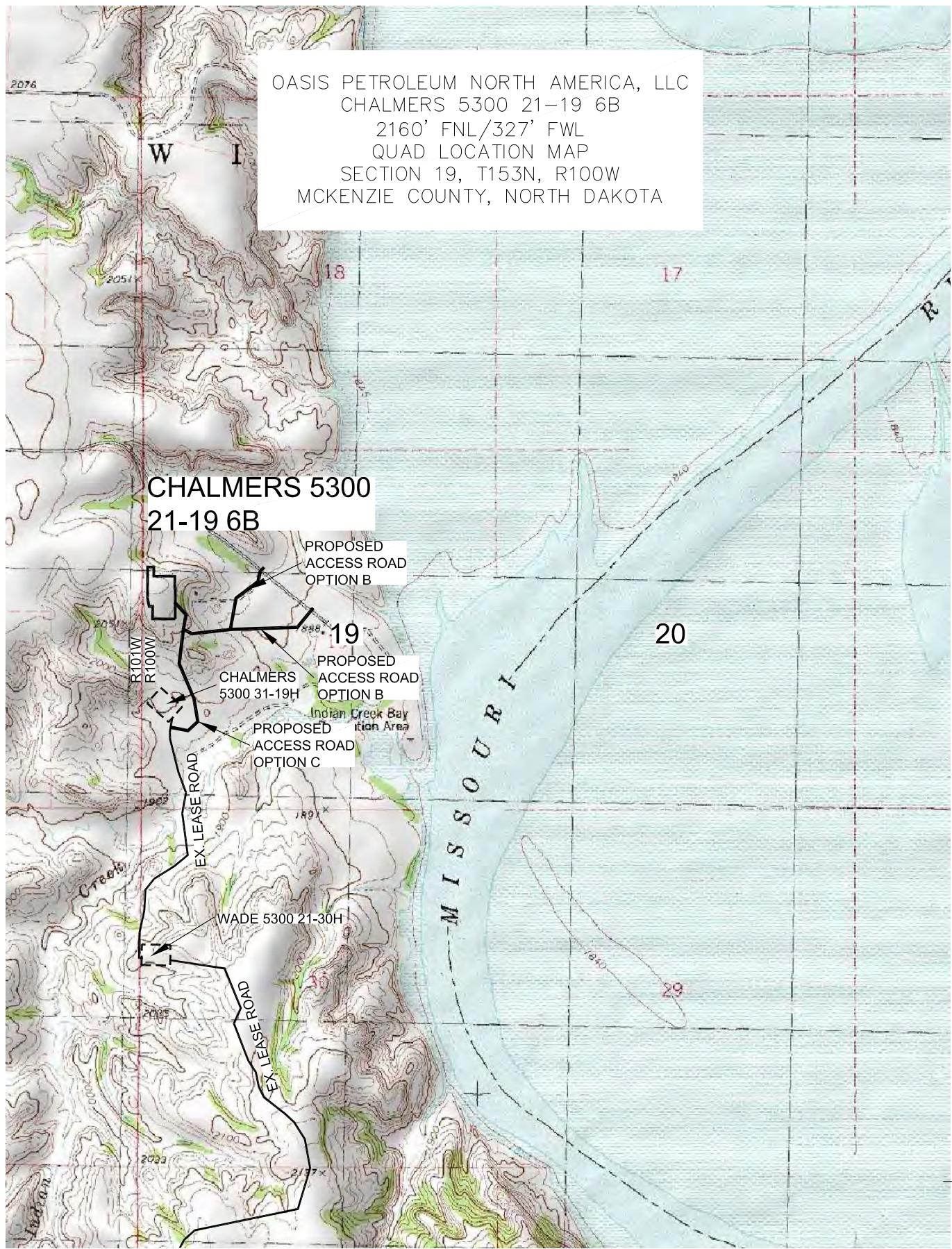
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 ACCESS APPROACH
 SECTION 19, T153N, R100W
 MCKENZIE COUNTY, NORTH DAKOTA

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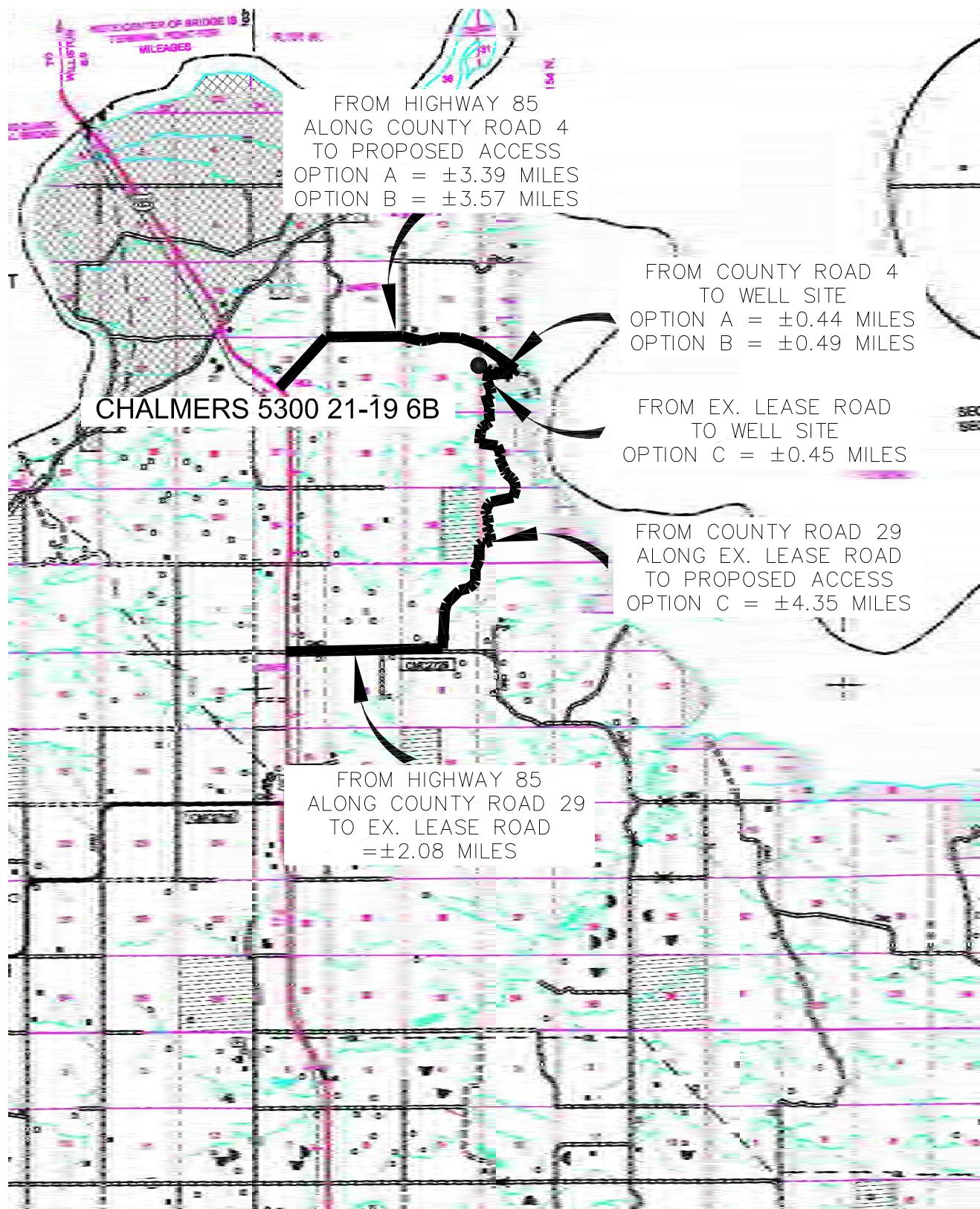
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OASIS PETROLEUM NORTH AMERICA, LLC
QUAD LOCATION MAP
SECTION 19, T153N, R100W
MCKENZIE COUNTY, NORTH DAKOTA

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COUNTY ROAD MAP
 OASIS PETROLEUM NORTH AMERICA, LLC
 1001 FANNIN, SUITE 1500, HOUSTON, TX 77002
 "CHALMERS 5300 21-19 6B"
 2160 FEET FROM NORTH LINE AND 327 FEET FROM WEST LINE
 SECTION 19, T153N, R100W, 5th P.M., MCKENZIE COUNTY, NORTH DAKOTA



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SCALE: 1" = 2 MILE

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OASIS PETROLEUM NORTH AMERICA, LLC
 COUNTY ROAD MAP
 SECTION 19, T153N, R100W
 MCKENZIE COUNTY, NORTH DAKOTA

Drawn By: B.H.H.	Project No.: S13-09-282.01
Checked By: D.D.K.	Date: JAN. 2014

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REV 3	5/2/14	BHH	MOVED WELLS ON PAD/REVISED PAD

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.



STATEMENT

This statement is being sent in order to comply with NDAC 43-02-03-16 (Application for permit to drill and recomplete) which states (in part that) "confirmation that a legal street address has been requested for the well site, and well facility if separate from the well site, and the proposed road access to the nearest existing public road". On the date noted below a legal street address was requested from the appropriate county office.

April 3, 2014
McKenzie County
Aaron Chisolm – address@co.mckenzie.nd.us

Chalmers 5300 21-19 5T Lot 2 Section 19 T153N R100W
Chalmers 5300 21-19 6B Lot 2 Section 19 T153N R100W
Chalmers 5300 21-19 7T2 Lot 2 Section 19 T153N R100W
Chalmers 5300 21-19 8T Lot 2 Section 19 T153N R100W
Chalmers 5300 21-19 9T2 Lot 2 Section 19 T153N R100W
Chalmers 5300 21-19 10B Lot 2 Section 19 T153N R100W
Chalmers 5300 21-19 11T Lot 2 Sections 19 T153N R100W

Chelsea Covington

Chelsea Covington
Regulatory Assistant
Oasis Petroleum North America, LLC



June 10, 2014

Re: Un-Occupied Trailer House and Seasonal Cabin.

Brandi,

Just to follow up with past conversations about the dwellings east of our proposed Chalmer 5300 21-19 well site. The white trailer is unlivable, it has no water, power or sewer. The cabin is seasonal at best and has not been used for several years. If I can be of further assistance please advise.

Thank you,

A handwritten signature in blue ink, appearing to read "JD DeMorrett".

JD DeMorrett

Sr. Staff Landman for Oasis Petroleum North America, LLC

PO Box 1126 Williston ND- Office 701-577-1600 Fax 701-577-1692